
COMPREHENSIVE ANNUAL FINANCIAL REPORT OF THE METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND

**FOR THE YEAR ENDED
DECEMBER 31, 2018**



**PREPARED BY THE MANAGEMENT AND STAFF OF THE METROPOLITAN WATER
RECLAMATION DISTRICT RETIREMENT FUND**

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TABLE OF CONTENTS	Page
● INTRODUCTORY SECTION.....	5
Certificate of Achievement for Excellence in Financial Reporting.....	6
Letter of Transmittal	7
Organization:	
Board of Trustees.....	12
Executive Staff, Advisors and Investment Managers.....	13
Organizational Chart	14
Responsibilities of Board and Staff.....	15
● FINANCIAL SECTION	17
Independent Auditor's Report.....	18
Report on Internal Control and Compliance.....	21
Management's Discussion and Analysis.....	23
Basic Financial Statements:	
Statement of Fiduciary Net Position.....	30
Statement of Changes in Fiduciary Net Position.....	31
Notes to Financial Statements	32
Required Supplementary Information:	
Schedule of Changes in the District's Net Pension Liability and Related Ratios.....	54
Schedules of District Contributions and Related Notes	55
Schedules of Investment Returns	56
Supplementary Information:	
Schedule of Administrative Expenses.....	58
Schedules of Investment Expenses and Payments to Consultants	59
Postemployment Healthcare Disclosure.....	60
● INVESTMENT SECTION	61
Custodian's Report.....	62
Investment Consultant's Report	63
Investment Preface:	
Authority	65
Responsibility	65
Policy & Objectives.....	65
Allocation	66
Management	66
Performance.....	67
Investment Assets:	
Asset Allocation (with graph)	68
Schedule of Investment Returns.....	69
History of Investment Returns (with graph).....	70
Historical Asset Allocation at Market Value.....	71
Fixed Income Diversification	72
Equity Diversification	73
Top 40 Common Stock Holdings.....	74
Manager by Type and Assets Managed	75
Investment Related Expenses:	
Investment Manager, Custodian and Consultant Compensation.....	76
Domestic Brokerage Commissions	77
International Brokerage Commissions	78

TABLE OF CONTENTS (CONTINUED)	Page
● ACTUARIAL SECTION	79
Actuarial Certification	80
Actuarial Report:	
Preface	83
Comparative Summary	85
Summary of Valuation Results	86
Changes in Unfunded Actuarial Liability	87
Actuarial Assumptions and Methods	88
Plan Provisions	92
Analysis of Funding:	
History of Change in Unfunded Liability	98
Actuarial Accrued and Unfunded Liabilities (with graph)	99
Actuarial Accrued Liability Prioritized Solvency Test	100
Historical Valuation Data:	
History of Retirees and Beneficiaries	
Added to and Removed from Benefit Payroll	101
Schedule of Active Member Valuation Data	102
History of Recommended Employer Multiples and Taxes Levied	102
● STATISTICAL SECTION	103
Membership Information:	
Participant Statistics	104
Employee Age and Service Distribution (with graph)	105
Annuitant and Beneficiary Information:	
Schedule of Annuitants by Type of Benefit	106
History of Beneficiaries by Type of Benefit	106
History of Annuity Payments	107
Annuitants Classified by Age and Gender	108
Annuitants Classified by Age and Gender (graph)	109
History of Average Annuities at Retirement	109
Schedule of Average Benefit Payments at Retirement	110
Financial Information (10 years):	
Additions by Source and Deductions by Type	111
Employee and Employer Contributions	112
Benefit Expenses by Type	113
Changes in Fiduciary Net Position	114
● LEGISLATIVE CHANGES SECTION	117

INTRODUCTORY SECTION

Certificate of Achievement for Excellence in Financial Reporting

Letter of Transmittal

Organization

Board of Trustees

Executive Staff and Advisors

Organizational Chart

Responsibilities of Board and Staff



Government Finance Officers Association

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

Presented to

**Metropolitan Water Reclamation
District Retirement Fund, Illinois**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2017

Christopher P. Morrell

Executive Director/CEO

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND

RETIREMENT FUND OFFICE
SUITE 330

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BOARD OF TRUSTEES
JOHN P. DALTON, JR.
ROBERT T. REGAN
HON. MARIYANA T. SPYROPOULOS
STEPHEN J. CARMODY
HON. KIMBERLY DU BUCLET
JOSEPH F. KENNEDY
KATHLEEN THERESE MEANY

May 22, 2019

Board of Trustees of the
Metropolitan Water Reclamation
District Retirement Fund
111 E. Erie Street
Chicago, Illinois 60611

Dear Trustees:

Submitted herewith is the Comprehensive Annual Financial Report (CAFR) of the Metropolitan Water Reclamation District Retirement Fund (Fund) for the year ending December 31, 2018.

Responsibility for the completeness and accuracy of the information presented in this report rests with the management of the Fund. Management has established and maintained a system of internal accounting controls designed to safeguard Fund assets and ensure that adequate accounting data is compiled to allow for the preparation of financial statements in conformity with Generally Accepted Accounting Principles (GAAP).

The internal control structure is designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that the cost of control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgments by management. To the best of our knowledge and belief, the enclosed financial statements, supporting schedules and statistical tables are accurate in all material respects and are reported in a manner designed to present fairly the financial position and the results of operations of the Fund.

In accordance with the Illinois Pension Code, the Fund's basic financial statements for the fiscal year ended December 31, 2018 have been subject to an audit by independent accountants selected by the Board of Trustees. The unqualified opinion of Legacy Professionals, LLP has been included in the Financial Section of this report.

GAAP require that management provide a narrative introduction, overview and analysis to accompany the basic financial statements in the form of a Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement, and should be read in conjunction with, the MD&A which can be found in the Financial Section following the report of the independent auditor.

FUND PROFILE

The Fund was established in 1931 by the State of Illinois legislature and is administered in accordance with Chapter 40, Act 5, Articles 1, 13, and 20 of the Illinois Compiled Statutes.

The Fund is the administrator of a single-employer defined benefit public employee retirement system established to provide retirement, death and disability benefits for covered employees of the Metropolitan Water Reclamation District of Greater Chicago (District). The Fund is included in the District's financial statements as a pension trust fund.

As of December 31, 2018 the Fund serves 1,832 active members, 2,443 benefit recipients, and 127 inactive members. The plan description is provided within the notes to the financial statements in the Financial Section and within the Actuarial Section of this report.

FINANCIAL CONDITION**Financial Position**

Net Position decreased 10.5% in 2018 by \$157.8 million due to negative investment returns that mirrored the market in general. For a full understanding of the Fund's financial results, the reader is urged to review the Financial Section of this report which contains the auditor's opinion, management's discussion and analysis, the financial statements, required supplementary information, and other supplementary information.

Objective and Sources of Funding

The Fund's funding objective is to meet all obligations to present and future members and retirees, through three sources - earnings on the Fund's investment portfolio, and contributions from the employer (the District) and employees.

The Fund's investment portfolio typically provides the largest portion of total additions in any given year, in the form of investment returns; during 2018 however, this typical pattern of inflows was disrupted by negative returns. During the year, the invested assets of the Fund earned a rate of return of -7.5% net of fees, compared to the Fund's 2018 Policy Index return of -6.9%, and the 2017 rate of return of 15.6%. The ten year annualized rate of return on the Fund's investments is 9.2%, compared to 9.4% for the Policy Index return for the same period.

Employer contributions typically provide a much smaller portion of total additions than investment returns. Due to the passage of PA 97-0894 in 2012 and the establishment of a Funding Policy by the District in 2014, in recent years the Fund has received increased employer contributions that meet or exceed the actuarial requirement. The employer contributions are funded through an annual property tax levy according to a statutory formula.

Employee contributions typically provide the smallest percentage of total additions. The required percentage withheld from employee's salaries is set by state statute. In accordance with PA 97-0894 contributions from Tier I employees increased to 12% in 2015, where they will remain until the funding goal is reached. Contributions from Tier II employees are set at 9% of salaries, with a salary cap for annuity purposes in 2018 of \$113,645.

Funding Status

An important measure of the long-term financial stability of a pension fund is the funded ratio which is the ratio of the actuarial value of assets to the actuarial accrued liability. The greater the funded ratio, the greater assurance is given to participants that the Fund will meet its obligations to pay their future pension benefits. The Fund engages an independent actuary to perform an annual actuarial valuation of the plan. The December 31, 2018 valuation reports the actuarial value of assets (AVA) at \$1.470 billion, the actuarial accrued liability (AAL) at \$2.601 billion, and the unfunded AAL at \$1.131 billion, resulting in a funded ratio of 56.5%.

The funded ratio is a measure at one point in time, but is best viewed in the context of its historical trend to assess the Fund's progress in relation to its long-term objective. For a more complete understanding of the Fund's funding status, the reader is encouraged to review the Actuarial section of this report which contains a summary of valuation results, schedules that analyze funding, and details about the data used in the valuation. Ten year trend information is available in both the Actuarial and Statistical sections of this CAFR.

Investments

At year end, the Fund's 15 investment management firms were managing 19 separate mandates that comprise the Fund's \$1.257 billion investment portfolio. The Board employs an investment consultant who provides services including manager search, selection and oversight, performance reporting, attribution analysis, and investment policy development. The Fund's goal is to maximize the long-term total return of the Fund's investments through a policy of diversification within a parameter of prudent risk as measured on the total portfolio.

The Investment Section of this CAFR contains details regarding the Fund's investment policy, performance, diversification, investment expenses and a summary of the investment activities that took place in 2018. Also included are the Custodian's report and the Investment Consultant's report.

MAJOR ACTIVITIES AND HIGHLIGHTS

- In June 2018 the Fund's tax levy request for 2019 was submitted to the District in the gross amount of \$87,319,000, substantially the same as the 2018 levy request of \$87,281,000. The 2019 tax levy is based on a multiple of 4.19 times employee contributions two years prior, and generally fluctuates with the District's active payroll.
- The asset allocation was expanded by the Board in 2018 when it approved an allocation of 5% to core open-end real estate. Funding the new allocations to the UBS Trumbull Property Fund and DWS RREEF America REIT II portfolios began in 2018 and was completed January 2, 2019.
- Board appointments and elections since 12/31/17 include the following:
 - In December 2017 Board officers for 2018 were elected as follows: Joseph F. Kennedy, President; Robert T. Regan, Vice President; and Hon. Mariyana Spyropoulos, Secretary
 - Joseph F. Kennedy stepped down as President in April 2018; John P. Dalton was elected as President at that time
 - In the October 2018 Trustee election, Robert T. Regan was duly re-elected as Trustee for a four-year term beginning December 1, 2018

- Retirement Fund staff achievements and changes include:
 - Susan Boutin, who served as Executive Director from May 2006 through April 2019, retired as of April 30, 2019 after 21 years of service
 - Mary Murphy, Operations Manager and Ksenija Hrvojevic, Benefits Manager both reached 20 years of service at the Fund in 2018
 - Hiring and training of a new Office Services Assistant in January 2018; the position was vacant at year end and filled again in April 2019
- Retirement Fund staff activity in 2018 include:
 - Processing of 96 retirement applications (including 19 reciprocal retirements) and 34 survivor applications
 - 30,600 benefit payments paid to retirees and beneficiaries totaling \$158.6M; 99% paid via electronic funds transfer
 - 99 new retirees and 34 new spouse/child annuitants added to annuity payroll; 60 retirees and 38 spouse/child annuitants removed from payroll due to death or termination
 - Preparation of 841 annuity estimates for active employees
 - Mailing of pension verification forms to 2,440 benefit recipients to confirm that the intended recipients were still alive and therefore eligible to receive benefits
 - 60 meetings with investment managers to discuss current investment offerings
 - Responses prepared and sent to fulfill 30 FOIA requests
- Member communications in 2018 include:
 - New employee orientation provided to 121 new hires of the District throughout the year
 - April mailing of over 1,950 contribution statements to all active and inactive members, listing cumulative pension contributions through December 31, 2017
 - Five days of plant-site individual retirement counseling sessions, presented by the Fund's benefits staff to approximately 123 individual employees at the Stickney, Calumet, O'Brien and Egan plants in February, March and April
 - June and September issues of Vested Interest, the Fund's newsletter, prepared and mailed to all members
 - October Open Enrollment Newsletter, for retiree healthcare benefits offered by the District to take effect January 1, 2019, prepared and sent to 2,354 annuitants, 78% by email and 22% by mail
- Trustees and staff participated in several training sessions during 2018, including:
 - Annual Reciprocal Conference, held in Oak Lawn
 - International Foundation of Employee Benefit Plans Annual Conference
 - IFEBP Certificate of Achievement in Public Pension Plans (CAPPP)
 - Midwest Institutional Investors Forum, sponsored by U.S. Markets Group
 - Generating Returns, Investing in China, and Pension Risk Strategies conferences sponsored by Pension & Investments
 - Marquette Associates 2018 Investment Symposium
 - GFOA Best Practices and GAAP Update

AWARDS

The Government Financial Officers Association of the United States and Canada (GFOA) awarded the Certificate of Achievement for Excellence in Financial Reporting to our Fund for its CAFR for the fiscal year ended December 31, 2017. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports.

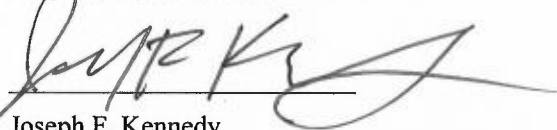
To be awarded the Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents meet or exceed the program standards. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for only one year. The Metropolitan Water Reclamation District Retirement Fund has received a Certificate of Achievement for the last 25 years. We believe our current report continues to conform to the Certificate of Achievement program requirements. We are, therefore, submitting it to the GFOA to determine its eligibility for a Certificate of Achievement for the year ending December 31, 2018.

ACKNOWLEDGMENTS

The preparation of this report reflects the combined efforts of the Fund staff under the direction of the Board of Trustees. This report is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship of the assets of the Fund.

Respectfully submitted,



Joseph F. Kennedy
Acting Director

BOARD OF TRUSTEES

12/31/18

John P. Dalton, Jr., President

Mr. Dalton began his District employment in 1993. He currently works in the District's Maintenance & Operations Department as Master Mechanic I at the Calumet Water Reclamation Plant. He was appointed to the MWRD Retirement Fund Board of Trustees in 2005, elected to serve a three-year term on the Board in 2006, and re-elected in 2009, 2013 and in 2017 for a four year term ending in November 2021.

Robert T. Regan, Vice President

Mr. Regan began his District employment in 1991. He currently works in the District's Maintenance & Operations Department as a Principal Mechanical Engineer at the Stickney Water Reclamation Plant. He was elected by the employees to serve a three-year term on the MWRD Retirement Fund Board of Trustees in 2004, re-elected in 2007, 2010, 2014 and in 2018 for a four year term ending in November 2022.

Honorable Mariyana T. Spyropoulos, Secretary

Ms. Spyropoulos has served on the MWRD Board of Commissioners since 2009 and served as President through January 2019. She was appointed to the MWRD Retirement Fund Board of Trustees upon expiration of the term served by the Hon. Cynthia M. Santos, for a three year term starting in January 2013. She was re-appointed in 2016 and 2019 for a three year term ending in January 2022.

Stephen J. Carmody, Trustee

Mr. Carmody began his District employment in 1989. He currently works in the District's Maintenance & Operations Department as Engineer of Treatment Plant Operations I at the Stickney Water Reclamation Plant. He was elected in November 2008, re-elected in 2011 and in 2015 for a four year term ending in November 2019.

Joseph F. Kennedy, Trustee

Mr. Kennedy began his employment at the Metropolitan Water Reclamation District of Greater Chicago (District) in 1988. He currently works in the District's Engineering Department as a Managing Civil Engineer. He was appointed to the MWRD Retirement Fund Board of Trustees in 1999, was elected to the Board later that same year, and was re-elected in 2002, 2005, 2008, 2012 and 2016 for four year terms ending November 2020.

Honorable Barbara J. McGowan, Trustee

Ms. McGowan served on the District Board of Commissioners since 1998 and is currently serving as Vice President. She was appointed to the MWRD Retirement Fund Board of Trustees in December 2007, and re-appointed in 2009, 2012, 2015 and in 2018 for a three year term ending in January 2021.

Kathleen Therese Meany, Trustee

Ms. Meany served on the District Board of Commissioners since election in 1990; she served as Vice-President for 16 years, and President from 2013 until her retirement in 2014. She was appointed to the MWRD Retirement Fund Board as Retiree Trustee in 2016 to complete the term of Harold G. Downs which expired January 2017, and was re-appointed in 2017 for a three year term ending in January 2020.

**EXECUTIVE STAFF, ADVISORS AND INVESTMENT MANAGERS
12/31/18****EXECUTIVE STAFF**

Susan A. Boutin, Executive Director

ADVISORS

- Legal Counsel: Jacobs, Burns, Orlove, and Hernandez, Chicago, IL
- Investment Consultant: Marquette Associates, Chicago, IL
- Consulting Actuary: Foster & Foster, Naperville, IL
- Auditor: Legacy Professionals, LLP, Chicago, IL
- Custodian: The Bank of New York Mellon Co., New York, NY

INVESTMENT MANAGERS

1. Ariel Investments, Chicago, IL
2. DWS, Chicago, IL
3. Decatur Capital Management Inc., Decatur, GA
4. Dimensional Fund Advisors, Austin, TX
5. Garcia Hamilton & Associates, Houston, TX
6. Hexavest Inc., Montreal, Canada
7. LSV Asset Management, Chicago, IL
8. Matarin Capital Management, New York, NY
9. Mesirow Financial, Chicago, IL
10. Neuberger Berman, New York, NY
11. O'Shaughnessy Asset Management, Stamford, CT
12. State Street Global Advisors, Boston, MA
13. Standish Mellon Asset Management, Boston, MA
14. UBS Realty Investors, Chicago, IL
15. Wasatch Advisors, Salt Lake City, UT

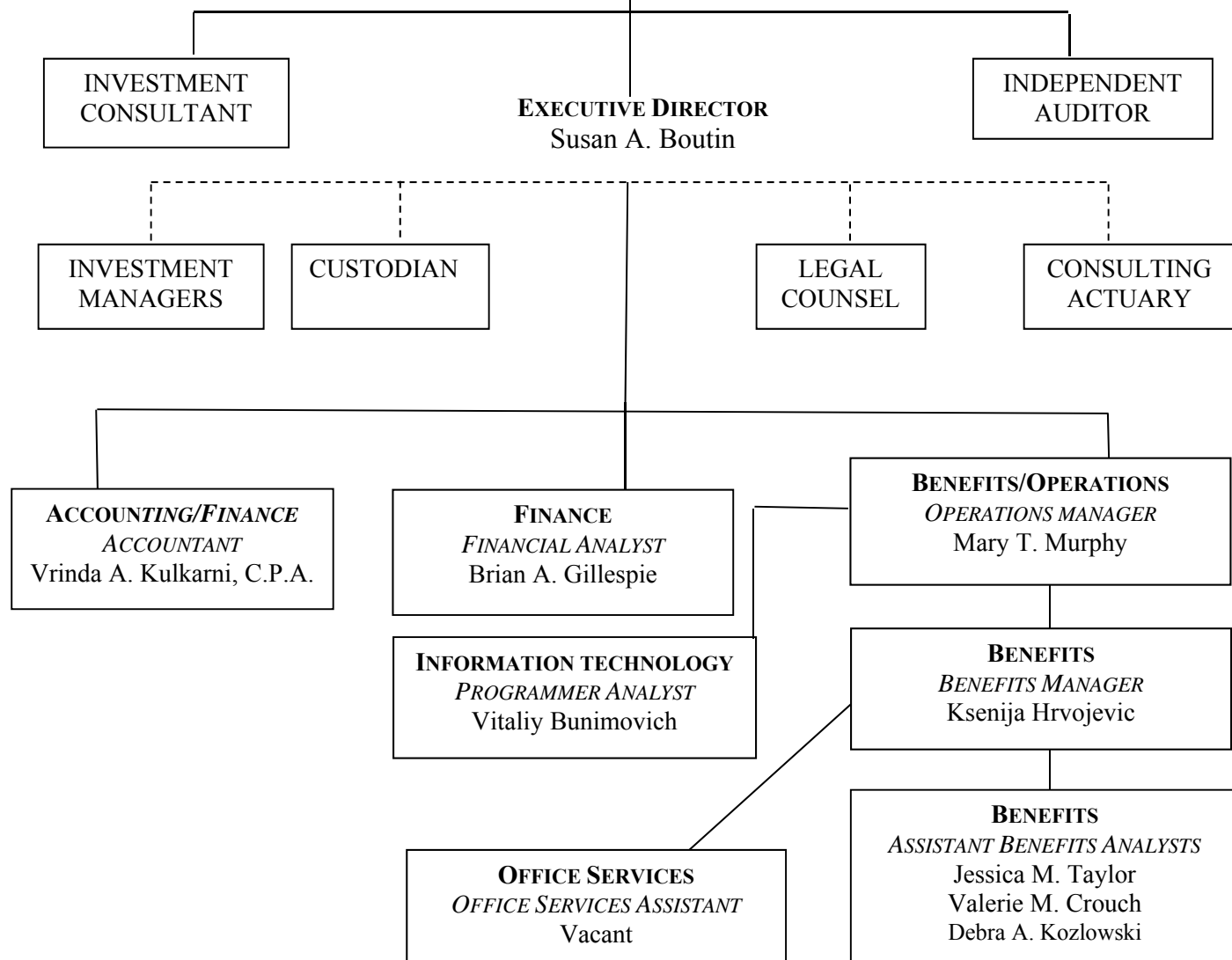
Details regarding the investment professionals listed above can be found in the Investment Section of this CAFR, on pages 75 and 76.

ORGANIZATIONAL CHART

December 31, 2018

BOARD OF TRUSTEES

John P. Dalton, Jr. (President)
 Robert T. Regan (Vice President)
 Hon. Mariyana T. Spyropoulos (Secretary)
 Stephen J. Carmody (Trustee)
 Joseph F. Kennedy (Trustee)
 Hon. Barbara J. McGowan (Trustee)
 Kathleen T. Meany (Retiree Trustee)



———— Full and direct authority and responsibility.
 - - - - - Appointment by the Board of Trustees, direction and coordination by the Executive Director.

RESPONSIBILITIES OF THE BOARD OF TRUSTEES

The Board of Trustees of the Retirement Fund is composed of seven members. Two Trustees are appointed by the District Board of Commissioners, one is recommended by the District Board of Commissioners and approved by the Retirement Fund Board, and four are District employees elected by the active members of the Fund. Appointed members serve for terms of three years, and elected members serve for terms of four years on a rotating basis so that each year, one seat on the Board is up for election and another is up for appointment.

The Board has the powers and duties to collect all contributions due to the Plan, to direct the investment of the assets of the Fund in a manner prescribed by State statute and Fund policies, to authorize or suspend payment of any benefits, to make rules and regulations for the proper conduct of the affairs of the Fund, and to appoint employees and consultants. The Board approves its own budget which is prepared by the administrative staff of the Fund, and submits a detailed report of the affairs of the Fund to the State of Illinois Department of Insurance and to the District.

RESPONSIBILITIES OF THE STAFF

The Board appoints an Executive Director who is responsible for all administrative functions, supervision of staff, and for the administration and payment of benefits to the members of the Fund under the direction of the Board of Trustees.

The Executive Director is responsible for coordinating efforts with the Fund's various consultants. The Financial Analyst works closely with the Fund's investment consultant, on asset allocation studies, investment manager searches, asset transitions, and investment monitoring. The Board considers recommendations made by the Investment consultant in the development and maintenance of the Fund's investment policy. Every four to five years, the Fund's actuary performs an experience analysis to review the recent experience of the Fund and to recommend actuarial assumptions for use in the annual valuation. The Board also considers recommendation from the Fund's actuary and attorney regarding legislative initiatives. Attorneys are consulted regarding various issues including statutory interpretations, determinations from the Internal Revenue Service, and potential legal actions.

The Benefits Manager supervises a staff of three Benefits Analysts and the Office Services Assistant. Together, the benefits staff's responsibilities include computation of annuity benefits, certification of reciprocal service credit, refunds of spouse contributions at the time of retirement to unmarried employees, contribution refunds to qualified participants, calculation of survivor benefits or refunds to estate, and insurance enrollment and claim administration. Calculations are internally verified and then presented to the Trustees for approval. The staff is responsible for distribution of benefit payments and the associated withholdings for taxes, insurance, credit union deductions, as well as year-end tax reporting (IRS Form 1099-R).

Throughout the year staff prepares retirement estimates, which include calculations of applicable refund repayment and leave of absence payment estimates to qualified individuals to enhance their retirement benefits. In spring, staff travels to District plants to provide on-site individual retirement counseling. In addition, periodic pre-retirement seminars are jointly presented by Fund and District staff at various locations throughout the District, and an informative newsletter is produced twice per year for the membership.

Benefits staff is also responsible for the administration of ordinary and duty disability benefits to disabled employees, which includes verification of the disability, and calculation and payment of the benefits. The benefit staff also maintains a record of all employee contributions and the associated interest.

The Operations Manager directly supports the Executive Director in the day-to-day running of the Fund and is responsible for technology initiatives. The Fund Programmer Analyst is responsible for the data processing that produces benefits payments and records employee contributions in the Fund's proprietary benefit management software. The Fund Accountant is responsible for the general accounting that serves as the basis for the annual financial statements and for coordinating the annual audit and preparation of the annual CAFR.

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FINANCIAL SECTION

Independent Auditors' Report

Report on Internal Control and Compliance

Management's Discussion and Analysis

Basic Financial Statements:

Statement of Fiduciary Net Position

Statement of Changes in Fiduciary Net Position

Notes to Financial Statements

Required Supplementary Information

Schedule of Changes in the District's Net Pension Liability
and Related Ratios

Schedule of District Contributions and Related Notes

Schedule of Investment Returns

Other Supplementary Information:

Schedule of Administrative Expenses

Schedule of Investment Expenses

Schedule of Payments to Consultants

Postemployment Healthcare Disclosure

**INDEPENDENT AUDITORS' REPORT**

To the Trustees
Metropolitan Water Reclamation
District Retirement Fund

Report on the Financial Statements

We have audited the accompanying financial statements of the Metropolitan Water Reclamation District Retirement Fund (the Fund), a fiduciary fund of the Metropolitan Water Reclamation District of Greater Chicago (the District), which comprise the statement of fiduciary net position as of December 31, 2018, the related statement of changes in fiduciary net position for the year then ended and the related notes to the financial statements, which collectively comprise the Fund's basic financial statements. The Fund's financial statements include partial prior-year information for 2017. Such information does not include various notes to the basic financial statements and the management's discussion and analysis for 2017, which are required 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 Fund's financial statements for the year ended December 31, 2017, from which such partial information was derived.

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 of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

Auditors' Responsibility (continued)

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

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

Opinion

In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the fiduciary net position of Metropolitan Water Reclamation District Retirement Fund as of December 31, 2018, and the changes in fiduciary net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Other Matters***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 23 through 29 and the schedules of changes in the District's net pension liability and related ratios, of District contributions and related note, and of investment returns on pages 54 through 56 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Other Matters (continued)**Supplementary Information*

Our audit was conducted for the purpose of forming an opinion on the Fund's basic financial statements as a whole. The accompanying schedules of administrative expenses, of investment expenses, of payments to consultants and of postemployment healthcare disclosure on pages 58 through 60 are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such 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. The 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 information is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 22, 2019, on our consideration of the Metropolitan Water Reclamation District Retirement Fund'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 results 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 Metropolitan Water Reclamation District Retirement Fund's internal control over financial reporting and compliance.

Legacy Professionals LLP

Westchester, Illinois

April 22, 2019



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN
ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS***

To the Trustees
Metropolitan Water Reclamation
District Retirement Fund

Report on the Financial Statements

We have audited, in accordance with the 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, the basic financial statements of Metropolitan Water Reclamation District Retirement Fund (the Fund), which comprise the statement of fiduciary net position as of December 31, 2018, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated April 22, 2019.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Fund's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control. Accordingly, we do not express an opinion on the effectiveness of the Fund's internal control.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

4 Westbrook Corporate Center | Suite 700 | Westchester, IL 60154 | 312-368-0500 | 312-368-0746 Fax | www.legacypcpas.com

Internal Control over Financial Reporting (continued)

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Fund's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Fund's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Fund's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Metropolitan Water Reclamation District Retirement Fund's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Legacy Professionals LLP

Westchester, Illinois

April 22, 2019

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND
(A Component Unit of the Metropolitan Water Reclamation District of Greater Chicago)

MANAGEMENT’S DISCUSSION AND ANALYSIS

The management of the Metropolitan Water Reclamation District Retirement Fund (the Fund) presents this narrative overview of the financial statements and financial performance of the Fund for the years ended December 31, 2018 and 2017. The Management’s Discussion and Analysis (MD&A) is designed to focus on current activities, resulting changes and current known facts. It should be read in conjunction with the letter of transmittal, the financial statements and their accompanying notes, required supplementary information, and other supplementary information.

FINANCIAL HIGHLIGHTS

- The Fund’s investment portfolio returned (7.5) % and 15.6% (net of fees) for the calendar years 2018 and 2017, respectively. The Fund’s Policy Index returned (6.9) % and 15.7% for the same years.
- Benefits and administrative expenses exceeded income from contributions and investment income in 2018, resulting in a decrease in the Fund’s net position restricted for benefits of \$(157.8) million or -10.5% to \$1.34 billion at December 31, 2018, from the prior year end.
- The Fund’s funded ratio was 56.5% as of December 31, 2018, down from 58.3% at December 31, 2017. A 5-year upward trend in this ratio started in 2013 as a result of solid investment returns, special contributions from the District, and legislation changes that resulted in increased employee and employer contributions. However negative investment returns due to market conditions, and actuarial assumption changes caused the slight decline in the funded ratio in 2018.

UNDERSTANDING THE FUND’S FINANCIAL STATEMENTS

The Fund prepares its financial statements on an accrual basis in accordance with generally accepted accounting principles promulgated by the Governmental Accounting Standards Board. The statement of fiduciary net position provides information about the nature and amount of investments available to satisfy the pension benefit obligations of the Fund. The statement of changes in fiduciary net position accounts for all additions to and deductions from the net position held in trust for pension benefits. This statement measures the Fund’s performance over the past year in increasing or decreasing the fiduciary net position available for pension benefits.

While the statement of fiduciary net position and statement of changes in fiduciary net position provide important financial information, significant actuarial factors also need to be considered in order to determine the financial health of the Fund. Two primary factors are the funded status and the actuarially determined contribution requirement, both of which are calculated by the Fund’s actuary.

UNDERSTANDING THE FUND'S FINANCIAL STATEMENTS (CONTINUED)

The funded ratio of the Fund is the actuarial value of assets divided by the total actuarial liability, and is calculated using the 5-year smoothed market-related value method. The smoothing prevents extreme volatility in the actuarial value of assets due to short-term fluctuations in the investment markets.

Another important calculation by our actuary is the Actuarially Determined Contribution Requirement which combines the employer's normal cost with an amount needed to amortize the net pension liability by the year 2050. This can be compared to the actual contribution from the employer to determine the adequacy of employer contributions to fund the liabilities of the plan.

This report contains the following three components:

1. Basic Financial Statements which are the statement of fiduciary net position, the statement of changes in fiduciary net position, and the notes to the financial statements which contain information that is integral to the financial statements
2. Required Supplementary Information which presents important actuarial information
3. Other Supplementary Information which gives details of administrative, investment, and payments to consultants, as well as disclosure regarding post employment healthcare

FIDUCIARY NET POSITION

A summary of net position for the plan at December 31, 2018 and 2017 is shown in the following table and discussion. These financial statements reflect the resources available to pay future benefits to retirees and beneficiaries at the close of the reported years. Details of fiduciary net position at December 31, 2018 and 2017 are found on page 30.

Condensed Statement of Fiduciary Net Position

	12/31/18	12/31/17	\$ Change	% Change
<u>ASSETS:</u>				
Cash	\$ 2,131,153	\$ 1,990,166	\$ 140,987	7.1%
Employer contributions receivable - net	87,281,000	89,604,000	(2,323,000)	-2.6%
Due from broker	111,904,867	165,504,618	(53,599,751)	-32.4%
Other receivables	3,896,683	3,702,720	193,963	5.2%
Investments	1,242,672,493	1,383,772,856	(141,100,363)	-10.2%
Securities lending collateral	14,166,319	27,447,849	(13,281,530)	-48.4%
Total assets	<u>1,462,052,515</u>	<u>1,672,022,209</u>	<u>(209,969,694)</u>	-12.6%
<u>LIABILITIES:</u>				
Accounts payable	1,210,249	1,359,693	(149,444)	-11.0%
Due to broker	102,681,679	141,420,691	(38,739,012)	-27.4%
Securities lending collateral	14,166,319	27,447,849	(13,281,530)	-48.4%
Total liabilities	<u>118,058,247</u>	<u>170,228,233</u>	<u>(52,169,986)</u>	-30.6%
NET POSITION	<u>\$ 1,343,994,268</u>	<u>\$ 1,501,793,976</u>	<u>\$ (157,799,708)</u>	-10.5%

During 2018, the net position of the Fund decreased \$(157.8) million or -10.5% from net position at December 31, 2017. This decrease was primarily due to the decline in investment values, resulting from negative investment returns in 2018.

Other changes in the components of assets on the statement of fiduciary net position have a corresponding change in liabilities, resulting in no effect on net position. Specifically, the amounts for assets and liabilities for forward exchange contracts and securities lending collateral fluctuate from year to year depending on the amount of security transactions traded but not settled and on the amount of securities out on loan at year-end.

Fiduciary net position at December 31, 2018 was \$1.34 billion, representing the amount available at year end to satisfy future pension benefit obligations.

CHANGES IN FIDUCIARY NET POSITION

A summary of changes in fiduciary net position for the plan for the fiscal years ended December 31, 2018 and 2017 follows. This summary reflects changes in the sources (additions) and uses (deductions) of funds during these years; the net increase or decrease is the change in net position available for benefits since the end of the previous fiscal year. Details of changes in fiduciary net position during 2018 and 2017 can be found on page 31.

Condensed Statement of Changes in Fiduciary Net Position

	2018	2017	\$ Change	% Change
<u>ADDITIONS:</u>				
Employer contributions	\$ 87,167,339	\$ 89,858,224	\$ (2,690,885)	-3.0%
Employee contributions	21,032,601	20,839,829	192,772	0.9%
Total contributions	108,199,940	110,698,053	(2,498,113)	-2.3%
Net investment income (loss)	(103,313,150)	194,475,674	(297,788,824)	-153.1%
Net securities lending income	307,088	345,785	(38,697)	-11.2%
Total investment income (loss)	(103,006,062)	194,821,459	(297,827,521)	-152.9%
Other	15,415	3,100	12,315	397.3%
Total additions	5,209,293	305,522,612	(300,313,319)	-98.3%
<u>DEDUCTIONS:</u>				
Retirement annuities	159,561,047	152,152,914	7,408,133	4.9%
Refunds	1,762,475	2,560,129	(797,654)	-31.2%
Administrative expense	1,685,479	1,613,976	71,503	4.4%
Total deductions	163,009,001	156,327,019	6,681,982	4.3%
INCREASE (DECREASE)				
IN NET POSITION	(157,799,708)	149,195,593	(306,995,301)	-205.8%
Beginning net position	1,501,793,976	1,352,598,383	149,195,593	11.0%
Ending net position	<u>\$ 1,343,994,268</u>	<u>\$ 1,501,793,976</u>	<u>\$ (157,799,708)</u>	-10.5%

CHANGES IN FIDUCIARY NET POSITION (CONTINUED)**Additions**

Additions to fiduciary net position are accumulated through employer and employee contributions, and portfolio investment returns.

Total contributions for 2018 were \$108.2 million, a decrease of \$(2.5) million or -2.3% from 2017. Per current statutes, the District annually levies a tax at a rate which will produce a sum that will be sufficient to meet the Fund's actuarially determined contribution requirement but shall not exceed an amount equal to employee contributions two years prior times 4.19. In 2014, the District established a Funding Policy to contribute annually an amount that over time will increase the ratio of Fund assets to accrued liabilities to 100% by the year 2050.

Employee contributions were \$21.0 million in 2018, substantially the same as 2017. In general, total employee contributions vary with changes in employer payroll and plan modifications.

Net investment income in 2018 was lower than the prior year by \$(297.8) million, reflecting total returns of (7.5) %, compared to 15.6% in 2017. Negative returns were experienced in the U.S. and non-U.S. equity markets in 2018.

Investment income is a combination of unrealized gains (losses) on investments held at year end, realized gains (losses) on investment sales, and interest and dividend income earned during the year. Investment income is shown net of investment expenses which consist of fees charged by the Fund's investment managers, investment consultant, and custodian.

The Fund has participated in the securities lending program offered by the Bank of New York Mellon, the Fund's custodian bank, since 2007. The Fund also participates in the securities lending program offered by State Street Global Advisors (SSGA) with regards to their pooled Aggregate Bond Index Fund. For the year ended December 31, 2018, securities lending activities generated net income of approximately \$307,000 which is a decrease of -11.2% from 2017.

CHANGES IN FIDUCIARY NET POSITION (CONTINUED)**Deductions**

Deductions from fiduciary net position are payments made by the Fund for benefits (to retirees, survivors, and disabled employees), refunds and administrative expenses. Total deductions in 2018 were \$163.0 million compared to \$156.3 million in 2017, an increase of \$6.7 million, or 4.3%. The largest part of this change is due to an increase in benefit payments, primarily attributable to the 3% cost of living increase granted to annuitants each year. In addition, annuity benefits generally increase as deceased annuitants, who had lower benefits, are removed from the annuitant payroll, and new retirees with higher benefits are added.

RETURN ON INVESTMENTS AND ASSET ALLOCATION

The Fund's rate of return on investments in 2018 was (7.5) % net of fees, slightly lower than the return of (6.9) % on the Policy Index. The rate of return on investments in 2017 was 15.6% net of fees, compared to the return of 15.7% on the Policy Index. The components of the Policy Index at December 31, 2018 are listed below:

- 42% domestic equities (21% S&P 500 Index, 10% Russell Midcap Index, 11% Russell 2000 Index)
- 23% international equities (11% MSCI ACWI ex-US Index, 6% S&P Developed ex-US Index, 6% MSCI Emerging Markets Index)
- 30% fixed income (7% Barclays Global Aggregate (Hedged) Index and 23% Barclays Aggregate Index)
- 5% core open-end real estate (5% NFI-ODCE Index)

Detailed target allocations are shown on the next page.

RETURN ON INVESTMENTS AND ASSET ALLOCATION (CONTINUED)

Major Asset Class	Target
Domestic Large Cap Equity	21%
Domestic Mid Cap Equity	10%
Domestic Small Cap Equity	11%
International Large Cap Equity	11%
International Small Cap Equity	6%
Emerging Market Equity	6%
Core Real Estate	5%
Core Fixed Income	15%
Core Plus Fixed Income	8%
Global Fixed Income	7%
Total	100%

CURRENT ASSET BALANCES AND OUTLOOK

As of March 25, 2019, the Fund's invested assets had a fair market value of \$1.32 billion, an increase from the December 31, 2018 balance. The Fund manages risk by holding a diversified portfolio so that the impact of positive and negative market swings in the various sectors of the portfolio offset each other over time. With continual review of our target asset allocation and intermittent rebalancing, the Fund expects to achieve investment returns that outperform its policy index and actuarial assumed rate of return over the long run.

CONTACT INFORMATION

This financial report is intended to provide our members and other interested parties with a general overview of the Metropolitan Water Reclamation District Retirement Fund's finances. Questions concerning this report or requests for additional information should be directed to the Fund at 111 East Erie Street, Suite 330, Chicago, Illinois 60611, by phone at (312) 751-3222, or by email at pension@mwrdd.org.

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND

STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2018

(WITH COMPARATIVE AMOUNTS FOR PRIOR YEAR)

	<u>2018</u>	<u>2017</u>
Assets		
Cash	\$ 2,131,153	\$ 1,990,166
Receivables		
Employer contributions - (net of allowance for uncollectible amounts of (\$4,203,047 in 2018 & \$3,883,473 in 2017))	87,281,000	89,604,000
Due from broker	111,904,867	165,504,618
Accrued interest and dividends	3,843,996	3,660,222
Accounts receivables	52,687	42,498
Total receivables	<u>203,082,550</u>	<u>258,811,338</u>
Investments - at fair value		
Equities	470,319,672	568,135,135
U.S. Government and government agency obligations	91,161,132	96,640,684
Corporate and foreign government obligations	145,707,083	143,847,949
Mutual and exchange traded funds	89,341,330	100,269,404
Pooled funds - equity	215,174,230	251,103,550
Pooled funds - fixed income	152,257,239	193,075,191
Limited partnership - real estate	37,119,081	-
Real estate investment trust	26,778,440	-
Short-term investment fund	14,814,286	30,700,943
	<u>1,242,672,493</u>	<u>1,383,772,856</u>
Securities lending collateral	14,166,319	27,447,849
Total investments	<u>1,256,838,812</u>	<u>1,411,220,705</u>
Total assets	<u>1,462,052,515</u>	<u>1,672,022,209</u>
Liabilities and Net Position		
Liabilities		
Accounts payable	1,210,249	1,359,693
Due to broker	102,681,679	141,420,691
Securities lending collateral	14,166,319	27,447,849
Total liabilities	<u>118,058,247</u>	<u>170,228,233</u>
Net position restricted for pension benefits	<u>\$ 1,343,994,268</u>	<u>\$ 1,501,793,976</u>

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
YEAR ENDED DECEMBER 31, 2018

(WITH COMPARATIVE AMOUNTS FOR PRIOR YEAR)

	<u>2018</u>	<u>2017</u>
Additions		
Employer contributions	\$ 87,167,339	\$ 89,858,224
Employee contributions	<u>21,032,601</u>	<u>20,839,829</u>
Total contributions	<u>108,199,940</u>	<u>110,698,053</u>
Investment income (loss)		
Net appreciation (depreciation)		
in fair value of investments	(122,365,473)	177,341,970
Interest	8,317,990	7,700,427
Dividend income	<u>15,758,513</u>	<u>14,054,030</u>
Total investment income (loss)	(98,288,970)	199,096,427
Less investment expenses	<u>(5,024,180)</u>	<u>(4,620,753)</u>
Net investment income (loss)	<u>(103,313,150)</u>	<u>194,475,674</u>
Securities lending income		
Earnings	555,840	448,326
Broker rebates	(164,155)	(13,332)
Less bank fees	<u>(84,597)</u>	<u>(89,209)</u>
Net securities lending income	<u>307,088</u>	<u>345,785</u>
Other	<u>15,415</u>	<u>3,100</u>
Total additions	<u>5,209,293</u>	<u>305,522,612</u>
Deductions		
Annuities and benefits		
Employee annuitants	133,184,182	127,098,834
Surviving spouse annuitants	25,264,246	24,203,400
Child annuitants	143,000	142,000
Ordinary disability benefits	856,301	631,401
Duty disability benefits	<u>113,318</u>	<u>77,279</u>
Total annuities and benefits	159,561,047	152,152,914
Refunds of employee contributions	1,762,475	2,560,129
Administrative expenses	<u>1,685,479</u>	<u>1,613,976</u>
Total deductions	<u>163,009,001</u>	<u>156,327,019</u>
Net increase (decrease)	(157,799,708)	149,195,593
Net position restricted for pension benefits		
Beginning of year	<u>1,501,793,976</u>	<u>1,352,598,383</u>
End of year	<u>\$ 1,343,994,268</u>	<u>\$ 1,501,793,976</u>

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND**NOTES TO FINANCIAL STATEMENTS**

DECEMBER 31, 2018

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Metropolitan Water Reclamation District Retirement Fund (the Fund) is administered in accordance with Chapter 40 of the Illinois Compiled Statutes Act 5, Article 13.

Financial Reporting Entity - Accounting principles generally accepted in the United States of America define a financial reporting entity as consisting of the primary government and its component units for which the primary government is financially accountable. Financial accountability includes appointing a voting majority of a component unit's governing board, the ability of a primary government to impose its will on the component unit, or a potential for a component unit to provide specific financial benefits to or impose specific financial burdens on the primary government. The Fund has determined that no other outside entity meets the above criteria and, therefore, no other entity has been included as a component unit in the Fund's financial statements.

The Fund is considered a fiduciary fund of the Metropolitan Water Reclamation District of Greater Chicago (the District) and, as such, is included in the District's financial statements.

Measurement Focus and Basis of Accounting - The financial statements are prepared using the economic resources measurement focus and the accrual basis of accounting. Employer contributions to the Fund are recognized as income pursuant to legal requirements as specified in the Illinois Compiled Statutes. Fund member (employee) contributions are recognized as additions in the period in which the contributions are due. Benefits and administrative expenditures are recognized when due and payable in accordance with the terms of the Plan.

Investments - The Fund reports investments at fair value, which generally represents reported market value as of the last business day of the year. The fair value of a financial instrument is the amount that would be received to sell that asset or paid to transfer that liability (exit price) in an orderly transaction between market participants at the measurement date.

Estimates - The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures in the financial statements. Actual results could differ from those estimates.

Reclassifications - Certain reclassifications have been made to prior year amounts to conform to the current year presentation.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Subsequent Events - Subsequent events have been evaluated through April 22, 2019, which is the date the financial statements were available to be issued.

NOTE 2. FUND DESCRIPTION

The Fund is a single employer defined benefit plan, established by the Illinois State Legislature in 1931 to provide retirement annuities, death and disability benefits for certain employees of the District as well as Fund employees. The Fund is administered in accordance with 40 ILCS 5 of the Illinois Compiled Statutes.

The Board of Trustees is composed of a seven member board, which consists of four member-elected employee Trustees, and three appointed Trustees, one of which is a retiree. State law authorizes the Board to make investments, pay benefits, hire staff and consultants and perform all necessary functions to carry out the provisions of the Illinois Compiled Statutes. The provisions of the Fund, including the defined benefits and the employer and employee contribution levels are established by those statutes and may be amended or terminated only by the Illinois State Legislature.

Membership

At December 31, 2018, the Fund's membership consisted of:

Active employees	<u>1,832</u>
Retirees and beneficiaries currently receiving benefits	
Retirees	1,848
Surviving spouses	571
Children	<u>24</u>
Total retirees and beneficiaries	<u>2,443</u>
Inactive employees entitled to benefits or a refund of contributions	<u>127</u>
Total members	<u><u>4,402</u></u>

The Fund's active membership includes District employees, District Commissioners, and Retirement Fund staff and is referred to as "employees" in the financial statements and notes.

NOTE 2. FUND DESCRIPTION (CONTINUED)**Funding**

Funding to meet the annuity and benefit obligations of the Fund is expected to come from employee contributions, employer contributions by the District and income earned on the Fund's investments.

Tier I employees (hired prior to January 1, 2011) are required to contribute 12% of their salary to the Fund since 2015; this contribution rate will remain in effect until such time as the Fund reaches a funding level of 90%. Tier II employees (hired on or after January 1, 2011) are required to contribute 9%. Contributions are collected as a payroll withholding. Employees made contributions of \$21,032,601 for the year ended December 31, 2018.

State statutes (40 ILCS 5) dictate that the District shall annually levy a tax upon all the taxable real property within the District at a rate which, when extended, will produce a sum that

- (i) will be sufficient to meet the Fund's actuarially determined contribution requirement, but
- (ii) shall not exceed an amount equal to the total employee contributions 2 years prior to the year for which the tax is levied, multiplied by 4.19 (the tax multiple). The actuarially determined contribution requirement is equal to the employer's normal cost plus the annual amount needed to amortize the unfunded liability by the year 2050 as a level percent of payroll. The funding goal is to attain a funded ratio of at least 90% by the year 2050, with the funded ratio being the ratio of the actuarial value of assets to the total actuarial liability.

Per the statutes, the tax shall be levied and collected in the same manner as the general taxes of the District.

The tax rate is based on an actuarially determined rate recommended by an independent actuary subject to the statute noted above. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by the plan participants during the year, with an additional amount to finance any net pension liability. For the year ended December 31, 2018, the District's contribution was 46.40% of covered payroll.

NOTE 2. FUND DESCRIPTION (CONTINUED)**Retirement Eligibility and Benefits**

The following describe and reflect plan provisions as described in Article 13 of the Illinois Pension Code.

Normal Retirement

An employee whose duties include service of 120 days or more per year and has at least 5 years of service at age 60 is eligible to receive an undiscounted retirement benefit (if hired before January 1, 2011). An employee with at least 10 years of service at age 67 is eligible to receive an undiscounted retirement benefit (if hired on or after January 1, 2011).

The normal retirement benefit is 2.2% of the final average salary for each of the first 20 years of service and 2.4% for each year of service in excess of 20 years. The benefit shall not exceed 80% of final average salary.

Early Retirement

An employee hired before January 1, 2011 who attains age 55 (50 if hired on or before June 13, 1997) with at least 10 years of service is entitled to receive a minimum retirement benefit. An employee hired on or after January 1, 2011 who attains age 62 with at least 10 years of service is entitled to receive a minimum retirement benefit.

If the employee retires prior to the attainment of age 60, the normal retirement benefit computed shall be reduced by .5% for each full month the member is less than age 60 or service is less than 30 years whichever is less (if hired before January 1, 2011). If hired on or after January 1, 2011, the normal retirement benefit is reduced by .5% for each full month the member is less than age 67. There is no discount if the employee has 30 years of service.

Alternate Provision for Commissioners

Any participant Commissioner may elect to establish alternate credits for an alternative annuity. An additional contribution of 3% of salary is required for participation. In lieu of the normal retirement benefits any Commissioner who has elected to participate, has attained age 55 and has 6 years of service is eligible for an enhanced benefit formula.

Surviving Spouse Annuity

Upon an employee's death an annuity will be payable to the eligible surviving spouse. If an employee was hired before June 13, 1997, a spouse is immediately eligible for a surviving spouse annuity if married on the date of an employee's death, or if married on the employee's date of retirement and remained married until retiree's death. Dissolution of a marriage after retirement shall not divest the spouse of entitlement if the marriage was in effect for at least 10 years on the date of retirement.

NOTE 2. FUND DESCRIPTION (CONTINUED)**Retirement Eligibility and Benefits (continued)*****Surviving Spouse Annuity (continued)***

If an employee was hired on or after June 13, 1997, a spouse is eligible for a surviving spouse annuity after 3 years of member's service, with the same conditions for marriage as described for members hired prior to June 13, 1997.

If an employee was hired before January 1, 2011, the surviving spouse annuity is equal to 60% of the employee's retirement benefit at the time of death, plus 1% for each year of total service, to a maximum of 85%. If hired on or after January 1, 2011, an eligible surviving spouse will be entitled to an annuity equal to 66 2/3% of the employee's retirement benefit at time of death.

Under certain conditions, an age discount applies to the surviving spouse annuity if the employee was hired after January 1, 1992 for employees in service before January 1, 2011.

Children's Annuity

Each unmarried child, until the attainment of age 18 (23 if full-time student), of a member that dies in service or of a former employee that dies with at least 10 years of service, is eligible for a monthly annuity of \$500 per month (if one parent is living) and \$1,000 per month (if neither parent is living) to a maximum total benefit of \$5,000 per month for all children of the employee.

Refunds

Upon withdrawal from service an employee hired before January 1, 2011, under age 55 (50 if hired on or before June 13, 1997), or age 55 (50 if hired on or before June 13, 1997) and less than age 60 with less than 20 years of service, or age 60 or over with less than 5 years of service, is eligible for a refund of accumulated employee contributions without interest upon request.

An employee hired on or after January 1, 2011, is eligible for a refund of accumulated employee contributions without interest if under age 62 regardless of service, or if less than 10 years of service regardless of age on withdrawal.

Upon receipt of a refund, the member forfeits rights to benefits from the Fund. Refund repayment provisions may apply in certain cases.

NOTE 2. FUND DESCRIPTION (CONTINUED)**Retirement Eligibility and Benefits (continued)****Disability Benefits*****Duty Disability***

An employee incurring injury or illness arising out of employment with the District and compensable under the Workers Compensation Act or the Occupational Disease Act may apply for duty disability benefits administered by the Fund. Duty disability benefits are 75% of the salary earned on the date of disability, less the amount paid by Worker's Compensation. The benefit is 50% of salary if disability resulted from a physical defect or disease that existed at the time injury was sustained. Benefits are payable during the period of disablement, but not beyond attainment of age 65. If the disability occurs at age 60 or older, benefits are payable for a maximum of 5 years.

Ordinary Disability

An employee who becomes disabled due to any cause other than illness or injury incurred in the performance of duty may apply for ordinary disability benefits administered by the Fund. Ordinary disability benefits provide 50% of employee's earnable salary at the date of disability, for a maximum period of the lesser of 25% of the employee's actual service prior to disablement or 5 years.

NOTE 3. PENSION LIABILITY OF THE DISTRICT**Net Pension Liability**

The components of the net pension liability of the District as of December 31, 2018, were as follows:

Total pension liability	\$ 2,588,389,303
Fund fiduciary net position	<u>(1,343,994,268)</u>
District's net pension liability	<u>\$ 1,244,395,035</u>
Fund fiduciary net position as a percentage of the total pension liability	<u>51.92%</u>

See the schedule of changes in the district's net pension liability and related ratios on page 30 of the required supplementary information for additional information related to the funded status of the Fund.

NOTE 3. PENSION LIABILITY OF THE DISTRICT (CONTINUED)**Actuarial Assumptions**

The total pension liability was determined by an actuarial valuation as of December 31, 2018, using the following actuarial methods and assumptions, applied to all periods included in the measurement.

Actuarial methods and assumptions:

Valuation date	12/31/18
Cost method	Entry age normal
Asset valuation method	Five Year Smoothing Method
Inflation	2.5%
Salary increases	Varies by service
Investment rate of return	7.25%
Postretirement annuity increases	Tier 1 participants – 3.00%
	Tier 2 participants – 1.25%

Healthy and disabled lives mortality rates were based on the RP-2000 Combined Healthy Mortality Table with Generational Mortality Improvements (Scale AA).

The demographic assumptions used in the December 31, 2018 valuation were based on the results of an actuarial experience study conducted by Foster & Foster, Inc. dated September 28, 2018. As a result of the experience study, the assumed investment return was reduced from 7.50% to 7.25%, the retirement, salary increase, withdrawal and mortality rates were updated and the payroll growth assumption rate was lowered from 3.7% to 3.0%.

Discount Rate

The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made at the current contribution rate and that District contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the Fund'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 of 7.25% was applied to all periods of projected benefit payments to determine the total pension liability.

NOTE 3. PENSION LIABILITY OF THE DISTRICT (CONTINUED)**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following is a sensitivity analysis of the net pension liability to changes in the discount rate. The table below presents the pension liability of the District calculated using the discount rate of 7.25% as well as what the District's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (6.25%) or 1 percentage point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
District's net pension liability	<u>\$ 1,539,876,439</u>	<u>\$ 1,244,395,035</u>	<u>\$ 995,556,421</u>

NOTE 4. DEPOSITS WITH FINANCIAL INSTITUTIONS**Custodial Credit Risk**

Custodial credit risk for deposits with financial institutions is the risk that in the event of a bank failure, the Fund's deposits may not be returned to it. The Fund does not have a formal policy for custodial credit risk. The Fund's deposits consist of monies held checking and money market accounts. The Fund places its cash with financial institutions deemed to be creditworthy. Balances are insured by FDIC up to \$250,000 per financial institution. As of December 31, 2018, the Fund had no uninsured, uncollateralized deposits with financial institutions.

NOTE 5. INVESTMENTS**Investment Policy**

The Illinois Statutes prescribe the “prudent person rule” as the Fund’s investment authority, effective August 31, 2007. This rule requires the Fund to make investments with the care, skill, prudence and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an entity of like character with like aims. Within the “prudent person” framework, the Board of Trustees adopts investment guidelines for the Fund’s investment managers which are included within their respective Investment Management Agreements. The Fund adopted asset allocation policy is 42% domestic equities, 23% international equities, 30% fixed income and 5% core open-end real estate. The composition of the policy index is 21% S&P 500 Index, 10% Russell Midcap Index, 11% Russell 2000 Index, 11% MSCI ACWI ex U.S. Index, 6% S&P Developed Small Cap ex-US Index, 6% MSCI Emerging Markets Index, 7% Barclays Global Aggregate (Hedged) Index, 23% Barclays Aggregate Index and 5% NFI-ODCE Index. During the year ended December 31, 2018, there were no significant changes to the investment policy.

Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments (i.e. the actuarial assumed investment rate of return of 7.25%) 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 expenses and inflation) are developed for each major 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 for each major asset class included in the pension plan’s target asset allocation as of December 31, 2018 are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation %</u>	<u>Long-Term Expected Real Rate of Return</u>
Domestic equity	42.0%	5.8%
International equity	23.0%	6.7%
Fixed income	30.0%	1.3%
Private real estate	<u>5.0%</u>	5.3%
Total investments	<u>100.0%</u>	
Inflation rate of investment advisor		1.9%

NOTE 5. INVESTMENTS (CONTINUED)**Annual Money-Weighted Rate of Return**

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was -7.44% for the year ended December 31, 2018. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Investment Risk

Generally accepted accounting principles specify the disclosure requirements for deposits that are not covered by depository insurance and investment securities that are uninsured and are not registered in the name of the government or a trust agent. By statute, all investments are held in the name of the Metropolitan Water Reclamation District Retirement Fund.

Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Fund will not be able to recover the value of its investments or collateral securities in the possession of an outside party.

As of December 31, 2018, the Fund had minimal exposure to custodial credit risk since all investments were insured, registered, and/or held in the Fund's name.

Concentration of Investment Risk

No investments that represent 5% or more of the Fund's net position restricted for pension benefits were identified.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Investments held for longer periods are subject to increased risk of adverse interest rate changes. One strategy to manage exposure to interest rate risk is to purchase a combination of short-term and long-term investments, while considering cash flow needs of the Fund. The Fund does not maintain an investment policy relative to interest rate risk. However, the Board of Trustees recognizes that its investments are subject to short-term volatility and their goal is to maximize total return within prudent risk parameters.

NOTE 5. INVESTMENTS (CONTINUED)**Investment Risk (continued)***Interest Rate Risk (continued)*

The following table presents a summarization of the Plan's debt investments at December 31, 2018, using the segmented time distribution method:

<u>Type of Investment</u>	<u>Maturity</u>	<u>Fair Value</u>	<u>Percentage</u>
U.S. Government and government agency obligations	< 1 year	\$ 2,894,704	3.2%
	1 - 5 years	13,820,090	15.1%
	5 - 10 years	15,385,763	16.9%
	Over 10 years	<u>59,060,575</u>	<u>64.8%</u>
		<u>\$ 91,161,132</u>	<u>100.0%</u>
Corporate and foreign government obligations	< 1 year	\$ 7,610,678	5.2%
	1 - 5 years	54,961,953	37.7%
	5 - 10 years	46,319,107	31.8%
	Over 10 years	<u>36,815,345</u>	<u>25.3%</u>
		<u>\$ 145,707,083</u>	<u>100.0%</u>
Pooled funds - fixed income	5-10 years	<u>\$ 152,257,239</u>	<u>100.0%</u>
Short-term investment fund	< 1 year	<u>\$ 14,814,286</u>	<u>100.0%</u>

NOTE 5. INVESTMENTS (CONTINUED)**Investment Risk (continued)***Credit Risk*

Credit risk is defined as the risk that the issuer of a debt security will not pay its par value upon maturity. The Illinois Statutes prescribe the “prudent person rule” as the Fund’s investment authority and within the “prudent person” framework, the Board of Trustees adopts investment guidelines that consider credit risk for the Fund’s investment managers which are included within their respective investment Management Agreements.

Quality ratings are as provided by Standard & Poor’s. For the pooled funds - fixed income investments an average credit quality rating is provided by Bank of America Merrill Lynch and Bloomberg Barclays. The following table presents a summarization of the credit quality ratings of the holdings within the investments at December 31, 2018:

<u>Type of Investment</u>	<u>Rating</u>	<u>Fair Value</u>	<u>Percentage</u>
U.S. Government and government agency obligations	AA	\$ 84,036,961	92.2%
	Not Rated	<u>7,124,171</u>	<u>7.8%</u>
		<u>\$ 91,161,132</u>	<u>100.0%</u>
Corporate and foreign government obligations	AAA	\$ 12,450,529	8.5%
	AA	13,325,667	9.2%
	A	33,933,330	23.3%
	BBB	35,272,181	24.2%
	BB	3,373,543	2.3%
	B	3,020,352	2.0%
	CC	52,546	0.1%
	Not Rated	<u>44,278,935</u>	<u>30.4%</u>
		<u>\$ 145,707,083</u>	<u>100.0%</u>
Pooled funds - fixed income	AAA	\$ 141,440,623	92.9%
	BB	<u>10,816,616</u>	<u>7.1%</u>
		<u>\$ 152,257,239</u>	<u>100.0%</u>
Short-term investment fund	Not Rated	<u>\$ 14,814,286</u>	<u>100.0%</u>

NOTE 5. INVESTMENTS (CONTINUED)**Investment Risk (continued)***Foreign Currency Risk*

Foreign currency risk is the risk of loss arising from changes in currency exchange rates. All foreign currency-denominated investments held by the Fund are in equities, fixed income and foreign cash. The Fund's exposure to foreign currency risk at December 31, 2018 is presented as follows:

<u>Type of Investment</u>	<u>Fair Value</u>	<u>Percentage</u>
Equities		
Australian dollar	\$ 8,214,710	1.8%
British pound sterling	18,314,935	3.9%
Canadian dollar	3,998,872	0.9%
Danish krone	2,059,631	0.5%
European euro	32,455,113	6.9%
Hong kong dollar	2,878,732	0.6%
Israeli shekel	780,186	0.2%
Japanese yen	30,068,048	6.4%
New Zealand dollar	1,483,603	0.3%
Norwegian krone	1,869,080	0.4%
Singapore dollar	1,551,176	0.3%
Swedish krona	4,492,769	1.0%
Swiss franc	8,554,910	1.8%
U.S. dollar	353,597,907	75.0%
Total equities	<u>\$470,319,672</u>	<u>100.0%</u>
Corporate and foreign government obligations		
Argentina peso	\$ 483,347	0.3%
Australian dollar	734,443	0.5%
British pound sterling	1,977,328	1.4%
Canadian dollar	3,280,446	2.2%
Chilean peso	432,869	0.3%
European euro	14,780,930	10.1%
Indian rupee	364,813	0.2%
Israeli shekel	114,668	0.1%
Japanese yen	16,882,122	11.6%
New Zealand dollar	3,736,803	2.6%
Thailand baht	238,863	0.2%
U.S. dollar	102,680,451	70.5%
Total corporate and foreign government obligations	<u>\$145,707,083</u>	<u>100.0%</u>

NOTE 5. INVESTMENTS (CONTINUED)**Investment Risk (continued)***Foreign Currency Risk (continued)*

<u>Type of Investment</u>	<u>Fair Value</u>	<u>Percentage</u>
Short-term investment funds		
Argentina peso	\$ 54,540	0.4%
Australian dollar	91,202	0.6%
British pound sterling	324,152	2.2%
Canadian dollar	61,169	0.4%
Danish krone	13,063	0.1%
European euro	420,143	2.8%
Hong kong dollar	99,014	0.7%
Israeli shekel	12,843	0.1%
Japanese yen	244,299	1.7%
New Zealand dollar	75,552	0.5%
Norwegian krone	21,742	0.1%
Russian ruble	15,684	0.1%
Singapore dollar	96,931	0.6%
South African rand	8,067	0.1%
Swedish krona	63,062	0.4%
Swiss franc	132,705	0.9%
U.S. dollar	13,080,118	88.3%
Total short-term investment fund	<u>\$ 14,814,286</u>	<u>100.0%</u>

NOTE 6. WHEN-ISSUED TRANSACTIONS

The Fund may purchase securities on a when-issued basis, that is, obligate itself to purchase securities with delivery and payment to occur at a later date. At the time the Fund enters into a commitment to purchase the security, the transaction is recorded at the purchase price which equals fair value. The value at delivery may be more or less than the purchase price. No interest accrues to the Fund until delivery and payment takes place. As of December 31, 2018, the Fund contracted to acquire securities on a when-issued basis with a total principal amount of approximately \$7,125,000.

NOTE 7. FAIR VALUE MEASUREMENTS

GASB Statement No. 72, *Fair Value Measurement and Application*, established a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described as follows:

Basis of Fair Value Measurement

Level 1	Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities
Level 2	Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly
Level 3	Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable

The Fund categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Fund has the following recurring fair value measurements as of December 31, 2018.

		Fair Value Measurements at 12/31/2018 Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	Total			
Investments by fair value level				
Equities	\$ 470,319,672	\$470,319,672	\$ -	\$ -
U.S. Government and government agency obligations	91,161,132	36,715,958	54,445,174	-
Corporate and foreign government obligations	145,707,083	-	145,707,083	-
Mutual and exchange traded funds	89,341,330	89,341,330	-	-
Total investments by fair value level	796,529,217	<u>\$596,376,960</u>	<u>\$200,152,257</u>	<u>\$ -</u>
Investments measured at net asset value	446,143,276			
Total investments at fair value	<u>\$1,242,672,493</u>			

NOTE 7. FAIR VALUE MEASUREMENTS (CONTINUED)Level 1 Measurements

Equities, mutual and exchanged traded funds, and U.S. Treasury securities are traded in active markets on national and international securities exchanges and are valued at closing prices on the last business day of the period presented.

Level 2 Measurements

U.S. Government and government agency obligations and corporate and foreign government obligations are generally valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. To the extent that quoted prices are not available, fair value is determined based on a valuation model that include inputs such as interest rate yield curves and credit spreads. Securities traded in markets that are not considered active are valued based on quoted market prices, broker to dealer quotations, or alternative pricing sources with reasonable levels of price transparency. Securities that trade infrequently and therefore have little or no price transparency are valued using the investment manager's best estimates.

The valuation methods for investments measured at net asset value (NAV) are presented on the following table.

	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (If Eligible)</u>	<u>Redemption Notice Period</u>
Investments measured at net asset value:				
Pooled funds - equity (1)				
SSGA S&P 500 Flagship Fund	\$ 101,496,033	-	Daily	N/A
SSGA S&P Midcap Index Fund	47,389,509	-	Daily	N/A
SSGA MSCI ACWI Fund	66,288,688	-	2 times monthly	N/A
Pooled funds - fixed income (2)				
SSGA U.S. Aggregate Bond Index	141,440,623	-	Daily	N/A
Neuberger Berman High Income Fund	10,816,616	-	Monthly	N/A
Limited partnership - real estate (3)				
Trumbull Property Fund	37,119,081	-	Quarterly	60 days
Real estate investment trust (4)				
RREEF America REIT II	26,778,440	8,750,000	Quarterly	45 days
Short-term investment fund (5)				
BNY Mellon EB Temporary Investment Fund	<u>14,814,286</u>	-	Daily	N/A
Total investments measured at net asset value	<u>\$ 446,143,276</u>			

NOTE 7. FAIR VALUE MEASUREMENTS (CONTINUED)

- (1) Pooled funds - equity - The investment objective of these investments is to track the performance of the S&P 500, S&P MidCap 500 and MSCI ACWI ex USA indexes over the long term. The fair value of the investments in these funds has been determined using the NAV per share of the investments.
- (2) Pooled funds - fixed income - The investment objective of the U.S. Aggregate Bond Index is to track the performance of the Barclays U.S. Aggregate Bond Index over the long term. The investment objective of the High Income Fund is to achieve an attractive total return of income and capital appreciation by investing primarily in high yield fixed income securities and bank loan interests, including secured and unsecured bank loans. The fair value of the investments in these funds has been determined using the NAV per share of the investments.
- (3) Limited partnership - real estate - The partnership's investment objective is to actively manage a core portfolio of primarily equity real estate investments located in the United States. The fair value of the investments in these funds has been determined using the NAV per share of the investments.
- (4) Real estate investment trust - The Fund's investment objective is to generate attractive, predictable investment returns from a target portfolio of low-risk equity investments in income-producing real estate while maximizing the total return. The fair value of the investments in these funds has been determined using the NAV per share of the investments.
- (5) Short-term investment - This investment's objective is to invest in short-term investments of high quality and low risk to protect capital while achieving investment returns. The fair value of the investments in these funds has been determined using the NAV per share of the investments.

NOTE 8. DERIVATIVES

The Fund uses forward foreign currency exchange contracts to manage portfolio risk and to facilitate international portfolio trading.

A derivative security is a financial contract whose value is based on, or “derived” from, a traditional security, an asset, or a market index. Derivative instruments include forward contracts as part of the Fund’s portfolio. Derivative instruments are valued using pricing models based on the prevailing forward exchange rate of the underlying currencies taking into account the counterparties’ creditworthiness.

Derivative transactions involve, to varying degrees, credit risk, interest rate risk and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to the previously agreed upon terms. Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Market risk is the possibility that a change in interest or currency rates will cause the value of a financial instrument to decrease or become more costly to settle. Due to the purpose and short-term nature of the forward currency contracts these risks are considered to be minimal.

Forward contracts are used to hedge against fluctuations in foreign currency-denominated assets used primarily in portfolio trade settlements. These contracts are a cash contract in which a seller agrees to deliver a specific cash commodity to a buyer sometime in the future. Forward agreements are subject to the creditworthiness of the counterparties, which are principally large financial institutions. Forward currency contracts are reported at fair value in due to broker and due from broker on the statement of fiduciary net position. The gain or loss on forward currency contracts is recognized and recorded on the statement of changes in fiduciary net position as part of investment income. The forward currency contracts are short term in nature, typically ranging from one month to three months.

The deferred outflows of resources and deferred inflows of resources of the hedging derivatives are immaterial and not included in these financial statements.

At December 31, 2018, the Fund’s assets and liabilities included the following forward foreign currency exchange contract balances which are included in due from broker and due to broker:

Forward Foreign Currency Exchange Contract receivables	\$ 89,185,638
Forward Foreign Currency Exchange Contract payables	\$ 89,282,685

NOTE 9. SECURITIES LENDING

State Statutes and the investment policy permit the Fund to lend its securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The Bank of New York Mellon, the Fund's custodian, requires collateral in the form of cash, U.S. Government obligations and irrevocable letters of credit or other securities worth at least 102% of the lent securities' market value, and for international securities, collateral worth at least 105%. The contract with the Fund's custodian requires it to indemnify the Fund if the borrowers fail to return the securities (and if the collateral is inadequate to replace the securities lent) or fail to pay the Fund for income distributions by the securities issuers while the securities are out on loan.

The relationship between the maturities of the investment pool and the Fund's loans is affected by the maturities of the securities loans made by other entities that use the agent's pool, which the Fund cannot determine. The Fund cannot pledge or sell collateral securities without borrower default; as such, the collateral security or non-cash collateral is not reported in the financial statements. The average term of securities loaned was 88 days for 2018; however, all securities loans can be terminated on demand by either the Fund or the borrower. Cash collateral is invested in the lending agent's short-term investment pool, which at year-end has a weighted average maturity of 1 day.

Although the Fund's securities lending activities are collateralized as described above, they involve both market and credit risk. In this context, market risk refers to the possibility that the borrower of securities will be unable to collateralize the loan upon a sudden material change in the fair value of the loaned securities or the collateral. Credit risk refers to the possibility that counterparties involved in the securities lending program may fail to perform in accordance with the terms of their contracts.

Indemnification deals with the situation in which a client's securities are not returned due to the insolvency of a borrower. The contract with the lending agent requires it to indemnify the Fund if borrowers fail to return the securities or fail to pay the Fund for income distributions by the issuers of securities while the securities are on loan.

During 2018, there were no losses due to default of a borrower or the lending agent.

NOTE 9. SECURITIES LENDING (CONTINUED)

A summary of securities loaned at fair value as of December 31, 2018 is as follows:

Securities loaned - backed by cash collateral

U.S. and international equities	\$ 8,742,607
Exchanged traded funds	3,227,329
U.S. Government and government agency obligations	1,326,229
Corporate bonds	<u>326,278</u>
Total securities loaned - backed by cash collateral	<u>13,622,443</u>

Securities loaned - backed by non-cash collateral

U.S. and international equities	56,840,301
Exchanged traded funds	1,182,262
Corporate bonds	<u>55,321</u>
Total securities loaned - backed by non-cash collateral	<u>58,077,884</u>

Total	<u><u>\$ 71,700,327</u></u>
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As of December 31, 2018, the fair value (carrying amount) of loaned securities was \$71,700,327. As of December 31, 2018, the fair value (carrying amount) of cash collateral received by the Fund was \$14,166,319. The cash collateral is included as an asset and a corresponding liability on the accompanying statement of fiduciary net position. As of December 31, 2018, the fair value (carrying amount) of noncash collateral received by the Fund was \$59,453,926.

The Fund also participates in the securities lending programs offered by State Street Global Advisors (SSGA) with regards to their pooled funds. Securities lending income earned by SSGA serves as a credit to quarterly management fees, and any remainder is used for purchasing additional units in the SSGA fixed income pooled fund.

NOTE 10. PRONOUNCEMENTS ISSUED BUT NOT YET ADOPTED

In November 2016, GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. Statement No. 83 addresses accounting and financial reporting for certain asset retirement obligations and establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. Statement No. 83 is effective for the Fund's fiscal year ending December 31, 2019.

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*. Statement No. 84 improves guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. Statement No. 84 is effective for the Fund's fiscal year ending December 31, 2019.

In March 2017, GASB issued Statement No. 87, *Leases*. Statement No. 87 improves accounting and financial reporting for leases by governments and increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. Statement No. 87 is effective for the Fund's fiscal year ending December 31, 2020.

In April 2018, GASB issued Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*. Statement No. 88 was issued to improve the information that is disclosed in notes to government financial statements related to debt. This Statement also clarifies which liabilities governments should include when disclosing information related to debt. If it applies, Statement No. 88 is effective for the Fund's fiscal year ending December 31, 2019.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*. The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period. If it applies, Statement No. 89 is effective for the Fund's fiscal year ending December 31, 2020.

In August 2018, GASB issued Statement No. 90, *Majority Equity Interest - an amendment of GASB Statements No. 14 and No. 61*. The objectives of this Statement are (1) to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and (2) to improve the relevance of financial statement information for certain component units. If it applies, Statement No. 90 is effective for the Fund's fiscal year ending December 31, 2019.

The Fund's management has not yet determined the effect, if any; these Statements will have on the Fund's financial statements.

REQUIRED SUPPLEMENTARY INFORMATION

Required supplementary information includes financial information and disclosures that are required by the GASB but are not considered a part of the basic financial statements. Such information includes:

- Schedule of Changes in the District's Net Pension Liability and Related Ratios
- Schedule of District Contributions and Related Note
- Schedule of Investment Returns

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE DISTRICT'S NET PENSION LIABILITY AND RELATED RATIOS

LAST FIVE FISCAL YEARS

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension liability					
Service cost	\$ 32,212,530	\$ 32,370,187	\$ 32,057,687	\$ 32,228,341	\$ 31,602,226
Interest	182,881,416	179,038,283	173,861,700	168,530,178	163,338,376
Differences between expected and actual experience	12,157,757	(1,990,761)	13,813,742	14,421,984	10,861,109
Changes of assumptions	35,593,015	-	-	-	-
Benefit payments, including refunds					
of employee contributions	(161,323,522)	(154,713,043)	(147,336,015)	(140,509,756)	(133,897,848)
Net change in total pension liability	101,521,196	54,704,666	72,397,114	74,670,747	71,903,863
Total pension liability					
Beginning of year	2,486,868,107	2,432,163,441	2,359,766,327	2,285,095,580	2,213,191,717
End of year	<u>\$ 2,588,389,303</u>	<u>\$ 2,486,868,107</u>	<u>\$ 2,432,163,441</u>	<u>\$ 2,359,766,327</u>	<u>\$ 2,285,095,580</u>
Change in fiduciary net position					
Contributions - employer	\$ 87,167,339	\$ 89,858,224	\$ 80,259,713	\$ 71,041,361	\$ 73,906,168
Contributions - employee	21,032,601	20,839,829	20,830,779	21,385,212	18,974,954
Net investment income (loss)	(103,006,062)	194,821,459	113,585,872	(1,427,839)	81,600,566
Benefit payments, including refunds					
of employee contributions	(161,323,522)	(154,713,043)	(147,336,015)	(140,509,756)	(133,897,848)
Administrative expense	(1,685,479)	(1,613,976)	(1,502,639)	(1,659,917)	(1,406,507)
Other	15,415	3,100	107,175	28,817	4,460
Net change in fiduciary net position	(157,799,708)	149,195,593	65,944,885	(51,142,122)	39,181,793
Net position restricted for pension benefits					
Beginning of year	1,501,793,976	1,352,598,383	1,286,653,498	1,337,795,620	1,298,613,827
End of year	<u>\$ 1,343,994,268</u>	<u>\$ 1,501,793,976</u>	<u>\$ 1,352,598,383</u>	<u>\$ 1,286,653,498</u>	<u>\$ 1,337,795,620</u>
District's net pension liability	<u>\$ 1,244,395,035</u>	<u>\$ 985,074,131</u>	<u>\$ 1,079,565,058</u>	<u>\$ 1,073,112,829</u>	<u>\$ 947,299,960</u>
Fund fiduciary net position as a percentage					
of the total pension liability	<u>51.92%</u>	<u>60.39%</u>	<u>55.61%</u>	<u>54.52%</u>	<u>58.54%</u>
Covered payroll	<u>\$ 187,849,708</u>	<u>\$ 184,385,188</u>	<u>\$ 182,640,163</u>	<u>\$ 177,792,309</u>	<u>\$ 176,183,941</u>
Employer's net pension liability as a percentage					
of covered payroll	<u>662.44%</u>	<u>534.25%</u>	<u>591.09%</u>	<u>603.58%</u>	<u>537.68%</u>

This schedule will show information for ten years as the additional years' information becomes available.

Metropolitan Water Reclamation District Retirement Fund

Required Supplementary Information

Schedule of District Contributions and Related Note

Last Ten Years

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Actuarially Determined Contribution (ADC)	\$ 54,790,175	\$ 61,872,925	\$ 69,393,171	\$ 74,828,844	\$ 68,414,142	\$ 64,477,662	\$ 62,603,576	\$ 64,596,066	\$ 65,727,912	\$ 64,988,583
Contributions in Relation to the ADC	<u>32,153,874</u>	<u>29,917,793</u>	<u>37,379,137</u>	<u>65,097,835</u>	<u>92,944,381</u>	<u>73,906,168</u>	<u>71,041,361</u>	<u>80,259,713</u>	<u>89,858,224</u>	<u>87,167,339</u>
Contribution deficiency (excess)	<u>\$ 22,636,301</u>	<u>\$ 31,955,132</u>	<u>\$ 32,014,034</u>	<u>\$ 9,731,009</u>	<u>\$ (24,530,239)</u>	<u>\$ (9,428,506)</u>	<u>\$ (8,437,785)</u>	<u>\$ (15,663,647)</u>	<u>\$ (24,130,312)</u>	<u>\$ (22,178,756)</u>
Covered payroll	<u>\$ 176,915,399</u>	<u>\$ 174,485,734</u>	<u>\$ 164,275,424</u>	<u>\$ 163,816,934</u>	<u>\$ 169,375,857</u>	<u>\$ 176,183,941</u>	<u>\$ 177,792,309</u>	<u>\$ 182,640,163</u>	<u>\$ 184,385,188</u>	<u>\$ 187,849,708</u>
Contributions as a percentage of covered payroll	<u>18.17%</u>	<u>17.15%</u>	<u>22.75%</u>	<u>39.74%</u>	<u>54.87%</u>	<u>41.95%</u>	<u>39.96%</u>	<u>43.94%</u>	<u>48.73%</u>	<u>46.40%</u>

NOTE TO SCHEDULE:

Valuation date:

Actuarially determined contribution rates are calculated as of December 31, one year prior to the fiscal year in which contributions are reported.

Methods and assumptions used to

determine contributions:

Actuarial cost method	Entry Age Normal
Amortization method	Level percent of pay, closed.
Remaining amortization period	33 years remaining amortization as of 1/1/18.
Actuarial asset method	Assets are valued with an adjustment to expected assets to uniformly spread actuarial investment gains and losses (measured by the difference in actual market value investment return and expected market value investment return) over a five year period.
Investment rate of return	7.50% per year compounded annually, net of investment related expenses.
Inflation	2.5% per year
Salary increases	Vary by service.
Payroll growth	3.7% per year
Termination rates	Termination rates vary by age and gender.
Retirement rates	Retirement rates are based on the most recent experience analysis and vary by age of member.

See Independent Auditors' Report.

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF INVESTMENT RETURNS
LAST FIVE FISCAL YEARS

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	<u>-7.44%</u>	<u>15.62%</u>	<u>9.43%</u>	<u>-0.15%</u>	<u>6.67%</u>

This schedule will show information for ten years as the additional years' information becomes available.

See Independent Auditors' Report

SUPPLEMENTARY INFORMATION

Other supplementary information includes financial information and disclosures that are not required by GASB and are not considered a part of the basic financial statements. Such information includes:

- Schedule of Administrative Expenses
- Schedule of Investment Expenses
- Schedule of Payments to Consultants
- Postemployment Healthcare Disclosure

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND
SUPPLEMENTARY INFORMATION

Schedule of Administrative Expenses

Year Ended December 31, 2018
(with comparative amounts for prior year)

	<u>2018</u>	<u>2017</u>
Salaries and wages		
Regular employees	\$ 1,055,482	\$ 1,028,980
Employee benefits	166,632	137,113
Professional services		
Actuarial	64,000	54,091
Legal and lobbyist	70,324	48,949
Audit and state regulatory fees	40,000	35,000
Public stenographer	9,577	7,312
Medical	10,040	5,496
Investigation	1,608	1,674
Printing and publication	4,204	4,010
Postage	12,863	11,086
Office supplies and furniture	6,398	4,636
Travel	3,758	748
Maintenance and repair	277	803
Payments to consultants	187,746	222,085
Membership dues, conference fees, subscriptions and publications	8,160	6,478
Computer hardware and software	10,618	12,463
Insurance	21,536	21,510
Miscellaneous	12,256	11,542
Total administrative expenses	<u>\$ 1,685,479</u>	<u>\$ 1,613,976</u>

METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND
SUPPLEMENTARY INFORMATION

Schedule of Investments Expenses

Year ended December 31, 2018
(with comparative amounts for prior year)

	<u>2018</u>	<u>2017</u>
Investment manager fees	\$ 4,672,015	\$ 4,255,449
Custodian fees	182,165	195,304
Investment consulting fees	<u>170,000</u>	<u>170,000</u>
Investment expenses	<u>\$ 5,024,180</u>	<u>\$ 4,620,753</u>

Schedule of Payments to Consultants

Year Ended December 31, 2018
(with comparative amounts for prior year)

<u>Firm / Individual</u>	<u>Services</u>	<u>2018</u>	<u>2017</u>
Novitas (formerly JC Consulting Group, Inc.)	Benefit system maintenance and development	\$ 153,300	\$ 184,568
Elizabeth Cautadella	Benefits consultant	34,302	35,375
Crestwood Associates	MS Dynamics upgrade	-	1,998
Best Case Technologies	Website consultant	<u>144</u>	<u>144</u>
Total payments to consultants		<u>\$ 187,746</u>	<u>\$ 222,085</u>

**METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND
SUPPLEMENTARY INFORMATION**

POSTEMPLOYMENT HEALTHCARE DISCLOSURE

The Fund does not provide any health insurance supplement. Employee and survivor annuitants may elect coverage under the insurance programs offered through the Metropolitan Water Reclamation District of Greater Chicago (the District), the former employer of employee annuitants. The District offers these programs to retirees on a year-by-year basis. Retirees are not guaranteed coverage under the District's insurance programs. The Fund withholds the prescribed annuitant portion of the monthly medical premium and forwards it in total to the District, which subsidizes the medical coverage. The District provides full disclosure in its Comprehensive Annual Financial Report.

INVESTMENT SECTION

Custodian Report

Investment Consultant Report

Investment Preface:

- Authority
- Responsibility
- Policy & Objectives
- Allocation
- Management
- Performance

Investment Analytics:

Investment Assets

- Asset Allocation (with graph)
- Schedule of Investment Returns
- Historical Investment Returns (with graph)
- Historical Asset Allocation
- Fixed Income & Equity Diversification
- Top 40 Common Stock Holdings
- Manager by Type and Assets Managed

Investment Related Expenses

- Investment Manager Compensation
- Custodial Fees
- Investment Consultant Fees
- Domestic Brokerage Commissions
- International Brokerage Commissions



May 14, 2019

To the Board of Trustees of the Metropolitan Water Reclamation District Retirement Fund:

The Bank of New York Mellon as custodian of the assets of the Metropolitan Water Reclamation District Retirement Fund (Fund) held by it in a custodial account has provided annual accounting statements to the Fund which represents The Bank of New York Mellon's record of investments, receipts, disbursements, purchases and sales of securities and other transactions pertinent to the custody accounts for the period of January 1, 2018 through December 31, 2018.

In addition to the custody of assets in the custody accounts, and pursuant to the Master Custody Agreement among the Board of Trustees and the Bank of New York Mellon dated May 2, 2017 and the securities lending contract dated June 27, 2007, The Bank of New York Mellon provides the following services:

- Maintain safe custody of the assets owned by MWRD Retirement Fund.
- Settle trades in accordance with manager instructions.
- Collect dividends and registered interest payments.
- Provide proxy processing and corporate action services
- Sweep cash balances of manager accounts in end of day sweep vehicle.
- Provide MWRD with monthly and annual audited investment accounting statements.
- Provide periodic reports summarizing the investment activity of the Fund's assets.
- Administer a securities lending program for MWRD Retirement Fund's assets and invest cash collateral received from such loans.

Sincerely,

A handwritten signature in black ink that reads "Diana Bellini".

Diana Bellini
Vice President
Relationship Manager
(412) 234-5355



To the Metropolitan Water Reclamation District Retirement Fund (MWRDRF) Board of Trustees:

Marquette Associates ("Marquette") is the independent investment consultant for the MWRDRF. Marquette is responsible for the implementation of the Retirement Fund's asset allocation, trustee education, the selection and monitoring of investment managers as well as investment performance analysis. Marquette follows the CFA® Institute's Performance Presentation Standards for calculating and reporting performance returns.

The assumed actuarial rate of return for the Retirement Fund in Fiscal Year 2018 was 7.50%. In 2018, the MWRDRF's total portfolio returned -7.10% gross of fees and -7.50% net of fees. Over the same period, the policy index returned -6.9%. A new asset class – core open end real estate – was added to the portfolio during the year; at the end of 2018, the MWRDRF's Policy Index was comprised of approximate weightings in the following indices: Barclays Aggregate (23%), Barclays Global Aggregate Index – Hedged (9%), S&P 500 (21%), Russell 2000 (11%), MSCI ACWI ex-U.S (11%), S&P Developed Small-Cap ex-U.S (6%), Russell Mid-Cap (10%), MSCI EM Index (6%), and NFI-ODCE (3%).

In the first half of 2018, tax cuts and improved U.S.-North Korean relations fueled a risk-on market that kept securities prices at or near peak levels. The second half of the year saw escalating global tariffs, volatility in emerging markets and a drop in the price of oil that widened most fixed income asset classes' spreads back to long term averages and caused the yield curve to invert on the short end. The MWRDRF ended 2018 with a 31.5% allocation to fixed income; net of fees, the fixed income composite returned -0.1% versus the composite benchmark (Barclays Aggregate) which returned 0.0%.

In the domestic equities market, 2018 commenced with high investor expectations fueled by recent fiscal policies such as tax cuts and deregulation. This euphoria lasted the first 26 days of the year before fears of increasing inflation, higher interest rates, and accelerating wage growth took root.

The S&P 500 fell 10% over the span of just nine trading days in early February and had its first correction in over two years. Despite a tough February, sentiment turned positive in March with the S&P 500 continuing to break records and the small cap Russell 2000 index hitting an all-time high.

Although the equity markets ended the year in negative territory, there were some bright spots in 2018; for example, in August, Apple and Amazon became the first trillion-dollar companies, and the S&P 500 peaked in September. The MWRDRF portfolio ended the year with a 41.0% allocation to U.S equities; net of fees, the U.S equities composite returned -10.0% versus the composite benchmark (Wilshire 5000) which returned -5.3%.

Developed small-cap stocks generated a loss of -18.4%, as it was also a challenging year for non-U.S. equities; developed large stocks returned -14.2% while emerging markets lost 14.6%. The MWRDRF ended 2018 with a 22.2% allocation to non-U.S. equities; net of fees, the non-U.S. equity composite had a -15.2% return versus the composite benchmark (MSCI ACWI ex-US) which returned -14.2%.

The MWRDRF made its first dedicated allocation to real estate in early 2018. Key fundamentals within this asset class such as consistent income, low vacancy rates, and stable transaction volumes helped to drive positive returns.

The MWRDRF ended 2018 with a 5.2% allocation to Core Open-End real estate. Net of fees, the composite saw a 6.4% since inception return while the benchmark (NFI) returned 6.7%.

180 North LaSalle Street, Ste 3500, Chicago, IL 60601 PHONE 312-527-5500 FAX 312-527-9064 WEB marquetteassociates.com
CHICAGO | BALTIMORE | ST. LOUIS

The MWRDRF portfolio continues to be highly liquid and transparent and, in spite of the negative volatility of 2018, the overall performance of portfolio continues to be strong relative to peers and on an absolute basis.

Sincerely,



Kweku Obed, CFA, CAIA

180 North LaSalle Street, Ste 3500, Chicago, IL 60601
CHICAGO | BALTIMORE | ST. LOUIS

INVESTMENT PREFACE

INVESTMENT AUTHORITY

The Metropolitan Water Reclamation District Retirement Fund's (Fund) investment authority is established by and subject to the provisions of the Illinois Compiled Statutes, Chapter 40, Act 5, Articles 1 and 13.

The Retirement Fund Board of Trustees invests the Fund's reserves according to the Prudent Person Rule. This rule requires a Trustee, who is a fiduciary by way of title, to discharge their duties with the care, prudence and diligence that a prudent person acting in a like capacity and familiar with such matters would use in a similar situation.

INVESTMENT RESPONSIBILITY

The duties of the Board include the appointment and review of investment managers as fiduciaries to manage the investment assets of the Fund. The investment managers are granted discretionary authority to manage stated assets and vote all proxies for the Board. The investment managers must discharge their duties with respect to the Fund solely in the interest of the Fund's contributors and beneficiaries.

INVESTMENT POLICY & OBJECTIVES

The Fund's asset allocation strategy is based on a combination of long-term investment return expectations and the Fund's expected cash requirements for payments of benefits and expenses. The investment objective of the total portfolio is to maximize the rate of return within a prudent level of risk.

The Fund is expected to exceed the policy index, on average, over rolling four quarter periods. During 2018, the Fund's actuarial return assumption was 7.5%. Subsequently, the Trustees approved lowering the assumed investment return to 7.25%. The Fund's policy index is as follows:

21%	S&P 500 Index
10%	Russell MidCap Index
11%	Russell 2000 Index
11%	MSCI ACWI ex-US Index
6%	S&P Developed Small Cap ex-U.S.
6%	MSCI Emerging Markets Index
23%	Bloomberg Barclays US Aggregate Index
7%	Bloomberg Barclays Global Aggregate (Hedged) Index
5%	NFI-ODCE Index

Individual goals are established for each investment manager and incorporated into the contracts with those managers. The Board hires and reviews investment managers based on an evaluation of their investment philosophy, long-term performance and ability to complement existing portfolio styles. Investment managers must adhere to their stated investment philosophy and strive to attain their performance goals. The formal investment policy is reviewed annually.

INVESTMENT ALLOCATION

The Investment Policy of the Fund establishes asset allocation targets and ranges for each asset class to achieve risk and return objectives. Fund staff, in collaboration with the Fund's investment consultant, monitors the investment allocation monthly. Formal rebalancing is recommended by the consultant when variances approach 5% over or under the targets. In addition, strategic withdrawals for payment of benefits are used to fine-tune the allocations.

As of December 31, 2018, and 2017, the Fund's asset allocation percentages based on assets under management on p. 75, are listed below.

Asset Class	2018 Actual Asset Allocation	2018 Target Allocation	2017 Actual Asset Allocation
Domestic Equity	40.8%	42.0%	43.9%
International Equity	22.3%	23.0%	24.1%
Domestic Fixed income	24.4%	23.0%	25.5%
Global Fixed Income	7.3%	7.0%	6.5%
Real Estate	5.2%	5.0%	0.0%
Total	100.0%	100.0%	100.0%

INVESTMENT MANAGEMENT

The Fund's stated investment objective is to maximize the rate of return within a prudent level of risk. During 2018, the Board of Trustees, in cooperation with the Fund's investment consultant Marquette Associates, undertook the following investment activities related to the Fund's stated investment objective:

- In January, the Fund began the process of allocating 5% of total assets, equal to approximately \$70 million, to two Core Open-End Real Estate managers. The allocation was approved at the October 2017 Board meeting.
- At year-end, \$61.25 million of the approximately \$70 million investment had been allocated. The remaining \$8.75 million was allocated on January 2, 2019 completing the funding of the Core Open-End Real Estate investment.
- In August, the Trustees, along with Fund staff, participated in a roundtable discussion with six minority/emerging managers organized by Marquette Associates.
- In 2018, the Fund exceeded its minority (MWDBE) broker/dealer commission goals of 30% for domestic equity trades, 10% for international equity trades and 20% of par for fixed income trades, achieving actual minority commissions of 62%, 23% and 29% of par, respectively.

INVESTMENT PERFORMANCE

Marquette Associates evaluates investment manager performance as well as overall performance on a monthly and quarterly basis and presents their reports to the Trustees at the monthly Board meetings. Investment returns are calculated based on a time-weighted rate of return based on market values and in compliance with industry accepted reporting standards. Rates of returns are reported both gross and net of investment fees. The Fund's investment managers report performance in compliance with Global Investment Performance Standards. This reporting requirement is also included in the managers' contractual agreements with the Fund.

The time weighted market value rate of return on invested assets for the year ending December 31, 2018 was -7.5% net of fees, compared to the Fund's Policy Index return of -6.9%. The Fund's performance over the long term against the Policy Index, the various component indices, and the actuarial rate of return assumption is an important indicator of how well the Fund is accomplishing its investment objectives. Data for trend analysis is presented in tables later in this section entitled *Schedule of Investment Returns* and *History of Investment Returns*.

Investment Analytics

Investment Section

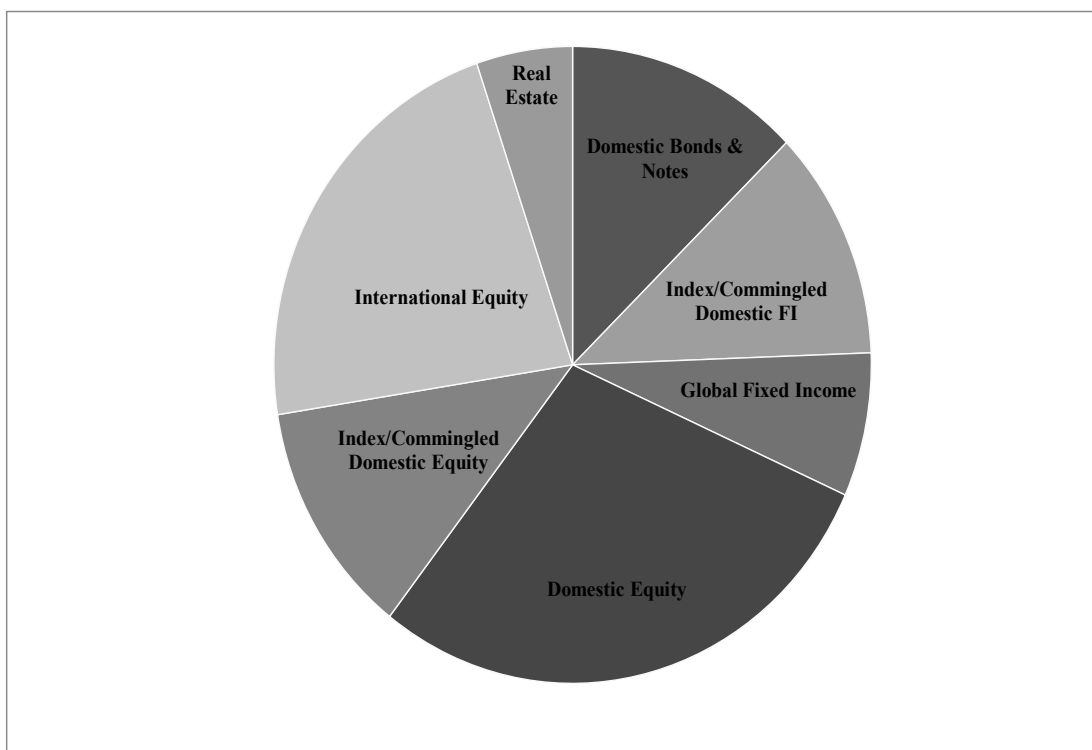
INVESTMENT ASSETS

Summary at Market Value

December 31, 2018 and 2017

	December 31, 2018		December 31, 2017	
Fixed Income Investments				
Domestic Bonds & Notes	\$157,787,096	12.7 %	\$167,708,532	12.1 %
Index/Commingled Domestic FI	145,373,885	11.7	184,200,212	13.3
Global Fixed Income	90,627,946	7.3	90,613,860	6.5
	<u>393,788,927</u>	<u>31.7</u>	<u>442,522,604</u>	<u>32.0</u>
Equity Investments				
Domestic Equity	358,438,677	28.8	438,094,325	31.6
Index/Commingled Domestic Equity	148,885,547	12.0	169,595,171	12.3
International Equity	<u>277,387,644</u>	<u>22.3</u>	<u>333,545,437</u>	<u>24.1</u>
	784,711,868	63.1	941,234,933	68.0
Real Estate Investments				
Domestic Real Estate	63,897,521	5.2	-	0.0
Short Term Investments & Cash	<u>274,178</u>	<u>-</u>	<u>15,319</u>	<u>-</u>
Total at Market Value	<u>\$1,242,672,493</u>	<u>100.0 %</u>	<u>\$1,383,772,856</u>	<u>100.0 %</u>

Asset Allocation at Market Value
December 31, 2018



SCHEDULE OF INVESTMENT RETURNS³

	Year ending 12/31/18 ^{1,2}	3-Year Annualized	5-Year Annualized	10-Year Annualized
Fund's Total Portfolio	(7.5) %	5.4 %	4.5 %	9.2 %
Policy Index	(6.9)	5.5	4.9	9.4
Fund's Domestic Equity Composite	(10.0)	7.2	5.9	12.4
Wilshire 5000 - Composite Index	(5.3)	9.1	8.1	13.2
Policy Index Components:				
S&P 500 - Large cap Index	(4.4)	9.3	8.5	13.1
Russell Mid Cap - Mid cap Index	(9.1)	7.0	5.4	-
Russell 2000 - Small cap Index	(11.0)	7.4	4.4	-
Fund's International Equities	(15.2)	4.8	3.5	3.7
Policy Index Components:				
MSCI ACWI ex-US Index	(14.2)	-	-	-
S&P Developed Small Cap ex-US Index	(18.4)	3.9	-	-
MSCI Emerging Markets Index	(14.6)	-	-	-
Fund's Fixed Income	(0.1)	2.7	2.5	3.7
Policy Index Components:				
Barclay's US Aggregate	0.0	2.1	2.5	3.5
Barclay's Global Aggregate (Hedged) Index	1.8	-	-	-

^{1.} See current Policy Index on p.69. From July 2016 through December 2017 the Fund's Policy Index was composed of 21% S&P 500 Index, 10% Russell Mid Cap Index, 11% Russell 2000 Index, 11% MSCI ACWI ex-US Index, 6% S&P Developed Small Cap ex-US Index, 6% MSCI Emerging Markets Index, 7% Barclays Global Aggregate (Hedged) Index and 28% Barclay's U.S. Aggregate Index.

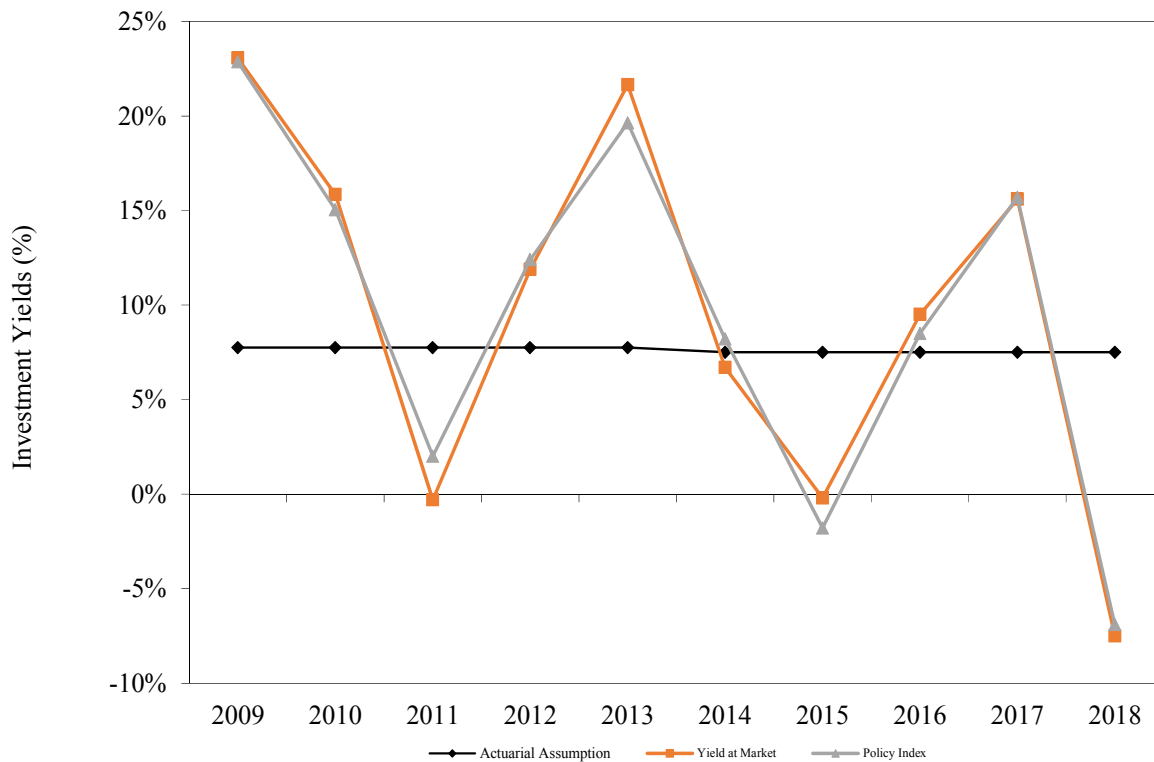
^{2.} Investment returns are reported net of investment fees. The calculation is based on a time-weighted rate of return at market and is in compliance with industry accepted reporting standards. Quarterly reports of the Fund's Investment Consultant can be obtained upon request.

^{3.} Source: Marquette Associates, Investment Consultant

HISTORY OF INVESTMENT RETURNS AT MARKET VALUE

Years ending December 31

Year	Invested Assets	Actuarial Assumption	Yield at Market ¹	Fund's Policy Index ²
2009	\$ 982,263,533	7.75%	23.1%	22.9%
2010	1,060,891,508	7.75%	15.9%	15.0%
2011	979,087,210	7.75%	-0.3%	2.0%
2012	1,064,586,807	7.75%	11.9%	12.4%
2013	1,246,898,339	7.75%	21.7%	19.6%
2014	1,281,356,457	7.50%	6.7%	8.2%
2015	1,221,831,791	7.50%	-0.2%	-1.8%
2016	1,271,792,170	7.50%	9.5%	8.5%
2017	1,383,772,856	7.50%	15.6%	15.7%
2018	1,242,672,493	7.50%	-7.5%	-6.9%



¹ Time weighted investment returns are reported net of investment fees.

² The Fund's Policy Index is detailed on the previous page.

Investment Analytics

Investment Section

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Equities										
Domestic Equities	48.9	60.9	55.0	53.0	58.3	48.5	30.1	31.6	31.6	28.8
Index/Commingled Domestic Equities	10.3	1.9	-	-	-	-	16.4	11.6	12.3	12.0
International Equities	<u>4.5</u>	<u>5.2</u>	<u>10.4</u>	<u>9.4</u>	<u>9.4</u>	<u>14.7</u>	<u>15.6</u>	<u>22.3</u>	<u>24.1</u>	<u>22.3</u>
	<u>63.7</u>	<u>68.0</u>	<u>65.4</u>	<u>62.4</u>	<u>67.7</u>	<u>63.2</u>	<u>62.1</u>	<u>65.5</u>	<u>68.0</u>	<u>63.1</u>
Fixed Income										
Domestic Fixed Income	-	-	-	15.7	12.9	19.7	19.5	12.3	12.1	12.7
Index/Commingled Domestic Fixed Income	36.3	32.0	34.6	21.9	19.4	17.1	12.4	15.4	13.4	11.7
Global Fixed Income	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>6.0</u>	<u>6.8</u>	<u>6.5</u>	<u>7.3</u>
	<u>36.3</u>	<u>32.0</u>	<u>34.6</u>	<u>37.6</u>	<u>32.3</u>	<u>36.8</u>	<u>37.9</u>	<u>34.5</u>	<u>32.0</u>	<u>31.7</u>
Real Estate										
Domestic Real Estate	-	-	-	-	-	-	-	-	-	5.2
Total Portfolio	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

¹ Allocation percentages based on Assets Under Management as of December 31st on p.75.

FIXED INCOME DIVERSIFICATION
as of December 31, 2018

	Market Value (MV)	MV as a % of Total Fixed Income
Domestic Fixed Income		
Treasuries & Government	\$ 23,224,418	9.8 %
Corporate	56,334,270	23.8
Mortgage-backed	65,090,238	27.5
Asset-Backed	7,248,330	3.0
Municipals	219,165	0.1
Total Domestic Fixed Income	152,116,421	64.2
Global Fixed Income		
Treasuries & Government	3,616,129	1.5
Corporate	35,982,442	15.2
Asset-Backed	2,487,427	1.1
Foreign	42,665,797	18.0
Total Global Fixed Income	84,751,795	35.8
Total Fixed Income ¹	\$ 236,868,215	100.0 %

¹ Actively managed fixed income totals on this schedule represent invested assets and thus do not include STI and cash; totals are in agreement with the Financial Statements.

EQUITY DIVERSIFICATION
as of December 31, 2018

	Market Value (MV)	MV as a % of Total Equity
Domestic Equities		
Financials	\$ 76,088,177	16.2 %
Information Technology	54,388,990	11.6
Industrials	52,906,182	11.3
Consumer Discretionary	43,494,412	9.2
Health Care	39,192,459	8.3
Communication Services	20,920,266	4.4
Consumer Staples	18,048,031	3.8
Energy	15,606,514	3.3
Real Estate	12,922,693	2.7
Materials	11,458,810	2.4
Utilities	5,198,580	1.1
Unclassified	872,803	0.2
Total Domestic Equities	351,097,917	74.5
International Equities		
Financials	20,975,210	4.5
Industrials	19,158,199	4.1
Consumer Discretionary	14,474,107	3.1
Materials	12,366,651	2.6
Consumer Staples	11,088,796	2.4
Unclassified	7,747,102	1.7
Health Care	7,406,760	1.6
Information Technology	6,579,430	1.4
Real Estate	5,737,893	1.2
Communication Services	5,193,253	1.1
Utilities	4,870,556	1.0
Energy	3,623,798	0.8
Total International Equities	119,221,755	25.5
Total Equity ¹	\$ 470,319,672	100.0 %

¹ Equity totals on this schedule represent actively managed invested assets; balances do not include STI and cash and are in agreement with the Financial Statements.

TOP 40 COMMON STOCK HOLDINGS ¹
as of December 31, 2018

<u>Company Name</u>	<u>Industry</u>	<u>Shares</u>	<u>Market Value</u>
Apple Inc	Computers	23,698	\$3,738,123
Euronet Worldwide Inc	Commercial Services	34,321	3,513,784
Microsoft Corp	Software	33,875	3,440,684
Aflac Inc	Insurance	74,900	3,412,444
Stanley Black & Decker Inc	Hand/Machine Tools	25,781	3,087,017
Alphabet Inc-Cl A	Internet	2,856	2,984,406
Amazon.Com Inc	Internet	1,950	2,928,842
Northern Trust Corp	Banks	34,600	2,892,214
Lazard Ltd	Diversified Financial Services	77,800	2,871,598
Keysight Technologies Inc	Electronics	46,000	2,855,680
JM Smucker Co	Food Processing	30,500	2,851,445
Corning Inc	Telecommunications	93,978	2,839,075
Citigroup Inc	Banks	54,120	2,817,487
First American Financial Corp	Insurance	61,700	2,754,288
Zimmer Biomet Holdings Inc	Health Care	26,500	2,748,580
Omnicom Group Inc	Advertising	36,900	2,702,556
Kennametal Inc	Hand/Machine Tools	80,800	2,689,024
Knight-Swift Transportation	Transportation	106,278	2,664,389
Interpublic Group of Cos Inc	Advertising	126,600	2,611,758
Laboratory Corp of America	Health Care Services	20,500	2,590,380
Monro Inc	Commercial Services	37,382	2,570,013
Dorman Products Inc	Auto Parts & Equipment	28,437	2,559,899
Intel Corp	Semiconductors	54,375	2,551,819
Kadant Inc	Machinery - Diversified	31,164	2,538,619
Cisco Systems Inc	Telecommunications	56,031	2,427,823
Amgen Inc	Biotechnology	12,466	2,426,756
Arbor Realty Trust Inc	Equity Reit (Real Estate Investment Tr	212,649	2,141,375
Ameriprise Financial Inc	Diversified Financial Services	19,232	2,007,244
Fabrinet	Misc Manufacturer	39,017	2,001,962
Pfizer Inc	Pharmaceuticals	45,400	1,981,710
Bok Financial Corp	Banks	26,768	1,962,897
Msg Networks Inc	Media	83,100	1,957,836
Houlihan Lokey Inc	Diversified Financial Services	52,900	1,946,720
Borgwarner Inc	Auto Parts & Equipment	55,600	1,931,544
Marathon Petroleum Corp	Oil & Gas	31,613	1,865,483
Thermo Fisher Scientific Inc	Health Care	8,324	1,862,828
Progressive Corp	Insurance	30,800	1,858,164
Metlife Inc	Insurance	44,659	1,833,699
Snap-On Inc	Hand/Machine Tools	12,400	1,801,596
Ensign Group Inc	Health Care Services	46,397	1,799,740

¹ A complete list of the Fund's portfolio holdings is available upon request.

Investment Analytics

Investment Section

MANAGER BY TYPE AND ASSETS MANAGED

Assets Under Management at Market Value

	December 31, 2018		December 31, 2017	
	Market Value	% of Total	Market Value	% of Total
<u>Fixed Income Managers</u>				
Domestic Fixed Income				
State Street Global Advisors	\$ 145,373,885	11.7 %	\$ 184,200,212	13.4 %
Neuberger Berman	105,418,853	8.5	116,040,487	8.4
Garcia Hamilton & Associates	52,368,243	4.2	51,668,045	3.7
Subtotal	303,160,981	24.4	351,908,744	25.5
Global Fixed Income				
Standish	90,627,946	7.3	90,613,860	6.5
Total Fixed Income	393,788,927	31.7	442,522,604	32.0
<u>Equity Managers</u>				
Domestic Equity				
Ariel Investments	71,034,376	5.7	89,113,750	6.4
Decatur Capital Management, Inc.	58,244,064	4.7	70,007,169	5.1
Mesirow Financial Management	23,865,711	1.9	28,200,269	2.0
LSV Asset Management	61,454,435	4.9	72,853,220	5.3
Matarin Capital Management	43,417,054	3.5	58,160,928	4.2
O'Shaughnessy Asset Management, LLC.	36,034,746	2.9	45,429,048	3.3
State Street Global Advisors	148,885,547	12.0	169,595,171	12.3
Wasatch Advisors	64,388,291	5.2	74,329,942	5.4
Subtotal	507,324,223	40.8	607,689,497	43.9
International Equity				
Hexavest Inc.	65,054,569	5.2	72,100,149	5.2
Dimensional Fund Advisors	75,789,431	6.1	91,380,793	6.6
LSV Asset Management	70,254,886	5.7	88,556,103	6.4
State Street Global Advisors	66,288,758	5.3	81,508,392	5.9
Subtotal	277,387,644	22.3	333,545,437	24.1
Total Equities	784,711,868	63.1	941,234,933	68.0
<u>Real Estate Managers</u>				
DWS RREEF America II	\$ 26,778,440	2.2 %	\$ -	0.0 %
UBS Trumbull Property Fund	37,119,081	3.0	-	0.0
Total Real Estate	63,897,521	5.1	-	0.0
Cash in Transition Accounts	274,178	0.0	15,319	0.0
Total Investments	\$ 1,242,672,493	100.0 %	\$ 1,383,772,856	100.0 %

¹ AUM on this schedule includes any short-term investments and cash held in the managers' accounts at year end and thus vary from investment type totals on the Financial Statements.

² Additional quarterly investment information is available on the Fund's website at mwrdrf.org.

INVESTMENT MANAGER COMPENSATIONInvestment Managers:¹

	2018	2017
Ariel Investments	\$ 409,062	\$ 417,382
DWS	118,484	-
Decatur Capital Management, Inc.	371,895	352,631
Garcia Hamilton & Associates	100,047	99,041
Hexavest Inc.	389,831	380,339
LSV Asset Management	1,033,548	1,071,895
Matarin Capital Management	396,076	407,503
Mesirow Financial Management	186,093	198,659
Neuberger Berman	256,724	255,439
O'Shaughnessy Asset Management, LLC.	200,255	185,768
Pioneer Institutional Asset Management	-	1,511
Standish Mellon Asset Management	226,325	222,740
State Street Global Advisors	113,133	114,882
UBS Realty Investors	316,765	
Wasatch Advisors	554,850	563,400
Total	\$ 4,673,088	\$ 4,271,190

CUSTODIAL FEES²Institution

Bank of New York Mellon Co.	\$ 181,092	\$ 179,563
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INVESTMENT CONSULTANT FEES³Consulting Firm

Marquette Associates	\$ 170,000	\$ 170,000
Total Investment Expenses	<u>\$ 5,024,180</u>	<u>\$ 4,620,753</u>

¹ Investment manager compensation is reflected in the financial statements along with other direct investment expenses as an offset to investment income and is so described within the notes to the financial statements.

² Custodial fees do not include management fees related to the Fund's commingled assets custodied by State Street.

SCHEDULE OF 2018 DOMESTIC BROKERAGE COMMISSIONS

<u>Broker Name</u>	<u>Commissions¹</u>	<u>% of Total</u>
Loop Capital Markets ²	\$ 27,682	15.1
Castleoak Securities ²	17,415	9.5
CL King & Associates ²	15,761	8.6
Drexel Hamilton LLC ²	15,144	8.3
Penserra Securities LLC ²	13,538	7.4
Robert W Baird & Co. Incorporated	10,009	5.5
Williams Capital Group LP ²	8,998	4.9
Cabrera Capital Markets ²	7,073	3.9
Academy Securities Inc. ²	6,476	3.5
Weeden & Co. L.P.	6,186	3.4
Virtu ITG LLC	5,472	3.0
Stifel, Nicolaus & Company, Incorporated	4,859	2.7
Bloomberg Tradebook LLC	4,415	2.4
JonesTrading Institutional Services LLC	4,273	2.3
Raymond James & Associates, Inc.	3,517	1.9
Credit Suisse Securities (USA) LLC	2,935	1.6
BTIG, LLC	2,506	1.4
Goldman Sachs & Co. LLC	2,127	1.2
J.P. Morgan Securities LLC	2,056	1.1
Subtotal	160,442	87.7
All Others ³	22,548	12.3
Total	<u>\$ 182,990</u>	<u>100.0</u>

¹ Investment brokerage commissions are accounted for as an additional cost to a security when the security is purchased, and as a reduction to the cash amount received when the security is sold.

² Directed brokerage for stock trades executed by Minority/Women/Disabled/Veteran – Owned Business Enterprises.

³ Brokerage firms that each received less than 1.0% of the total commissions.

SCHEDULE OF 2018 INTERNATIONAL BROKERAGE COMMISSIONS

<u>Broker Name</u>	<u>Commissions</u>	<u>% of Total</u>
Mischler Financial Group, Inc. ²	\$ 20,264	18.9
Pictet Canada	11,426	10.7
J.P. Morgan Securities LLC	8,517	8.0
UBS Securities LLC	8,428	7.9
Merrill Lynch, Pierce, Fenner & Smith Incorporated	6,286	5.9
Morgan Stanley & co. LLC	5,599	5.2
Credit Suisse Securities (USA) LLC	5,152	4.8
Deutsche Bank Securities Inc.	4,948	4.6
CLSA Americas, LLC	3,870	3.6
Loop Capital Markets LLC ²	3,865	3.6
Redburn (USA) LLC	2,935	2.7
Virtu ITG LLC	2,682	2.5
Cabrera Capital Markets, LLC ²	2,453	2.3
Macquarie Capital (USA) Inc.	2,433	2.3
Keefe, Bruyette & Woods, Inc.	2,382	2.2
Societe Generale	2,199	2.0
Citigroup	2,106	2.0
Mizuho Securities USA LLC	1,844	1.7
Goldman Sachs & Co. LLC	1,448	1.4
ODDO Securities	1,410	1.3
Instinet, LLC	1,358	1.3
RBC Capital Markets, LLC	1,095	1.0
Subtotal	102,699	95.9
All Others ³	4,413	4.1
Total	<u>\$ 107,112</u>	<u>100.0</u>

¹ Investment brokerage commissions are accounted for as an additional cost to a security when the security is purchased, and as a reduction to the cash amount received when the security is sold.

² Directed brokerage for stock trades executed by Minority/Women/Disabled/Veteran - Owned Business Enterprises.

³ Brokerage firms that each received less than 1.0% of the total commissions.

ACTUARIAL SECTION

Actuarial Certification

Actuarial Report

Preface

Comparative Summary

Summary of Valuation Results

Changes in Unfunded Actuarial Liability

Actuarial Assumptions and Methods

Plan Provisions

Analysis of Funding:

History of Change in Unfunded Liability with Analysis

Actuarial Accrued and Unfunded Liabilities (with graph)

Actuarial Accrued Liability Prioritized Solvency Test

Historical Valuation Data:

History of Retirees and Beneficiaries

Added to and Removed from Benefit Payroll

Schedule of Active Member Valuation Data

History of Recommended Employer Multiples and Taxes Levied



May 7, 2019

Board of Trustees
Metropolitan Water Reclamation District Retirement Fund
111 E. Erie St.
Chicago, IL 60611

ACTUARIAL CERTIFICATION

We have completed the annual actuarial valuation for the Metropolitan Water Reclamation District Retirement Fund.

The valuation was performed as of December 31, 2018 to determine whether assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. Successive valuations will be performed every year.

The funding objective of the Fund is to attain a funded ratio of at least 90% by the year 2050. However, an additional contribution requirement has been determined based on achieving a funding level of 100%. Employer contributions come from a property tax levied by the District equal to an amount that will be sufficient to meet the Fund's actuarially determined contribution requirement but shall not exceed an amount equal to the total employee contributions 2 years prior multiplied by 4.19.

We estimate that a tax multiple of 3.56 is required to cover the full actuarially determined contribution requirement for the year 2019.

Illinois Public Act 97-0894 provided for changes to member contribution requirements and the required tax levy multiplier. The expected member contributions in 2019 reflect the same rates expected in 2018.

The actuarial assumptions used in the December 31, 2018 valuation have been updated since the December 31, 2017 valuation. They are based on September 2018 experience analysis performed by Foster & Foster for the Fund over the period December 31, 2012 through December 31, 2017. The changes are summarized below:

- Lowered the assumed investment return from 7.50% to 7.25%.
- Updated retirement rates, withdrawal rates and mortality rates.
- Updated salary increase rates.
- Lowered the payroll growth assumption from 3.70% to 3.00%.

The entry age normal actuarial cost method was used for both the December 31, 2018 valuation and the December 31, 2017 valuation.

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The asset values used in the valuation were provided in the December 31, 2018 audited financial statements for the Fund. A five-year smoothed market value of assets was used to determine the actuarial value of assets. The market value is adjusted by the unrecognized investment gains and losses for each of the five years prior to the valuation date. The method is unchanged from the December 31, 2017 valuation.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board. The assumptions and methods used meet those standards. The valuation reflects laws and regulations issued to date pursuant to Article 13 of the Illinois Pension Code, as well as applicable federal laws and regulations.

In preparing this report, we have relied on personnel, plan design and asset information supplied by the Plan. The actuarial value of assets was determined based on information supplied by Legacy Professionals LLP, the auditor for the Plan. In our opinion, the assumptions used in the valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness, so we have no reason to doubt the substantial accuracy of the information. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

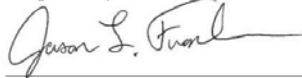
The trend data schedules presented in the financial section of the Comprehensive Annual Financial Report (CAFR) were prepared by the staff of the Fund based on information contained in the historical actuarial reports. The following exhibits included in the accompanying actuarial section were prepared by us based on information provided by the Fund:

- Present Value of Future Benefits
- History of Change in Unfunded Accrued Liability
- Breakdown of Aggregate Accrued Liabilities
- History of Annuitants and Surviving Spouses Added/Dropped from Rolls
- Recommended Employer Multiple
- Participant Statistics
- Summary of Annuitants and Surviving Spouses by Age
- History of Average Annuities at Retirement
- Membership Note Data

In our opinion, the assumptions and method used to determine the annual required contribution, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience.

In our opinion, the following valuation results fairly present the financial condition of the Metropolitan Water Reclamation District Retirement Fund as of December 31, 2018.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jason L. Franken", written over a horizontal line.

Jason L. Franken, FSA, EA, MAAA
Enrollment Number: 17-06888
Foster & Foster, Inc.

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ACTUARIAL PREFACE

PENSION FINANCING

The approaches used to finance pensions can be divided into two basic categories. Under Pay-As-You-Go Financing the benefits called for by the plan would be paid out directly by the employer as they become due. Most public retirement plans including the MWRD Retirement Fund use Actuarial Funding, a form of Advance Funding, which is designed to set aside money during an employee's working career so that sufficient funds are accumulated at the time of retirement to pay the employee's future pension. This method builds up a pool of assets which will generate investment income, thereby reducing the contribution requirements to meet the pension costs.

ACTUAL FUNDING

The Fund is financed by employee contributions, employer contributions (i.e. the MWRD tax levy) and investment earnings; investment earnings and employer funding are the primary determinants of the Fund's financial status.

In recent history, and through fiscal year 2013, employer contributions were set at 2.19 times employee contributions made in the calendar year two years prior. Beginning in 2013, employer contributions were increased to the lesser of the amount resulting from using a 4.19 multiple, or the actuarially determined contribution requirement.

Prior to 2013, employee contributions were 9% of salary for all employees. Contributions for Tier I employees, who became members before January 1, 2011, increased to 10% of salary in 2013, to 11% in 2014 and to 12% in 2015; the Tier I contribution rate remains at 12%. Contributions for Tier II employees, who became members after January 1, 2011, are 9% of salary.

ACTUARIAL FUNDING

The Fund's actuary performs an annual actuarial valuation which includes the determination of the Actuarial Accrued Liability, the Actuarial Value of Assets and what is known as the Actuarially Determined Contribution Requirement. Actuaries use demographic data (such as employee age, salary, and service credits), economic assumptions (such as estimated salary increases and interest rates), and decrement assumptions (such as employee turnover, mortality, and retirement rates) in performing these valuations. The actuarial valuation process is generally as follows:

1. Based on the demographic data and actuarial assumptions described above, the amount and timing of benefits payable in the future are estimated by the actuary for all participants at the valuation date. Important assumptions in this computation are the turnover, retirement age, and earnings progression for active members, and mortality for all participants.
2. The actuary then calculates the actuarial present value of these future benefits. This is the amount necessary to be invested at the valuation interest rate, at the valuation date, to provide benefit payments as they come due. Each year's estimated benefit payments are discounted by an assumed interest rate to determine the present dollar value of benefits.
3. The final step is to apply a cost method assigning portions of the total value of benefits to past, present and future periods of employee service. This allocation is accomplished by the development of normal cost and accrued benefit cost.

One of the most important actuarial assumptions is the assumed rate of return on investments. The Fund's current assumed rate is 7.25% as of the 12/31/18 valuation. It is believed to be appropriate based on the actuary's review of capital market assumptions and other factors which are part of the annual valuation. Based on common actuarial practice this return has been determined reasonable and achievable through asset allocation, on average, over the long-term.

The Fund uses the entry age normal actuarial cost method with costs allocated on the basis of earnings, one of several accepted actuarial cost methods. Under this cost method, the Actuarial Present Value of the projected pension of each member included in the valuation is assumed to be funded by annual installments, equal to a level percent of the member's earnings for each year between entry age and assumed exit age. The normal cost for the member for the current year is equal to the portion of the value so determined, assigned to this year. The normal cost for the plan for the year is the sum of the normal costs of all active members. The normal cost for the year beginning January 1, 2019 was determined to be \$33.8 million or 17.99% of payroll (11.32% of payroll is expected from employee contributions and 6.67% of payroll is the employer's portion.)

Accrued benefit cost, or the Actuarial Accrued Liability (AAL), is the portion of the present value of benefits assigned by the cost method to years of service up to the valuation date (i.e. for past service). This value changes as the member's salary and years of service change, and as some members leave and are replaced by new members. Future normal cost is the portion of the present value of benefits assigned to future years of service (i.e. for future service) and is assumed to be funded annually.

To the extent that current assets plus future normal costs (assumed to be funded annually) do not support members' expected future benefits, an Unfunded Actuarial Accrued Liability (UAAL) develops. The UAAL is generally amortized over a fixed period of time (e.g. 30 years) from the date incurred. Actuarial funding of plan benefits would require annual District (employer) contributions which at least cover the employer's normal cost, plus an amortization of the UAAL. In the past the District funded the plan according to statute as described above, which until the 2013 tax levy resulted in actual contributions that often fell short of the actuarial requirement. Legislation passed in 2012 changed the computation of the tax levy, resulting in higher District contributions that more closely approximates the actuarial funding requirement. The legislation which increased both the employer and employee contribution requirements is expected to eliminate the UAAL by the year 2050.

The information following this Preface is from the December 31, 2018 actuarial valuation performed by Foster & Foster, which was based upon:

- a) Membership data - provided by Fund staff
- b) Assets of the Fund - audited financial statements provided by Fund staff
- c) Actuarial Method – entry age actuarial cost method
- d) Actuarial Assumptions – summarized in this section

COMPARATIVE SUMMARY

	<u>2018</u>	<u>2017</u>
Additions		
Gross investment income ¹	\$ (98,273,555)	\$ 199,099,527
Securities lending income	307,088	345,785
Employer contributions	87,167,339	89,858,224
Employee contributions	<u>21,032,601</u>	<u>20,839,829</u>
Total income	10,233,473	310,143,365
Outgoing		
Refunds, benefits, administrative expense ²	<u>168,033,181</u>	<u>160,947,772</u>
Excess of Income Over Outgoing	<u><u>\$ (157,799,708)</u></u>	<u><u>\$ 149,195,593</u></u>
Number of Members	<u>12/31/2018</u>	<u>12/31/2017</u>
Active Members	1,832	1,835
Inactive Members	127	137
Members Receiving Annuity Benefits		
Retirees	1,848	1,809
Spouses	571	576
Children	<u>24</u>	<u>23</u>
Total Members	<u><u>4,402</u></u>	<u><u>4,380</u></u>
Members Receiving Disability Benefits	32	30
Active Member Pensionable Payroll ³	\$187,849,708	\$184,385,188
Present Value of Future Benefits	\$2,876,161,980	\$2,776,759,424
Actuarial Funding - Going Concern		
Total Actuarial Liability	\$2,601,163,632	\$2,497,890,179
Actuarial Value of Assets ⁴	\$1,470,308,639	\$1,456,195,876
Unfunded Actuarial Liability	\$1,130,854,993	\$1,041,694,303
Funded Ratio	56.5%	58.3%

¹ Includes Other Income² Includes Investment Expenses³ Active Member Pensionable Payroll is annualized based on actual payroll paid to active members in payperiod 26⁴ Actuarial asset values are calculated using a five-year smoothed market value

SUMMARY OF VALUATION RESULTS AS OF DECEMBER 31, 2018

Actuarial Liabilities for Active Members

Retirement	\$ 693,937,784
Termination	17,073,365
Death	23,878,188
Disability	<u>6,889,796</u>
Total	741,779,133

Actuarial Liabilities for Members Receiving Benefits

Retirement Annuities	1,621,753,298
Survivor Annuities/Children	<u>221,810,590</u>
Total	1,843,563,888

Actuarial Liability for Inactive Members	<u>15,820,611</u>
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Total Actuarial Liability	\$ 2,601,163,632
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Actuarial Value of Assets	<u>1,470,308,639</u>
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Unfunded Actuarial Liability	<u><u>\$ 1,130,854,993</u></u>
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Funded Ratio	56.5%
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**CHANGES IN UNFUNDED ACCRUED ACTUARIAL LIABILITY
YEAR ENDED DECEMBER 31, 2018**

1. Unfunded actuarial accrued liability (UAAL) as of 12/31/17		\$ 1,041,694,303
2. Employer normal cost developed as of 12/31/17	\$ 11,897,996	
3. Expected interest on 1 and 2	79,019,422	
4. Less: Actual employer contribution for the year	87,167,339	
5. Less: Expected interest on 4	<u>3,209,682</u>	
6. Net increase in UAAL due to employer contribution being less than normal cost plus interest on unfunded liability (lines 2 +3 -4 -5)		<u>540,397</u>
7. Expected UAAL as of 12/31/17		1,042,234,700
8. Change in UAAL due to actuarial (gain)/loss, by component:		
Increase in UAAL due to investment return lower than assumed	40,260,410	
Decrease in UAAL due to salary increases lower than assumed	(7,369,068)	
Increase in UAAL due to decrement experience	14,320,903	
Increase in UAAL due to inactive mortality experience	4,104,912	
Increase in UAAL due to other changes	<u>(135,723)</u>	
Net decrease in UAAL due to actuarial experience		51,181,434
9. Change in UAAL Due ot Assumption Changes		<u>37,438,859</u>
10. Unfunded actuarial accrued liability as of 12/31/18		<u>\$ 1,130,854,993</u>

ACTUARIAL ASSUMPTIONS AND METHODS

Below is a summary of the actuarial assumptions for the December 31, 2018 valuation. An experience study was performed in September of 2018 based on data for the period December 31, 2012 through December 31, 2017. The assumptions below are based on the experience study and were recommended by Foster & Foster Actuaries, and adopted by the Board of Trustees effective December 31, 2018.

Interest Rate	7.25%
Salary Increases	See Table 1
Cost-of-Living Adjustment - Annuitants	
Members Hired On Or After January 1, 2011	1.25%
Members Hired Before January 1, 2011	3.00%
Inflation Rate	2.50%
Payroll Growth	3.00%
Retirement Rates	See Table 2
Mortality Rates – Healthy & Disabled Lives	RP-2000 Combined Healthy Mortality Table with Generational Mortality Improvements (Scale AA). Female rates are adjusted by a factor of 1.04 and male rates are unadjusted.
Termination Rates	See Table 3
Disability Rates	See Table 4
Load for Reciprocal Benefits	1.5% of active member costs and liabilities.
Assumed Administrative Expenses	Administrative expenses paid from the trust during the prior year.
Percent Married	76%
Spousal Age Difference	Spouse of male member assumed to be 4 years younger than member; Spouse of female member assumed to be 4 years older than member.

ACTUARIAL ASSUMPTIONS AND METHODS, CONTINUED

Asset Valuation Method	5-year Smoothing Method
Actuarial Cost Method	Entry Age Normal, with costs allocated on basis of earnings. Actuarial gains and losses are reflected in the unfunded actuarial liability.
Actuarially Determined Contribution Requirement	Section 13-503. Employer's normal cost plus the annual amount needed to amortize the unfunded liability by the year 2050 as a level percent of payroll. The funding goal is to attain a funded ratio of at least 100% by the year 2050.
Source of Data	Data and audited financial information is provided by the Plan.
Valuation Date	December 31, 2018

Changes in Funding Assumptions/Methods since the prior valuation:

Method Changes

- None

Assumption Changes

Effective December 31, 2018 the following assumption changes were made to better reflect anticipated experience:

- The investment return assumption was lowered from 7.50% to 7.25%.
- Updated retirement rates, withdrawal rates and mortality rates.
- Updated salary increase rates.
- Lowered the payroll growth assumption from 3.70% to 3.00%.

ACTUARIAL ASSUMPTIONS AND METHODS, CONTINUED

Table 1 – Salary Increase Rates

Service	Salary Increase Rate
0	7.00%
1	6.50%
2	5.75%
3	5.50%
4	5.25%
5	6.00%
6	5.00%
7	4.75%
8	4.50%
9	4.25%
10	5.00%
11 – 14	4.00%
15	5.00%
16 – 19	4.00%
20	5.00%
21+	3.50%

Table 2 – Retirement Rates

Age	Retirement Rate
50 - 59	7%
60	20%
61 – 64	10%
65	15%
66	18%
67	25%
68	15%
69	30%
70	35%
71 – 74	20%
75	100%

ACTUARIAL ASSUMPTIONS AND METHODS, CONTINUED

Table 3 – Termination Rates

Service	Male Rate	Female Rate
0	5.00%	7.75%
1	3.50%	6.75%
2	3.50%	5.75%
3	2.60%	4.75%
4	2.24%	4.52%
5	2.15%	4.49%
6	1.75%	4.19%
7	1.70%	3.94%
8	1.65%	3.74%
9	1.55%	3.54%
10	1.55%	3.34%
11	1.55%	3.14%
12	1.45%	2.94%
13	1.40%	2.85%
14	1.35%	2.52%
15	1.20%	2.52%
16+	1.00%	2.52%

Table 4 – Disability Rates

Sample rates are as follows:

Age	Disability Rates
20	0.002%
25	0.003%
30	0.006%
35	0.014%
40	0.033%
45	0.065%
50	0.120%
55	0.225%
60	0.490%
65	0.000%

PLAN PROVISIONS

The following describe and reflect plan provisions in effect as described in Article 13 of the Illinois Pension Code. The provisions below reflect changes included in Public Act 96-0889 and Public Act 96-1490, which created the second “tier” of benefits for members hired on or after January 1, 2011 and provided clarifying changes.

Eligibility	All employees of the District whose duties indicate service during the calendar year for a minimum of 120 days are eligible.
Normal Retirement Eligibility	<p>Hired before January 1, 2011: Age 60 and 5 years of service</p> <p>Hired on or after January 1, 2011: Age 67 and 10 years of service</p>
Normal Retirement Benefit	<p>The annual benefit payable immediately is equal to the sum of:</p> <ul style="list-style-type: none"> (a) 2.2% of Average Final Salary for each year of service up to 20 years. (b) 2.4% of Average Final Salary for each year of service in excess of 20 years <p>The benefit shall not exceed 80% of Average Final Salary.</p>
Early Retirement Eligibility	<p>Hired before January 1, 2011: Age 55 (50 if hired before June 13, 1997) and 10 years of service</p> <p>Hired on or after January 1, 2011: Age 62 and 10 years of service</p>
Early Retirement Benefit	<p>Normal Retirement Benefit reduced as follows:</p> <p>Hired before January 1, 2011: If member retires before reaching age 60 with less than 30 years of service, 0.5% for each full month the member is less than age 60 or service is less than 30 years, whichever is less.</p> <p>Hired on or after January 1, 2011: If member retires before reaching age 67 with less than 30 years of service, 0.5% for each full month the member is less than age 67.</p>

PLAN PROVISIONS, CONTINUED

Deferred Retirement Eligibility

Tier 1: Age 55 (50 if hired before June 13, 1997) and 5 years of service. Tier 2: 10 years of service

Deferred Retirement Benefit

The annual benefit payable at the following ages:

Hired before January 1, 2011:

Age 62, if withdraw on or after age 55 (50 if hired before June 13, 1997) with at least 5 years of service and less than 10 years

Age 55 (50 if hired before June 13, 1997), if withdraw with 10 years of service

Hired on or after January 1, 2011: Age 62, if withdraw with 10 years of service

The annual benefit amount equals the Normal Retirement Benefit reduced with Early Retirement Reductions.

Minimum Retirement Annuity

10 years of service: \$500 per month plus \$25 per month for each year of service in excess of 10 years, not to exceed \$750 with 20 years of service

Less than 10 years of service or retirement before age 60: \$250 per month

Duty Disability Eligibility

Member incurs injury or sickness due to employment with the District and is compensable under the Workers' Compensation Act or the Occupational Disease Act.

Duty Disability Benefit

75% of salary earned on the date of disability, less the amount paid by Workers' Compensation

Benefit is 50% of salary if disability resulted from physical defect or disease that existed at the time injury was sustained.

Benefits are payable during period of disablement, but not beyond attainment of age 65. If disability occurs at age 60 or older, benefits are payable for a maximum of 5 years.

PLAN PROVISIONS, CONTINUED

Ordinary Disability Eligibility	Member becomes disabled due to any cause other than injury or illness incurred in the performance of duty.
Ordinary Disability Benefit	<p>50% of earnable salary at the date of disability</p> <p>Member may receive ordinary disability benefits for a maximum period of the lesser of 25% of member's actual service prior to disablement or 5 years.</p>
Surviving Spouse Annuity Eligibility	<p>Hired before June 13, 1997: Immediately eligible if married to member on date of member's death while in service or married to member on member's date of termination from service and remained married until member's death. Dissolution of marriage after retirement shall not divest the member's spouse of entitlement if marriage was in effect for at least 10 years on the date of retirement.</p> <p>Hired on or after June 13, 1997: Eligible after 3 years of service. Conditions for marriage described for members hired prior to June 13, 1997 apply.</p>
Surviving Spouse Benefit	<p>Hired before January 1, 2011: Retirement annuity earned at the time of death multiplied by a factor of 60% plus 1% for each year of member's total service, to a maximum of 85%. If hired after January 1, 1992, annuity is reduced by 0.25% for each full month spouse is younger than member to maximum reduction of 60%. Discount is reduced by 10% for each year marriage is in effect.</p> <p>Hired on or after January 1, 2011: 66 2/3% of retirement annuity earned at the time of death.</p>

PLAN PROVISIONS, CONTINUED

Minimum Surviving Spouse Annuity

Member with 10 years of service: greater of (a) \$500 per month plus \$25 per month for each year of service in excess of 10, not to exceed \$750 per month, or (b) 50% of the retirement annuity of member at time of death.

Member with less than 10 years of service: \$250 per month.

Children's Annuity Eligibility

Member parent dies in service or deceased parent was former member with at least 10 years of service. Child is unmarried and less than age 18 (23, if full-time student).

Children's Annuity Benefit

\$500 per month for each child if have living parent and \$1,000 per month for each child if neither parent is living to a maximum of \$5,000 per month.

Cost-of-Living Adjustments

Hired before January 1, 2011: Retirement annuity is increased on the anniversary of retirement by 3% of the monthly annuity payable at the time of increase.

Spouse annuity is increased on the earlier of the anniversary of the member's death or retirement (whichever occurs first) by 3% of the monthly annuity payable at the time of increase.

Hired on or after January 1, 2011: increase percentage is the lesser of 3% or $\frac{1}{2}$ the increase in CPI-U during the previous calendar year. Increase is based on the originally granted retirement or spouse's annuity.

PLAN PROVISIONS, CONTINUED

Member Contributions – retiree annuity

<u>Pay period:</u>	<u>Contribution percentage:</u>
Before January 1, 2013	7.5%
During calendar year 2013	8.5%
During calendar year 2014	9.5%
During calendar year 2015 and until fund is 90% funded	10.0%
After Fund is 90% funded	7.5%
Members hired on or after January 1, 2011 have member contributions of 7.5% of pay.	

Member Contributions – spouse annuity

<u>Pay period:</u>	<u>Contribution percentage:</u>
Before January 1, 2015	1.5%
During calendar year 2015 and until fund is 90% funded	2.0%
After Fund is 90% funded	1.5%
Members hired on or after January 1, 2011 contribute 1.5% of pay.	

Refund to Member upon Termination

Hired before January 1, 2011: Eligible for refund of all member contributions without interest if under age 55 (50 if hired before June 13, 1997); if age 60 with less than 20 years of service; or if 60 with less than 5 years of service. Upon receipt of refund, member forfeits rights to benefits from the Fund.

Hired on or after January 1, 2011: Eligible for refund of all member contributions without interest if under age 62; or if have less than 10 years of service on termination. Upon receipt of refund, member forfeits rights to benefits from the Fund.

Refund for Surviving Spouse's Annuity

Members unmarried at the time of retirement will receive a refund of contributions for spouse annuity with interest at 3% per year, compounded annually.

PLAN PROVISIONS, CONTINUED

Refund of Remaining Amounts	If upon death the total amount contributed by the member with 3% interest per year has not been paid to the member, the spouse or designated beneficiaries or estate receives a refund of the excess amount.
Required Tax Levy	Lesser of actuarially determined contribution and 4.19 multiplied by total member contributions for the two years prior.
Average Final Salary	<p>Hired before January 1, 2011: Highest average annual salary for any 52 consecutive bi-weekly pay periods within the last 10 years of service immediately preceding the date of retirement.</p> <p>Hired on or after January 1, 2011: Highest average annual salary for 96 consecutive months of service within last 120 months of service, limited to \$106,800 (in 2011, automatically increased by lesser of 3% or ½ the increase in CPI-U during the previous calendar year)</p>
Pensionable Salary	Salary paid to a Fund member for service to the District or to the Fund, including salary paid for vacation and sick leave and any amounts deferred under a deferred compensation plan established under the Code, but excluding the following: payment for unused vacation or sick leave, overtime pay, termination pay and any compensation in the form of benefits other than salary.
Pension Service	Any employment, excluding overtime or extra service for which salary is received.

Changes in Plan Provisions since the Prior Valuation

- None

HISTORY OF CHANGE IN UNFUNDED LIABILITY
(Actuarial Funding - Going Concern, Entry Age Normal Method)

Year	Salary Scale	Investment Returns ¹	Employer Contribution ²	Legislative Amendments
2009	\$ 2,554,058	\$ 67,692,897	\$ 35,218,424	\$ -
2010	(20,417,059)	49,969,954	46,822,864	-
2011	(25,334,699)	71,034,993	49,402,422	-
2012	(23,145,806)	58,584,984	31,300,739	-
2013	(6,368,436)	(48,963,802)	3,395,524	-
2014	(5,667,229)	(26,867,032)	16,960,113	-
2015	(3,201,181)	3,056,008	17,070,881	-
2016	(844,096)	(15,960,567)	9,554,045	-
2017	(11,576,111)	(27,925,002)	154,718	-
2018	(7,369,068)	40,260,410	540,397	-
	<u>\$ (101,369,627)</u>	<u>\$ 170,882,843</u>	<u>\$ 210,420,127</u>	<u>\$ -</u>

Year	Changes in Actuarial Assumptions	(see assumption reference key 3)	All Other Miscellaneous Experience	Total Increase (Decrease) in Unfunded Liability
2009	\$ -		\$ 15,455,286	\$ 120,920,665
2010	39,769,482	(m, r, t)	7,577,298	123,722,539
2011	-		23,734,658	118,837,374
2012	7,171,009	(d)	(18,064,759)	55,846,167
2013			(1,423,368)	(53,360,082)
2014	32,494,969	(i, m, r, s, t, d)	9,822,832	26,743,653
2015	-		12,971,818	29,897,526
2016	-		15,131,156	7,880,538
2017			10,111,004	(29,235,391)
2018	37,438,859	(i, m, r, s, t)	18,920,092	89,790,690
	<u>\$ 116,874,319</u>		<u>\$ 94,236,017</u>	<u>\$ 491,043,679</u>

¹ Represents investment income deficiency (excess) over expected returns.

² Represents employer contributions deficiency (excess) from normal cost plus interest.

³ Key to changes in assumptions:

i = interest rate

r = retirement rates

m = mortality

p = pension for survivors

d=disability assumption

s = salary

rb = reciprocal benefits

t = termination rates

The table above illustrates that over the last 10 years, the unfunded liability has increased by \$491.0 million. Of this increase, \$170.9 million has been due to investment returns being lower than assumed and \$210.4 million has been due to employer contributions that were less than normal cost plus interest on the UAAL. The increases in the unfunded liability were partially offset by a \$101.4 million reduction for overall salary increases being less than assumed over the last ten years.

During the year 2018 the unfunded liability increased by \$89.8 million due to a combination of investment returns lower than assumed and the change in actuarial assumptions.

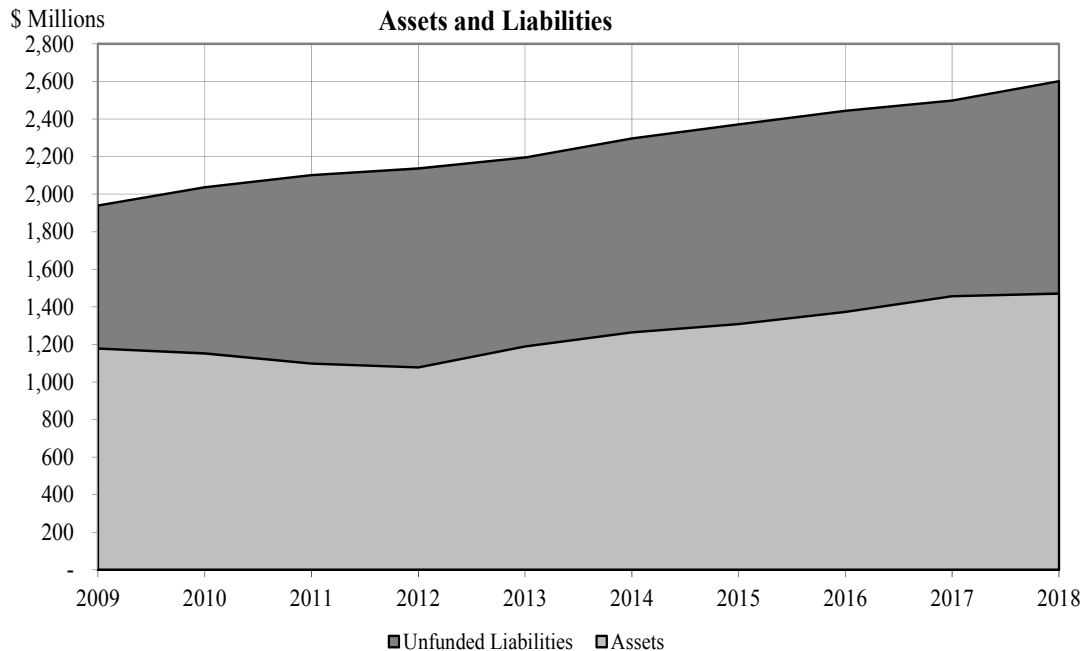
ACTUARIAL ACCRUED AND UNFUNDED LIABILITIES
(Actuarial Funding - Going Concern, Entry Age Normal Method)

Year End	Total Actuarial Accrued Liability (AAL)	Actuarial Value of Assets ¹	Funded Ratio	Unfunded AAL (UAAL)	Active Pensionable Payroll ³	UAAL as a % of Payroll
2009	\$1,939,172,047	\$1,177,810,068	60.7%	\$761,361,979	\$176,915,399	430.4%
2010 ²	2,036,679,763	1,151,595,245	56.5%	885,084,518	174,485,734	507.3%
2011	2,101,319,098	1,097,397,206	52.2%	1,003,921,892	164,275,424	611.1%
2012 ²	2,136,508,223	1,076,740,164	50.4%	1,059,768,059	163,816,934	646.9%
2013	2,194,911,693	1,188,503,716	54.1%	1,006,407,977	169,375,857	594.2%
2014 ²	2,296,438,698	1,263,287,068	55.0%	1,033,151,630	176,183,941	586.4%
2015	2,371,031,195	1,307,982,039	55.2%	1,063,049,156	177,792,309	597.9%
2016	2,443,291,644	1,372,361,950	56.2%	1,070,929,694	182,640,163	586.4%
2017	2,497,890,179	1,456,195,876	58.3%	1,041,694,303	184,385,188	565.0%
2018 ²	2,601,163,632	1,470,308,639	56.5%	1,130,854,993	187,849,708	602.0%

¹ Assets are stated at a 5-year smoothed market value.

² Change in actuarial assumptions.

³ Payroll is annualized based on actual payroll paid to active members on the last paydate of the year.



The table and graph above illustrate the growth of the unfunded liability over the last ten years. The unfunded AAL (UAAL) as a percentage of active member payroll, the last column of the table above, provides a helpful index which shows the smaller the ratio, the stronger the Fund. Observation of the trend of this index will give an indication of whether the Fund is becoming financially stronger or weaker.

ACTUARIAL ACCRUED LIABILITY PRIORITIZED SOLVENCY TEST

The prioritized solvency test is another means of checking a system's progress under its funding program. It shows the percentage of future benefit promises that are covered by the current Actuarial Value of Assets. In a short-term solvency test the plan's present assets (cash and investments) are compared with actuarial accrued liabilities classified into the following categories:

1. liability for active member contributions on deposit;
2. liability for future benefits to present retired lives; and
3. liability for the employer financed portion of service already rendered by active members.

If a system has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (i.e. the present value of liability 1) and the liabilities for future benefits to present retired lives (i.e. the present value of liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for the employer financed portion of benefits for present active members (i.e. the present value of liability 3) will normally be partially covered by the remainder of present assets. In addition, if a system has been using a level cost financing, the funded portion of the present value of liability 3 will increase over time. The Fund has not received employer contributions according to level cost financing, but rather has been financed in accordance with Illinois statutes.

Aggregate Accrued Liabilities for							
	(1)	(2)	(3)		(1)	(2)	(3)
Valuation Date	Active & Inactive Member Contributions	Retirees and Beneficiaries	Active & Inactive Members (ER financed portion)	Actuarial Asset Values ^a	Portion (%) of Accrued Liabilities Covered by Assets		
12/31							
2009	\$202,119,201	\$1,200,102,267	\$536,950,579	\$1,177,810,068	100	81	-
2010 ^b	206,933,701	1,313,366,530	516,379,532	1,151,595,245	100	72	-
2011	199,015,897	1,433,294,765	469,008,436	1,097,397,206	100	63	-
2012 ^b	213,323,414	1,431,829,221	491,355,588	1,076,740,164	100	60	-
2013	223,354,127	1,463,856,177	507,701,389	1,188,503,716	100	66	-
2014 ^b	231,430,077	1,541,326,692	422,154,924	1,263,287,068	100	67	-
2015	236,967,954	1,616,195,435	517,867,806	1,307,982,039	100	66	-
2016	244,239,334	1,676,732,070	522,320,240	1,372,361,950	100	67	-
2017	247,730,731	1,745,598,298	504,561,150	1,456,195,876	100	69	-
2018 ^b	251,845,144	1,843,563,888	505,754,600	1,470,308,639	100	66	-

^a Assets are at a 5-year smoothed market value. Investment income in excess or shortfall of the assumed rate of return (7.75% through the 2013 valuation date; 7.50% from 2014 through 2017; 7.25% beginning with the 2018 valuation) is smoothed over a 5-year period with 20% of a year's excess or shortfall being recognized each year beginning with the current year.

^b Change in actuarial assumptions.

HISTORY OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM BENEFIT PAYROLL

Employee Annuitants (Male and Female)

Year	Added to Payroll		Removed from Payroll		Annual Payroll		Average Annuity Benefits	Increase to Avg Benefits
	No.	Annuity Benefits ¹	No.	Annuity Benefits	No.	Annuity Benefits ²		
2009	47	\$4,893,827	56	\$1,954,139	1,596	\$87,837,917	\$55,036	4.0
2010	72	6,730,274	65	2,721,715	1,603	91,846,476	57,297	4.1
2011	146	12,073,715	66	2,827,418	1,683	101,092,773	60,067	4.8
2012	60	6,027,239	62	3,098,526	1,681	104,021,486	61,881	3.0
2013	75	6,497,171	52	2,345,133	1,704	108,173,524	63,482	2.6
2014	80	7,583,277	55	2,677,032	1,729	113,079,769	65,402	3.0
2015	101	9,640,885	70	3,828,434	1,760	118,892,220	67,552	3.3
2016	87	8,688,540	68	4,089,312	1,779	123,491,448	69,416	2.8
2017	98	14,254,728	68	3,780,260	1,809	129,366,688	71,513	5.9
2018	99	6,049,960	60	3,769,202	1,848	135,435,622	73,288	5.6

Surviving Spouse Annuitants (Male and Female)

Year	Added to Payroll		Removed from Payroll		Annual Payroll		Average Annuity Benefits	Increase to Avg Benefits
	No.	Annuity Benefits ¹	No.	Annuity Benefits	No.	Annuity Benefits ²		
2009	29	\$1,469,060	38	\$534,504	638	\$16,062,705	\$25,177	7.7
2010	28	1,433,075	34	602,769	632	16,893,011	26,729	6.2
2011	34	1,528,506	38	460,244	628	17,961,273	28,601	7.0
2012	38	1,969,114	47	858,542	619	19,071,845	30,811	7.7
2013	29	1,718,098	43	1,021,552	605	19,768,391	32,675	6.1
2014	28	1,846,441	40	931,782	593	20,683,050	34,879	6.7
2015	34	2,313,674	47	1,160,738	580	21,835,986	37,648	7.9
2016	42	3,096,415	32	1,162,089	590	23,770,312	40,289	7.0
2017	25	1,991,463	39	1,146,717	576	24,615,058	42,734	6.1
2018	30	1,798,261	35	1,046,607	571	25,965,116	45,473	6.4

¹ Includes 3% annual Cost of Living Adjustments (COLAs) for employee annuitants and for surviving spouse annuitants.

² Annual payroll is an annualized amount and represents twelve times the December 1st paid annuities.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Year End	Members in Service	% Change	Annual Payroll ¹	% Change	Average Salary	% Change	Actuarial Salary % Increase ³	CPI Chicago ²
2009	2,082	1.5	176,915,399	5.4	84,974	3.9	5.0	(1.2)
2010	2,024	(2.8)	174,485,734	(1.4)	86,208	1.5	5.0	1.4
2011	1,888	(6.7)	164,275,424	(5.9)	87,010	0.9	5.0	2.7
2012	1,856	(1.7)	163,816,934	(0.3)	88,263	1.4	5.0	1.5
2013	1,858	0.1	169,375,857	3.4	91,160	3.3	5.0	1.1
2014	1,873	0.8	176,183,941	4.0	94,065	3.2	Range	1.7
2015	1,846	(1.4)	177,792,309	0.9	96,312	2.4	Range	(0.3)
2016	1,843	(0.2)	182,640,163	2.7	99,099	2.9	Range	0.7
2017	1,835	(0.6)	184,385,188	3.7	100,482	4.3	Range	1.9
2018	1,832	(0.6)	187,849,708	2.9	102,538	3.5	Range	1.8

¹ Payroll is annualized based on actual pensionable salary paid to active members on the last paydate of the year.

² Represents average annual change in Consumer Price Index (CPI-U All Urban Consumers for Chicago-Gary-Kenosha) per the U.S. Bureau of Labor Statistics through 2016. The Index was renamed to CPI-U All Urban Consumers for Chicago-Naperville-Elgin, IL-IN-WI in 2017.

³ As of the December 31, 2014 valuation, the salary increase assumption was updated from a flat 5.0% to a table of rates from 3.5%-7.0% based on years of service.

HISTORY OF RECOMMENDED EMPLOYER MULTIPLES AND TAXES LEVIED

<u>Year of Tax Levy</u>	<u>Statutory Requirement</u> ²	<u>Statutory Actuarial Multiple</u> ³	<u>Maximum Statutory Multiple</u> ⁴	<u>Recommended Employer Multiple</u> ⁵	<u>Total Gross Tax Levy</u>
2011	2.19	N/A	N/A	4.42	34,362,000
2012 ¹	2.19	N/A	N/A	2.82 ⁶	34,761,000
2013	4.19	4.55	4.19	2.98 ⁶	62,984,000
2014 ¹	4.19	4.38	4.19	3.94 ⁶	61,654,000
2015	3.71	3.71	4.19	3.71	70,772,000
2016	3.40	3.40	4.19	3.40	79,505,000
2017	3.07	3.07	4.19	3.07	89,604,000
2018	3.12	3.12	4.19	3.12	87,281,000
2019	3.56	3.56	4.19	3.56	87,319,000

¹ Change in actuarial assumptions.

² As of the 2013 tax levy, per PA 97-0894 the statutory requirement is the lesser of the Statutory Actuarial Multiple or the Maximum Statutory Multiple. Prior to that the statutory requirement was 2.19.

³ As of the 2013 tax levy, a Statutory Actuarial Multiple is calculated based on an amortization of the UAAL for the period until the year 2050, which for 2013 is 38 years, for 2014 is 37 years, for 2015 is 36 years, for 2016 is 35, for 2017 is 34 years, and for 2018 is 33 years.

⁴ As of the 2013 tax levy, the tax levy is subject to a maximum statutory multiple of 4.19.

⁵ Through the 2012 tax levy the Recommended Employer Multiple represents the multiple needed to fully fund the GASB ARC which was calculated by amortizing the UAAL over 30 years.

⁶ In 2012, 2013 and 2014 the Fund received special contributions of \$30.0 million, \$30.0 million and \$12.0 million, respectively, from the District. These contributions effectively reduced the tax multiple needed to fully fund the ARC from 4.71 to 2.82 in 2012, from 4.97 to 2.98 in 2013, and from 4.75 to 3.94 in 2014.

STATISTICAL SECTION

Membership Information:

Participant Statistics

Employee Age and Service Distribution (with graph)

Annuitant and Beneficiary Information:

Schedule of Annuitants by Type of Benefit

History of Beneficiaries by Type of Benefit

History of Annuity Payments

Annuitants Classified by Age and Gender (with graph)

History of Average Annuities at Retirement

Schedule of Average Benefit Payments at Retirement

Financial Information (last ten years):

Additions by Source and Deductions by Type

Employee and Employer Contributions

Benefit Expenses by Type

Comparative Statement of Changes in Fiduciary Net Position

PARTICIPANT STATISTICS
Year 2018

Changes in Active Participants	Number at Beginning of Year	Additions	Decreases	Number at Year End
Male	1,363	82	91	1,354
Female	472	41	35	478
Total Active	1,835	123	126	1,832

Changes in Annuitants and Beneficiaries

Employee Annuitants	1,809	99	60	1,848
Spouse Annuitants	576	30	35	571
Child Annuities	23	4	3	24
Total Annuitants	2,408	133	98	2,443

**Percentage of Active Participants to
Annuitants and Beneficiaries**

76.2%

75.0%

The above schedule provides details about the changes in the number and gender of active participants, as well as the changes in the number and type of annuitants for the year. A percentage of active participants to annuitants less than 100% indicates that there are more retirees/payees than working members of the Fund.

EMPLOYEE AGE AND SERVICE DISTRIBUTION
ACTIVE MEMBER COUNT & PENSIONABLE SALARIES - BY AGE AND SERVICE
Male and Female Combined

12/31/18



AGE	YEARS OF SERVICE									Total
	< 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 +	
< 25	1	9								10
	\$56,014	\$67,036								\$65,934
25-29	10	39	9	1						59
	60,776	69,643	\$91,192	\$84,386						71,677
30-34	11	53	32	15						111
	61,836	75,001	88,205	108,815						82,071
35-39	8	66	48	61	12					195
	75,527	84,821	97,116	108,122	\$121,591					97,018
40-44	8	55	31	67	37	15				213
	90,797	86,718	93,807	107,971	112,088	\$126,671				101,809
45-49	6	40	37	56	48	57	18	2		264
	79,992	91,926	96,811	101,669	116,195	118,407	\$126,356	\$113,854		107,050
50-54	5	52	35	51	60	40	61	13		317
	70,036	88,078	95,192	97,847	103,885	123,161	127,189	126,700		106,679
55-59		41	26	62	58	48	78	21	3	337
		82,214	100,704	97,573	117,522	120,454	119,076	129,841	\$138,005	109,986
60-64	2	18	21	40	40	37	41	15	2	216
	76,785	89,218	93,238	92,323	104,305	118,586	119,913	113,894	155,938	106,051
65-69		8	5	16	22	13	14	5	2	85
		76,309	80,802	92,757	103,065	119,644	104,033	132,167	98,699	101,600
70 +				2	7	10	2	3	1	25
				118,100	87,954	110,728	89,272	112,922	84,386	102,434
Total										
Number	51	381	244	371	284	220	214	59	8	1,832
Average										
Salary	\$71,731	\$82,694	\$94,700	\$101,597	\$110,170	\$120,036	\$120,899	\$123,889	\$125,958	\$102,538

The above table provides detail about the number of active members categorized in 5-year bands of age and years of service. The above chart illustrates that the largest age segment of active members is 55-59 years of age with average pensionable salary of \$109,974. By years of service, the largest segment of active members has 1 - 4 years of service with an average pensionable salary of \$82,903.

**SCHEDULE OF ANNUITANTS BY TYPE OF BENEFIT
as of December 31, 2018**

Amount of Monthly Benefit	Number of Beneficiaries	Type of Benefit *					
		Retirees		Survivors		Children	
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
\$1 - \$500	92	36	2	20	9	1	24
501 - 1,000	68	35	1	23	9		
1,001 - 2,000	222	103	1	72	46		
2,001 - 3,000	223	140		58	25		
3,001 - 4,000	250	185		52	13		
4,001 - 5,000	286	216		56	14		
5,001 - 6,000	355	281		67	7		
6,001 - 7,000	268	227		36	5		
7,001 - 8,000	213	192		18	3		
8,001 - 9,000	145	134		11	0		
9,001 - 10,000	95	85		7	3		
over 10,000	226	210		15	1		
Totals	2,443	1,844	4	435	135	1	24

* Type of Benefit

- | | |
|--|--|
| 1. Normal Retirement for Age and Service | 4. Survivor Benefit - Death in Service |
| 2. Disability Annuity | 5. Survivor Benefit – Fixed Term Annuity |
| 3. Survivor Benefit - Normal | 6. Children |

The above schedule provides detail about the number, amount, and type of monthly benefits paid by the Fund in the last pay period of the year.

**HISTORY OF BENEFICIARIES BY TYPE OF BENEFIT
at Year End**

Year	Employee Annuitants ¹	Spouse Annuitants ^{1,2}	Child Annuitants	Total Annuitants	Ordinary Disability	Duty Disability
2009	1,596	638	18	2,252	17	23
2010	1,603	632	13	2,248	20	23
2011	1,683	628	17	2,328	18	22
2012	1,681	619	17	2,317	20	23
2013	1,704	605	20	2,329	18	17
2014	1,729	593	21	2,343	16	16
2015	1,760	580	19	2,359	16	14
2016	1,779	590	25	2,394	12	11
2017	1,809	576	23	2,408	23	7
2018	1,848	571	24	2,443	19	13

¹ Includes reciprocal annuitants

² Includes reversionary annuitants

The above schedule provides historical perspective about the number and types of beneficiaries paid by the Fund in the last pay period of the year.

**HISTORY OF ANNUITY PAYMENTS
at Year End**

Year	Employee Annuitants (Male and Female)		Spouse Annuitants (Male and Female)	
	Number of Annuitants	Annuity Payments ¹	Number of Annuitants	Annuity Payments ¹
2009	1,596	\$ 87,837,917	638	\$ 16,062,705
2010	1,603	91,846,476	632	16,893,011
2011	1,683	101,092,773	628	17,961,273
2012	1,681	104,021,486	619	19,071,845
2013	1,704	108,173,524	605	19,768,391
2014	1,729	113,079,769	593	20,683,050
2015	1,760	118,892,219	580	21,835,988
2016	1,779	123,491,448	590	23,770,312
2017	1,809	129,366,689	576	24,615,058
2018	1,848	135,435,625	571	25,965,116

¹ Payments are annualized, computed as twelve times the December 1st annuity payment.

The above schedule provides historical perspective about the number, type, and annual amount of annuity payments made by the Fund.

**ANNUITANTS CLASSIFIED BY AGE AND GENDER
as of December 31, 2018**

Retirement Annuities

Age	Number of Males	Annual Payments ¹	Average Annual Payments	Number of Females	Annual Payments ¹	Average Annual Payments
under 45	-	\$ -	\$ -	-	\$ -	\$ -
45 - 49	-	-	-	-	-	-
50 - 54	16	1,253,578	78,349	17	930,886	54,758
55 - 59	89	6,902,663	77,558	53	3,706,857	69,941
60 - 64	195	14,825,968	76,031	61	3,893,773	63,832
65 - 69	245	18,937,428	77,296	86	4,853,898	56,441
70 - 74	326	27,618,875	84,720	94	5,705,120	60,693
75 - 79	237	18,357,500	77,458	56	2,735,478	48,848
80 - 84	155	11,793,032	76,084	38	1,794,207	47,216
85 - 89	102	7,703,250	75,522	18	849,439	47,191
90 & up	51	3,323,877	65,174	9	249,796	27,755
Total	1,416	\$ 110,716,171	\$ 78,189	432	\$ 24,719,454	\$ 57,221
Average Age	72.5			72.1		

Spouse Annuities

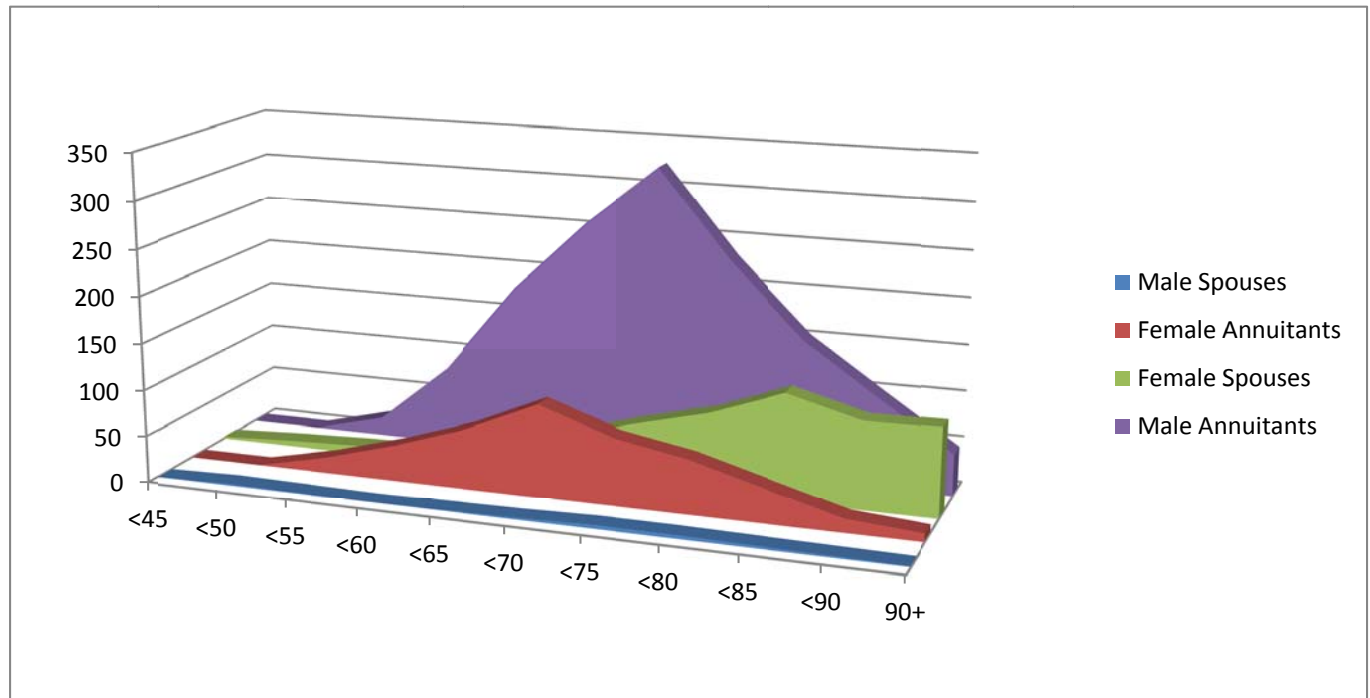
Age	Number of Males	Annual Payments ¹	Average Annual Payments	Number of Females	Annual Payments ¹	Average Annual Payments
under 45	-	\$ -	\$ -	1	\$ 49,510	\$ 49,510
45 - 49	0	-	-	6	303,214	50,536
50 - 54	2	13,995	6,998	11	453,155	41,196
55 - 59	1	4,501	4,501	12	456,899	38,075
60 - 64	1	15,674	15,674	26	1,356,539	52,175
65 - 69	1	97,779	97,779	43	2,352,487	54,709
70 - 74	4	184,160	46,040	65	3,812,259	58,650
75 - 79	5	160,746	32,149	89	4,572,840	51,380
80 - 84	4	87,422	21,856	117	5,750,554	49,150
85 - 89	1	16,676	16,676	86	3,627,070	42,175
90 & up	1	61,679	61,679	95	2,587,957	27,242
Total	20	\$ 642,632	\$ 32,132	551	\$ 25,322,484	\$ 45,957
Average Age	73.6			79.6		

¹ Payments are annualized, computed as twelve times the December 1st annuity payment.

The above schedules provide detail about the age, gender and average annual amounts paid to annuitants by the Fund in the current year. The age and gender information above is graphically represented on the following page.

ANNUITANTS BY AGE AND GENDER

(Reflects the data on the previous page)



HISTORY OF AVERAGE ANNUITIES AT RETIREMENT

Retirement Year	Number of Retirees ¹	Average Retirement Age ²	Average Years of MWRDGC Service ²	Average Monthly Annuity ²
2009	47	59.5	23.16	4,154
2010	72	61.4	25.49	4,946
2011	146	62.7	27.35	5,285
2012	60	61.7	21.48	4,264
2013	75	60.7	21.07	3,836
2014	80	61.7	23.28	4,661
2015	101	61.4	24.11	5,139
2016	87	62.6	22.88	4,889
2017	98	59.6	24.32	5,333
2018	99	60.5	24.06	5,087

¹Data from Actuary

²Data calculated by Fund staff

The above schedule provides summary information about the changes in the number, age, service and monthly pension benefit of the Fund's retirees from year to year.

SCHEDULE OF AVERAGE BENEFIT PAYMENTS AT RETIREMENT¹

	Years of Credited Service							Total
	0-5	5-10	10-15	15-20	20-25	25-30	30+	
Period 1/1/09 to 12/31/09								
Average Pension	\$374	\$978	\$2,002	\$2,693	\$4,245	\$5,957	\$5,678	\$4,154
Average Final Average Salary	\$5,000	\$5,772	\$6,453	\$5,827	\$7,400	\$7,915	\$7,242	\$6,972
Number of Retired Members	2	6	2	6	8	14	9	47
Period 1/1/10 to 12/31/10								
Average Pension	-	\$789	\$1,703	\$2,995	\$3,704	\$5,650	\$7,822	\$4,946
Average Final Average Salary	-	\$5,124	\$5,671	\$6,793	\$6,718	\$7,941	\$9,883	\$7,780
Number of Retired Members	-	2	11	7	16	12	24	72
Period 1/1/11 to 12/31/11								
Average Pension	\$618	\$1,124	\$2,612	\$3,490	\$4,524	\$5,406	\$6,945	\$5,285
Average Final Average Salary	\$6,879	\$5,475	\$7,786	\$7,288	\$7,394	\$7,367	\$8,774	\$7,898
Number of Retired Members	2	3	10	14	32	28	57	146
Period 1/1/12 to 12/31/12								
Average Pension	\$632	\$1,040	\$2,090	\$3,238	\$5,511	\$5,984	\$5,531	\$4,264
Average Final Average Salary	\$7,169	\$6,670	\$7,403	\$7,671	\$9,437	\$8,466	\$7,017	\$8,006
Number of Retired Members	4	4	6	10	14	12	10	60
Period 1/1/13 to 12/31/13								
Average Pension	\$273	\$2,077	\$2,210	\$2,863	\$3,586	\$6,208	\$5,255	\$3,836
Average Final Average Salary	\$6,130	\$9,343	\$7,585	\$7,024	\$6,782	\$8,698	\$6,677	\$7,513
Number of Retired Members	3	3	13	12	19	19	6	75
Period 1/1/14 to 12/31/14								
Average Pension	\$500	\$868	\$1,784	\$3,018	\$4,560	\$6,287	\$6,493	\$4,661
Average Final Average Salary	\$8,176	\$5,588	\$6,145	\$7,522	\$7,882	\$8,332	\$8,262	\$7,788
Number of Retired Members	2	2	9	11	19	29	8	80
Period 1/1/15 to 12/31/15								
Average Pension	\$406	\$1,090	\$2,339	\$2,949	\$4,806	\$6,321	\$7,541	\$5,139
Average Final Average Salary	\$7,361	\$6,460	\$8,489	\$7,986	\$8,184	\$8,738	\$9,664	\$8,560
Number of Retired Members	2	4	10	14	11	46	14	101
Period 1/1/16 to 12/31/16								
Average Pension	-	\$1,542	\$1,841	\$2,800	\$5,034	\$6,524	\$7,112	\$4,889
Average Final Average Salary	-	\$7,889	\$7,263	\$7,308	\$8,800	\$9,030	\$9,316	\$8,499
Number of Retired Members	-	8	8	13	15	33	10	87
Period 1/1/17 to 12/31/17								
Average Pension	\$150	\$1,623	\$1,925	\$2,930	\$3,967	\$7,014	\$7,694	\$5,333
Average Final Average Salary	\$6,249	\$8,142	\$7,544	\$7,487	\$7,563	\$9,671	\$9,952	\$8,739
Number of Retired Members	2	1	8	13	19	46	9	98
Period 1/1/18 to 12/31/18								
Average Pension	\$0	\$1,336	\$1,951	\$3,145	\$4,422	\$6,635	\$6,831	\$5,087
Average Final Average Salary	\$0	\$7,215	\$7,696	\$8,347	\$8,750	\$9,130	\$8,911	\$8,636
Number of Retired Members	-	4	16	9	14	29	27	99

¹ Average Monthly Benefit amount is rounded to the nearest dollar and does not include Survivor Annuities.

Years of Credited Service does not include reciprocal service. Calculated by Fund staff.

The above schedule provides historical perspective and detail about average initial pensions for retirees categorized by years of service.

ADDITIONS BY SOURCE AND DEDUCTIONS BY TYPE

Last Ten Years

(in Thousands of Dollars)

ADDITIONS BY SOURCE

Year Ending December 31	Employee Contributions	Employer Contributions	as a % of Covered Payroll	Investment Income ¹	Total Additions
2009	\$15,690	\$32,154	18.2	\$194,076	\$241,920
2010	15,872	29,918	17.1	142,915	188,705
2011	15,032	37,379	22.8	(1,376)	51,035
2012	14,714	65,098	39.7	116,325	196,137
2013	16,891	92,944	54.9	226,102	335,937
2014	18,975	73,906	41.9	81,605	174,486
2015	21,385	71,041	40.0	(1,399)	91,027
2016	20,831	80,260	43.9	113,693	214,784
2017	20,840	89,858	48.7	194,825	305,523
2018	21,046	87,167	47.3	(102,993)	5,220

DEDUCTIONS BY TYPE

Year Ending December 31	Benefits	Refunds	Administrative Expenses	Total Deductions	Change in Net Position
2009	\$103,404	\$1,175	\$1,319	\$105,898	\$136,022
2010	108,219	1,380	1,277	110,876	77,829
2011	118,102	2,711	1,399	122,212	(71,177)
2012	122,714	1,195	1,297	125,206	70,931
2013	127,206	1,129	1,391	129,726	206,211
2014	132,913	984	1,407	135,304	39,182
2015	139,161	1,348	1,660	142,169	(51,142)
2016	145,325	2,011	1,503	148,839	65,945
2017	152,153	2,560	1,614	156,327	149,196
2018	159,561	1,762	1,685	163,008	(157,788)

¹ Investment Income is net of investment expenses, and includes miscellaneous income and securities lending income.

The schedules above provide historical financial information and detail about the types of contributions received by the Fund.

Last Ten Years

(in Thousands of Dollars)

EMPLOYEE CONTRIBUTIONS

Year	Regular Contributions ¹	Optional Plan Contributions ²	Prior Service Payments ³	Commissioners' Alternative Plan ⁴	Total
2009	\$15,413	\$0	\$261	\$16	\$15,690
2010	15,581	-	276	15	15,872
2011	14,733	-	286	13	15,032
2012	14,377	-	326	11	14,714
2013	16,422	-	454	15	16,891
2014	18,575	-	385	15	18,975
2015	21,315	-	54	16	21,385
2016	20,768	-	13	50	20,831
2017	20,824	-	1	15	20,840
2018	20,949	-	70	14	21,033

EMPLOYER CONTRIBUTIONS

Year	Regular Contributions ⁵	Special Contributions	Total
2009	\$32,154	-	\$32,154
2010	29,918	-	29,918
2011	37,379	-	37,379
2012	35,098	\$30,000	65,098
2013	62,944	30,000	92,944
2014	61,906	12,000	73,906
2015	71,041	-	71,041
2016	80,260	-	80,260
2017	89,858	-	89,858
2018	87,167	-	87,167

¹ Includes employee contributions towards employee and surviving spouse annuities, and cost of living increases.

² Optional Plan Contributions were towards an enhanced benefit plan that expired in 2007.

³ Prior Service Payments include leave of absence, refund repayment and military service.

⁴ Contributions by elected Commissioners to an enhanced benefit plan.

⁵ Tax levy based on two years prior employee contributions per Statutes.

The schedules above provide historical financial information and detail about the types of contributions received by the Fund.

BENEFIT EXPENSES BY TYPE (in Thousands of Dollars)

<u>Year</u>	<u>Employee Annuities</u>	<u>Spouse Annuities</u>	<u>Child Annuities</u> ¹	<u>Ordinary Disabilities</u>	<u>Duty Disabilities</u>	<u>Total Benefits</u>
2009	\$86,582	\$15,690	\$120	\$745	\$268	\$103,405
2010	90,447	16,613	104	813	242	108,219
2011	99,601	17,523	112	650	216	118,102
2012	103,043	18,675	114	678	204	122,714
2013	106,624	19,432	114	822	214	127,206
2014	111,352	20,444	157	821	140	132,914
2015	116,885	21,279	116	722	159	139,161
2016	121,730	22,920	153	412	110	145,325
2017	127,099	24,203	142	632	77	152,153
2018	133,184	25,264	143	856	114	159,561

PERCENT OF TOTAL BENEFITS

<u>Year</u>	<u>Employee Annuities</u>	<u>Spouse Annuities</u>	<u>Child Annuities</u>	<u>Ordinary Disabilities</u>	<u>Duty Disabilities</u>
2009	83.73 %	15.17 %	0.12 %	0.72 %	0.26 %
2010	83.58	15.35	0.10	0.75	0.22
2011	84.33	14.84	0.09	0.55	0.18
2012	83.97	15.22	0.09	0.55	0.17
2013	83.82	15.28	0.09	0.65	0.17
2014	83.78	15.38	0.12	0.62	0.11
2015	83.99	15.29	0.08	0.52	0.11
2016	83.76	15.77	0.11	0.28	0.08
2017	83.53	15.91	0.09	0.42	0.05
2018	83.47	15.83	0.09	0.54	0.07

PERCENT CHANGE FROM YEAR TO YEAR

<u>Year</u>	<u>Employee Annuities</u>	<u>Spouse Annuities</u>	<u>Child Annuities</u>	<u>Ordinary Disabilities</u>	<u>Duty Disabilities</u>	<u>Total Benefits</u>
2009	3.14 %	5.06 %	-2.44 %	-11.94 %	22.94 %	3.33 %
2010	4.46	5.88	-13.33	9.13	-9.70	4.66
2011	10.12	5.48	7.69	-20.05	-10.74	9.13
2012	3.46	6.57	1.79	4.31	-5.56	3.91
2013	3.48	4.05	0.00	21.24	4.90	3.66
2014	4.43	5.21	37.72	-0.12	-34.58	4.49
2015	4.97	4.08	-26.11	-12.06	13.57	4.70
2016	4.15	7.71	31.90	-42.94	-30.82	4.43
2017	4.41	5.60	-7.19	53.40	-30.00	4.70
2018	4.79	4.38	0.70	35.44	48.05	4.87

¹ Child Annuities include children age 18-23 who are enrolled as a full time students.

The schedules above provide historical information about the types of benefits, the relative dollar amounts, as well as the total and relative growth or decline in the amount of benefits paid by the Fund.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION¹
Last 10 Years

Additions:	2018	2017	2016	2015	2014
Employer contributions	\$ 87,167,339	\$ 89,858,224	\$ 80,259,713	\$ 71,041,361	\$ 73,906,168
Employee contributions	21,032,601	20,839,829	20,830,779	21,385,212	18,974,954
Total contributions	108,199,940	110,698,053	101,090,492	92,426,573	92,881,122
Investment income					
Net appreciation (depreciation) in					
fair value of investments	(122,365,473)	177,341,970	92,762,607	(20,894,824)	63,589,719
Interest on fixed income investmen	8,306,779	7,679,730	11,347,002	10,369,440	8,933,924
Interest on short-term investments	11,211	20,697	23,036	2,589	2,008
Dividend income	15,758,513	14,054,030	13,633,175	14,072,578	14,539,290
Total investment income (loss)	(98,288,970)	199,096,427	117,765,820	3,549,783	87,064,941
Less investment expenses	5,024,180	(4,620,753)	(4,613,683)	(5,542,836)	(5,899,566)
Investment income (loss) net of expenses	(93,264,790)	194,475,674	113,152,137	(1,993,053)	81,165,375
Security lending activities					
Securities lending income	555,840	448,326	265,142	98,280	64,302
Broker rebates	(164,155)	(13,332)	294,951	645,265	505,896
Bank fees	(84,597)	(89,209)	(126,358)	(178,331)	(135,007)
Net income from securities lending	307,088	345,785	433,735	565,214	435,191
Other	15,415	3,100	107,175	28,817	4,460
Total additions	15,257,653	305,522,612	214,783,539	91,027,551	174,486,148
Deductions:					
Annuities and benefits					
Employee annuitants	133,184,182	127,098,834	121,729,901	116,884,577	111,351,904
Surviving spouse annuitants	25,264,246	24,203,400	22,919,525	21,279,363	20,443,693
Child annuitants	143,000	142,000	153,500	116,000	157,500
Ordinary disability benefits	856,301	631,401	412,706	721,720	820,626
Duty disability benefits	113,318	77,279	109,753	159,251	139,779
Total annuities and benefits	159,561,047	152,152,914	145,325,385	139,160,911	132,913,502
Refunds of employee contributions	1,762,475	2,560,129	2,010,630	1,348,845	984,346
Administrative expenses	1,685,479	1,613,976	1,502,639	1,659,917	1,406,507
Total deductions	163,009,001	156,327,019	148,838,654	142,169,673	135,304,355
Net increase (decrease)	(147,751,348)	149,195,593	65,944,885	(51,142,122)	39,181,793
Net position held in trust for pension benefits					
Beginning of year	1,501,793,976	1,352,598,383	1,286,653,498	1,337,795,620	1,298,613,827
End of year	\$ 1,354,042,628	\$ 1,501,793,976	\$ 1,352,598,383	\$ 1,286,653,498	\$ 1,337,795,620

¹ Prior to 2012 the financial statement that showed additions and deductions was entitled "Statement of Changes in Plan Net Assets".

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION (Continued)

Last 10 Years

Additions:	2013	2012	2011	2010	2009
Employer contributions	\$ 92,944,381	\$ 65,097,835	\$ 37,379,137	\$ 29,917,793	\$ 32,153,874
Employee contributions	16,890,798	14,714,496	15,031,961	15,872,560	15,690,322
Total contributions	109,835,179	79,812,331	52,411,098	45,790,353	47,844,196
Investment income					
Net appreciation (depreciation) in					
fair value of investments	211,132,376	103,332,085	(9,430,774)	136,082,191	187,518,451
Interest on fixed income investments	7,044,688	3,064,231	-	-	1,208,618
Interest on short-term investments	2,295	10,218	7,754	24,608	77,596
Dividend income	12,836,171	13,885,983	12,102,449	10,162,335	7,839,846
Total investment income (loss)	231,015,530	120,292,517	2,679,429	146,269,134	196,644,511
Less investment expenses	(5,465,211)	(4,755,254)	(4,389,141)	(3,607,447)	(2,576,926)
Investment income (loss) net of expenses	225,550,319	115,537,263	(1,709,712)	142,661,687	194,067,585
Security lending activities					
Securities lending income	89,443	131,240	93,329	90,389	-
Broker rebates	630,124	851,467	275,018	181,683	-
Bank fees	(174,283)	(233,885)	(77,124)	(53,512)	-
Net income from securities lending	545,284	748,822	291,223	218,560	-
Other	6,833	40,046	42,126	34,214	8,379
Total additions	335,937,615	196,138,462	51,034,735	188,704,814	241,920,160
Deductions:					
Annuities and benefits					
Employee annuitants	106,623,945	103,043,445	99,600,881	90,446,956	86,581,378
Surviving spouse annuitants	19,431,705	18,674,499	17,523,246	16,613,378	15,689,413
Child annuitants	114,000	114,000	112,012	103,505	120,290
Ordinary disability benefits	821,914	677,523	650,220	813,505	745,363
Duty disability benefits	214,417	204,441	216,010	241,842	268,086
Total annuities and benefits	127,205,981	122,713,908	118,102,369	108,219,186	103,404,530
Refunds of employee contributions	1,128,922	1,195,737	2,711,115	1,380,310	1,174,864
Administrative expenses	1,391,487	1,296,826	1,398,695	1,276,511	1,318,710
Total deductions	129,726,390	125,206,471	122,212,179	110,876,007	105,898,104
Net increase (decrease)	206,211,225	70,931,991	(71,177,444)	77,828,807	136,022,056
Net position held in trust for pension benefits					
Beginning of year	1,092,402,602	1,021,470,611	1,092,648,055	1,014,819,248	878,797,192
End of year	\$ 1,298,613,827	\$ 1,092,402,602	\$ 1,021,470,611	\$ 1,092,648,055	\$ 1,014,819,248

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LEGISLATIVE CHANGES SECTION

Legislative Changes

1979 Session

- PA 81-0634 Disability benefits payable for alcoholism if the employee participates in a rehabilitation program.
- PA 81-0679 Reciprocal Act: changes proportionate pension credits under the "alternate" formula.
- PA 81-1187 Under IRS Code Section 414(h), employer may pick up the employee contributions for all compensation earned after December 31, 1980, by a reduction in the cash salary or an offset to a future salary increase or by a combination of both.

1980 Session

- PA 81-1536 Reversed all changes made by PA 81-1187 and put the pick up section as a new paragraph. They are treated as employee contributions for all purposes, including refunds; and determination of the tax levy.

1981 Spring Session

- PA 82-0690 Effective January 1, 1982, signed November 12, 1981.
Post-retirement increases from 2% to 3% for new retirements only.
Maximum spouse benefit from \$500 to \$600.
Disability benefits payable to age 70 in some cases.
Increase in employee pensions of \$25 per month.
Increase in spouse pension of \$25 per month or up to \$250.
Children's annuities to \$100 and \$140.
Reduction in spouse age discount.
Increase in tax multiple to 2.34 in 1984 and after.
- PA 82-0308 Authorizes investments in conventional mortgage pass-through securities.
- PA 82-0256 Financial statement required by Department of Insurance within 6 months and actuarial statement within 9 months; \$100 per day penalty if late.

1982 Spring Session

- PA 82-0960 Expanded fiduciary standards, prohibited transactions, civil action may be brought by Attorney General or by a participant.
- PA 82-0768 Clarifies compulsory retirement age to 70 rather than 67.

1983 Spring Session

- PA 83-0827 Effective January 1, 1984, signed September 24, 1983.
2% benefit accrual formula.
Maximum spouse benefit from \$600 to \$800.
No reduction for spouse age difference.
Eliminates 30 day wait for refund.
Interest rate on refund repayments from 6% to 8%.
Eliminates second doctor's report for duty disability under certain conditions.
- PA 83-0861 Minimum reporting and actuarial information for 1984.
- PA 83-0869 10% prudent person investment category.
- PA 83-0970 Delegation of investment authority restrictions.

Legislative Changes Section

1984 Session No legislative changes

1985 Spring Session

PA 84-0733 Signed September 21, 1985.

Early Retirement Contribution (ERC) Plan: Elimination of age discount factor with one-time employee and employer contribution for those who retire after July 1, 1985 and before June 30, 1995.

Post-retirement annuity increases to begin upon the first anniversary of retirement for those who retire on or after July 1, 1985.

\$800 maximum on surviving spouse benefit removed.

Remarriage will terminate spouse annuity only for remarriage before July 1, 1985.

Optional term annuity if life annuity less than \$200.

1986 Spring Session

PA 84-1472 Changes the requirement from 10 years to 5 years for allowance after withdrawal while disabled.

Optional Plan of 3% contributions for 1% additional benefit per year of service. Provisions for payment of past service with interest. Provisions expire July 1, 1992. Such plan if elected by a member, would require a 3% of salary contribution (with interest for past service) and would produce an additional 1% per year of service benefit and would increase the employee annuity, post-retirement increase and spouse annuity. Additional optional benefits may not be established for more than 10 years of service. Membership in this plan is optional and as such, it is possible to delay election to just prior to retirement. The effective date of this optional plan is July 31, 1987 the date upon which approval was received from the Internal Revenue Service.

1987 Spring Session

PA 85-0964 Eligibility for retirement at age 50 instead of age 55.

No discount for age less than 60 with 30 or more years of service.

Accrual rate of 2.15% per year of service instead of 2%.

80% maximum benefit for future retirees instead of 75%.

Annuity based on 2 year final average salary instead of 4 year final average salary.

Ad hoc increases for present retiree, widow(er)'s and children.

Increase in employee contribution to 9%.

Decrease in the multiple to 2.19.

An alternative benefit for District Commissioners effective upon IRS approval (which was approved June 22, 1988).

Legislative Changes Section

1988 Session No legislative changes.

1989 Session

PA 86-0273 Signed August 24, 1989.

Average salary 104 consecutive weeks instead of 24 months.

Accrual rate of 2.2% of average salary for each of the first 20 years of service and 2.4% for each year of service in excess of 20.

Increase for surviving spouse of 3% of the amount of annuity on the date of employee's retirement or death in service.

Alternative annuity for commissioners age 60 with 6 years of service.

Widow(er)'s allowance of 60% plus 1% for each year of service of employee's annuity at the date of employee's death.

Ad hoc increases for widow(er)'s.

1990 Session

PA 86-0957 Amends Chapter 120, Paragraph 671 of the Revenue Act to provide for a separate listing on the tax bill of the dollar amount of tax due from the person assessed which is allocable to a tax levied under the Illinois Pension Code, or any other tax levied by a municipality or township for public pension or retirement purposes. Effective January 1, 1990.

PA 86-1488 Clarifies the date of 3% increase for surviving spouse.

Allows any City officer to transfer his MWRD service to the Municipal Fund.

1991 Session

PA 87-0794 Article 13 rewritten to preserve existing benefits, signed November 20, 1991.

Average salary 52 consecutive pay periods instead of 104 consecutive weeks.

Retirement annuity with 5 years service and age 60 instead of 10 years.

Early Retirement Contribution (ERC) Plan extended to June 30, 1997.

Age discount .5% for each full month employee is less than age 60 or each full month employee's service is less than 30 years, whichever is less.

Optional Plan extended to July 1, 1997.

Surviving spouse of employee who withdraws from service not eligible for annuity unless employee had 10 years of service.

Dissolution of marriage after retirement shall not divest spouse of an annuity if they had been married 10 years on the date of retirement.

For employee with Reciprocal service who retires on or after July 1, 1985 and dies after January 1, 1991 with 15 years in MWRD and service prior to September 5, 1975 spouse annuity shall be calculated as a percentage of total annuity minus amount payable by other fund as of date of death.

Surviving spouse annuity shall be discounted .25% for each full month the spouse is younger than the employee, with maximum 60%. The discount shall be reduced 10% for each full year the marriage was in effect as of the date of withdrawal or death in service.

Child annuity \$250 with one parent alive or \$350 when neither is alive.

Legislative Changes Section

1992 Session

PA 87-1265 Beginning January 1, 1993, all employee annuity increases are 3% compounded.
Beginning January 1, 1993, all non-term employee annuitants retiring at age 60 or older with at least 10 years of service get a \$500 minimum annuity.
Beginning January 1, 1993, all non-term, non-Reciprocal, non-Disability (Annuity) employees who qualify for an annuity will get a \$250 minimum annuity.
Employee may now purchase up to 15 years of optional service (previously 10 years).
Beginning January 1, 1993 all surviving spouse annuities are increased annually by 3% compounded if the employee had at least 10 years of service.
Starting January 1, 1993 all surviving spouse annuitants of non-term employee annuitants who retired at age 60 or older with at least 10 years of MWRD service get a \$500 minimum annuity.

1992 Session (continued)

Starting January 1, 1993 all surviving spouses of non-term, non-Reciprocal, non-Disability (Annuity) employee annuitants get a \$250 minimum annuity.
Alternative annuity for commissioners at age 55 (previously 60).
"No spouse" refunds include 3% interest (previously without interest).
Signed January 25, 1993.

1993 Session No legislative changes

1994 Session No legislative changes

1995 Session No legislative changes

1996 Session No legislative changes

1997 Session

PA 90-0012 Approved June 13, 1997.
Allows equity investments to be up to 50% of total investments.
Excludes future Civil Service Board members from participation in the retirement fund.
Raises eligibility for retirement for new entrants from age 50 to 55.
Extends the Early Retirement Contribution (ERC) Plan to December 31, 2002 for employees with at least 10 years of MWRD service and raises the age of eligibility for new employees to age 55.
Extends the Optional Plan to December 31, 2002 for employees in service on or before June 30, 1997, limits annual contributions, and allows contributions within 30 days of withdrawal. Any employees entering service after June 30, 1997, are not eligible to participate in this Plan.
Clarifies that a disability annuity is not payable if the employee is able to work.
For all employees hired after June 13, 1997, the early retirement discount requires at least 10 years of District service to be eligible to make the early retirement contribution even if they have 30 years total, including reciprocal service.
Bases calculation of contribution to eliminate the early retirement discount on the highest salary used in the benefit calculation and clarifies that the contribution will be based on a portion of years.

Legislative Changes Section

1997 Session, continued

PA 90-0012, continued

Clarifies that 3% annual compounded cost of living increases apply to employees and spouses whose annuities began under predecessor provisions of the statutes and provides annual cost of living increases to a small group of employees who retired before July, 1985 with at least 10 years of service who previously did not receive these increases.

Requires that new employees have at least 3 years of service before a surviving spouse benefit is payable, if employee dies in service or 10 years of service if employee withdraws before age 55; minimum service is required for a non-duty related death (no minimum service is required for a duty related death).

Subjects the minimum surviving spouse annuities to the discount for age differential and requires the marriage to have been in continuous effect for 10 years to eliminate the discount for the age differential.

Provides a child's annuity to children of former employees with at least 10 years of service and to children of retired annuitants. Increases the minimum service requirement of new employees from 2 to 3 years before a child's annuity would be payable.

Clarifies that the determination of the amount of a child's annuity is dependent on the life status of the child's parent and not the employee's surviving spouse.

Removes the age limitation for eligibility for duty and ordinary disability benefits and provides that disability for new employees will not be paid for the first 3 days of the disability payment period unless the disability continues for at least 11 more days.

Eliminates benefits for children of employees receiving duty disability benefit.

Allows payment of disability for up to 5 years if disability occurs at age 60 or later.

Clarifies that calculation of the benefit under the alternative annuity plan be based on the final average salary as a commissioner instead of salary at the time of termination of service.

Requires that new employees return to work for at least one year before becoming eligible to make contributions for a period of leave of absence.

Clarifies that a year of service credit for purposes other than an annuity is to be based on 26 pay periods in 12 consecutive months.

1998 Session No legislative changes

1999 Session No legislative changes

Legislative Changes Section

2000 Session

PA 91-0887 Signed July 6, 2000

Allows the Fund's Trustees to approve use of the actuarial table recommended by the actuarial consultant for purpose of calculating a reversionary annuity.

In cases where a Workers' Compensation claim is in dispute, clarifies that duty disability benefits are paid only for the period of disability determined by the Illinois Industrial Commission or acknowledged by the employer.

Ordinary and duty disability benefits are terminated if the employee does not provide the Fund with access to medical and/or employment records, or refuses to follow medical advice and treatment to enable the employee to return to work.

No interest is used when calculating retroactive duty disability benefits.

Allows lump-sum payments for optional credit on past service by commissioners electing the Alternative provision.

Refund repayments are calculated using a compound interest rate equal to 8% or the actuarial investment return assumption used in the most recent Annual Actuarial Statement, whichever is greater.

2001 Session

PA 92-0053 Signed July 12, 2001

Provides automatic annual increases of retirement annuities to commence on the first day of the month in which the first anniversary of the date of retirement occurs.

Provides a minimum retirement annuity equal to \$500 per month for an employee with at least 10 years of District service, plus \$25 per month for each year of service in excess of 10 years, to a maximum of \$750 per month.

Provides a minimum surviving spouse annuity equal to the greater of:

- a) \$500 per month for the surviving spouse of an employee with at least 10 years of District service, plus \$25 per month for each year of service in excess of 10 years, to a maximum of \$750 per month; or
- b) 50% of retirement annuity to of the deceased spouse at the time of death.

Provides an increase in a child's annuity to \$500 per month for 1 child and \$350 per month for each additional child if one parent is living. If neither parent is living, provides an increase in a child's annuity to \$1,000 per month for one child and \$500 for each additional child. In either case, the maximum benefit is \$2,500 per month for all children of the employee, to be divided equally among the children.

Allows equity investments to be up 65% of total investments.

2002 Session

PA 92-0599 Signed June 28, 2002

Provides for early retirement without discount for any employee who retires on or after January 1, 2003 but on or before December 31, 2007 if the employee is at least age 50 but less than age 60 and has at least 10 years of service credit exclusive of any reciprocal service and the sum of his years of creditable service and his age equals at least 80.

Provides for a revised Optional plan of additional benefits and contributions for the period from January 1, 2003 to December 31, 2007. The rate of contributions is 4% of pensionable earnings. The additional benefit is 1% per year of Optional contributions. Participation is limited to employees with at least 10 years of creditable service with this Fund. The maximum additional benefit that may be accumulated under this plan,

Legislative Changes Section

2002 Session, continued

PA 92-0599, continued

including any additional benefit accumulated under a prior optional benefit plan, is 12%. Participation requires an irrevocable written election. Payment for service prior to the irrevocable election is limited to the same calendar year. The cost of payment to establish Optional credit before the election is 4% of the salary for the applicable period of service, plus interest from the date of service to the date of payment at the higher of 8% per year or the actuarial investment return assumption. The tax levy for Optional contributions is equal to the amount of Optional contributions.

2003 Session

PA 93-0334 Signed July 24, 2003

Provides for active employees having at least ten years of MWRD service credit and meeting other requirements to purchase up to 2 years of active military credit toward their retirement annuity. The employees' contributions are to be calculated based upon the starting salary and are to include the employer's normal cost at the time of payment, plus regular interest of 3% per year compounded annually.

2004 Session No legislative changes

2005 Session

PA 94-0621 Signed August 18, 2005

For all new entrants, requires that disability annuitants have a minimum of five years of service exclusive of disability service to qualify for a benefit.

Provides for the minimum annuity as detailed in HB 478 for all employee and surviving annuitants regardless of whether an age discount applied to the employee's annuity calculation.

Clarifies surviving spouse annuity eligibility for the spouse of an employee who withdraws from service prior to the attainment of the minimum retirement age yet who has enough service to qualify for a future annuity. Changes make reference to a minimum retirement age, which varies dependent on start date, rather than a fixed age. Changes also provide for surviving spouse annuity eligibility for the spouse of a withdrawn employee who was eligible for an annuity at age 62 but died prior to annuity application.

Provides for calculation method for the surviving spouse annuity of a vested employee who separated from service before minimum retirement age and had not yet begun to receive an annuity.

Grants child annuities to children of deceased employees and former annuitants if the child is over age 18 but under age 23 and is a full time student.

Eliminates the three-day wait (for employees hired after June 13, 1997) for duty disability benefits that did not continue 11 additional days.

Provides ordinary disability benefits for employees hired after June 13, 1997 beginning the 31st day after the last day work provided all sick leave is exhausted.

Allows commissioner alternative contributions to be made pre-tax, pending IRS approval.

Provides an annuity for the surviving spouse of a commissioner who elects the commissioner's alternative plan from a fixed 66 2/3% of the commissioner's annuity at death to the greater of 66 2/3% or 60% plus 1% per year of service up to a maximum of 85% of the annuity earned by the commissioner on the date of death. The number

Legislative Changes Section

2005 Session, continued

PA 94-0621, continued

of years used to calculate the commissioner's annuity would also be used to calculate the annuity for the surviving spouse.

Changes refund eligibility to allow for a refund of contributions for a separated employee who was hired on or after June 13, 1997 who is between ages 50 and 55 with over 20 years of service.

Clarifies that interest paid on a refund to estate should be calculated through the date of withdrawal.

Allows for refunds to be repaid within 90 days of withdrawal.

Empowers the Board to assess and collect interest on amounts due the Fund using the current actuarial interest rate assumption.

2006 Session No legislative changes

2007 Session Signed August 17, 2007

PA 95-0279 Modifies child annuity eligibility requirements for adopted children. Removes the stipulation that proceedings to adopt the child must have begun at least one year prior to death.

PA 95-0521 Signed August 28, 2007

Requires the retirement system or pension fund to divest its assets with an Illinois finance entity if the entity does not annually certify that it complies with the requirements of the High Risk Home Loan Act.

PA 95-0586 Signed August 31, 2007

Effective January 1, 2008, the annuity effective date for employee and spouse annuities is the first of the month following retirement. Employee and spouse annuities are payable for the full month if the annuitant was alive on the first day of the month.

The \$10.00 per child monthly duty disability benefit was placed back into legislation for employees who were in service before June 13, 1997. This provision was inadvertently eliminated from the language at the time of the 1991 re-draft of 40 ILCS 5/13.

The contribution definition was revised to clarify that the 7 ½ % contribution for the employee's and child's annuity consisted of a 7% contribution for the retirement annuity and ½ % for the annual retiree cost of living increase.

The method of calculation of refunds after death was amended to clarify that the ½% allocated for the retiree cost of living was not included in a refund payable upon death. Further, to whom payment of a refund after death should be distributed was clarified. Payment is first made to a spouse, then to beneficiary as designated by the employee, and if there is no beneficiary form, then to the late employee's children in equal parts. If there is no spouse, then payment is made to the designated beneficiary.

If there is no spouse or designated beneficiary, then payment is made to any children of the deceased employee. If there is no spouse, designated beneficiary, or child then distribution is made to the heirs in accordance with the laws of descent and distribution in the State of Illinois.

Legislative Changes Section

2007 Session, continued

PA 95-0586, continued

The Retirement Fund Board of Trustees was granted authority to invest the Fund's reserves according to the Prudent-Person Rule. This rule requires a fiduciary (trustee) to discharge his/her duties with the care, prudence and diligence under the prevailing circumstances that a prudent person acting in a like capacity and familiar with such matters would use in a similar situation.

2008 Session

PA 95-0891 Signed August 22, 2008.
Amends the MWRDGC statutes, 70 ILCS 2605/5.9, to allow the MWRDGC to transfer interest income to the Retirement Fund.

PA 95-0923 Signed August 26, 2008.
Adds two additional Trustees to the Retirement Fund Board, one appointed retiree and one elected active employee. The appointed retiree is recommended by the Board of Commissioners and approved by the Board Trustees of the Fund. Each of the three appointed trustees now serves a term of three years and each of the four elected active employees will now serve a term of four years. The term of one appointed and one elected trustee expires each year.

2009 Session

PA 96-0006 Signed April 3, 2009.
Expands the Illinois Governmental Ethics Act (5 ILCS 420/4A-101) to require that pension board members annually file a statement of economic interest.

Expands the definition of "fiduciary" (40 ILCS 5/1-101.2) to include any person who, with respect to a pension fund or retirement system, "renders advice on the selection of fiduciaries for a fee or other compensation, direct or indirect, with respect to any moneys or other property of the pension fund or retirement system, or has any authority or responsibility to do so." It also provides an expanded definition of "consultant" (40 ILCS 5/1-101.5)

Sets out specific goals, targets, and reporting requirements for the utilization of emerging investment managers by pension funds. Provides a definition of "emerging manager" as "a qualified investment advisor that manages an investment portfolio of at least \$10 million but less than \$10 billion and is a 'minority owned business,' 'female owned business,' or 'business owned by a person with a disability' as those terms are defined in the Business Enterprise for Minorities, Females, and Persons with Disabilities Act."

Imposes conflict-of-interest prohibitions that involve an investment transaction with an investment adviser when the pension board member, employee, consultant, or their spouse: (1) has a direct interest in the income gains, or profits of the investment advisor; or (2) has a relationship with that investment adviser that would result in a pecuniary benefit to the board member, employee, or consultant (40 ILCS 5/1-110)

Makes several changes regarding the use of investment advisers and investment services (40 ILCS 5/1-113.14).

Requires that every retirement system and pension fund governed by the Illinois Pension Code is subject to the Illinois Open Meetings Act (40 ILCS 5/1-113.16). All retirement systems and pension funds, must maintain an official website, updated at least quarterly with information concerning the investment of funds.

Legislative Changes Section

2009 Session, continued

PA 96-0006, continued

Requires all board members to attend at least 8 hours of training per year on the topics of ethics, fiduciary duty and investments. Each pension board must annually certify that its members received the required training. The certification must be sent to the Division of Insurance of the Department of Financial and Professional Regulation (40 ILCS 5/1-113.18).

Expands the gift ban provisions to all of the pension systems (40 ILCS 5/1-125) and enumerates the number of allowable exemptions.

PA 96-0251 Signed August 11, 2009.

Technical clarification regarding the effective date of a reversionary annuity. The benefit would begin on the first of the month following the death of the annuitant and would be payable for the full month if the reversionary annuitant was alive on the day of the month.

Increased child annuity benefits to an unmarried child under the age of 18 years (under the age of 23 years in the case of a full-time student) to \$500 per month for each child, up to a maximum of \$5,000 for all children of the employee if one parent is alive. The child's annuity shall be \$1,000 for each child, up to a maximum of \$5,000 if neither parent is alive. The effective date of the child's annuity benefit shall be the first of the month following the death of the employee or annuitant. The benefit would be payable for the full month if the annuitant was less than age 18 (or 23 if a full-time student) on the first of the month.

2010 Session

PA 96-0889 Signed April 14, 2010.

The provisions apply to a person who first becomes an employee and a participant of any retirement system in Illinois, other than a retirement system established under Article 2,3,4,5,6, or 18 of the Illinois Compiled Statutes, on or after January 1, 2011.

The major changes from the existing benefit structure are as follows:

- Normal retirement age to receive full benefits is increased to 67.
- The age to receive a reduced (early retirement) benefit is increased to 62.
- The reduction for early retirement is one-half of one percent for each month a member's age is under 67.
- Increases in the number of months used to calculate the final average salary to the highest 96 months over the last 120 months of service.
- Caps the final rate of earnings at \$106,800 in 2011, which will increase annually by three percent or one-half of the increase of the Consumer Price Index.
- Changes the surviving spouse pension to sixty-six and two-thirds percent of the pension of the deceased member.
- Limits the annual pension increase for retirees to three percent or one-half of the increase in the Consumer Price Index, whichever is lower based on the original amount of the pension.
- Modifies the date the retiree cost of living increase would be paid to the first of the month following the attainment of age 67 or the first anniversary of the commencement of the annuity, whichever is later.

Legislative Changes Section

2010 Session, continued

PA 96-1490 Signed December 30, 2010.
This bill made technical changes to the two-tier system implemented by Public Act 96-0889.

2011 Session

PA 96-1513 Signed February 1, 2011
Effective June 1, 2011, two persons of either the same or opposite gender may enter into a legal relationship referred to as a civil union. Parties to the civil union have the same obligations, responsibilities, protections and benefits afforded by Illinois law to a married couple.

PA 97-0504 Signed August 23, 2011
Effective January 1, 2012, elected or appointed members of a public body subject to the Open Meetings Act must complete the electronic training on the Illinois Attorney General website once during their term of election or appointment as follows:

- Any person who is an elected or appointed member of a public body on January 1, 2012, must complete the electronic training between January 1, 2012 and January 1, 2013.
- Any person who becomes an elected or appointment member of a public body after January 1, 2012, must complete the electronic training no later than the 90th day after taking the oath of office or if not required to take the oath of office, after otherwise assuming responsibilities as a member of the public body.

Elected or appointed members need not complete the electronic training on an annual basis thereafter unless they are also designated to receive training on compliance with the Open Meetings Act.

PA 97-0609 Signed August 26, 2011
The provisions apply to a person who first becomes an employee and a participant of any retirement system in Illinois on or after January 1, 2012, and is receiving a retirement annuity and accepts on a contractual basis a position to provide services to a governmental agency from which he or she retired, then that person's annuity shall be suspended during the during the contractual service.

PA 97-0318 Signed August 12, 2011
The provisions of the Open Meetings Act are hereby expanded to allow closed meetings between internal or external auditors and governmental audit committees, finance committees and their equivalents when the discussion involves internal control weakness, identification of potential fraud risk areas, known or suspected frauds and fraud interviews conducted in accordance with generally accepted auditing standards.

2012 Session

PA 97-0651 Signed January 5, 2012
Expands the duties of fiduciaries to include the responsibility to report a reasonable suspicion of a false statement or other fraud to the Board of Trustees or the State's Attorney of the jurisdiction where the fraudulent activity occurred.

Legislative Changes Section

2012 Session, continued

PA 97-0894 Signed August 3, 2012

Effective with the 2013 fiscal year, increases the maximum tax levy from 2.19 multiplied by the employee contributions two years prior to the lesser of 4.19 multiplied by the employee contributions two years prior or the actuarially determined contribution requirement. Increases employee retirement contributions for Tier 1 employees by 1% per year for three years, starting with the first pay period paid in 2013. Resulting contribution rates for Tier 1 members are 10% in 2013, 11% in 2014, and 12% in 2015. The Tier 1 employee contribution rate will revert to 9% the first pay period paid on or after the date when the funded ratio of the Fund is determined to have reached the 90% funding goal.

2013 Session

PA 98-0433 Signed August 16, 2013

Creates an exception to the current RFP requirements for investment services. The competitive bid process will not be required for contracts for follow-on funds with the same fund sponsor through closed-end funds.

PA 98-0597 Signed November 20, 2013

Effective June 1, 2014, makes changes permitting same-sex marriage in the State of Illinois. Provides for reciprocity, recognizing same-sex marriages solemnized in other states and countries in which same-sex marriage is legal. Allows for voluntary conversion of civil unions to marriages.

2014 Session

PA 98-1022 Signed August 22, 2014

Effective February 1, 2015, the Boards of the Illinois retirement systems shall establish goals for utilization of investment managers that meet the definition of minority owned business, female owned business, and disabled person owned business. The systems will set a goal for each category.

Furthermore, beginning January 1, 2015, no contract for investment or consulting services or commitment to a private market fund shall be awarded by a retirement system unless such entity first discloses the following:

- 1) The number and percentage of its senior staff who are minority, female, or disabled.
- 2) The number of contracts for services that the applying entity has with a minority owned business, female owned business, or business owned by a person with a disability.
- 3) The number of contracts for services that the applying entity has with businesses other than a minority owned business, female owned business, business owned by a person with a disability, if more than 50% of the services under that contract are performed by a minority person, a female, or a person with a disability.

Legislative Changes Section

2014 Session, continued

PA 98-1022, continued

Provides that a retirement system must consider such information (within the bounds of financial and fiduciary prudence) before awarding a contract for investment services, consulting services, or commitment to a private market firm. The Act also provides that if an investment firm meeting the system's criteria responds to an RFP for investment services and meets the definition of a minority owned business, then that firm shall be allowed to present to the Board before a final decision is made for that RFP.

2015 Session

PA 99-0008 Signed July 9, 2015

Effective July 1, 2015, provides that if the employer fails to transmit required contributions to the pension fund, the fund may certify to the State Comptroller the amount due, and the Comptroller must, beginning in 2016, deduct and remit to the fund the certified amounts from payments of State funds to the employer.

PA 99-0462 Signed August 25, 2015

Effective January 1, 2016, adds an aspirational goal for Illinois pension funds to use emerging investment managers for not less than 20% of the total funds under management. It shall also be the goal that not less than 20% of investment managers be minorities, females, and persons with disabilities. It establishes a goal to use businesses owned by minorities, females, and persons with disabilities for not less than 20% of contracts awarded for information technology services, accounting services, insurance brokers, architectural and engineering services and legal services.

2016 Session

PA 99-0683 Signed July 29, 2016

Requires Illinois pension funds, except downstate police and fire funds, to develop and implement a process to identify deceased annuitants. The process must be implemented no later than June 30, 2017. The process requires the fund to check for any deceased annuitants at least once per month. Accepted methods to identify deceased annuitants include, but are not limited to, the use of a third party entity that specializes in the identification of deceased persons, the use of data provided by the Social Security Administration, or the use of data provided by the Department of Public Health's Office of Vital Records. Amends the Vital Records Act to require the Department of Public Health to provide death match services to Illinois pension funds at no cost.

2017 Session

PA 100-0244 Signed August 22, 2017

Provides an opportunity for annuitants in same-sex marriages or unions recognized in Illinois a) between June 1, 2011 and June 30, 2016 under the Illinois Religious Freedom Protection and Civil Union Act of 2011, or b) between February 26, 2014 and June 30, 2016 under the Illinois Marriage and Dissolution of Marriage Act of 2014, who retired prior to June 1, 2011 and received a refund of surviving spouse contributions, to repay the no-spouse refund with interest and establish eligibility for a surviving spouse annuity.

Legislative Changes Section

2017 Session, continued

PA 100-0244, continued

The annuitant must make an irrevocable election between January 22, 2018 and January 21, 2019. Repayment of the no-spouse refund includes interest at the actuarially assumed rate of return, compounded from the date of the refund to the date of payment. Payment may be made in full or in installments. All payments must be made in full within 24 months of the election.

PA 100-0334 Signed August 25, 2017

Expands the felony forfeiture language to include the forfeiture of surviving spouse benefits that would have been payable to the surviving spouse of a person entering service on or after August 25, 2017 who was convicted of any felony relating to and arising out of service as an employee.

PA 100-0542 Signed November 8, 2017

No later than January 1, 2018, and each January thereafter, requires a consultant to annually disclose to the board of the retirement system, board of the pension fund, or the investment board that retains the consultant certain information concerning searches for investment services from minority owned businesses, female owned businesses, and businesses owned by persons with a disability. Requires a consultant to disclose any compensation or economic opportunity received in the last 24 months from investment advisors retained by the board of a retirement system, board of a pension fund, or investment board. Requires consideration of these disclosures before awarding a contract for consulting services.

2018 Session

PA 100-0902 Signed August 17, 2018

Amends Article 1 to state that each retirement system, pension fund, or investment board shall make its best efforts to ensure that the racial and ethnic makeup of its senior administrative staff represents the racial and ethnic makeup of its membership.