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# **COMPREHENSIVE ANNUAL FINANCIAL REPORT**

**FOR THE YEAR ENDING  
DECEMBER 31, 2017**



## **METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND**

**A COMPONENT UNIT OF THE  
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
CHICAGO, ILLINOIS**

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

**SUSAN A. BOUTIN, EXECUTIVE DIRECTOR**

**ESTABLISHED JULY 7, 1931**

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**FORMERLY THE SANITARY DISTRICT EMPLOYEES' AND TRUSTEES' ANNUITY AND BENEFIT FUND**

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# **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, 2016**

*Christopher P. Morill*

Executive Director/CEO

## **METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND**

RETIREMENT FUND OFFICE  
SUITE 330  
SUSAN A. BOUTIN, EXECUTIVE DIRECTOR

111 EAST ERIE STREET  
CHICAGO, ILLINOIS 60611-2898  
TELEPHONE 312-751-3222  
FAX 312-751-5699

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

May 22, 2018

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, 2017. State law requires that all governmental units publish financial statements presented in conformity with Generally Accepted Accounting Principles (GAAP) and audited by a licensed public accountant within six months of the close of each fiscal year.

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 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, 2017 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.

Generally Accepted Accounting Principles require that management provide a narrative introduction, overview and an 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 the MD&A and should be read in conjunction with it. The Fund's MD&A can be found in the Financial Section, following the independent auditor's report.

**FUND PROFILE**

The Fund is the administrator of a single-employer defined benefit public employee retirement system established by the State of Illinois 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.

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.

For the past 86 years the primary goal of the Fund has been to provide continuity of benefits to the members while preserving the fiscal integrity and financial stability of the Fund. As of December 31, 2017 the Fund serves 1,835 active members, 2,408 benefit recipients, and 137 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 increased in 2017 by \$149.2 million. 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. Investment returns, along with securities lending income provided 63.8% of total additions in 2017. During the year, the invested assets of the Fund earned a rate of return of 15.6% net of fees, compared to the 2016 rate of return of 9.5% and the Fund's 2017 Policy Index return of 15.7%. The ten year annualized rate of return on the Fund's investments is 6.9%, the same as the Policy Index return for the same period.

Employer contributions typically provide a much smaller portion of total additions than investment returns. In 2017, employer contributions were 29.4% of total additions. 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.

Employee contributions typically provide the smallest percentage of total additions, which in 2017 were 6.8%. 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 2017 of \$112,402.



**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, 2017 valuation reports the actuarial value of assets (AVA) at \$1.456 billion, the actuarial accrued liability (AAL) at \$2.498 billion, and the unfunded AAL at \$1.042 billion, resulting in a funded ratio of 58.3%.

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 13 investment management firms were managing 17 separate mandates that comprised the Fund's \$1.411 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. Our 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 2017. Also included are the Master Custodian's report and the Investment Consultant's report.

**MAJOR ACTIVITIES AND HIGHLIGHTS**

- In June 2017 the Fund's tax levy request for 2018 was submitted to the District in the gross amount of \$87,281,000, a decrease of \$2,323,000 over the 2017 levy request of \$89,604,000. The 2018 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 for 2017 was the same as in the prior year; near year-end, the Board approved an allocation to core open-end real estate to be funded in 2018.
- Board appointments and elections during the year included the following:
  - Elected officers for 2017 were Joseph F. Kennedy, President; Robert T. Regan, Vice President; and Hon. Mariyana Spyropoulos, Secretary
  - Kathleen Therese Meany was re-appointed to the position of Retiree Trustee for a three year term beginning February 1, 2017
  - John P. Dalton Jr. was duly selected as Trustee for a four-year term beginning December 1, 2017

- Retirement Fund staff changes included:
  - George Kirie, Financial Analyst, retired in May 2017 after serving the Fund for 30 years
  - Jean Sivils, Assistant Benefits Analyst, retired in May 2017 after serving the Fund for over 16 years, the MWRDGC for over 1 year
  - Brian Gillespie joined the Fund in October 2017 as Financial Analyst
- Benefit staff activity in 2017 included the processing of 97 retirement applications and 28 survivor applications, and the preparation of 662 annuity estimates for active employees.
- Member communications in 2017 included:
  - New employee orientation provided to 113 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 25, 2016
  - Five days of plant-site individual retirement counseling sessions, presented by the Fund's benefits staff to approximately 103 individual employees at the Stickney, Calumet, O'Brien and Egan plants in February, March and April
  - May and November issues of Vested Interest, the Fund's newsletter
  - October mailing to all annuitants to inform them of open enrollment for retiree healthcare benefits, to take effect January 1, 2018
- Pursuant to a 2016 RFP for insurance brokerage services, Tave Risk Management presented their recommendations for cyber liability, general liability and other insurances in February, and coverage was effective March 2017.
- In July an RFP for actuarial services resulted in three presentations being heard from the five respondents; in August, Foster & Foster was retained to provide actuarial services for a 1 year term with option to renew for 4 additional years.
- An RFP for a core open-end real estate fund manager was posted in July; four firms were interviewed in September and two firms were hired to manage 2.5% of total assets each. Funding the new allocations to the UBS Trumbull Property Fund and Deutsche Asset Management RREEF America REIT II portfolios began in 2018.
- Trustees and staff participated in several training sessions this year, including:
  - Annual Reciprocal Conference, held in Tinley Park
  - Midwest Institutional Investors Forum, sponsored by U.S. Markets Group
  - Emerging Manager Summit, sponsored by Opal Financial Group
  - Generating Returns, The Future of Emerging Markets, ESG Investing, Pension Risk Strategies, and Multi-Asset Investing conferences sponsored by Pension & Investments
  - International Foundation of Employee Benefit Plans Annual Conference
  - Marquette Associates 2017 Investment Symposium

**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, 2016. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports.

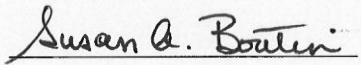
To be awarded the Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents meet or exceed the program standards. This report must satisfy both generally accepted accounting principles and applicable legal 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 24 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, 2017.

**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,



Susan A. Boutin  
Executive Director

**BOARD OF TRUSTEES**

**12/31/17**

**Joseph F. Kennedy, President**

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.

**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 and in 2014 for a four year term ending in November 2018.

**Honorable Mariyana T. Spyropoulos, Secretary**

Ms. Spyropoulos has served on the MWRD Board of Commissioners since 2009 and is currently serving as President. 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. In January 2016 she was re-appointed for a three year term ending in January 2019.

**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.

**John P. Dalton, Jr., Trustee**

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.

**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  
12/31/17****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
- Master Custodian: The Bank of New York Mellon Co., New York, NY

**INVESTMENT MANAGERS**

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

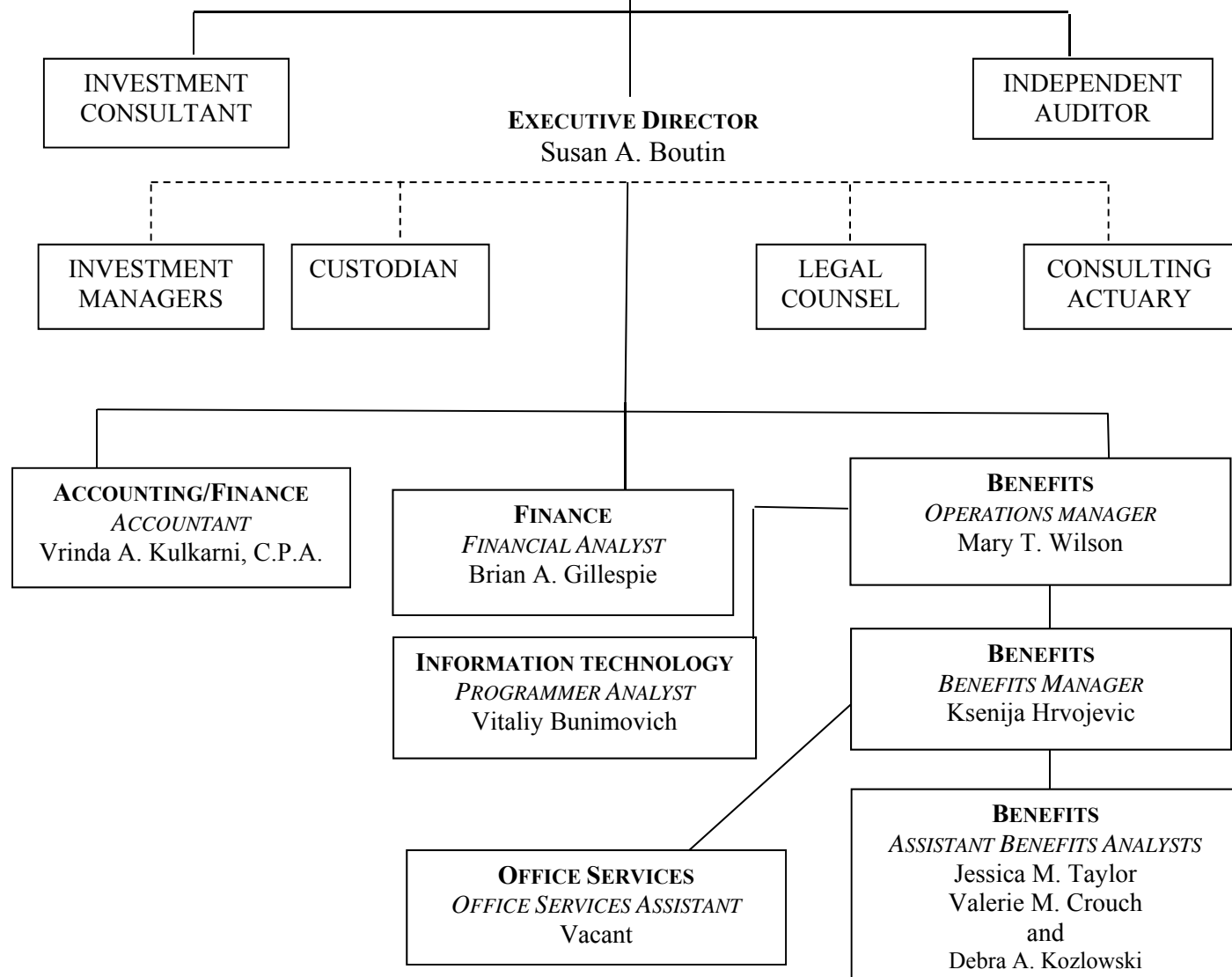
Details regarding the investment professionals listed above can be found in the Investment Section of this CAFR, on pages 79 and 80.

# ORGANIZATIONAL CHART

December 31, 2017

## BOARD OF TRUSTEES

Joseph F. Kennedy (President)  
 Robert T. Regan (Vice President)  
 Hon. Mariyana T. Spyropoulos (Secretary)  
 Stephen J. Carmody (Trustee)  
 John P. Dalton, Jr. (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 an appointment.

Annually, the Board of Trustees elects a President, a Vice President, and a Secretary. Among its duties, the Board authorizes payments of benefits, supervises collections, directs investment of the assets of the Fund in a manner prescribed by State statute and Fund policies, makes rules and regulations for the proper conduct of the affairs of the Fund, appoints employees and consultants and submits a detailed report of the affairs of the Fund to the State of Illinois Department of Insurance and to the District. The Board appoints an Executive Director who is responsible for all administrative functions and supervision of staff.

**RESPONSIBILITIES OF THE STAFF**

The Executive Director and the Fund staff are responsible for the administration and payment of benefits to the members of the Fund under the direction of the Board of Trustees.

Staff 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 and insurance enrollment and claim administration. In the event of a death of a participant, the staff calculates survivor benefits (spouse and child) or a refund to estate, if applicable. All calculations are verified internally before they are presented to the Trustees for approval. The staff is responsible for distribution of benefit payments and the associated withholding for taxes, insurance, credit union deductions and year-end tax reporting (IRS Form 1099-R).

At the request of District employees at any stage of their career, Fund staff prepares retirement estimates and provides individual retirement counseling. Estimate calculations include applicable refund repayment and leave of absence payment estimates to qualified individuals to enhance their retirement benefits. In addition, periodic pre-retirement seminars are jointly presented by Fund and District staff at various locations throughout the District.

The Fund 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 Executive Director is responsible for coordinating efforts with the Fund's various consultants. In conjunction with our investment consultant, the Fund coordinates asset allocation studies, investment manager searches, asset transitions, development and maintenance of the Fund's investment policy and investment monitoring. With the guidance of the Fund's actuary and attorney, the Fund reviews and makes recommendations regarding legislative initiatives. The staff also consults with attorneys regarding various issues including statutory interpretations, determinations from the Internal Revenue Service, and potential legal actions.

Fund staff is responsible for the general accounting that serves as the basis for the annual financial statements. Financial statements with supporting schedules are prepared in a cooperative effort between staff and auditors. The Fund's external auditor also reviews and makes recommendations regarding accounting practices. The annual audit includes limited sampling and testing for compliance with statutory and administrative policy.

The Fund's proprietary benefit management software provides reporting of additions and changes made to the member data during each processing cycle. Similarly, the actuary annually performs year-to-year comparisons of data in order to identify any anomalies. Every four to five years, our actuary performs an experience analysis to review the recent experience of the Fund and to recommend actuarial assumptions for use in the annual valuation.

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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 statement of fiduciary net position of the Metropolitan Water Reclamation District Retirement Fund (the Fund), a fiduciary fund of the Metropolitan Water Reclamation District of Greater Chicago (the District), as of December 31, 2017, the related statement of changes in fiduciary net position for the year then ended and the related notes to the financial statements. The Fund's financial statements include partial prior-year information for 2016. Such information does not include various notes to the basic financial statements and the management's discussion and analysis for 2016, 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, 2016, 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 financial status of Metropolitan Water Reclamation District Retirement Fund as of December 31, 2017, and the changes in its financial status 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 58 through 60 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)**Other Supplementary Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Metropolitan Water Reclamation District Retirement Fund's basic financial statements. The accompanying schedules of administrative expenses, of investment expenses, of payments to consultants and of postemployment healthcare disclosure on pages 62 through 64 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 18, 2018 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*

Chicago, Illinois

April 18, 2018



**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, 2017, 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 18, 2018.

***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.

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 entity'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.

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. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses or significant deficiencies. However, material weaknesses or significant deficiencies may exist that have not been identified.

***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 entity'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*

Chicago, Illinois

April 18, 2018

**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, 2017 and 2016. 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 15.6% and 9.5% (net of fees) for the calendar years 2017 and 2016, respectively. The Fund's Policy Index returned 15.7% and 8.7% for the same years.
- Income from contributions and investment income exceeded payments for benefits and administrative expenses in 2017, resulting in an increase in the Fund's net position available for benefits of \$149.2 million or 11.0% to \$1.50 billion at December 31, 2017, from the prior year end.
- The Fund's funded ratio, which is computed as the actuarial value of assets divided by the total actuarial liability, was 58.3% as of December 31, 2017, up from 56.2% in 2016. The recent upward trend in this ratio started in 2013 as a result of solid investment returns, special contributions from Metropolitan Water Reclamation District of Greater Chicago (the District), and legislation changes resulting in increased employee and employer contributions.

**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 plan. 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 success over the past year in increasing 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 status of the Fund is the ratio of the actuarial value of assets to the 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 unfunded 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 postemployment healthcare



**FIDUCIARY NET POSITION**

A summary of net position for the plan at December 31, 2017 and 2016 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, 2017 and 2016 are found on page 30.

**Condensed Statement of Fiduciary Net Position**

	<b>12/31/17</b>	<b>12/31/16</b>	<b>\$ Change</b>	<b>% Change</b>
<b><u>ASSETS:</u></b>				
Cash	\$ 1,990,166	\$ 3,670,431	\$ (1,680,265)	-45.8%
Receivables	135,478,733	90,273,902	45,204,831	50.1%
Forward foreign currency exchange contracts	123,332,605	116,576,244	6,756,361	5.8%
Investments	1,383,772,856	1,271,792,170	111,980,686	8.8%
Securities lending collateral	27,447,849	42,117,674	(14,669,825)	-34.8%
Total assets	<u>1,672,022,209</u>	<u>1,524,430,421</u>	<u>147,591,788</u>	9.7%
<b><u>LIABILITIES:</u></b>				
Securities lending collateral	27,447,849	42,117,674	(14,669,825)	-34.8%
Forward foreign currency exchange contracts	124,383,722	116,937,166	7,446,556	6.4%
Other	18,396,662	12,777,198	5,619,464	44.0%
Total liabilities	<u>170,228,233</u>	<u>171,832,038</u>	<u>(1,603,805)</u>	-0.9%
<b>NET POSITION</b>	<u><u>\$ 1,501,793,976</u></u>	<u><u>\$ 1,352,598,383</u></u>	<u><u>\$149,195,593</u></u>	11.0%

During 2017, the net position of the plan increased \$149.2 million or 11.0% from net position at December 31, 2016. This increase was primarily due to increased investment values, resulting from positive investment returns in 2017.

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, pending securities purchases, 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, 2017 was \$1.50 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, 2017 and 2016 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 2017 and 2016 can be found on page 31.

**Condensed Statement of Changes in Fiduciary Net Position**

	<b>2017</b>	<b>2016</b>	<b>\$ Change</b>	<b>% Change</b>
<b><u>ADDITIONS:</u></b>				
Employer contributions	\$ 89,858,224	\$ 80,259,713	\$ 9,598,511	12.0%
Employee contributions	20,839,829	20,830,779	9,050	0.0%
Total contributions	110,698,053	101,090,492	9,607,561	9.5%
Net investment income (loss)	194,475,674	113,152,137	81,323,537	71.9%
Net securities lending income	345,785	433,735	(87,950)	-20.3%
Total investment income	194,821,459	113,585,872	81,235,587	71.5%
Other	3,100	107,175	(104,075)	-97.1%
Total additions	305,522,612	214,783,539	90,739,073	42.2%
<b><u>DEDUCTIONS:</u></b>				
Retirement annuities	152,152,914	145,325,385	6,827,529	4.7%
Refunds	2,560,129	2,010,630	549,499	27.3%
Administrative expense	1,613,976	1,502,639	111,337	7.4%
Total deductions	156,327,019	148,838,654	7,488,365	5.0%
<b>INCREASE (DECREASE)</b>				
<b>IN NET POSITION</b>	149,195,593	65,944,885	83,250,708	126.2%
Beginning net position	1,352,598,383	1,286,653,498	65,944,885	5.1%
Ending net position	<u>\$ 1,501,793,976</u>	<u>\$ 1,352,598,383</u>	<u>\$ 149,195,593</u>	11.0%

**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 2017 were \$110.7 million, an increase of \$9.6 million or 9.5% from 2016. 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 \$20.8 million in 2017, substantially the same as 2016. In general, total employee contributions vary with changes in employer payroll and plan modifications.

Net investment income in 2017 was higher than the prior year by \$81.3 million, reflecting total returns of 15.6%, compared to 9.5% in 2016. Higher returns were experienced in the U.S. large cap and across non-U.S. equity markets in 2017.

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, 2017, securities lending activities generated net income of \$346,000, a decrease of 20.3% from 2016 primarily due to a reduction in securities out on loan during the year.

**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 2017 were \$156.3 million compared to \$148.8 million in 2016, an increase of \$7.5 million, or 5.0%. 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 2017 was 15.6% net of fees, slightly lower than the return of 15.7% on the Policy Index. The rate of return on investments in 2016 was 9.5% net of fees, compared to the return of 8.7% on the Policy Index. The components of the Policy Index at December 31, 2017 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 Small Cap ex-US Index, 6% MSCI Emerging Markets Index)
- 35% fixed income (7% Barclays Global Aggregate (Hedged) Index, and 28% Barclays Aggregate Index)

The Board modified the Target Allocation in December 2017 to include a 5% allocation to core open-end real estate which is expected to be funded in 2018. The updated target allocations are shown on the next page.

**RETURN ON INVESTMENTS AND ASSET ALLOCATION (CONTINUED)**

<b>Major Asset Class</b>	<b>Target</b>
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%
	100%

**CURRENT ASSET BALANCES AND OUTLOOK**

As of March 31, 2018, the Fund's invested assets had a fair market value of \$1.38 billion, essentially unchanged from the December 31, 2017 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 [BoutinS@mwr.org](mailto:BoutinS@mwr.org).

**METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND**  
**STATEMENT OF FIDUCIARY NET POSITION**  
**DECEMBER 31, 2017**

(WITH COMPARATIVE AMOUNTS FOR PRIOR YEAR)

	<u>2017</u>	<u>2016</u>
Assets		
Cash	\$ 1,990,166	\$ 3,670,431
Receivables		
Employer contributions - taxes (net of allowance for uncollectible amounts of (\$3,883,473 in 2017 & \$3,753,025 in 2016)	89,604,000	79,505,000
Securities sold	42,172,013	7,563,442
Forward foreign currency exchange contracts	123,332,605	116,576,244
Accrued interest and dividends	3,660,222	3,160,847
Accounts receivables	42,498	44,613
Total receivables	<u>258,811,338</u>	<u>206,850,146</u>
Investments - at fair value		
Fixed income	249,811,744	234,274,908
Fixed income - pooled funds - short-term	30,688,768	32,492,910
Fixed income - pooled fund - long-term	184,200,198	195,103,880
Common stocks	576,587,803	524,405,443
Mutual and commingled equity funds	342,484,343	285,515,029
	<u>1,383,772,856</u>	<u>1,271,792,170</u>
Securities lending collateral	27,447,849	42,117,674
Total investments	<u>1,411,220,705</u>	<u>1,313,909,844</u>
Total assets	<u>1,672,022,209</u>	<u>1,524,430,421</u>
Liabilities and Net Position		
Liabilities		
Accounts payable	1,359,693	1,270,180
Securities purchased	17,036,969	11,507,018
Forward foreign currency exchange contracts	124,383,722	116,937,166
Securities lending collateral	27,447,849	42,117,674
Total liabilities	<u>170,228,233</u>	<u>171,832,038</u>
Net position restricted for pension benefits	<u>\$ 1,501,793,976</u>	<u>\$ 1,352,598,383</u>
See accompanying notes to financial statements		

**METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND**  
**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**  
**YEAR ENDED DECEMBER 31, 2017**  
(WITH COMPARATIVE AMOUNTS FOR PRIOR YEAR)

	<u>2017</u>	<u>2016</u>
Additions		
Employer contributions	\$ 89,858,224	\$ 80,259,713
Employee contributions	20,839,829	20,830,779
Total contributions	<u>110,698,053</u>	<u>101,090,492</u>
Investment income		
Net appreciation		
in fair value of investments	177,341,970	92,762,607
Interest	7,700,427	11,370,038
Dividend income	14,054,030	13,633,175
Total investment income	<u>199,096,427</u>	<u>117,765,820</u>
Less investment expenses	<u>(4,620,753)</u>	<u>(4,613,683)</u>
Net investment income	<u>194,475,674</u>	<u>113,152,137</u>
Securities lending income		
Earnings	448,326	265,142
Broker rebates	(13,332)	294,951
Less bank fees	<u>(89,209)</u>	<u>(126,358)</u>
Net securities lending income	<u>345,785</u>	<u>433,735</u>
Other	<u>3,100</u>	<u>107,175</u>
Total additions	<u>305,522,612</u>	<u>214,783,539</u>
Deductions		
Annuities and benefits		
Employee annuitants	127,098,834	121,729,901
Surviving spouse annuitants	24,203,400	22,919,525
Child annuitants	142,000	153,500
Ordinary disability benefits	631,401	412,706
Duty disability benefits	<u>77,279</u>	<u>109,753</u>
Total annuities and benefits	<u>152,152,914</u>	<u>145,325,385</u>
Refunds of employee contributions	2,560,129	2,010,630
Administrative expense	<u>1,613,976</u>	<u>1,502,639</u>
Total deductions	<u>156,327,019</u>	<u>148,838,654</u>
Net increase	149,195,593	65,944,885
Net position restricted for pension benefits		
Beginning of year	<u>1,352,598,383</u>	<u>1,286,653,498</u>
End of year	<u>\$ 1,501,793,976</u>	<u>\$ 1,352,598,383</u>

See accompanying notes to financial statements

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

DECEMBER 31, 2017

**NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The 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.

**New Accounting Pronouncement** - The Fund has implemented Governmental Accounting Board (GASB) Statement No. 82, *Pension Issues – an amendment of GASB Statement No. 67, No. 68 and No. 73* (GASB 82), which addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee plan member contribution requirements.

**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 when due and the employer has made a formal commitment to provide the contributions. 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. 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.



**NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)****Investments (continued)**

Common stocks, mutual funds, most commingled equity funds, U.S. Treasury securities, some U.S. Government and government agency obligations and some non-U.S. Government Obligations are traded in active markets on national and international securities exchanges and are valued at closing prices on the last business day of period presented.

U.S. Government and government agency obligations, non-U.S. Government obligations, mortgage backed securities, asset backed securities, corporate bonds and notes, and some pooled funds 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 or dealer quotations, or alternative pricing sources with reasonable levels of price transparency.

The fair value of the common collective trust is based on the net asset value per share by reference to the underlying investments, which consist of fixed income securities. Units held in the common collective trust are valued at the unit value as reported by the investment manager as of the last business day of period presented.

The investment in the fixed income - pooled fund - long term and a commingled equity fund are comprised of commingled funds. The fair value of these investments are based on the net asset value per share as determined by reference to the funds' underlying assets, which are principally collective investment funds and marketable equity securities. Units held in the commingled funds are valued at the unit value as reported by the investment manager as of the last business day of period presented.

Investments in the fixed income - pooled funds - short term investments are valued at cost which approximates their fair value, except for foreign currency which is traded in active markets on national and international exchanges and is valued at closing on the last business day of each period presented.

Securities lending collateral held for securities on loan is valued at estimated fair value as determined by the custodian.

Purchases and sales of the investments are reflected on a trade-date basis and are recorded net of commissions paid to brokerage firms. Investment management fees are recorded as a reduction of investment income.

Dividend income is recorded on the ex dividend date. Interest income is recorded on the accrual basis.

**NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**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.

**Subsequent Events** - In preparing these financial statements, the Fund has evaluated events and transactions for potential recognition or disclosure through April 18, 2018, 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, 2017, the Fund's membership consisted of:

Active employees	<u>1,835</u>
Retirees and beneficiaries currently receiving benefits	
Retirees	1,809
Surviving spouses	576
Children	<u>23</u>
Total retirees and beneficiaries	<u>2,408</u>
Inactive employees entitled to benefits or a refund of contributions	<u>137</u>
Total members	<u><u>4,380</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 (the taxes levied 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 \$20,839,829 for the year ended December 31, 2017.

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 unfunded accrued liability. For the year ended December 31, 2017, the District's contribution was 48.73% 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.

***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 above 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, 2017, were as follows:

Total pension liability	\$ 2,486,868,107
Fund fiduciary net position	<u>(1,501,793,976)</u>
District's net pension liability	<u><u>\$ 985,074,131</u></u>

Fund fiduciary net position as a percentage of the total pension liability	<u><u>60.39%</u></u>
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See the schedule of changes in the district's net pension liability and related ratios on page 58 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, 2017, using the following actuarial methods and assumptions, applied to all periods included in the measurement.

Actuarial methods and assumptions:

Valuation date	12/31/17
Cost method	Entry age normal
Inflation	2.5%
Salary increases	Varies by service
Investment rate of return	7.5% per year compounded annually, net of investment related expenses

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

Disabled lives mortality rates were based on RP-2000 Disabled Retiree Mortality Table.

The demographic assumptions used in the December 31, 2017 valuation were based on the results of an actuarial experience study conducted by Foster & Foster, Inc. dated September 23, 2014.

**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 7.5%) 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, 2017 are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
Domestic equity	5.6%
International equity	5.8%
Bonds	0.9%
Private Real Estate	5.6%

**NOTE 3. PENSION LIABILITY OF THE DISTRICT (CONTINUED)****Discount Rate**

The discount rate used to measure the total pension liability was 7.5%. 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 7.5% was applied to all periods of projected benefit payments to determine the total pension liability.

**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 7.5% 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 (6.5%) or 1 percentage point higher (8.5%) than the current rate:

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
District's net pension liability	<u>\$ 1,269,993,791</u>	<u>\$ 985,074,131</u>	<u>\$ 745,011,954</u>

**Assumption Changes**

No changes in the last four fiscal years.

**NOTE 4. CASH DEPOSITS**

As of December 31, 2017, the Fund's book balance and bank balance of cash is \$1,990,166 and \$2,058,091 respectively, and is held at the Amalgamated Bank of Chicago and JP Morgan Chase Bank. Cash deposits are exposed to custodial credit risk if they are not covered by deposit insurance and are (a) uncollateralized, (b) collateralized with securities held by the pledging financial institution or (c) collateralized with securities held by the pledging financial institution's trust department or agent but not in the Fund's name. The Fund does not have a formal policy relating to custodial risk for deposits. The Fund had no uninsured, uncollateralized cash at December 31, 2017.



**NOTE 5. INVESTMENT SUMMARY****Authorization**

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. By statute, all investments are held in the name of the Metropolitan Water Reclamation District Retirement Fund.

**Investment Policy**

The Board of Trustees’ adopted asset allocation policy at December 31, 2017 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-US Index, 6% S&P Developed Small Cap ex-US Index, 6% MSCI Emerging Markets Index, 7% Barclays Global Aggregate (Hedged) Index, and 28% Barclays Aggregate Index.

**Custodian**

The Fund’s actively managed investments are registered in electronic book entry form and held in Trust Accounts custodied by The Bank of New York Mellon, the Fund’s agent. The Fund’s pooled investments are held in trust and custodied by State Street Global Advisors (SSGA).

**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.

**NOTE 5. INVESTMENT SUMMARY (CONTINUED)****Investment Risk (continued)***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, 2017, 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.

*Rate of Return*

For the year ended December 31, 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 15.62%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

*Interest Rate Risk*

Interest rate risk is defined as the risk that the fair value of an investment will be adversely affected by changes in market interest rates. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value is to changes in market interest rates. 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. INVESTMENT SUMMARY (CONTINUED)****Investment Risk (continued)***Interest Rate Risk (continued)*

The following table categorizes the Fund's interest bearing investments and presents the fair value and segmented time distribution of debt securities held by the Fund as of December 31, 2017:

Type of Investment	Fair Value	Investment Maturities (in Years)			
		Less Than 1	1 -5	6 -10	More Than 10
Fixed income					
U.S. Government and government agency obligations	\$ 93,189,850	\$ 9,710,234	\$ 14,523,807	\$ 7,484,247	\$ 61,471,562
Municipal bonds	3,493,799	3,493,799	-	-	-
Non-U.S. Government obligations	50,014,660 *	1,070,758	21,513,865	12,022,536	15,407,501
Mortgage backed	6,506,573	74,858	-	-	6,431,715
Asset backed	21,597,745	63,358	11,138,493	1,397,338	8,998,556
Corporate bonds and notes	66,134,124	474,043	33,517,617	18,511,073	13,631,391
Common collective trust - fixed income	8,874,993	226,312	2,887,923	5,048,096	712,662
Fixed income	249,811,744	15,113,362	83,581,705	44,463,290	106,653,387
Pooled funds - fixed income					
Short-term investments	30,688,768 *	30,688,768	-	-	-
Long-term investments	184,200,198	-	-	184,200,198	-
Total	<u>\$ 464,700,710</u>	<u>\$ 45,802,130</u>	<u>\$ 83,581,705</u>	<u>\$ 228,663,488</u>	<u>\$ 106,653,387</u>

\* Includes foreign currency-denominated investments

*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.

## NOTE 5. INVESTMENT SUMMARY (CONTINUED)

## Investment Risk (continued)

*Credit Risk (continued)*

Quality ratings are as provided by Moody's. For the common collective trust an average credit quality rating is provided by Bank of America Merrill Lynch. The following table presents a summarization of the credit quality ratings of the holdings within the investments at December 31, 2017:

Type of Investment	Credit Rating	Fair Value	Percentage
Fixed income:			
U.S. Government and government agency obligations:	Aaa	\$ 93,189,850	20.1 %
Municipal bonds	Not Rated	3,493,799	0.8
Non-U.S Government obligations:	A1-A3	1,538,006	0.3
	Aa1-Aa3	2,836,313	0.6
	Aaa	2,052,578	0.4
	Ba1 - Ba3	238,710	0.1
	Baa1 - Baa3	671,313	0.1
	Not Rated	42,677,740	9.2
		50,014,660 *	10.7
Mortgage backed:	A1-A3	57,623	0.0
	Aa1-Aa3	337,008	0.1
	Aaa	4,212,437	0.9
	Not Rated	1,899,505	0.4
		6,506,573	1.4
Asset backed:	A1-A3	2,390,791	0.5
	Aa1-Aa3	2,930,775	0.6
	Aaa	2,905,920	0.6
	B1-B3	429,021	0.1
	Ba1-Ba3	1,025,757	0.2
	Baa1 - Baa3	1,784,141	0.4
	Caa1 - Caa3	528,672	0.1
	Not Rated	9,602,668	2.1
		21,597,745	4.6 %

\* Includes foreign currency-denominated investments

## NOTE 5. INVESTMENT SUMMARY (CONTINUED)

## Investment Risk (continued)

*Credit Risk (continued)*

Type of Investment	Credit Rating	Fair Value	Percentage
Fixed income (continued):			
Corporate bonds and notes:	A1-A3	\$ 12,539,115	2.7 %
	Aa1-Aa3	2,918,515	0.6
	Aaa	6,054,521	1.3
	B1-B3	7,568,090	1.6
	Ba1-Ba3	2,288,159	0.5
	Baa1 - Baa3	9,310,140	2.0
	Caa1 - Caa3	921,677	0.2
	Not Rated	24,533,907	5.3
		<u>66,134,124</u>	<u>14.2</u>
Common collective trust - fixed income	BB-	<u>8,874,993</u>	<u>1.9</u>
Fixed income total		<u>249,811,744</u>	<u>53.7</u>
Fixed income - pooled funds			
Short-term investments	Not Rated	30,688,768	6.6
Long-term investments:	A	20,869,883	4.5
	Aa	6,925,927	1.5
	Aaa	131,297,901	28.3
	Baa	25,069,647	5.4
	Not Rated	<u>36,840</u>	<u>0.0</u>
		<u>214,888,966</u>	<u>46.3</u>
Total		<u>\$ 464,700,710</u>	<u>100.0 %</u>

## NOTE 5. INVESTMENT SUMMARY (CONTINUED)

## Investment Risk (continued)

*Credit Risk (continued)*

Type of Investment	Credit Rating	Fair Value	Percentage
Fixed income (continued):			
Corporate bonds and notes:	A1-A3	\$ 12,539,115	2.7 %
	Aa1-Aa3	2,918,515	0.6
	Aaa	6,054,521	1.3
	B1-B3	7,568,090	1.6
	Ba1-Ba3	2,288,159	0.5
	Baa1 - Baa3	9,310,140	2.0
	Caa1 - Caa3	921,677	0.2
	Not Rated	24,533,907	5.3
		<u>66,134,124</u>	<u>14.2</u>
Common collective trust - fixed income	BB-	<u>8,874,993</u>	<u>1.9</u>
Fixed income total		<u>249,811,744</u>	<u>53.7</u>
Fixed income - pooled funds			
Short-term investments	Not Rated	30,688,768	6.6
Long-term investments:	A	20,869,883	4.5
	Aa	6,925,927	1.5
	Aaa	131,297,901	28.3
	Baa	25,069,647	5.4
	Not Rated	<u>36,840</u>	<u>0.0</u>
		<u>214,888,966</u>	<u>46.3</u>
Total		<u>\$ 464,700,710</u>	<u>100.0 %</u>

## NOTE 5. INVESTMENT SUMMARY (CONTINUED)

## Investment Risk (continued)

*Foreign Currency Risk (continued)*

<u>Type of Investment</u>	<u>Fair Value</u>	<u>Percentage</u>
Fixed Income:		
Corporate bonds and notes:		
Argentina Peso	\$ 1,936,511	3.9 %
Australian Dollar	1,342,096	2.7
Canadian Dollar	2,635,529	5.3
Chilean Peso	490,187	1.0
Euro	9,243,317	18.6
Pound Sterling	2,847,927	5.7
Israeli Shekel	127,978	0.3
Indian Rupee	159,325	0.3
Japanese Yen	19,403,995	39.2
Mexican Peso	1,287,871	2.7
Norwegian Krone	4,259	0.0
New Zealand Dollar	3,881,744	7.8
Russian Rubel	1,014,336	2.0
Swedish Krona	1,115,479	2.2
Thailand Baht	240,052	0.5
Turkish Lira	875,180	1.8
Uruguayan Peso	512,334	1.0
South African Rand	2,468,892	5.0
	<u>\$ 49,587,012</u>	<u>100.0 %</u>

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

<u>Type of Investment</u>	<u>Fair Value</u>	<u>Percentage</u>
Fixed income - pooled funds:		
Short term investments:		
Foreign Cash:		
Argentina Peso	\$ 32,768	1.8 %
Australian Dollar	185,970	10.2
Canadian Dollar	149,912	8.2
Swiss Franc	77,457	4.3
Danish Krone	84,421	4.6
Euro	270,584	15.0
Pound Sterling	91,844	5.0
Hong Kong Dollar	188,059	10.3
Israeli Shekel	129,921	7.1
Japanese Yen	263,174	14.5
Mexican New Peso	50,908	2.8
Norwegian Krone	57,450	3.2
New Zealand Dollar	28,875	1.6
Polish Zloty	29,930	1.6
Russian Ruble	37,797	2.1
Swedish Krona	37,317	2.1
Singapore Dollar	27,180	1.5
Thailand Baht	2,602	0.1
Turkish Lira	9,764	0.5
South African Rand	64,017	3.5
	<u>\$ 1,819,950</u>	<u>100.0 %</u>



**NOTE 6. 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 table on the following page sets forth, by level within the fair value hierarchy, the investments at fair value as of December 31, 2017. The Fund has no Level 3 investments as of December 31, 2017.

**NOTE 6. FAIR VALUE MEASUREMENTS (CONTINUED)**

		Fair Value Measurements at 12/31/17 Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	Total			
<b>Investments by fair value level</b>				
Fixed income				
U.S. Government and government agency obligations	\$ 93,189,850	\$ 30,407,624	\$ 62,782,226	\$ -
Municipal bonds	3,493,799	-	3,493,799	-
Non-U.S. Government obligations	50,014,660	(79,664)	50,094,324	-
Mortgage backed	6,506,573	-	6,506,573	-
Asset backed	21,597,745	-	21,597,745	-
Corporate bonds and notes	66,134,124	-	66,134,124	-
Total fixed income	<u>240,936,751</u>	<u>30,327,960</u>	<u>210,608,791</u>	<u>-</u>
Equity securities				
Common stocks	576,587,803	576,587,803	-	-
Mutual/commingled equity funds	260,975,960	260,975,960	-	-
Total equity securities	<u>837,563,763</u>	<u>837,563,763</u>	<u>-</u>	<u>-</u>
Fixed income - pooled funds -				
Short term investments	30,688,768	-	30,688,768	-
Long term investments	184,200,198	-	184,200,198	-
Total fixed income - pooled funds	<u>214,888,966</u>	<u>-</u>	<u>214,888,966</u>	<u>-</u>
Total investments by fair value level	1,293,389,480	<u>\$ 867,891,723</u>	<u>\$ 425,497,757</u>	<u>\$ -</u>
<b>Investments measured at NAV</b>	<u>90,383,376</u>			
Total investments at fair value	<u>\$ 1,383,772,856</u>			
<b>Investment derivative instruments</b>				
Foreign currency options (liabilities)	\$ (28,229)	\$ -	\$ (28,229)	\$ -
Futures contracts (liabilities)	<u>(36,698)</u>	<u>(36,698)</u>	<u>-</u>	<u>-</u>
Total investment derivative instruments	<u>\$ (64,927)</u>	<u>\$ (36,698)</u>	<u>\$ (28,229)</u>	<u>\$ -</u>

**NOTE 6. FAIR VALUE MEASUREMENTS (CONTINUED)****Level 1**

Common stocks, mutual and commingled equity funds, and U.S. Government and government agency obligations and Non-U.S. Government obligations classified in Level 1 are traded in active markets on national and international securities exchanges and are valued at closing prices on the measurement date.

**Level 2**

U.S. Government and government agency obligations, municipal bonds, non-U.S. Government obligations, mortgage backed securities, asset backed securities, and corporate bonds and notes are classified in Level 2 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.

Investments in the fixed income – pooled funds – short term are valued at cost which approximates their fair value, except for foreign currency which is traded in active markets on national and international exchanges and is valued at closing on the last business day of each period presented. Redemptions are available on a daily basis without restriction.

The investment in the fixed income – pooled fund – long term is comprised of a commingled fund. The fair value of this investment is based on the net asset value per share as determined by reference to the fund's underlying assets, which are principally marketable collective investment funds. Units held in the commingled fund are valued at the unit value as reported by the investment manager as of the last business day of period presented. Redemptions are available on a daily basis without restriction.

**Investments Measured at Net Asset Value**

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

**NOTE 6. FAIR VALUE MEASUREMENTS (CONTINUED)****Investments Measured at Net Asset Value (continued)**

	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (If Currently Eligible)</u>	<u>Redemption Notice Period</u>
Investments measured at net asset value				
Fixed income				
(1) Common collective trust	\$ 8,874,993	-	Monthly	N/A
Mutual and commingled equity funds				
(2) Commingled funds non - US equity	<u>81,508,383</u>	-	2 times monthly	N/A
Total investments measured at net asset value	<u>\$ 90,383,376</u>			

- (1) Common collective trust - The fund's investment objective 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 investment in the fund has been determined using the NAV per share of the investment.
- (2) Commingled funds non - U.S. equity - The fund's investment objective is to approximate as closely as practicable the performance of the MSCI ACWI ex USA Index over the long term by investing in other collective investment funds which have characteristics consistent with the fund's overall investment objective. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

**NOTE 7. 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.

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.

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, 2017 the Plan’s investments included the following forward foreign currency exchange contract balances:

Forward Foreign Currency Exchange Contract receivables	<u>\$ 123,332,605</u>
Forward Foreign Currency Exchange Contract payables	<u>\$ 124,383,722</u>

**NOTE 8. SECURITIES LENDING**

The Fund lends 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 master custodian, requires collateral in the form of cash, 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 master 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.

All securities loans can be terminated on demand by either the Fund or the borrower, although the average term of the loans is one week. Cash collateral is invested in the lending agent's short-term investment pool, which at year-end has a weighted average maturity of 2 days.

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.

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.

**NOTE 8. SECURITIES LENDING (CONTINUED)**

A summary of securities loaned at fair value as of December 31, 2017 is as follows:

Fair value of securities loaned for cash collateral	\$ 26,675,638
Fair value of securities loaned for non-cash collateral	<u>32,031,506</u>
Total fair value of securities loaned	<u>\$ 58,707,144</u>
Fair value of cash collateral from borrowers	\$ 27,447,849
Fair value of non-cash collateral from borrowers	<u>32,788,709</u>
Total fair value of collateral	<u>\$ 60,236,558</u>

The value of the cash collateral held and a corresponding liability to return the collateral are reported on the accompanying statement of fiduciary net position.

The Fund also participates in the securities lending programs offered by State Street Global Advisors (SSGA) with regards to their commingled index 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 bond index fund.

**NOTE 9. PRONOUNCEMENTS ISSUED BUT NOT YET ADOPTED**

In June 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Statement No. 75 replaces the requirements of Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Statement No. 75 requires governments to report a liability on the financial statements for the other postemployment benefits that they provide. Statement No. 75 also requires more extensive note disclosures and required supplementary information about the other postemployment benefit liabilities. Statement No. 75 is effective for the Fund's fiscal year ending December 31, 2018.

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. 85, *Omnibus 2017*. Statement No. 85 addresses practice issues that have been identified during implementation and application of certain GASB Statements. It address a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits (OPEB)). Statement No. 85 is effective for the Fund's fiscal year ending December 31, 2018.

In March 2017, GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. Statement No. 86 improves consistency in accounting and financial reporting for in-substance defeasance of debt and improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. Statement No. 86 is effective for the Fund's fiscal year ending December 31, 2018.

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.

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 Four Fiscal Years

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension liability				
Service cost	\$ 32,370,187	\$ 32,057,687	\$ 32,228,341	\$ 31,602,226
Interest	179,038,283	173,861,700	168,530,178	163,338,376
Differences between expected and actual experience	(1,990,761)	13,813,742	14,421,984	10,861,109
Changes of assumptions	-	-	-	- *
Benefit payments, including refunds of employee contributions	(154,713,043)	(147,336,015)	(140,509,756)	(133,897,848)
Net change in total pension liability	54,704,666	72,397,114	74,670,747	71,903,863
Total pension liability				
Beginning of year	<u>2,432,163,441</u>	<u>2,359,766,327</u>	<u>2,285,095,580</u>	<u>2,213,191,717</u>
End of year	<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	\$ 89,858,224	\$ 80,259,713	\$ 71,041,361	\$ 73,906,168
Contributions - employee	20,839,829	20,830,779	21,385,212	18,974,954
Net investment income (loss)	194,821,459	113,585,872	(1,427,839)	81,600,566
Benefit payments, including refunds of employee contributions	(154,713,043)	(147,336,015)	(140,509,756)	(133,897,848)
Administrative expense	(1,613,976)	(1,502,639)	(1,659,917)	(1,406,507)
Other	<u>3,100</u>	<u>107,175</u>	<u>28,817</u>	<u>4,460</u>
Net change in fiduciary net position	149,195,593	65,944,885	(51,142,122)	39,181,793
Net position restricted for pension benefits				
Beginning of year	<u>1,352,598,383</u>	<u>1,286,653,498</u>	<u>1,337,795,620</u>	<u>1,298,613,827</u>
End of year	<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>\$ 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>60.39%</u>	<u>55.61%</u>	<u>54.52%</u>	<u>58.54%</u>
Covered payroll	<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>534.25%</u>	<u>591.09%</u>	<u>603.58%</u>	<u>537.68%</u>

\* No value is shown in the changes of assumptions because both the beginning and ending total pension liability are based upon the actuarial assumptions adopted in the December 31, 2014 valuation. Those assumptions are listed in Note 3 of these financial statements. This schedule will show information for ten years as the additional years' information becomes available.

See Independent Auditors' Report.

## Required Supplementary Information

## Financial Section

### Metropolitan Water Reclamation District Retirement Fund Required Supplementary Information Schedule of District Contributions and Related Note

Last Ten Years

	<u>2008</u>	<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>
Actuarially Determined Contribution (ADC)	\$ 49,758,238	\$ 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
Contributions in Relation to the ADC	33,406,819	32,153,874	29,917,793	37,379,137	65,097,835	92,944,381	73,906,168	71,041,361	80,259,713	89,858,224
Contribution deficiency (excess)	<u>\$ 16,351,419</u>	<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>
Covered payroll	<u>\$ 167,865,254</u>	<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>
Contributions as a percentage of covered payroll	<u>19.90%</u>	<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>

#### NOTE TO SCHEDULE:

Valuation date:

December 31, 2017

Methods and assumptions used to

determine contributions:

Actuarial cost method

Amortization method

Remaining amortization period

Actuarial asset method

Investment rate of return

Inflation

Salary increases

Payroll growth

Termination rates

Mortality rates

Retirement rates

Disability rates

Entry Age Normal

Level percent of pay, closed.

34 years remaining amortization as of 1/1/17.

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.

7.50% per year compounded annually, net of investment related expenses.

2.5% per year

Vary by service.

3.7% per year

Termination rates vary by age and gender.

Healthy Members: RP-2000 Combined Healthy Mortality Table with Generational Mortality Improvements (Scale AA).

Disabled Members: RP-2000 Disabled Retiree Mortality Table.

Retirement rates are based on the most recent experience analysis and vary by age of member.

Disability rates vary by age.

See Independent Auditors' Report.

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

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	<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, 2017  
(with comparative amounts for prior year)

	<u>2017</u>	<u>2016</u>
Salaries and wages		
Regular employees	\$ 1,028,980	\$ 1,065,647
Employee benefits	137,113	151,463
	<u>1,166,093</u>	<u>1,217,110</u>
Professional services		
Actuarial	54,091	58,516
Legal and lobbyist	48,949	46,100
Audit and state regulatory fees	35,000	34,500
Public stenographer	7,312	7,945
Medical	5,496	4,906
Investigation	1,674	830
	<u>152,522</u>	<u>152,797</u>
Other administrative expenses		
Printing and publication	4,010	5,025
Postage	11,086	11,836
Office supplies and furniture	4,636	5,440
Travel	748	684
Maintenance and repair	803	155
Payments to consultants	222,085	86,137
Membership dues, conference fees, subscriptions and publications	6,478	8,095
Computer hardware and software	12,463	2,937
Insurance	21,510	-
Miscellaneous	11,542	12,423
	<u>295,361</u>	<u>132,732</u>
Total administrative expenses	<u>\$ 1,613,976</u>	<u>\$ 1,502,639</u>

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

**Schedule of Investments Expenses**

Year ended December 31, 2017  
(with comparative amounts for prior year)

	<u>2017</u>	<u>2016</u>
Investment manager fees	\$ 4,255,449	\$ 4,200,633
Custodian fees	195,304	247,032
Investment consulting fees	<u>170,000</u>	<u>166,018</u>
Investment expenses	<u>\$ 4,620,753</u>	<u>\$ 4,613,683</u>

**Schedule of Payments to Consultants**

Year Ended December 31, 2017  
(with comparative amounts for prior year)

<u>Firm / Individual</u>	<u>Services</u>	<u>2017</u>	<u>2016</u>
Novitas (formerly JC Consulting Group, Inc.)	Benefit system maintenance and development	\$ 184,568	\$ 53,920
Elizabeth Cataudella	Benefits consultant	35,375	30,813
Crestwood Associates	MS Dynamics upgrade	1,998	1,260
Best Case Technologies	Website consultant	<u>144</u>	<u>144</u>
Total payments to consultants		<u>\$ 222,085</u>	<u>\$ 86,137</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



500 Grant Street  
151-4040  
Pittsburgh, PA 15258

April 25, 2018

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, 2017 through December 31, 2017.

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 blue ink, appearing to read "Michael D. Skirtich".

Michael D. Skirtich

Vice President/Relationship Manager

(412) 234-6527



March 15, 2018

Board of Trustees  
Metropolitan Water Reclamation District Retirement Fund  
100 East Erie Street  
Chicago, IL 60611

To the Board of Trustees:

Marquette Associates ("Marquette") is the independent investment consultant for the Metropolitan Water Reclamation District Retirement Fund ("MWRDRF"). Marquette is responsible for the implementation of the MWRDRF's 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 MWRDRF is 7.5%. In 2017, the MWRDRF returned 15.6% net of fees. Over the same period, the policy index returned 15.7%. At the end of 2017, the MWRDRF's Policy index was comprised of approximate weightings in the following indices: Bloomberg Barclays U.S. Aggregate Index (28.0%), Bloomberg Barclays Global Aggregate Index – Hedged (7.0%), S&P 500 Index (21.0%), Russell MidCap Index (10.0%), Russell 2000 Index (11.0%), MSCI ACWI ex-U.S Index (11.0%), S&P Developed Small Cap ex-U.S Index (6.0%) and MSCI EM Index (6.0%).

The yield curve flattened dramatically in 2017 as the Fed remained cautious of curve inversion. The market ended 2017 by projecting three rate hikes in 2018 while temporary nominal U.S. GDP growth increases from 3.4% to 3.5% were priced into tight spread levels. The MWRDRF ended 2017 with a 31.2% allocation to fixed income; net of fees, the fixed income composite returned 3.9% versus the benchmark (Bloomberg Barclays U.S. Aggregate Index) which returned 3.5%.

In the domestic equity market, 2017 commenced with a continuation of the 2016 post-election rally. The year was somewhat of an anomaly as company earnings saw ongoing support with minimal downward revisions relative to prior years. As equities continued to grind higher throughout the year, major indices repeatedly hit new all-time highs. During the year, the S&P 500 Index and the DJIA Index logged 62 and 71 new closing highs, respectively. A defining characteristic of 2017 was the low volatility environment. The VIX remained low throughout the year and hit one of its lowest levels ever in May at 9.8. Over the course of 2017, market drawdowns were minor and short-lived. With a max intra-year drawdown of 3%, 2017 experienced the smallest pullback going back to 1995. The MWRDRF ended the year with a 44.7% allocation to U.S. equities; net of fees, the U.S. equities composite returned 18.3% versus the benchmark (Wilshire 5000 Total Market Index) which returned 21.0%.

Non-U.S. equity investors' patience was finally rewarded with a banner year in 2017, as both strong economic and earnings growth across the globe fueled index performance higher. Broad benchmarks returned more than 20% including the MSCI EAFE Index (25%), MSCI EAFE Small-Cap Index (33%), and the MSCI Emerging Markets Index (37%). The developed markets sidestepped political landmines with market-friendly election outcomes in the Netherlands, France, and Germany. Emerging market returns drove a major reversal to investor sentiment, leading to the first positive inflows in the last 4 years. The dollar weakened, boosting non-U.S. equity returns for U.S.-based investors. The MWRDRF ended 2017 with a 24.1% allocation to non-U.S. equities; net of fees, the non-U.S. equity composite had a 28.6% return versus the benchmark (MSCI ACWI ex US Index) which returned 27.2%.



The MWRDF portfolio continues to be highly liquid and transparent and the use of dedicated passive management in U.S and non-U.S equities has helped to control the portfolio's tracking error versus the policy benchmark. Also, the MWRDF's allocation to international equities was one of the key drivers of the double-digit performance that was realized by the portfolio at the end of the year.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kweku Obed', is positioned above the printed name.

Kweku Obed, CFA, CAIA

## 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 and its actuarial return assumption of 7.5%. The Fund's policy index is as follows:

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
28%	Barclay's US Aggregate Index
7%	Barclays Global Aggregate (Hedged) 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, 2017, and 2016, the Fund's asset allocation percentages based on assets under management on p.79, are listed below.

Asset Class	2017 Actual Asset Allocation	2017 Target Allocation	2016 Actual Asset Allocation
Domestic Equity	43.9%	42.0%	43.2%
International Equity	24.1%	23.0%	22.3%
Domestic Fixed Income	25.5%	28.0%	27.7%
Global Fixed Income	6.5%	7.0%	6.8%
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 2017, 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:

- Trustees received additional education and training on fixed income diversification and a real estate investment overview presented by Marquette Associates.
- In July, the Board of Trustees approved the posting of an RFP for an Investment Manager to manage 5% of the assets under management in a Core Open-End Real Estate Fund.
- In October, the Trustees approved the hiring of UBS Realty Advisors and Deutsche Asset Management to manage a 5% allocation equal to approximately \$70.0 million to Core Open-End Real Estate split evenly between the two managers.
- The Trustees revised the Fund's Investment Policy to reflect the addition of a 5% allocation to Core Open-End Real Estate.
- In 2017 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 67%, 21% and 28% of par, respectively.

**INVESTMENT PERFORMANCE**

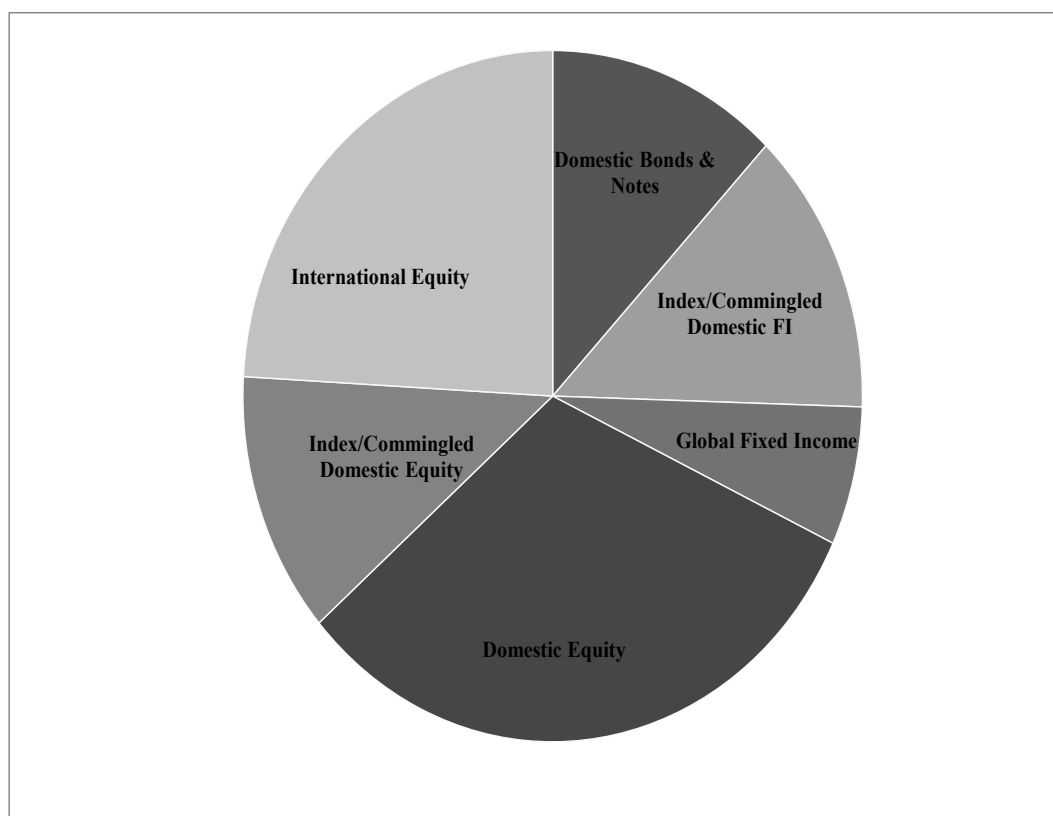
Marquette Associates evaluates investment manager performance as well as overall performance on a monthly and quarterly basis and presents their reports to the Trustees at the monthly Board meetings. Investment returns are calculated based on a time-weighted rate of return based on market values and 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, 2017 was 15.6% net of fees, compared to the Fund's Policy Index return of 15.7%. 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*.

**ASSET ALLOCATION**  
**Summary at Market Value**  
**December 31, 2017 and 2016**

	<u>December 31, 2017</u>		<u>December 31, 2016</u>	
Fixed Income Investments				
Domestic Bonds & Notes	\$167,708,532	12.1 %	\$157,798,187	12.3 %
Index/Commingled Domestic FI	184,200,212	13.4	195,103,893	15.4
Global Fixed Income	<u>90,613,860</u>	<u>6.5</u>	<u>86,663,602</u>	<u>6.8</u>
	442,522,604	32.0	439,565,682	34.5
Equity Investments				
Domestic Equity	438,094,325	31.6	401,826,617	31.6
Index/Commingled Domestic Equity	169,595,171	12.3	147,005,511	11.6
International Equity	<u>333,545,437</u>	<u>24.1</u>	<u>283,385,088</u>	<u>22.3</u>
	941,234,933	68.0	832,217,216	65.5
Cash	<u>15,319</u>	<u>-</u>	<u>9,272</u>	<u>-</u>
Total at Market Value	<u>\$1,383,772,856</u>	<u>100.0 %</u>	<u>\$1,271,792,170</u>	<u>100.0 %</u>

**Asset Allocation at Market Value**  
**December 31, 2017**





## SCHEDULE OF INVESTMENT RETURNS

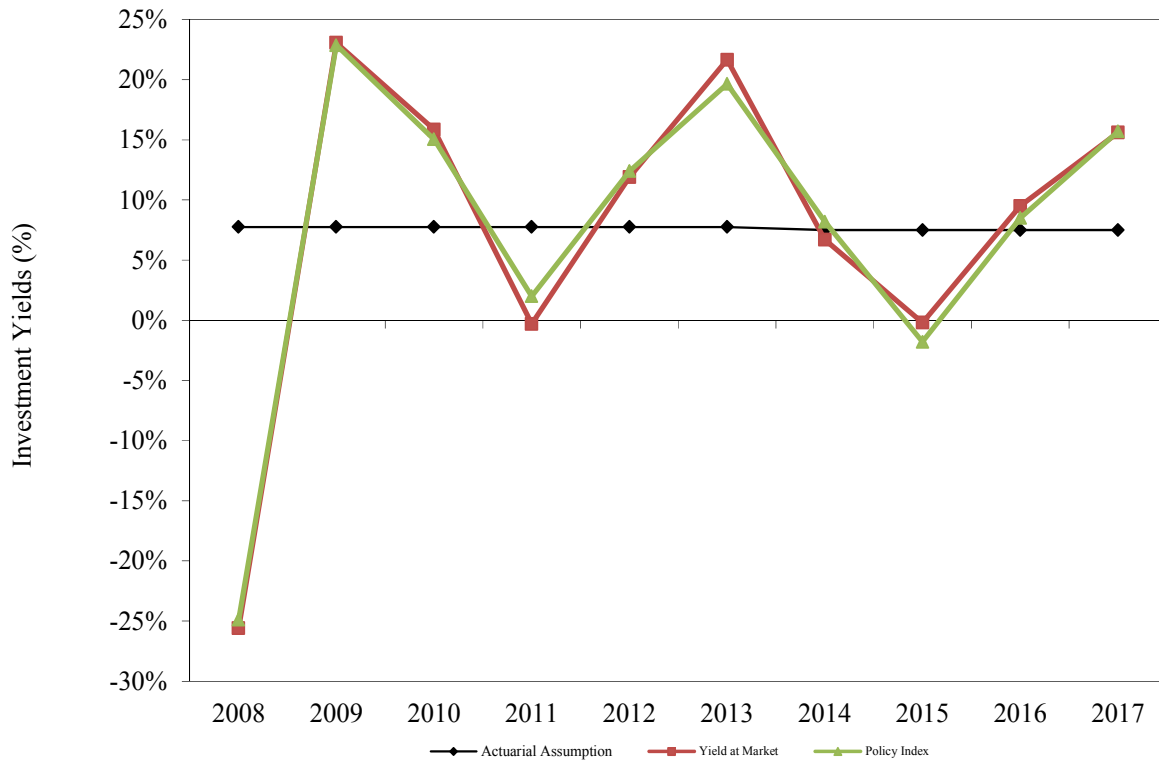
	Year ending 12/31/17 <sup>1,2</sup>	3-Year Annualized	5-Year Annualized	10-Year Annualized
<b>Fund's Total Portfolio</b>	<b>15.6 %</b>	<b>8.1 %</b>	<b>10.4 %</b>	<b>6.9 %</b>
Policy Index	15.7	7.9	10.2	6.9
<b>Fund's Domestic Equity Composite</b>	<b>18.3</b>	<b>10.6</b>	<b>15.3</b>	<b>7.7</b>
Wilshire 5000 - Composite Index	21.0	11.4	15.7	8.6
Policy Index Components:				
S&P 500 - Large cap Index	21.8	11.4	15.8	8.5
Russell Mid Cap - Mid cap Index	18.5	9.6	15.0	9.1
Russell 2000 - Small cap Index	14.6	10.0	14.1	8.7
<b>Fund's International Equities</b>	<b>28.8</b>	<b>11.8</b>	<b>9.5</b>	<b>3.7</b>
Policy Index Components:				
MSCI ACWI ex-US Index	27.2	-	-	-
S&P Developed Small Cap ex-US Index	32.4	13.4	-	-
MSCI Emerging Markets Index	37.3	-	-	-
<b>Fund's Fixed Income</b>	<b>3.9</b>	<b>2.5</b>	<b>2.4</b>	<b>4.0</b>
Policy Index Components:				
Barclay's US Aggregate	3.5	2.2	2.1	4.0
Barclay's Global Aggregate (Hedged) Index	3.0	-	-	-

1. The Fund's Policy Index is 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 since July 2016.
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.

**HISTORY OF INVESTMENT RETURNS AT MARKET VALUE**

Years ending December 31

Year	Invested Assets	Actuarial Assumption	Yield at Market <sup>1</sup>	Fund's Policy Index <sup>2</sup>
2008	\$ 850,451,228	7.75%	-25.6%	-24.9%
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%
5 year annualized return			10.4%	10.2%
10 year annualized return			6.9%	6.9%



<sup>1</sup> Time weighted investment returns are reported net of investment fees.

<sup>2</sup> The Fund's Policy Index is detailed on the previous page.

**HISTORICAL ASSET ALLOCATION AT MARKET VALUE****Last Ten Years**

	<b>Market Value as a Percent of Portfolio<sup>1</sup></b>									
	<b><u>2008</u></b>	<b><u>2009</u></b>	<b><u>2010</u></b>	<b><u>2011</u></b>	<b><u>2012</u></b>	<b><u>2013</u></b>	<b><u>2014</u></b>	<b><u>2015</u></b>	<b><u>2016</u></b>	<b><u>2017</u></b>
<b>Equities</b>										
Domestic Equities	42.0	48.9	60.9	55.0	53.0	58.3	48.5	30.1	31.6	31.6
Index/Commingled Domestic Equities	5.9	10.3	1.9	-	-	-	-	16.4	11.6	12.3
International Equities	<u>4.1</u>	<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>52.0</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>
<b>Fixed Income</b>										
Domestic Fixed Income	4.5	-	-	-	15.7	12.9	19.7	19.5	12.3	12.1
Index/Commingled Domestic Fixed Income	43.5	36.3	32.0	34.6	21.9	19.4	17.1	12.4	15.4	13.4
Global Fixed Income								6.0	6.8	6.5
	<u>48.0</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>
<b>Total Portfolio</b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>

<sup>1</sup> Allocation percentages based on Assets Under Management as of December 31<sup>st</sup> on p.79.

**FIXED INCOME DIVERSIFICATION**  
**as of December 31, 2017**

	Market Value (MV)	MV as a % of Total Fixed Income
<b>Domestic Fixed Income</b>		
Treasuries & Government	\$ 88,921,901	35.6 %
Corporate	42,209,146	16.9
Mortgage-backed	6,506,572	2.6
Asset-Backed	19,921,089	8.0
Municipals	3,493,799	1.4
Total Domestic Fixed Income	161,052,507	64.5
<b>Global Fixed Income</b>		
Treasuries & Government	4,267,948	1.7
Corporate	32,799,971	13.1
Asset-Backed	1,676,656	0.7
Foreign	50,014,661	20.0
Total Global Fixed Income	88,759,236	35.5
Total Fixed Income <sup>1</sup>	\$ 249,811,744	100.0 %

<sup>1</sup> 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, 2017**

	Market Value (MV)	MV as a % of Total Equity
<b>Domestic Equities</b>		
Consumer Discretionary	\$ 69,113,828	12.0 %
Consumer Staples	19,083,317	3.3
Energy	19,283,944	3.3
Financials	95,271,555	16.5
Health Care	48,783,231	8.5
Industrials	60,245,226	10.4
Information Technology	69,300,910	12.0
Materials	14,509,157	2.5
Telecommunication Services	3,295,324	0.6
Utilities	4,963,527	0.9
Real Estate	17,734,664	3.1
Unclassified	1,260,286	0.2
Total Domestic Equities	422,844,969	73.3
<b>International Equities</b>		
Consumer Discretionary	21,121,978	3.7
Consumer Staples	12,405,465	2.2
Energy	5,271,957	0.9
Financials	25,424,021	4.4
Health Care	11,764,476	2.0
Industrials	23,379,210	4.1
Information Technology	8,108,903	1.4
Materials	15,626,919	2.7
Telecommunication Services	7,606,906	1.3
Utilities	7,428,705	1.3
Real Estate	8,560,237	1.5
Unclassified	7,044,056	1.2
Total International Equities	153,742,834	26.7
Total Equity <sup>1</sup>	\$ 576,587,803	100.0 %

<sup>1</sup> 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 <sup>1</sup>**  
**as of December 31, 2017**

<u>Company Name</u>	<u>Industry</u>	<u>Shares</u>	<u>Market Value</u>
Aflac Inc	Insurance	60,300	\$5,293,134
Boeing Co	Aerospace/Defense	17,411	5,134,678
Apple Inc	Computers	27,422	4,640,625
First American Financial Corp	Insurance	68,900	3,861,156
JM Smucker Co	Food Processing	29,900	3,714,776
Zimmer Biomet Holdings Inc	Health Care	30,300	3,656,301
Lazard Ltd	Diversified Financial Services	68,400	3,591,000
Laboratory Corp Of America Hol	Health Care Services	22,500	3,588,975
Northern Trust Corp	Banks	34,100	3,406,249
Valero Energy Corp	Oil & Gas	37,010	3,401,589
Corning Inc	Electronics	104,314	3,337,005
Alphabet Inc-Cl A	Internet	3,131	3,298,195
Microsoft Corp	Software	38,125	3,261,213
Ameriprise Financial Inc	Diversified Financial Services	18,272	3,096,556
Citigroup Inc	Banks	41,109	3,058,921
Stanley Black & Decker Inc	Hand/Machine Tools	17,981	3,051,196
Kennametal Inc	Hand/Machine Tools	61,300	2,967,533
Lyondellbasell Industries	Chemicals	25,853	2,852,103
Aetna Inc	Health Care Services	15,540	2,803,261
Interpublic Group of Cos Inc	Advertising	137,700	2,776,032
Keysight Technologies Inc	Electronics	65,900	2,741,440
Mcdonald'S Corp	Retail	15,438	2,657,189
Monro Inc	Commercial Services	45,961	2,617,479
Western Union Co	Commercial Services	136,854	2,601,595
Euronet Worldwide Inc	Commercial Services	30,435	2,564,757
Mattel Inc	Toys/Games/Hobbies	166,600	2,562,308
Altra Industrial Motion Corp	Machinery - Diversified	50,595	2,549,988
Amazon.Com Inc	Internet	2,150	2,514,361
Illinois Tool Works Inc	Misc Manufacturer	14,600	2,436,010
Omnicom Group Inc	Advertising	33,400	2,432,522
JP Morgan Chase & Co	Banks	22,600	2,416,844
CBS Corp	Media	40,664	2,399,176
Houlihan Lokey Inc	Diversified Financial Services	52,500	2,385,075
Thermo Fisher Scientific Inc	Health Care	12,324	2,340,081
Borgwarner Inc	Auto Parts & Equipment	45,700	2,334,813
National Oilwell Varco Inc	Oil & Gas Services	64,400	2,319,688
Wesco International Inc	Wholesale Dist	33,505	2,283,366
Ebix Inc	Software	28,689	2,273,603
Amgen Inc	Biotechnology	12,850	2,234,615
Arbor Realty Trust Inc	Equity REIT	254,960	2,202,854

<sup>1</sup> A complete list of the Fund's portfolio holdings is available for review in the Fund's Administrative Office.

## Investment Analytics

## Investment Section

### MANAGER BY TYPE AND ASSETS MANAGED

#### Assets Under Management at Market Value

	December 31, 2017		December 31, 2016	
	Market Value	% of Total	Market Value	% of Total
<u>Fixed Income Managers</u>				
Domestic Fixed Income				
State Street Global Advisors	\$ 184,200,212	13.4 %	\$ 195,103,893	15.4 %
Neuberger Berman	116,040,487	8.4	107,384,131	8.4
Garcia Hamilton & Associates	51,668,045	3.7	49,859,556	3.9
Pioneer Investments	-	-	554,500	-
Subtotal	351,908,744	25.5	352,902,080	27.7
Global Fixed Income				
Standish	90,613,860	6.5	86,663,602	6.8
Total Fixed Income	442,522,604	32.0	439,565,682	34.5
<u>Equity Managers</u>				
Domestic Equity				
Ariel Investments	89,113,750	6.4	80,815,596	6.4
Decatur Capital Management, Inc.	70,007,169	5.1	54,672,456	4.3
Mesirow Financial Management	28,200,269	2.0	28,177,480	2.2
LSV Asset Management	72,853,220	5.3	70,392,015	5.5
Matarin Capital Management	58,160,928	4.2	58,759,286	4.6
O'Shaughnessy Asset Management, LLC.	45,429,048	3.3	36,320,444	2.9
State Street Global Advisors	169,595,171	12.3	147,005,511	11.6
Wasatch Advisors	74,329,942	5.4	72,689,340	5.7
Subtotal	607,689,497	43.9	548,832,128	43.2
International Equity				
Hexavest Inc.	72,100,149	5.2	60,863,530	4.8
Dimensional Fund Advisors	91,380,793	6.6	74,743,620	5.9
LSV Asset Management	88,556,103	6.4	83,846,936	6.6
State Street Global Advisors	81,508,392	5.9	63,931,002	5.0
Subtotal	333,545,437	24.1	283,385,088	22.3
Total Equities	941,234,933	68.0	832,217,216	65.5
Cash in Transition Accounts	15,319	0.0	9,272	0.0
Total Investments	<u>\$1,383,772,856</u>	<u>100.0 %</u>	<u>\$1,271,792,170</u>	<u>100.0 %</u>

**INVESTMENT MANAGER COMPENSATION**Investment Managers:<sup>1</sup>

	2017	2016
Ariel Investments	\$ 417,382	\$ 358,523
Decatur Capital Management, Inc.	352,631	242,850
Garcia Hamilton & Associates	99,041	30,345
Herndon Capital Management, LLC.	-	84,789
Hexavest Inc.	380,339	339,518
LSV Asset Management	1,071,895	997,472
Matarin Capital Management	407,503	349,153
Mesirow Financial Management	198,659	185,549
Neuberger Berman	255,439	270,610
O'Shaughnessy Asset Management, LLC.	185,768	156,257
Pioneer Institutional Asset Management	1,511	241,691
Standish Mellon Asset Management	222,740	203,441
State Street Global Advisors	114,882	92,335
Vontobel Asset Management	-	113,492
WCM Investment Management	-	49,124
Wasatch Advisors	563,400	484,985
Total	\$ 4,271,190	\$ 4,200,134

**CUSTODIAL FEES**<sup>2</sup>Institution

Bank of New York Mellon Co.	\$ 179,563	\$ 247,032
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**INVESTMENT CONSULTANT FEES**<sup>3</sup>Consulting Firm

Marquette Associates	\$ 170,000	\$ 166,518
Total Investment Expenses	<u>\$ 4,620,753</u>	<u>\$ 4,613,683</u>

<sup>1</sup> 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.

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

<sup>3</sup> Investment consultant fees less in 2016 due to commission recapture payment made by BNY Convergenx to Marquette Associates on behalf of the Fund.



## SCHEDULE OF 2017 DOMESTIC BROKERAGE COMMISSIONS

<u>Broker Name</u>	<u>Commissions<sup>1</sup></u>	<u>% of Total</u>
Loop Capital Markets <sup>2</sup>	\$ 31,163	13.9 %
Castleoak Securities <sup>2</sup>	25,666	11.5
CL King & Associates <sup>2</sup>	24,437	10.9
Penserra Securities <sup>2</sup>	17,109	7.6
Cabrera Capital Markets <sup>2</sup>	14,882	6.6
Drexel Hamilton LLC <sup>2</sup>	14,100	6.3
Williams Capital Group LP <sup>2</sup>	11,888	5.3
Robert W. Baird & Co	8,429	3.8
Bloomberg Tradebook LLC	8,405	3.8
Academy Securities Inc. <sup>2</sup>	6,393	2.9
ITG Inc	5,646	2.5
Credit Suisse Securities (USA) LLC	5,547	2.5
Instinet	5,014	2.2
Stifel Nicolaus & Co Inc	4,949	2.2
Weeden & Co LP	3,279	1.5
Raymond James	2,828	1.3
Liquidnet Holdings Inc	2,633	1.2
William Blair & Company	2,619	1.2
Subtotal	194,987	87.0
All others <sup>3</sup>	29,174	13.0
Total	<u>\$ 224,161</u>	<u>100.0 %</u>

<sup>1</sup> 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.

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

<sup>3</sup> Brokerage firms that each received less than 1.0% of the total commissions.

**SCHEDULE OF 2017 INTERNATIONAL BROKERAGE COMMISSIONS**

<u>Broker Name</u>	<u>Commissions</u>	<u>% of Total</u>
Mischler Financial <sup>2</sup>	\$ 22,566	15.5 %
Morgan Stanley	12,081	8.3
Credit Suisse	10,368	7.1
Deutsche Bank	7,582	5.2
UBS	7,192	4.9
JP Morgan Securities	6,437	4.4
Pictet Canada	5,828	4.0
ITG	5,576	3.8
Goldman Sachs	5,460	3.8
Merrill Lynch	5,065	3.5
SMBC	4,769	3.3
Redburn	4,618	3.2
RBC Capital Markets	4,522	3.1
Macquarie Securities	4,391	3.0
CLSA	4,139	2.8
Societe Generale	3,918	2.7
Cabrera Capital <sup>2</sup>	3,793	2.6
Barclays Capital	3,760	2.6
Mizuho Securities	3,715	2.6
Instinet	3,179	2.2
Keefe, Bruyette & Woods	2,836	1.9
ODDO Securities	2,767	1.9
Loop Capital Markets <sup>2</sup>	2,668	1.8
Citigroup	2,020	1.4
Natixis	1,999	1.4
Liquidnet	1,610	1.1
Subtotal	142,859	98.1
All others <sup>3</sup>	2,601	1.9
Total	<u>\$ 145,460</u>	<u>100.0 %</u>

<sup>1</sup> 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.

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

<sup>3</sup> 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



April 30, 2018

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, 2017 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 3.12 is required to cover the full actuarially determined contribution requirement for the year 2018.

Illinois Public Act 97-0894 provided for changes to member contribution requirements and the required tax levy multiplier. The expected member contributions in 2018 reflect the same rates expected in 2017.

The actuarial assumptions used in the December 31, 2017 valuation are the same as those used in the December 31, 2016 valuation. They are based on an experience analysis performed by Foster & Foster for the Fund over the period December 31, 2008 through December 31, 2013.

The entry age normal actuarial cost method was used for both the December 31, 2017 valuation and the December 31, 2016 valuation.

The asset values used in the valuation were provided in the December 31, 2017 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, 2016 valuation.

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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.

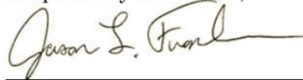
The trend data schedules presented in the financial section of the Comprehensive Annual Financial Report (CAFR) were prepared by the staff of the Fund based on information contained in the historical actuarial reports. The following exhibits included in the accompanying actuarial section were prepared 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, 2017.

Respectfully submitted,



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.

Until the 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 7.5% as of the 12/31/14 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, 2018 was determined to be \$33.1 million or 17.93% of payroll (11.42% of payroll is expected from employee contributions and 6.51% 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. Recent legislation however has changed the computation of the tax levy, resulting in higher District contributions that more closely approximate 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, 2017 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**

	<b><u>2017</u></b>	<b><u>2016</u></b>
Additions		
Gross investment income <sup>1</sup>	\$ 199,099,527	\$ 117,872,995
Securities lending income	345,785	433,735
Employer contributions	89,858,224	80,259,713
Employee contributions	<u>20,839,829</u>	<u>20,830,779</u>
Total income	310,143,365	219,397,222
Outgoing		
Refunds, benefits, administrative expense <sup>2</sup>	<u>160,947,772</u>	<u>153,452,337</u>
Excess of Income Over Outgoing	<u><u>\$ 149,195,593</u></u>	<u><u>\$ 65,944,885</u></u>
Number of Members	<b><u>12/31/2017</u></b>	<b><u>12/31/2016</u></b>
Active Members	1,835	1,843
Inactive Members	137	135
Members Receiving Annuity Benefits		
Retirees	1,809	1,779
Spouses	576	590
Children	<u>23</u>	<u>25</u>
Total Members	<u><u>4,380</u></u>	<u><u>4,372</u></u>
Members Receiving Disability Benefits	30	23
Active Member Pensionable Payroll <sup>3</sup>	\$184,385,188	\$182,640,163
Present Value of Future Benefits	\$2,776,759,424	\$2,726,249,184
Actuarial Funding - Going Concern		
Total Actuarial Liability	\$2,497,890,179	\$2,443,291,644
Actuarial Value of Assets <sup>4</sup>	\$1,456,195,876	\$1,372,361,950
Unfunded Actuarial Liability	\$1,041,694,303	\$1,070,929,694
Funded Ratio	58.3%	56.2%

<sup>1</sup> Includes Other Income<sup>2</sup> Includes Investment Expenses<sup>3</sup> Active Member Pensionable Payroll is annualized based on actual payroll paid to active members in payperiod 26<sup>4</sup> Actuarial asset values are calculated using a five-year smoothed market value



**SUMMARY OF VALUATION RESULTS AS OF DECEMBER 31, 2017**

## Actuarial Liabilities for Active Members

Retirement	\$ 695,236,448
Termination	9,860,864
Death	24,375,725
Disability	<u>7,159,381</u>
Total	736,632,418

## Actuarial Liabilities for Members Receiving Benefits

Retirement Annuities	1,536,538,430
Survivor Annuities/Children	<u>209,059,868</u>
Total	1,745,598,298

## Actuarial Liability for Inactive Members

15,659,463

## Total Actuarial Liability

\$ 2,497,890,179

## Actuarial Value of Assets

1,456,195,876

## Unfunded Actuarial Liability

\$ 1,041,694,303

## Funded Ratio

58.3%

**CHANGES IN UNFUNDED ACCRUED ACTUARIAL LIABILITY  
YEAR ENDED DECEMBER 31, 2017**

1. Unfunded actuarial accrued liability (UAAL) as of 12/31/16		\$ 1,070,929,694
2. Employer normal cost developed as of 12/31/16	\$ 12,094,866	
3. Expected interest on 1 and 2	81,226,842	
4. Less: Actual employer contribution for the year	89,858,224	
5. Less: Expected interest on 4	<u>3,308,766</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>154,718</u>
7. Expected UAAL as of 12/31/17		1,071,084,412
8. Change in UAAL due to actuarial (gain)/loss and assumption/method changes, by component:		
Decrease in UAAL due to investment return higher than assumed	(27,925,002)	
Decrease in UAAL due to salary increases lower than assumed	(11,576,111)	
Increase in UAAL due to decrement experience	13,672,315	
Increase in UAAL due to inactive mortality experience	(2,787,776)	
Increase in UAAL due to other changes	<u>(773,535)</u>	
Net decrease in UAAL due to actuarial experience		<u>(29,390,109)</u>
9. Unfunded actuarial accrued liability as of 12/31/17		<u><u>\$ 1,041,694,303</u></u>

## ACTUARIAL ASSUMPTIONS AND METHODS

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Below is a summary of the actuarial assumptions for the December 31, 2017 valuation. An experience study was performed in September of 2014 based on data for the period December 31, 2008 through December 31, 2013. 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, 2014.

Interest Rate	7.50%
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%
Payroll Growth	3.70%
Retirement Rates	See Table 2
Mortality Rates – Healthy Lives	RP-2000 Combined Healthy Mortality Table with Generational Mortality Improvements (Scale AA).
Mortality Rates – Disabled Lives	RP-2000 Disabled Retiree Mortality Table
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, 2017

**Changes in Funding Assumptions/Methods since the prior valuation:**

**Method Changes**

- None

**Assumption Changes**

- None

ACTUARIAL ASSUMPTIONS AND METHODS, CONTINUED

Table 1 – Salary Increase Rates

Service	Salary Increase Rate
0	7.00%
1	6.25%
2	5.75%
3	5.50%
4	5.25%
5	5.00%
6	4.75%
7	4.50%
8	4.50%
9+	4.25%

Table 2 – Retirement Rates

Age	Retirement Rate
50 - 59	6%
60 - 64	13%
65	15%
66 - 67	19%
68 - 69	20%
70 - 74	25%
75	100%

ACTUARIAL ASSUMPTIONS AND METHODS, CONTINUED

Table 3 – Termination Rates

Service	Male Rate	Female Rate
0	4.000%	5.733%
1	3.480%	4.973%
2	3.089%	5.064%
3	2.604%	4.759%
4	2.245%	4.518%
5	1.780%	4.490%
6	1.561%	4.193%
7	1.500%	3.945%
8	1.500%	3.646%
9	1.500%	2.342%
10	1.502%	2.054%
11	1.391%	1.946%
12	1.343%	1.898%
13	1.244%	1.859%
14	1.189%	1.772%
15	1.111%	1.772%
16	0.985%	1.772%
17+	0.500%	1.772%

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

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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"> <li>(a) 2.2% of Average Final Salary for each year of service up to 20 years.</li> <li>(b) 2.4% of Average Final Salary for each year of service in excess of 20 years</li> </ul> <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: 0.5% per 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	<p>The annual benefit payable at the following ages:</p> <p>Hired before January 1, 2011:</p> <p>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</p> <p>Age 55 (50 if hired before June 13, 1997), if withdraw with 10 years of service</p> <p>Hired on or after January 1, 2011: Age 62, if withdraw with 10 years of service</p> <p>The annual benefit amount equals the Normal Retirement Benefit reduced with Early Retirement Reductions.</p>
Minimum Retirement Annuity	<p>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</p> <p>Less than 10 years of service or retirement before age 60: \$250 per month</p>
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	<p>75% of salary earned on the date of disability, less the amount paid by Workers' Compensation</p> <p>Benefit is 50% of salary if disability resulted from physical defect or disease that existed at the time injury was sustained.</p> <p>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.</p>



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 (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 <sup>1</sup>	Employer Contribution <sup>2</sup>	Legislative Amendments
2008	\$ 1,116,908	\$ 86,292,325	\$ 26,926,611	\$ -
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	-
	<u>\$ (92,883,651)</u>	<u>\$ 216,914,758</u>	<u>\$ 236,806,341</u>	<u>\$ -</u>

Year	Changes in Actuarial Assumptions	(see assumption reference key 3)	All Other Miscellaneous Experience	Total Increase (Decrease) in Unfunded Liability
2008	\$ (22,899,666)	(rb)	\$ 10,718,411	\$ 102,154,589
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)
	<u>\$ 56,535,794</u>		<u>\$ 86,034,336</u>	<u>\$ 503,407,578</u>

<sup>1</sup> Represents investment income deficiency (excess) over expected returns.

<sup>2</sup> Represents employer contributions deficiency (excess) from normal cost plus interest.

<sup>3</sup> 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

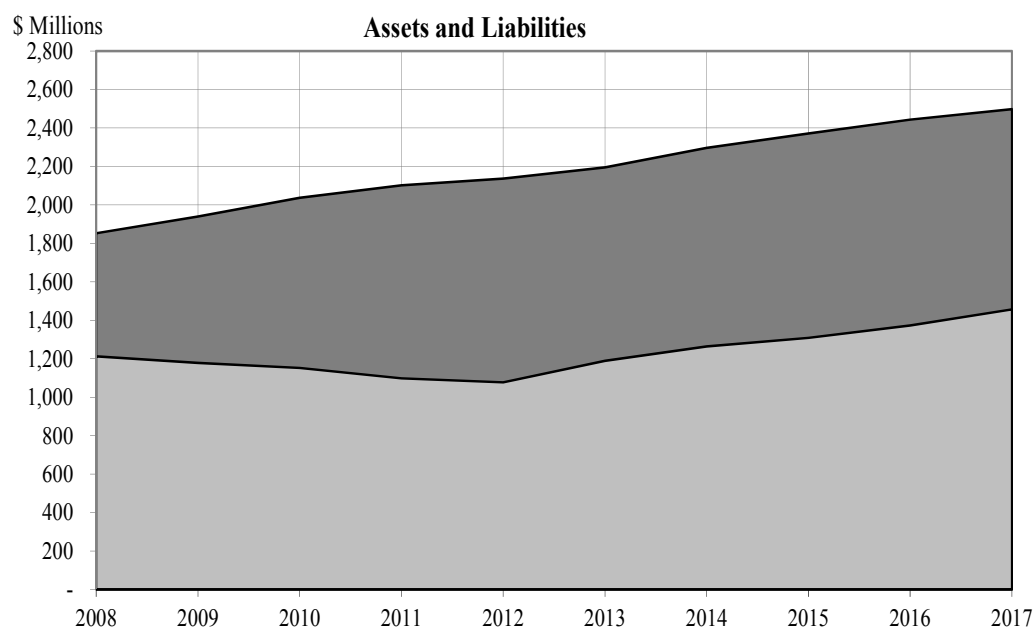
t = termination rates

The table above illustrates that over the last 10 years, the unfunded liability has increased by \$503.4 million. Of this increase, \$216.9 million has been due to investment returns being lower than assumed and \$236.8 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 \$92.9 million reduction for overall salary increases being less than assumed over the last ten years.

During the year 2017 the unfunded liability decreased by \$29.2 million primarily due to investment returns higher than assumed.

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

Year End	Total Actuarial Accrued Liability (AAL)	Actuarial Value of Assets <sup>1</sup>	Funded Ratio	Unfunded AAL (UAAL)	Active Pensionable Payroll <sup>3</sup>	UAAL as a % of Payroll
2008 <sup>2</sup>	\$1,852,279,634	\$1,211,838,320	65.4%	\$640,441,314	\$167,865,254	381.5%
2009	1,939,172,047	1,177,810,068	60.7%	761,361,979	176,915,399	430.4%
2010 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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%

<sup>1</sup> Assets are stated at a 5-year smoothed market value.<sup>2</sup> Change in actuarial assumptions.<sup>3</sup> 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)
			Active & Inactive			Portion (%) of	
Valuation	Active &		Members	Actuarial Asset		Accrued	
Date	Inactive Member	Retirees and	(ER financed	Values <sup>a</sup>		Liabilities	
12/31	Contributions	Beneficiaries	portion)			Covered by	
						Assets	
2008 <sup>b</sup>	\$190,017,921	\$1,176,701,786	\$485,559,927	\$1,211,838,320	100	87	-
2009	202,119,201	1,200,102,267	536,950,579	1,177,810,068	100	81	-
2010 <sup>b</sup>	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 <sup>b</sup>	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 <sup>b</sup>	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	-

<sup>a</sup> Assets are at a 5-year smoothed market value. Investment income in excess or shortfall of the assumed rate of return (7.75% through 2013 valuation date; 7.50% since 2014) 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.

<sup>b</sup> Change in actuarial assumptions.

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

#### Employee Annuitants (Male and Female)

	Added to Payroll		Removed from Payroll		Annual Payroll		Average	Increase
	Annuity		Annuity		Annuity		Annuity	to Avg
Year	No.	Benefits <sup>1</sup>	No.	Benefits	No.	Benefits <sup>2</sup>	Benefits	Benefits
2008	63	\$5,558,865	58	\$2,202,686	1,605	\$84,898,229	\$52,896	3.8 %
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	9,655,500	68	3,780,260	1,809	129,366,688	71,513	3.0

#### Surviving Spouse Annuitants (Male and Female)

	Added to Payroll		Removed from Payroll		Annual Payroll		Average	Increase
		Annuity		Annuity		Annuity	Annuity	to Avg
Year	No.	Benefits <sup>1</sup>	No.	Benefits	No.	Benefits <sup>2</sup>	Benefits	Benefits
2008	34	\$1,619,387	41	\$783,014	647	\$15,128,149	\$23,382	7.0 %
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

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

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



**SCHEDULE OF ACTIVE MEMBER VALUATION DATA**

Year End	Members in Service	% Change	Annual Payroll <sup>1</sup>	% Change	Average Salary	% Change	Actuarial Salary % Increase <sup>3</sup>	CPI Chicago <sup>2</sup>
2008	2,052	2.5 %	\$ 167,865,254	5.7 %	\$ 81,806	3.1 %	5.0 %	3.8 %
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	(0.4)	184,385,188	1.0	100,482	1.4	Range	1.9
10 year average change:		(0.8) %		1.6 %		2.4 %		1.3 %

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

<sup>2</sup> 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.

<sup>3</sup> As of the December 31, 2014 valuation, the salary increase assumption was updated from a flat 5.0% to a table of rates from 4.25%-7.0% based on years of service.

**HISTORY OF RECOMMENDED EMPLOYER MULTIPLES AND TAXES LEVIED**

<u>Year of Tax Levy</u>	<u>Statutory Requirement<sup>2</sup></u>	<u>Statutory Actuarial Multiple<sup>3</sup></u>	<u>Maximum Statutory Multiple<sup>4</sup></u>	<u>Recommended Employer Multiple<sup>5</sup></u>	<u>Total Gross Tax Levy</u>
2009	2.19	N/A	N/A	3.68	\$32,640,000
2010 <sup>1</sup>	2.19	N/A	N/A	4.19	32,307,000
2011	2.19	N/A	N/A	4.42	34,362,000
2012 <sup>1</sup>	2.19	N/A	N/A	2.82 <sup>6</sup>	34,761,000
2013	4.19	4.55	4.19	2.98 <sup>6</sup>	62,984,000
2014 <sup>1</sup>	4.19	4.38	4.19	3.94 <sup>6</sup>	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

<sup>1</sup> Change in actuarial assumptions.

<sup>2</sup> 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.

<sup>3</sup> 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, and for 2017 is 34 years.

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

<sup>5</sup> 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.

<sup>6</sup> 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.

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## **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 2017**

<b>Changes in Active Participants</b>	Number at Beginning of Year	Additions	Decreases	Number at Year End
Male	1,354	85	76	1,363
Female	489	31	48	472
Total Active	1,843	116	124	1,835

**Changes in Annuitants and Beneficiaries**

Employee Annuitants	1,779	98	68	1,809
Spouse Annuitants	590	25	39	576
Child Annuities	25	1	3	23
Total Annuitants	2,394	124	110	2,408

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

77.0%

76.2%

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**

**12/31/17**



AGE	YEARS OF SERVICE									Total
	< 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 +	
< 25		8								8
		\$61,514								\$61,514
25-29	9	39	6	1						55
	63,129	71,957	\$87,801	\$82,722						72,437
30-34	11	66	32	14						123
	71,634	72,307	92,707	107,252						81,531
35-39	9	55	37	63	12					176
	80,660	81,596	99,939	104,987	\$112,485					95,883
40-44	5	51	40	62	34	11				203
	79,085	87,631	93,215	105,744	111,783	\$127,724				100,271
45-49	5	50	35	52	68	49	20	2		281
	68,236	86,672	94,061	98,088	108,136	117,311	\$107,326	\$96,938		101,457
50-54	7	42	38	52	55	44	74	11		323
	74,181	85,695	92,888	96,042	102,561	122,233	120,631	124,700		105,139
55-59	6	35	26	68	53	47	81	28	1	345
	71,171	86,785	95,754	97,027	116,213	114,102	117,803	129,209	\$88,192	108,180
60-64	3	19	25	36	52	28	42	9	3	217
	82,583	90,142	89,737	93,283	103,954	120,334	109,541	104,694	130,749	102,637
65-69		4	4	14	24	10	15	6	3	80
		63,811	97,761	90,120	107,450	118,157	104,207	108,915	130,932	103,471
70 +				5	6	8	2	2	1	24
				102,188	85,316	103,192	106,743	82,238	82,722	96,211
Total										
Number	55	369	243	367	304	197	234	58	8	1,835
Average										
Salary	\$72,959	\$81,208	\$94,098	\$99,667	\$107,895	\$118,125	\$115,353	\$119,718	\$119,494	\$100,482

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 \$108,180. By years of service, the largest segment of active members has 10-14 years of service with an average pensionable salary of \$99,667.

**SCHEDULE OF ANNUITANTS BY TYPE OF BENEFIT**  
**as of December 31, 2017**

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	94	37	2	21	10	1	23
501 - 1,000	72	36	2	26	8		
1,001 - 2,000	233	100		78	55		
2,001 - 3,000	232	140		62	30		
3,001 - 4,000	259	197		50	12		
4,001 - 5,000	289	212		65	12		
5,001 - 6,000	360	297		56	7		
6,001 - 7,000	242	212		26	4		
7,001 - 8,000	209	192		15	2		
8,001 - 9,000	118	108		10	0		
9,001 - 10,000	107	95		8	4		
over 10,000	193	179		14	0		
Totals	2,408	1,805	4	431	144	1	23

\* 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 <sup>1</sup>	Spouse Annuitants <sup>1,2</sup>	Child Annuitants	Total Annuitants	Ordinary Disability	Duty Disability
2008	1,605	647	20	2,272	19	28
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

<sup>1</sup> Includes reciprocal annuitants

<sup>2</sup> 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 <sup>1</sup>	Number of Annuitants	Annuity Payments <sup>1</sup>
2008	1,605	\$ 84,898,229	647	\$ 15,128,149
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

<sup>1</sup> Payments are annualized, computed as twelve times the December 1<sup>st</sup> 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, 2017**

**Retirement Annuities**

Age	Number of Males	Annual Payments <sup>1</sup>	Average Annual Payments	Number of Females	Annual Payments <sup>1</sup>	Average Annual Payments
under 45	-	\$ -	\$ -	-	\$ -	\$ -
45 - 49	-	-	-	-	-	-
50 - 54	20	1,565,202	78,260	17	1,152,555	67,797
55 - 59	85	6,300,438	74,123	39	2,509,314	64,341
60 - 64	182	14,206,489	78,058	65	3,910,505	60,162
65 - 69	259	20,303,998	78,394	100	5,592,046	55,920
70 - 74	324	26,182,831	80,811	73	4,251,184	58,235
75 - 79	230	17,263,770	75,060	59	2,855,589	48,400
80 - 84	152	10,908,278	71,765	37	1,645,067	44,461
85 - 89	98	7,209,865	73,570	15	607,164	40,478
90 & up	45	2,660,022	59,112	9	242,372	26,930
Total	1,395	\$ 106,600,893	\$ 76,416	414	\$ 22,765,796	\$ 54,990
Average Age	72.6			70.1		

**Spouse Annuities**

Age	Number of Males	Annual Payments <sup>1</sup>	Average Annual Payments	Number of Females	Annual Payments <sup>1</sup>	Average Annual Payments
under 45	-	\$ -	\$ -	2	\$ 75,509	\$ 37,755
45 - 49	2	13,588	6,794	6	259,170	43,195
50 - 54	1	4,501	4,501	9	282,653	31,406
55 - 59	-	-	-	11	348,321	31,666
60 - 64	1	15,218	15,218	23	1,242,611	54,027
65 - 69	2	111,830	55,915	44	2,211,516	50,262
70 - 74	4	117,496	29,374	67	3,624,752	54,101
75 - 79	4	189,240	47,310	87	4,246,604	48,812
80 - 84	3	39,856	13,285	116	5,549,629	47,842
85 - 89	2	56,484	28,242	95	3,897,925	41,031
90 & up	1	59,882	59,882	96	2,268,273	23,628
Total	20	\$ 608,095	\$ 30,405	556	\$ 24,006,963	\$ 43,178
Average Age	73.3			79.8		

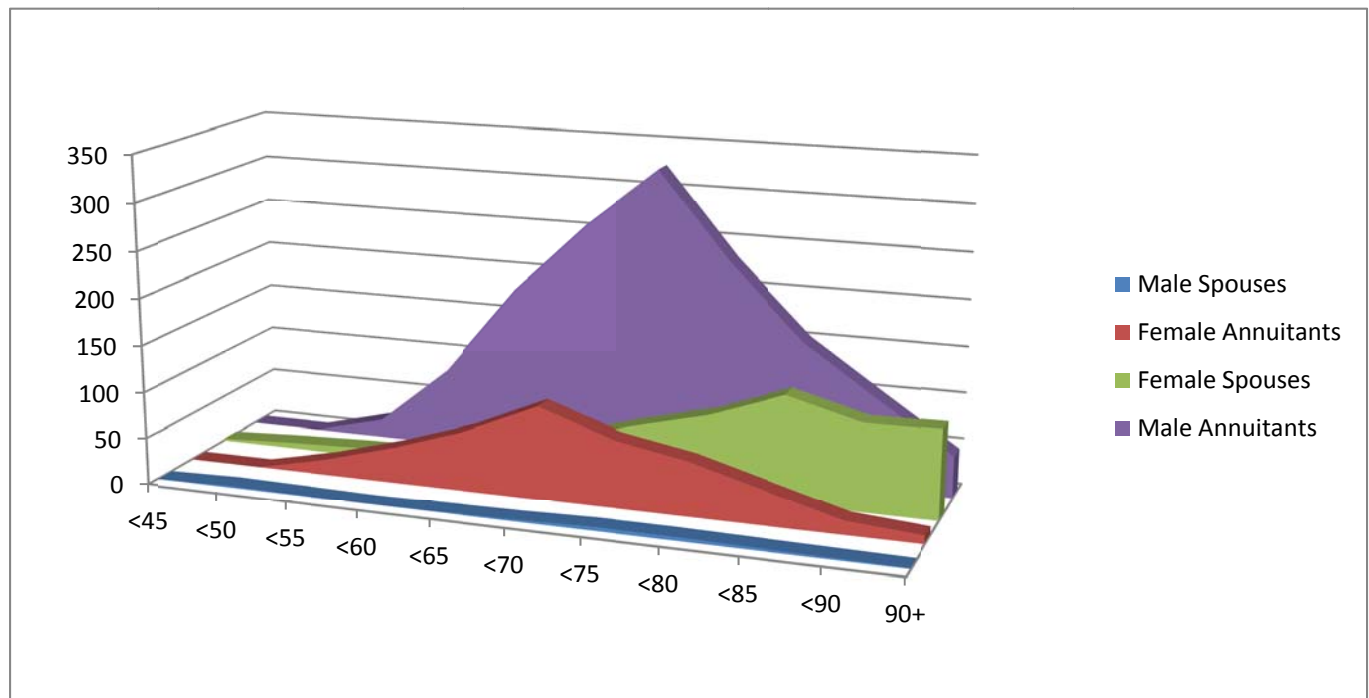
<sup>1</sup> Payments are annualized, computed as twelve times the December 1st annuity payment.

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 <sup>1</sup>	Average Retirement Age <sup>2</sup>	Average Years of MWRDGC Service <sup>2</sup>	Average Monthly Annuity <sup>2</sup>
2008	63	60.8	21.99	4,133
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

<sup>1</sup>Data from Actuary

<sup>2</sup>Data 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 RETIREMENT<sup>1</sup>**

	Years of Credited Service							Total
	0-5	5-10	10-15	15-20	20-25	25-30	30+	
<b>Period 1/1/08 to 12/31/08</b>								
Average Pension	\$322	\$753	\$1,518	\$3,715	\$4,282	\$6,166	\$6,122	\$4,133
Average Final Average Salary	\$6,382	\$5,521	\$5,570	\$7,646	\$6,896	\$8,113	\$7,652	\$7,097
Number of Retired Members	3	4	9	9	13	13	12	63
<b>Period 1/1/09 to 12/31/09</b>								
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
<b>Period 1/1/10 to 12/31/10</b>								
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
<b>Period 1/1/11 to 12/31/11</b>								
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
<b>Period 1/1/12 to 12/31/12</b>								
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
<b>Period 1/1/13 to 12/31/13</b>								
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
<b>Period 1/1/14 to 12/31/14</b>								
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
<b>Period 1/1/15 to 12/31/15</b>								
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
<b>Period 1/1/16 to 12/31/16</b>								
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
<b>Period 1/1/17 to 12/31/17</b>								
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

<sup>1</sup> 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.

**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 <sup>1</sup>	Total Additions
2008	\$14,778	\$33,407	19.9	(\$299,142)	(\$250,957)
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

**DEDUCTIONS BY TYPE**

Year Ending December 31	Benefits	Refunds	Administrative Expenses	Total Deductions	Change in Net Assets
2008	\$100,069	\$965	\$1,280	\$102,314	(\$353,271)
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

<sup>1</sup> 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.

**EMPLOYEE AND EMPLOYER CONTRIBUTIONS**  
**Last Ten Years**  
**(in Thousands of Dollars)**

**EMPLOYEE CONTRIBUTIONS**

Year	Regular Contributions <sup>1</sup>	Optional Plan Contributions <sup>2</sup>	Prior Service Payments <sup>3</sup>	Commissioners' Alternative Plan <sup>4</sup>	Total
2008	\$14,519	\$49	\$194	\$16	\$14,778
2009	15,413	-	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

**EMPLOYER CONTRIBUTIONS**

Year	Regular Contributions <sup>5</sup>	Special Contributions	Total
2008	\$33,407	-	\$33,407
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

<sup>1</sup> Includes employee contributions towards employee and surviving spouse annuities, and cost of living increases.

<sup>2</sup> Optional Plan Contributions were towards an enhanced benefit plan that expired in 2007.

<sup>3</sup> Prior Service Payments include leave of absence, refund repayment and military service.

<sup>4</sup> Contributions by elected Commissioners to an enhanced benefit plan.

<sup>5</sup> 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> <sup>1</sup>	<u>Ordinary Disabilities</u>	<u>Duty Disabilities</u>	<u>Total Benefits</u>
2008	\$83,948	\$14,934	\$123	\$846	\$218	\$100,069
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

**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>
2008	83.89 %	14.92 %	0.12 %	0.85 %	0.22 %
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

**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>
2008	5.71 %	6.97 %	-2.38 %	-23.09 %	-9.92 %	5.51 %
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

<sup>1</sup> 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 POSITION<sup>1</sup>**  
**Last 10 Years**

<b>Additions:</b>	2017	2016	2015	2014	2013
Employer contributions	\$ 89,858,224	\$ 80,259,713	\$ 71,041,361	\$ 73,906,168	\$ 92,944,381
Employee contributions	20,839,829	20,830,779	21,385,212	18,974,954	16,890,798
Total contributions	110,698,053	101,090,492	92,426,573	92,881,122	109,835,179
Investment income					
Net appreciation (depreciation) in fair value of investments	177,341,970	92,762,607	(20,894,824)	63,589,719	211,132,376
Interest on fixed income investmen	7,679,730	11,347,002	10,369,440	8,933,924	7,044,688
Interest on short-term investments	20,697	23,036	2,589	2,008	2,295
Dividend income	14,054,030	13,633,175	14,072,578	14,539,290	12,836,171
Total investment income (loss)	199,096,427	117,765,820	3,549,783	87,064,941	231,015,530
Less investment expenses	(4,620,753)	(4,613,683)	(5,542,836)	(5,899,566)	(5,465,211)
Investment income (loss) net of expenses	194,475,674	113,152,137	(1,993,053)	81,165,375	225,550,319
Security lending activities					
Securities lending income	448,326	265,142	98,280	64,302	89,443
Broker rebates	(13,332)	294,951	645,265	505,896	630,124
Bank fees	(89,209)	(126,358)	(178,331)	(135,007)	(174,283)
Net income from securities lending	345,785	433,735	565,214	435,191	545,284
Other	3,100	107,175	28,817	4,460	6,833
Total additions	305,522,612	214,783,539	91,027,551	174,486,148	335,937,615
<b>Deductions:</b>					
Annuities and benefits					
Employee annuitants	127,098,834	121,729,901	116,884,577	111,351,904	106,623,945
Surviving spouse annuitants	24,203,400	22,919,525	21,279,363	20,443,693	19,431,705
Child annuitants	142,000	153,500	116,000	157,500	114,000
Ordinary disability benefits	631,401	412,706	721,720	820,626	821,914
Duty disability benefits	77,279	109,753	159,251	139,779	214,417
Total annuities and benefits	152,152,914	145,325,385	139,160,911	132,913,502	127,205,981
Refunds of employee contributions	2,560,129	2,010,630	1,348,845	984,346	1,128,922
Administrative expenses	1,613,976	1,502,639	1,659,917	1,406,507	1,391,487
Total deductions	156,327,019	148,838,654	142,169,673	135,304,355	129,726,390
<b>Net increase (decrease)</b>	<b>149,195,593</b>	<b>65,944,885</b>	<b>(51,142,122)</b>	<b>39,181,793</b>	<b>206,211,225</b>
Net position held in trust for pension benefits					
Beginning of year	1,352,598,383	1,286,653,498	1,337,795,620	1,298,613,827	1,092,402,602
End of year	\$ 1,501,793,976	\$ 1,352,598,383	\$ 1,286,653,498	\$ 1,337,795,620	\$ 1,298,613,827

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

## Financial Information

## Statistical Section

### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION (Continued)

#### Last 10 Years

<b>Additions:</b>	2012	2011	2010	2009	2008
Employer contributions	\$ 65,097,835	\$ 37,379,137	\$ 29,917,793	\$ 32,153,874	\$ 33,406,819
Employee contributions	14,714,496	15,031,961	15,872,560	15,690,322	14,778,404
Total contributions	79,812,331	52,411,098	45,790,353	47,844,196	48,185,223
Investment income					
Net appreciation (depreciation) in					
fair value of investments	103,332,085	(9,430,774)	136,082,191	187,518,451	(311,205,254)
Interest on fixed income investments	3,064,231	-	-	1,208,618	4,106,340
Interest on short-term investments	10,218	7,754	24,608	77,596	670,923
Dividend income	13,885,983	12,102,449	10,162,335	7,839,846	9,191,366
Total investment income (loss)	120,292,517	2,679,429	146,269,134	196,644,511	(297,236,625)
Less investment expenses	(4,755,254)	(4,389,141)	(3,607,447)	(2,576,926)	(2,507,486)
Investment income (loss) net of expenses	115,537,263	(1,709,712)	142,661,687	194,067,585	(299,744,111)
Security lending activities					
Securities lending income	131,240	93,329	90,389	-	3,691,075
Broker rebates	851,467	275,018	181,683	-	(2,912,737)
Bank fees	(233,885)	(77,124)	(53,512)	-	(194,845)
Net income from securities lending	748,822	291,223	218,560	-	583,493
Other	40,046	42,126	34,214	8,379	18,089
Total additions	196,138,462	51,034,735	188,704,814	241,920,160	(250,957,306)
<b>Deductions:</b>					
Annuities and benefits					
Employee annuitants	103,043,445	99,600,881	90,446,956	86,581,378	83,948,187
Surviving spouse annuitants	18,674,499	17,523,246	16,613,378	15,689,413	14,934,213
Child annuitants	114,000	112,012	103,505	120,290	122,652
Ordinary disability benefits	677,523	650,220	813,505	745,363	846,201
Duty disability benefits	204,441	216,010	241,842	268,086	217,496
Total annuities and benefits	122,713,908	118,102,369	108,219,186	103,404,530	100,068,749
Refunds of employee contributions	1,195,737	2,711,115	1,380,310	1,174,864	964,846
Administrative expenses	1,296,826	1,398,695	1,276,511	1,318,710	1,280,321
Total deductions	125,206,471	122,212,179	110,876,007	105,898,104	102,313,916
<b>Net increase (decrease)</b>	<b>70,931,991</b>	<b>(71,177,444)</b>	<b>77,828,807</b>	<b>136,022,056</b>	<b>(353,271,222)</b>
Net position held in trust for pension benefits					
Beginning of year	1,021,470,611	1,092,648,055	1,014,819,248	878,797,192	1,232,068,414
End of year	<u>\$ 1,092,402,602</u>	<u>\$ 1,021,470,611</u>	<u>\$ 1,092,648,055</u>	<u>\$ 1,014,819,248</u>	<u>\$ 878,797,192</u>

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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 31<sup>st</sup> 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 90<sup>th</sup> 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.