



# Denver Employees Retirement Plan

## COMPREHENSIVE ANNUAL FINANCIAL REPORT



**Fiscal Year Ended December 31, 2015**

A Component Unit of the City and County of Denver, Colorado

# Denver Employees Retirement Plan

(A Component Unit of the City and County of Denver, Colorado)

## Comprehensive Annual Financial Report

Fiscal Year Ended December 31, 2015

Cheryl Cohen-Vader

Retirement Board Chair

Steven E. Hutt

Executive Director

Prepared by the Plan Staff

# Table of Contents

<b>Introductory Section</b>	
Primary Plan Sponsor and Elected Officials.....	5
Letter of Transmittal.....	6
Retirement Board.....	8
Advisory Committee.....	9
Professional Services and Investment Managers.....	10
Certificate of Achievement for Excellence in Financial Reporting.....	11
Organizational Structure.....	12
<b>Financial Section</b>	
Independent Auditors' Report on Financial Statements and Supplementary Information.....	14
Management's Discussion and Analysis.....	17
Basic Financial Statements:	
Statement of Fiduciary Net Position.....	21
Statement of Changes in Fiduciary Net Position.....	22
Notes to Financial Statements.....	23
Required Supplementary Information:	
Schedule of Changes in Net Pension Liability and Related Ratios.....	35
Schedule of Net Pension Liability.....	36
Schedule of Employer Contributions and Notes (Pension).....	37
Schedule of Investment Returns.....	38
Schedule of Funding Progress (OPEB).....	39
Schedule of Employer Contributions (OPEB).....	40
Supplementary Information:	
Schedule of Administrative Expenses.....	41
Schedule of Investment Expenses.....	42
<b>Investment Section</b>	
Investment Consultant's Statement.....	45
Mission Statement.....	47
Investment Responsibilities.....	47
Investment Objectives.....	47
Asset Allocation Target.....	48
Chart of Allocation Target.....	48
Chart of Allocation by Asset Class.....	49
Asset Target Allocation by Managed Account.....	50
Top Ten Stock and Bond Holdings.....	51
Investment Performance.....	52
Schedule of Investment Commissions.....	53
Schedule of Investment Fees.....	54
<b>Actuarial Section</b>	
Actuary's Certification Letter.....	56
Valuation Methods and Assumptions.....	58
Analysis of Financial Experience.....	68
Schedules of Retirees – Beneficiaries and Active Members.....	69
Solvency Test.....	70
Summary of Principal Plan Provisions.....	71
Schedule of Funding Progress.....	75
Schedule of Employer Contributions – Pension and Retiree Medical.....	76
<b>Statistical Section</b>	
Changes in Fiduciary Net Position.....	79
Schedule of Benefit Expenses by Type.....	81
Schedule of Retired Members by Type of Benefit – Pension and Health Insurance Reduction.....	83
Schedule of Retired Members by Attained Age and Type of Pension Benefit.....	85
Average Monthly Benefit Payment – Pension.....	86
Average Monthly Benefit Payment – Health Insurance Reduction.....	87
Principal Participating Employers.....	88
Location of Plan Retirees (Map).....	89

# Introductory Section

This Page Intentionally Left Blank

**Primary Plan Sponsor**

City and County of Denver, Colorado

**Elected Officials**

Mayor

Honorable Michael B. Hancock

Auditor

Honorable Timothy M. O'Brien, CPA

**City Council**

District 1	Honorable Rafael Espinoza
District 2	Honorable Kevin Flynn
District 3	Honorable Paul D. López
District 4	Honorable Kendra Black
District 5	Honorable Mary Beth Susman
District 6	Honorable Paul Kashmann
District 7	Honorable Jolon Clark
District 8	Honorable Christopher Herndon
District 9	Honorable Albus Brooks
District 10	Honorable Wayne New
District 11	Honorable Stacie Gilmore
Council at-Large	Honorable Robin Kniech
Council at-Large	Honorable Deborah Ortega

Clerk and Recorder

Honorable Debra Johnson



Steven E. Hutt  
Executive Director  
777 Pearl Street  
Denver, CO 80203  
Ph. 303.839.5419  
Fax 303.839.9525  
www.derp.org

June 1, 2016

Dear Members of the Denver Employees Retirement Plan:

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the Denver Employees Retirement Plan (the Plan) of the City and County of Denver (the City) for the fiscal year ended December 31, 2015.

**Comprehensive Annual Financial Report** This report is an overview intended to give the reader reliable and useful information which describes the financial position of the Plan and provides assurance that the Plan is in compliance with applicable legal provisions. The Plan's management is responsible for the accuracy of the data contained in this report, and we believe the information included presents fairly the fiduciary net position of the Plan as of December 31, 2015, as well as the changes in fiduciary net position for the year.

**Internal Control** The Plan's management has designed and implemented internal and accounting controls to provide reasonable assurance of the accuracy and reliability of all the financial records and the safekeeping of the Plan assets. There are inherent limitations in the effectiveness of any system of internal controls. The cost of internal control should not exceed anticipated benefits; therefore the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of material misstatements.

**Independent Audit** The Revised Municipal Code of the City requires an annual audit of the trust fund, with the results being furnished to the Mayor, the City Council, and the Auditor of the City. The Retirement Board selected the accounting firm CliftonLarsonAllen, LLP to render an opinion as to the fairness of the Plan's 2015 financial statements. The audit was performed in accordance with auditing standards generally accepted in the United States of America and the standards for financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. The Independent Accountants' Report is included in the Financial Section of this report.

**Management's Discussion and Analysis** Generally accepted accounting principles (GAAP) require that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement MD&A and should be read in conjunction with it. The Plan's MD&A can be found immediately following the report of the independent accountants in the Financial Section of this report.

**Plan Profile** The Plan was established on January 1, 1963, as a defined benefit plan. Most employees of the City, certain employees of the Denver Health and Hospital Authority (DHHA), and all of the Plan staff are covered by the Plan. Excluded from membership are the uniformed employees of the City's police and fire departments and the employees of the Denver Water Board. All active Plan members are required to contribute to Social Security while employed. As of December 31, 2015, there were 8,636 active and 9,074 retired members of the Plan.

The Plan is governed by a five member Board, the members of which are appointed for staggered six-year terms by the Mayor of the City. Additionally, three members of the Advisory Committee are elected by the Plan membership for staggered three-year terms and one member is appointed by the City's Career Service Board.

All Plan-related benefit and administrative provisions are detailed in Sections 18-401 through 18-430.7 of the Revised Municipal Code of the City. Any amendments to the Plan must be enacted into ordinance by the Denver City Council and approved by the Mayor of the City.

## Introductory Section

---

The Plan provides retirement benefit options based upon the member's date of hire. At the time of retirement, a member may elect to receive a reduced benefit in order to provide a lifetime benefit to a spouse or an eligible beneficiary upon the member's death. The Plan also provides disability and death benefits. With respect to other post-retirement benefits, the Plan offers retired members and their beneficiaries the option of purchasing health, dental, and vision insurance coverage. Based on a formula incorporating a member's years of service, the Plan pays a portion of the monthly insurance premium(s). A more detailed explanation of benefits is outlined in the Summary of Principal Plan Provisions in the Actuarial Section of this report. The Plan's Membership Services representatives provide ongoing pre-retirement counseling to the active members and assist retired members and their beneficiaries throughout the year.

**Investment Performance** The Plan follows a strategic asset allocation policy so that investments are diversified. The goal of the asset allocation is to provide the highest level of return at an acceptable level of risk. During 2015, the Plan's investment portfolio returned -1.34% gross of fees. These investment results exceeded the overall strategic benchmark return for the Plan of -2.11%, but lagged the median peer return of -0.05%.

**Funded Status** The Plan's pension benefit fund continues to be in a healthy financial position compared to our peer group of other public pension funds nationally. The Retirement Board, the Executive Director, and the Plan staff remain committed to managing the Plan's assets and liabilities to maintain the long-term financial soundness of the Plan and to have the funds needed to pay every dollar of benefits promised to every current and future retiree. The funded status of the pension benefit fund for the year beginning January 1, 2015 was 73.7%. The Plan continues to work successfully with the City to annually receive the full amount of the actuarially required contribution necessary to achieve the Plan's funding goals. Additional information regarding the Plan's funding is included in the Actuarial Section of the report.

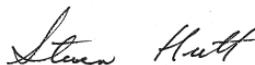
**Awards** The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Denver Employees Retirement Plan for its CAFR for the fiscal year ended December 31, 2014. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports. To be awarded the Certificate of Achievement for Excellence in Financial Reporting, a government unit must publish an easily readable and efficiently organized report, the contents of which meet or exceed program standards. The report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for one year. The Plan has received a Certificate of Achievement for 26 years in a row. We believe this current report continues to meet the Certificate of Achievement program requirements and will submit it to the GFOA for consideration again this year.

**Conclusion** We express our appreciation to the Plan staff who served the membership throughout 2015 and who prepared this report. We hope readers find it easy to read and understand, and will recognize the contributions that the Retirement Board, Advisory Committee, and Plan staff make toward the continued successful operation of the Plan.

Sincerely,



Cheryl Cohen-Vader  
Retirement Board Chair



Steven Hutt  
Executive Director

## Retirement Board

Each member is appointed by the Mayor of Denver



**Cheryl Cohen-Vader**

Term expires January 1, 2020



**Guadalupe Gutierrez-Vasquez**

Term expires January 1, 2021



**John J. Hanley**

Term expires January 1, 2017



**Bruce Hoyt**

Term expires January 1, 2019



**Eric S. Rothaus**

Term expires January 1, 2022

### **Advisory Committee**

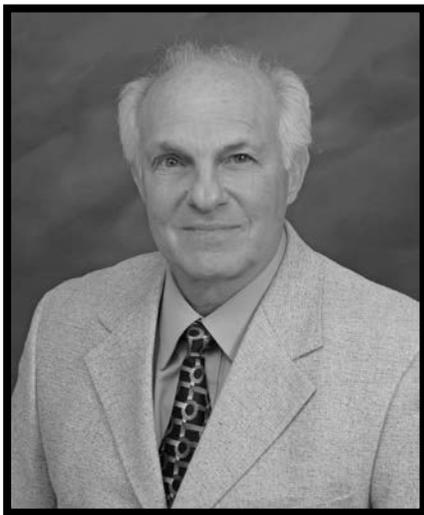
Three members are elected by the Plan membership and one member is appointed by the Denver Career Service Board



**Michael F. Aleksick**  
Term expires June, 2018 on  
the date of annual meeting



**Heather L. Britton**  
Term expires June, 2017 on  
the date of annual meeting



**Robert Press**  
Term expires June, 2017 on  
the date of annual meeting



**Erma D. Zamora**  
Term expires June, 2016 on  
the date of annual meeting

### Professional Services

#### Actuary

- Gabriel Roeder Smith & Co.

#### Custodian Bank

- Bank of New York Mellon Corporation

#### Independent Auditor

- CliftonLarsonAllen, LLP

#### Investment Consulting

- Summit Strategies Group

### Investment Managers

#### Domestic Equity Managers

- Brown Advisory
- Eagle Capital Management
- Franklin Templeton
- Mellon Capital Management
- Neuberger Berman, LLC

#### International Equity Managers

- Dimensional Fund Advisors
- Fidelity Institutional
- Franklin Templeton
- LSV Asset Management
- Mellon Capital Management

#### Fixed Income Managers

- Athyrium
- Golub Capital
- GSO Capital Partners, LP
- Mellon Capital Management
- Pictet Asset Management Limited
- Sankaty Advisors
- Smith Graham & Company

#### Real Estate Managers

- Contrarian Capital Management, LLC
- Long Wharf Real Estate Partners, LLC
- JP Morgan Asset Management
- Prudential Real Estate Investors
- UBS Global Asset Management
- Walton Street Capital

#### Alternative Investments Managers

- Adams Street Partners, LLC
- EIG Global Energy Partners
- Hancock Timber Resource Group
- Invesco Private Capital
- JP Morgan Private Equity Group
- Kayne Anderson Capital Advisors
- Lime Rock Resources
- Tortoise Capital Advisors

#### Absolute Return Funds

- KKR Prisma

Investment commissions and fees can be found on pages 53-54 in the Investment Section.



Government Finance Officers Association

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

Presented to

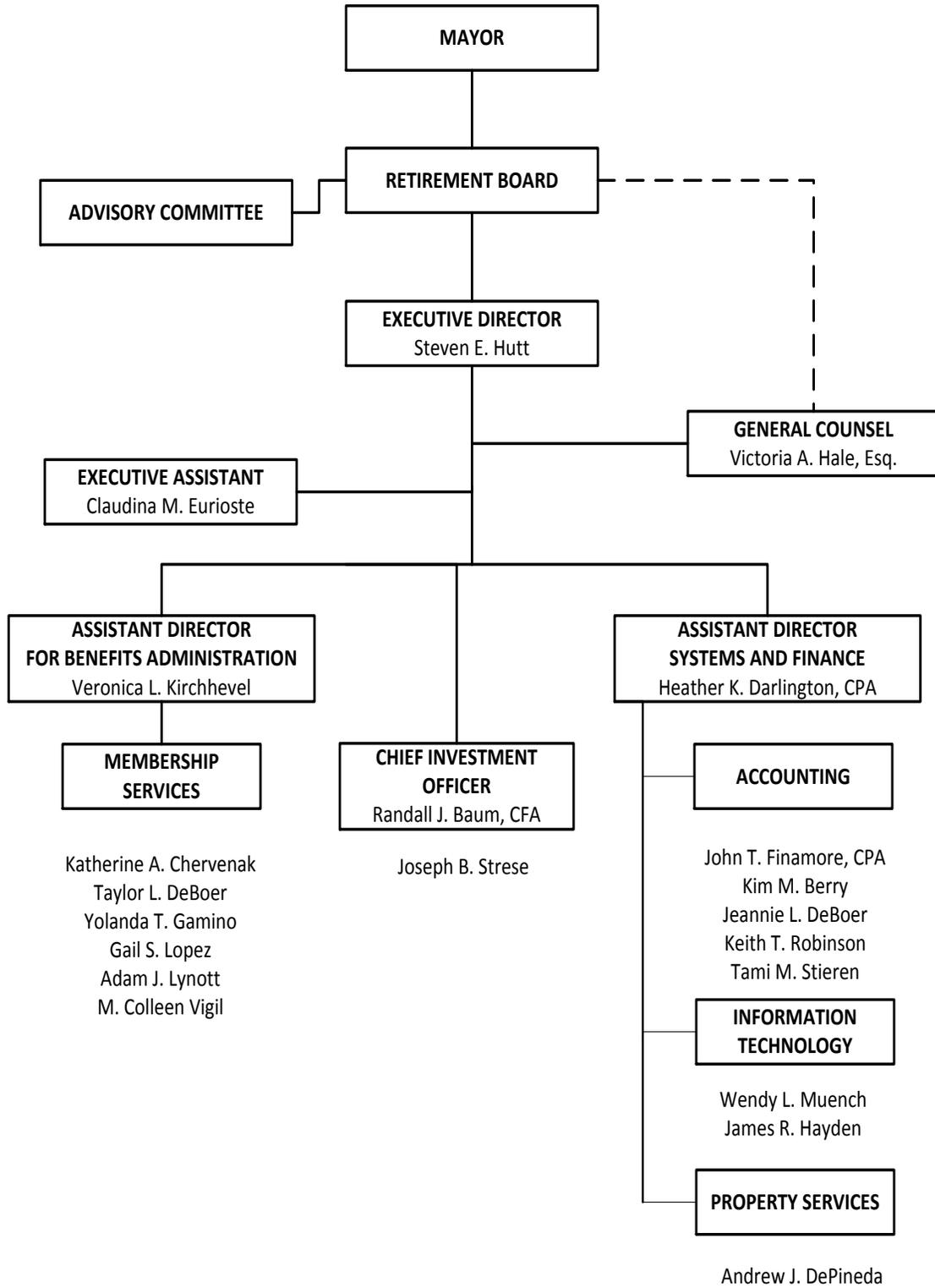
**Denver Employees Retirement Plan  
Colorado**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**December 31, 2014**

Executive Director/CEO

### Organizational Structure



# Financial Section



CliftonLarsonAllen LLP  
CLAconnect.com

### INDEPENDENT AUDITORS' REPORT

Retirement Board of Directors  
Denver Employees Retirement Plan  
Denver, Colorado

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Denver Employees Retirement Plan (the Plan), a component unit of the City and County of Denver, as of and for the year ended December 31, 2015, 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 Plan'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 Plan'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.



An independent member of Nexia International

### ***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, 2015, and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Report on Summarized Comparative Information***

We have previously audited the Plan's 2014 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated May 11, 2015. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2014 is consistent, in all material respects, with the audited financial statements from which it has been derived.

### ***Other Matters***

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of changes in net pension liability and related ratios, schedule of employer contributions, and schedule of investment returns for pensions and the schedule of funding progress and schedule of employer contributions for other postemployment benefits as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who consider it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Other Information***

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Plan's basic financial statements. The other supplementary information listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements.

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

The introductory, investment, actuarial and statistical sections listed in the table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion or provide any assurance on them.

### **Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated May 9, 2016, 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 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 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**

Denver, Colorado  
May 9, 2016

---

## Financial Section

---

### Management's Discussion and Analysis

This is an analysis and overview of the financial activities of the Denver Employees Retirement Plan (the Plan) for the year ended December 31, 2015. For additional information, please refer to the basic financial statements, notes to the financial statements, required supplementary information, and supporting schedules.

#### **Financial Highlights**

As of December 31, 2015, \$2,016,499,464 (net) was restricted for the payment of benefits and to meet the Plan's future obligations to its members and their beneficiaries.

For 2015, the Plan's total net position restricted for benefits decreased by \$116,629,017, a 5.5% decrease from the amount of net position restricted for benefits reported at the end of 2014. The net decrease for 2015 is the result of benefit payments exceeding contributions received, along with unfavorable financial markets for the year that contributed to a net investment loss of \$37,054,557.

Additions to the Plan's net position included contributions of \$64,442,980 from the City and County of Denver (the City) and \$7,171,724 from the Denver Health and Hospital Authority (DHHA). Active members of the Plan contributed \$49,715,799.

Deductions from the Plan's net position during 2015 totaled \$200,904,963. This amount is 6.1% higher than the total 2014 deductions. Increasing retired member benefits, due to a net increase in the number of retirees and higher average monthly benefit payments for new retirees, is the cause for the higher deduction amount.

The Plan's funding objective is to meet its long-term benefit obligations through employer and employee contributions and investment returns. As of January 1, 2015, the date of the last actuarial valuation, the funded ratio for the pension and health benefits funds was 73.7% and 53.8%, 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 financial statements include:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to Financial Statements
- Required Supplementary Information
- Supplementary Information

*The Statement of Fiduciary Net Position* presents the Plan's assets, liabilities, and net position as of December 31, 2015, with summarized comparative totals for 2014. This statement reflects the Plan's net position available for benefits in each the retirement and the health benefits funds as of December 31, 2015, and in the aggregate as of December 31, 2014.

*The Statement of Changes in Fiduciary Net Position* shows the additions to and deductions from the Plan's net position during 2015, with summarized comparative totals for 2014.

The Governmental Accounting Standards Board (GASB) promulgates the requirements for financial statement presentation and certain disclosures for state and local governmental entities. The financial statements, notes to financial statements, and required supplementary information presented in this report were prepared in compliance with applicable GASB pronouncements.

## Financial Section

### Management's Discussion and Analysis

The financial statements provide a snapshot of the Plan's assets and liabilities as of December 31, 2015 and the financial activities which occurred during the year. The financial statements were prepared using the economic resources measurement focus and the accrual basis of accounting. Investment activities have been reported based on trade dates and were valued pursuant to independent outside sources. All capital assets, exclusive of land, are depreciated over their useful lives. Refer to the financial statements and notes to the financial statements for additional information.

*Notes to the Financial Statements* provide additional information which is essential for a full understanding of the basic financial statements.

*Required Supplementary Information* provides additional information and details about the Plan's progress in funding its future obligations and the history of employer and employee contributions.

#### **Financial Analysis**

There are several ways to measure the Plan's financial status. One means is to determine the Plan's net position available to pay benefits. This is the difference between total assets and total liabilities. Another way is to refer to the funded ratio which takes into account the actuarial assets and actuarial liabilities of the Plan. As of January 1, 2015, the date of the last actuarial valuation, the pension benefits fund had a funded ratio of 73.7%, or for every dollar of pension benefits due participants, the Plan had approximately \$0.74 in actuarial assets available for payment. The health benefits account had a funded ratio of 53.8%, meaning the Plan had approximately \$0.54 in actuarial assets available for payment for every dollar of health benefits due.

On December 31, 2015, the Plan's net position totaled \$2,016,499,464. Of this amount, \$113,010,827 represented funds reserved in the Deferred Retirement Option Plan (DROP) and the Amended Deferred Retirement Option Plan (DROP II) accounts.

The Plan's Board has an investment allocation strategy in place and, with the help of an outside consultant, continually monitors the Plan's investments. The Plan's total assets decreased in 2015 due to unfavorable market conditions impacting investments. As of December 31, the Plan's fiduciary net position was:

	2015	2014	Amount of Change	Percentage Change
<b>Assets</b>				
Cash, short-term investments, and receivables	\$ 48,353,227	\$ 47,101,571	\$ 1,251,656	2.7%
Securities lending collateral	232,666,571	261,154,085	(28,487,514)	(10.9%)
Investments, at fair value	1,969,806,460	2,084,995,411	(115,188,951)	(5.5%)
Capital assets, net	4,766,996	4,991,625	(224,629)	(4.5%)
Total assets	2,255,593,254	2,398,242,692	(142,649,438)	(5.9%)
<b>Liabilities</b>				
Accounts payable and unsettled securities purchased	6,427,219	3,960,126	2,467,093	62.3%
Securities lending obligations	232,666,571	261,154,085	(28,487,514)	(10.9%)
Total liabilities	239,093,790	265,114,211	(26,020,421)	(9.8%)
<b>Fiduciary net position</b>	<u>\$ 2,016,499,464</u>	<u>\$ 2,133,128,481</u>	<u>\$ (116,629,017)</u>	(5.5%)

## Financial Section

### Management's Discussion and Analysis

#### **Reserves**

The Plan has established a reserve account for accumulated DROP benefits of \$113,010,827 as of December 31, 2015. These funds are restricted for individuals who elected to participate in one of the DROP programs. Upon retirement, the member could elect to receive distributions or keep the accumulated monies with the Plan. The remaining Plan net position is available to pay retirement and health benefits.

#### **Plan Activities**

Net additions were lower than Plan deductions, resulting in an overall 5.5% decrease in Plan net position for the year. For the years ended December 31, the Plan's activities were:

	2015	2014	Amount of Change	Percentage Change
<b>Additions</b>				
Contributions	\$ 121,330,503	\$ 106,520,184	\$ 14,810,319	13.9%
Net investment earnings	(37,054,557)	105,562,567	(142,617,124)	(135.1%)
Total additions, net	84,275,946	212,082,751	(127,806,805)	(60.3%)
<b>Deductions</b>				
Benefits	196,978,251	185,591,129	11,387,122	6.1%
Administrative expenses	3,926,712	3,779,006	147,706	3.9%
Total deductions	200,904,963	189,370,135	11,534,828	6.1%
Change in net position	(116,629,017)	22,712,616	(139,341,633)	(613.5%)
Beginning of year net position	2,133,128,481	2,110,415,865	22,712,616	1.1%
<b>End of year Fiduciary net position</b>	<b>\$ 2,016,499,464</b>	<b>\$ 2,133,128,481</b>	<b>\$ (116,629,017)</b>	<b>(5.5%)</b>

#### **Additions to Fiduciary Net Position**

The monies needed to pay benefits are accumulated from the contributions made from employers and employees, and income generated from the Plan's investments. Income or losses on investments are reported net of investment management expenses. Employer contributions for 2015 totaled \$71,614,704, which is 11.4% higher than the amounts contributed in 2014, due primarily to an increase in the contribution rate in January, 2015. During 2015, employees contributed a total of \$49,715,799, which is an increase of 17.7% over the 2014 amount due to increases in the contribution rate and service buybacks. The Plan's net investment return was approximately (1.9%) in 2015 compared to 5.3% in 2014. Key factors driving the loss include: international anxieties, China's slowdown, weak emerging market export economies, and the continued collapse of oil prices. The Plan had net securities lending transaction income of \$989,338.

	2015	2014	Amount of Change	Percentage Change
Employer contributions	\$ 71,614,704	\$ 64,273,417	\$ 7,341,287	11.4%
Employee contributions	49,715,799	42,246,767	7,469,032	17.7%
Net appreciation (depreciation) in fair value of investments	(55,770,238)	73,633,051	(129,403,289)	(175.7%)
Interest, dividends, real estate/alternative investments, and absolute return income	33,152,256	46,130,412	(12,978,156)	(28.1%)
Securities lending transactions income, net	989,338	700,695	288,643	41.2%
Investment expenses	(15,425,913)	(14,901,591)	(524,322)	3.5%
<b>Total additions, net</b>	<b>\$ 84,275,946</b>	<b>\$ 212,082,751</b>	<b>\$ (127,806,805)</b>	<b>(60.3%)</b>

## Financial Section

### Management's Discussion and Analysis

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

The Plan provides a lifetime pension benefit to its retired members, as well as survivor, disability, and retiree health, dental, and vision benefits. Annual expenses of the Plan include retirement benefits, DROP distributions, refunds of employee contributions, and administrative expenses. For the year ended December 31, 2015, deductions totaled \$200,904,963, an increase of 6.1% over the amount of 2014 total deductions. The increase is attributed to a 2.9 % net increase in the number of retirees, along with higher average monthly benefit payments for new retirees. Refunds of contributions to non-vested members were higher due to a 23.2% increase in the number of member refund requests, coupled with a higher average refund per member. Administrative expenses were slightly higher than those of the previous year due primarily to an increase in personnel merit increases.

	2015	2014	Amount of Change	Percentage Change
Benefits	\$ 194,733,222	\$ 184,025,261	\$ 10,707,961	5.8%
Employee refunds	2,245,029	1,565,868	679,161	43.4%
Administrative expenses	3,926,712	3,779,006	147,706	3.9%
<b>Total deductions</b>	<u>\$ 200,904,963</u>	<u>\$ 189,370,135</u>	<u>\$ 11,534,828</u>	6.1%

#### ***Capital Assets***

Capital assets, net of accumulated depreciation, had a net decrease of \$224,629 for the year ended December 31, 2015, which is comprised primarily of depreciation expense of \$432,609. See Note 9 *Capital Assets* for additional information.

#### ***Assumed Rate of Return***

The City enacted Ordinance No. 591 in 2015 which lowered the Plan's assumed rate of return from 8.00% to 7.75%. The reason that the assumed rate of investment return has been lowered is that DERP's independent investment consultant and actuary have advised that a lower rate of return is expected over the coming years for the Plan-specific asset allocation.

#### ***Requests for Information***

This management's discussion and analysis is intended to provide the Plan's Board, participating employers, and the membership with an overview of the Plan's financial position as of December 31, 2015, and a summary of the Plan's activities for the year then ended.

Questions about any of the information presented or requests for additional information should be directed to:

Denver Employees Retirement Plan  
777 Pearl Street  
Denver, CO 80203  
Phone: 303-839-5419  
Fax: 303-839-9525  
Website: [www.derp.org](http://www.derp.org)  
Email: [mbrsvs@derp.org](mailto:mbrsvs@derp.org)

## Financial Section

### Statement of Fiduciary Net Position

December 31, 2015

(with Summarized Comparative Totals for December 31, 2014)

	Pension Benefits	Health Benefits	December 31,	
			2015	2014
<b>Assets</b>				
Cash and short-term investments	\$ 42,022,653	\$ 1,560,108	\$ 43,582,761	\$ 43,678,632
Securities lending collateral	224,498,009	8,168,562	232,666,571	261,154,085
Receivables				
Unsettled securities sold	2,851,063	103,739	2,954,802	1,788,310
Interest and dividends	<u>1,751,919</u>	<u>63,745</u>	<u>1,815,664</u>	<u>1,634,629</u>
Total receivables	4,602,982	167,484	4,770,466	3,422,939
Investments, at fair value				
U.S. Government obligations	146,887,967	5,344,651	152,232,618	159,629,188
Domestic corporate bonds and other fixed income	233,731,028	8,504,513	242,235,541	227,950,419
Domestic stocks	437,047,513	15,902,366	452,949,879	540,292,161
International stocks	464,643,057	16,906,455	481,549,512	523,451,123
Real estate	177,139,987	6,445,397	183,585,384	161,858,407
Alternative investments	340,871,122	12,402,902	353,274,024	362,957,097
Absolute return	<u>100,328,943</u>	<u>3,650,559</u>	<u>103,979,502</u>	<u>108,857,016</u>
Total investments	1,900,649,617	69,156,843	1,969,806,460	2,084,995,411
Capital assets				
Land	414,943	15,098	430,041	430,041
Building and equipment, net of accumulated depreciation	<u>4,184,691</u>	<u>152,264</u>	<u>4,336,955</u>	<u>4,561,584</u>
Total assets	2,176,372,895	79,220,359	2,255,593,254	2,398,242,692
<b>Liabilities</b>				
Unsettled securities purchased	3,703,134	134,742	3,837,876	1,290,720
Securities lending obligations	224,498,009	8,168,562	232,666,571	261,154,085
Accounts payable	<u>2,498,435</u>	<u>90,908</u>	<u>2,589,343</u>	<u>2,669,406</u>
Total liabilities	<u>230,699,578</u>	<u>8,394,212</u>	<u>239,093,790</u>	<u>265,114,211</u>
<b>Net position restricted for benefits</b>	<u>\$ 1,945,673,317</u>	<u>\$ 70,826,147</u>	<u>\$ 2,016,499,464</u>	<u>\$ 2,133,128,481</u>
Net position restricted for pension and health benefits	\$ 1,832,662,490	\$ 70,826,147	\$ 1,903,488,637	\$ 2,022,999,495
Net position restricted for DROP and DROP II benefits	<u>113,010,827</u>	<u>-</u>	<u>113,010,827</u>	<u>110,128,986</u>
<b>Net position restricted for benefits</b>	<u>\$ 1,945,673,317</u>	<u>\$ 70,826,147</u>	<u>\$ 2,016,499,464</u>	<u>\$ 2,133,128,481</u>

See Notes to Financial Statements

## Financial Section

### Statement of Changes in Fiduciary Net Position

Year Ended December 31, 2015

(with Summarized Comparative Totals for the Year Ended December 31, 2014)

	Pension Benefits	Health Benefits	Year ended December 31,	
			2015	2014
<b>Additions</b>				
Contributions				
City and County of Denver, Colorado	\$ 60,397,944	\$ 4,045,036	\$ 64,442,980	\$ 57,336,647
Denver Health and Hospital Authority	6,836,653	335,071	7,171,724	6,936,770
Plan members	<u>46,689,696</u>	<u>3,026,103</u>	<u>49,715,799</u>	<u>42,246,767</u>
Total contributions	113,924,293	7,406,210	121,330,503	106,520,184
Investment earnings				
Net appreciation (depreciation) in fair value of investments	(53,786,729)	(1,983,509)	(55,770,238)	73,633,051
Interest	6,937,759	258,275	7,196,034	12,040,782
Dividends	13,681,115	508,910	14,190,025	16,482,153
Real estate, alternative investments, and absolute return income	<u>11,342,895</u>	<u>423,302</u>	<u>11,766,197</u>	<u>17,607,477</u>
	(21,824,960)	(793,022)	(22,617,982)	119,763,463
Investment expenses	<u>(14,874,877)</u>	<u>(551,036)</u>	<u>(15,425,913)</u>	<u>(14,901,591)</u>
	(36,699,837)	(1,344,058)	(38,043,895)	104,861,872
Securities lending transactions income	769,935	28,708	798,643	559,547
Securities lending transactions expenses				
Borrower rebates	501,566	18,656	520,222	374,560
Agent fees	<u>(317,693)</u>	<u>(11,834)</u>	<u>(329,527)</u>	<u>(233,412)</u>
	<u>953,808</u>	<u>35,530</u>	<u>989,338</u>	<u>700,695</u>
Net investment earnings (losses)	<u>(35,746,029)</u>	<u>(1,308,528)</u>	<u>(37,054,557)</u>	<u>105,562,567</u>
Total additions, net	78,178,264	6,097,682	84,275,946	212,082,751
<b>Deductions</b>				
Retired member benefits	176,046,015	12,905,247	188,951,262	178,306,018
DROP and DROP II benefits paid	5,781,960	-	5,781,960	5,719,243
Refunds of contributions	2,164,104	80,925	2,245,029	1,565,868
Administrative expenses	<u>3,785,416</u>	<u>141,296</u>	<u>3,926,712</u>	<u>3,779,006</u>
Total deductions	<u>187,777,495</u>	<u>13,127,468</u>	<u>200,904,963</u>	<u>189,370,135</u>
Change in net position	(109,599,231)	(7,029,786)	(116,629,017)	22,712,616
<b>Net position held in trust for benefits</b>				
Beginning of year	<u>2,055,272,548</u>	<u>77,855,933</u>	<u>2,133,128,481</u>	<u>2,110,415,865</u>
End of year	<u>\$ 1,945,673,317</u>	<u>\$ 70,826,147</u>	<u>\$ 2,016,499,464</u>	<u>\$ 2,133,128,481</u>

See Notes to Financial Statements

**Notes to Financial Statements**

**Note 1 Plan Description**

The Denver Employees Retirement Plan (the Plan) administers a cost-sharing multiple-employer defined benefit plan providing pension and post employment health benefits to eligible members. The Plan was established in 1963 by the City and County of Denver, Colorado. During 1996, the Denver Health and Hospital Authority (DHHA) was created and joined the Plan as a contractual entity. In 2001, the Plan became closed to new entrants from DHHA. All risks and costs are shared by the City and County of Denver (the City) and DHHA. There is a single actuarial evaluation performed annually that covers both the pension and post employment health benefits. All assets of the Plan are funds held in trust by the Plan for its members for the exclusive purpose of paying pension and post employment health benefits.

Substantially all of the general employees of the City, certain employees of DHHA, and all employees of the Plan are covered under the Plan. The classified service employees of the Denver Police and Denver Fire Departments, and the employees of the Denver Water Board, are covered by separate retirement systems. At December 31, 2015, the Plan membership consisted of the following:

	<b>Pension Benefits</b>	<b>Health Benefits</b>
Retirees and beneficiaries currently receiving benefits	9,074	6,298
Retirees and beneficiaries entitled to health benefits but not receiving any	-	2,776
Terminated employees entitled to benefits but not yet receiving them	3,464	3,464
Current employees:		
Vested	5,273	5,273
Non-vested	3,363	3,363
<b>Total</b>	<b>21,174</b>	<b>21,174</b>

The following brief description of the Plan is provided for general information purposes only. Sections 18-401 through 18-430.7 of the City’s Revised Municipal Code should be referred to for complete details of the Plan.

The Plan provides retirement, death and disability benefits for its members and their beneficiaries. Members who were hired before July 1, 2011, and retire at or after age 65 (or at age 55 if the sum of their age and credited service is at least 75) are entitled to an annual retirement benefit, in an amount equal to 2.0% of their final average salary for each year of credited service, payable monthly for life. Effective for employees hired after September 1, 2004, the formula multiplier was reduced to 1.5%. Final average salary is based on the member’s highest salary during a 36 consecutive month period of credited service. Members with 5 years of credited service may retire at or after age 55 and receive a reduced retirement benefit.

For members who were hired after July 1, 2011, they must be age 60 and have combined credited service of at least 85 in order to receive a normal retirement prior to age 65. Final average salary is based on the member’s highest salary during a 60 consecutive month period of credited service. Five year vesting is required of all employees in order to qualify for a benefit, regardless of their age at the time of termination of employment.

Annual cost of living adjustments are granted on an ad hoc basis. The estimated cost of benefit and contribution provisions is determined annually by an independent actuary, recommended by the Plan’s Board, and enacted into ordinance by the Denver City Council.

### Notes to Financial Statements

The health benefits account was established by City Ordinance in 1991 to provide, beginning January 1, 1992, post-employment health care benefits in the form of a premium reduction to retired members, their spouses and dependents, spouses and dependents of deceased active and retired members, and members of the Plan awaiting approval of retirement applications. During 2015, the monthly health insurance premium reduction was \$12.50 per year of service for retired participants not yet eligible for Medicare, and \$6.25 per year of service for retirees eligible for Medicare. The health insurance premium reduction can be applied to the payment of medical, dental, and/or vision insurance premiums. The benefit recipient pays any remaining portion of the premiums.

#### **Note 2 Summary of Significant Accounting Policies**

##### ***Reporting Entity***

The Plan has separate legal standing and is fiscally independent of the City. However, based upon the criterion of financial accountability as defined by Governmental Accounting Standards Board (GASB) Statement No. 14, *The Financial Reporting Entity*, as amended, the Plan is reported as a component unit of the City's financial reporting entity.

##### ***Basis of Accounting and Presentation***

The accompanying financial statements are prepared in accordance with accounting principles generally accepted in the United States of America. The Plan is accounted for using the economic resources measurement focus and the accrual basis of accounting. Employer/employee contributions and investment earnings are recognized in the period in which they are due and earned, respectively. Expenses are recognized when incurred. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

##### ***Plan Expenses***

The Plan's Board acts as the trustee of the Plan's assets. The operating and other administrative expenses incurred by the Board, or its employees, in the performance of its duties as the Plan's trustee are paid from the assets of the Plan accumulated from contributions and investment earnings. Such expenses totaled \$3,926,712 in 2015, and are reported as administrative expenses in the accompanying statement of changes in plan net position.

##### ***Investments***

The Plan's investments are reported at fair value. The fair value of domestic stocks is based on prices reported by national exchanges. The fair value of international stocks and fixed income securities are based on prices obtained from an approved independent pricing service. Fair values of real estate and alternative investments are determined by independent periodic appraisals of properties owned and valuation of assets in the various investment funds. The absolute return fund of funds' investment fair value is based upon net asset values provided by the fund's third-party administrator. Short-term investments, with the exception of international funds, are recorded at amortized cost which approximates fair value. Investment earnings are recognized as earned. Gains and losses on sales and exchanges of securities are recognized on the trade date.

For 2015, the Plan realized net gain on the disposition of investments of \$74,807,535. The calculation of realized gains and losses is independent of the calculation of the net appreciation in the fair value of the Plan's investments and is determined using the weighted average cost method. Unrealized gains and losses on investments held for more than one year and sold in the current year were included in the net appreciation in the fair value of investments reported for 2015.

### Notes to Financial Statements

Investments of the Plan shall be in accordance with all applicable laws of the State of Colorado and the City, specifically:

- Investments shall be solely in the interest of the participants and their beneficiaries and for the exclusive purpose of providing benefits to the participants and their beneficiaries.
- Investments shall be made with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent investor acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.
- Investments shall be diversified so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.

#### **Capital Assets**

Capital assets, which include land, building, furniture, and equipment, are recorded at historical cost. The Plan's capitalization threshold for capital assets is \$500 of cost and a useful life in excess of one year. The costs of routine maintenance and repairs that do not add to the value of capital assets or materially extend assets' lives are not capitalized. Depreciation on capital assets, excluding land, is calculated using the straight-line method over the following estimated useful lives:

Building	30 years
General office equipment and furniture	10 years
Internally generated computer software	15 years
Computer equipment	5 years

#### **Income Taxes**

The Plan's current determination letter issued by the Internal Revenue Service, dated February 27, 2014, qualifies the Plan as a tax-exempt entity pursuant to Section 401(a) of the Internal Revenue Code. Earnings on the trust funds are exempt from federal income tax under Section 501(a) of the Internal Revenue Code.

#### **Estimates Made by Management**

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 certain estimates and assumptions that affect the reported amounts of assets, 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.

#### **Prior-Year Summarized Totals**

The basic financial statements include certain prior year summarized comparative information in total, but do not present detail for the pension or health benefits accounts. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the Plan's audited financial statements for the year ended December 31, 2014, from which the summarized information was derived.

### Notes to Financial Statements

#### ***Current Economic Conditions***

The current economic environment continues to present public employee benefit plans such as the Plan with challenges which have resulted in substantial volatility in the fair value of investments. The accompanying financial statements have been prepared using values and information available to the Plan as of the date of the financial statements. Due to the volatility of economic conditions, the values of assets recorded in the financial statements could change materially in the future.

#### **Note 3 Contributions**

The Plan's funding policy provides for annual contributions at rates determined by an independent actuary recommended by the Plan's Board and enacted by City ordinance which, when expressed as a percentage of annual covered payroll, are sufficient to accumulate assets to pay benefits when due. During 2015, the actuarially determined contribution rates, expressed as a percentage of annual covered payroll, for the pension and health benefits were 17.16% and 1.18%, respectively, for a combined total of 18.34%. The City enacted Ordinance No. 701 in 2014 to re-set the combined total contribution rate to 19.50% effective January, 2015, with no change for 2016. In 2015, employers contributed a total of 11.50% of covered payroll and employees made a pre-tax contribution of 8.00% in accordance with Section 18-407 of the City's Revised Municipal Code. The employees' contribution was handled as a payroll deduction and was forwarded to the Plan with the employers' contribution. During 2015, the employers contributed \$67,234,597 for pension benefits and \$4,380,107 for health benefits while the employees contributed a total of \$46,689,696 for pension benefits and \$3,026,103 for health benefits.

An actuarial valuation is performed annually by an independent actuarial consultant to determine that contributions are sufficient to provide funds for future benefits and to evaluate the funded status of the Plan. For 2015, in accordance with the January 1, 2015, actuarially determined contribution requirements, the total required contribution was \$104,263,846 (\$55,200,439 of normal cost and \$42,365,006 amortization of the unfunded actuarial accrued liability for pension benefits; \$2,559,391 of normal cost and \$4,139,010 amortization of the unfunded actuarial accrued liability for health benefits) based on a rate of 18.34% of projected payroll. The actual contribution was \$119,824,670 using a rate of 19.50% of covered payroll, which when combined with the members' repayments of \$1,505,833, discussed below, resulted in total contributions of \$121,330,503. In accordance with a separate agreement between DHHA and the Plan, DHHA made a supplemental contribution in the amount of \$2,311,289, which is included in the total contributions amount.

During 2015, employee contributions totaled \$49,715,799 and were allocated to pension and health benefits in the same manner as the employers' contributions. Regular employee contributions were not required or allowed between January 1, 1979, and September 30, 2003. City ordinance currently allows members to repay refunded contributions plus interest to reinstate service credits for periods prior to January 1, 1979. Any employee who made contributions after September 30, 2003, and was not vested upon leaving covered service could request a refund of those contributions. Eligible active members may also purchase permissive service credits in accordance with the Internal Revenue Code, which includes a maximum of five years of nonqualified service credits. Members paid \$1,505,833 under these provisions during 2015.

**Notes to Financial Statements**

**Note 4 Deferred Retirement Option Plan (DROP)**

Between January 1, 2001, and April 30, 2003, active members of the Plan who were eligible for a normal or rule-of-75 retirement could choose to enter the Deferred Retirement Option Plan (DROP) for a maximum of four years. After April 30, 2003, no active member with an actual and effective date of retirement after May 1, 2003, could enter or participate in DROP. Under DROP, the member’s monthly retirement benefit was calculated as of the date of DROP entry. While participating in DROP, the member continued to work for the employer, earning a regular salary. The monthly retirement benefits were deposited into a DROP account maintained by the Plan. The balance in each member’s DROP account earns interest at a rate equal to the actuarial assumed rate of return, currently 7.75% per annum. Sections 18-422 through 18-429 of the City’s Revised Municipal Code should be referred to for more complete information on DROP. Upon retirement, members have access to the funds accumulated during their participation in DROP. During 2015, a total of \$8,466,412 in interest was credited to members’ DROP accounts. During 2015, a total of \$5,700,291 was distributed from the DROP accounts to members who had retired and exited DROP. As of December 31, 2015, the reserve for DROP payments was \$108,391,153.

**Note 5 Amended Deferred Retirement Option Plan (DROP II)**

Between May 1, 2003, and August 31, 2003, active members of the Plan who were eligible for a normal or rule-of-75 retirement could choose to enter the Amended Deferred Retirement Option Plan (DROP II) for a maximum of five years. While participating in DROP II, the member continued to work for the employer, earning a regular salary. The member’s monthly retirement benefits were deposited into a DROP II account maintained by the Plan. The balance in each member’s DROP II account earns interest equal to the Plan’s investment earnings rate provided it is not less than 3% per annum and not more than the Plan’s annual actuarial assumed rate of return, currently 7.75% per annum. Sections 18-430 through 18-430.7 of the City’s Revised Municipal Code should be referred to for more complete information on DROP II. Upon exiting DROP II, members have access to the funds accumulated during their participation in DROP II. A total of \$194,389 in interest was credited to members’ DROP II accounts during 2015. Also during 2015, a total of \$81,669 was distributed to members who had exited DROP II. As of December 31, 2015, the reserve for DROP II payments was \$4,619,674.

**Note 6 Funded Status and Funding Progress of Health Benefits**

The funded status of the Plan’s Health Benefits as of January 1, 2015, was as follows:

	<b>Health Benefits</b>
Actuarial accrued liability (AAL)	\$152,922,281
Actuarial value of Plan assets	82,194,505
Unfunded AAL	\$70,727,776
Funded ratio (actuarial value of Plan assets/AAL)	53.7%
Covered payroll (active Plan members)	\$568,562,500
Unfunded AAL as a percentage of covered payroll	12.4%

The actuarial valuation of the Plan’s health benefits involve estimates of the value of reported amounts and assumptions about the probability of certain events well into the future. Actuarially determined amounts are subject to revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information immediately following the notes to the financial statements, presents multi-year trend information showing whether the actuarial value of the Plan’s assets is increasing or decreasing over time.

### Notes to Financial Statements

The value of projected benefits for financial reporting purposes is based upon the substantive plan in effect at the time of each actuarial valuation, and the pattern of sharing costs between the employers and plan members to that point. Consistent with the long-term perspective of the actuarial calculations, the actuarial methods and assumptions used include techniques intended to reduce short-term volatility in the actuarial accrued liabilities and the actuarial value of assets.

For the January 1, 2015, actuarial valuation, the projected unit credit valuation method was used. The Actuarial Value of Assets recognizes 20% of the difference between the projected actuarial value and the fair value at the valuation date. This method has the effect of smoothing volatility in investment returns. The actuarial assumptions included a 7.75% investment rate of return (net of administrative expenses), projected salary increases of 3.25% – 7.25%, including inflation of 2.75%, and no cost of living increases. Healthcare cost trend rate is not applicable for health benefits as the benefit is based upon the member’s age and years of service. The amortization period at December 31, 2015, was 30 years using a level percent of pay, closed basis, amortization method.

#### Note 7 Deposits and Investments

It is the objective of the Plan in managing the trust as a whole to provide a net realized nominal rate of return meeting or exceeding the actuarial assumption of 7.75% annualized, over a full market/economic cycle of three to seven years. The relative investment objective of the Plan is to exceed the rate of return that would have been achieved by a statically allocated and passively managed portfolio, at the same risk, in accordance with a long-term asset allocation strategy of the following approximate percentages: equity 46.0%, fixed income 20.5%, real estate 8.0%, alternative investments 20.5%, and absolute return 5.0%. At December 31, 2015, the Plan’s deposit and investment balances were as follows:

	Fair Value
U.S. Treasury securities	\$ 80,729,076
U.S. Agency securities	71,503,542
Corporate and mortgage bonds	242,235,541
Domestic stocks	452,949,879
International stocks	481,549,512
Real estate	183,585,384
Alternative Investments	353,274,024
Absolute return	103,979,502
Cash and short-term investments	43,582,761
Total	\$ 2,013,389,221

A portion of the Plan’s fixed income assets are exposed to risks, including credit risk, concentration of credit risk, interest rate risk, and foreign currency risk, that have the potential to result in losses.

#### Credit Risk

To mitigate the risk that issuers or other counterparties to an investment will not fulfill their obligations, the Plan manages credit risk through the constraints on investments specified in each manager’s investment guidelines included in the Plan’s Investment Policy. Securities implicitly guaranteed by the U.S. Government are included.

The following table provides information regarding Standard & Poor’s (S&P) and Moody’s credit ratings associated with the Plan’s investment in debt securities as of December 31, 2015:

## Financial Section

### Notes to Financial Statements

#### Note 7 DEPOSITS AND INVESTMENTS (continued)

S&P	Moody's	Asset Backed	Corporate	Non-U.S. Government Bonds	Mortgage Backed	Implicit U.S. Government Agencies	Total
AAA	Aaa	\$ 394,970	\$ 17,534,841	\$ -	\$ 21,719,617	\$ 2,756,089	\$ 42,405,517
AAA	NR	-	-	-	853,708	-	853,708
AA+ to AA-	Aa3 to A1	24,003	2,494,238	-	1,304,278	68,576,671	72,399,190
A+ to A-	A1 to Baa2	57,947	6,916,935	-	3,148,773	-	10,123,655
BBB+ to BBB-	A3 to Baa3	72,282	12,305,941	-	3,927,758	-	16,305,981
BB+ to BB-	Ba3 to B1	55	15,038,263	-	2,985	-	15,041,303
B+ to B-	B1 to Caa1	-	9,344,429	-	-	-	9,344,429
CCC+ to CCC-	B3 to Caa2	88,370	1,505,001	-	-	-	1,593,371
D	NR	-	639,449	-	-	-	639,449
NR	Aaa to Baa2	-	-	42,681,895	60,002	-	42,741,897
NR	NR	-	91,922,517	10,197,284	-	-	102,119,801
		<u>\$ 637,627</u>	<u>\$ 157,701,614</u>	<u>\$ 52,879,179</u>	<u>\$ 31,017,121</u>	<u>\$ 71,332,760</u>	<u>\$ 313,568,301</u>
U.S. Government							80,729,076
Explicit U.S. Government Agencies							170,782
Total							<u>\$ 394,468,159</u>

NR - no rating available.

#### Concentration of Credit Risk

The Plan is potentially exposed to credit risk concentrations from a single issuer. The plan has no formal policy for concentration of credit risk. As of December 31, 2015, the Plan had no exposure to any single issuer exceeding 1% of total plan assets.

#### Custodial Credit Risk

In the event of a failure of a financial institution or counterparty, custodial credit risk is the risk that the Plan would not be able to recover its deposits, investments, or collateral securities in the possession of an outside party. The Plan has no formal policy for custodial credit risk for deposits and investments. At December 31, 2015, the Plan did not have any deposits, investments, or collateral securities subject to custodial credit risk.

#### Interest Rate Risk

Interest rate risk is the risk that changes in financial market rates of interest will adversely affect the value of an investment. The Plan manages its exposure to changing interest rates by making allocations to variable-rate debt instruments, which have no interest rate sensitivity, and by limiting its target allocation to fixed-rate securities to 14% of the total Plan portfolio. Both allocations are set by the Investment Policy. The Investment Policy further constrains the duration (a measure of interest rate risk) of the fixed-rate allocation to prudent levels. At December 31, 2015, the Plan's fixed income investments had the following maturities by investment type:

Investment Type	Fair Value	Less than 1			More than 10	
		Year	1-5 Years	6-10 Years	Years	
U.S. Treasury securities	\$ 80,729,076	\$ 165,083	\$ 45,520,063	\$ 21,406,475	\$ 13,637,455	
U.S. agency securities	71,503,542	5,788	46,057,124	20,714,728	4,725,902	
Asset backed	637,627	1,154	231,017	234,258	171,198	
Corporate	157,701,614	1,338,824	120,677,798	30,099,316	5,585,676	
Non-U.S. Government bonds	52,879,179	5,578,410	22,953,201	12,533,793	11,813,775	
Mortgage backed	31,017,121	62,677	12,553,306	12,729,398	5,671,740	
Total	<u>\$ 394,468,159</u>	<u>\$ 7,151,936</u>	<u>\$ 247,992,509</u>	<u>\$ 97,717,968</u>	<u>\$ 41,605,746</u>	

## Financial Section

### Notes to Financial Statements

#### Note 7 DEPOSITS AND INVESTMENTS (continued)

##### Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The Plan's Investment Policy allows 18.5% to 30.0% of total investments to be invested in international equities. The Plan's Investment Policy allows 1.5% to 3.5% of total investments to be invested in international fixed income. The following positions represent the Plan's total exposure to foreign currency risk (in U.S. Dollars) as of December 31, 2015:

Foreign Currency	Equities	Fixed Income	Total
Euro	\$ 104,858,029	\$ -	\$ 104,858,029
British Pound Sterling	67,294,583	2,220	67,296,803
Japanese Yen	66,829,165	-	66,829,165
Chinese Yuan	39,031,935	18,019	39,049,954
South Korean Won	29,920,944	111,790	30,032,734
Swiss Franc	23,251,562	-	23,251,562
Taiwan Dollar	21,327,504	-	21,327,504
South African Rand	10,465,387	4,235,606	14,700,993
Brazilian Real	9,555,003	4,002,110	13,557,113
Australian Dollar	13,418,267	-	13,418,267
Indian Rupee	12,220,063	-	12,220,063
Thai Baht	6,191,852	4,356,109	10,547,961
Russian Ruble	7,609,454	2,478,306	10,087,760
Hong Kong Dollar	9,643,078	-	9,643,078
Mexican Peso	4,527,690	4,753,230	9,280,920
Swedish Krona	8,656,398	-	8,656,398
Malaysian Ringgit	3,196,016	4,663,321	7,859,337
Canadian Dollar	7,596,869	-	7,596,869
Turkish Lira	3,713,019	3,769,569	7,482,588
Indonesian Rupiah	3,008,015	4,346,793	7,354,808
Polish Zloty	2,036,677	4,955,126	6,991,803
Singapore Dollar	6,201,700	-	6,201,700
Hungarian Forint	1,504,008	2,686,199	4,190,207
Danish Krone	4,010,394	-	4,010,394
Columbian Peso	438,669	3,007,092	3,445,761
New Israeli Shekel	3,212,872	-	3,212,872
Norwegian Krone	2,888,480	-	2,888,480
United Arab Emirati Dirham	1,504,008	-	1,504,008
Romanian Leu	-	1,472,675	1,472,675
New Zealand Dollar	1,098,968	-	1,098,968
Chilean Peso	1,018,339	46,485	1,064,824
Qatari Riyal	955,672	-	955,672
Peru Sole	-	854,862	854,862
Philippine Peso	564,003	253,224	817,227
Czech Koruna	799,004	-	799,004
Egyptian Pound	141,001	-	141,001
Other	287,427	-	287,427
	-	-	-
<b>Total</b>	<b><u>\$ 478,976,055</u></b>	<b><u>\$ 46,012,736</u></b>	<b><u>\$ 524,988,791</u></b>

## Financial Section

### Notes to Financial Statements

#### Note 8 Securities Lending Transactions

The Investment Policy permits the Plan to participate in a securities lending program to augment income. The program is administered by the Plan's custodial agent bank, which lends certain securities for a predetermined period of time, to an independent broker/dealer (borrower) in exchange for collateral. Collateral may be cash, U.S. government securities, defined letters of credit, or other collateral approved by the Plan. Loans of domestic securities are initially collateralized at 102% of the fair value of securities lent. Loans of international securities are initially collateralized at 105% of the fair value of securities lent. The custodial agent bank determines daily that required collateral meets a minimum of 100% of the fair value of securities on loan for domestic securities lent and 105% for international securities lent. The Plan continues to receive interest and dividends during the loan period as well as a fee from the borrower. There are no restrictions on the amount of securities that can be lent at one time. The duration of securities lending loans generally matches the maturation of the investments made with cash collateral. At December 31, 2015, the fair value of underlying securities lent was \$322,970,896. The fair value of associated collateral was \$336,192,766; of this amount, \$232,666,570 represents the fair value of cash collateral as reported on the financial statements and \$103,526,196 is the fair value of non-cash collateral not reported on the financial statements. The Plan has no credit risk exposure at December 31, 2015, since the collateral held exceeds the value of securities lent.

The Plan reports securities loaned as assets on the Statement of Plan Net Position. Cash received as collateral on securities lending transactions and investments made with that cash are recorded as an asset and liability. Investments purchased with cash collateral are recorded as Securities Lending Collateral with a corresponding liability as Securities Lending Obligations.

#### Note 9 Capital Assets

The Plan's capital assets activity for the year ended December 31, 2015, was as follows:

	<u>January 1</u>	<u>Additions</u>	<u>Deletions</u>	<u>December 31</u>
Capital assets, not being depreciated				
Land	\$ 430,041	\$ -	\$ -	\$ 430,041
Capital assets, being depreciated				
Building	1,136,013	-	-	1,136,013
Furniture and equipment	6,138,509	207,981	(23,897)	6,322,593
Total capital assets, being depreciated	7,274,522	207,981	(23,897)	7,458,606
Accumulated depreciation				
Building	(873,362)	(37,522)	-	(910,884)
Furniture and equipment	(1,839,576)	(395,088)	23,897	(2,210,767)
Total accumulated depreciation	(2,712,938)	(432,610)	23,897	(3,121,651)
Total capital assets being depreciated, net	4,561,584	(224,629)	-	4,336,955
<b>Capital assets, net</b>	<u>\$ 4,991,625</u>	<u>\$ (224,629)</u>	<u>\$ -</u>	<u>\$ 4,766,996</u>

The 2015 depreciation expense for the pension and health benefit accounts was \$405,442 and \$27,168 respectively.

#### Note 10 Commitments and Contingencies

As of December 31, 2015, the Plan had commitments for the future purchase of investments in private debt of \$100,158,527, real estate of \$17,783,352, and alternative investments of \$207,243,548. The purpose of such commitments is to assist the Plan in maintaining the designated level of exposure to these asset classes. The anticipated pace of funding the commitments coincides with the expected distribution rate of invested assets.

### Notes to Financial Statements

#### Note 11 Net Pension Liability of Employers

The components of the net pension liability of the employers at December 31, 2015, were as follows:

Total pension liability	\$3,124,965,445
Plan fiduciary net position	<u>1,945,673,317</u>
Net pension liability	<u>\$1,179,292,128</u>
Plan fiduciary net position as a percentage of the total pension liability	62.26%

#### Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of January 1, 2015 with a measurement date of December 31, 2015, using the following actuarial assumptions, applied to all prior periods included in the measurement:

Inflation		2.75%
Salary Increases	3.25% to 7.25%	
Investment Rate of Return		7.75%

The mortality tables were based on the RP-2000 Combined Mortality Table for Males and Females, as appropriate, with adjustments for mortality improvements based on Scale AA. The Disabled mortality tables were based on the RP-2000 Disabled Life Mortality Table for Males and Females, as appropriate, with adjustments for mortality improvements based on Scale AA.

The actuarial assumptions used in the January 1, 2015 valuation were based on the results of an actuarial experience study as of January 1, 2013.

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 arithmetic real rates of return were adopted by the Plan's trustees after considering input from the Plan's investment consultant and actuary. For each major asset class that is included in the pension plan's target asset allocation as of December 31, 2015 these best estimates are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
US Equities	22.50%	4.30%
Non-US Developed Markets	15.50%	6.00%
Emerging Markets	8.00%	9.80%
<b>Total Public Equity</b>	<b>46.00%</b>	
Core Fixed Income	11.50%	0.80%
Debt	2.50%	5.90%
Private Debt	6.50%	8.40%
<b>Total Fixed Income</b>	<b>20.50%</b>	
Real Estate	8.00%	6.40%
Absolute Return	5.00%	3.60%
Energy MLP's	7.00%	7.30%
Private Equity/Other	13.50%	7.70%
Cash	<u>0.00%</u>	0.50%
<b>Total</b>	<u><u>100.00%</u></u>	

**Notes to Financial Statements**

**Note 11 Net Pension Liability of Employers (continued)**

A single discount rate of 7.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.75%. The projection of cash flows used to determine this single rate assumed that plan member and employer contributions will be made at the current contribution rate. Based on these assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current 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.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the Plan’s net pension liability, calculated using a single discount rate of 7.75%, as well as what the Plan’s net pension liability would be if it were calculated using a single discount rate that is 1-percentage point lower or 1-percentage point higher:

	<b>1% Decrease</b>	<b>Current Single Discount Rate Assumption</b>	<b>1% Increase</b>
	<b>6.75%</b>	<b>7.75%</b>	<b>8.75%</b>
Net Pension Liability	\$1,507,452,709	\$1,179,292,128	\$900,586,146

**Note 12 Other Post Employment Benefit Plan – Implicit Rate Subsidy**

Employees of the Plan, along with a portion of the employees of DHHA (those employed prior to 2001 who have elected to remain members of the Plan), and a majority of the employees of the City (certain fire and police personnel are excluded), are participants in the City’s health care plan. For active employees participating in the City’s health care plan, the employers pay a certain percentage of monthly premiums and the employees pay the remainder of the premium. Vested retired employees participating in the City’s health care plan pay 100% of the premium and are eligible for an insurance premium reduction payment from the Plan, see Note 1. In establishing premiums, the active and retired employees from the three employers are grouped together without age-adjustment or differentiation between employers. The premiums are the same for both active and retired employees creating an implicit rate subsidy for the retirees.

The City is acting in a cost-sharing multiple-employer capacity for this other post employment benefit plan. The City’s Revised Municipal Code, Section 18-412, authorizes the Plan retirees to participate in the health insurance programs offered to the active employees. To be eligible, a retiree must be a minimum of 55 years of age if hired prior to July 1, 2011, and a minimum of 60 years of age if hired after July 1, 2011, with 5 years of service and have begun receiving their pension benefit. Coverage ceases when one reaches Medicare eligibility. For purposes of calculating the implicit rate subsidy, it was estimated there were 1,470 retirees not yet covered by Medicare who were covered by the health insurance programs. There is no stand-alone report for this plan and it is not included in the City’s financial statements. The City’s required contribution toward the implicit rate subsidy is based on pay-as-you-go financing. Contributions made by DERP toward the implicit rate subsidy were \$16,757, \$15,445, and \$16,274 for the years ended December 31, 2015, 2014 and 2013, respectively, which is 112.5%, 105.1%, and 85.4% of the required contribution for each year ended, based upon pay-as-you-go financing.

A Schedule of Funding Progress and Schedule of Employer Contributions are presented as Required Supplementary Information following the notes to the financial statements. The Schedule of Funding Progress presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits. Both the Schedule of Funding Progress and the Schedule of Employer Contributions present information related to the cost-sharing plan as a whole, of which the

### Notes to Financial Statements

#### **Note 12 Other Post Employment Benefit Plan – Implicit Rate Subsidy (continued)**

Plan is one participant, and should provide information helpful for understanding the scale of the information presented relative to the Plan.

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

For the December 31, 2014, actuarial valuation of the implicit rate subsidy, the entry age normal, level percent of pay, valuation method was used. The actuarial assumptions included a 3.0% general inflation rate, 4.0% investment rate of return, a 3.25% salary increase, and health care cost trend grading from 8.0% decreasing by 0.5% per year to 5.0% thereafter. The amortization period was 30 years, open basis, using a level percentage of pay amortization method. The actuarial valuation of the implicit rate subsidy is performed every two years.

## Financial Section

### Required Supplementary Information (Unaudited)

#### Schedule of Changes in Net Pension Liability and Related Ratios (Ultimately 10 Fiscal Years will be displayed)

Fiscal year ending December 31,	2015	2014
<b>Total Pension Liability</b>		
Service Cost (Entry-Age Normal)	\$ 46,419,739	\$ 42,793,142
Interest on the Total Pension Liability	229,130,437	221,367,921
Benefit Changes	-	-
Difference between Expected and Actual Experience	29,122,513	-
Transition to Entry-Age Normal <sup>(1)</sup>	-	140,652,205
Assumption/Method Changes <sup>(2)</sup>	73,157,470	-
Benefit Payments	(181,827,975)	(171,178,475)
Refunds	(2,164,104)	(1,507,554)
<b>Net Change in Total Pension Liability</b>	<b>193,838,080</b>	<b>232,127,239</b>
<b>Total Pension Liability - Beginning</b>	<b>2,931,127,365</b>	<b>2,699,000,126</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 3,124,965,445</b>	<b>\$ 2,931,127,365</b>
<b>Plan Fiduciary Net Position</b>		
Employer Contributions	\$ 67,234,597	\$ 59,941,041
Employee Contributions	46,689,696	39,521,451
Pension Plan Net Investment Income	(35,746,029)	101,595,704
Benefit Payments	(181,827,975)	(171,178,475)
Refunds	(2,164,104)	(1,507,554)
Pension Plan Administrative Expense	(3,785,416)	(3,638,296)
Other Income	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(109,599,231)</b>	<b>24,733,871</b>
<b>Total Fiduciary Net Position - Beginning</b>	<b>2,055,272,548</b>	<b>2,030,538,677</b>
<b>Total Fiduciary Net Position - Ending (b)</b>	<b>\$ 1,945,673,317</b>	<b>\$ 2,055,272,548</b>
<b>Net Pension Liability - Ending (a)-(b)</b>	<b>\$ 1,179,292,128</b>	<b>\$ 875,854,817</b>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	62.26%	70.12%
<b>Covered Employee Payroll</b>	\$568,562,500	\$540,229,189
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	207.42%	162.13%

<sup>(1)</sup> Transition liability is the additional liability due to the transition from the Projected Unit Cost to Entry-Age Normal actuarial cost method.

<sup>(2)</sup> As of October 1, 2015, the valuation interest rate was lowered from 8% to 7.75%.

## Financial Section

---

### Required Supplementary Information (Unaudited)

#### Schedule of the Net Pension Liability (Ultimately 10 Fiscal Years will be displayed)

<b>Fiscal Year Ending December 31,</b>	<b>Total Pension Liability</b>	<b>Plan Net Position</b>	<b>Net Pension Liability</b>	<b>Plan Net Position as a % of Total Pension Liability</b>	<b>Covered Payroll</b>	<b>Net Pension Liability as a % of Covered Payroll</b>
2014	\$2,931,127,365	\$2,055,272,548	\$875,854,817	70.12%	\$540,229,189	162.13%
2015	\$3,124,965,445	\$1,945,673,317	\$1,179,292,128	62.26%	\$568,562,500	207.42%

## Financial Section

### Required Supplementary Information (Unaudited)

#### Schedule of Employer Contributions

Fiscal Year Ending December 31,	Actuarially Determined Contributions (a)	Actual Contributions (b)	Contribution Deficiency (Excess) (a)-(b)	Covered Payroll (c)	Actual Contribution as a % of Covered Payroll (b)/(c)
2006	\$42,277,006	\$37,809,048	\$4,467,958	\$495,285,185	7.63%
2007	39,623,830	40,955,026	(1,331,196)	499,462,875	8.20%
2008	41,699,683	44,362,545	(2,662,862)	545,835,393	8.13%
2009	54,392,610	43,127,064	11,265,546	564,986,660	7.63%
2010	48,995,846	42,228,203	6,767,643	506,045,186	8.34%
2011	52,000,472	45,703,351	6,297,121	517,398,105	8.83%
2012	56,054,792	49,756,639	6,298,153	517,396,257	9.62%
2013	55,397,564	56,427,308	(1,029,744)	531,559,017	10.62%
2014	55,871,677	59,941,041	(4,069,364)	540,229,189	11.10%
2015	59,811,786	67,234,597	(7,422,811)	568,562,500	11.83%

#### Notes to Schedule of Contributions

**Valuation Date:** January 1, 2015  
**Notes:** Actuarially determined contribution rates are calculated as of December 31 of each year and are applicable for the following calendar (fiscal) year.

#### Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Percentage of Payroll, Annually Established 30-Year Closed Bases
Remaining Amortization Period	Approximately 28 Years
Asset Valuation Method	Smoothed market
Inflation	2.75%
Salary Increases	3.25% to 7.25%
Investment Rate of Return	7.75%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2013 valuation pursuant to an experience study of the period 2008-2012.
Mortality	RP-2000 Combined Mortality Table Projected Via Scale AA to 2020, with Multipliers Specific to Gender and Payment Status of Employee.

#### Other Information:

**Notes:** There were no benefit changes during the year.  
As of October 1, 2015, the valuation interest rate was lowered from 8% to 7.75%.  
The latest experience study was conducted in 2013 covering the 5-year period of January 1, 2008 to December 31, 2012. At the time, the recommended mortality table was expected to produce a margin of 8% on the retired male mortality experience and 7% on the retired female experience (Source: Denver Employees Retirement Plan 2013 Actuarial Experience Study for the period ending December 31, 2012, Page 24, 25).

## Financial Section

---

### Required Supplementary Information (Unaudited)

#### Schedule of Investment Returns Last 10 Fiscal Years

Fiscal Year Ending December 31,	Annual Return <sup>(1)</sup>
2006	13.72%
2007	10.57%
2008	(26.17%)
2009	13.74%
2010	13.89%
2011	(0.31%)
2012	12.54%
2013	17.99%
2014	4.91%
2015	(1.96%)

<sup>(1)</sup> Annual money-weighted rate of return, net of Investment expenses

## Financial Section

### Required Supplementary Information (Unaudited)

#### Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Projected Unit Credit (b)	Unfunded AAL (Funding Excess) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	Unfunded AAL (Funding Excess) as a Percentage of Covered Payroll (b-a)/(c)
<b>Health Benefits</b>						
1/1/10	\$90,414,800	\$141,642,522	\$51,227,722	63.8%	\$506,045,186	10.1%
1/1/11	87,609,491	143,112,474	55,502,983	61.2	517,398,105	10.7
1/1/12	84,679,890	142,966,927	58,287,037	59.2	517,396,257	11.3
1/1/13	82,992,647	148,886,318	65,893,671	55.7	531,559,017	12.4
1/1/14	82,736,993	149,782,074	67,045,081	55.2	540,229,189	12.4
1/1/15	82,194,505	152,922,281	70,727,776	53.7	568,562,500	12.4
<b>Implicit Rate Subsidy</b>						
12/31/13	\$0	\$89,879,000	\$89,879,000	0.0%	\$464,092,000	19.4%
12/31/14	0	73,738,477	73,738,477	0.0	487,407,934	15.1
12/31/15	0	73,494,705	73,494,705	0.0	503,248,691	14.6

## Financial Section

### Required Supplementary Information (Unaudited)

#### Schedule of Employer Contributions

Year beginning January 1	Annual actuarially required contribution	Percentage contributed
<b>Health Benefits</b> <sup>(1) (2)</sup>		
2010 <sup>(3)</sup>	\$4,290,712	68.2%
2011 <sup>(4)</sup>	4,965,060	84.6
2012 <sup>(5)</sup>	5,153,185	82.3
2013 <sup>(6)</sup>	4,721,761	87.6
2014 <sup>(7)</sup>	4,093,763	105.8
2015 <sup>(8)</sup>	4,322,064	101.3
<b>Implicit Rate Subsidy</b>		
2013	\$6,421,000	85.4%
2014	4,987,182	105.1
2015	5,048,374	112.5

(1) Employers made contributions based on the legally required rates.

(2) Excludes DHHA supplemental.

(3) Beginning on January 1, 2010, the employers and employees contributed 8.5% and 4.5%, respectively.

(4) Beginning on January 1, 2011, the employers and employees contributed 9.5% and 5.5%, respectively.

(5) Beginning on January 1, 2012, the employers and employees contributed 10.25% and 6.25%, respectively.

(6) Beginning on January 1, 2013, the employers and employees contributed 11.00% and 7.00%, respectively and amortization method changed from level dollar 30-year open to level percent of pay 30-year closed.

(7) Beginning on January 1, 2014, the employers and employees contributed 11.20% and 7.30%, respectively.

(8) Beginning on January 1, 2015, the employers and employees contributed 11.50% and 8.00%, respectively.

## Financial Section

---

### Supporting Schedules

#### Schedule of Administrative Expenses Year ended December 31, 2015

Personnel services:	
Salaries	\$ 1,618,419
Employee benefits	636,493
Total personnel services	<u>2,254,912</u>
Professional services:	
Actuarial	73,144
Legal	-
Retirement board	28,864
Audit	49,250
Consultation	5,735
Total professional services	<u>156,993</u>
Office operations:	
Plan insurance	99,157
Postage	75,208
Office forms and printing	13,657
Office equipment	30,069
Employee travel and conferences	10,514
Telephone	13,435
Membership education	4,834
Miscellaneous operating	11,283
Employee education	10,468
Office supplies	10,024
Publications	2,542
Automobile	4,716
Total office operations	<u>285,907</u>
Computer operations:	
Hardware and software maintenance	-
Software licenses and hosting fees	596,091
Supplies and other expenses	7,173
Total computer operations	<u>603,264</u>
Miscellaneous administrative expenses:	
Building operations	193,027
Depreciation expense	432,609
Total miscellaneous administrative expenses	<u>625,636</u>
<b>Total</b>	<u><u>\$ 3,926,712</u></u>

---

## Financial Section

---

### Supporting Schedules

#### Schedule of Investment Expenses Year ended December 31, 2015

Alternative investment portfolio management	\$ 4,263,450
International equity portfolio management	2,638,214
Domestic equity portfolio management	2,555,443
Fixed income portfolio management	2,119,929
Real estate portfolio management	1,863,446
Absolute return investment portfolio management	1,093,217
Other investment related expenses	788,492
Custody	103,722
	<hr/>
<b>Total</b>	<b>\$ 15,425,913</b>
	<hr/> <hr/>

# Investment Section

This Page Intentionally Left Blank



**Summit Strategies Group**

April 29, 2016

Steven E. Hutt  
Executive Director  
Denver Employees Retirement Plan  
777 Pearl Street  
Denver, Colorado 80203

Dear Mr. Hutt:

This letter reviews the performance for the Denver Employees Retirement Plan (DERP) through December 31, 2015.

The DERP investment portfolio posted a negative return in the fiscal year ended December 31, 2015, returning -1.34% gross of fees. Performance exceeded DERP's strategic policy benchmark return of -2.11%, but fell short of the -0.05% median return of the BNY Mellon Public Fund Universe. As a result, DERP's one-year performance ranked in the 88<sup>th</sup> percentile of the Public Fund Universe. The best performing asset classes in the DERP investment portfolio were real estate (up 16.16%) and private equity (up 12.91%). The worst performing asset classes were energy investments and energy-related master limited partnerships, posting losses during the year, of -27.34% and -26.81%, respectively.

Over the trailing 3 years ended 12/31/15, DERP achieved an annualized return of 7.48%, outperforming the strategic policy benchmark return of 6.37% and ranking in the 41<sup>st</sup> percentile of the Public Fund Universe, outperforming 59% of other public funds. The trailing 5-year return currently stands at 7.15%, outperforming the strategic policy benchmark return of 6.43% and ranking in the 41<sup>st</sup> percentile of the Public Fund Universe. DERP's trailing 10-year annualized return is 5.83%, better than the 5.36% strategic policy benchmark return and ranking in the 56<sup>th</sup> percentile of the BNY Mellon Public Fund Universe.

As DERP's investment consultant, Summit Strategies Group calculates performance statistics utilizing fair values obtained from custodial records or other statements. Performance is determined using a time-weighted calculation methodology. Summit makes comparisons with other public pension plans, evaluates specific portfolio sector performance, and compares portfolio returns to a strategic policy benchmark. The strategic policy benchmark is comprised of a weighted average of the various passive indexes in the same proportions as the DERP investment allocation policy.

It is DERP's goal to seek appropriate returns by the prudent investment of assets. Such investment activities are in accordance with applicable law, modern portfolio theory, and prevailing industry practice, and seek to minimize risk while generating the growth that will assist in paying promised benefits to members and beneficiaries. A study of assets and liabilities is conducted periodically to ensure the mix of investments remains appropriate, and adjustments to the portfolio are made when changes in plan circumstances and/or current capital markets conditions dictate. It is the responsibility of the Retirement Board, with the assistance of Summit Strategies and DERP internal investment staff, to approve a target asset allocation policy, which reflects an appropriate balance between risk and return. A comprehensive study of assets and liabilities was conducted by Summit Strategies most recently in early 2014, and annual asset allocation targets are established in March/April of each year.

8182 Maryland Avenue, 6th Floor • St. Louis, Missouri 63105 • 314.727.7211, fax 314.727.6068 • [summitstrategies.com](http://summitstrategies.com)

The target asset allocation at year-end was comprised of the following indices in the percentages as indicated: Russell 1000 (19.00%), Russell 2000 (3.50%), MSCI EAFE (10.00%), MSCI World ex US Small Cap (5.50%), MSCI Emerging Markets (8.00%), Barclays Capital Aggregate Bond (11.50%), Barclays Capital US High Yield Ba/B 2% Issuer Cap (6.50%), JPMorgan Government Bond Index – Emerging Markets (2.50%), NCREIF Fund Index – Open End Diversified Core Equity (8.00%), HFRI FOF Conservative Index (5.00%), Alerian MLP Index (7.00%) and Alternative Investments (13.50%).

In fiscal year 2015, commitments were made to a private equity fund managed by Adams Street Partners, a distressed debt fund managed by Sankaty Advisors, a distressed real estate fund managed by Contrarian Capital Management, and to a private energy fund managed by Kayne Anderson Capital Advisors.

For the first time since fiscal year 2008, DERP experienced a negative return. However, the results for the last 3 and 5 year periods, while slightly below the return assumption, exceed both the strategic policy benchmark and the return of the median public pension fund. This reflects the hard work of the Board and Staff during an evolving market environment to position the DERP investment portfolio to benefit the Plan and its members. The future holds many challenges, including slow global economic growth, volatile energy prices, high asset valuations, and demographic headwinds. The long-term results are positive, and we believe the portfolio is in a good position to capture consistent, quality results in the years to come.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy S. Sant". The signature is fluid and cursive, with a large initial "T" and "S".

Timothy S. Sant, CFA  
Principal, Director of Consulting

### **Mission Statement**

The Denver Employees Retirement Plan (the Plan) was established on January 1, 1963, as a defined benefit pension plan. The Plan Board assumes full and absolute responsibility for establishing, implementing, and monitoring adherence to the pension fund policy. The mission of any fiduciary acting with regard to the management, investment, receipt, or expenditure of the trust assets is to act solely in the interest of the members and their beneficiaries, and to:

- (a) Provide benefits to participants and their beneficiaries;
- (b) Pay reasonable expenses associated with the administration of the plan;
- (c) Invest with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent investor acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character with like aims; and
- (d) Diversify the investments so as to minimize the risk of loss and to maximize rate of return.

### **Investment Responsibilities**

The Plan Board is responsible for formulating investment strategies, asset allocation, and contracting with investment management firms and professionals. The Plan Board has formal written objectives and guidelines contained in the Plan's *Investment Policy*, in which asset allocation targets, investment objectives, and investment manager guidelines are specified. Changes to the *Investment Policy* must be approved by the Plan Board.

The investment managers are each responsible for implementing investment strategies in accordance with the stated investment policies, guidelines, and objectives of the Plan. Each manager is responsible for optimizing investment return within its guideline constraints and in the sole interest of the Plan's members and beneficiaries. The Board has directed all investment managers to vote proxies to vote in the interest of the Plan's members and beneficiaries, and to report annually as to how proxies were voted.

### **Investment Objectives**

As outlined in the *Investment Policy*, the investment objectives include:

- (a) Providing a net realized real rate of return meeting or exceeding the actuarial assumption of seven and three quarters percent, annualized, over a full market/economic cycle of three to seven years;
- (b) Maintaining an efficient portfolio determined by the risk and return concepts of Modern Portfolio Theory; and
- (c) Exceeding the rate of return of that achieved by a passively managed portfolio weighted in the same proportion and at the same risk.

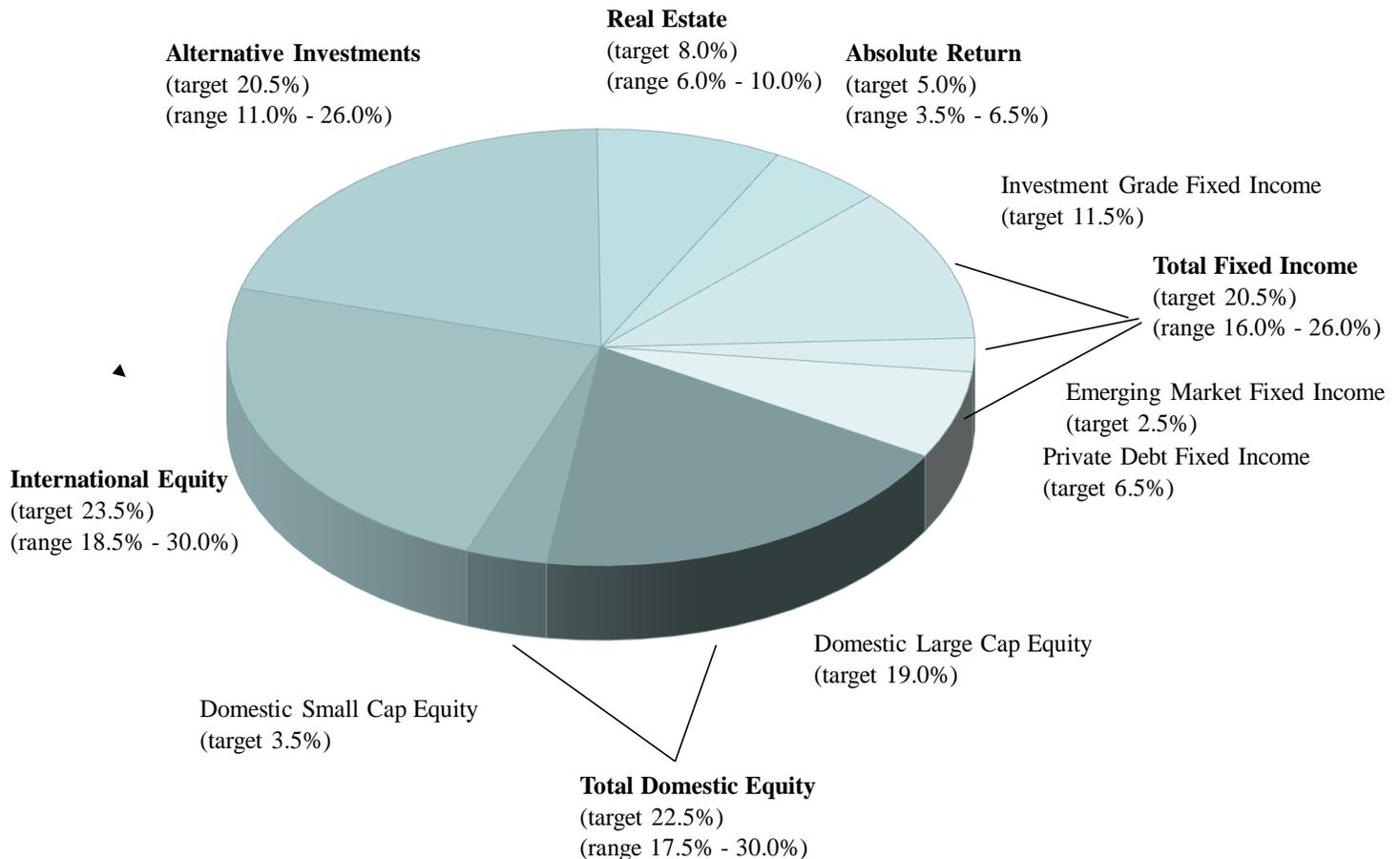
## Investment Section

### Asset Allocation Target

The Plan Board recognizes that an asset allocation plan has the greatest impact on long-term performance results and is, therefore, the most important decision in the investment process. The risk/return profile is maintained by identifying a long-term target strategic asset allocation. Temporary deviations from the targets are held within ranges.

The first formal asset allocation plan was adopted by the Plan Board in 1989. There have been subsequent asset allocation plans adopted, with the most recent being on April 17, 2015. The Plan's investment consultant assisted the Plan Board in developing the latest asset allocation.

The asset allocation strategy as of December 31, 2015 is depicted in the chart below:



At target, a portfolio so allocated would be expected to achieve a 7.1% return with a standard deviation (risk) of 11.9%.

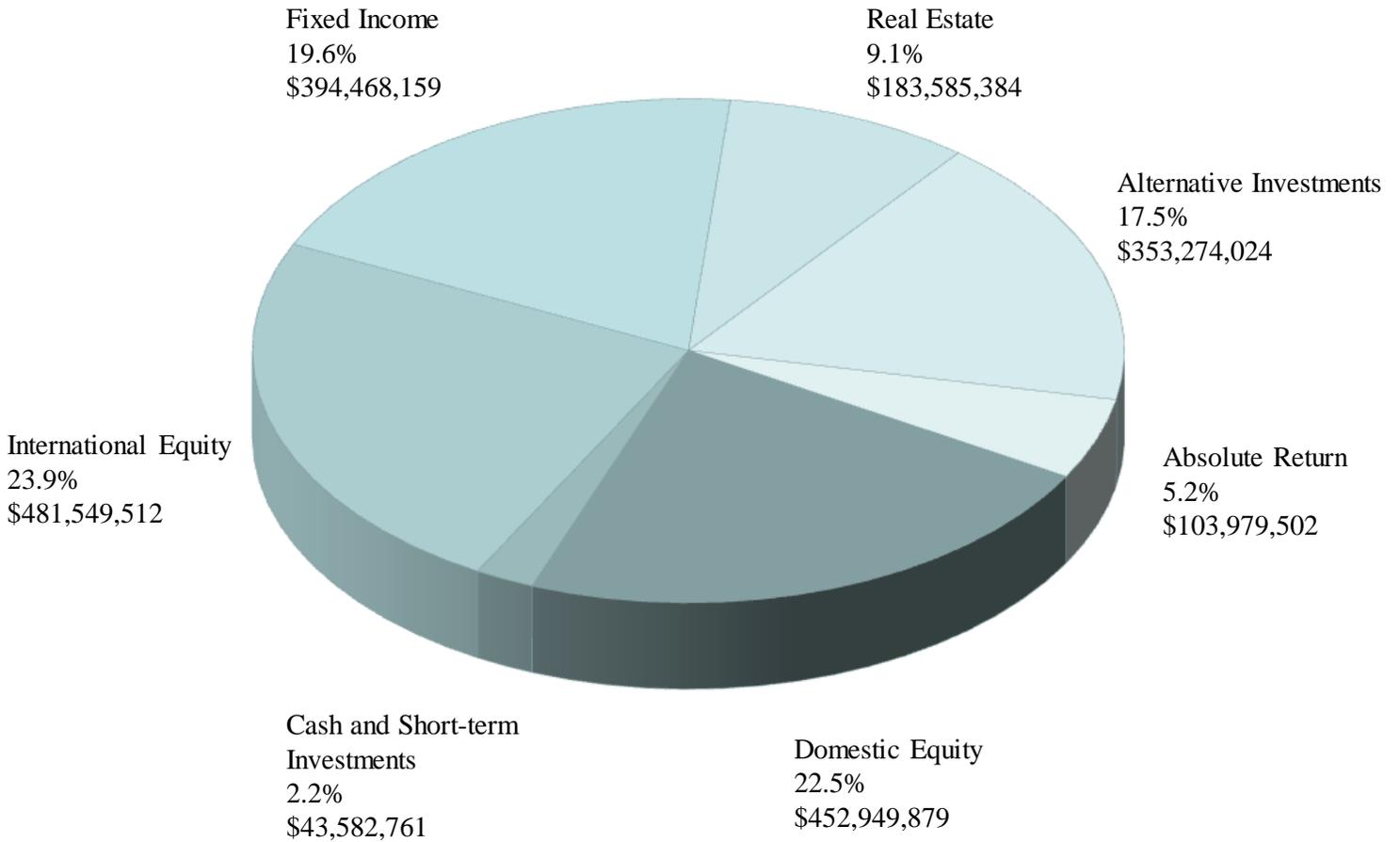
---

## Investment Section

---

### Asset Allocation by Asset Class

The total Fiduciary Net Position of the Plan on December 31, 2015, was \$2,016,499,464 including cash and investments of \$2,013,389,221. At December 31, 2015, the Plan's investment assets were allocated as shown in the following chart:



## Investment Section

### Asset Target Allocation by Managed Account

A list of investment managers appears in the introductory section of this report. The Plan's *Investment Policy* identifies the target allocation by managed account and asset style group as follows:

<u>Managed Account</u>	<u>Target Allocation</u>	<u>Asset Style Group</u>	<u>Target Allocation Range</u>
Mellon Capital Management	5.00%	S&P 500 Index	3.00% to 9.00%
Brown Advisory	7.00%	Large Cap Equity (Growth)	5.00% to 9.00%
Eagle Capital Management	7.00%	Large Cap Equity (Value)	5.00% to 9.00%
Franklin Global Advisors	1.25%	Small Cap Equity (Growth)	1.00% to 2.00%
Neuberger Berman, LLC	2.25%	Small Cap Equity (Value)	1.80% to 3.50%
Mellon Capital Management	2.00%	EAFE Index	1.50% to 5.00%
Fidelity Institutional	4.00%	International Equity (Growth)	3.00% to 5.00%
Templeton Investment Counsel, LLC	4.00%	International Equity (Value)	3.00% to 5.00%
Dimensional Fund Advisors	5.50%	International Equity (Small Cap)	4.50% to 7.00%
LSV Asset Management	8.00%	International Equity (Emerging Markets)	6.00% to 10.00%
Plan Staff	5.00%	Fixed Income Government	4.50% to 7.00%
Mellon Capital Management	5.00%	Barclays Aggregate Index	4.50% to 7.00%
Smith Graham & Company	1.50%	Fixed Income Gov't./Credit	1.00% to 2.50%
Golub Capital	2.00%	Fixed Income-Senior Loans	1.00% to 5.00%
Athyrium	1.00%	Fixed Income-Private Debt	0.00% to 2.00%
GSO Capital	1.00%	Fixed Income-Private Debt	0.00% to 2.00%
Sankaty Advisors	2.50%	Fixed Income-Distressed Debt	0.50% to 3.50%
Pictet Asset Management	2.50%	Fixed Income Emerging Market Debt	1.50% to 3.50%
Prisma Capital Partners	5.00%	Absolute Return	3.50% to 6.50%
Real Estate	8.00%	Real Estate	6.00% to 10.00%
Alternative Investments	20.50%	Energy, Timber, MLP, and Private Equity	11.00% to 26.00%

## Investment Section

---

The Plan staff actively monitors each investment manager for compliance with guidelines. There is no allocation to cash. Each manager is directed to prudently remain fully invested in their asset style group. All allocated but uninvested cash is commingled and actively managed by the Plan staff. Investment manager, custodian, and consultant fees are aggressively negotiated and reviewed periodically.

The top ten stock and bond holdings as of December 31, 2015, are shown in the following tables:

### Top Ten Stock Holdings December 31, 2015

<u>Shares</u>	<u>Stocks</u>	<u>Fair Value</u>
22,656	Alphabet, Inc.	\$17,387,929
20,129	Amazon.Com, Inc.	13,604,990
98,726	Ecolab, Inc.	11,292,280
265,500	Oracle Corporation	9,698,715
170,258	Microsoft Corporation	9,445,914
66,975	Berkshire Hathaway, Inc.	8,843,379
165,100	Citigroup, Inc.	8,543,925
186,160	Liberty Global, Inc.	7,589,743
78,773	AON Corporation	7,263,658
259,627	Twenty-First Century Fox	7,069,643

### Top Ten Bond Holdings December 31, 2015

<u>Par</u>	<u>Bonds</u>			<u>Fair Value</u>
9,500,000	FHLMC Bond	2.375%	due 1/13/2022	\$9,631,955
6,700,000	U.S. Treasury Bond	8.125	due 8/15/2019	8,260,095
5,500,000	FHLBC Bond	3.250	due 3/8/2024	5,805,415
5,000,000	U.S. Treasury Note	2.625	due 11/15/2020	5,194,900
4,750,000	FHLMC Bond	3.750	due 3/27/2019	5,085,635
5,000,000	FNMA Bond	1.875	due 9/18/2018	5,070,000
5,000,000	FNMA Bond	1.625	due 11/27/2018	5,036,400
5,000,000	FHLMC Bond	0.750	due 1/12/2018	4,959,750
5,000,000	FNMA Bond	0.875	due 5/21/2018	4,953,150
4,500,000	FHLBC Bond	1.625	due 6/14/2019	4,514,400

Complete listings of stock and bond holdings are available at the Plan's office.

## Investment Section

---

### Investment Performance

The Plan contracts with Summit Strategies Group to measure investment results on a quarterly basis. Returns are calculated using a time-weighted rate of return based on the fair value of assets. Returns are reported gross of fees unless otherwise stated. The estimated annualized return from the inception of the Plan on January 1, 1963 to December 31, 2015 is 8.94%. Annualized investment results compared with benchmarks for the year ending December 31, 2015, are as follows:

	<b>Last Year</b>	<b>Last 3 Years</b>	<b>Last 5 Years</b>
Domestic Equity	2.82%	15.02%	11.79%
Russell 3000 Index	0.48	14.74	12.18
International Equity	-5.76	2.64	2.48
International Equity Policy Index	-4.34	1.86	1.24
Fixed Income	-1.11	0.34	3.10
Fixed Income Policy Index	-2.42	-0.28	2.77
Real Estate	16.16	14.99	14.88
NCREIF Index	15.01	13.81	13.66
Total Portfolio	-1.34	7.48	7.15
Total Fund Policy Index	-2.11	6.37	6.43
Total Portfolio (net of fees)	-1.88	6.90	6.59
Change in Consumer Price Index (CPI-U)	0.12	1.08	1.74

## Investment Section

---

### Schedule of Investment Commissions

December 31, 2015

<b><u>BROKER</u></b>	<b><u>QUANTITY (UNITS)</u></b>	<b><u>BROKER COMMISSION</u></b>	<b><u>COMMISSION PER/SHARE</u></b>
MELLON FINANCIAL	3,052,250	\$64,915	\$0.021
INVESTMENT TECHNOLOGY	1,451,091	19,635	0.014
UBS SECURITIES	590,191	13,565	0.023
JP MORGAN SECURITIES	639,244	11,447	0.018
LIQUIDNET	508,910	10,099	0.020
CITIGROUP	673,975	10,011	0.015
CREDIT SUISSE	593,407	9,610	0.016
WELLS FARGO SECURITIES	636,907	9,521	0.015
ISI GROUP	326,983	9,048	0.028
ITG	598,120	8,333	0.014
SANFORD C BERNSTEIN	317,549	7,679	0.024
MORGAN STANLEY	257,284	4,943	0.019
JEFFERIES & COMPANY	152,131	4,911	0.032
WILLIAM BLAIR	145,624	4,456	0.031
RBC CAPITAL MARKETS	255,119	4,130	0.016
GUGGENHEIM CAPITAL	135,123	4,099	0.030
STIFEL NICOLAUS	157,127	3,801	0.024
BLOOMBERG TRADEBOOK	129,935	2,599	0.020
ROBERT W BAIRD & COMPANY	76,340	2,548	0.033
DEUTSCHE	105,888	2,473	0.023
BMO CAPITAL MARKETS	97,298	2,084	0.021
BARCLAYS	63,817	2,052	0.032
INSTINET CORPORATION	101,314	1,902	0.019
RAYMOND JAMES	53,358	1,852	0.035
JONES TRADING	56,128	1,551	0.028
BNY CONVERGEX	42,849	1,256	0.029
All other brokers (each at \$1,000 or less)	<u>1,463,260</u>	<u>14,253</u>	0.010
<b>TOTAL</b>	<b><u>13,394,498</u></b>	<b><u>\$246,105</u></b>	<b>\$0.018</b>

## Investment Section

---

### Schedule of Investment Fees

December 31, 2015

<u>Externally Managed Portfolios</u>	<u>Assets Under Management</u>	<u>Fees</u>
U.S. Equities:		
Actively Managed :	\$ 348,235,795	\$ 2,515,682
Passively Managed	104,714,084	39,760
International Equities:		
Actively Managed	438,422,003	2,619,225
Passively Managed	43,127,509	18,990
Fixed Income:		
Actively Managed	296,386,704	2,101,323
Passively Managed	98,081,455	18,606
Real Estate:		
Fees netted with earnings	66,052,203	834,234
Fees paid separately	117,533,181	1,029,212
Absolute Return:		
Fees netted with earnings	103,979,502	1,093,217
Alternative Investments:		
Fees netted with earnings	198,130,932	3,173,084
Fees paid separately	155,143,092	1,090,366
	<u>\$ 1,969,806,460</u>	<u>\$ 14,533,699</u>
 <b><u>Other Investment Services</u></b>		
Custody Fees		\$ 103,722
Other investment related expenses		788,492

# Actuarial Section



Gabriel Roeder Smith & Company  
Consultants & Actuaries

7900 East Union Avenue  
Suite 1100  
Denver, CO 80237-2746

303.217.7600 phone  
303.217.7609 fax  
www.gabrielroeder.com

---

May 25, 2016

Board of Trustees  
Denver Employees Retirement Plan  
777 Pearl St  
Denver, CO 80203

**Re: Denver Employees Retirement Plan Actuarial Valuation as of January 1, 2015**

Dear Board Members:

The results of the January 1, 2015 Annual Actuarial Valuation of the Denver Employees Retirement Plan (DERP) are presented in this report. The purpose of the valuation was to measure the Plan's funding progress and to determine the employer contribution rate, for the next fiscal year.

The valuation was based upon information, furnished by DERP, concerning Plan benefits, financial transactions, active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. These calculations may be subject to certain provisions of the agreement between Denver Health and Hospital Authority (DHHA) and DERP. This letter and these calculations are not intended as legal or accounting advice, and we would recommend review by legal counsel for the compliance of these calculations with all relevant agreements.

The actuarial methods and assumptions used are in compliance with the parameters established by GASB Statements No. 67 and No. 68. For the retiree medical benefits, the schedules illustrate the value of the explicit benefit as described in the Plan Summary, and that explicit benefit is valued in compliance with all the parameters established by GASB Statements No. 43 and 45. The value of any implicit rate subsidy in the City-sponsored health plans will be illustrated in the disclosures related to those plans.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events for the Pension Plan, Retiree Medical Plan, and DHHA. We believe that the assumptions and methods used in this report are reasonable and appropriate for the purpose for which they have been used. However, other assumptions and methods could also be reasonable and could result in materially different results. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

**Gabriel Roeder Smith & Company**

Board of Trustees  
May 25, 2016  
Page 2

The following schedules were prepared by GRS:

1. Valuation Methods and Assumptions
2. Analysis of Financial Experience
3. Demographic History
4. Solvency Test
5. Plan Provisions
6. Schedule of Funding Progress
7. Schedule of Employer Contributions

If there is other information that you need in order to make an informed decision regarding the matters discussed in this report, please contact us.

We certify that the information contained in this report is accurate and fairly presents the actuarial position of DERP as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

The actuaries submitting this statement are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. Both are experienced in performing valuations for public retirement systems.

Respectfully submitted,



Leslie L. Thompson, FSA, FCA, EA, MAAA  
Senior Consultant



Paul T. Wood, ASA, FCA, MAAA  
Consultant

**Gabriel Roeder Smith & Company**

## Valuation Methods and Assumptions

### Funding Valuation Methods

**Actuarial Cost Method for Determination of Actuarially Determined Contribution - The Projected Unit Credit (PUC) Cost Method** was used in the valuation.

The Projected Unit Credit Cost Method develops a normal cost and an accrued liability based on the benefit accrued as of the valuation date.

The normal cost is the present value of the benefits that accrue during the year. The benefit accrued during the year is the retirement benefit based on pay projected to a member's retirement date, based on service accrued as of the valuation date. The actuarial accrued liability is the present value of benefits allocated to service prior to the valuation date.

Finally, for all funding methods, the present value of benefits is equal to the accrued liability plus the present value of future normal costs.

**Deferred Retirement Option Plan (DROP) and DROP II** – The DROPs are closed and no new members are assumed to enter either of the two DROPs. For members who were in DROP and remained employed upon their exit from the DROP program, their accrued liability is calculated as the value of their deferred benefit based on compensation and service earned before their DROP participation plus the value of their additional benefit earned based on compensation and service accrued after their DROP participation ended, as well as their accrued DROP balance. Further detail describing the DROPs can be found in the Plan Provisions section of this report.

**Benefits Limited to Maximums Specified in Internal Revenue Code (IRC)** – Benefits in pay status are limited to the maximum specified by Section 415 of the IRC, as adjusted annually. The benefits in pay status are limited to the maximum compensation permitted by Section 401(a)(17) of the IRC.

### Asset Valuation Method

**Actuarial Value of Assets** – The Actuarial Value of Assets recognizes 20% of the difference between the projected actuarial value and the market value at the valuation date. Effective January 1, 2009, this value is no longer constrained to a range of 80% to 120% of the market value of assets as of the valuation date. This method has the effect of smoothing volatility in investment returns. Returns are measured net of all administrative and investment expenses.

Actuarial Standards of Practice Statement #44 provides some guidance in the selection of a method for determining the actuarial value of assets. In particular, when considering utilizing an asset method other than the market value of assets, the method should be selected that is designed to produce actuarial values of assets that bear a reasonable relationship to the corresponding market values. The qualities of the DERP asset value method should include:

The actuarial value of assets should sometimes be greater than, and sometimes lesser than, the market value of assets. The method employed in the DERP valuation does produce asset values which are sometimes greater than, and sometimes less than the market value of assets.

The asset values fall within a sufficiently narrow range around the corresponding market values.

## Development of Amortization Payment

**Determination of UAAL Contribution Rate** - The unfunded accrued liability as of January 1, 2015 is calculated as of the beginning of the fiscal year for which employer contributions are being calculated.

The unfunded accrued liability is amortized over the appropriate period to determine the amortization payment. This payment is divided by the projected fiscal year payroll to determine the amortization payment as a percentage of active member payroll.

Effective January 1, 2013, the funding policy for the development of the annual amortization payment was changed from 30-year open to a year-by-year 30-year closed. An amortization base will be established each year and each base will be paid off over 30 years, using annual payments determined as a level percentage of payroll. Each base and full payment schedule is shown in the Appendix.

## GASB Statement Nos. 67 and 68 Valuation Cost Method

**Actuarial Cost Method for the purposes of satisfying the requirements of GASB Statement Nos. 67 and 68** - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

## Valuation Assumptions

**The actuarial assumptions used** in the valuation are shown in this Section. Both the economic and demographic assumptions were based on an Experience Study performed as of January 1, 2013, and adopted for the January 1, 2013 valuation report.

## Changes to Actuarial Assumptions

Since the prior valuation, the discount rate was changed from 8.00% to 7.75%. No other assumptions or methods have changed since the prior valuation.

## Valuation Assumptions

Mortality rates were adjusted to include margin for future longevity improvement as described below.

**Post-Retirement and Beneficiary Mortality Table:** *This table shows the probability of dying after leaving employment either as a vested terminated member, a retiree or a beneficiary of a deceased member.*

- A. Male: RP-2000 Combined Mortality Table for males projected with Scale AA to 2020
- B. Female: RP-2000 Combined Mortality Table for females projected with Scale AA to 2020 with a multiplier of 90%

Ages	% Dying Within Next Year Non-Disabled	
	Men	Women
50	0.15%	0.11%
55	0.25%	0.21%
60	0.49%	0.41%
65	0.96%	0.79%
70	1.64%	1.36%
75	2.85%	2.15%
80	5.26%	3.59%

**Disabled Mortality Table:** *This table shows the probability of dying at sample attained ages.*

- A. Male: RP-2000 Disabled Life Mortality Table for males projected with Scale AA to 2020
- B. Female: RP-2000 Disabled Life Mortality Table for females projected with Scale AA to 2020

Ages	% Dying Within Next Year Disabled	
	Men	Women
50	2.01%	0.82%
55	2.41%	1.41%
60	3.05%	1.98%
65	3.78%	2.54%
70	4.63%	3.40%
75	6.19%	4.45%
80	8.95%	6.28%

## Actuarial Section

**Active Mortality:** *This table for active members shows the probability of dying before retirement or termination of employment. 15% of the deaths are assumed to be duty-related and 85% are assumed to be non-duty related.*

- A. Male: RP-2000 Combined Mortality Table for males projected with Scale AA to 2020 with a multiplier of 85%
- B. Female: RP-2000 Combined Mortality Table for females projected with Scale AA to 2020 with a multiplier of 85%

Ages	% Dying Within Next Year Non-Disabled	
	Men	Women
20	0.02%	0.01%
25	0.03%	0.01%
30	0.03%	0.02%
35	0.06%	0.03%
40	0.08%	0.04%
45	0.10%	0.07%
50	0.13%	0.10%

**Rates of Disability:** *15% of the disabilities are assumed to be duty-related and 85% are assumed to be non-duty related.*

Ages	% Becoming Disabled Within Next Year	
	Duty	Non-Duty
20	0.00%	0.02%
25	0.00%	0.02%
30	0.00%	0.02%
35	0.00%	0.03%
40	0.01%	0.06%
45	0.02%	0.11%
50	0.04%	0.23%
55	0.07%	0.37%
60	0.10%	0.57%
65	0.15%	0.85%

## Actuarial Section

**Rates of Separation from Active Membership:** Rates do not apply to members eligible to retire and do not include separation on account of death or disability. For inactive members, the assumed age at retirement is 65. If an inactive member is not vested, the liability valued is equal to their employee contributions plus interest. Rates are not applied after the member is eligible for reduced or unreduced retirement benefits.

<b>Non Hospital</b>			<b>Non Hospital</b>		
<b>Years of Service</b>	<b>Select Period</b>		<b>Ages</b>	<b>Ultimate Rates</b>	
	<b>% of Active Members Separating Within Next Year</b>			<b>% of Active Members Separating Within Next Year*</b>	
	<b>Men</b>	<b>Women</b>		<b>Men</b>	<b>Women</b>
1	15.97%	19.84%	25	6.25%	9.00%
2	13.73%	17.11%	30	5.50%	7.75%
3	11.81%	14.76%	35	4.75%	6.50%
4	10.15%	12.72%	40	4.00%	5.50%
5	8.73%	10.97%	45	3.25%	4.50%
6	7.51%	9.46%	50	2.50%	3.50%
7	6.46%	8.16%	55	1.90%	2.70%
8	5.55%	7.04%	60	1.90%	2.70%
9	4.77%	6.07%	64	1.90%	2.70%

\*Members with 10 or more years of service

<b>Hospital</b>		
<b>Ages</b>	<b>% of Active Members Separating Within Next</b>	
	<b>Men</b>	<b>Women</b>
30	14.84%	15.41%
35	12.92%	11.91%
40	10.72%	8.40%
45	7.97%	5.60%
50	4.40%	5.60%
55	1.10%	5.60%
60	1.10%	5.60%
64	1.10%	5.60%

## Actuarial Section

**Rates of Retirement:** *This table for active members shows the probability of eligible members retiring during the next year.*

<b>Non Hospital</b>			<b>Hospital</b>		
<b>Percent of Eligible Active Members Retiring Within Next Year</b>			<b>Percent of Eligible Active Members Retiring Within Next Year</b>		
<b>Ages</b>	<b>Early Retirement</b>	<b>Normal Retirement</b>	<b>Ages</b>	<b>Early Retirement</b>	<b>Normal Retirement</b>
55	2.50%	N/A	55	2.50%	N/A
56	2.75%	N/A	56	2.75%	N/A
57	3.00%	N/A	57	3.00%	N/A
58	3.25%	N/A	58	3.25%	N/A
59	3.50%	N/A	59	3.50%	N/A
60	3.75%	N/A	60	3.75%	N/A
61	4.00%	N/A	61	4.00%	N/A
62	10.00%	N/A	62	10.00%	N/A
63	10.00%	N/A	63	10.00%	N/A
64	10.00%	N/A	64	10.00%	N/A
65	N/A	20.00%	65	N/A	20.00%
66	N/A	18.00%	66	N/A	18.00%
67	N/A	18.00%	67	N/A	18.00%
68	N/A	18.00%	68	N/A	18.00%
69	N/A	18.00%	69	N/A	18.00%
70	N/A	100.00%	70	N/A	18.00%
			71	N/A	18.00%
			72	N/A	18.00%
			73	N/A	18.00%
			74	N/A	18.00%
			75	N/A	100.00%

## Actuarial Section

---

	<b>Percent of Eligible Active Members Retiring Within Next Year</b>
<b>Ages</b>	<b>Rule of 75 Retirement</b>
NAR*	22.00%
NAR+1	14.00%
NAR+2	14.00%
NAR+3	14.00%
NAR+4	14.00%
NAR+5	14.00%
NAR+6	18.00%
NAR+7	22.00%
NAR+8	26.00%
NAR+9	30.00%
NAR+10	30.00%

\*NAR, Normal Age at Retirement, is defined as the first age at which a member is eligible to retire under the Rule of 75 with a minimum age of 55 (or Rule of 85 with a minimum age of 60 if hired after July 1, 2011). After attainment of age 70 (age 75 for the Hospital group) the retirement rate assumption is 100.00%.

**Economic Assumptions**

1. Investment Return Rate: 7.75% per annum, compounded annually, net of investment and administrative expenses.
2. Cost of Living Increases: 0.00% per annum
3. Inflation Rate: 2.75% per annum
4. Real Rate of Return: 5.00% per annum
5. The Rates of Salary Increase: *Assumed salary increases for active members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.*

<b>Non Hospital</b>			
<b>Sample Ages</b>	<b>% Increase in Salary for the Year</b>		
	<b>Merit and Seniority</b>	<b>Base (Economic)*</b>	<b>Increase for the Year</b>
20	4.00%	3.25%	7.25%
25	3.50%	3.25%	6.75%
30	2.50%	3.25%	5.75%
35	2.00%	3.25%	5.25%
40	1.25%	3.25%	4.50%
45	0.50%	3.25%	3.75%
50	0.00%	3.25%	3.25%
55	0.00%	3.25%	3.25%
60	0.00%	3.25%	3.25%
65	0.00%	3.25%	3.25%

<b>Hospital</b>			
<b>Sample Ages</b>	<b>% Increase in Salary for the Year</b>		
	<b>Merit and Seniority</b>	<b>Base (Economic)*</b>	<b>Increase for the Year</b>
30	0.00%	3.25%	3.25%
35	0.00%	3.25%	3.25%
40	0.00%	3.25%	3.25%
45	0.00%	3.25%	3.25%
50	0.00%	3.25%	3.25%
55	0.00%	3.25%	3.25%
60	0.00%	3.25%	3.25%
65	0.00%	3.25%	3.25%

*\*Salary increases shown include wage inflation of 3.25% per annum.*

	<b>Miscellaneous and Technical Assumptions</b>
<b><i>Administrative &amp; Investment Expenses</i></b>	The investment return assumption is intended to be the return net of investment and administrative expenses.
<b><i>Benefit Service</i></b>	Exact fractional service is used to determine the amount of benefit payable.
<b><i>COLA</i></b>	None assumed.
<b><i>Covered Payroll</i></b>	Annual payroll projected forward with one year's salary increase.
<b><i>Death after termination but before Retirement (or Continuation)</i></b>	A load of 0.7% (1.3% for members hired after January 1, 2010) is added to the vested terminated benefit to account for the benefit paid to the spouse if the participant dies before retirement.
<b><i>Decrement Operation</i></b>	All decrements other than withdrawal are in force during retirement eligibility.
<b><i>Decrement Timing</i></b>	Decrements of all types are assumed to occur mid-year.
<b><i>Eligibility Testing</i></b>	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.
<b><i>Incidence of Contributions</i></b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
<b><i>Marriage Assumption</i></b>	75% of males and 60% of females are assumed to be married for purposes of death-in-service benefits and 75% of males and 60% of females are assumed to be married for purposes of retiree medical benefits. Male spouses are assumed to be the same age as female spouses for active member valuation purposes.
<b><i>Normal Form of Benefit</i></b>	A straight life annuity is the normal form of benefit.
<b><i>Pay Increase Timing</i></b>	Beginning of year. This is equivalent to assuming that reported pays represent annualized rates of pay on the valuation date.
<b><i>Service Credit Accruals</i></b>	It is assumed that members accrue one year of service credit per year.
<b><i>Split of Member and Employer Contributions</i></b>	For the Schedule of Employer Contributions the member and employer contributions are split between the pension and medical funds based on their respective ratios to the Total Computed Contribution Rate developed in the previous year's actuarial valuation.

***Terminal Pay***

For members hired prior to January 1, 2010, unused sick and vacation hours are converted into pay at retirement, death, disability or termination. That converted amount is included in the Final Average Compensation (FAC). The valuation accounts for this by assuming the FAC will be increased by 5.00% for active retirement benefits and increased by 2.25% for active ordinary death and termination benefits for members hired prior to January 1, 2010.

***Retiree Medical  
Election Percentage***

It is assumed that 85% of members who retire elect medical benefits, 30% of members who terminate elect medical benefits, 80% of beneficiaries elect medical benefits, and 80% of members who leave as disabled members elect retiree medical benefits.

## Actuarial Section

Denver Employees Retirement Plan

Schedule 2

### Analysis of Financial Experience Composite Gain (Loss) for the Years Ending December 31, 2010 through 2014

<b>Type of Activity:</b>	<b>Retirement Benefits</b>				
	<b><u>2014</u></b>	<b><u>2013</u></b>	<b><u>2012</u></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
1. Retirement, Disability, Death, Withdrawal, Pay Increases, etc.	\$ (27,660,900)	\$ (1,477,800)	\$ (2,989,900)	\$ (5,824,600)	\$ (24,786,800)
2. New Entrants	(2,376,500)	(2,101,900)	(1,564,900)	(1,165,700)	(1,065,700)
3. Investment Income	<u>(19,188,065)</u>	<u>(9,038,647)</u>	<u>(49,642,700)</u>	<u>(77,418,800)</u>	<u>(56,387,300)</u>
Gain (Loss)	(49,225,465)	(12,618,347)	(54,197,500)	(84,409,100)	(82,239,800)
Non-recurring Items:					
Changes in Actuarial Assumptions and Methods	(70,052,165)	-	(114,153,600)	(7,044,100)	-
Changes in Plan Provisions	<u>(208,300)</u>	<u>(2,622,800)</u>	<u>(87,200)</u>	<u>(72,500)</u>	<u>-</u>
Total Non-recurring Items	<u>(70,260,465)</u>	<u>(2,622,800)</u>	<u>(114,240,800)</u>	<u>(7,116,600)</u>	<u>-</u>
Composite Gain (Loss) During Year	<u>\$ (119,485,930)</u>	<u>\$ (15,241,147)</u>	<u>\$ (168,438,300)</u>	<u>\$ (91,525,700)</u>	<u>\$ (82,239,800)</u>

<b>Type of Activity:</b>	<b>Health Benefits</b>				
	<b><u>2014</u></b>	<b><u>2013</u></b>	<b><u>2012</u></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
1. Retirement, Disability, Death, Withdrawal, Pay Increases, etc.	\$ 1,568,200	\$ 781,300	\$ 693,700	\$ 1,324,000	\$ 223,200
2. New Entrants	(84,500)	(106,800)	(57,600)	(59,200)	(91,200)
3. Investment Income	<u>(1,084,695)</u>	<u>(759,107)</u>	<u>(2,432,700)</u>	<u>(3,670,600)</u>	<u>(2,858,300)</u>
Gain (Loss)	399,005	(84,607)	(1,796,600)	(2,405,800)	(2,726,300)
Non-recurring Items:					
Changes in Actuarial Assumptions and Methods	(3,350,257)	-	(5,489,000)	-	-
Changes in Plan Provisions	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Non-recurring Items	<u>(3,350,257)</u>	<u>-</u>	<u>(5,489,000)</u>	<u>-</u>	<u>-</u>
Composite Gain (Loss) During Year	<u>\$ (2,951,252)</u>	<u>\$ (84,607)</u>	<u>\$ (7,285,600)</u>	<u>\$ (2,405,800)</u>	<u>\$ (2,726,300)</u>

## Actuarial Section

### Demographic History

#### Schedule of Retirees and Beneficiaries <sup>(1)</sup>

Valuation Date	Number Added Since Last Valuation Date	Allowances for Additional Retirees and Beneficiaries	Number Removed Since Last Valuation Date	Allowances for Retirees and Beneficiaries Removed	Number	Pension Benefit Amount	Average Annual Benefit	Percent Increase in Average Benefit
1/1/09	474	\$9,536,489	215	\$2,245,574	6,873	\$109,243,231	\$15,895	3.3%
1/1/10	733	17,229,892	183	1,847,244	7,423	124,695,435	16,799	5.7
1/1/11	410	7,484,590	227	2,827,899	7,606	130,319,793	17,134	2.0
1/1/12	457	9,392,512	287	2,922,903	7,776	138,317,723	17,788	3.8
1/1/13	540	11,227,434	271	2,973,325	8,045	146,837,873	18,252	2.6
1/1/14	658	15,872,322	221	3,126,984	8,482	159,503,726	18,805	3.0
1/1/15	597	13,833,209	264	4,026,993	8,815	169,735,929	19,255	2.4

<sup>(1)</sup> Includes DROP retirees.

#### Schedule of Active Members <sup>(2)</sup>

Valuation Date	Number	Annual Payroll	Average Annual Earnings	Percent Increase in Average Earnings
1/1/09	9,323	\$564,986,660	\$60,601	3.7%
1/1/10	8,604	506,045,186	58,815	(2.9)
1/1/11	8,403	517,398,105	61,573	4.7
1/1/12	8,149	517,396,257	63,492	3.1
1/1/13	8,175	531,559,017	65,023	2.4
1/1/14	8,304	540,229,189	65,057	0.1
1/1/15	8,489	568,562,500	66,976	3.0

<sup>(2)</sup> This schedule does not include participants in DROP and DROP II.

## Actuarial Section

### Solvency Test Pension Benefits

1/1/10	\$1,290,661,062	\$123,892,229	\$761,689,445	(a)	\$1,923,560,713	100%	100%	67%
1/1/11	1,341,928,443	129,821,083	813,006,592	(b)	1,942,871,295	100	100	58
1/1/12	1,412,766,986	154,615,776	819,147,309	(c)	1,946,844,159	100	100	46
1/1/13	1,520,343,891	156,404,385	916,442,060	(d)	1,980,204,173	100	100	33
1/1/14	1,639,107,535	154,017,183	905,875,408	(e)	2,062,322,953	100	100	30
1/1/15	1,765,776,526	173,010,460	954,881,366	(f)	2,132,024,635	100	100	20

(a) Includes DROP accounts of \$98,422,814.

(b) Includes DROP accounts of \$98,884,382.

(c) Includes DROP accounts of \$101,400,591.

(d) Includes DROP accounts of \$105,677,036.

(e) Includes DROP accounts of \$107,943,569.

(f) Includes DROP accounts of \$110,654,947.

A short-term solvency test is one means of checking a plan's progress under its funding program. In a short-term solvency test, a plan's assets are compared with the accrued liabilities of the plan. The liabilities are ranked, with (1) representing the liabilities of present retired lives, (2) terminated vested members liabilities, and (3), the liabilities for service already rendered by active members. For DERP pension benefits, the liabilities for the retired members and the terminated vested members are fully covered by the valuation assets, and the liabilities for service already rendered by active members is partially covered by the remainder of the valuation assets.

### Health Benefits\*

Valuation Date	Actuarial Accrued Liabilities			Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Retirees and Beneficiaries	Terminated Vested Members	Active Members				
1/1/10	\$98,068,689	\$6,768,999	\$36,804,834	\$90,414,800	92%	0%	0%
1/1/11	94,937,728	7,310,323	40,864,423	87,609,491	92	0	0
1/1/12	94,007,699	8,530,269	40,428,959	84,679,890	90	0	0
1/1/13	95,955,842	8,393,768	44,536,708	82,992,647	86	0	0
1/1/14	98,236,724	8,277,021	43,268,329	82,736,993	84	0	0
1/1/15	100,367,730	8,614,343	43,940,208	82,194,505	82	0	0

\* These liabilities represent solely the value of the explicit benefit, without regard to the implicit rate subsidy and therefore are not compliant with GASB #45.

A short-term solvency test is one means of checking a plan's progress under its funding program. In a short-term solvency test, a plan's assets are compared with the accrued liabilities of the plan. The liabilities are ranked, with (1) representing the liabilities of present retired lives, (2) terminated vested members liabilities, and (3), the liabilities for service already rendered by active members. For DERP health benefits, the liabilities for the retired members is partially covered by the valuation assets, and the liabilities for terminated vested members and for service already rendered by active members is not covered by any valuation assets.

**Plan Provisions**

- A. Ordinances** Amended and Restated under Denver Municipal Code Section 18-391 through 18-430.7. Most recently amended under Ordinance No. 701-14, adopted November 2014.
- B. Effective Date** January 1, 1963
- C. Plan Year** January 1 through December 31
- D. Type of Plan** Qualified, 401(a) governmental defined benefit retirement plan; for GASB purposes it is a multi-employer cost sharing plan.
- E. Eligibility Requirements** Elected Officials, Appointed Officials, and Employees as defined in Denver Municipal Code Sections 18-402 and 18-406.
- F. Credited Service** Service measured in completed calendar months from date of employment to date of retirement or prior termination.
- G. Compensation** *Gross pay, compensation and salary* shall mean that amount of remuneration, including wages, salaries, other amounts received for personal services actually rendered in the course of employment with the employer, and other amounts actually included or that could be included in gross income of and due to an employee, including employees on disability leave as provided for in division 4 of article V of chapter 18 of the Denver Municipal Code, or otherwise, from the employer in the full amount as calculated before any reductions or deductions are made for any purpose, including reductions or deductions by reason of sections 125, 132(f)(4) or 457 of the Internal Revenue Code, but not including distributions made from a plan of the employer designed to be eligible under section 457. Employer provided fringe benefits receiving special tax benefits, such as premiums for group term life insurance (to the extent excludible from gross income), shall be excluded from the definition of compensation. The calendar year shall be the limitation year (determination period) for purposes of section 415 of the Internal Revenue Code.
- H. Final Average Compensation (FAC)** Average monthly rate of compensation during the highest 36 successive calendar months of covered service.
- I. Normal Retirement**
1. Eligibility: For employees hired prior to July 1, 2011, attainment of age 65, or attainment of age 55 with age plus credited service equal to 75. For Employees hired July 1, 2011 or after, attainment of age 65 with 5 years of service, or attainment of age 60 with age plus credited service equal to 85.
  2. Benefit: 1.5% (2.0% if hired before September 1, 2004) of FAC times credited service.
  3. Normal Form: straight life annuity.

## Actuarial Section

---

### **J. Early Retirement**

1. Eligibility: Attainment of age 55 (60 for members hired on or after July 1, 2011) and completion of 5 years.
2. Benefit: Benefit accrued to date of retirement, reduced by 3% (6% for members hired on or after July 1, 2011) per year from age 65 to reflect commencement of benefit at an earlier age.

### **K. Temporary Early Retirement**

Pending approval of a disability application, a retirement benefit is available to an active, vested member who is at least age 55 or age 60, if hired on or after July 1, 2011. This benefit is designed to provide income to the member during the process of fulfilling the disability application requirements. There is a three year limit on this retirement benefit.

### **L. Deferred Retirement**

1. Eligibility: Any vested employee who terminates service for any reason other than retirement, disability, or death and leaves their accumulated contributions on deposit in the trust fund.
2. Benefit: Based on the formula in effect at the time of separation from service. Payment may commence any month after the member's 55<sup>th</sup> birthday, if hired prior to July 1, 2011, or after the member's 60<sup>th</sup> birthday, if hired July 1, 2011 or later.

### **M. Service Connected Disability**

1. Eligibility: Any employee who becomes totally and permanently disabled as defined in Denver Municipal Code Section 18-408(d) which arises out of and in the course of the member's employment with the employer.
2. Benefit: Based on the greater of 20 years of service or actual service plus 10 years. Total credited service cannot exceed the credited service the member would have earned at age 65.
3. Normal Form: straight life annuity.

### **N. Non-Service Connected Disability**

1. Eligibility: Any vested employee who becomes totally and permanently disabled as defined in Denver Municipal Code Section 18-408(e) which does not occur as a result of a service connected disability.
2. Benefit: The higher of 75% of the amount calculated for a service-connected disability or the amount calculated for an early retirement.
3. Normal Form: straight life annuity.

### **O. Death in the Line of Duty**

The active member's surviving spouse is awarded the retirement benefit the member would have been entitled at their normal retirement date based on the higher of 15 years of service or actual credited service plus 5 years. Total credited service cannot exceed the credited service the member would have earned at age 65. If there is no surviving spouse but the member has children under age 21, then the benefit shall be paid until the youngest child becomes age 21. If there is no surviving spouse and no children under age 21, then the benefit shall be paid to a designated beneficiary.

**P. Other Pre-Retirement Death**

The active member's surviving spouse is awarded 75% of the benefit that would have been entitled had the death been service connected. If an active member who has attained the age of fifty-five (55) or the age of sixty (60) if hired on or after July 1, 2011 dies prior to the actual retirement date, the member shall be deemed to have retired on the first day of the month following the month in which death occurs and the surviving spouse will receive an annuity as if the member had elected the 100% joint and survivor option if this will result in a greater benefit to the spouse than the above provision.

**Q. Post-Retirement Death**

1. For Normal Retirement (with at least 5 years of service), Disability Retirement (after age 65), and for Temporary Early Retirement (pending approval of disability) the lump-sum death benefit is \$5,000.
2. For Disability Retirement before age 65, the death benefit is 150% of the member's annualized average monthly salary, limited to \$50,000. This benefit reduces to \$5,000 upon the disabled member reaching age 65.
3. If hired prior to July 1, 2011, for Early Retirement the lump-sum at age: 64 is \$4,750; 63 is \$4,500; 62 is \$4,250; 61 is \$4,000; 60 is \$3,750; 59 is \$3,500; 58 is \$3,250; 57 is \$3,000; 56 is \$2,750; 55 is \$2,500.
4. If hired on or after July 1, 2011, for Early Retirement the lump-sum at age: 64 is \$4,500; 63 is \$4,000; 62 is \$3,500; 61 is \$3,000; 60 is \$2,500.

**R. Optional Forms**

Joint and Survivor Option - Any employee retiring under the normal retirement provision may elect a joint and survivor benefit. The member's benefit is actuarially reduced based on their election: 100%, 75%, or 50%. Once the benefit commences this election cannot be changed. If the spouse or designated beneficiary predeceases the member, the benefit paid to the member shall be increased to the full single straight life annuity as if no joint and survivor benefit had been selected.

**S. Medical Benefits**

Retiree Medical Plan Benefits – Participants and their surviving spouses or dependents receiving retirement benefits are eligible to elect to receive Plan-provided retiree medical coverage and a Plan-provided subsidy (benefit) to help provide for the payment of health insurance premiums. The Plan contributes \$6.25 per month for each year of service for members who are Medicare eligible. The Plan contributes \$12.50 per month for each year of service for members not eligible for Medicare. In the event of the election of a Joint and Survivor option, the benefit is calculated based on the age of the member. If the member predeceases the joint and survivor beneficiary then the full benefit is transferred to the surviving spouse or dependent regardless of the joint and survivor election percentage. The monthly benefit is limited to the monthly premium amount for the coverage elected. If a member dies and leaves a beneficiary who is not a spouse or dependent, that beneficiary can elect to participate in the group health Plan, but must pay the full cost. No Plan contribution can be made for non-spouse or non-dependent beneficiaries.

## Actuarial Section

---

- T. Refunds**
1. Eligibility: All members leaving covered employment with less than 5 years of service are eligible. Vested members (those with 5 or more years of service) may not withdraw their accumulated contributions plus interest in lieu of the deferred benefits otherwise due.
  2. Benefit: The member who withdraws receives a lump-sum payment of his/her employee contributions, plus the interest credited on these contributions. Interest is credited at 3.00%.
- U. Member Contributions** 8.00% of compensation, effective January 1, 2015.
- V. Employer Contributions** 11.50% of compensation, effective January 1, 2015 for each member.
- W. Cost of Living Increases** Given on an ad-hoc basis. There have been no cost of living increases since 2002.
- X. Changes from Previous Valuation** There have been no changes in the Plan provisions since the previous actuarial valuation, except for those specified herein.
- Y. Deferred Retirement Option Plan**
1. DROP – From January 1, 2001 through April 30, 2003, in lieu of immediate termination of employment and receipt of a normal retirement benefit, eligible members were permitted to continue employment for four years and have their normal retirement benefit paid into the deferred retirement option plan (DROP) account, after which time the participant either terminated employment or continued to be employed and resume regular membership with the retirement Plan.
  2. DROP II – From May 1, 2003 through September 1, 2003, in lieu of immediate termination of employment and receipt of a normal retirement benefit, eligible members were permitted to continue employment for five years and have their normal retirement benefit paid into the DROP II account after which time all participants terminated employment.
- Z. Other Ancillary Benefits**
- Social Security Make-Up Benefit – For members hired before July 1, 2011 and retiring on or after January 1, 1996, an additional retirement benefit equal to the applicable percentage (per Denver Municipal Code Section 18-409(i)) of the member's estimated primary Social Security benefit multiplied by credited service with the City/DHHA during which the contributions were made to Social Security (up to a maximum of 35 years of credited service) divided by 35. This additional benefit is payable beginning on the first day of the month after the member's 62<sup>nd</sup> birthday or the member's retirement date, whichever is later, but will not be paid before retirement benefits have begun from the Plan. Members retiring under a disability form of retirement are not eligible for this benefit.

## Actuarial Section

### Schedule of Funding Progress\*

#### Pension Benefits (in millions)

Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) [(3) - (2)]	Funded Ratio [(2)/(3)]	Covered Payroll	UAAL as a Percentage of Covered Payroll [(4)/(6)]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004	\$1,572.94	\$1,604.53	\$31.59	98.03%	\$506.52	6.24%
2005	1,651.09	1,665.54	14.45	99.13%	495.17	2.92%
2006	1,735.21	1,782.50	47.30	97.35%	495.29	9.55%
2007	1,837.48	1,862.77	25.30	98.64%	499.46	5.06%
2008	1,950.01	1,985.65	35.64	98.21%	545.84	6.53%
2009	1,924.99	2,095.89	170.90	91.85%	564.99	30.25%
2010	1,923.56	2,176.24	252.68	88.39%	506.05	49.93%
2011	1,942.87	2,284.76	341.88	85.04%	517.40	66.08%
2012	1,946.84	2,386.53	439.69	81.58%	517.40	84.98%
2013	1,980.20	2,593.19	612.99	76.36%	531.56	115.32%
2014	2,062.32	2,699.00	636.68	76.41%	540.23	117.85%
2015	2,132.02	2,893.67	761.64	73.68%	568.56	133.96%

#### Health Benefits\*\* (in millions)

Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) [(3) - (2)]	Funded Ratio [(2)/(3)]	Covered Payroll	UAAL as a Percentage of Covered Payroll [(4)/(6)]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004	\$87.11	\$105.48	\$18.37	82.59%	\$506.52	3.63%
2005	88.53	116.57	28.04	75.95%	495.17	5.66%
2006	90.23	123.78	33.55	72.90%	495.29	6.77%
2007	93.09	127.13	34.04	73.22%	499.46	6.82%
2008	96.46	128.61	32.15	75.00%	545.84	5.89%
2009	92.68	134.00	41.32	69.17%	564.99	7.31%
2010	90.41	141.64	51.23	63.83%	506.05	10.12%
2011	87.61	143.11	55.50	61.22%	517.40	10.73%
2012	84.68	142.97	58.29	59.23%	517.40	11.27%
2013	82.99	148.89	65.89	55.74%	531.56	12.40%
2014	82.74	149.78	67.05	55.24%	540.23	12.41%
2015	82.19	152.92	70.73	53.75%	568.56	12.44%

\*Figures prior to 2008 were provided by the previous actuary.

\*\*These liabilities represent solely the value of the explicit benefit, without regard to the implicit rate subsidy. The explicit benefit is valued in compliance with all the parameters established by GASB Statements No. 43 and No.45. The value of any implicit rate subsidy in the city-sponsored health plans will be illustrated in the disclosures related to those plans.

**Pension Plan\***  
**Schedule of Employer Contributions**

Year Beginning January 1: (1)	Annual Required Contribution (ARC)		Contributions *		Percentage of GASB ARC Contributed
	% of Payroll <sup>9</sup> (2)	Amount (3)	% of Payroll <sup>9</sup> (4)	Amount <sup>1</sup> (5)	[(5)/(3)] (6)
2005 <sup>2</sup>	7.68%	\$38,039,016	7.54%	\$37,347,133	98.18%
2006	8.54%	42,277,066	7.63%	37,809,048	89.43%
2007	7.93%	39,623,830	8.20%	40,955,026	103.36%
2008	7.64%	41,699,683	8.13%	44,362,545	106.39%
2009	9.63%	54,392,610	7.63%	43,127,064	79.29%
2010 <sup>3</sup>	9.68%	48,995,846	8.34%	42,228,203	86.19%
2011 <sup>4</sup>	10.05%	52,000,472	8.83%	45,703,351	87.89%
2012 <sup>5</sup>	10.83%	56,054,792	9.62%	49,756,639	88.76%
2013 <sup>6</sup>	10.42%	55,397,564	10.62%	56,427,308	101.86%
2014 <sup>7</sup>	10.34%	55,871,677	11.55%	59,941,041	107.28%
2015 <sup>8</sup>	10.52%	59,811,786	N/A	N/A	N/A

\*Figures prior to 2008 were provided by the previous actuary.

<sup>1</sup> Employers made contributions based on the legally required rates.

<sup>2</sup> Beginning on January 1, 2005, the employers and employees contributed 8.50% and 2.50%, respectively.

<sup>3</sup> Beginning on January 1, 2010, the employers and employees contributed 8.50% and 4.50%, respectively.

<sup>4</sup> Beginning on January 1, 2011, the employers and employees contributed 9.50% and 5.50%, respectively.

<sup>5</sup> Beginning on January 1, 2012, the employers and employees contributed 10.25% and 6.25%, respectively.

<sup>6</sup> Beginning on January 1, 2013, the employers and employees contributed 11.00% and 7.00%, respectively and amortization method changed from level dollar 30-year open to level percent of pay 30-year closed.

<sup>7</sup> Beginning January 1, 2014, the employer and employee contribution are 11.20% and 7.30%, respectively.

<sup>8</sup> Beginning January 1, 2015, the employer and employee contributions are 11.50% and 8.00%, respectively.

<sup>9</sup> Estimated Payroll

**Retiree Medical Plan\***  
**Schedule of Employer Contributions\*\***

Year Beginning January 1:	Annual Required Contribution (ARC)		Contributions *		Percentage of ARC Contributed
	% of Payroll <sup>9</sup>	Amount	% of Payroll <sup>9</sup>	Amount <sup>1</sup>	[(5)/(3)]
(1)	(2)	(3)	(4)	(5)	(6)
2005 <sup>2</sup>	0.61%	\$3,032,638	0.71%	\$3,530,326	116.41%
2006	0.82%	4,081,627	0.82%	4,075,768	99.86%
2007	0.79%	3,929,333	0.90%	4,504,640	114.64%
2008	0.83%	4,532,574	0.78%	4,253,783	93.85%
2009	0.91%	5,156,984	0.81%	4,551,097	88.25%
2010 <sup>3</sup>	0.85%	4,290,712	0.58%	2,924,858	68.17%
2011 <sup>4</sup>	0.96%	4,965,060	0.81%	4,202,033	84.63%
2012 <sup>5</sup>	1.00%	5,153,185	0.82%	4,241,292	82.30%
2013 <sup>6</sup>	0.89%	4,721,761	0.78%	4,135,064	87.57%
2014 <sup>7</sup>	0.76%	4,093,763	0.83%	4,332,376	105.83%
2015 <sup>8</sup>	0.76%	4,322,064	N/A	N/A	N/A

\*Figures prior to 2008 were provided by the previous actuary.

\*\*These liabilities represent solely the value of the explicit benefit, without regard to the implicit rate subsidy.

The explicit benefit is valued in compliance with all the parameters established by GASB Statements No. 43 and No. 45. The value of any implicit rate subsidy in the city-sponsored health plans will be illustrated in the disclosures related to those plans.

- <sup>1</sup> Employers made contributions based on the legally required rates.
- <sup>2</sup> Beginning on January 1, 2005, the employers and employees contributed 8.50% and 2.50%, respectively.
- <sup>3</sup> Beginning on January 1, 2010, the employers and employees contributed 8.50% and 4.50%, respectively.
- <sup>4</sup> Beginning on January 1, 2011, the employers and employees contributed 9.50% and 5.50%, respectively.
- <sup>5</sup> Beginning on January 1, 2012, the employers and employees contributed 10.25% and 6.25%, respectively.
- <sup>6</sup> Beginning on January 1, 2013, the employers and employees contributed 11.00% and 7.00%, respectively and amortization method changed from level dollar 30-year open to level percent of pay 30-year closed.
- <sup>7</sup> Beginning January 1, 2014, the employer and employee contribution are 11.20% and 7.30%, respectively.
- <sup>8</sup> Beginning January 1, 2015, the employer and employee contributions are 11.50% and 8.00%, respectively.
- <sup>9</sup> Estimated Payroll

# Statistical Section

This section of the Plan's comprehensive annual financial report presents detailed information to assist the reader in understanding what the information in the financial statements, note disclosures, and required supplementary information indicate about the Plan's overall financial status.

## Statistical Section

### Changes in Fiduciary Net Position

Last Ten Fiscal Years

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
<b>Pension Benefits</b>				
Additions:				
Member contributions <sup>(1)</sup>	\$ 11,436,362 <sup>(2)</sup>	\$ 11,979,390	\$ 12,804,873	\$ 12,849,520
Employer contributions <sup>(1)</sup>	37,809,048	40,955,026	44,362,545	43,127,064
Investment earnings (net of expenses)	<u>234,113,308</u>	<u>199,977,322</u>	<u>(523,370,681)</u>	<u>198,018,642</u>
Total additions to fiduciary net position	283,358,718	252,911,738	(466,203,263)	253,995,226
Deductions:				
Benefit payments	95,436,244	104,926,801	115,090,867	121,191,856
Refunds	209,412	390,158	492,692	430,252
Administrative expenses	<u>2,618,710</u>	<u>2,469,185</u>	<u>2,839,820</u>	<u>2,558,311</u>
Total deductions from fiduciary net position	<u>98,264,366</u>	<u>107,786,144</u>	<u>118,423,379</u>	<u>124,180,419</u>
Change in fiduciary net position	<u>\$ 185,094,352</u>	<u>\$ 145,125,594</u>	<u>\$ (584,626,642)</u>	<u>\$ 129,814,807</u>
<b>Health Benefits</b>				
Additions:				
Member contributions <sup>(1)</sup>	\$ 1,187,939	\$ 1,297,609	\$ 1,183,354	\$ 1,291,670
Employer contributions <sup>(1)</sup>	4,075,768	4,504,640	4,253,783	4,551,097
Investment earnings (net of expenses)	<u>11,955,835</u>	<u>10,012,367</u>	<u>(25,408,688)</u>	<u>9,252,242</u>
Total additions to fiduciary net position	17,219,542	15,814,616	(19,971,551)	15,095,009
Deductions:				
Benefit payments	9,933,174	10,612,929	10,822,553	11,003,408
Refunds	10,705	19,489	24,005	20,304
Administrative expenses	<u>133,977</u>	<u>123,382</u>	<u>138,364</u>	<u>120,955</u>
Total deductions from fiduciary net position	<u>10,077,856</u>	<u>10,755,800</u>	<u>10,984,922</u>	<u>11,144,667</u>
Change in fiduciary net position	<u>\$ 7,141,686</u>	<u>\$ 5,058,816</u>	<u>\$ (30,956,473)</u>	<u>\$ 3,950,342</u>

<sup>(1)</sup> Employer and employee contributions are made in accordance with rates set by City ordinance. The contribution rate has been actuarially determined by an independent actuary to be sufficient to accumulate assets necessary to pay the actuarial liability when due.

<sup>(2)</sup> Effective January 1, 2005, the employer and employee contributions increased to 8.5% and 2.5%, respectively.

<sup>(3)</sup> Effective January 1, 2010, the employee contribution increased to 4.5%.

<sup>(4)</sup> Effective January 1, 2011, the employer and employee contributions increased to 9.5% and 5.5%, respectively.

<sup>(5)</sup> Effective January 1, 2012, the employer and employee contributions increased to 10.25% and 6.25%, respectively.

<sup>(6)</sup> Effective January 1, 2013, the employer and employee contributions increased to 11.00% and 7.00%, respectively.

<sup>(7)</sup> Effective January 1, 2014, the employer and employee contributions increased to 11.20% and 7.30%, respectively.

<sup>(8)</sup> Effective January 1, 2015, the employer and employee contributions increased to 11.50% and 8.00%, respectively.

## Statistical Section

<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
\$ 21,139,754 <sup>(3)</sup>	\$ 26,110,772 <sup>(4)</sup>	\$ 30,663,247 <sup>(5)</sup>	\$ 37,138,512 <sup>(6)</sup>	\$ 39,521,451 <sup>(7)</sup>	\$ 46,689,696 <sup>(8)</sup>
42,228,203	45,703,351	49,756,639	56,427,308	59,941,041	67,234,597
<u>217,566,113</u>	<u>(2,396,020)</u>	<u>205,809,820</u>	<u>318,274,197</u>	<u>101,595,703</u>	<u>(35,746,029)</u>
280,934,070	69,418,103	286,229,706	411,840,017	201,058,195	78,178,264
137,392,322	142,108,250	149,470,854	158,285,769	171,178,475	181,827,975
666,009	948,969	947,756	1,051,298	1,507,554	2,164,104
<u>2,555,677</u>	<u>2,883,909</u>	<u>3,334,741</u>	<u>3,597,603</u>	<u>3,638,296</u>	<u>3,785,416</u>
<u>140,614,008</u>	<u>145,941,128</u>	<u>153,753,351</u>	<u>162,934,670</u>	<u>176,324,325</u>	<u>187,777,495</u>
<u>\$ 140,320,062</u>	<u>\$ (76,523,025)</u>	<u>\$ 132,476,355</u>	<u>\$ 248,905,347</u>	<u>\$ 24,733,870</u>	<u>\$ (109,599,231)</u>
\$ 1,950,508	\$ 2,329,357	\$ 2,492,678	\$ 2,543,374	\$ 2,725,316	\$ 3,026,103
2,924,858	4,202,033	4,241,292	4,135,064	4,332,376	4,380,107
<u>9,714,426</u>	<u>(42,792)</u>	<u>8,635,748</u>	<u>12,911,917</u>	<u>3,966,864</u>	<u>(1,308,528)</u>
14,589,792	6,488,598	15,369,718	19,590,355	11,024,556	6,097,682
11,708,006	12,471,835	12,446,444	12,582,751	12,846,786	12,905,247
30,120	41,255	39,653	42,505	58,314	80,925
<u>115,362</u>	<u>125,390</u>	<u>139,510</u>	<u>145,169</u>	<u>140,710</u>	<u>141,296</u>
<u>11,853,488</u>	<u>12,638,480</u>	<u>12,625,607</u>	<u>12,770,425</u>	<u>13,045,810</u>	<u>13,127,468</u>
<u>\$ 2,736,304</u>	<u>\$ (6,149,882)</u>	<u>\$ 2,744,111</u>	<u>\$ 6,819,930</u>	<u>\$ (2,021,254)</u>	<u>\$ (7,029,786)</u>

## Statistical Section

### Schedule of Benefit Expenses by Type Last Ten Fiscal Years

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Age and Service Benefits:				
Retirees	\$ 77,386,468	\$ 85,768,809	\$ 94,138,108	\$ 100,395,696
Survivor	4,057,908	4,342,907	4,772,142	5,050,283
Death in Service Benefits	2,802,956	2,905,886	3,118,334	3,347,207
Disability Benefits:				
Retirees:				
On-the-Job	581,664	607,662	695,022	646,932
Off-the-Job	2,986,632	3,115,834	3,257,205	3,377,520
Survivors	874,519	927,141	1,012,571	1,071,358
Lump Sum Death Benefits	996,348	1,199,236	1,055,949	1,310,065
Pension Benefits' Contribution Refunds				
Separation	209,238	388,627	473,621	261,010
Death	174	1,531	19,071	169,242
Health Benefits' Contribution Refunds				
Separation	10,696	19,413	23,076	12,317
Death	9	76	929	7,987
DROP Benefits	5,749,749	6,059,326	7,041,536	5,992,795
Pension Benefits	89,686,495	98,867,475	108,049,331	115,199,061
Health Benefits	9,933,174	10,612,929	10,822,553	11,003,408

## Statistical Section

---

<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
\$ 114,044,816	\$ 119,878,934	\$ 127,091,564	\$ 135,648,423	\$ 146,505,901	\$ 156,519,225
5,415,206	5,879,654	6,126,099	6,619,661	7,274,571	7,755,324
3,636,127	3,659,245	3,736,130	3,781,917	3,965,980	4,054,992
769,792	818,527	869,781	826,071	844,509	879,295
3,712,434	3,888,218	3,854,524	3,940,566	4,018,848	3,977,212
1,124,708	1,122,643	1,238,793	1,309,114	1,433,661	1,535,422
1,376,342	1,508,915	1,315,428	1,350,159	1,415,762	1,324,545
591,480	911,074	941,408	1,051,298	1,507,554	2,162,575
74,529	37,895	6,348	-	-	1,529
26,749	39,608	39,387	42,505	58,314	80,868
3,371	1,647	266	-	-	57
7,312,897	5,352,114	5,238,535	4,809,858	5,719,243	5,781,960
130,079,425	136,756,136	144,232,319	153,475,911	165,459,232	176,046,015
11,708,006	12,471,835	12,446,444	12,582,751	12,846,786	12,905,247

## Statistical Section

### Schedule of Retired Members by Type of Benefit - Pension December 31, 2015

Amount of Monthly Benefit	Number of Retirees	Type of Retirement*							Option Selected**			
		1	2	3	4	5	6	7	1	2	3	4
\$1- 50	92	89	3						91		1	
51- 100	114	72	20			8	14		80	28	3	3
101- 150	214	157	28	1		8	20		123	73	6	12
151- 200	240	174	36			6	21	3	142	72	6	20
201- 250	272	195	44			14	19		156	86	9	21
251- 300	255	157	47		3	22	24	2	152	81	4	18
301- 350	274	167	41		5	26	27	8	169	71	14	20
351- 400	214	139	33	1	10	15	14	2	130	53	9	22
401- 450	215	136	38		6	13	18	4	120	56	10	29
451- 500	214	120	36	1	13	17	24	3	121	63	10	20
501- 600	440	233	92	3	21	26	50	15	252	116	23	49
601- 700	367	218	51	1	26	20	41	10	219	84	24	40
701- 800	332	182	52	2	22	16	44	14	172	93	28	39
801- 900	300	183	38	3	14	20	34	8	161	78	22	39
901- 1,000	282	186	21	3	21	12	30	9	152	76	21	33
1,001-1,100	310	205	29	2	18	11	36	9	166	80	24	40
1,101-1,200	297	206	23	1	17	11	28	11	154	93	19	31
1,201-1,300	274	190	16	3	12	13	35	5	136	74	19	45
1,301-1,400	240	186	8	3	13	3	19	8	128	55	22	35
1,401-1,500	252	196	11	1	13	13	16	2	141	52	18	41
1,501-1,600	235	189	10	3	7	10	16		134	50	28	23
1,601-1,700	218	184	3	2	8	8	10	3	116	48	21	33
1,701-1,800	208	169	3		10	10	15	1	117	43	19	29
1,801-1,900	215	191	4	1	7	3	9		117	35	24	39
1,901-2,000	177	159	2		4	3	8	1	80	48	18	31
2,001-2,500	841	744	8	4	21	18	38	8	425	214	78	124
2,501-3,000	619	578	4	5	7	4	20	1	312	145	54	108
3,001-3,500	467	437		4	4	7	13	2	215	122	50	80
3,501-4,000	304	291	2		3	2	6		143	84	26	51
4,001-4,500	184	178			1	4	1		81	39	14	50
\$4,501- over	408	393	1	1	1	6	5	1	167	114	45	82
<b>Totals</b>	<b>9,074</b>	<b>6,904</b>	<b>704</b>	<b>45</b>	<b>287</b>	<b>349</b>	<b>655</b>	<b>130</b>	<b>4,872</b>	<b>2,326</b>	<b>669</b>	<b>1,207</b>

**\* Type of Retirement:**

1. Normal Retirement for Age and Service
2. Early Retirement
3. Disability – On-the-Job
4. Disability – Off-the-Job
5. Survivor Payment – Death in Service
6. Survivor Payment – Normal or Early Retirement
7. Survivor Payment – Disability Retirement

**\*\*Option Selected:**

1. Life
2. 100% Joint and Survivor
3. 75% Joint and Survivor
4. 50% Joint and Survivor

## Statistical Section

### Schedule of Retired Members by Type of Benefit - Health Insurance Reduction December 31, 2015

(1) Non Medicare-eligible		(2) Medicare-eligible	
Amount of Reduction	Number of Retirees	Amount of Reduction	Number of Retirees
Eligible to Receive		Eligible to Receive	
\$12.50 - 50.00	83	\$6.25 - 50.00	477
51.00 - 100.00	290	51.00 - 100.00	1,055
101.00 - 150.00	271	101.00 - 150.00	1,130
151.00 - 200.00	197	151.00 - 200.00	979
201.00 - 250.00	256	201.00 - 250.00	342
251.00 - 300.00	231	251.00 - 300.00	65
301.00 - 350.00	284	301.00 - 350.00	40
351.00 - 400.00	258	351.00 - 400.00	33
401.00 - 450.00	210	401.00 - 450.00	11
451.00 - 500.00	54	451.00 - 500.00	1
501.00 - 550.00	8	501.00 - 550.00	4
551.00 - 600.00	5	551.00 - 600.00	2
601.00 - 650.00	2	601.00 - 650.00	0
651.00 - 700.00	6	651.00 - 700.00	0
701.00 - 750.00	0	701.00 - 750.00	2
751.00 - 800.00	1	751.00 - 800.00	0
\$801.00 - over	0	\$801.00 - over	1
Total	2,156	Total	4,142

**Type of Benefit:**

(1) Participants who are not Medicare-eligible are eligible for health/dental insurance premium reduction equal to \$12.50 per month for each year of service.

(2) Participants who are Medicare-eligible are eligible for health/dental insurance premium reduction equal to \$6.25 per month for each year of service.

Note: In some instances, the years of service of spouses may have been combined when determining the amount of benefit.

## Statistical Section

### Schedule of Retired Members by Attained Age and Type of Pension Benefit December 31, 2015

Age	Number of Retirees/ Beneficiary	Type of Retirement*						
		1	2	3	4	5	6	7
01-24	40				8	22	5	5
25-29	6					3	2	1
30-34	13					7	4	2
35-39	23				1	11	5	6
40-44	24				5	9	6	4
45-49	45	2			11	20	9	3
50-54	64	5		2	15	24	15	3
55-59	1,048	880	42	3	52	44	16	11
60-64	1,833	1,534	91	16	61	58	57	16
65-69	2,190	1,825	151	10	62	55	70	17
70-74	1,403	1,082	142	1	35	29	88	26
75-79	933	664	93	7	19	27	104	19
80-84	689	473	62	4	12	15	113	10
85-89	443	295	39	2	4	12	89	2
90-94	247	104	71		1	10	56	5
95 and up	73	40	13		1	3	16	
Totals	9,074	6,904	704	45	287	349	655	130

**\*Type of Retirement:**

1. Normal Retirement for Age and Service
2. Early Retirement
3. Disability – On-the-Job
4. Disability – Off-the-Job
5. Survivor Payment – Death in Service
6. Survivor Payment – Normal or Early Retirement
7. Survivor Payment – Disability Retirement

## Statistical Section

### Average Monthly Benefit Payment – Pension Last Ten Fiscal Years

Retirement Effective Date for the Years Ended December 31:	Years of Credited Service							Total
	0-5	6-10	11-15	16-20	21-25	26-30	31+	
<b>2006</b>								
Average Monthly Benefit	\$241.12	\$380.82	\$798.58	\$1,640.94	\$2,061.07	\$2,498.79	\$3,358.99	\$1,612.03
Mean Final Average Monthly Salary	\$1,116.33	\$3,672.48	\$4,061.86	\$5,301.29	\$5,103.43	\$7,480.71	\$5,453.33	\$4,562.89
Number of Retirees	7	86	71	59	50	44	63	380
<b>2007</b>								
Average Monthly Benefit	\$52.26	\$406.89	\$668.51	\$1,306.00	\$1,802.38	\$2,500.82	\$3,146.99	\$1,525.70
Mean Final Average Monthly Salary	\$2,936.27	\$3,784.99	\$3,637.37	\$4,493.97	\$4,707.83	\$4,897.62	\$5,052.79	\$4,372.90
Number of Retirees	1	88	56	68	55	50	61	379
<b>2008</b>								
Average Monthly Benefit	\$758.53	\$444.21	\$844.40	\$1,584.03	\$2,316.39	\$2,603.67	\$3,369.03	\$1,621.69
Mean Final Average Monthly Salary	\$2,053.60	\$3,781.87	\$4,450.86	\$4,998.35	\$5,568.83	\$5,209.11	\$5,532.95	\$4,742.67
Number of Retirees	3	94	63	72	44	55	46	377
<b>2009</b>								
Average Monthly Benefit	\$170.48	\$371.43	\$861.17	\$1,646.28	\$2,171.89	\$2,631.60	\$3,380.10	\$1,960.51
Mean Final Average Monthly Salary	\$3,651.81	\$3,179.39	\$4,348.20	\$5,337.72	\$5,432.91	\$5,123.81	\$5,359.29	\$4,883.90
Number of Retirees	5	93	77	114	126	73	142	630
<b>2010</b>								
Average Monthly Benefit	\$211.53	\$369.70	\$979.86	\$1,527.63	\$2,163.74	\$2,606.62	\$3,138.77	\$1,569.19
Mean Final Average Monthly Salary	\$3,293.07	\$3,738.27	\$5,649.60	\$5,459.85	\$5,761.51	\$5,114.12	\$5,862.78	\$5,152.88
Number of Retirees	5	72	63	74	40	33	48	335
<b>2011</b>								
Average Monthly Benefit	\$296.19	\$500.13	\$1,078.70	\$1,848.95	\$2,506.49	\$3,229.10	\$3,896.81	\$1,908.05
Mean Final Average Monthly Salary	\$4,168.30	\$4,069.33	\$5,078.96	\$5,671.69	\$6,024.76	\$5,987.34	\$5,877.89	\$5,268.32
Number of Retirees	40	74	66	90	44	43	55	412
<b>2012</b>								
Average Monthly Benefit	\$547.95	\$447.11	\$1,083.12	\$1,871.72	\$2,482.05	\$3,215.24	\$4,361.42	\$2,001.66
Mean Final Average Monthly Salary	\$6,647.48	\$3,884.74	\$5,068.86	\$5,761.95	\$5,797.04	\$6,102.37	\$6,753.19	\$5,716.52
Number of Retirees	34	101	104	78	61	37	52	467
<b>2013</b>								
Average Monthly Benefit	\$291.11	\$407.63	\$1,091.12	\$1,943.89	\$2,882.70	\$3,867.46	\$4,470.81	\$2,136.39
Mean Final Average Monthly Salary	\$4,208.28	\$3,809.74	\$4,983.96	\$5,834.63	\$6,815.54	\$7,356.09	\$6,845.95	\$5,693.45
Number of Retirees	29	91	87	103	85	55	63	513
<b>2014</b>								
Average Monthly Benefit	\$236.76	\$457.19	\$1,130.46	\$2,076.25	\$3,135.95	\$3,815.05	\$4,512.90	\$2,194.94
Mean Final Average Monthly Salary	\$3,461.08	\$4,024.75	\$5,225.31	\$6,393.35	\$6,795.95	\$7,206.76	\$6,749.41	\$5,693.80
Number of Retirees	36	126	79	92	72	54	55	514
<b>2015</b>								
Average Monthly Benefit	\$321.79	\$535.69	\$1,172.21	\$2,366.45	\$2,919.18	\$3,513.48	\$4,821.40	\$2,235.74
Mean Final Average Monthly Salary	\$4,214.31	\$4,311.94	\$5,332.13	\$6,817.83	\$6,363.86	\$6,703.53	\$7,400.13	\$5,877.68
Number of Retirees	24	96	100	79	80	63	57	499

## Statistical Section

### Average Monthly Benefit Payment – Health Insurance Reduction Last Eight Fiscal Years

As of December 31:	Years of Credited Service							Total
	1-5	6-10	11-15	16-20	21-25	26-30	31+	
<b>2006</b>								
Total Eligible Reduction Amount	\$3,531	\$30,738	\$68,931	\$125,975	\$183,056	\$230,344	\$296,069	\$938,644
Average Monthly Benefit Paid	\$36.36	\$62.47	\$95.70	\$145.35	\$191.33	\$245.71	\$292.40	\$190.26
Number of Retirees	89	423	608	780	876	872	897	4,545
<b>2007</b>								
Total Eligible Reduction Amount	\$3,775	\$30,788	\$66,525	\$127,688	\$189,438	\$239,006	\$317,100	\$974,320
Average Monthly Benefit Paid	\$37.58	\$62.76	\$97.04	\$145.41	\$191.21	\$246.67	\$303.49	\$190.26
Number of Retirees	96	432	599	794	915	910	957	4,703
<b>2008</b>								
Total Eligible Reduction Amount	\$3,263	\$33,463	\$69,656	\$139,150	\$191,944	\$245,413	\$330,750	\$1,013,639
Average Monthly Benefit Paid	\$36.25	\$71.05	\$190.18	\$161.05	\$201.83	\$256.98	\$326.83	\$190.26
Number of Retirees	90	471	638	864	951	955	1,012	4,981
<b>2009</b>								
Total Eligible Reduction Amount	\$3,313	\$35,381	\$75,444	\$154,194	\$213,188	\$256,800	\$375,813	\$1,114,133
Average Monthly Benefit Paid	\$36.40	\$72.50	\$110.78	\$165.44	\$209.01	\$260.18	\$336.15	\$209.54
Number of Retirees	91	488	681	932	1,020	987	1,118	5,317
<b>2010</b>								
Total Eligible Reduction Amount	\$3,506	\$34,006	\$75,925	\$157,556	\$209,787	\$252,344	\$377,131	\$1,110,255
Average Monthly Benefit Paid	\$36.91	\$69.97	\$110.20	\$164.12	\$206.48	\$255.41	\$336.12	\$207.29
Number of Retirees	95	486	689	960	1,016	988	1,122	5,356
<b>2011</b>								
Total Eligible Reduction Amount	\$4,666	\$31,748	\$72,015	\$157,243	\$200,803	\$262,652	\$313,342	\$1,042,469
Average Monthly Benefit Paid	\$36.45	\$62.25	\$93.77	\$151.05	\$192.34	\$246.39	\$313.97	\$187.66
Number of Retirees	128	510	768	1,041	1,044	1,066	998	5,555
<b>2012</b>								
Total Eligible Reduction Amount	\$4,844	\$32,767	\$76,100	\$161,844	\$209,974	\$266,394	\$328,562	\$1,080,485
Average Monthly Benefit Paid	\$36.97	\$61.36	\$92.24	\$147.27	\$188.32	\$241.08	\$309.96	\$184.10
Number of Retirees	131	534	825	1,099	1,115	1,105	1,060	5,869
<b>2013</b>								
Total Eligible Reduction Amount	\$5,087	\$33,201	\$78,183	\$165,711	\$215,607	\$267,749	\$336,423	\$1,101,961
Average Monthly Benefit Paid	\$37.40	\$60.70	\$91.98	\$144.60	\$184.44	\$235.90	\$305.01	\$181.06
Number of Retirees	136	547	850	1,146	1,169	1,135	1,103	6,086
<b>2014</b>								
Total Eligible Reduction Amount	\$5,480	\$34,538	\$79,741	\$166,663	\$214,240	\$267,382	\$341,055	\$1,109,099
Average Monthly Benefit Paid	\$38.05	\$60.17	\$90.31	\$139.35	\$177.79	\$229.12	\$300.22	\$175.91
Number of Retirees	144	574	883	1,196	1,205	1,167	1,136	6,305
<b>2015</b>								
Total Eligible Reduction Amount	\$5,678	\$36,043	\$81,626	\$168,578	\$214,335	\$266,580	\$343,191	\$1,116,031
Average Monthly Benefit Paid	\$37.85	\$60.37	\$89.01	\$134.86	\$172.71	\$223.27	\$292.83	\$171.14
Number of Retirees	150	597	917	1,250	1,241	1,194	1,172	6,521

## Statistical Section

---

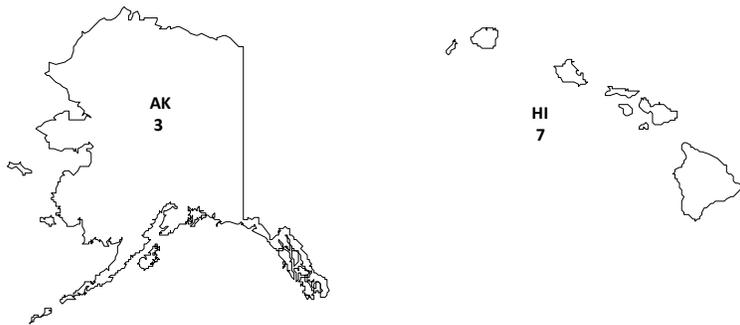
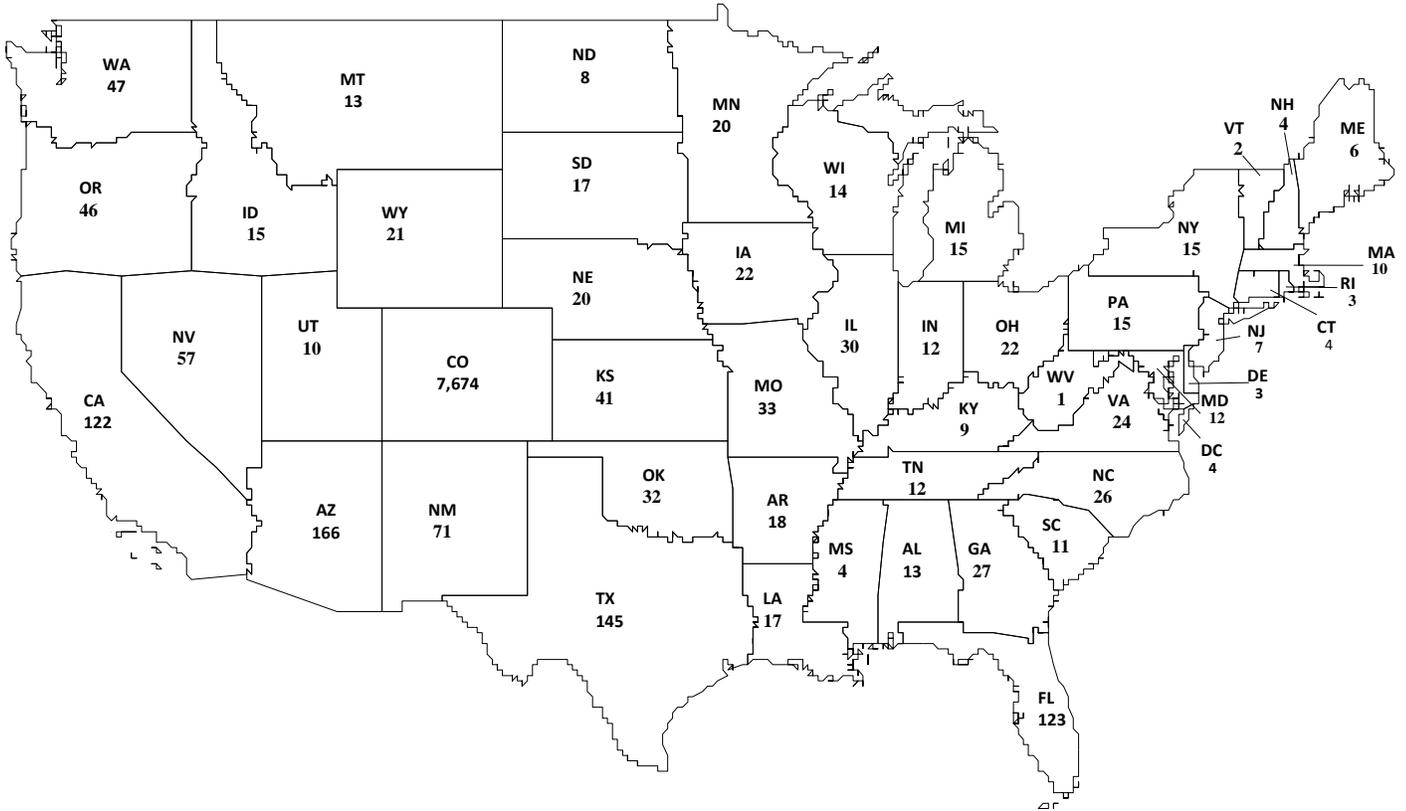
### Principal Participating Employers Current Year and Nine Years Ago

	2015			2006		
	<u>Covered Employees</u>	<u>Rank</u>	<u>Percentage of Total System</u>	<u>Covered Employees</u>	<u>Rank</u>	<u>Percentage of Total System</u>
<b>Pension Benefits</b>						
Participating Government:						
City and County of Denver	22,861	1	94.2%	16,978	1	91.1%
Denver Health and Hospital Authority	<u>1,416</u>	2	<u>5.8%</u>	<u>1,649</u>	2	<u>8.9%</u>
Total	<u><u>24,277</u></u>		<u><u>100.0%</u></u>	<u><u>18,627</u></u>		<u><u>100.0%</u></u>
<b>Health Benefits</b>						
Participating Government:						
City and County of Denver	22,861	1	94.2%	16,978	1	91.1%
Denver Health and Hospital Authority	<u>1,416</u>	2	<u>5.8%</u>	<u>1,649</u>	2	<u>8.9%</u>
Total	<u><u>24,277</u></u>		<u><u>100.0%</u></u>	<u><u>18,627</u></u>		<u><u>100.0%</u></u>

# Statistical Section

## Location of Plan Retirees

Total Number of Retirees – 9,074



### Other Countries and Territories

Argentina	1
Australia	1
Bulgaria	1
Costa Rica	3
Finland	1
Israel	3
Italy	1
Mexico	5
New Zealand	2
Panama	1
United Kingdom	2

**Denver Employees Retirement Plan**

**777 Pearl Street**

**Denver, CO 80203-3717**

**303-839-5419**

**[www.derp.org](http://www.derp.org)**

**[mbrsvs@derp.org](mailto:mbrsvs@derp.org)**

*Photos on front cover courtesy of the City and County of Denver*