85 Years Strong
1931 2016

Comprehensive Annual Financial Report

For Fiscal Year Ended
June 30, 2016

Serving our Members for 85 Years & Counting

Public Employees Retirement Association
Pension Trust Funds of the State of Minnesota

A Window into PERA's Past 85 Years

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Public Employees Retirement Association

Pension Trust Funds of the State of Minnesota

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2016

Executive Director

Doug Anderson

Prepared by PERA Finance, Executive, and Communication and Education Divisions.

Member of Government Finance Officers Association of the United States and Canada

Table of Contents

Introductory Section

PERA 2016 Comprehensive Annual Financial Report

PERA through the years
Established 1931—

On April 24, 1931 the Public Employees Retirement Association (PERA) was born through an act of the Minnesota Legislature. In this early time, all investments were in the form of local municipal bonds. It was to be another four years before Social Security received congressional approval in Washington D.C. Now, over three-quarters of a century later, PERA is Minnesota's largest public pension plan and celebrating its 85th anniversary.

PERA's Financial Highlights– year **1937**

Total Membership	4,665
Retired	55
Total Expenses	$5,073
Retirement Annuities	$200
Salaries	$3,550
Total Investment Amount	$933,994

1937 Active Members	4,610
Total Assets	$1,025,896
Cash on Hand	$46,656
Total Revenues	$41,367
Investment Bonds	$35,810
Back Pay: Retired Members	$10,434
Employee Contributions	$279

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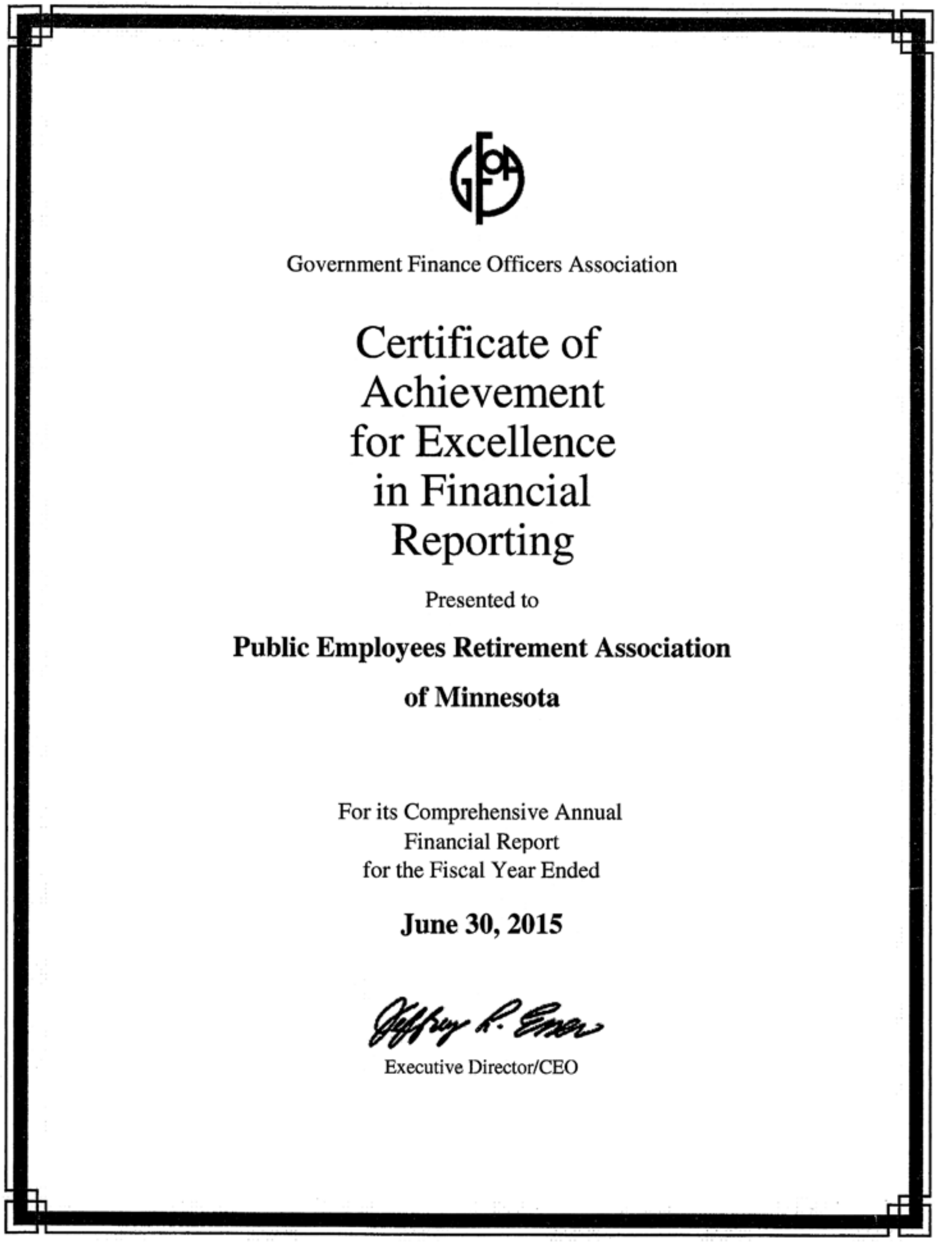
Achievement Award



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Public Employees Retirement Association

of Minnesota

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2015

Executive Director/CEO

The Government Finance Officers Association (GFOA) recognizes public retirement systems that meet its rigorous reporting standards with its annual Certificate of Achievement for Excellence in Financial Reporting. It is the highest form of recognition for accounting and financial reporting in the public pension sector. PERA received this award for the 2015 Comprehensive Annual Financial Report.

Continued from previous page

Kathryn A. Green
Board President

December 23, 2016

Dear Members, Annuitants, Beneficiaries and Governmental Employers:

The Public Employees Retirement Association (PERA) June 30, 2016 Comprehensive Annual Financial Report is respectfully submitted. The report discloses financial, investment, actuarial, statistical and other related information about PERA and the funds it administers. Responsibility for the accuracy and completeness of the report rests with PERA.

PERA's net assets at fair market value are $25.7 billion as of June 30, 2016. While investment returns were slightly negative in fiscal year 2016, the funds have averaged earnings between 6.5 percent and 8.7 percent when measured over periods ranging from 5 to 30 years. The funds have exceeded the composite market return benchmark in each of those measurement periods.

PERA recently celebrated its 85th anniversary. The organization has a very rich history and has been remarkably resilient. PERA's first newsletter which was issued in 1939, documents that many of the issues we face today are similar to those that were overcome back at that time. The 1939 newsletter noted that investment returns were below the assumed rate of 4% and that members were living longer than the actuaries expected. Those issues exist today in the form of two consecutive years with investment returns below the assumed rate and word from our actuaries that future lifespans are now assumed to be longer than previously expected.

The study and selection of appropriate assumptions is one of the most important responsibilities of PERA's staff and board. The past fiscal year included incorporating results from an experience study performed for the General Employees Plan by PERA's actuarial consultant for the six year period ending June 30, 2014. The liabilities disclosed in this report reflect the recommended changes from that study. A similar study was done for the four year period ending June 30, 2015 for the Police and Fire Plan. The recommended assumption changes for that plan as well as a recommended mortality rate change for the Correctional Plan are expected to be incorporated into next year's results.

Evaluation and selection of an appropriate investment return assumption is an ongoing challenge. The assumption should consider long-term expectations reflecting the fact that benefit payments for current members will be paid for many years forward. Since it is a long term assumption, it typically should change infrequently. Nevertheless, it should be monitored on a regular basis.

The current assumed return for funding purposes is 8.0% as prescribed by statute. The investment return assumption used for Governmental Accounting Standard Board (GASB) reporting purposes may differ from the funding rate. The rate used for fiscal year 2016 GASB reporting results is 7.5%, a decrease from last year's rate of 7.9%. PERA's board and staff will continue to closely monitor assumptions in an attempt to best determine how to manage benefit and costs for current and future generations.

There are changes and new challenges that come with 85 years of existence. PERA has experienced incredible growth in membership, assets, benefit payment responsibilities, and administrative complexity, all of which is demonstrated in this report. Unlike the fledgling enterprise that had about 500 actives members and 100 retirees in 1939, PERA has matured to an organization that now issues over 100,000 payments to retirees each and every month.

While PERA has a long history, the tenure of its Executive Director is just beginning. Having started in November, 2015, Doug Anderson just recently completed his first year. He is pleased to lead our organization and its nearly one hundred employees towards fulfilling our mission and goals.

The implementation of GASB Statements No. 67 & No. 68 continued to require a large effort as the second year of implementation had as many challenges as the first. However, PERA's dedication of resources to understanding this issue and providing training to our employers helped to meet these new standards. PERA's work in this area has been very well received by those that have struggled to implement the new standard.

As trustees of the association it is our fiduciary duty to ensure the protection and furtherance of the interests of our members, annuitants, and beneficiaries. We believe our efforts over the past year have been consistent with PERA's mission to administer and promote sustainable retirement plans and provide services that our members value. We have a long history proving that our plans can be sustained and will continuously monitor the direction of the funds and recommend changes when necessary to make sure they are sustained in the future.

Kathryn A. Green

Kathryn A. Green
President
PERA Board of Trustees

Doug Anderson
Executive Director

Dave Andrews
Accounting Director

December 20, 2016

Board of Trustees
Public Employees Retirement Association of Minnesota
60 Empire Drive, Suite 200
St. Paul, Minnesota 55103

Dear Board Members:

We are pleased to present this Comprehensive Annual Financial Report (CAFR) of the Public Employees Retirement Association (PERA) for the fiscal year ended June 30, 2016—our 85th year of operation. The information contained in this report is accurate in all material respects and is intended to present fairly the financial status and results of operations of the Association.

Responsibility for the contents of this report, including the financial statements, rests solely with the management of the Association. This transmittal letter is designed to complement Management's Discussion and Analysis (MD&A) and should be read in conjunction with it.

Plan Overview

PERA was established in 1931 by the Minnesota legislature. For financial reporting purposes, PERA is considered a pension trust fund of the State of Minnesota. The State reports PERA's assets in the State's annual report as pension trust fund assets. PERA's cost-sharing plans are funded on an actuarial reserve basis, with money being set aside for benefits while benefits are being earned and before they are paid.

PERA serves over 2,000 separate local governmental entities. These participating employers include cities, counties, townships, and school districts located throughout the State. On June 30, 2016, PERA's membership included 165,609 current, active employees and 105,686 benefit recipients in the three cost-sharing multiple-employer and one agent multiple-employer defined benefit plans and another 7,723 members with money in the defined contribution plan. The three cost-sharing plans include the General Employees Plan, the Police and Fire Plan, and the Correctional Plan. The Volunteer Firefighter Plan is the one agent multiple-employer defined benefit plan administered by PERA.

PERA provides many services to its members including, but not limited to, individual benefit determinations, personal benefit statements, access to pre-retirement group counseling, and individual retirement benefit counseling. Members can also use the online MY PERA system to check their total accumulated contributions and service credits and use the benefit calculator to estimate their retirement benefits at various ages or dates. We provide several educational videos and specialized publications with information on specific topics of interest to members. And, our trained call center staff respond in a timely manner to questions from members and other stakeholders.

Accounting Systems and Reports

Financial statements are prepared in conformity with accounting principles generally accepted in the United States of America and reporting guidelines set forth by the Governmental Accounting Standards Board (GASB). PERA's CAFR also complies with *Minnesota Statutes*, Section 356.20. Transactions are reported on the accrual basis of accounting. Contributions from employers and members are recognized as revenue when earned and measurable. Expenses are recorded when corresponding liabilities are incurred, regardless of when payment is made.

PERA's management team is responsible for establishing and maintaining a system of internal controls. Internal controls are designed to provide reasonable, but not absolute, assurance regarding the safeguarding of assets against loss or unauthorized disposition and the reliability of the financial records from which the financial reports are prepared. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived; and (2) the evaluation of costs and benefits requires estimates and judgment by management. Our independent auditors have audited the accompanying financial statements and reviewed our internal control structure. They reported no material weaknesses in our internal controls. Management believes that an adequate system of internal control is in place and that the accompanying statements, schedules and tables are fairly presented.

Investments

In accordance with *Minnesota Statutes*, Section 353.06, PERA's financial assets are invested by the Minnesota State Board of Investment (SBI). All investments undertaken by SBI are governed by the common law prudent person rule and other standards codified in Chapter 11A of the *Minnesota Statutes*. SBI is comprised of the state's elected officers: Governor Mark Dayton; State Auditor Rebecca Otto; Secretary of State Steve Simon; and State Attorney General Lori Swanson.

SBI appoints a 17-member Investment Advisory Council (IAC) to advise SBI on asset allocation and other policy matters relating to investments. The IAC also advises SBI on methods to improve the rate of return while assuring adequate security of the assets under management. PERA's executive director is a standing member of the IAC. All proposed investment policies are reviewed and discussed in detail by the full IAC before they are presented to SBI for action.

SBI also employs investment consultants to monitor and evaluate investment management firms' performance and to evaluate or suggest various alternatives for asset allocation and other investment policy matters.

Combined Funds

Pension assets of the Association are managed externally by private money managers retained under contract with the SBI. These assets are pooled with the assets of other active members and benefit recipients of statewide retirement funds into the Combined Retirement Fund. The greatest share of these assets, approximately 60%, is invested in domestic and international common stocks in order to maximize the long-term rate of return. Including international stocks in the asset mix allows the SBI to diversify its holdings across world markets and offers the opportunity to enhance returns and reduce the risk/volatility of the total portfolio. For the year ended June 30, 2016, the Combined Retirement Fund produced a -0.1% rate of return.

SBI has one overriding responsibility in the management of these funds: to ensure that sufficient funds are available to finance promised retirement benefits. Within this context, SBI has established a long-term investment objective: to outperform a composite market index weighted to reflect the long-term asset allocation policy over a ten-year period. Performance is measured net of all fees and costs to assure SBI's focus is on true net return. The Combined Funds' 10-year annualized rate of return at June 30, 2016 was 6.5%, and its 20-year annualized rate of return was 7.5%.

Continued

Economic Conditions and Outlook

Well into the current economic expansion, Minnesota continues to add jobs at a fairly steady rate. Consistent job growth has contributed to the state's declining unemployment rate, which is now at 4.0% on a seasonally adjusted basis, 0.6 percentage points below the current U.S. rate. At the same time, the state's employment growth is seeing the effects of drags on exports and a tightening labor market. Total non-farm employment in Minnesota grew 1.0% in fiscal year 2016 and is forecast to accelerate slightly to 1.2% growth in fiscal year 2017. Employment growth is forecast to decelerate to 0.8% in fiscal year 2018 followed by 1.0% growth in fiscal year 2019.

Information from the Bureau of Economic Analysis, Quarterly Census of Employment and Wages (QCEW), and income tax withholding collections suggests Minnesota's nominal wage and salary disbursements grew 3.2% in fiscal year 2016. Wage income is now expected to accelerate to 5.3% growth in fiscal year 2017, followed by 4.7% in each of fiscal years 2018 and 2019. Minnesota personal income grew 2.0% in fiscal year 2016, and is now forecast to accelerate to 4.6% in fiscal year 2017, followed by 4.6% and 4.7% in fiscal year 2018 and 2019, respectively.

Minnesota's housing recovery continued to gain traction from its excellent performance in Calendar Year (CY) 2015, and as we approach the end of CY 2016, homebuilding activity is encouraging. As of October 2016, closed sales of homes in Minnesota preserved its good performance, reaching an 11-year high. Also encouraging are the rising median and mean sales prices. According to the Minnesota Association of Realtors, in October 2016 the median sales price in the state rose 8.5%, while the average sales price increased 6.1%.

As the labor market continues to tighten and wages continue to grow, more people will be looking for long-term stable housing, increasing household formations, a key driver of demand for housing. Increasing formations foster housing sales and starts. After six years of low levels, annual household formations have picked up to 18,000 in calendar year 2015, consistent with continued employment growth. In calendar years 2016 and 2017, annual net new formations are forecast to be around 25,700 and 21,600, respectively.

The 30-year fixed mortgage rate has risen to 4.16% at the end of November. Even though this is still low relative to historic norms, if rates keep moving up, it could affect demand for homes.

A global economic slowdown and a stronger U.S. dollar relative to major trading partners make Minnesota-produced goods and commodities more expensive elsewhere in the world, reducing demand for the state's products abroad. Exports of Minnesota manufactured goods have fallen over the last year, and manufacturing employment has declined. In the current forecast, we expect improvements in global growth to lead Minnesota manufacturers to add jobs starting in 2018. Minnesota's exports of goods and services to countries throughout the world are an important source of economic strength. According to data from the Minnesota Department of Employment and Economic Development for the second quarter of calendar year 2016, Minnesota exports, including agricultural, mining and manufactured products, were valued at $4.8 billion, showing a decline of 8.0% since the second quarter of calendar year 2015, which is 2.0% more than the national decline of exports over the same period.

Current Funding Ratios

The primary funding objectives of PERA are:

1) to establish contribution rates which, when expressed as a percentage of active members' payroll, will remain level from generation to generation; and
2) to meet the statutorily set deadlines for full funding.

An important measure of the health of a retirement system is the level of funding. A funding ratio is most commonly defined as an asset value divided by the actuarial accrued liability. At the end of fiscal year 2016, the ratio of assets to liabilities (using the actuarial value of assets) of the General Employees Fund was 75.5%. For the Police and Fire Fund and the Correctional Fund, the ratios were 87.7% and 95.7%, respectively. The actuarial value of assets reflects smoothing of the previous five years of asset gains and losses. When the funding ratios are measured on the actual market values as of June 30, 2016, the funding ratios were 72.4%, 84.3%, and 91.7% respectively.

PERA's historical funding ratios are shown in the *Schedule of Funding Progress*. The current funding ratios represent how current assets compare to accrued liabilities. A pension plan is often considered fully funded when a funding ratio reaches 100%. However, that does not mean funding requirements will cease. The cost of future benefit accruals will continue to be required even after previously accrued, but not yet funded obligations have been met. It is important that benefit structures and future contributions are aligned to ensure that plans progress toward full funding in a reasonable time period.

Major Initiatives

During the year the board adopted, and the legislature approved, numerous demographic assumption changes for the General Employees Plan. These changes were the result of a study of member experience over a six-year period ending June 30, 2014. The assumption changes included increases in assumed member salaries, reduced rates of disability and retirement, increased rates of termination, and changes to the percentage of members assumed to be married and their form of payment election upon retirement. The most impactful assumption change was not based on actual observed member experience, but rather a new forecast for rates of future mortality rate improvements. Collectively, the new assumptions increased the unfunded actuarial accrued liability by about $0.4 billion and reduced the funding ratio by over 1%.

An experience study of the Police and Fire Plan was prepared by the actuary in fiscal year 2016. This study was for the four-year period ending June 30, 2014 and resulted in various recommended demographic assumption changes. The recommended changes were adopted by the board and will be considered by the Legislature in 2017. Pending approval, the results of the demographic changes will be incorporated in the 2017 valuations. No experience study was done specifically for the Correctional Plan due its relatively smaller size. However, the mortality assumption derived from Police and Fire Plan members was deemed to be a reasonable basis for use in the Correctional Plan and that change is also expected to be made in 2017.

In fiscal year 2016, 20 fire departments joined the Volunteer Firefighter Plan, bringing the total to 112. With the exception of one department, all of those fire departments provide lump-sum benefits to a volunteer firefighter at retirement. There are a handful of fire department relief associations in Minnesota that offer monthly benefits to retired volunteer firefighters. Effective January 2016, PERA added one fire department that provides monthly benefits to their retired firefighters and surviving spouses.

During the year PERA adopted several GASB standards. The most significant standard is *GASB Statement No. 72, Fair Value Measurement and Application*. The statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. This information is presented within the notes to the financial statements.

This year PERA achieved a number of significant goals. We continued to improve MY PERA, the online personal account information system. Continued efforts were made to input valuable information to our online management system to ensure accurate and timely response to member questions. Call recording was implemented for training and quality control purposes. The education team traveled statewide to meet with groups and individuals explaining PERA benefits. The data sharing efforts from the statewide plans continue to help increase automation in retirement estimates with multiple plan service.

PERA launched several new or enhanced features in its web reporting system for employers. For over ten years, PERA has maintained an online web tool that is used by all local units of government and school districts to carry out their membership and contribution reporting duties. The system enhancements made in the last year have resulted in efficiency gains for the employers and the association. Examples include developing processes for monitoring annual salaries of new members to ensure compliance with the membership salary threshold in law, introducing a module to collect and retain pay calendar information on all contributing employers, and replacing several paper mailings done to obtain missing forms or data with online reports that the employers can easily complete for uploading into PERA's computer system.

Continued effort was made to enhance our suite of on-line tools for members and employers. Our focus is continuous improvement to our systems and services so that we can accommodate the growing needs of all of PERA's stakeholders.

Continued

Letter of Transmittal

(Continued from previous page)

Internally, PERA instituted several changes to improve communication methods for employees. All staff meetings are now held several times a year to discuss important issues, upcoming events, and review recent Board of Trustee meetings. PERA's internal intranet "PERAsite" continues to share information throughout the agency and store important documents for employees to reference. All employees participated in PERA's first test of the emergency response system known as the "Continuity Of Operations Plan" or COOP to disseminate information in case of an emergency. Finally, PERA implemented "Code of Conduct" training for all employees to give tools to maintain the integrity of the plans and the agency.

Professional Services

Actuarial consulting services during the fiscal year were provided by Gabriel, Roeder, Smith & Co. The State's Attorney General continued to provide PERA with legal counsel. SBI continued to manage and invest the assets of PERA's funds, and the State's Legislative Auditor provided professional financial auditing services. Abdo, Eick & Meyers provided auditing services for PERA's GASB 68-related schedules. Disability determination services were provided by Managed Medical Review Organization.

Membership Report

This report is complemented by an annual financial newsletter that discloses, in summary form, the contents of this report. This financial newsletter is mailed by February of each year to all PERA members, including active and deferred members and benefit recipients. In addition, this report is reproduced, in its entirety, on PERA's website, www.mnpera.org.

National Recognition

PERA has an outstanding staff dedicated to the utmost professionalism in administering the plans entrusted to the governance of the PERA Board of Trustees. PERA received national recognition as a leader in pension fund administration and disclosure of financial information. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a *Certificate of Achievement for Excellence in Financial Reporting* to PERA for its CAFR for the fiscal year ended June 30, 2015.

The *Certificate of Achievement* is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a *Certificate of Achievement*, a government unit must publish an easily readable and efficiently organized CAFR. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A *Certificate of Achievement* is valid for one year only. We believe our current report continues to meet the *Certificate of Achievement* program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

Acknowledgments

As a compendium of financial, investment, actuarial and other statistical information, PERA's Comprehensive Annual Financial Report provides complete and reliable information on which management decisions may be based and through which compliance with statutory requirements may be assessed. In addition, the report serves as the primary source through which the effectiveness of the Trustees' management and administration of PERA and its funds may be judged.

We are sure you join with us in expressing gratitude and appreciation to the staff and PERA's advisors for their efforts in producing this report and for their loyal and dedicated service to the Association and its members, annuitants, beneficiaries, and participating local governmental employers.

Respectfully submitted,

Doug Anderson **Executive Director**	**David Andrews** **Accounting Director**

PERA Board of Trustees, Key Administrative Staff and Professional Consultants

Board of Trustees

Kathryn A. Green, President
Appointed School Board Representative
Trustee since April 2006
Current term expires January 2018

Rebecca Otto
State Auditor
Trustee since February 2007
Current term expires January 2019

Leigh Lenzmeier
Appointed County Representative
Trustee since November 2010
Current term expires January 2017

Mary Falk
Appointed General Public Representative
Trustee since June 2015
Current term expires January 2019

Paul Bourgeois
Elected General Membership Representative
Trustee since February 2011
Current term expires January 2019

Lori Volz
Elected General Membership Representative
Trustee since February 2015
Current term expires January 2019

David Metusalem, Vice President
Elected Police and Fire Representative
Trustee since February 2015
Current term expires January 2019

Don Rambow
Appointed Cities Representative
Trustee since March 2005
Current term expires January 2017

Lawrence J. Ward
Appointed Annuitant Representative
Trustee since February 2012
Current term expires January 2020

Ross Arneson
Elected Retiree/Disabilitant Representative
Trustee since February 1999
Current term expires January 2019

Thomas Stanley
Elected General Membership Representative
Trustee since March 2013
Current term expires January 2019

Key Administrative Staff

Executive Director:
Doug Anderson

Accounting Director:
David Andrews

Professional Consultants

Actuary:
Gabriel Roeder Smith & Company

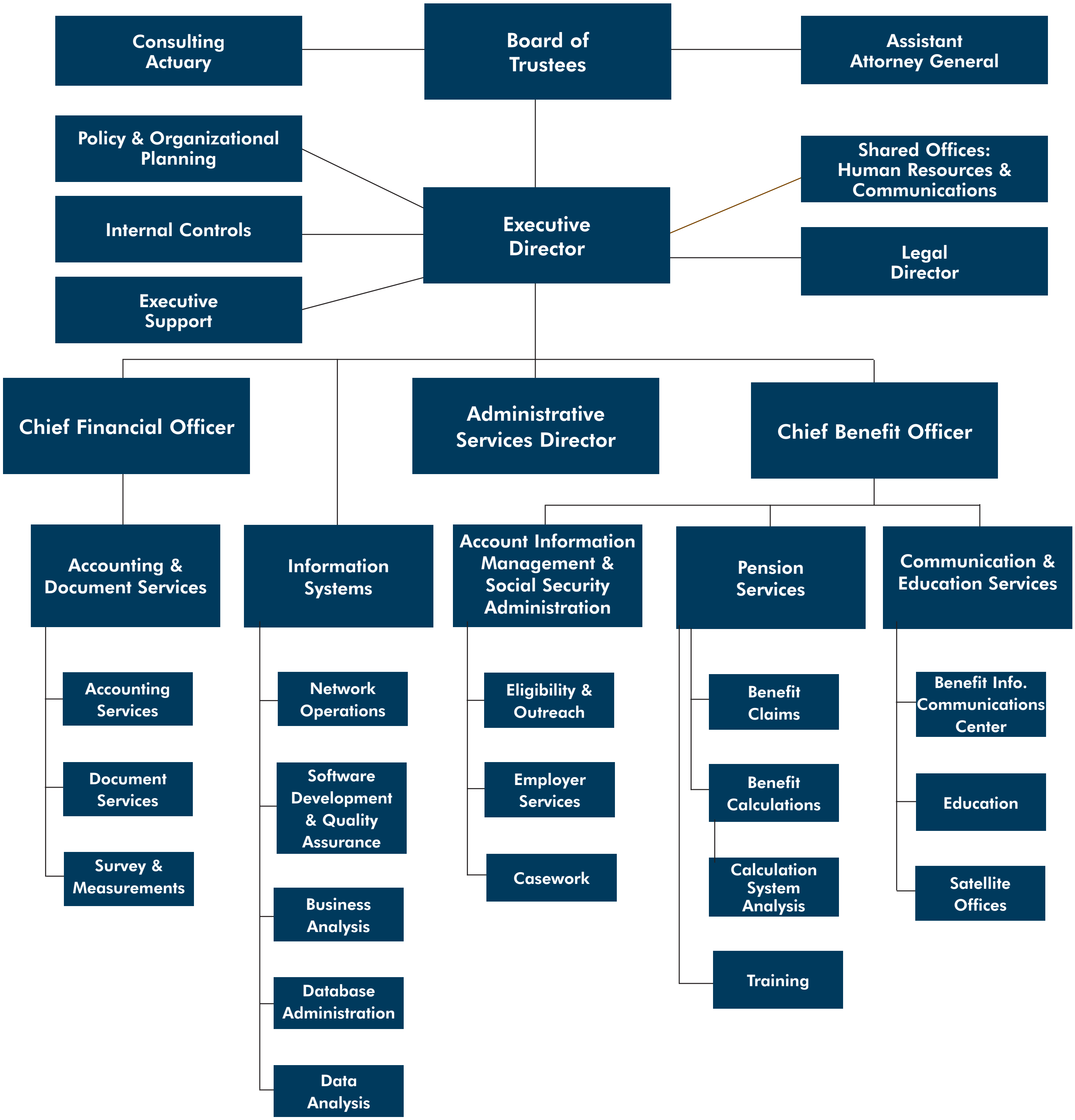
Auditor:
Minnesota Office of the Legislative Auditor
Abdo, Eick & Meyers

Legal Counsel:
Minnesota Office of Attorney General

Medical Advisor:
MMRO - Managed Medical Review Organization

NOTE: PERA invests its funds in various investment pools administered by the Minnesota State Board of Investment (SBI). The SBI retains various investment advisors whose fees are paid by the pool participants, including PERA. A schedule of these advisors and PERA's share of their fees is located on page 77 in the Investment Section of this CAFR.

Organization Structure



PERA's mission is to administer and promote sustainable retirement plans and provide services that our members value.

PERA's vision: PERA will be a recognized leader in efficient and excellent service delivery and plan management.

Finance Section

PERA 2016 Comprehensive Annual Financial Report

PERA through the years

'50s and '60s—

The late '50s saw an increase in not only income, but in new staff and departments to administer an amended law. These departments were established to pay benefits to survivors and minor dependent children of active public employee members who died, and to pay disability benefits. As a result of the increased staff, PERA found itself moving the association office from City Hall, to a private business building which was able to house the extended operation. For the first time in over 26 years, the association found itself paying rent.

PERA's Financial Highlights– year **1958**

Total Membership	41,381
Retired	2,148
Beneficiaries	401
Total Revenues	$6,881,367
Employee Contributions	$205,911
Employer Contributions	$5,319,201
Investment Earnings and Other	$1,356,255

1958 Active Members	39,233
Total Assets	$34,868,060
Cash in Bank	$1,046,080
Total Expenses	$8,844,227
Retirement Annuities	$7,607,944
Member Refunds	$1,001,947
Survivor and Disability Benefits	$249,548

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OLA **OFFICE OF THE LEGISLATIVE AUDITOR**
STATE OF MINNESOTA • James Nobles, Legislative Auditor

Independent Auditor's Report

Members of the Board of Trustees
Public Employees Retirement Association of Minnesota

Mr. Doug Anderson, Executive Director
Public Employees Retirement Association of Minnesota

Report on the Financial Statements

We have audited the accompanying financial statements of the Public Employees Retirement Association of Minnesota (PERA), which included the statement of fiduciary net position as of June 30, 2016, the related statement of changes in fiduciary net position, and notes to the financial statements, as listed in the Financial Section of the Table of Contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's 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.

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 controls relevant to PERA'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 PERA's internal controls. 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.

Members of the Board of Trustees
Mr. Doug Anderson, Executive Director
Page 2

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Public Employees Retirement Association of Minnesota as of June 30, 2016, and the changes in financial position for the fiscal year then ended in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter – Assumptions Used

PERA's actuary has recommended some changes to the actuarial assumptions for the Public Employees Police & Fire Plan. The actuary based its recommended changes on an experience study for the four-year period ending June 30, 2015.[1] PERA plans to implement the recommended changes to the actuarial assumptions for its fiscal year 2017 estimate of pension liability. Implementing the recommended changes will increase the pension liability for the Public Employees Police & Fire Plan. See Note 6 in the Notes to the Financial Statements for further information about PERA's net pension liability. This matter had no effect on our audit opinion.

Emphasis of Matter – GASB and Statutory Financial Requirements

Minnesota Statutes 2016, 356.20, require PERA to include in its financial report information using funding-focused statutory assumptions and methodologies. For its fiscal year 2016 financial report, the funding-focused information differs from the GASB-based information primarily for the following reasons:

(1) The discount rates required by statute for funding purposes were significantly higher than the discount rates used for financial reporting purposes. The discount rate is the rate used to bring the projected future benefit payments to the present value of those benefits (the pension liability). A higher discount rate results in a smaller pension liability.

(2) For funding purposes, statutes require investment gains and losses be recognized over a five-year period to "smooth" the volatility that can occur from year to year. For GASB financial reporting purposes, assets are valued at fair (market) value as of the end of the fiscal year.

Including funding-focused information was necessary for PERA to comply with state law and had no effect on our audit opinion.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis and the other required supplementary information, as listed in the Financial Section of the Table of Contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which 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 Management's Discussion and Analysis and the other 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.

[1] An experience study compares the actual experience of plan participants to assumptions used to estimate the cost of future benefit payments. The actuarial valuation process, while very sophisticated in its calculation methodology, is an estimate based on assumptions about events, which occur many years into the future. A range of assumptions may be reasonable. No one set of assumptions is uniquely correct.

We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information Included with the Financial Statements

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise PERA's basic financial statements. The supporting schedules in the Financial Section and the Introductory, Investment, Actuarial, and Statistical Sections, as listed in the Table of Contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supporting schedules, as listed in the Financial Section of the Table of Contents, are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. The supporting schedules have 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 supporting schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial, and Statistical Sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we issued our report, also dated December 20, 2016, on our consideration of the Public Employees Retirement Association of Minnesota's internal controls over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope and results of our testing of internal controls over financial reporting and compliance and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

James R. Nobles
Legislative Auditor

Cecile M. Ferkul, CPA, CISA
Deputy Legislative Auditor

December 20, 2016
Saint Paul, Minnesota

Management Discussion and Analysis

As management of Minnesota's Public Employees Retirement Association (PERA), we present this discussion and analysis of the financial activities for the year ended June 30, 2016 (FY16). This narrative is intended to supplement the financial statements which follow this discussion, and should be read in conjunction with the transmittal letter, which begins on page 10 of this annual report.

Overview of the Financial Statements

This Comprehensive Annual Financial Report (CAFR) contains two basic financial statements: the *Statement of Fiduciary Net Position* and the *Statement of Changes in Fiduciary Net Position*. These financial statements, in conjunction with the accompanying *Notes to the Financial Statements*, report information about PERA's financial condition to answer the question: "Is PERA better off or worse off as a result of this year's activities?" These statements are prepared using the accrual basis of accounting as is required by generally accepted accounting principles specified in statements issued by the Government Accounting Standards Board (GASB).

Basic Financial Statements

The *Statement of Fiduciary Net Position* provides a snapshot of account balances at year-end. It reports the assets available for future payments to benefit recipients, along with any liabilities that are owed as of the statement date. The difference between assets and liabilities, called "*Net Position Restricted for Pensions,*" represents the value of assets held in trust for future benefit payments. Over time, increases and decreases in net position can be one measurement of whether PERA's financial position is improving or declining.

The *Statement of Changes in Fiduciary Net Position*, on the other hand, shows additions to and deductions from net position that took place throughout the year.

Notes to the Basic Financial Statements

The *Notes to the Financial Statements* are an integral part of the financial statements and provide additional information that is essential for a comprehensive understanding of the data provided in the financial statements. The notes describe the accounting and administrative policies under which PERA operates, and provide additional levels of detail for selected financial statement items.

- Note 1 provides a plan description for PERA, including a background of PERA as an organization, its employers, participating members and benefit provisions of the various plans.

- Note 2 provides a summary of significant accounting policies. This section provides notes on PERA as a reporting entity, the basis of presentation and accounting, and an explanation of various financial statement components like cash, receivables, investments, capital assets, accrued compensated absences and administrative expenses.

- Note 3 provides information about cash deposits and PERA's investments, including fair value reporting, various risks, derivatives and securities lending.

- Note 4 provides information about capital assets.

- Note 5 provides information about contributions.

- Note 6 provides information about the net pension liability.

- Note 7 provides information about new asset transfers and PERA employee participation in the Coordinated Plan.

Financial Highlights

- PERA's Net Position decreased 3.0% during the year from $26.5 billion in fiscal year 2015 (FY15) to $25.7 billion in FY16.

- Total additions for FY16 were $1.1 billion, comprised of contributions of $1.1 billion, investment loss of $27 million, and a transfer of assets from new participants in the Statewide Volunteer Firefighter Retirement Plan of $20 million.

- Total deductions for the year increased from $1.8 billion in FY15 to $1.9 billion in FY16 largely due to an increase in the number of benefit recipients and a 1% COLA granted in January 2016.

- As of June 30, 2016 the actuarial funding status for the main retirement plans administered by PERA is as follows:
  - General Employees Plan is actuarially funded at 75.5%
  - Police and Fire Plan is actuarially funded at 87.7%, and
  - Correctional Plan is actuarially funded at 95.7%.

Financial Analysis of PERA's Funds

PERA is the administrator of three cost-sharing multiple-employer defined benefit retirement plans, one agent multiple-employer defined benefit plan, and one defined contribution plan. In a defined benefit plan, pension benefits are determined by a member's salary or benefit level and credited years of service, regardless of contribution amounts and investment returns for those contributions over the working career of a member. PERA administers four such plans which are accounted for in the following:

- General Employees Fund,
- Police and Fire Fund,
- Correctional Fund, and
- Volunteer Firefighter Fund.

In a defined contribution plan, pension benefits are determined by contributions made to a member's account and investment returns for those contributions. PERA administers one such plan accounted for in the Defined Contribution Fund.

General Employees Fund

Total assets as of June 30, 2016 were $20.6 billion, a slight increase of $75 million or 0.4% from the prior year. The primary reason for the minimal increase was due to a -0.1% investment return.

Total liabilities as of June 30, 2016 were $2.6 billion, an increase of $661 million from the prior year, mostly due to a higher value of securities lending collateral on the books at year end.

Total net position, the difference between total assets and total liabilities, decreased $587 million, or -3.2%, in FY16 to $18.0 billion.

Additions to Plan Net Position

The reserves needed to finance retirement benefits are accumulated through the collection of employer, member, and State of Minnesota contributions and through earnings on investments. Total contributions of $841 million were reduced by a net investment loss of $20 million to give total additions to the plan of $821 million.

Employer, member, and State of Minnesota contributions increased from the previous year by a total of $52 million, largely due to salary increases, full year of contribution increases, and more active members. The net investment loss totaled $20 million as the result of a -0.1% rate of return in FY16.

Deductions from Plan Net Position

The plan's largest expense was for retirement benefits to members and beneficiaries. Total benefits increased 4.4% to a little more than $1.35 billion in FY16. The increase in benefits resulted from an increase in the number of benefit recipients and a 1% cost-of-living increase for most retirees effective January 1, 2016.

Overall Financial Position

The financial position of a public pension plan is not so much determined by what is found on the face of the financial statements, but by looking at trends in the funding ratio and contribution sufficiency or deficiency. The actuarial value of assets, which is smoothed over a 5-year period, increased by $791 million in FY16 to $18.7 billion, which is presently $771 million higher than the fair value of assets. The funding ratio decreased from 76.3% in FY15 to 75.5% in FY16 when calculated using the actuarial value of assets.

For the past several years, contribution rates have not been sufficient for the General Employees Fund to become fully funded by its target date of 2031. As of June 30, 2016, contributions were deficient by 1.9% of pay to reach fully funded status by 2031, down from a 1.2% deficiency in FY15.

Fiduciary Net Position—Defined Benefit Plans (in thousands)

	General Employees Fund		Police and Fire Fund	
	2016	**2015**	**2016**	**2015**
Assets				
Cash & Receivables	$47,949	$47,518	$18,442	$16,811
Investments	17,952,309	18,535,696	7,085,329	7,335,023
Securities Lending Collateral	2,549,270	1,891,438	1,006,274	748,586
Capital Assets & Other	7,254	7,382	0	0
Total Assets	**$20,556,782**	**$20,482,034**	**$8,110,045**	**$8,100,420**
Liabilities				
Accounts Payable	$5,483	$1,263	$5,681	$3,130
Accrued Compensated Absences	886	887	0	0
Securities Lending Collateral	2,549,270	1,891,438	1,006,274	748,586
Bonds Payable	5,994	6,651	0	0
Total Liabilities	**$2,561,633**	**$1,900,239**	**$1,011,955**	**$751,716**
Total Net Position	**$17,995,149**	**$18,581,795**	**$7,098,090**	**$7,348,704**

Police and Fire Fund

Total assets as of June 30, 2016 were over $8.0 billion in the Police and Fire Fund, an increase of $9.6 million, or 0.1% from the prior year. Total liabilities were $1.0 billion, an increase of $260 million due to the larger securities lending collateral on the books at the end of the fiscal year.

Total net position decreased $250 million or roughly a -3.4% from the prior year to an ending balance of $7.1 billion.

Additions to Plan Net Position

Employer and employee contributions increased $18 million in FY16, largely due to salary increases, full year of contribution increases, and more active members. In 2014 the State of Minnesota began providing $9 million per year in direct state aid to the Police and Fire Fund until the fund is 90% funded. The net investment loss in FY16 totaled just under $9 million, as the result of a -0.1% rate of return.

Correctional Fund		Volunteer Firefighter Fund	
2016	2015	2016	2015
$524	$504	$119	$121
507,706	490,486	54,269	32,163
72,017	50,023	7,737	3,624
0	0	0	0
$580,247	**$541,013**	**$62,125**	**$35,908**
$447	$259	$13	$2
0	0	0	0
72,017	50,023	7,737	3,624
0	0	0	0
$72,464	**$50,282**	**$7,750**	**$3,626**
$507,783	**$490,731**	**$54,375**	**$32,282**

Deductions from Plan Net Position

Retirement benefits to members and beneficiaries made up over 99% of the plan's total deductions. The amount of benefits paid increased 3.6% in FY16 to $498 million. The increase in benefits resulted from an increase in retirees and a 1% cost-of-living increase for most retirees effective January 1, 2016.

Overall Financial Position

As a result of benefit provision changes made during the 2013 legislative session and contribution rate increases in FY15, the plan's funding ratio improved from 83.6% at the end of FY15 to 87.7% at the end of FY16 and the FY15 contribution deficiency of 2.7% of pay improved to a sufficiency of 1.2% of pay in FY16.

Correctional Fund

Total assets in the Correctional Fund as of June 30, 2016, equaled $580 million, an increase of $39 million or 7.3% from the prior year. The increase is due to positive investment earnings plus a slightly larger amount of securities lending collateral on the books at year end. The Correctional Fund is a younger fund with a smaller asset base, and brings in more cash through contributions than it pays out in benefits and refunds. Total liabilities increased due to a larger amount of securities lending collateral at the end of the year. As a result, total net position increased $17 million with an ending net position of $507 million.

Additions to Plan Net Position

Contributions and net investment income for FY16 totaled $28 million, compared to $47 million in the prior year. Employer and member contributions increased $1 million from FY15 levels due to an increase in the number of active members. The Correctional Fund had net investment income that totaled $209,000 despite a -0.1% rate of return in FY16.

Deductions from Plan Net Position

Expenses for this plan are still relatively small. Retirement benefits increased 20% from $7.8 million in FY15 to $9.4 million in FY16 as more members became eligible to retire.

Overall Financial Position

At the end of FY16, the Correctional Fund is 95.7% funded, which is a slight increase from last year's 95.6%. Fortunately, contribution rates are 0.12% sufficient to allow the plan to become fully funded by 2031.

Volunteer Firefighter Fund

The Volunteer Firefighter Retirement Plan is an agent multi-employer defined benefit plan that began January 1, 2010, with 6 fire departments and 129 volunteer firefighters. Since then, an additional 106 fire departments have joined the plan and fund net assets have increased to $54 million. Originally all the fire departments in the plan paid lump-sum benefits. However, on January 1, 2016 the first fire department with a monthly annuity payment option joined the plan.

Assets increased by 73% in FY16, or roughly $26 million, largely due to $20 million in new assets being transferred into the fund from the 20 fire departments that joined the plan during the year. Fire departments are only eligible to join the plan on January 1 of any given year. The modest investment returns result from significantly larger balances the second half of the fiscal year that were able to negate the losses from the first half of the fiscal year. This also resulted in larger amount of securities lending collateral at year end.

Changes in Fiduciary Net Position—Defined Benefit Plans (in thousands)

	General Employees Fund		Police and Fire Fund	
	2016	2015*	2016	2015
Additions				
Employer Contributions	$459,978	$435,265	$156,065	$144,317
State Contributions	6,000	0	9,000	9,000
Member Contributions	375,291	353,882	95,172	88,733
Investment Income (Loss)	(20,851)	799,079	(8,949)	317,556
Other Additions	431	281	3	84
Total Additions	**$820,849**	**$1,588,507**	**$251,291**	**$559,690**
Deductions				
Retirement Benefits	$1,359,176	$1,301,396	$498,608	$481,330
Refunds of Contributions	37,209	35,706	2,391	1,953
Administrative Expenses	11,110	10,377	906	803
Total Deductions	**$1,407,495**	**$1,347,479**	**$501,905**	**$484,086**
Increase (Decrease) in Net Position	**$(586,646)**	**$241,028**	**$(250,614)**	**$75,604**

*Includes Minneapolis Employees Retirement Fund

In its sixth full year, the fund received $332,000 in contributions from employers and $1.8 million in fire state aid from the State of Minnesota. Net investment income totaled $1.3 million and benefits paid totaled $1.6 million. Funding is received through fire state aid from the State of Minnesota, investment returns, and annual employer contributions (if they are needed to keep each fire department's account 100% funded). Net position increased 68.4% from FY15 to $54 million, largely due to the additional fire departments that joined during the year.

Agency Summary

For the second consecutive year, PERA experienced investment returns that were below the expected rate of return. For the year ended June 30, 2016, investment earnings were flat. These substandard investment returns have resulted in a decrease of our funding level and net position. PERA continues to review all of the funding assumptions and is continually reviewing options to shore up the financial position for all the funds.

This financial report is designed to provide a general overview of PERA's finances and to demonstrate its accountability with the assets it holds in trust. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to PERA at 60 Empire Drive, Suite 200 in St. Paul, Minnesota 55103-2088.

Correctional Fund		Volunteer Firefighter Fund	
2016	2015	2016	2015
$16,490	$ 15,736	$332	$226
0	0	1,811	1,430
11,008	10,472	0	0
209	20,373	1,325	880
0	0	20,401	4,667
$27,707	**$46,581**	**$23,869**	**$7,203**
$9,381	$7,777	$1,644	$1,221
982	1,057	0	0
292	247	132	86
$10,655	**$9,081**	**$1,776**	**$1,307**
$17,052	**$37,500**	**$22,093**	**$5,896**

Financial Section

Statement of Fiduciary Net Position

As of June 30, 2016 (in thousands)

	Defined Benefit Funds		
	General Employees Fund	Police and Fire Fund	Correctional Fund
Assets			
Cash	**$6,410**	**$2,524**	**$290**
Receivables			
Accounts Receivable	$40,148	$15,896	$227
Due from Other Funds	1,391	22	7
Total Receivables	**$41,539**	**$15,918**	**$234**
Investments at fair value			
US Stock Index Pool	$5,557,335	$2,193,697	$156,968
Bond Pool	4,437,241	1,751,552	125,331
US Stock Actively Managed Pool	2,776,187	1,095,869	78,414
Broad International Stock Pool	2,515,673	993,035	71,056
Alternative Investment Pool	2,300,707	908,179	64,984
Money Market	365,166	142,997	10,953
Total Investments	**$17,952,309**	**$7,085,329**	**$507,706**
Securities Lending Collateral	**$2,549,270**	**$1,006,274**	**$72,017**
Capital Assets			
Equipment Net of Accumulated Depreciation	$320	$0	$0
Property Net of Accumulated Depreciation	6,934	0	0
Total Capital Assets	**$7,254**	**$0**	**$0**
Total Assets	**$20,556,782**	**$8,110,045**	**$580,247**
Liabilities			
Accounts Payable	$5,454	$4,764	$160
Payable to Other Funds	29	917	287
Securities Lending Collateral	2,549,270	1,006,274	72,017
Accrued Compensated Absences	886	0	0
Bonds Payable	5,994	0	0
Total Liabilities	**$2,561,633**	**$1,011,955**	**$72,464**
Net Position Restricted For Pensions	**$17,995,149**	**$7,098,090**	**$507,783**

The accompanying notes are an integral part of the financial statements.

	Volunteer Firefighter Fund	Defined Contribution Fund	Agency Fund Other Post Employment Benefits	Total
	$3	**$171**	**$816**	**$10,214**
	$116	$221	$0	$56,608
	0	0	0	1,420
	$116	**$221**	**$0**	**$58,028**
	$0	$9,209	$0	$7,917,209
	24,900	3,219	94,807	6,437,050
	19,094	36,934	391,456	4,397,954
	7,843	2,526	0	3,590,133
	0	0	0	3,273,870
	2,432	6,380	16,983	544,911
	$54,269	**$58,268**	**$503,246**	**$26,161,127**
	$7,737	**$9,783**	**$0**	**$3,645,081**
	$0	$0	$0	$320
	0	0	0	6,934
	$0	**$0**	**$0**	**$7,254**
	$62,125	**$68,443**	**$504,062**	**$29,881,704**
	$13	$12	$504,062	$514,465
	0	187	0	1,420
	7,737	9,783	0	3,645,081
	0	0	0	886
	0	0	0	5,994
	$7,750	**$9,982**	**$504,062**	**$4,167,846**
	$54,375	**$58,461**	**$0**	**$25,713,858**

Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2016 (in thousands)

	Defined Benefit Funds		
	General Employees Fund	Police and Fire Fund	Correctional Fund
Additions			
Contributions			
Employer	$459,978	$156,065	$16,490
State of Minnesota	6,000	9,000	0
Member	375,291	95,172	11,008
Total Contributions	**$841,269**	**$260,237**	**$27,498**
Investment Income			
Net Appreciation in Fair Value of Investments	$(8,036)	$(3,870)	$554
Less Investment Expense	(24,011)	(9,498)	(661)
Net Investment Income	**$(32,047)**	**$(13,368)**	**$(107)**
Income From Securities Lending Activities:			
Securities Lending Income	$18,886	$7,455	$534
Securities Lending Expenses:			
Borrower Rebates	(3,775)	(1,491)	(107)
Management Fees	(3,915)	(1,545)	(111)
Net Income From Securities Lending	**$11,196**	**$4,419**	**$316**
Total Net Investment Income	**$(20,851)**	**$(8,949)**	**$209**
Other Additions	**$431**	**$3**	**$0**
Total Additions	**$820,849**	**$251,291**	**$27,707**
Deductions			
Benefits	$1,359,176	$498,608	$9,381
Refunds of Contributions	37,209	2,391	982
Administrative Expenses	11,110	906	292
Total Deductions	**$1,407,495**	**$501,905**	**$10,655**
Net Increase (Decrease) in Net Position	**$(586,646)**	**$(250,614)**	**$17,052**
Net Position Restricted For Pensions			
Beginning of year	**$18,581,795**	**$7,348,704**	**$490,731**
End of year	$17,995,149	$7,098,090	$507,783

The accompanying notes are an integral part of the financial statements.

Volunteer Firefighter Fund	Defined Contribution Fund	Total
$332	$1,965	$634,830
1,811	0	16,811
0	1,779	483,250
$2,143	**$3,744**	**$1,134,891**
$1,298	$1,020	$ (9,034)
(44)	(55)	(34,269)
$1,254	**$965**	**$(43,303)**
$71	$57	$27,003
0	(12)	(5,385)
0	(11)	(5,582)
$71	**$34**	**$16,036**
$1,325	**$999**	**$(27,267)**
$20,401	**$2**	**$20,837**
$23,869	**$4,745**	**$1,128,461**
$1,644	$0	$1,868,809
0	3,755	44,337
132	189	12,629
$1,776	**$3,944**	**$1,925,775**
$22,093	**$801**	**$(797,314)**
$32,282	**$57,660**	**$26,511,172**
$54,375	$58,461	$25,713,858

Financial Section

NOTE 1
Plan Description

A) Organization

Established by the Minnesota Legislature in 1931, the Public Employees Retirement Association (PERA) of Minnesota administers pension plans that serve approximately 329,000 current or former county, school and local public employees, their survivors, and dependents. Retirement plans administered by the Association provide a variety of retirement pensions, and survivor and disability benefits.

PERA's Board of Trustees is responsible for administering these plans in accordance with statutes passed by the Minnesota Legislature and has a fiduciary obligation to PERA's members, their governmental employers, the state, and its taxpayers. PERA's Board of Trustees is composed of 11 members. The state auditor is a member by statute. Five trustees are appointed by the governor. Serving four-year terms, these five trustees represent cities, counties, school boards, retired annuitants, and the general public, respectively. The remaining five board members are elected by the PERA membership at large to serve four-year terms. Three trustees represent the general active membership, one represents Police and Fire Plan members, and one represents annuitants and benefit recipients. The next trustee election is scheduled for January 2019.

The board appoints an executive director to serve as chief administrative officer of PERA. With approval of the board, the director develops the annual administrative budget, determines staffing requirements, contracts for actuarial and other services, and directs the day-to-day operations of the Association. The director also serves as a member of the State Investment Advisory Council, which advises the Minnesota State Board of Investment (SBI) on the management and investment of public pension funds and other assets.

The following is a summary of the laws, regulations, and administrative rules governing the Public Employees Retirement Association retirement plans and should not be interpreted as a comprehensive explanation thereof. If there is any discrepancy between this summary and the laws governing PERA, the statutes and regulations shall govern.

PERA is the administrator of five separate retirement plans and an agency fund that accounts for other post-employment benefits for participating employers. Each plan has specific membership, contribution, benefit, and pension provisions.

PERA administers three cost-sharing multiple-employer retirement plans, the General Employees Retirement Plan (General Employees Plan accounted for in the General Employees Fund), the Public Employees Police and Fire Plan (Police and Fire Plan accounted for in the Police and Fire Fund), and the Public Employees Local Government Correctional Service Retirement Plan, called the Public Employees Correctional Plan (Correctional Plan accounted for in the Correctional Fund).

In addition to the cost-sharing multiple-employer plans, PERA administers one agent multiple-employer retirement plan, the Statewide Volunteer Firefighter Retirement Plan (Volunteer Firefighter Plan accounted for in the Volunteer Firefighter Fund) and one multiple-employer defined contribution plan, the Public Employees Defined Contribution Plan (Defined Contribution Plan accounted for in the Defined Contribution Fund). PERA also administers an agency fund to track the investments placed in a trust by various entities with the SBI to cover future other postemployment benefit costs (OPEB).

- The General Employees Plan encompasses two plans — the PERA Coordinated Plan and the PERA Basic Plan. The Coordinated Plan, created in 1968, provides retirement and other benefits in addition to those supplied by Social Security. Established in 1931, the Basic Plan was PERA's original retirement plan and is not coordinated with the federal program. PERA's Basic Plan was closed to new membership in 1968 with the creation of the Coordinated Plan. Today, fewer than ten Basic members remain active public employees. The Minneapolis Employees Retirement Fund (MERF) was included in the General Employees Plan in June 2010 as a separate division and was merged into the plan January 1, 2015. A traditional defined benefit plan, MERF was closed to new membership in 1979. It encompasses employees of the City of Minneapolis, the Metropolitan Airports Commission, Minnesota State Colleges and Universities, and non-teaching personnel at Minneapolis schools. Annual state and employer appropriations of $37 million ensure the plan remains self-sustaining. The active membership of the Minneapolis Employees Retirement Fund is also small with less than 20 members.

- The Police and Fire Plan was created in 1959 for police officers and firefighters not covered by a local relief association. It also encompasses all paid Minnesota police officers and firefighters hired since 1980.

- The Correctional Plan was established in 1999 for correctional officers serving in county and regional adult and juvenile corrections facilities. Participants must be responsible for the security, custody and control of the facilities and their inmates.

- The Defined Contribution Plan, created in 1987 to provide a retirement plan for personnel employed by public ambulance services, has since been expanded to include physicians, city managers, and locally-elected public officials, except for county sheriffs. Officials first elected to a governing body, such as a city council or county board after June 30, 2002, may only participate in PERA's Defined Contribution Plan. Previously, such officials could elect Coordinated Plan participation as an alternative to the Defined Contribution Plan. City managers may participate in the Defined Contribution Plan as an alternative to Coordinated Plan membership.

- The Volunteer Firefighter Plan, an agent multiple-employer defined benefit plan, was added to PERA's list of plans in January 2010 with the creation of a lump-sum benefit retirement division. Effective January 2016, the Legislature added a monthly benefit retirement division to the plan. The plan is open to any municipal volunteer fire department or independent nonprofit firefighting corporation in the state. The municipality or corporation determines the level of benefits offered. Funding is provided through Minnesota State Fire Aid (based on insurance premiums and administered by the Minnesota Department of Revenue) and, if required, additional municipal contributions. As of June 30, 2016, 112 volunteer fire departments have joined the plan.

- PERA's Agency Fund, added in the 2008 legislative session and established by *Minnesota Statutes* Section 471.6175, allows any political subdivision or other public entity that has an OPEB liability to create a separate trust with SBI to pay future OPEB costs. Since PERA already had a reporting relationship with most governmental entities, the Association was asked to collect voluntary employer contributions and send the funds to the SBI. The various entities are responsible for making sure any withdrawals are done in accordance with generally accepted accounting principles and *Minnesota Statutes*. They are also responsible for setting and paying benefits, for determining voluntary contribution amounts, and for handling any OPEB reporting requirements. Entities may transfer their assets from PERA/SBI to a bank or insurance company at any time. As of June 30, 2016, 22 different entities had assets worth $504 million in separate revocable and irrevocable trusts that will be used to pay OPEB costs in the future.

The plans, including benefit provisions and the obligation to make contributions, are established and administered in accordance with *Minnesota Statutes*, Chapters 353, 353D, 353E, 353G and 356. These statutes also define financial reporting requirements.

B) Participating Employers

PERA serves approximately 2,000 separate units of government in the General Employees Plan, 500 units of government in the Police and Fire Plan, 80 counties in the Correctional Plan, and 1,000 units of government in the Defined Contribution Plan. These units of government are made up of counties, cities, townships, school districts, and other entities whose revenues are derived from taxation, fees, or assessments. PERA also serves 112 fire departments and their sponsors. The Defined Contribution Plan serves any local unit of government whose current or former elected officials elect to participate. The Defined Contribution Plan also serves any publicly-operated ambulance service that receives an operating subsidy from a governmental entity and elects to participate in the plan.

C) Participating Members

PERA has approximately 166,000 active members. With certain statutory exceptions, an employee performing personal services for a governmental employer whose salary is paid, in whole or in part, from revenues derived from taxation, fees, assessments, or other sources, is a member of PERA. Plan participation is dependent on the occupation of the member.

The General Employees Plan covers employees of counties, cities, townships and employees of schools in non-certified positions throughout the State of Minnesota. The Police and Fire Plan, originally established for police officers and firefighters not covered by a local relief association, now covers all police officers and firefighters hired since 1980. Effective July 1, 1999, the Police and Fire Plan also covers police officers and firefighters belonging to a local relief association that elected to merge with and transfer assets and administration to PERA. The Correctional Plan covers employees in county correctional institutions who have direct contact with inmates. The Volunteer Firefighter Plan covers approximately 2,600 volunteer firefighters whose fire departments elected to be covered by PERA. Coverage under the Defined Contribution Plan is open to elected local government officials (except elected county sheriffs), emergency medical service personnel employed by or providing service to any of the participating ambulance services, and physicians employed at public facilities. Elected officials and ambulance personnel who are covered by a public or private pension plan because of their employment are not eligible to participate in the Defined Contribution Plan. At June 30, 2016, there were 7,723 members in the Defined Contribution Plan.

Shown in **Figure 1** below are the membership totals in PERA's multi-employer defined benefit plans as of June 30, 2016.

Figure 1: PERA Membership — Defined Benefit Plans

	General Employees	Police and Fire	Correctional	Volunteer Firefighter	Total
Retirees and beneficiaries receiving benefits	94,288	10,352	967	79	105,686
Terminated employees entitled to benefits/refunds but not yet receiving them:					
Vested	52,516	1,490	2,755	928	57,689
Non-Vested	132,416	1,059	2,359	0	135,834
Current, active employees:					
Vested	90,491	9,088	2,251	201	102,031
Non-Vested	58,254	2,310	1,576	1,438	63,578
Total	**427,965**	**24,299**	**9,908**	**2,646**	**464,818**

D) Benefit Provisions - Defined Benefit Annuity Plans

PERA's defined benefit plans are tax qualified plans under Section 401(a) of the Internal Revenue Code. PERA provides retirement benefits as well as disability benefits to members, and benefits to survivors upon death of eligible members. Members of the General Employees, Correctional, and Police and Fire plans hired prior to July 1, 2010, are vested for retirement benefits after 36 months of public service. The vesting requirement for individuals hired after June 30, 2010, is 60 months. Police and Fire Plan members enrolled after June 30, 2014, have a vesting period of 10 years (120 months).

Retirement benefits are based on a member's highest average salary for any five successive years of allowable service, age, and years of credit at termination of service. A reduced retirement annuity is also available to eligible members seeking early retirement. Members of PERA's defined benefit plans receive one service credit for each month for which they are paid. Individuals may earn a maximum of 12 service credits per year. Salary used in retirement and disability benefit calculations is the average monthly salary over an individual's highest-paid 60 consecutive months of public service (high-five salary), or all months of service if less than 60.

Members of the PERA General Employees, Correctional, and Police and Fire plans may select from several types of retirement benefits.

Single-Life Pension — A Single-Life Pension is a lifetime annuity that ceases upon the death of the retiree. No survivor benefit is payable.

Survivor Options — Upon retirement, members may choose from one of four survivor options. All of these pensions are payable for the lifetime of the retiree. At the time of the retiree's death, the designated survivor begins to receive monthly benefit payments at varying levels for his or her lifetime. Depending on the survivor option chosen by the member, survivor payments are at a 25, 50, 75 or 100% level of that received by the member. Selection of a survivor option will result in a reduction in the amount of the pension from the single-life pension level. The amount of the reduction depends on the age of both the retiring member and the survivor. All survivor pension options incorporate an "automatic bounce back" feature. This returns the amount of the pension to the level of the single-life benefit in the event the designated survivor predeceases the retiree. The cost of this protection is borne by the funds, not by the retiree.

Deferred Pension — A vested member who terminates public service may leave contributions in the fund(s) in which he or she participated and qualify for a pension at retirement age. The benefit amount, calculated as of the date of termination, will increase at a rate of 1% per year, compounded annually, for members who terminated public service prior to January 1, 2012. There is no benefit growth for members terminating service thereafter.

Combined Service and Proportionate Pensions — Retiring members may elect to combine service in a PERA-covered position with service in any of the other eligible Minnesota pension funds and qualify for a retirement benefit from each fund in which they participated. These funds are designated by statute. Vested members qualify for a combined service pension if they have six or more months of service in each fund and have not begun to receive a benefit from any of the designated funds. Pensions are based upon the formula of each fund and the member's average salary over the five highest-paid years of service, no matter when it was earned.

Public employees who retire at or over their Social Security full retirement age with between one and ten years of service in one or more designated funds may qualify for a proportionate pension. Benefits are paid by each applicable fund in which the employee has credit and are based upon the formula of each fund and the member's average salary during the period of service covered by that fund.

General Employees Plan

The General Employees Plan is governed by *Minnesota Statutes* Chapter 353. Benefits for plan members hired prior to July 1, 2010, vest after three years of credited service. Plan members first hired after June 30, 2010, vest after five years of credited service. General Employees Plan members belong to either the Basic or Coordinated Plan. Coordinated members are covered by Social Security and Basic members are not. All new General Employees Plan members must participate in the Coordinated Plan. Two methods are used to compute benefits for Coordinated and Basic members. The retiring member receives the higher of a step-rate benefit accrual formula (Method 1) or a level accrual formula (Method 2). Members hired prior to July 1, 1989 receive the higher of the two calculated amounts. Only Method 2 is used for members hired after June 30, 1989.

Under Method 1, the annuity accrual rate for Basic members is 2.2% of average salary for each of the first ten years of service and 2.7% for each remaining year. For a Coordinated member, the annuity accrual rate is 1.2% of average salary for each of the first ten years of service and 1.7% for each remaining year. Using this calculation, members are eligible for a full (unreduced) retirement annuity if they are age 65 or over with at least one year of public service or their age plus years of public service equal 90 (Rule of 90). A reduced retirement annuity is payable as early as age 55 with three or more years of service. The reduction is 0.25% for each month under age 65. A member with 30 or more years of service may retire at any age with the 0.25% reduction made from age 62 instead of 65. For General Employees Plan members whose annuity is calculated using Method 1, a full annuity is available when age plus years of service equal at least 90.

Under Method 2, the annuity accrual rate is 2.7% of average salary for Basic members and 1.7% for Coordinated members for each year of service. This calculation provides for unreduced retirement benefits at age 65 for members first hired prior to July 1, 1989, and at the age for unreduced Social Security benefits, capped at age 66, for those first hired into public service on or after that date. Early retirement results in an actuarial reduction with augmentation (about 6% per year) for members retiring prior to full retirement age.

The annuity accrual rate for former MERF members is 2.0% of average salary for each of the first ten years of service and 2.5% for each remaining year. MERF members may choose a death benefit option with the death benefit being at least $500 and not more than one-half the value of the employee's total retirement benefit.

Police and Fire Plan

The Police and Fire Plan is established in *Minnesota Statutes* Chapter 353. Benefits for plan members hired prior to July 1, 2010, vest after three years of credited service. Plan members first hired after June 30, 2010, but before July 1, 2014, vest on a prorated basis from 50% after five years up to 100% after ten years of credited service. Benefits for plan members first hired after June 30, 2014, vest on a prorated basis from 50% after ten years up to 100% after twenty years of credited service. The annuity accrual rate is 3% of average salary for each year of service.

A full unreduced pension is earned when members meet the following conditions: age 55 and vested or age plus years of service equal at least 90 if first hired prior to July 1, 1989. A reduced retirement annuity is available to members between the ages of 50 and 55. Under legislation enacted in the 2013 session of the Legislature, the reduction for Police and Fire plan early retirement began increasing incrementally in July 2014. It will culminate in a 5% per year reduction in 2019.

Correctional Plan

The Correctional Plan is governed by *Minnesota Statutes* Chapter 353E. Benefits for plan members hired prior to July 1, 2010, vest after three years of credited service. Members first hired after June 30, 2010, vest on a prorated basis from 50% after five years up to 100% after ten years of credited service. The annuity accrual rate is 1.9% of average salary for each year of service in that plan.

A full, unreduced pension is earned at age 55 when members meet the following conditions: three or more years of service, five years if hired after June 30, 2010, or age plus years of service total at least 90 if hired prior to July 1, 1989. An actuarial reduction with augmentation is made in a member's benefit for retirement prior to qualification for an unreduced pension.

Post Retirement Increases

Post retirement increases of 1% (2.5% for Correctional Plan) are given each year to annuitants who have been receiving a benefit for at least 12 months (36 months for Police and Fire plan annuitants whose benefits were effective after June 1, 2014). If the market value of assets equals or exceeds 90% of the actuarial accrued liability in the two most recent consecutive actuarial valuations for each plan, the post retirement increase will increase to 2.5% for annuitants in that plan.

The benefit provisions stated in the preceding paragraphs of this section are current provisions and apply to active plan participants. Vested, terminated employees who are entitled to benefits but are not receiving them yet are bound by the provisions in effect at the time they last terminated their public service.

E) Benefit Provisions – Volunteer Firefighter Plan

The Volunteer Firefighter Plan is established and administered in accordance with *Minnesota Statutes,* Chapter 353G. Members of the Volunteer Firefighter Plan are vested after five years. The plan includes a lump-sum retirement division first available on January 1, 2010, and a monthly benefit retirement division. The lump-sum retirement division account is funded by fire state aid, investment earnings and (if necessary) employer contributions. Members do not contribute to the plan. Benefits are paid based on the number of years of service multiplied by a benefit level chosen by the entity sponsoring the fire department from 71 possible levels ranging from $500 per year of service to $7,500 per year of service. Plan provisions include a pro-rated vesting schedule that increases from 5 years at 40% through 20 years at 100%.

Established by the Minnesota Legislature in 2015, coverage by the monthly benefit retirement division may only be elected if the volunteer firefighters are covered by a monthly benefit volunteer firefighter relief association governed by *Minnesota Statutes* Chapter 424A.

The service pension amount for the firefighters of a fire department covered by the monthly benefit retirement division of the retirement plan is the amount specified in the retirement benefit plan document applicable to the fire department.

F) Benefit Provisions – Defined Contribution Plan

The Defined Contribution Plan is a tax qualified plan under Section 401(a) of the Internal Revenue Code and all contributions by or on behalf of employees are tax deferred until time of withdrawal. The plan is established and administered in accordance with *Minnesota Statutes,* Chapter 353D.

Since the Defined Contribution Plan consists of individual accounts paying a lump-sum benefit, there are no vesting requirements for member or employer contributions and earnings. Plan benefits depend solely on amounts contributed to the plan plus investment earnings, less administrative expenses. Employer and employee contributions are combined and used to purchase shares in one or more of the seven accounts of the Minnesota Supplemental Investment Fund administered by the SBI. Investment options include the Broad International Stock Fund, U.S. Stock Actively Managed Fund, U.S. Stock Index Fund, Balanced Fund, Bond Fund, Stable Value Fund, and Money Market Fund. PERA receives 2.0% of employer contributions paid during the year, plus twenty five-hundredths of 1% (0.25%) of the assets in each member's account each year for administering the plan.

At the time of retirement or termination, PERA distributes the market value of a member's account to the member or transfers it to another qualified plan or individual retirement account. Upon the member's death, PERA distributes the value of the account to the member's designated beneficiary.

G) Earnings Limitation

Retirees who return to work in a PERA-covered position are subject to the same earnings limitations as Social Security recipients. Benefits are reduced if these limits are exceeded, with the amount held in escrow. The retiree may request repayment of these funds one year after leaving the position. If reemployment extends through the end of a calendar year, the deductions from that year may be reclaimed one year later.

The earnings limitation only applies to PERA-covered employment. Self or private employment and elected official service will result in no benefit reduction for retirees. Earnings limits are waived for Coordinated Plan members who begin receiving benefits under a Phased Retirement Agreement. Phased Retirement allows members age 62 and above to begin receiving a pension without termination of public service if they accept a reduction in hours worked to less than 1,044 per year. The agreements can be up to one year in length and can be renewed for up to five years. The program is scheduled to sunset in 2019. Because they only provide lump-sum benefits, the Defined Contribution Plan and the Volunteer Firefighter Plan have no earnings limits.

H) Disability Benefits

Members may be eligible for benefits from PERA if they are unable to work because of a physical or mental disability. Disability is defined by statute, and PERA may require periodic medical examinations of those receiving these benefits.

Disability benefit calculations are based upon years of service and average high-five salary for Coordinated Plan members. For Police and Fire Plan members, there is a minimum benefit of 60% of salary if disabled while engaged in hazardous activities related to the occupation. The minimum duty-related disability benefit is 47.5% for Correctional Plan members. Disability under any other circumstances results in a minimum benefit of 45% of salary for Police and Fire Plan members and 19% for Correctional Plan members. A duty disability benefit will only be awarded if the disabling event occurred while the member was engaged in hazardous activities inherent to the occupation.

Coordinated Plan members qualify for disability when vested for a retirement benefit, and by meeting the statutory definition. Police and Fire and Correctional plan members qualify by meeting the definition with one or more years of service if disabled outside the line of duty. If disabled in the line of duty, there is no minimum service requirement.

Neither the Defined Contribution Plan nor the Volunteer Firefighter Plan has specific disability benefits. However, the Defined Contribution Plan does allow for monthly benefit payments until the account balance is exhausted.

I) Survivor Benefits

PERA also provides survivor (death) benefits for families of members who qualify for such coverage should they die before commencing retirement benefit payments. The qualifications and types of benefits vary with each plan. As of August 1, 2013, Minnesota recognizes same-sex marriage. PERA's governing statutes make no distinction concerning the gender of a spouse, and the agency therefore follows the state's definition of a valid marriage.

A lifetime survivor benefit is available to the surviving spouse of a Coordinated, Correctional, or Police and Fire plan member. For Police and Fire Plan members, this benefit is based on either 50% of the average of the full-time monthly base salary rate in effect during the last six months of allowable service or a formula using the member's total years of service, high-five salary age at death and age of the spouse. The surviving spouse benefit for Coordinated and Correctional plan members is only based on the formula. This benefit is payable to the spouse of a deceased member for life, even upon remarriage. Automatic lifetime survivor benefits are also available to the spouse of Police and Fire Plan members who suffer total and permanent duty disability. Survivor benefits for other disabled members are only available if the member chooses a survivor option to their disability benefit.

For the surviving spouse of a Coordinated or Correctional plan member, there are alternative term-certain benefits of 10, 15, or 20 years duration. The monthly payment, however, may not exceed 75% of the member's average high five-year salary. Survivor benefits are immediately suspended for any survivor charged with causing the death of an Association member. The benefit is permanently revoked upon conviction of such a crime.

Dependent children of active or disabled Police and Fire Plan members are eligible for benefits until age 18, or age 23 if full-time students. In this case, the maximum family benefit is 70% of the member's average monthly salary. If a Coordinated or Correctional plan member dies and there is no surviving spouse, any children under age 20 qualify to receive a monthly term-certain benefit.

Instead of a monthly benefit, the surviving spouse, if a designated beneficiary, may elect a refund of any remaining employee contributions in the account, plus interest. However, a refund may not be elected if there are dependent children who are eligible for benefits.

The Volunteer Firefighter Plan provides for payment of the member's accrued benefits to a surviving spouse or, if none, to minor children or, finally, the member's estate, based on retirement at age 50. Similarly, the Defined Contribution Plan provides for payment of the account balance to beneficiaries.

J) Refunds

Refunds of contributions are available at any time to members who terminate public service and have not yet begun receiving a pension. The refund includes employee contributions plus 4% interest, compounded annually.

A refund of member contributions plus interest may also be elected by the designated beneficiary of a member or former member who dies before reaching retirement. If there is no beneficiary, payment is made to the surviving spouse or, if none, to the estate of the deceased member or former member.

If a retiree and designated survivor, if any, die before all employee contributions are paid in the form of a pension or benefits, the remaining balance would be paid in the same manner outlined for beneficiaries. No interest is paid to beneficiaries on the balance in an account if the member was receiving retirement benefits.

A former member who has received a refund may repay all or a portion of the refund after having reentered public service for a minimum of six months. This restores forfeited service. Interest charged on repayment is 8.5%, compounded annually until June 30, 2015, and 8% thereafter.

NOTE 2
Summary of Significant Accounting Policies

A) Reporting Entity

PERA functions as a separate statutory entity. The Association maintains rights to sue or be sued in its own name and to hold property in its own name. For financial reporting purposes, PERA is considered a pension trust fund of the State of Minnesota and is included in the State's Comprehensive Annual Financial Report with its fiduciary funds. PERA does not have any component units.

B) Basis of Presentation and Basis of Accounting

The accompanying financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) that apply to governmental accounting for fiduciary funds. Financial statements for all funds are prepared using the accrual basis of accounting. Employee and employer contributions are recognized as revenues when due, pursuant to formal commitments and statutory requirements. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses. Actual results could differ from those estimates.

During the year ended June 30, 2016, PERA adopted the following standards of the Governmental Accounting Standards Board (GASB): GASB Statement No. 72, Fair Value Measurement and Application; GASB Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68 and Amendments to Certain Provisions of GASB Statements 67 and 68; GASB Statement No. 76, The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments; and GASB Statement No. 82, Pension Issues.

GASB Statement No. 72 requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. Information about fair value measurements is presented in Note 3 A. GASB Statement No. 73 primarily clarified certain specific provisions of GASB Statements 67 and 68. GASB Statement No. 82 requires that the measure of payroll presented in schedules of required supplementary information should be covered payroll, i.e. the payroll on which contributions are based.

C) Cash

For PERA's defined benefit and defined contribution plans, cash includes cash on deposit in the state's treasury, which is commingled with other state funds. Cash on deposit consists of year-end receipts not yet processed as of the investment cutoff on June 30. In the Agency Fund, cash consists of recent receipts held by the SBI that have not yet been invested in one of the three investment pools available.

D) Receivables

Accounts receivable represents plan member and employer contributions which are received after fiscal year-end for services rendered prior to fiscal year-end. For the General Employees Fund, the receivable also includes an employer supplemental contribution of $31 million billed in fiscal year 2016 but not due from employers until fiscal year 2017.

Due from Other Funds represents the reallocation of administrative expenses, which is done annually in August once the fiscal year's expenses have been finalized.

E) Investments

Pursuant to *Minnesota Statutes*, Section 11A.04, the state's retirement plan assets are commingled in various pooled investment accounts, administered by SBI. As of June 30, 2016, the participation shares in the combined retirement fund at fair value totaled approximately 31.1% for the General Employees Fund, 12.3% for the Police and Fire Fund, and 0.9% for the Correctional Fund.

SBI is made up of Minnesota's governor, state auditor, secretary of state and attorney general. The authority for establishing and amending investment policy decisions is granted to the SBI in *Minnesota Statutes,* Section 11A.04. The Legislature has also established a 17-member Investment Advisory Council (IAC) to advise the Board and its staff on investment-related matters. PERA's executive director is a permanent member of the IAC. *Minnesota Statutes,* Section 11A.24, broadly restricts retirement fund investments to obligations and stocks of United States and Canadian governments, their agencies and their registered corporations; short term obligations of specified high quality; restricted participation as a limited partner in venture capital, real estate or resource equity investments; restricted participation in registered mutual funds; and some qualified foreign instruments. Short-term investment securities include investments that have high credit quality and are highly liquid. The securities have a low-risk, low-return profile and include U.S. Government Treasury bills, bank certificates of deposit, bankers' acceptances, corporate commercial paper, and other money market instruments.

Investments in the pooled accounts, including assets of the Defined Contribution Fund and the Agency Fund, are reported at fair value. Fair value is the proportionate share of the combined market value of the investment portfolio of the SBI investment pool in which the funds participate. All securities within the pools are valued at fair value except for U.S. Government short-term securities and commercial paper, which are valued at market less accrued interest. Accrued interest is recognized as short-term income. SBI values long-term fixed income securities by using the Financial Times Interactive Data Services valuation system. This service provides prices for both actively traded and privately placed bonds. For equity securities, SBI uses a valuation service provided by Reuters and market value is the last reported sales price for securities traded on national or international exchanges. If a security is not actively traded, then the fair value is based on the analysis of financial statements, analysis of future cash flows and independent appraisals.

Assumptions made in valuing securities are as follows:

- Values of actively traded securities determined by recognized exchanges are objectively negotiated purchase prices between willing buyers and sellers and are not subject to either undue influence or market manipulation.

- Values of securities not actively traded are determined by objective appraisals by qualified professional analysts whose results would not vary materially from those of other similarly qualified professionals. The fair value of investments is based upon valuations provided by a recognized pricing service. Securities traded on a national or international exchange are valued using the last reported trade price. Short-term investments are reported at cost, which approximates fair value. The fair value of real estate investments is based on independent yearly appraisals. Investments that do not have an established market are reported at estimated fair value.

The SBI made no significant changes to their investment policies during fiscal year 2016.

Information about the primary government's (State of Minnesota) investments, including credit risk classification, can be obtained from Minnesota Management & Budget, 400 Centennial Building, 658 Cedar Street, Saint Paul, Minnesota 55155.

Investment income is recognized as earned. Accrued investment income of the pooled investment accounts is included in participation in the accounts. Gains and losses on sales or exchanges are recognized on the transaction date.

For financial reporting purposes, the cost of security transactions is included in the transaction price. Investment expenses include administrative expenses of the SBI to manage the state's investment portfolio and investment management fees paid to the external money managers and the state's master custodian for pension plan assets. These expenses are allocated to the funds participating in the pooled investment accounts. Information on specific investments owned by the pooled accounts, investment activity, currency risk, interest rate risk, and a detailed schedule of fees and commissions by brokerage firm, along with the number of shares traded, total commissions, and commissions per share for the pooled investment accounts may be obtained from the Minnesota State Board of Investment at the Retirement Systems of Minnesota Building, 60 Empire Drive, Suite 355, Saint Paul, Minnesota 55103.

Asset Allocation. The SBI has an asset allocation policy which is based on investment objectives and the expected long-term performance of the capital markets. The most recent target asset allocation was approved by the Board in December 2008, and is shown in **Figure 2.**

Figure 2: Target Asset Allocation

Asset Class	Target Allocation
Domestic Stocks	45%
International Stocks	15%
Bonds/Fixed Income	18%
Alternative Assets	20%
Unallocated Cash	2%

Rate of Return. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the actual cash flows that took place during the performance period. Since PERA's various funds have different cash flows throughout the year, they have different money-weighted rates of return. The money-weighted rate of return for each fund is presented in **Figure 3**.

Figure 3: Money-weighted Rate of Return

Fund	Fiscal Year 2016
General Employees Fund	-0.07%
Police and Fire Fund	-0.09%
Correctional Fund	0.08%
Volunteer Firefighter Fund	2.82%

F) Capital Assets

Capital assets, generally assets with a cost in excess of $30,000 and a useful life greater than one year, are capitalized at cost at the time of acquisition (see Note 4). Depreciation is computed on a straight-line basis over the estimated useful life of the related assets. The estimated useful lives are three to ten years for furniture and equipment, and forty years for the building. PERA's threshold for intangible assets is $1,000,000. PERA did not have any intangible assets in fiscal year 2016.

G) Accrued Compensated Absences

PERA's employees accrue vacation leave, sick leave and compensatory leave at various rates within limits specified in collective bargaining agreements. Accumulated amounts for compensated absences are accrued when incurred. Such leave is liquidated in cash primarily at the time of termination of employment. The total liability at June 30, 2016, is $886,166. Of this, $88,092 is considered a short-term liability and $798,074 is considered a long-term liability. The total decreased by $1,152 during fiscal year 2016.

H) Administrative Expenses

PERA's administrative expenses are paid during the year from the General Employees Fund. At year-end, a portion of the expenses are allocated to the Police and Fire Fund and the Correctional Fund, based on membership counts. The Defined Contribution Fund reimburses the General Employees Fund to the extent of fees collected for recovery of administrative costs. The Volunteer Firefighter Fund reimburses the General Employees Fund $30 per firefighter. The applicable amounts are reported as expenses and reported on the Statement of Fiduciary Net Position as a payable to other funds or due from other funds. Administrative costs are funded from investment income for the defined benefit plans.

NOTE 3
Deposits and Investment Risk Disclosures

A) Fair Value Reporting

GASB Statement No. 72, Fair Value Measurement and Application, sets forth the framework for measuring the fair value of investments based on a hierarchy of valuation inputs. The hierarchy has three levels:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Inputs for Level 2 include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability; and
- Inputs derived principally from or corroborated by observable market data by correlation or other means.

Level 3: Unobservable inputs for the asset or liability. Unobservable inputs reflect the SBI's assumptions about the inputs that market participants would use in pricing an asset or liability. In Figure 4 on the following page, Level 3 investments primarily consist of assets where the asset is distressed, or there is not an active market.

All non-cash investments, including derivative investments that are not hedging derivatives, are required to be measured at fair value on a recurring basis. The SBI maintains investment pools that participants can invest in; participants own a proportionate share of the investment pools. The fair value of the investment pools is priced daily by the SBI custodian, when a daily price is available, by using independent pricing sources.

Cash and short term investments are not leveled under GASB Statement No. 72, and therefore are not included in Figure 4. Investments that do not have a readily determinable fair value are measured using the net asset value (NAV) per share (or its equivalent) as a practical expedient, and are not classified in the fair value hierarchy.

The fair value of the assets measured at NAV has been determined using the March 31, 2016, values, adjusted for cash flows. The investments measured at NAV are typically not eligible for redemption. Distributions are received as underlying investments when the funds are liquidated, which occur over the life of the investment. The SBI has 21 investments that are valued at NAV that are currently in the liquidation mode, totaling 1.5% of the NAV value. PERA's proportionate share of the unfunded commitments to the investments valued at NAV totals $2,393,618,578.

Explanations of investment types follow **Figure 4.**

Figure 4: Fair Value of PERA Investments (in thousands)

As of June 30, 2016

Equity Investments	Fair Value	Level 1	Level 2	Level 3
Common Stock	$14,832,158	$14,819,026	$12,709	$423
Real Estate Investment Trust	558,578	558,561	0	17
Other Equity	262,513	228,484	33,999	29
Equity Total	$15,653,249	$15,606,071	$46,709	$469
Fixed Income Investments				
Government Issues	$3,639,488	$0	$3,623,587	$15,901
Corporate Bonds	2,244,414	0	2,244,414	0
Mortgage-Backed Securities	632,262	0	631,309	953
Asset-Backed Securities	315,516	0	313,669	1,848
Other Debt Instruments	7,461	0	7,461	0
Fixed Income Total	$6,839,142	$0	$6,820,441	$18,701
Investment Derivatives - Options	$(56)	$(56)	$0	$0
Total Investments by Fair Value	$22,492,335	$15,606,015	$6,867,150	$19,170

Investments Measured at the Net Asset Value (in thousands)	NAV	Unfunded Commitments
Private Equity	$2,015,118	$1,422,957
Real Estate	267,976	200,890
Resource	505,486	436,587
Yield Oriented	401,987	333,185
NAV total	$3,190,567	$2,393,619

Equity Investments

Common Stock: Securities representing equity ownership in a corporation, providing voting rights, and entitling the holder to a share of the company's success through dividends and/or capital appreciation.

Real Estate Investment Trust (REIT): An investment pool established by a group of investors for the purpose of investing in real estate or mortgages. REITs are generally exempt from federal taxes, provided that 95% of earned income is distributed and that the various investors are not treated differently.

Other Equity: Includes Preferred Stock, Depository Receipts, Limited Partnership Units, Common Stock Units, and Mutual Funds

Fixed Income Investments

Asset-Backed Securities: Bonds or notes back by financial assets, including auto loans and credit card receivables.

Mortgage-Backed Securities: An asset-backed security that is secured by a mortgage or collection of mortgages. The mortgages are sold to a government agency or investment bank that will package the loans together into a security that can be purchased by investors.

Corporate Bonds: Debt obligations issued by corporations as an alternative to offering equity ownership by issuing stock. Like most municipal bonds and Treasuries, most corporate bonds pay semi-annual interest and promise to return their principal when they mature. Maturities range from 1 to 30 years.

Government Issue: Securities or bonds issued by any of the fifty states, the territories and their subdivisions, counties, cities, towns, villages and school districts, agencies (such as authorities and special districts created by the states), and certain federally sponsored agencies such as local housing authorities.

Other Debt Instruments: Includes Short Term Investment Funds (STIF) type instruments.

Investment Derivatives: Options – Futures. A contract that gives the holder the right to buy from or sell to the writer a specified amount of securities at a specified price, good for a specified period of time.

Investments Measured at Net Asset Value (NAV)

Private Equity: The private equity investment strategy is to establish and maintain a broadly diversified private equity portfolio composed of investments that provide diversification by industry type, stage of corporate development and location. The SBI has 112 Private Equity investments representing 63% of the NAV value.

Real Estate: The real estate investment strategy calls for the establishment and maintenance of a broadly diversified real estate portfolio composed of investments that provide overall diversification by property type and location. The main components of this portfolio consist of investments in closed-end commingled funds. The remaining portion of the portfolio may include investments in less diversified, more focused (specialty) commingled funds and REITs. The SBI has 15 Real Estate investments representing 8% of the NAV value.

Resource Funds: The strategy for resource investments is to establish and maintain a portfolio of resource investment vehicles that provide an inflation hedge and additional diversification. Resource investments will include oil and gas investments and energy service industry investments that are diversified by geographic area as well as by type. The SBI has 25 Resource Funds' investments representing 16% of the NAV value.

Yield Oriented: The strategy for yield-oriented investments is to target funds that typically provide a current return and may have an equity component. Structures such as subordinated debt investments and mezzanine investments are typical yield-oriented investments. The SBI has 36 Yield Oriented Funds' investments representing 13% of the NAV value.

B) Custodial Credit Risk

Custodial credit risk for cash deposits and investments is the risk that, in the event of a bank or custodian failure, PERA will not be able to recover the value of its investments or collateral securities. *Minnesota Statutes*, Section 9.031, requires that cash deposits be secured by depository insurance or a combination of depository insurance and collateral securities held in the state's name by an agent of the state. Such insurance and collateral shall be in amounts sufficient to ensure that deposits do not exceed 90% of the sum of the insured amount and the market value of the collateral. Throughout fiscal year 2016, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all PERA deposits, eliminating exposure to custodial credit risk.

C) Credit Risk

Credit risk is the risk that an issuer or counterparty to an investment will be unable to fulfill its obligations to the holder of the investment. The SBI has policies designed to minimize credit risk. They may invest funds in governmental obligations provided the issue is backed by the full faith and credit of the issuer or the issue is rated among the top four quality rating categories by a nationally recognized rating agency. They may invest funds in corporate obligations provided the issue is rated among the top four quality categories by a nationally recognized rating agency. They may also invest in unrated corporate obligations or in corporate obligations that are not rated among the top four quality categories provided that:

- The aggregate value of these obligations may not exceed 5% of the fund for which the state board is investing;
- Participation is limited to 50% of a single offering; and
- Participation is limited to 25% of an issuer's obligations.

The SBI may also invest in bankers' acceptances, deposit notes of U.S. banks, certificates of deposit, mortgage securities, and asset-backed securities rated in the top four quality categories by a nationally recognized rating agency. Commercial paper must be rated in the top two quality categories.

PERA's share of SBI's exposure to credit risk, based on the lower of Moody's or S&P Quality Ratings for debt securities and short-term investments, is shown in **Figure 5**. Agencies quality rating consists of implicitly guaranteed investments (which are not rated), including the Federal Home Loan Bank, Federal National Mortgage Association (Fannie Mae), Federal home Loan Mortgage Corporation (Freddie Mac), Financing Corporation (FICO), Federal Farm Credit Banks, and Federal Agricultural mortgage Corporation (Farmer Mac).

Figure 5: Credit Risk Exposure (in thousands)

Quality Rating	Fair Value as of June 30, 2016
AAA	$348,790
AA	164,733
A	385,425
BBB	1,221,188
BB	686,054
B	98,095
CCC	46,384
CC	18,529
C	1,061
D	9,067
Unrated Agencies	1,880,313
Unrated Other	961,646
U.S. Government	1,710,348
Total	$7,531,633

D) Concentration of Credit Risk

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. SBI determined concentration of credit risk based on security identification number. PERA does not have exposure to a single issuer that equals or exceeds 5% of the overall portfolio and, therefore, there is no material concentration of credit risk.

E) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt investments could adversely affect the fair value of an investment. The SBI does not have a policy on interest rate risk. Retirement plan and OPEB debt securities are held in external investment pools and PERA's share has the weighted average maturities shown in **Figure 6**.

F) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates between the U.S. dollar and foreign currencies could adversely affect the fair value of an investment. Most foreign currency risk resides within SBI's international equity investment holdings. In order to reduce foreign currency risk, the SBI has developed the following policies. Government obligations, including guaranteed or insured issues of the International Bank for Reconstruction and Development, the Inter-American Development Bank, the Asian Development Bank, and the African Development Bank, must pay interest and principal in U.S. dollars. The principal and interest of obligations of corporations, including those corporations incorporated or organized under the laws of the Dominion of Canada or any province thereof, must also be paid in U.S. dollars. SBI has less than a 15% exposure to foreign currency risk. PERA's share of foreign security investments at June 30, 2016, was distributed among the currencies shown in **Figure 7**.

Figure 6: Interest Rate Risk

Security	Weighted Average Maturity (in years)
Short-Term Investment Securities	0.76
Asset-Backed Securities	2.45
Agency Securities	3.96
Mortgage-Backed Securities	4.00
Collateralized Mortgage Obligations	4.14
Commericial Mortgage-Backed Securities	5.08
Yankee Bonds	8.30
Corporate Debt Obligations	9.29
U.S. Treasuries	9.69
Municipal Debt Obligations	15.81
Foreign Country Bonds	20.61

Financial Section

Figure 7: Foreign Currency Risk (fair value in thousands)

Currency	Cash	Equity	Fixed Income
Euro Currency	$1,493	$1,014,556	$3,161
Japenese Yen	6,937	632,005	6,966
Pound Sterling	3,641	502,653	6,692
Hong Kong Dollar	826	240,537	0
Swiss Franc	42	230,731	0
Canadian Dollar	1,705	220,169	224
Australian Dollar	379	169,610	0
Indian Rupee	21	74,141	0
South Korean Won	0	70,255	0
Swedish Krona	153	68,581	0
New Taiwan Dollar	98	67,412	0
Danish Krone	0	66,423	0
South African Rand	214	42,749	0
Brazillian Real	14	35,663	0
Singapore Dollar	85	30,765	0
Indonesian Rupiah	150	23,886	0
Norwegian Krone	74	18,886	0
Mexican Peso	6	18,396	0
Philippine Peso	5	16,619	0
Thailand Baht	56	12,427	0
Turkish Lira	4	10,910	0
Polish Zloty	1	9,354	0
New Zealand Dollar	173	8,470	0
Other	167	31,349	0
Total	**$16,244**	**$3,616,547**	**$17,042**

G) Derivative Financial Instruments

On behalf of PERA, SBI invests in various types of derivative financial instruments. Derivatives are defined as any financial arrangement between two parties that has value based on or derived from future price fluctuations. The derivative financial instruments that SBI enters into include futures, options, stock warrants and rights, currency forwards, and synthetic guaranteed investment contracts.

Minnesota Statutes, Section 11A.24, provides that any agreement for put and call options and futures contracts may only be entered into with a fully offsetting amount of cash or securities. This provision applies to foreign currency forward contracts used to offset the currency risk of a security. All other derivatives are exchange-traded. The purpose of the SBI's derivative activity is to equitize cash in the portfolio, to adjust the duration of the portfolio, or to offset current futures positions.

Explanations of each derivative instrument type are presented below. The fair value balances and notional amounts (or face value) at June 30, 2016, classified by derivative instrument type (e.g., futures, options, currency forwards, and stock warrants and rights), and the changes in fair value for fiscal year 2016 are shown in **Figure 8**.

Figure 8: Derivative Financial Instruments (in thousands)

Derivative Investment Type	Changes in Fair Value During Fiscal Year 2016	Fair Value at June 30, 2016	Notional Amount
Futures:			
Equity Futures--Long	$421	$0	$732
Equity Futures--Short	608	0	(8)
Fixed Income Futures--Long	14,600	0	161,919
Fixed Income Futures--Short	(30,546)	0	(303,337)
Options:			
Futures Options Bought	(1,603)	0	0
Futures Options Written	1,134	(56)	(117)
Foreign Currency Forwards	3,672	1,729	125,461
Stock Warrants and Rights:			
Stock Warrants	(143)	303	121
Stock Rights	(13)	254	930

Derivative Investment Type

Futures: Futures are contract commitments to purchase (asset) or sell (liability) at a future date. The net change in the values of futures contracts is settled on a regular basis and gains and losses are included in investment income.

Options: Options are contracts that give buyers or sellers the right to buy (calls) or sell (puts) a security at a predetermined price on a future date. Gains and losses result from variances in the market value of the security that is the subject of the contract that occur prior to or on the contract specified date. The gains and losses are included in investment income.

Currency Forward Contracts: Foreign currency forward contracts are used to manage portfolio foreign currency risk. The provisions of the contract vary based on what is negotiated between the two parties to the contract.

Stock Warrants and Rights: Stock warrants, similar to options, are the right to purchase shares of a stock at a certain price by a certain date. They usually have a longer term before expiration, e.g. five years or more. When stock warrants are exercised, new shares are issued by the company. Rights are the same but are issued to current stock owners to enable them to retain their relative ownership share. Gains and losses from the sale or exercise of stock warrants and rights are included in investment income.

SBI maintains a fully benefit-responsive synthetic guaranteed investment contract for the Supplemental Investment Fund - Fixed Interest Account. The investment objective of the Fixed Interest Account is to protect investors from loss of their original investment and to provide a competitive interest rate. On June 30, 2016, the Fixed Interest Account portfolio of well diversified high quality investment grade fixed income securities had a fair value of $1,418,559,475 that is $40,433,072 in excess of the value protected by the wrap contract. The Fixed Income Account also includes liquid investment pools with a combined fair value of $166,470,219.

SBI is exposed to credit risk through the counterparties in foreign currency forward contracts used to offset the currency risk of a security. PERA's proportionate share of the maximum loss that SBI would have recognized as of June 30, 2016, if all counterparties failed to perform as contracted is $2,935,701.

H) Securities Lending

PERA does not own specific securities, but instead owns shares in pooled funds invested by the SBI. The SBI is authorized to enter into securities lending transactions in accordance with *Minnesota Statutes*, Chapter 356A.06, Subd. 7 and has, via a Securities Lending Authorization Agreement, authorized State Street Bank and Trust Company to lend its securities to broker-dealers and banks pursuant to a form of loan agreement.

During the fiscal year, State Street lent, at the direction of the SBI, certain securities held by State Street as custodian and received cash or other collateral including securities issued or guaranteed by the United States government. State Street did not have the ability to pledge or sell collateral securities absent a borrower default. Borrowers were required to deliver collateral for each loan equal to at least 100% of the market value of the loaned securities.

Pursuant to the Securities Lending Authorization Agreement, State Street had an obligation to indemnify the SBI in the event of default by a borrower. There were no failures by any borrower to return loaned securities or pay distributions thereon during the fiscal year that resulted in a declaration or notice of default of the borrower.

During the fiscal year, the SBI and the borrowers maintained the right to terminate securities lending transactions upon notice. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. As of June 30, 2016, the investment pool had an average duration of 12.39 days and an average weighted final maturity of 88.83 days for USD collateral. Because the loans were terminable at will their duration did not generally match the duration of the investments made with cash collateral. On June 30, 2016, SBI had no credit risk exposure to borrowers. The market value of the collateral held and the fair value of securities on loan from the SBI as of June 30, 2016, was $6,374,568,461 and $6,149,187,410 respectively. Cash collateral of $3,645,081,192 is reported on the Statement of Fiduciary Net Position as an asset. Liabilities resulting from these securities lending transactions are also reported on the *Statement of Fiduciary Net Position*.

NOTE 4
Capital Assets, Building and Land

Capital assets are presented on the June 30, 2016, Statement of Fiduciary Net Position at historical cost, net of accumulated depreciation, as summarized in **Figure 9**. There were no significant leases as of June 30, 2016.

Figure 9: Capital Assets (in thousands)

	Balance June 30, 2015	Additions	Disposals	Balance June 30, 2016
Capital Assets, Not Being Depreciated:				
Land	$170	$0	$0	$170
Capital Assets, Being Depreciated:				
Building	10,893	0	0	10,893
Equipment, Furniture & Fixtures	871	239	0	1,110
Total Capital Assets Being Depreciated	**$11,764**	**$239**	**$0**	**$12,003**
Less Accumulated Depreciation for:				
Building	(3,848)	(281)	0	(4,129)
Equipment, Furniture & Fixtures	(704)	(86)	0	(790)
Total Accumulated Depreciation	**$(4,552)**	**$(367)**	**$0**	**$(4,919)**
Total Capital Assets, Net of Accumulated Depreciation	**$7,382**	**$(128)**	**$0**	**$7,254**

Legislation was passed in 1999 allowing PERA, the Minnesota Teacher's Retirement Association (TRA) and the Minnesota State Retirement System (MSRS) to purchase land and construct a 140,000 square foot building to house all three retirement systems. Ownership of the facility is prorated based on the amount of square footage each retirement system occupies in the building. PERA's ownership share is 36.5%. PERA's share of the cost to purchase the 4.3 acres of land was $170,308.

In June 2000 the State of Minnesota, under the authority of the Commissioner of Finance (currently known as Minnesota Management and Budget), issued revenue bonds totaling $29 million on behalf of the three retirement systems to pay for the construction of the facility. In August, 2012, the remaining bonds were refunded with the proceeds of a new, lower interest rate bond issue. The new bonds are secured by the value of the total assets of the largest defined benefit plans in the three statewide retirement systems. Through the issuance of the refunding bonds, which received a AAA rating, the bond term was reduced by five years and the present value of the savings to the retirement systems was $9,582,538. PERA's portion of the savings was $3,497,626.

Figure 10 shows the debt service amounts for which PERA is directly responsible. Pursuant to the joint and several liability clause in the bond sale official statement, in the event of default, PERA could be liable for the entire remaining outstanding principal and premium balances of the bonds, plus the interest accrued for the month of June, totaling $17,645,400. Bonds payable on the Statement of Fiduciary Net Position is PERA's share of outstanding debt at the current ownership interest. It includes the principal balance as of June 30, 2016, the premium balance as of June 30, 2016, and interest accrued for the month of June.

Figure 10: Debt Repayment Schedule

Fiscal Year	PERA Principal	Interest	Premium	Total
2017	$611,375	$93,198	$53,970	$758,543
2018	624,150	83,062	51,879	759,091
2019	642,400	72,713	49,745	764,858
2020	651,525	62,062	47,548	761,135
2021	669,775	51,259	45,320	766,354
2022	684,375	40,154	43,029	767,558
2023	698,975	28,807	40,689	768,471
2024	673,425	17,217	24,319	714,961
2025	365,000	6,052	8,548	379,600
Totals	**$5,621,000**	**$454,524**	**$365,047**	**$6,440,571**
Total Unpaid Principal, 06/30/16			$5,621,000	
Total Unpaid Premium, 06/30/16			365,047	
Accrued Interest, June 2016		7,767		
Total Bonds Payable on Financials		**$5,993,814**		

NOTE 5
Contribution Requirements

Minnesota Statutes, Chapters 353, 353E, 353G and 356 set the rates for employer and employee contributions. Contribution rates are shown in **Figure 11**. Contribution rates in the General Employees Plan are not sufficient to get that plan fully funded by 2031. Contribution rates in the Police and Fire and Correctional plans are sufficient to fully fund the plans by the full funding dates of 2039 and 2031, respectively. The actuarially required contributions are expressed as a level percentage of covered payroll and are determined using an individual entry-age actuarial cost method.

The State of Minnesota was also required to begin contributing $9 million to the Police and Fire Fund each year, beginning in fiscal year 2014. That state aid continues until that fund is 90% funded, or the State Patrol Plan, administered by the Minnesota State Retirement System, is 90% funded, whichever occurs later.

MERF was fully merged into the General Employees Fund in fiscal year 2015. Supplemental contribution amounts were recal-

Figure 11: Retirement Plan Contribution Rates

	Member	Employer
General Employees Fund		
-Basic Plan	9.10%	11.78%
-Coordinated Plan	6.50%	7.50%
-MERF Plan	9.75%	9.75%
Police and Fire Fund	10.80%	16.20%
Correctional Fund	5.83%	8.75%

culated after the merger based on the amount of MERF's unfunded liability as of the merger date. The State of Minnesota will be contributing $6 million and MERF's employers will be contributing $31 million in fiscal years 2016 and 2017. Thereafter, the state will contribute $16 million and MERF's employers will contribute $21 million through calendar year 2031.

Minnesota Statutes, Section 353D.03, specifies contribution rates for those who participate in the Defined Contribution Plan. An eligible elected official or physician who decides to participate contributes 5% of salary, which is matched by the employer. For ambulance service personnel, employer contributions are determined by the employer, and for salaried employees must be a fixed percentage of salary. Employer contributions for volunteer personnel may be a unit value for each call or period of alert duty. Employees who are paid for their services may elect to make member contributions in an amount not to exceed the employer share.

Employer required contributions are calculated annually for each employer in the Volunteer Firefighter Plan. If fire state aid (based on income generated from insurance policies) plus expected investment income are not enough to cover the expected normal cost of benefits during the next calendar year, an employer contribution is calculated and payable by the end of the next calendar year.

NOTE 6
Net Pension Liability of Employers and Nonemployer Contributing Entity

The components of the net pension liability of the defined benefit cost-sharing plans for participating employers and the State of Minnesota (a nonemployer contributing entity in the General Employees Fund) as of June 30, 2016, calculated in accordance with GASB Statement No. 67, are shown in **Figure 12**.

Figure 12: NPL Components (in thousands)

	General Employees Fund	Police and Fire Fund	Correctional Fund
Total Pension Liability (A)	$26,114,413	$11,111,264	$873,097
Fund Fiduciary Net Position (B)	(17,994,909)	(7,098,090)	(507,783)
Net Pension Liability (A-B)	$8,119,504	4,013,174	365,314
Fund Fiduciary Net Position as a Percentage of the Total Pension Liability (B/A)	68.9%	63.9%	58.2%

A) Actuarial Methods and Assumptions

The total pension liability for each of the defined benefit cost-sharing plans was determined by an actuarial valuation as of June 30, 2016, using the entry age normal actuarial cost method. A closed amortization period is used, with 17 years remaining for the General Employees Plan, 15 years remaining for the Correctional Plan and 25 years remaining for the Police and Fire Plan. Inflation is assumed to be 2.50%. Salary growth assumptions in the General Employees Plan decrease in annual increments from 11.50% after one year of service, to 3.50% after 26 years of service. In the Police and Fire Plan, salary growth assumptions decrease from 12.75% after one year of service to 4.25% after 23 years of service. In the Correctional Plan, salary growth assumptions decrease from 8.75% at age 20 to 3.75% at age 65. Mortality rates for the General Employee Plan are based on RP-2014 mortality tables. The mortality rate tables for the Police and Fire and the Correctional Plans are based on RP-2000 mortality tables. The tables are adjusted slightly to fit PERA's experience.

Actuarial assumptions for the General Employees Plan are reviewed every four to six years. The most recent four-year experience study for the General Employees Plan was completed in 2015. The most recent five-year experience study for the Police and Fire Plan was completed in 2016, but the results were not adopted at the time of the valuation. Experience studies have not been prepared for PERA's other plans, but assumptions are reviewed annually. Economic assumptions were updated in 2014 based on a review of inflation and investment return assumptions.

The long-term expected rate of return on pension plan investments used in the determination of the total pension liability is 7.5%. The rate was determined using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. The best-estimate ranges were developed by PERA's actuary in a 2014 economic assumption review using capital market assumptions from the SBI and eight additional investment consultants. 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 then adding expected inflation. Best estimates of geometric real rates of return for each major asset class included in the plan's target asset allocation as of June 30, 2016, are summarized in **Figure 13**.

Figure 13: Long-term Expected Real Rate of Return By Asset Class

	Assumed Asset Allocation	Long-term Expected Real Rate of Return (Geometric)
Domestic Stocks	45%	5.50%
International Stocks	15%	6.00%
Bonds	18%	1.45%
Alternative Assets	20%	6.40%
Unallocated Cash	2%	0.50%

B) Discount Rate

The discount rate used to measure the total pension liability in 2016 was 7.50%, a reduction from the 7.9% used in 2015. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and employers will be made at rates set in Minnesota statute. Based on these assumptions, the fiduciary net position of the General Employees Fund was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

In the Police and Fire Fund and the Correctional Fund, the fiduciary net position was projected to be available to make all projected future benefit payments of current plan members through

June 30, 2056 and June 30, 2058 respectively. Beginning in fiscal years ended June 30, 2057 for the Police and Fire Fund and June 30, 2059 for the Correctional Fund, when projected benefit payments exceed the funds' projected fiduciary net position, benefit payments were discounted at the municipal bond rate of 2.85% based on an index of 20-year general obligation bonds with an average AA credit rating at the measurement date, An equivalent single discount rate of 5.60% for the Police and Fire Fund and 5.31% for the Correctional Fund was determined that produced approximately the same present value of projected benefits when applied to all years of projected benefits as the present value of projected benefits using 7.50% applied to all years of projected benefits through the point of asset depletion and 2.85% after.

C) Sensitivity Analysis

Figure 14 presents the net pension liability of employers and the State of Minnesota for PERA's defined benefit cost-sharing plans as of June 30, 2016, calculated using the current discount rate of 7.5%, as well as what each plan's net pension liability would be if it were calculated using a discount rate that is 1% lower and 1% higher than the current rate.

NOTE 7

Other Notes

A) New Asset Transfers

The Volunteer Firefighter Plan was created by the Minnesota Legislature in 2009. The plan is an agent multiple-employer defined benefit plan. Twenty fire departments joined the plan in fiscal year 2016, bringing the total number of fire departments in the Volunteer Firefighter Plan to 112. The amount of assets transferred, $20,400,917, is shown as an "Other Addition" in PERA's Statement of Changes in Fiduciary Net Position. Each fire department has a separate account and retains its own assets and liabilities.

B) Participating Pension Plan

All employees of PERA are covered by the General Employees Coordinated Plan and eligible for the plan provisions described in Note 1.D. *Minnesota Statute* Section 353.27 sets the rates for employee and employer contributions. These statutes are established and amended by the Minnesota Legislature. Contribution rates were shown previously in Figure 11. Total covered payroll for PERA employees during fiscal year 2016 was approximately $6.1 million.

Employer pension contributions for PERA employees for the years ending June 30, 2016, 2015 and 2014 were $460,443, $426,221, and $404,724 respectively, and were equal to the required contributions for each year as set by state statute. Employer contributions paid by PERA on behalf of these employees are funded by General Employees Fund investment income.

Figure 14: Sensitivity Analysis (in thousands)

Net Pension Liability (Asset) at Different Discount Rates

	General Employees Fund		Police and Fire Fund		Correctional Fund	
1% Decrease	6.50%	$11,532,102	4.60%	$5,617,911	4.31%	$550,050
Current Discount Rate	7.50%	8,119,504	5.60%	4,013,174	5.31%	365,314
1% Increase	8.50%	5,308,452	6.60%	2,701,982	6.31%	221,092

Required Supplementary Information (in thousands)

General Employees Fund

	Fiscal Year		
	2014	2015	2016
Total Pension Liability			
Service Cost	$388,391	$421,602	$434,551
Interest on the Total Pension Liability	1,591,756	1,712,534	1,839,388
Change of Benefit Terms	0	1,147,198	0
Difference between Expected and Actual Experience	96,123	(348,383)	(647,197)
Assumption Changes	645,499	0	2,119,742
Benefit Payments	(1,109,866)	(1,235,303)	(1,359,176)
Refund Payments	(38,264)	(35,655)	(37,209)
Net Change in Total Pension Liability	$1,573,639	$1,661,993	$2,350,099
Total Pension Liability--Beginning	$20,528,682	$22,102,321	$23,764,314
Total Pension Liability--Ending (a)	$22,102,321	$23,764,314	$26,114,413
Plan Fiduciary Net Position			
Contributions--Employer	$382,251	$435,115	$459,978
Contributions--Member	334,495	353,765	375,291
Contributions--Nonemployer Contributing Entity	0	0	6,000
Net Investment Income	2,760,854	777,504	(20,851)
Benefit Payments	(1,109,866)	(1,235,303)	(1,359,176)
Refund Payments	(38,264)	(35,655)	(37,209)
Administrative Expenses	(9,861)	(10,367)	(11,350)
Other	605	891,914	431
Net Change in Plan Fiduciary Net Position	$2,320,214	$1,176,973	$(586,886)
Plan Fiduciary Net Position--Beginning	$15,084,608	$17,404,822	$18,581,795
Plan Fiduciary Net Position--Ending (b)	$17,404,822	$18,581,795	$17,994,909
Net Pension Liability (a)-(b)	$4,697,499	$5,182,519	$8,119,504
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	78.75%	78.19%	68.91%
Covered-Employee Payroll	$5,351,920	$5,549,255	$5,773,708
Net Pension Liability as a Percentage of Covered Employee Payroll	87.77%	93.39%	140.63%

Police and Fire Fund

	Fiscal Year		
	2014	2015	2016
Total Pension Liability			
Service Cost	$169,124	$187,959	$194,352
Interest on the Total Pension Liability	598,165	648,233	658,198
Change of Benefit Terms	0	0	0
Difference between Expected and Actual Experience	1,813	(221,112)	(375,575)
Assumption Changes	323,945	0	2,650,350
Benefit Payments	(452,462)	(481,330)	(498,608)
Refund Payments	(1,633)	(1,953)	(2,391)
Net Change in Total Pension Liability	$638,952	$131,797	$2,626,326
Total Pension Liability--Beginning	$7,714,189	$8,353,141	$8,484,938
Total Pension Liability--Ending (a)	$8,353,141	$8,484,938	$11,111,264
Plan Fiduciary Net Position			
Contributions--Employer	$132,632	$144,317	$156,065
Contributions--Member	81,213	88,733	95,172
Contributions--Nonemployer Contributing Entity	9,000	9,000	9,000
Net Investment Income	1,158,389	317,556	(8,949)
Benefit Payments	(452,462)	(481,330)	(498,608)
Refund Payments	(1,633)	(1,953)	(2,391)
Administrative Expenses	(798)	(803)	(906)
Other	18	84	3
Net Change in Plan Fiduciary Net Position	$926,359	$75,604	$(250,614)
Plan Fiduciary Net Position--Beginning	$6,346,741	$7,273,100	$7,348,704
Plan Fiduciary Net Position--Ending (b)	$7,273,100	$7,348,704	$7,098,090
Net Pension Liability (a)-(b)	$1,080,041	$1,136,234	$4,013,174
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	87.07%	86.61%	63.88%
Covered-Employee Payroll	$820,333	$845,076	$881,222
Net Pension Liability as a Percentage of Covered Employee Payroll	131.66%	134.45%	455.41%

Continued

Schedule of Changes in Net Pension Liabilities and Related Ratios

Required Supplementary Information (in thousands)

(Continued from previous page)

Correctional Fund

	Fiscal Year		
	2014	2015	2016
Total Pension Liability			
Service Cost	$26,488	$25,098	$25,950
Interest on the Total Pension Liability	33,955	37,043	40,605
Change of Benefit Terms	0	0	0
Difference between Expected and Actual Experience	(5,327)	(7,892)	382
Assumption Changes	(34,168)	0	310,332
Benefit Payments	(6,711)	(7,777)	(9,381)
Refund Payments	(1,105)	(1,057)	(982)
Net Change in Total Pension Liability	$13,132	$45,415	$366,906
Total Pension Liability--Beginning	$447,644	$460,776	$506,191
Total Pension Liability--Ending (a)	$460,776	$506,191	$873,097
Plan Fiduciary Net Position			
Contributions--Employer	$15,054	15,736	16,490
Contributions--Member	10,030	10,472	11,008
Contributions--Nonemployer Contributing Entity	0	0	0
Net Investment Income	69,451	20,373	209
Benefit Payments	(6,711)	(7,777)	(9,381)
Refund Payments	(1,105)	(1,057)	(982)
Administrative Expenses	(236)	(247)	(290)
Other	(1)	(1)	(2)
Net Change in Plan Fiduciary Net Position	$86,482	$37,499	$17,052
Plan Fiduciary Net Position--Beginning	$366,750	$453,232	$490,731
Plan Fiduciary Net Position--Ending (b)	$453,232	$490,731	$507,783
Net Pension Liability (a)-(b)	$7,544	$15,460	$365,314
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	98.36%	96.95%	58.16%
Covered-Employee Payroll	$172,041	$179,623	$188,816
Net Pension Liability as a Percentage of Covered Employee Payroll	4.39%	8.61%	193.48%

Notes to Schedule of Changes in Net Pension Liabilities and Related Ratios

General Employees Fund

2016 Changes

Changes in Actuarial Assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2035 and 2.5% per year thereafter to 1.0% per year for all future years.

- The assumed investment return was changed from 7.9% to 7.5%. The single discount rate was changed from 7.9% to 7.5%.

- Other assumptions were changed pursuant to the experience study dated June 30, 2015. The assumed future salary increases, payroll growth, and inflation were decreased by 0.25% to 3.25% for payroll growth and 2.50% for inflation.

2015 Changes

Changes in Plan Provisions:

- On January 1, 2015 the Minneapolis Employees Retirement Fund was merged into the General Employees Fund, which increased the total pension liability by $1.1 billion and increased the fiduciary plan net position by $892 million. Upon consolidation, state and employer contributions were revised.

Changes in Actuarial Assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2030 and 2.5% per year thereafter to 1.0% per year through 2035 and 2.5% per year thereafter.

Police and Fire Fund

2016 Changes

Changes in Actuarial Assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2037 and 2.5% thereafter to 1.0% per year for all future years.

- The assumed investment return was changed from 7.9% to 7.5%. The single discount rate changed from 7.9% to 5.6%.

- The assumed future salary increases, payroll growth, and inflation were decreased by 0.25% to 3.25% for payroll growth and 2.50% for inflation.

2015 Changes

Changes in Plan Provisions:

- The post-retirement benefit increase to be paid after attainment of the 90% funding threshold was changed, from inflation up to 2.5%, to a fixed rate of 2.5%.

Changes in Actuarial Assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2030 and 2.5% per year thereafter to 1.0% per year through 2037 and 2.5% per year thereafter.

Correctional Fund

2016 Changes

Changes in Actuarial Assumptions:

- The assumed investment return was changed from 7.9% to 7.5%. The single discount rate changed from 7.9% to 5.31%.

- The assumed future salary increases, payroll growth, and inflation were decreased by 0.25% to 3.25% for payroll growth and 2.50% for inflation.

Schedule of Contributions from Employers and Nonemployers

Required Supplementary Information (last 10 years, in thousands, unaudited)

General Employees Fund

Year Ended June 30	Actuarially Determined Contribution (a)	Statutorily Determined Contribution (b)	Actual Contributions (c)	Contribution Deficiency (Excess) (a) - (c)	Covered Payroll (d)	Actual Contribution as a % of Covered Payroll (c)/(d)
2007	$335,698	$283,419	$283,419	$52,279	$4,448,954	6.37%
2008	374,522	303,304	303,304	71,218	4,722,432	6.42%
2009	381,151	328,603	328,603	52,548	4,778,708	6.88%
2010	443,548	342,678	342,678	100,870	4,804,627	7.13%
2011	321,782	357,596	357,596	(35,814)	5,079,429	7.04%
2012	371,295	368,037	368,037	3,258	5,142,592	7.16%
2013	430,773	372,652	372,652	58,121	5,246,928	7.10%
2014	476,321	382,251	382,251	94,070	5,351,920	7.14%
2015	523,017	435,115	435,115	87,902	5,549,255	7.84%
2016	542,151	465,978	465,978	76,173	5,773,708	8.07%

Police and Fire Fund

Year Ended June 30	Actuarially Determined Contribution (a)	Statutorily Determined Contribution (b)	Actual Contributions (c)	Contribution Deficiency (Excess) (a) - (c)	Covered Payroll (d)	Actual Contribution as a % of Covered Payroll (c)/(d)
2007	$116,325	$74,707	$74,707	$41,618	$648,342	11.52%
2008	144,548	87,023	87,023	57,525	703,701	12.37%
2009	140,591	101,548	101,548	39,043	733,164	13.85%
2010	150,220	107,066	107,066	43,154	740,101	14.47%
2011	124,284	109,604	109,604	14,680	775,806	14.13%
2012	152,369	121,891	121,891	30,478	794,417	15.34%
2013	189,254	125,995	125,995	63,259	796,188	15.82%
2014	163,985	141,632	141,632	22,353	820,333	17.27%
2015	197,325	153,317	153,317	44,008	845,076	18.14%
2016	189,375	165,065	165,065	24,310	881,222	18.73%

Correctional Fund

Year Ended June 30	Actuarially Determined Contribution (a)	Statutorily Determined Contribution (b)	Actual Contributions (c)	Contribution Deficiency (Excess) (a) - (c)	Covered Payroll (d)	Actual Contribution as a % of Covered Payroll (c)/(d)
2007	$8,712	$12,499	$12,499	$(3,787)	$134,117	9.32%
2008	10,153	13,388	13,388	(3,235)	154,202	8.68%
2009	11,469	14,124	14,124	(2,655)	154,650	9.13%
2010	12,273	14,170	14,170	(1,897)	154,777	9.16%
2011	12,183	14,289	14,289	(2,106)	165,077	8.66%
2012	12,473	14,320	14,320	(1,847)	164,340	8.71%
2013	14,207	14,498	14,498	(291)	164,820	8.80%
2014	14,606	15,054	15,054	(448)	172,041	8.75%
2015	13,759	15,736	15,736	(1,977)	179,623	8.76%
2016	16,446	15,736	16,490	(44)	188,816	8.73%

Notes to Schedule of Contributions

Required Supplementary Information

Methods and Assumptions

The following methods and assumptions are used to calculate actuarially determined contributions and are, in a few cases, different from the methods and assumptions used to calculate the Net Pension Liability.

Valuation Date:	June 30, 2016
Actuarial Cost Method:	Entry age
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	17 years in General Employee Fund, 25 years in Police and Fire Fund, 15 years in Correctional Fund
Asset Valuation Method:	5-year smoothed fair value
Inflation:	2.75%
Investment Rate of Return:	8.00%
Payroll Growth Rate:	3.50%
Mortality:	Life expectancies for the General Employee Plan are based on RP-2014 tables and for the Police and Fire and the Correctional Plans are based on RP-2000 mortality tables. The tables are adjusted slightly to fit PERA's experience.
Cost of Living Increase:	1% per year until 2053 then 2.5% thereafter for the General Employees Fund, 1% per year until 2051 then 2.5% thereafter for the Police and Fire Fund, 2.5% for all years for the Correctional Fund

Schedule of Investment Returns*

Required Supplementary Information

Year	General Employees Fund	Police and Fire Fund	Correctional Fund	Volunteer Firefighter Fund
2016	-0.07%	-0.09%	0.08%	2.82%
2015	4.45%	4.46%	4.42%	2.83%
2014	18.66%	18.66%	18.56%	13.12%

* The annual money-weighted rate of return for each plan is net of pension expense.

Statement of Changes in Assets and Liabilities—Agency Fund

Required Supplementary Information
for the Fiscal Year Ended June 30, 2016 (in thousands)

	Beginning Balance 07/01/2015	Additions	Deductions	Ending Balance 06/30/2016
ASSETS				
Cash	$951	$50,563	$50,698	$816
Investments				
Bond Pool	67,242	30,823	3,258	94,807
Index Stock Pool	399,844	124,284	132,672	391,456
Money Market	18,901	975	2,893	16,983
Total Assets	**$486,938**	**$206,645**	**$189,521**	**$504,062**
LIABILITIES				
Accounts Payable	$486,938	$206,645	$189,521	$504,062
Total Liabilities	**$486,938**	**$206,645**	**$189,521**	**$504,062**

Schedule of Investment Expenses

For the Fiscal Year Ended June 30, 2016 (in thousands)

Source of Expenses	General Employees Fund	Police and Fire Fund	Correctional Fund	Volunteer Firefighter Fund	Defined Contribution Fund	Total
Outside Money Managers–Equities	$18,313	$7,244	$505	$22	$28	$26,112
Outside Money Managers–Fixed Income	4,049	1,602	112	19	22	5,804
Minnesota State Board of Investment	1,400	554	38	3	5	2,000
Nuveen Investment Solutions	11	5	0	0	0	16
QED Consulting	140	54	4	0	0	198
Pension Consulting Alliance	98	39	2	0	0	139
Total	$24,011	$9,498	$661	$44	$55	$34,269

A *Schedule of Investment Fees* paid to money managers is provided in the *Investment Section* of this report.

Schedule of Payments to Consultants

For the Fiscal Year Ended June 30, 2016 (in thousands)

Individual or Firm Name	Fee Paid	
Actuary		
Gabriel Roeder Smith & Co.	$253	**$253**
Financial Services		
Abdo Eick & Meyers LLP	$238	
MMB / OLA Audit Fees	121	
SVF Audit Fees	12	**$371**
Legal		
Attorney General	$15	**$15**
Management Consultants		
Avenet LLC	$1	
Berwyn Group	9	
Duan Corp.	2	
EFL Associates	6	
Graystone Group Advertising	1	
Kusske Financial Mgmt.	4	
Lexis/Nexis Risk Data Mgmt.	2	
MMB / MAD	76	**$101**
Medical Evaluations		
MMRO	$463	
Office of Administrative Hearings	4	**$467**
Total Professional Service Fees		**$1,207**

Financial Section

Schedule of Administrative Expenses

For the Fiscal Year Ended June 30, 2016 (in thousands)

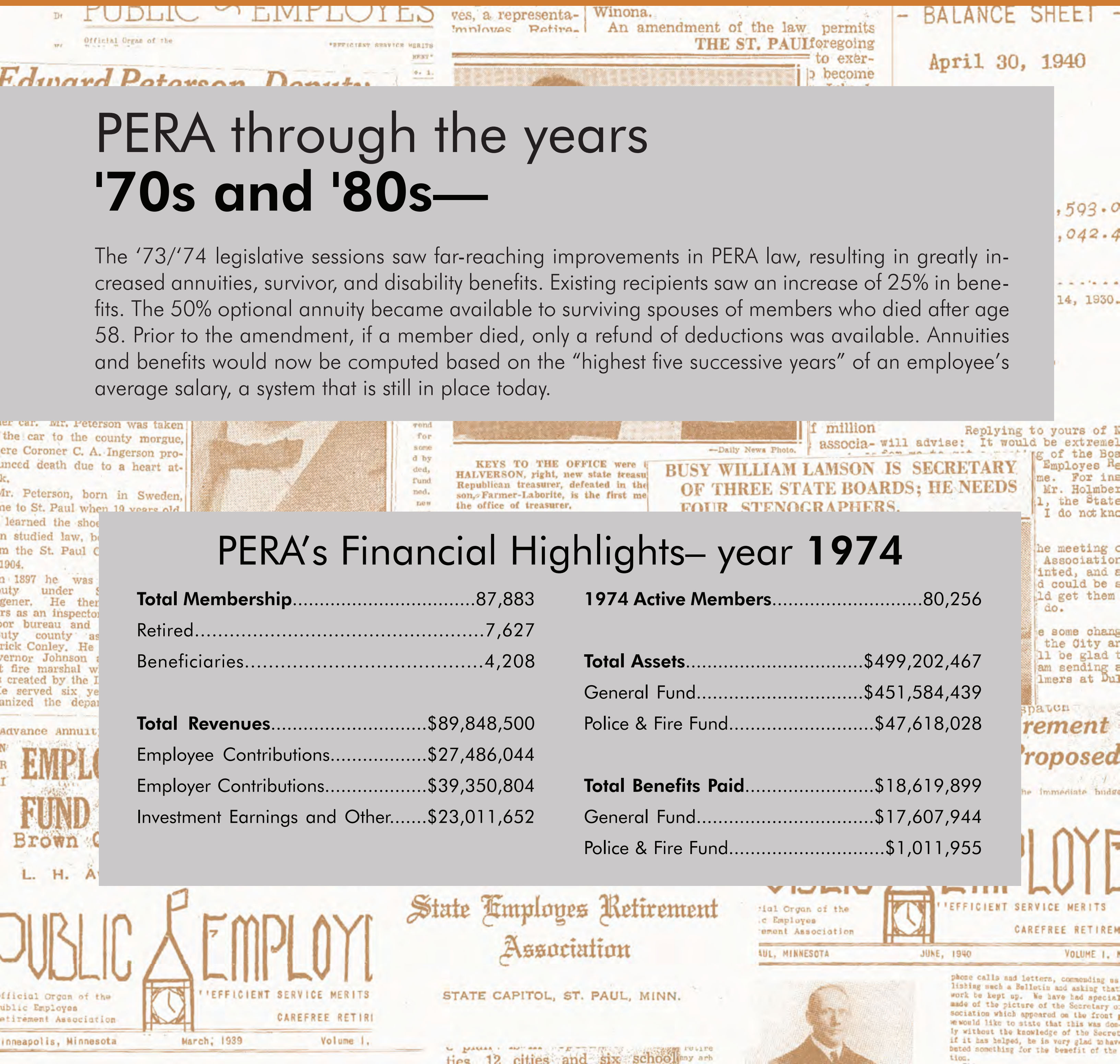
Personal Services		
Staff Salaries	$8,256	
Part-Time, Seasonal Labor	200	
Other Benefits	118	
Total Personal Services		**$8,574**
Professional Services		
Actuary	$253	
Financial	371	
Legal	15	
Management Consultants	101	
Medical Evaluations	467	
Total Professional Services		**$1,207**
Communications		
Mail and Telephone Services	$601	
Printing and Publications	64	
Total Communication		**$665**
Office Building and Maintenance		
Building	$529	
Depreciation—Building	270	
Bond Interest	102	
Total Building and Maintenance		**$901**
Other		
Depreciation—Equipment	$98	
Employee Development	64	
Equipment Maintenance	312	
Indirect Costs	187	
Operating Costs	181	
Supplies and Materials	340	
Travel	100	
Total Other		**$1,282**
Total Administrative Expense		**$12,629**

Allocation of Administrative Expense

Defined Benefit Plans		
General Employees Fund	$11,110	
Police and Fire Fund	906	
Correctional Fund	292	
Volunteer Firefighter Fund	132	
Defined Contribution Plans		
Defined Contribution Fund	189	
Total Administrative Expenses		**$12,629**

Investment Section

PERA 2016 Comprehensive Annual Financial Report



PERA through the years

'70s and '80s—

The '73/'74 legislative sessions saw far-reaching improvements in PERA law, resulting in greatly increased annuities, survivor, and disability benefits. Existing recipients saw an increase of 25% in benefits. The 50% optional annuity became available to surviving spouses of members who died after age 58. Prior to the amendment, if a member died, only a refund of deductions was available. Annuities and benefits would now be computed based on the "highest five successive years" of an employee's average salary, a system that is still in place today.

PERA's Financial Highlights– year **1974**

Total Membership	87,883
Retired	7,627
Beneficiaries	4,208
Total Revenues	$89,848,500
Employee Contributions	$27,486,044
Employer Contributions	$39,350,804
Investment Earnings and Other	$23,011,652

1974 Active Members	80,256
Total Assets	$499,202,467
General Fund	$451,584,439
Police & Fire Fund	$47,618,028
Total Benefits Paid	$18,619,899
General Fund	$17,607,944
Police & Fire Fund	$1,011,955

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MINNESOTA STATE BOARD OF INVESTMENT

Board Members:

Governor
Mark Dayton

State Auditor
Rebecca Otto

Secretary of State
Steve Simon

Attorney General
Lori Swanson

Executive Director & Chief Investment Officer:

Mansco Perry

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An Equal Opportunity Employer

Investment Authority

The assets of the Public Employees Retirement Association (PERA) are invested along with the assets of the Teachers Retirement Association and the Minnesota State Retirement System under the direction and authority of the State Board of Investment (SBI) in accordance with Minnesota Statutes, Chapters 11A and 356A. The SBI includes Minnesota's governor, auditor, secretary of state and attorney general. The Legislature has established a 17-member Investment Advisory Council (IAC) to advise the SBI and its staff on investment related matters. PERA's executive director is a member of the IAC.

Investment Policy

Investment policy states that the SBI will operate within standard investment practices of the prudent person. The SBI is to "exercise that degree of judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived therefrom." (See M.S., section 11A.09.) The SBI is authorized to own government obligations, corporate obligations, various short-term obligations, corporate stocks, venture capital interests, resource investments, and real estate interests subject to specific constraints. (See M.S., section 11A.24.) In particular, pension fund assets are to be invested for the exclusive benefit of the members of the fund.

Investment Objectives & Performance

PERA's pension contributions from employees and employers are invested in the Combined Funds. The Combined Funds include the assets of active and retired public employees who participate in the defined benefit plans administered by PERA, the Minnesota State Retirement System, and the Minnesota Teachers Retirement Association. PERA does not own any underlying assets, but instead owns a participation in the pooled Combined Funds. Because these assets normally accumulate for thirty to forty years, SBI's objective is to take advantage of the long investment time horizon offered by equities and alternative assets in order to meet its actuarial return target and ensure that sufficient funds are available to finance promised benefits at the time of retirement. The 2015 legislature reduced the interest rate actuarial assumption for PERA to a single rate of 8%.

Continued

MINNESOTA STATE BOARD OF INVESTMENT

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St. Paul, MN 55103
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FAX (651) 296-9572
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minn.sbi@state.mn.us.
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The long term objectives of the Combined Funds are:

- Provide returns that are 3-5 percentage points greater than inflation over the latest 20-year period; and
- Outperform a composite market index weighted in a manner that reflects the actual asset mix of the Combined Funds over the latest 10-year period.

Consistent with these objectives, the SBI maintains a long-term asset allocation for the Combined Funds as follows:

Domestic Equity	45%
International Equity	15%
Alternatives	20%
Fixed Income	18%
Cash	2%

Based on values on June 30, 2016, the Combined Funds returned 5.3 percentage points above the CPI over the last 20 years and returned 0.2 percentage point above the composite index over the past 10 years. Investment returns ranked in the 28th percentile over the past five years and in the 22nd percentile over the past 10 years, compared to similar funds in the Trust Universe Comparison Service.

Investment Presentation

Investment returns were prepared using time-weighted rate of return methodology based upon fair market value, net of investment expenses.

Respectfully submitted,

Mansco Perry III

Mansco Perry III
Executive Director
Minnesota State Board of Investment

October 31, 2016

Investment Results

Fund Performance

Fund	Rates of Return (Annualized) FY 2016	3-Year	5-Year	10-Year	20-Year
Combined Funds (Active/Retiree)*	-0.1%	7.3%	7.7%	6.5%	7.5%
Combined Composite Market Index	1.1	7.4	7.6	6.3	7.3

* Percentages are net of all management fees.

Note: All composite indices are composed of the following market indicators, weighted according to asset allocation:
- **Domestic Stocks**—Russell 3000 measures the performance of the largest 3,000 US companies;
- **Int'l. Stocks**—Morgan Stanley Capital International All Country World Index measures equity market performance in the global developed and emerging markets. There are 45 countries included in this index. It does not include the United States;
- **Bonds**—Barclays Capital Aggregate Bond Index reflects the performance of the broad bond market for investment grade (Baa or higher) bonds, US Treasury and agency securities, and mortgage obligations with maturities greater than one year.

Investment Returns by Sector

Performance of Asset Pools (Net of Fees)

	Rates of Return (Annualized) FY 2016	3-Year	5-Year	10-Year
Domestic Stock Pool	0.0%	10.7%	11.2%	7.2%
Russell 3000	2.1	11.1	11.6	7.4
Bond Pool	5.9%	4.3%	4.3%	5.4%
Barclays Agg.	6.0	4.1	3.8	5.1
International Stock Pool	-9.7%	1.8%	0.9%	2.4%
MSCI ACWI Free ex US (net)	-10.2	1.2	0.1	1.9
Alternative Investments	0.2%	8.6%	9.4%	9.6%
Real Estate Pool (Equity Emphasis)	8.4%	15.2%	12.7%	6.2%
Private Equity Pool (Equity Emphasis)	7.4%	13.1%	12.0%	11.5%
Resource Pool (Equity Emphasis)	-24.2%	-7.9%	-1.0%	7.8%
Yield Oriented Pool (Debt Emphasis)	-3.7%	6.5%	9.4%	10.4%

Note: Investment returns were calculated using a time-weighted rate of return.

Continued

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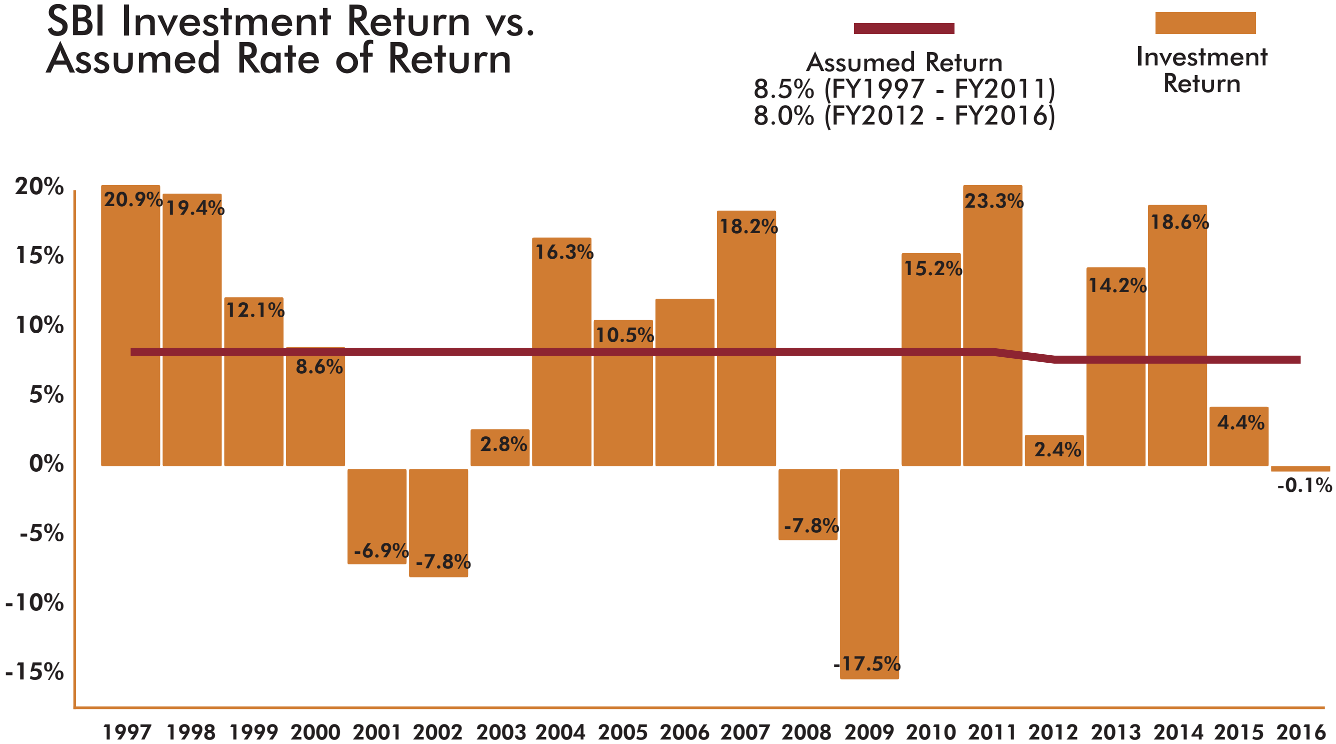
SBI Investment Return vs. Assumed Rate of Return



The State Board of Investment (SBI) has exceeded its assumed rate of return 12 of the past 20 years. Over those 20 years, the SBI has had annualized investment earnings of 7.3%.

TUCS Ranking

Percentage Ranking: 1 Year — 77th   3 Year — 37th   5 Year — 28th   10 year — 22th

Note: Comparison is with public and corporate pension plans greater than $1 billion, gross of fees.

Asset Allocation

As of June 30, 2016

Investment Type	Combined Funds	
	Actual Asset Mix	Long-term Policy Target
Domestic Stocks	46.4%	45.0%
International Stocks	14.0	15.0
Bonds	24.7	18.0
Alternative Assets*	12.8	20.0
Cash	2.1	2.0
Total	100%	100%

* Alternative assets include real estate, private equity (venture capital), resource (oil, gas, etc.), and yield (debt) oriented funds.

Investment Section

List of Largest Assets Held

June 30, 2016

Top Ten Equity Holdings (By Fair Value)

Security	Fair Value (In millions)	% of Portfolio
Apple Inc.	$242.06	0.94%
Microsoft Corporation	187.53	0.73
Johnson & Johnson	167.64	0.65
Exxon Mobil Corporation	165.47	0.64
Amazon.com Inc.	154.36	0.60
Facebook Inc.	154.32	0.60
JP Morgan Chase & Co.	130.40	0.51
Pfizer Inc.	125.24	0.49
Wells Fargo & Co.	121.84	0.47
General Electric Company	117.61	0.46

Top Ten Fixed Income Holdings (By Fair Value)

Security	Coupon %	Fair Value (In millions)	% of Portfolio
Fannie Mae (FNMA)	3.500%	$62.22	0.24%
Fannie Mae (FNMA)	4.000	62.06	0.24
U.S. Treasury Note	1.375	56.92	0.22
U.S. Treasury Bond	2.500	55.05	0.21
U.S. Treasury Note	0.875	52.42	0.20
U.S. Treasury Note	0.625	50.28	0.20
U.S. Treasury Note	1.375	48.27	0.19
U.S. Treasury Note	1.500	45.96	0.18
U.S. Treasury Note	1.375	44.76	0.17
Fannie Mae (FNMA)	3.000	41.62	0.16

PERA's assets are commingled in various pooled investment accounts administered by the State Board of Investment. PERA does not own specific values of the underlying assets. The percentages shown are those of the total pooled accounts. The fair value amounts are based on PERA's participation in the pools. Information on investment activity, a listing of specific investments owned by the pooled accounts and a schedule of fees and commissions can be obtained from the Minnesota State Board of Investment.

Investment Summary at Fair Value

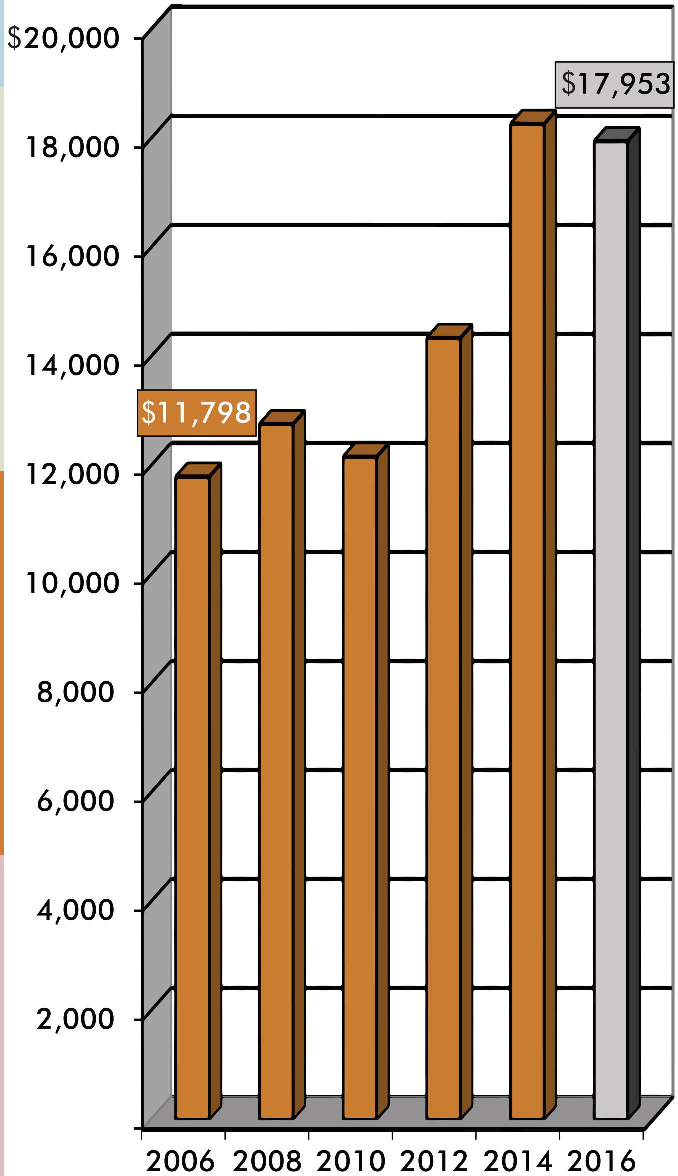
For Fiscal Years Ended June 30, 2015 and 2016 (in thousands)

	Fair Value June 30, 2015	Fair Value June 30, 2016	Percent of Total Fair Value
General Employees Fund			
Pooled Accounts			
US Stock Index Pool	$5,883,398	$5,557,335	31%
Bond Pool	4,364,608	4,437,241	25%
US Stock Actively Managed Pool	2,882,860	2,776,187	15%
Broad International Stock Pool	2,762,003	2,515,673	14%
Alternative Investment Pool	2,288,787	2,300,707	13%
Money Market	354,040	365,166	2%
Total Pooled Accounts	**$18,535,696**	**$17,952,309**	**100%**
Police and Fire Fund			
Pooled Accounts			
US Stock Index Pool	$2,328,724	$2,193,697	31%
Bond Pool	1,727,568	1,751,552	25%
US Stock Actively Managed Pool	1,141,072	1,095,869	15%
Broad International Stock Pool	1,093,236	993,035	14%
Alternative Investment Pool	905,931	908,179	13%
Money Market	138,492	142,997	2%
Total Pooled Accounts	**$7,335,023**	**$7,085,329**	**100%**
Correctional Fund			
Pooled Accounts			
US Stock Index Pool	$155,540	$156,968	31%
Bond Pool	115,387	125,331	25%
US Stock Actively Managed Pool	76,214	78,414	15%
Broad International Stock Pool	73,019	71,056	14%
Alternative Investment Pool	60,509	64,984	13%
Money Market	9,817	10,953	2%
Total Pooled Accounts	**$490,486**	**$507,706**	**100%**
Volunteer Firefighter Fund			
Pooled Accounts			
Bond Pool	$14,660	$24,900	46%
US Stock Actively Managed Pool	11,172	19,094	35%
Broad International Stock Pool	4,686	7,843	15%
Money Market	1,645	2,432	4%
Total Pooled Accounts	**$32,163**	**$54,269**	**100%**

Fair Value of Investments

Last 10 Years (in millions)

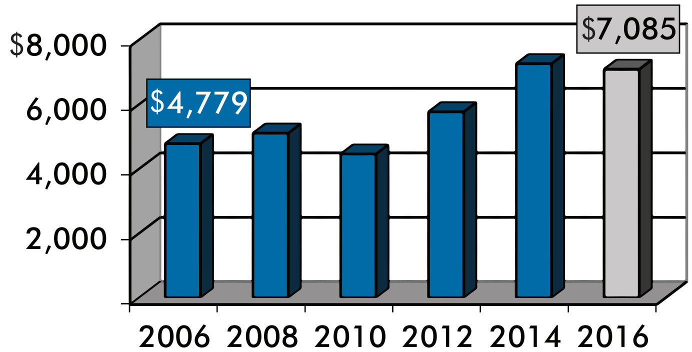
General Employees Fund



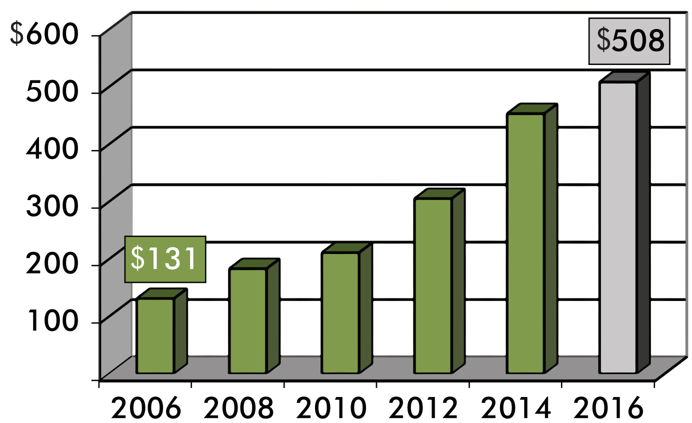
General Employees Fund
Minneapolis Employees Retirement Fund was merged into the General Employees Fund on January 1, 2015.

For comparison purposes, both funds are combined on this illustration.

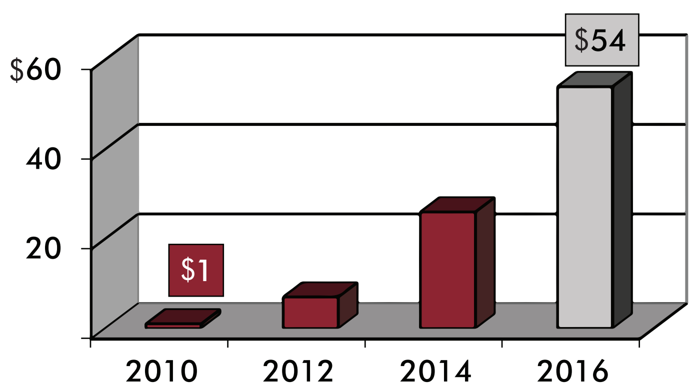
Police and Fire Fund



Correctional Fund



Volunteer Firefigher Fund



Schedule of Investment Fees

For Fiscal Year Ended June 30, 2016 (in thousands)

SBI & Consultants:

State Board of Investment	$2,000
Nuveen Investment Solutions	16
QED Consulting	198
Pension Consulting Alliance	139
Total	**$2,353**

Outside Money Managers:

Active Domestic Equity:

Barrow Hanley	$657
Earnest Partners	429
Goldman Equity	833
Hotchkis and Wiley	826
Intech Investment	782
Jacobs Levy Equity	850
LSV Asset	1,059
Martingale	671
McKinley Capital	922
Next Century	862
Peregrine Capital	914
Sands Capital	775
Systematic Financial	606
Winslow Capital	426
Zevenbergen Capital	842
Total	**$11,454**

Passive Domestic Equity:

Blackrock	$382

Semi Passive Equity:

Blackrock	$1,026
Intech	950
JP Morgan	1,232
Mellon Capital	1,030
Total	**$4,238**

Global Equity:

Acadian Asset	$645
AQR Capital Management	664
Capital International	1,917
Columbia Investments	481
JP Morgan Fleming	465
Marathon Asset	1,030
McKinley Capital	526
Morgan Stanley Dean Witter	2,389
Pyramis Global Advisors	1,050
State Street	871
Total	**$10,038**

Domestic Bonds:

Aberdeen Asset Management	$794
Blackrock Financial	478
Columbia Investment	515
Dodge & Cox	721
Goldman Sachs	799
Neuberger	343
Pimco	1,474
Western Asset Management	670
Total	**$5,794**

Fixed Interest:

Galliard Capital Management	$10

Total Investment Fees	**$34,269**

PERA's assets are commingled in various pooled investment accounts administered by the State Board of Investment. The SBI uses outside money managers and consultants to invest the assets. The amounts in this schedule represent PERA's share of fees paid to SBI, and fees paid by SBI to consultants and money managers. A listing of commissions paid to brokers by the money managers can be obtained from the Minnesota State Board of Investment.

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Actuarial Section

PERA 2016 Comprehensive Annual Financial Report

PERA through the years
the '90s—

With an increasing membership and numerous legislative changes over the years, the volume and complexity of PERA's work had grown significantly, with few offsetting increases in staff or improvements in technology to carry the increased workload. During 1994, PERA developed and launched its five-year business strategic plan to update technologies and basic work processes, with the purpose of delivering quality services to its members. This plan was PERA's most significant accomplishment that year, affecting both management of PERA and the services it provides.

PERA's Financial Highlights– year **1994**

Total Membership	184,417
Retired	33,094
Beneficiaries	7,101
Deferred Annuitants	15,863
Average Annual Benefits	$15,381
Retirement Fund	$8,266
Police & Fire Fund	$17,307
Police & Fire Consolidation Fund	$20,570

1994 Active Members	128,359
Total Assets	$6,720,160,000
Retirement Fund	$4,835,626,000
Police & Fire Fund	$1,234,136,000
Police & Fire Consolidation Fund	$646,554,000
Defined Contribution Plan	$3,844,000
Retirement Fund Annuitants	40,195

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GRS
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December 8, 2016

Board of Trustees
Public Employees Retirement
Association of Minnesota (PERA)
60 Empire Drive, Suite 200
St. Paul, MN 55103-2088

Dear Members of the Board:

We have previously prepared and presented to you our annual actuarial valuation of the General Employees Retirement Plan (GERP), the Public Employees Police and Fire Plan (PEPFP), and the Local Government Correctional Service Retirement Plan (LGCSRP) as of July 1, 2016. Reading this Comprehensive Annual Financial Report (CAFR) is not a substitute for reading the actuarial reports. In order to gain a full understanding of the actuarial condition of the systems, it is important to read and understand the full actuarial reports and potentially other relevant information in addition to this CAFR. The actuarial reports are available on PERA's website, along with online copies of this and previous CAFRs.

Valuation Results

The fundamental financing objective of the fund is to establish contribution rates which will remain approximately level as a percentage of active member payroll from generation to generation and meet the required deadline for full funding. The results of the valuations for funding purposes are summarized in the following table. For all plans, because the valuations smooth asset returns over five years, the actuarial value of assets is higher than the market value of assets. The funding ratios on that basis are higher and the deficiencies are lower than the market value of assets results.

	Accrued Liability Funding Ratio		Contribution Sufficiency/ (Deficiency) (% of Pay)			Projected Full Funding Date	
Plan	Actuarial Value of Assets	Market Value of Assets	Actuarial Value of Assets	Market Value of Assets	Statutory Amortization Date	Actuarial Value of Assets	Market Value of Assets
GERP	75.52%	72.42%	(1.87)%	(2.97)%	2033	2041	2048
PEPFP	87.74%	84.32%	1.18%	(0.90)%	2041	2039	2059
LGCSRP	95.67%	91.68%	0.12%	(0.89)%	2031	2029	2055

The GERP currently has a contribution deficiency. A contribution deficiency means that over the long run, without further changes or favorable actuarial experience, the contributions scheduled to be made to the fund will not meet the goal of full funding by the statutory amortization date.

Continued

Board of Trustees
December 8, 2016
Page 2

The funded ratio measurements shown above are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations (of transferring the obligations to a unrelated third party in an arm's length market value transaction). The measurements also are dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will be different from those calculated in the actuarial reports due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement of 100% would not be synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).

The following actuarial assumptions and plan changes were recognized this year in the valuations for funding purposes:

- The assumed post-retirement benefit increase rate was changed from 2.0% per year through 2034 and 2.5% thereafter to 2.0% through 2052 and 2.5% thereafter in the GERP, and from 1.0% per year through 2034 and 2.5% per year thereafter to 1.0% per year through 2050 and 2.5% per year thereafter in the PEPFP.

In addition, the GERP recognized the following changes:

- Assumed increases in member salaries were changed.
- Assumed rates of retirement were reduced. In addition, distinct rates for reduced (Early) retirements were adopted for members hired prior to July 1, 1989, and members hired after June 30, 1989.
- Assumed rates of termination were increased.
- Assumed rates of disability were reduced.
- The percent married assumption for active male members was changed from 75% to 80%.
- The base mortality table for annuitants and employees was changed from RP-2000 to RP-2014, fully generational, white collar adjustments with age adjustments. The mortality improvement scale was changed from Scale AA to Scale MP-2015.
- Form of payment assumptions were modified.

GRS conducted an examination of the basic financial and membership data provided to us by the association as of June 30, 2016, and determined that the data appears reasonable in comparison to last year, and we have relied upon the data as submitted in performing the actuarial valuation and preparing trend data schedules. The actuarial cost method and the assumptions related to asset valuation, investment return, earnings progression and active member payroll growth are specified by State Statute. All other assumptions are based on actual experience with changes recommended by the actuary, adopted by the PERA Board, and approved by the Legislative Commission on Pensions and Retirement (LCPR). The assumptions and methods used meet the parameters set by Actuarial Standards of Practice.

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Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

The actuary prepared the following supporting schedules in the Actuarial Section of the CAFR:

- Schedule of Funding Progress
- Determination of Contribution Sufficiency
- Determination of Actuarial Value of Assets
- Schedule of Changes in Unfunded Actuarial Accrued Liabilities

All other supporting schedules in the Actuarial Section, along with the Schedule of Changes in Net Pension Liabilities and Related Ratios and the Schedule of Contributions from Employers and Non-employers in the Financial Section of the CAFR were prepared by PERA based on information included in the actuary's annual valuation.

To the best of our knowledge and belief, the valuations were performed in accordance with generally accepted actuarial principles and procedures, current Governmental Accounting Standards Board (GASB) pronouncements, the requirements of Minnesota Statutes, Section 356.215, and the requirements of the Standards for Actuarial Work established by the LCPR. In our opinion, the results of the valuations reflect the actuarial position of the plans on an ongoing basis under the prescribed assumptions, methods, and procedures.

Brian B. Murphy and Bonita J. Wurst are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. In addition, Mr. Murphy meets the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c). The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

Respectfully submitted,

Brian B. Murphy

Brian B. Murphy, FSA, EA, FCA, MAAA

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, FCA, MAAA

BBM/BJW:ah

Gabriel Roeder Smith & Company

Actuarial Section

Summary of Actuarial Assumptions and Methods

PERA implemented GASB Statement No. 67 in fiscal year 2014, which requires pension plans to calculate and disclose a net pension liability in financial statement footnote disclosures using a fairly specific set of actuarial methods and assumptions. The schedules found in the Actuarial Section of this Comprehensive Annual Financial Report (CAFR), on the other hand, are based on actuarial assumptions and methods specified by Minnesota Statute or approved by the Legislative Commission on Pensions and Retirement to determine funding requirements. The actuarial assumptions are based on experience studies of PERA's demographics for each plan conducted by PERA's actuary.

While some of the actuarial assumptions used for GASB financial reporting purposes are identical to the actuarial assumptions used for funding purposes, there are a few differences. For example, the long-term rate of return on investments is assumed to be 7.5 percent for financial reporting purposes, but is assumed to be 8.0 percent (as set in Minnesota Statute) for funding purposes. Also, when calculating the net pension liability for reporting purposes, the fair value of assets is used in accordance with GASB 67. When calculating the unfunded actuarial accrued liability for funding purposes, the actuarial value of assets (smoothed over a 5-year period) is used in accordance with Minnesota Statute.

The actuarial assumptions used in the "funding" actuarial valuations are set in statute or approved by the Legislative Commission on Pensions and Retirement. PERA's actuary uses the "funding" actuarial assumptions disclosed on the following pages when preparing the "financial reporting" actuarial valuations. The *Summary of Actuarial Assumptions and Methods* are listed on the following pages for each plan.

A summary of plan provisions is available in the *Notes to the Financial Information*. The responsibility for establishing and maintaining a funding policy rests with the Minnesota Legislature.

General Employees Fund

The following assumptions were used in valuing the liabilities and benefits under the plan. All actuarial assumptions are prescribed by Minnesota Statutes, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. These parties are responsible for selecting the assumptions used for this valuation. The assumptions prescribed are based on the last experience study dated June 30, 2015.

Actuarial Cost Method	Entry Age Normal, with costs allocated as a level percentage of payroll. Actuarial gains (losses) reduce (increase) the unfunded actuarial accrued liability. (1960)*
Asset Valuation Method	Fair market value smoothed over 5 years. (2008)
Investment return	8.00% per annum. (2015)
Benefit increases after retirement	1.00% per annum through 2052 and 2.50% per annum thereafter. (2013)
Salary increases	Reported salary at valuation date increased according to the rate table, to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for members with less than one year of service earned during the year. (2016)
Inflation	2.75% per year. (2015)
Payroll growth	3.50% per year. (2015)
Mortality rates	
Healthy pre-retirement	RP-2014 Employee Mortality Table, adjusted for white collar and mortality improvements using projection scale MP-2015, from a base year of 2014. Rates are set forward one year for males and set back one year for females. (2016)
Healthy post-retirement	RP-2014 Healthy Annuitant Mortality Table, adjusted for white collar and mortality improvements using projection scale MP-2015, from a base year of 2014. Rates are set forward two years for males. Female rates are multiplied by a factor of 0.90. (2016)
Disabled retirees	RP-2014 Disabled Mortality Table, adjusted for mortality improvements using projection scale MP-2015, from a base year of 2014. Rates are set forward one year for males and set forward six years for females. (2016)
Retirement	Members retiring from active status are assumed to retire according to the age related rates shown in the tables. Members who have attained the highest assumed retirement age are assumed to retire in one year. (2016)
Withdrawal	Service-related rates based on experience; see table of sample rates. (2016)
Disability	Age-related rates based on experience; see table of sample rates. (2016)
Allowance for combined service annuity	Liabilities for active members are increased by 0.80% and liabilities for former members are increased by 60.00% to account for the effect of some participants having eligibility for a Combined Service Annuity. (2016)
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll. (1989)

* Year in parenthesis is the date of adoption.

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General Employees Fund

Refund of contributions	Account balances accumulate interest until normal retirement dates at the rates described in the Summary of Plan Provisions and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Commencement of deferred benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at Normal Retirement.
Percentage married	80% of male and 70% of female active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Males are assumed to have a beneficiary three years younger, while females are assumed to have a beneficiary two years older. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows: Males: 10% elect 25% Joint & Survivor option 15% elect 50% Joint & Survivor option 10% elect 75% Joint & Survivor option 35% elect 100% Joint & Survivor option Females: 10% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 15% elect 100% Joint & Survivor option Remaining married members and unmarried members are assumed to elect the Straight Life option. Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility. Decrements are assumed to occur mid-fiscal year.
Service credit accruals	It is assumed that members accrue one year of service credit per year.

General Employees Fund

Age in 2014	Rate (%)* Healthy Post-Retirement Mortality** Male	Female	Healthy Pre-Retirement Mortality** Male	Female	Disability Mortality** Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.07%	0.11%
25	0.05	0.02	0.03	0.01	0.25	0.26
30	0.07	0.04	0.03	0.02	0.56	0.47
35	0.10	0.07	0.04	0.02	0.94	0.71
40	0.15	0.10	0.05	0.03	1.36	0.97
45	0.22	0.14	0.08	0.05	1.76	1.25
50	0.32	0.19	0.13	0.08	2.10	1.50
55	0.44	0.24	0.22	0.13	2.40	1.76
60	0.60	0.35	0.37	0.19	2.74	2.20
65	0.91	0.59	0.65	0.29	3.31	3.03
70	1.54	0.95	1.15	0.49	4.26	4.44

Age	Disability Retirement Male	Female
20	0.01%	0.01%
25	0.01	0.01
30	0.01	0.01
35	0.03	0.02
40	0.05	0.04
45	0.08	0.05
50	0.15	0.10
55	0.34	0.16
60	0.53	0.28
65	0.00	0.00
70	0.00	0.00

* Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. If the rates were not adjusted as described, we would not expect the valuation results to be materially different.

** The rates shown are RP-2014 mortality with age setbacks, multipliers, and white collar adjustments, if applicable. Rates are further adjusted for mortality improvements using projection scale MP-2015 (from a base year of 2014).

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General Employees Fund

Salary Scale	
Year	Increase
1	11.50%
2	8.50
3	7.00
4	6.00
5	5.50
6	5.20
7	4.90
8	4.80
9	4.70
10	4.50
11	4.25
12	4.10
13	4.00
14	3.90
15	3.90
16	3.85
17	3.80
18	3.75
19	3.75
20	3.75
21	3.75
22	3.70
23	3.60
24	3.60
25	3.60
26+	3.50

	% Withdrawals	
Year	Male	Female
1	25.00%	25.00%
2	20.00	20.00
3	15.00	15.00
4	10.00	11.00
5	9.00	10.00
6	7.00	9.00
7	5.50	7.50
8	5.00	6.50
9	4.50	5.50
10	4.00	5.00
11	3.25	4.25
12	3.00	4.00
13	2.75	3.75
14	2.50	3.50
15	2.50	3.25
16	2.25	3.00
17	2.00	2.75
18	1.75	2.50
19	1.50	2.50
20	1.50	2.25
21	1.50	2.25
22	1.50	2.25
23	1.00	2.00
24	1.00	2.00
25	1.00	1.75
26	1.00	1.75
27	1.00	1.50
28	1.00	1.50
29	1.00	1.50
30	1.00	1.50

Police and Fire Fund

The following assumptions were used in valuing the liabilities and benefits under the plan. All actuarial assumptions are prescribed by Minnesota Statutes, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. These parties are responsible for selecting the assumptions used for this valuation. The assumptions prescribed are based on the last experience study, dated November 2010, prepared by a former actuary, and a review of inflation and investment return assumptions. An experience study for the 2011-2015 period was issued on August 30, 2016. This report recommended many changes to demographic assumptions, expected to be effective at a future date.

Actuarial Cost Method	Entry Age Normal, with costs allocated as a level percentage of payroll. Actuarial gains (losses) reduce (increase) the unfunded actuarial accrued liability. (1960)*
Asset Valuation Method	Fair market value smoothed over 5 years. (2008)
Investment return	8.00% per annum. (2015)
Benefit increases after retirement	1.00% per annum through 2050 and 2.50% per annum thereafter. (2016)
Salary increases	Reported salary at valuation date increased according to the rate table, to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for members with less than one year of service earned during the year. (2015)
Inflation	2.75% per year. (2015)
Payroll growth	3.50% per year. (2015)
Mortality rates	
Healthy pre-retirement	RP-2000 employee generational mortality table projected with mortality improvement scale AA, white collar adjustment, set back two years for males and females. (2011)
Healthy post-retirement	RP-2000 annuitant generational mortality table projected with mortality improvement scale AA, white collar adjustment. The RP-2000 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 15 to 70 and the annuitant mortality table contains mortality rates for ages 50 to 95. We have applied the annuitant mortality table for active members beyond age 70 until the assumed retirement age and the employee mortality table for annuitants younger than age 50. (2011)
Disabled	RP-2000 healthy annuitant mortality table, white collar adjustment, set forward eight years for males and females. (2011)
Retirement	Members retiring from active status are assumed to retire according to the age related rates shown in the rate table. Members who have attained the highest assumed retirement age are assumed to retire in one year. (2011)
Withdrawal	Select and Ultimate rates based on actual experience. Ultimate rates after the third year are shown in rate table. Select rates in the first three years are: (2011)

Year	Select Withdrawal Rates
1	8.00%
2	5.00%
3	3.50%

Continued

* Year in parenthesis is the date of adoption.

Actuarial Section

(continued from previous page)

Police and Fire Fund

Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related.
Allowance for combined service annuity	Liabilities for former members are increased by 30.00% to account for the effect of some participants having eligibility for a Combined Service Annuity.
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll.
Refund of contributions	Account balances accumulate interest until normal retirement date and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Commencement of deferred benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 55.
Percentage married	85% of male and 65% of female active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Wives are assumed to be three years younger than their husbands for male members, and husbands are assumed to be four years older than their wives for female members. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows: Males: 10% elect 25% Joint & Survivor option 20% elect 50% Joint & Survivor option 20% elect 75% Joint & Survivor option 35% elect 100% Joint & Survivor option Females: 5% elect 25% Joint & Survivor option 15% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 15% elect 100% Joint & Survivor option Remaining married members and unmarried members are assumed to elect the Straight Life option. Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility. Decrements are assumed to occur mid-fiscal year.
Service credit accruals	It is assumed that members accrue one year of service credit per year.

Police and Fire Fund

Age	Healthy Post-Retirement Mortality** (Rate %*)		Healthy Pre-Retirement Mortality** (Rate %*)		Disability Mortality** (Rate %*)	
	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.03%	0.02%	0.04%	0.02%
25	0.04	0.02	0.04	0.02	0.05	0.04
30	0.04	0.03	0.04	0.02	0.08	0.06
35	0.06	0.05	0.05	0.04	0.11	0.08
40	0.09	0.06	0.08	0.06	0.17	0.13
45	0.13	0.10	0.11	0.08	0.57	0.29
50	0.60	0.24	0.17	0.13	0.57	0.47
55	0.54	0.35	0.24	0.20	0.92	0.74
60	0.66	0.56	0.35	0.31	1.58	1.24
65	1.16	0.91	0.56	0.50	2.67	2.09
70	1.93	1.52	0.85	0.76	4.75	3.50

Age	Withdrawal Rates After Third Year		Disability Retirement	
	Male	Female	Male	Female
20	6.01%	6.01%	0.11%	0.11%
25	3.24	3.24	0.13	0.13
30	1.90	1.90	0.16	0.16
35	1.46	1.46	0.19	0.19
40	1.26	1.26	0.29	0.29
45	0.91	0.91	0.54	0.54
50	0.50	0.50	1.04	1.04
55	0.11	0.11	2.03	2.03
60	0.00	0.00	0.00	0.00

* Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. If the rates were not adjusted as described, we would not expect the valuation results to be materially different.

** These rates were adjusted for mortality improvements using Projection Scale AA.

Continued

(continued from previous page)

Police and Fire Fund

Age	Retirement
50	13%
51	10
52	10
53	10
54	13
55	30
56	20
57	20
58	20
59	20
60	25
61	25
62	35
63	35
64	35
65	50
66	50
67	50
68	50
69	50
70+	100

Salary Scale	
Year	Increase
1	12.75%
2	10.75
3	8.75
4	7.75
5	6.25
6	5.85
7	5.55
8	5.35
9	5.15
10	5.05
11	4.95
12	4.85
13	4.75
14	4.65
15	4.55
16	4.55
17	4.55
18	4.55
19	4.55
20	4.55
21	4.45
22	4.35
23+	4.25

Correctional Fund

The following assumptions were used in valuing the liabilities and benefits under the Plan. All actuarial assumptions are prescribed by Minnesota Statutes, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. These parties are responsible for selecting the assumptions used for this valuation. The assumptions prescribed are based on the last experience study, dated February 2012, prepared by a former actuary and a review of inflation and investment return assumptions, dated September 11, 2014.

Actuarial Cost Method	Entry Age Normal, with costs allocated as a level percentage of payroll. Actuarial gains (losses) reduce (increase) the unfunded actuarial accrued liability. (1960)*
Asset Valuation Method	Fair market value smoothed over 5 years. (2008)
Investment return	8.00% per annum. (2015)
Benefit increases after retirement	2.50% per annum. (2014)
Salary increases	Reported salary at valuation date increased according to the rate table, to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for members with less than one year of service earned during the year.
Inflation	2.75% per year. (2015)
Payroll growth	3.50% per year. (2015)
Mortality rates	
Healthy Pre-retirement	RP-2000 employee generational mortality table projected with mortality improvement scale AA, white collar adjustment. (2012)
Healthy Post-retirement	RP-2000 annuitant generational mortality table projected with mortality improvement scale AA, white collar adjustment. The RP-2000 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 15 to 70 and the annuitant mortality table contains mortality rates for ages 50 to 95. We have applied the annuitant mortality table for active members beyond age 70 until the assumed retirement age and the employee mortality table for annuitants younger than age 50. (2012)
Disabled	RP-2000 disabled mortality table. (2012)
Retirement	Members retiring from active status are assumed to retire according to the age related rates shown in the rate table. Members who have attained the highest assumed retirement age are assumed to retire in one year. (1999)
Withdrawal	Select and Ultimate rates based on actual experience. Ultimate rates after the third year are shown in rate table. Select rates in the first three years are: (1999)

Year	Select Withdrawal Rates
1	25%
2	20%
3	15%

* Year in parenthesis is the date of adoption.

Continued

Summary of Actuarial Assumptions and Methods

(continued from previous page)

Correctional Fund

Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related.
Allowance for combined service annuity	Liabilities for former members are increased by 30.00% to account for the effect of some participants having eligibility for a Combined Service Annuity.
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll.
Refund of contributions	Account balances accumulate interest until normal retirement date and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Commencement of deferred benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 55.
Percentage married	85% of active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Females are assumed to be three years younger than their male spouses. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows: Males: 5% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 10% elect 75% Joint & Survivor option 35% elect 100% Joint & Survivor option Females: 5% elect 25% Joint & Survivor option 5% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 5% elect 100% Joint & Survivor option Remaining married members and unmarried members are assumed to elect the Straight Life option. Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility. Decrements are assumed to occur mid-fiscal year.
Service credit accruals	It is assumed that members accrue one year of service credit per year.
Pay Increases	Pay increases are assumed to happen at the beginning of the fiscal year. This is equivalent to assuming that reported earnings are pensionable earnings for the year ending on the valuation date.

Correctional Fund

Age in 2014	Rate (%)* Healthy Post-Retirement Mortality**		Healthy Pre-Retirement Mortality**		Disability Mortality**	
	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.03%	0.02%	2.26%	0.75%
25	0.04	0.02	0.04	0.02	2.26	0.75
30	0.04	0.03	0.04	0.03	2.26	0.75
35	0.06	0.05	0.06	0.05	2.26	0.75
40	0.09	0.06	0.09	0.06	2.26	0.75
45	0.13	0.10	0.13	0.10	2.26	0.75
50	0.60	0.24	0.20	0.16	2.90	1.15
55	0.54	0.35	0.27	0.24	3.54	1.65
60	0.66	0.56	0.43	0.38	4.20	2.18
65	1.16	0.91	0.67	0.59	5.02	2.80
70	1.93	1.52	0.98	0.88	6.26	3.76

Age	Withdrawal Rates		Disability Retirement	
	Male	Female	Male	Female
20	14.70%	14.20%	0.04%	0.04%
25	14.70	14.20	0.06	0.06
30	9.10	11.40	0.10	0.08
35	6.00	8.60	0.18	0.11
40	4.40	6.90	0.23	0.18
45	3.40	4.30	0.34	0.39
50	2.40	3.10	0.55	0.70
55	1.40	2.20	0.88	1.18
60	0.00	0.00	1.41	2.41
65	0.00	0.00	1.67	2.67

* Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. If the rates were not adjusted as described, we would not expect the valuation results to be materially different.

** These rates were adjusted for mortality improvements using projection scale AA.

Continued

(continued from previous page)

Correctional Fund

Age	Retirement
50	3%
51	2
52	2
53	2
54	5
55	20
56	8
57	8
58	8
59	8
60	15
61	15
62	30
63	30
64	30
65	40
66	40
67	40
68	40
69	40
70+	100

Salary Scale	
Age	Increase
20	8.75%
25	7.50
30	6.50
35	6.00
40	5.50
45	4.75
50	4.75
55	4.50
60	4.00
65	3.75
70+	3.75

Schedule of Funding Progress

(last 10 years, in thousands, unaudited)

General Employees Fund

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
06/30/2007	$12,985,324	$17,705,627	$4,720,303	73.34%	$4,448,954	106.1%
06/30/2008	13,048,970	17,729,847	4,680,877	73.60%	4,722,432	99.1%
06/30/2009	13,158,490	18,799,416	5,640,926	69.99%	4,778,708	118.0%
06/30/2010	13,126,993	17,180,956	4,053,963	76.40%	4,804,627	84.4%
06/30/2011	13,455,753	17,898,849	4,443,096	75.18%	5,079,429	87.5%
06/30/2012	13,661,682	18,598,897	4,937,215	73.45%	5,142,592	96.0%
06/30/2013	14,113,295	19,379,769	5,266,474	72.82%	5,246,928	100.4%
06/30/2014	15,644,540	21,282,504	5,637,964	73.51%	5,351,920	105.3%
06/30/2015	17,974,439	23,560,951	5,586,512	76.29%	5,549,255	100.7%
06/30/2016	18,765,863	24,848,409	6,082,546	75.52%	5,773,708	105.3%

Police and Fire Fund

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
06/30/2007	$5,198,922	$5,669,347	$470,425	91.70%	$648,342	72.6%
06/30/2008	5,233,015	5,918,061	685,046	88.42%	703,701	97.3%
06/30/2009	5,239,855	6,296,274	1,056,419	83.22%	733,164	144.1%
06/30/2010	5,188,339	5,963,672	775,333	87.00%	740,101	104.8%
06/30/2011	5,274,602	6,363,546	1,088,944	82.89%	775,806	140.4%
06/30/2012	5,797,868	7,403,295	1,605,427	78.31%	794,417	202.1%
06/30/2013	5,932,945	7,304,032	1,371,087	81.23%	796,188	172.2%
06/30/2014	6,525,019	8,151,328	1,626,309	80.05%	820,333	198.2%
06/30/2015	7,076,271	8,460,477	1,384,206	83.64%	845,076	163.8%
06/30/2016	7,385,777	8,417,621	1,031,844	87.74%	881,222	117.1%

Correctional Fund

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
06/30/2007	$159,548	$162,169	$ 2,621	98.38%	$134,117	2.0%
06/30/2008	192,937	192,572	(365)	100.19%	154,202	-0.2%
06/30/2009	217,577	229,383	11,806	94.85%	154,650	7.6%
06/30/2010	242,019	248,867	6,848	97.25%	154,777	4.4%
06/30/2011	274,704	284,593	9,889	96.53%	165,077	6.0%
06/30/2012	306,454	343,199	36,745	89.29%	164,340	22.4%
06/30/2013	346,778	381,179	34,401	90.98%	164,820	20.9%
06/30/2014	410,489	426,508	16,019	96.24%	172,041	9.3%
06/30/2015	475,963	498,052	22,089	95.56%	179,623	12.3%
06/30/2016	529,879	553,840	23,961	95.67%	188,816	12.7%

Solvency Test

Last 10 Years (in Thousands)

General Employees Fund

Valuation Date	Actuarial Accrued Liability For: Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)	Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets 1	2	3
06/30/07	$1,974,734	$9,374,533	$6,356,360	$12,985,324	100%	100%	25.7%
06/30/08	2,109,827	9,826,846	5,793,174	13,048,970	100%	100%	19.2%
06/30/09	2,273,256	10,368,306	6,157,854	13,158,490	100%	100%	8.4%
06/30/10	2,420,862	9,713,177	5,046,917	13,126,993	100%	100%	19.7%
06/30/11	2,548,609	10,195,812	5,154,428	13,455,753	100%	100%	13.8%
06/30/12	2,644,948	10,785,022	5,168,927	13,661,682	100%	100%	4.5%
06/30/13	2,739,037	11,432,882	5,207,850	14,113,295	100%	99%	0.0%
06/30/14	2,827,447	12,614,999	5,840,058	15,644,540	100%	100%	3.5%
06/30/15	2,915,621	14,666,626	5,978,704	17,974,439	100%	100%	6.6%
06/30/16	3,018,468	15,706,371	6,123,570	18,765,863	100%	100%	0.7%

Police and Fire Fund

Valuation Date	Actuarial Accrued Liability For: Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)	Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets 1	2	3
06/30/07	$404,434	$3,333,906	$1,931,007	$5,198,922	100%	100%	75.6%
06/30/08	440,786	3,513,091	1,964,184	5,233,015	100%	100%	65.1%
06/30/09	485,324	3,729,392	2,081,558	5,239,855	100%	100%	49.2%
06/30/10	531,676	3,547,230	1,884,766	5,188,339	100%	100%	58.9%
06/30/11	571,695	3,801,239	1,990,612	5,274,602	100%	100%	45.3%
06/30/12	609,387	4,654,847	2,139,061	5,797,868	100%	100%	24.9%
06/30/13	647,401	4,635,133	2,021,498	5,932,945	100%	100%	32.2%
06/30/14	662,732	5,190,447	2,298,149	6,525,019	100%	100%	29.2%
06/30/15	715,501	5,310,721	2,434,255	7,076,271	100%	100%	43.1%
06/30/16	769,533	5,279,381	2,368,707	7,385,777	100%	100%	56.4%

Correctional Fund

Valuation Date	Actuarial Accrued Liability For: Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)	Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets 1	2	3
06/30/07	$38,697	$41,560	$81,912	$159,548	100%	100%	96.8%
06/30/08	44,596	55,875	92,101	192,937	100%	100%	100.4%
06/30/09	51,082	69,198	109,103	217,577	100%	100%	89.2%
06/30/10	56,834	74,405	117,628	242,019	100%	100%	94.2%
06/30/11	62,736	88,904	132,953	274,704	100%	100%	92.6%
06/30/12	66,254	117,016	159,929	306,454	100%	100%	77.0%
06/30/13	70,603	134,069	176,507	346,778	100%	100%	80.5%
06/30/14	75,492	154,273	196,743	410,489	100%	100%	91.9%
06/30/15	77,771	194,694	225,587	475,963	100%	100%	90.2%
06/30/16	81,675	228,642	243,523	526,879	100%	100%	88.9%

Schedule of Active Members Valuation Data

Last 10 Years

General Employees Fund

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/07	146,226	$4,448,954,000	$30,425	3.3%
06/30/08	143,562	4,722,432,000	32,895	8.1%
06/30/09	143,353	4,778,708,000	33,335	1.3%
06/30/10	140,389	4,804,627,000	34,224	2.7%
06/30/11	139,952	5,079,429,000	36,294	6.0%
06/30/12	139,330	5,142,592,000	36,909	1.7%
06/30/13	139,763	5,246,928,000	37,542	1.7%
06/30/14	143,343	5,351,920,000	37,336	-0.5%
06/30/15	145,650	5,549,255,000	38,100	2.0%
06/30/16	148,745	5,773,708,000	38,816	1.9%

Police and Fire Fund

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/07	10,720	$648,342,000	$60,480	3.6%
06/30/08	10,961	703,701,000	64,200	6.2%
06/30/09	11,035	733,164,000	66,440	3.5%
06/30/10	11,002	740,101,000	67,270	1.2%
06/30/11	10,880	775,806,000	71,306	6.0%
06/30/12	10,865	794,417,000	73,117	2.5%
06/30/13	10,940	796,188,000	72,778	-0.5%
06/30/14	10,879	820,333,000	75,405	3.6%
06/30/15	11,157	845,076,000	75,744	0.4%
06/30/16	11,398	881,222,000	77,314	2.1%

Correctional Fund

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/07	3,566	$134,117,000	$37,610	6.1%
06/30/08	3,710	154,202,000	41,564	10.5%
06/30/09	3,715	154,650,000	41,629	0.2%
06/30/10	3,521	154,777,000	43,958	5.6%
06/30/11	3,510	165,077,000	47,030	7.0%
06/30/12	3,460	164,340,000	47,497	1.0%
06/30/13	3,493	164,820,000	47,186	-0.7%
06/30/14	3,603	172,041,000	47,749	1.2%
06/30/15	3,692	179,623,000	48,652	1.9%
06/30/16	3,827	188,816,000	49,338	1.4%

Schedule of Retirees and Beneficiaries

Last 10 Years

General Employees Fund

Year Ended	Added to Rolls: Number Added	Added to Rolls: Annual Allowances	Removed from Rolls: Number Removed	Removed from Rolls: Annual Allowances	Year-End Total: Number	Year-End Total: Annual Allowances	% Change in Annual Allowances	Average Annual Allowances
06/30/07	4,374	$40,320,000	2,016	$28,116,000	61,436	$793,309,000	5.0%	$12,913
06/30/08	4,552	69,065,000	2,108	27,228,000	63,880	835,146,000	5.3%	13,074
06/30/09	4,358	71,682,000	2,179	32,436,000	66,059	874,392,000	4.7%	13,237
06/30/10	4,692	79,514,000	2,277	34,332,000	68,474	919,574,000	5.2%	13,430
06/30/11	5,717	81,013,000	2,370	36,249,000	71,821	964,338,000	4.9%	13,427
06/30/12	6,145	87,604,000	2,431	36,693,000	75,535	1,015,249,000	5.3%	13,441
06/30/13	6,166	92,483,000	2,618	40,328,000	79,083	1,067,404,000	5.1%	13,497
06/30/14	6,700	104,862,000	2,649	40,605,000	83,134	1,131,661,000	6.0%	13,612
06/30/15	10,537	241,065,000	3,079	54,630,000	90,592	1,318,096,000	16.5%	14,550
06/30/16	6,783	110,107,000	3,087	52,933,000	94,288	1,375,270,000	4.3%	14,586

Police and Fire Fund

Year Ended	Added to Rolls: Number Added	Added to Rolls: Annual Allowances	Removed from Rolls: Number Removed	Removed from Rolls: Annual Allowances	Year-End Total: Number	Year-End Total: Annual Allowances	% Change in Annual Allowances	Average Annual Allowances
06/30/07	428	$17,754,000	197	$6,936,000	7,032	$283,128,000	6.5%	40,263
06/30/08	361	25,372,000	199	7,572,000	7,194	300,928,000	6.3%	41,830
06/30/09	338	21,685,000	170	6,396,000	7,362	316,217,000	5.1%	42,953
06/30/10	368	24,314,000	189	7,308,000	7,541	333,223,000	5.4%	44,188
06/30/11	527	23,608,000	220	8,333,000	7,848	348,498,000	4.6%	44,406
06/30/12	1,786	82,541,000	228	9,640,000	9,406	421,399,000	20.9%	44,801
06/30/13	442	27,616,000	269	10,645,000	9,579	438,370,000	4.0%	45,764
06/30/14	736	43,581,000	276	11,214,000	10,039	470,737,000	7.4%	46,891
06/30/15	431	31,109,000	261	11,409,000	10,209	490,437,000	4.2%	48,040
06/30/16	447	25,711,000	304	13,615,000	10,352	502,533,000	2.5%	48,545

Correctional Fund

Year Ended	Added to Rolls: Number Added	Added to Rolls: Annual Allowances	Removed from Rolls: Number Removed	Removed from Rolls: Annual Allowances	Year-End Total: Number	Year-End Total: Annual Allowances	% Change in Annual Allowances	Average Annual Allowances
06/30/07	57	$490,000	5	$3,000	275	$1,953,000	33.2%	$7,102
06/30/08	47	471,000	4	48,000	318	2,376,000	21.7%	7,472
06/30/09	77	755,000	9	108,000	386	3,023,000	27.2%	7,832
06/30/10	60	707,000	5	96,000	441	3,634,000	20.2%	8,240
06/30/11	92	866,000	5	68,000	528	4,432,000	22.0%	8,394
06/30/12	96	1,048,000	17	168,000	607	5,312,000	19.9%	8,751
06/30/13	100	1,125,000	17	180,000	690	6,257,000	17.8%	9,068
06/30/14	96	1,131,000	17	274,000	769	7,114,000	13.7%	9,251
06/30/15	121	1,722,000	26	336,000	864	8,500,000	19.5%	9,838
06/30/16	118	1,645,000	15	146,000	967	9,999,000	17.6%	10,340

Determination of Contribution Sufficiency

As of June 30, 2016 (in thousands)

General Employees Fund

Statutory Contributions—M.S. Chapter 353		Percent of Payroll	Dollar Amount
Employee Contributions		6.50%	$383,996
Employer Contributions		7.50%	443,059
Employer Supplemental Contributions		0.52%	31,000
State Contributions		0.10%	6,000
Total (a)		**14.62%**	**$864,055**
Actuarially Required Contributions—M.S. Chapter 356			
Normal Cost	Retirement	5.37%	$317,176
	Disability	0.22%	13,022
	Death	0.10%	5,908
	Deferred	1.37%	80,945
	Refund	0.54%	31,904
	Total	7.60%	$448,955
Amortization of Supplemental Contribution (UAAL)		8.69%	$513,303
Allowance for Administrative Expenses		0.20%	11,814
Total (b)		**16.49%***	**$974,072**
Contribution Sufficiency (Deficiency) (a - b)		**-1.87%**	**$(110,017)**
Projected Annual Payroll for Fiscal Year Beginning July 1, 2016			**$5,906,821**

Police and Fire Fund

Statutory Contributions—M.S. Chapter 353		Percent of Payroll	Dollar Amount
Employee Contributions		10.80%	$98,909
Employer Contributions		16.20%	148,364
Minneapolis Police Contributions		0.98%	8,890
Minneapolis Fire Contributions		0.52%	4,757
Virginia Fire Contributions		0.00%	30
State Contributions		0.98%	9,000
Total (a)		**29.48%**	**$269,950**
Actuarially Required Contributions—M.S. Chapter 356			
	Retirement	15.79%	$144,609
Normal Cost	Disability	3.19%	29,215
	Death	0.49%	4,488
	Deferred	1.13%	10,349
	Refund	0.13%	1,191
	Total	20.73%	$189,852
Amortization of Supplemental Contribution (UAAL)		7.47%	$68,412
Allowance for Administrative Expenses		0.10%	916
Total (b)		**28.30%****	**$259,180**
Contribution Sufficiency (Deficiency) (a - b)		**1.18%**	**$10,770**
Projected Annual Payroll for Fiscal Year Beginning July 1, 2016			**$915,827**

* The required contribution on a market value of assets basis is 17.59% of payroll.
** The required contribution on a market value of assets basis is 30.39% of payroll.

Continued

Actuarial Section

Determination of Contribution Sufficiency

As of June 30, 2016 (in thousands) (continued from previous page)

Correctional Fund

Statutory Contributions—M.S. Chapter 353E		Percent of Payroll	Dollar Amount
Employee Contributions		5.83%	$11,784
Employer Contributions		8.75%	17,687
Total (a)		**14.58%**	**$29,471**
Actuarially Required Contributions—M.S. Chapter 356			
Normal Cost	Retirement	8.57%	$17,323
	Disability	2.02%	4,083
	Death	0.18%	364
	Deferred	1.98%	4,002
	Refund	0.47%	950
	Total	13.22%	$26,722
Amortization of Supplemental Contribution (UAAL)		1.09%	$2,203
Allowance for Administrative Expenses		0.15%	303
Total (b)		**14.46%***	**$29,228**
Contribution Sufficiency (Deficiency) (a - b)		**0.12%**	**$243**
Projected Annual Payroll for Fiscal Year Beginning July 1, 2016			**$202,134**

* The required contribution on a market value of assets basis is 15.47% of payroll.

Determination of Actuarial Value of Assets

As of June 30, 2016 (in thousands)

General Employees Fund

Fair value of assets available for benefits (a)				$17,994,909
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2016	$(1,484,753)	80%	$(1,187,802)	
Year ended June 30, 2015	(630,861)	60%	(378,517)	
Year ended June 30, 2014	1,571,711	40%	628,684	
Year ended June 30, 2013	833,405	20%	166,681	
Total unrecognized return (b)				**$(770,954)**
Actuarial Value of Assets (a-b)				**$18,765,863**

Police and Fire Fund

Fair value of assets available for benefits (a)				$7,098,090
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2016	$(587,179)	80%	$(469,743)	
Year ended June 30, 2015	(254,614)	60%	(152,768)	
Year ended June 30, 2014	659,930	40%	263,972	
Year ended June 30, 2013	354,260	20%	70,852	
Total unrecognized return (b)				**$(287,687)**
Actuarial Value of Assets (a-b)				**$7,385,777**

Correctional Fund

Fair value of assets available for benefits (a)				$507,783
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2016	$(39,723)	80%	$(31,778)	
Year ended June 30, 2015	(16,571)	60%	(9,943)	
Year ended June 30, 2014	39,430	40%	15,772	
Year ended June 30, 2013	19,267	20%	3,853	
Total unrecognized return (b)				**$(22,096)**
Actuarial Value of Assets (a-b)				**$529,879**

Schedule of Changes in Unfunded Actuarial Accrued Liabilities (UAAL)

For the Fiscal Year Ended June 30, 2016 (in thousands)

	General Employees Fund	Police and Fire Fund	Correctional Fund
A. UAAL at Beginning of Year (7/1/15)	**$5,586,512**	**$1,384,206**	**$22,089**
B. Change Due to Interest Requirements and Current Rate of Funding			
1. Normal Cost and Expenses	439,360	193,151	25,690
2. Contributions	(841,269)	(260,237)	(27,498)
3. Interest on A, B1 and B2	430,845	108,053	1,695
C. Expected UAAL at End of Year (A+B)	**$5,615,448**	**$1,425,173**	**$21,976**
D. Increase (Decrease) Due to Actuarial Losses (Gains) Because of Experience Deviations from Expected*			
1. Age and Service Retirements	5,127	(6,258)	(823)
2. Disability Retirements	(194)	2,944	(1,789)
3. Death-in-Service Benefits	(8,912)	(290)	(98)
4. Withdrawals	(42,502)	(896)	720
5. Salary Increases	27,757	(29,913)	(829)
6. Investment Income	69,210	6,203	1,981
7. Mortality of Annuitants	(6,294)	1,454	1,440
8. Other Items	7,083	(95,954)	1,383
E. UAAL at End of Year Before Plan Amendments and Changes in Actuarial Assumption (C+D)	**$5,666,723**	**$1,302,463**	**$23,961**
F. Change in UAAL Due to Change in Plan Provisions	0	0	0
G. Change in UAAL Due to Change in Actuarial Assumptions and Methods	415,823	(270,619)	0
H. Change in Unfunded Actuarial Accrued Liability Due To Changes in Decrement Timing and Methodology	0	0	0
I. UAAL at End of Year 6/30/16 (E+F+G+H)	**$6,082,546**	**$1,031,844**	**$23,961**

* Explanatory Notes:
1. If members retire earlier than assumed, there is a loss; if later, a gain.
2. If more members take a disability than assumed, there is a loss; if fewer, a gain.
3. If fewer active members die than assumed, there is a loss; if more, a gain.
4. If fewer members terminate employment than assumed, there is a loss; if more, a gain.
5. If there are larger salary increases than assumed, there is a loss; if smaller, a gain.
6. If there is a smaller investment return than assumed, there is a loss; if larger, a gain.
7. If benefit recipients live longer than assumed, there is a loss; if less, a gain.
8. Miscellaneous gains and losses.

Statistical Section

PERA 2016 Comprehensive Annual Financial Report

PERA through the years
the '00s—

The 2005 Legislative Session was noteworthy in that PERA was able to get approval to increase Coordinated Plan and Police & Fire Plan contribution rates incrementally over the next five years. The existing rates did not pay for the benefits promised to members and needed to be raised in order for the Association's plans to become or remain fully funded. During 2005, PERA completed work on ERIS, a web-based tool that allows participating employers to enroll their eligible employees and enter personal and secure employment data about their employees directly into our system.

PERA's Financial Highlights– year **2005**

Total Membership	358,949	**2005 Active Members**	155,890
Retired	52,928		
Beneficiaries	10,517	**Total Assets**	$17,150,195,000
Deferred Annuitants	139,614	Retirement Fund	$12,062,702,000
		Police & Fire Fund	$4,949,134,000
Average Annual Benefits	$13,227	Correctional Fund	$112,413,000
Retirement Fund	$9,262	Defined Contribution Plan	$25,946,000
Police & Fire Fund	$27,660		
Correctional Fund	$2,760	**Retirement Fund Annuitants**	63,445

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December 2, 2016

The Statistical Section provides additional historical perspective, context, and detail in order to promote a more comprehensive understanding of PERA's financial statements, note disclosures, and supplemental information. In addition, multi-year trend financial and operating information provided in this section is intended to facilitate understanding of how the agency's financial position and performance has changed over time.

Financial trend information includes a ten-year *Schedule of Changes in Fiduciary Net Position*. This schedule provides the history of additions and deductions for each fund and allows the reader to see the rate of growth for each addition and deduction type. The *Benefits and Refunds by Type* schedule shows the types of benefit payments and refunds paid out over the last ten years. These two schedules show the changes to the fund balances and the reasons for those changes over the past ten years.

Membership information includes information about our active, deferred, and retired members. The section includes a *Summary of Membership* for each fund including the ten-year counts of active and non-active members. The *Schedule of New Retirees and Initial Benefits Paid* for our defined benefit plans, followed by a *Schedule of Benefit Recipients by Type* give more detailed information about the starting benefit payment and the type of benefit selected. In addition, the schedule includes information about how many annuitants chose a joint and survivor option.

The final schedule, *Principal Participating Employers*, shows the top ten participating employers in each fund compared to the top ten employers in 2007. In addition, information is displayed on how to view the full-listing of all participating employers and the contributions submitted to PERA.

The information contained in this section was produced by either PERA's actuary or from internal data sources.

David Andrews

David Andrews
Accounting Director

Schedule of Changes in Fiduciary Net Position

Last 10 Fiscal Years (in thousands)

General Employees Fund*

Additions	2007	2008	2009	2010
Employer Contributions	$283,419	$303,304	$328,603	$342,678
State Contributions	0	0	0	0
Member Contributions	260,907	280,007	298,381	303,571
Investment Income (net of expense)	2,206,085	(669,406)	(2,381,642)	1,519,786
Other	4,229	3,681	3,725	241
Total Additions to Fiduciary Net Position	$2,754,640	$(82,414)	$(1,750,933)	$2,166,276
Deductions				
Benefits	$784,013	$824,372	$863,910	$906,300
Refunds	25,745	28,772	26,887	28,770
Administrative Expenses	9,061	9,473	9,706	9,476
Other	2,918	3,245	1,895	0
Total Deductions from Fiduciary Net Position	$821,737	$865,862	$902,398	$944,546
Special Item				
Change in Fiduciary Net Position	**$1,932,903**	**$(948,276)**	**$(2,653,331)**	**$1,221,730**

*The Minneapolis Employees Retirement Fund merged into the General Employees Fund on January 1, 2015.

Police and Fire Fund

Additions	2007	2008	2009	2010
Employer Contributions	$74,707	$87,023	$101,548	$107,065
State Contribution	0	0	0	0
Member Contributions	50,689	58,259	67,701	71,736
Investment Income (net of expense)	882,408	(266,573)	(967,445)	602,177
Other	1,671	1,029	701	0
Total Additions to Fiduciary Net Position	$1,009,475	$(120,262)	$(797,495)	$780,978
Deductions				
Benefits	$280,267	$295,994	$310,100	$326,041
Refunds	874	1,496	1,237	1,493
Administrative Expenses	678	745	747	753
Other	248	342	199	0
Total Deductions from Fiduciary Net Position	$282,067	$298,577	$312,283	$328,287
Change in Fiduciary Net Position	**$727,408**	**$(418,839)**	**$(1,109,778)**	**$452,691**

Correctional Fund

Additions	2007	2008	2009	2010
Employer Contributions	$12,499	$13,388	$14,123	$14,170
Member Contributions	8,335	8,922	9,409	9,442
Investment Income (net of expense)	25,081	(9,552)	(36,201)	24,745
Other	22	16	35	0
Total Additions to Fiduciary Net Position	$45,937	$12,774	$(12,634)	$48,357
Deductions				
Benefits	$1,836	$2,268	$2,836	$3,353
Refunds	474	724	810	714
Administrative Expenses	185	213	219	222
Other	12	34	17	0
Total Deductions from Fiduciary Net Position	$2,507	$3,239	$3,882	$4,289
Change in Fiduciary Net Position	**$43,430**	**$9,535**	**$(16,516)**	**$44,068**

2011	2012	2013	2014	2015	2016
$357,596	$368,037	$372,652	$382,251	$435,115	$459,978
0	0	0	0	0	6,000
311,115	321,412	327,933	334,495	353,765	375,291
2,607,568	320,417	1,903,746	2,760,854	777,504	(20,851)
435	564	0	605	278	431
$3,276,714	$1,010,430	$2,604,331	$3,478,205	$1,566,662	$820,849
$950,708	$1,000,644	$1,051,591	$1,109,866	$1,235,303	$1,359,176
38,218	39,105	35,865	38,264	35,655	37,209
9,748	9,650	9,897	9,861	10,367	11,110
0	0	23	0	0	0
$998,674	$1,049,399	$1,097,376	$1,157,991	$1,281,325	$1,407,495
				$891,636	
$2,278,040	**$(38,969)**	**$1,506,955**	**$2,320,214**	**$1,176,973**	**$(586,646)**

2011	2012	2013	2014	2015	2016
$109,604	$121,891	$125,995	$132,632	$144,317	$156,065
0	0	0	9,000	9,000	9,000
73,702	76,264	76,434	81,213	88,733	95,172
1,024,981	156,926	806,742	1,158,389	317,556	(8,949)
1	488,521	24	18	84	3
$1,208,288	$843,602	$1,009,195	$1,381,252	$559,690	$251,291
$342,219	$386,208	$431,726	$452,462	$481,330	$498,608
2,012	1,524	2,020	1,633	1,953	2,391
762	855	755	798	803	906
0	0	0	0	0	0
$344,993	$388,587	$434,501	$454,893	$484,086	$501,905
$863,295	**$455,015**	**$574,694**	**$926,359**	**$75,604**	**$(250,614)**

2011	2012	2013	2014	2015	2016
$14,289	$14,320	$14,498	$15,054	$15,736	$16,490
9,624	9,581	9,609	10,030	10,472	11,008
50,343	7,846	44,378	69,451	20,373	209
0	0	0	0	0	0
$74,256	$31,747	$68,485	$94,535	$46,581	$27,707
$4,026	$4,809	$5,757	$6,711	$7,777	$9,381
1,338	1,332	1,177	1,105	1,057	982
229	229	209	236	247	292
0	0	0	1	0	0
$5,593	$6,370	$7,143	$8,053	$9,081	$10,655
$68,663	**$25,377**	**$61,342**	**$86,482**	**$37,500**	**$17,052**

Continued

Statistical Section

Schedule of Changes in Fiduciary Net Position

Last 10 Fiscal Years (in thousands) (continued from previous page)

Minneapolis Employees Retirement Fund*

Additions	2007	2008	2009	2010
Employer Contributions	$19,545	$6,405	$6,646	$4,798
State Contribution	9,000	8,866	9,000	9,000
Member Contributions	1,665	1,431	1,072	1,081
Investment Income (net of expense)	209,351	(61,298)	(223,187)	125,710
Other	0	0	0	0
Total Additions to Fiduciary Net Position	$239,561	$(44,596)	$(206,469)	$140,589
Deductions				
Benefits	$147,031	$148,221	$148,745	$147,099
Refunds	165	727	88	27
Administrative Expenses	665	690	761	1,235
Other	0	155	1,882	1,571
Total Deductions from Fiduciary Net Position	$147,861	$149,793	$151,476	$149,932
Special Item				
Change in Fiduciary Net Position	**$91,700**	**$(194,389)**	**$(357,945)**	**$(9,343)**

*The Minneapolis Employees Retirement Fund merged into the General Employees Fund on January 1, 2015.

Volunteer Firefighter Fund*

Additions	2007	2008	2009	2010
Employer Contributions	$0	$0	$0	$7
State Contributions	0	0	0	0
Investment Income (net of expense)	0	0	0	(8)
Other (mainly initial transfer of assets)	0	0	0	791
Total Additions to Plan Net Position	$0	$0	$0	$790
Deductions				
Benefits and Refunds	$0	$0	$0	$25
Administrative Expenses	0	0	0	1
Total Deductions from Fiduciary Net Position	$0	$0	$0	$26
Change in Fiduciary Net Position	**$0**	**$0**	**$0**	**$764**

*The Volunteer Firefighter Plan was established January 1, 2010.

Defined Contribution Fund

Additions	2007	2008	2009	2010
Employer Contributions	$1,374	$1,503	$1,583	$1,582
Member Contributions	1,254	1,356	1,462	1,480
Investment Income	4,265	(2,173)	(5,146)	3,710
Other	0	0	0	1
Total Additions to Plan Net Position	$6,893	$686	$(2,101)	$6,773
Deductions				
Refunds	$2,014	$1,567	$1,398	$1,817
Administrative Expenses	117	113	112	211
Total Deductions from Fiduciary Net Position	$2,131	$1,680	$1,510	$2,028
Change in Fiduciary Net Position	**$4,762**	**$(994)**	**$(3,611)**	**$4,745**

2011	2012	2013	2014	2015	2016
$5,105	$31,623	$31,447	$31,426	$150	$0
22,750	22,750	24,000	24,000	21,575	0
767	564	426	370	0	0
182,660	18,199	108,116	145,957	117	0
44	207	8	39	3	0
$211,326	$73,343	$163,997	$201,792	$21,845	$0
$143,961	$140,709	$137,807	$134,466	$66,093	$0
178	638	57	47	51	0
233	172	131	146	10	0
0	0	0	0	0	0
$144,372	$141,519	$137,995	$134,659	$66,154	$0
				$(891,636)	
$66,954	**$(68,176)**	**$26,002**	**$67,133**	**$(935,945)**	**$0**

2011	2012	2013	2014	2015	2016
$191	$118	$291	$414	$226	$332
	153	361	900	1,430	1,811
242	254	1,082	2,623	880	1,325
2,450	3,076	7,984	7,953	4,667	20,401
$2,883	$3,601	$9,718	$11,890	$7,203	$23,869
$119	$278	$838	$1,096	$1,221	$1,644
8	21	38	71	86	132
$127	$299	$876	$1,167	$1,307	$1,776
$2,756	**$3,301**	**$8,842**	**$10,723**	**$5,896**	**$22,093**

2011	2012	2013	2014	2015	2016
$1,622	$1,674	$1,734	$1,755	$1,850	$1,965
1,496	1,547	1,612	1,628	1,698	1,779
6,726	1,263	5,625	8,004	2,681	999
0	0	0	0	0	2
$9,844	$4,484	$8,971	$11,387	$6,229	$4,745
$2,596	$2,128	$3,399	$2,800	$3,489	$3,755
129	144	152	171	186	189
$2,725	$2,272	$3,551	$2,971	$3,675	$3,944
$7,119	**$2,212**	**$5,420**	**$8,416**	**$2,554**	**$801**

Benefits and Refunds by Type

Last 10 Fiscal Years (in thousands)

General Employees Fund*

	2007	2008	2009	2010
Benefits by Type:				
Retirement	$751,396	$791,449	$830,476	$872,828
Survivor	12,100	11,424	10,942	10,558
Disability	20,517	21,499	22,492	22,914
Total	$784,013	$824,372	$863,910	$906,300
Refunds by Type:				
Separation	$17,494	$19,970	$18,343	$19,261
Death	379	393	428	378
Interest/Employer	7,872	8,409	8,116	9,131
Total	$25,745	$28,772	$26,887	$28,770

*The Minneapolis Employees Retirement Fund merged into the General Employees Fund on January 1, 2015.

Police and Fire Fund

	2007	2008	2009	2010
Benefits by Type:				
Retirement	$233,941	$247,667	$260,312	$274,751
Survivor	13,079	13,237	13,746	14,120
Disability	33,247	35,090	36,042	37,170
Total	$280,267	$295,994	$310,100	$326,041
Refunds by Type:				
Separation	$538	$890	$735	$955
Death	0	39	0	0
Interest/Employer	336	567	502	538
Total	$874	$1,496	$1,237	$1,493

Correctional Fund

	2007	2008	2009	2010
Benefits by Type:				
Retirement	$624	$863	$1,209	$1,627
Survivor	9	12	14	19
Disability	1,203	1,393	1,613	1,707
Total	$1,836	$2,268	$2,836	$3,353
Refunds by Type:				
Separation	$395	$606	$650	$572
Death	5	0	0	5
Interest/Employer	73	118	160	137
Total	$473	$724	$810	$714

	2011	2012	2013	2014	2015	2016
	$917,461	$967,793	$914,195	$970,716	$1,083,605	$1,195,640
	10,058	9,038	114,131	116,451	129,405	140,630
	23,189	23,813	23,265	22,699	22,293	22,906
	$950,708	$1,000,644	$1,051,591	$1,109,866	$1,235,303	$1,359,176

	$25,201	$27,395	$25,878	$27,962	$26,173	$27,601
	475	688	695	514	707	505
	12,542	11,022	9,292	9,788	8,775	9,103
	$38,218	$39,105	$35,865	$38,264	$35,655	$37,209

	2011	2012	2013	2014	2015	2016
	$289,796	$327,956	$336,220	$353,620	$379,068	$391,952
	14,518	18,268	52,827	54,462	56,523	58,119
	37,905	39,984	42,679	44,380	45,739	48,537
	$342,219	$386,208	$431,726	$452,462	$481,330	$498,608

	$1,275	$1,079	$1,243	$1,179	$1,423	$1,540
	2	6	31	0	0	0
	735	439	746	454	530	851
	$2,012	$1,524	$2,020	$1,633	$1,953	$2,391

	2011	2012	2013	2014	2015	2016
	$2,081	$2,790	$3,518	$4,427	$5,528	$6,951
	23	23	180	240	278	372
	1,922	1,996	2,059	2,044	1,971	2,055
	$4,026	$4,809	$5,757	$6,711	$7,777	$9,381

	$997	$1,060	$857	$844	$821	$792
	0	10	48	0	29	0
	341	262	272	261	207	190
	$1,338	$1,332	$1,177	$1,105	$1,057	$982

Continued

Benefits and Refunds by Type

Last 10 Fiscal Years (in thousands) (continued from previous page)

Minneapolis Employees Retirement Fund*

Benefits by Type:

	2007	2008	2009	2010
Retirement	$118,302	$119,414	$120,213	$137,548
Survivor	18,437	18,769	18,661	4,051
Death in Service	4,290	4,257	4,142	0
Disability	6,001	5,781	5,729	5,500
Total	$147,030	$148,221	$148,745	$147,099

Refunds by Type:

	2007	2008	2009	2010
Separation	$163	$367	$75	$27
Death	3	360	13	0
Interest/Employer	0	0	0	0
Total	$166	$727	$88	$27

* The Minneapolis Employees Retirement Fund merged into the General Employees Retirement Fund on January 1, 2015.

Volunteer Firefighter Fund*

Benefits by Type:

	2007	2008	2009	2010
Retirement	$0	$0	$0	$0
Survivor	0	0	0	0
Lump Sum Benefit	0	0	0	25
Total	$0	$0	$0	$25

*The Volunteer Firefighter Plan was established January 1, 2010.

2011	2012	2013	2014	2015	2016
$117,332	$116,016	$113,130	$110,372	$54,292	0
23,813	24,304	24,354	23,972	11,773	0
0	0	0	0	0	0
2,816	389	323	122	28	0
$143,961	$140,709	$137,807	$134,466	$66,093	0
$149	$328	$7	$0	$6	0
29	64	32	37	24	0
0	246	18	10	21	0
$178	$638	$57	$47	$51	0

2011	2012	2013	2014	2015	2016
$0	$0	$0	$0	$0	$279
0	0	0	0	0	23
119	279	838	1,096	1,221	1,342
$119	$279	$838	$1,096	$1,221	$1,644

Statistical Section

Summary of Membership

Defined Benefit Plans — Last 10 Years

General Employees Plans

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2007	146,226	61,436	39,722	109,599	356,983
2008	143,562	63,880	43,984	116,805	368,231
2009	143,353	66,059	43,133	121,690	374,235
2010	140,389	68,474	45,151	126,027	380,041
2011	139,952	71,821	45,325	109,630	366,728
2012	139,330	75,535	44,354	115,287	374,506
2013	139,763	79,083	45,946	119,509	384,301
2014	143,433	83,134	48,505	121,018	396,001
2015	145,650	90,592	51,605	125,366	413,213
2016	148,745	94,288	52,516	132,416	427,965

Police and Fire Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2007	10,720	7,032	1,200	814	19,766
2008	10,961	7,194	1,242	879	20,276
2009	11,035	7,362	1,280	911	20,588
2010	11,002	7,541	1,315	930	20,788
2011	10,880	7,848	1,335	870	20,933
2012	10,865	9,406	1,303	971	22,545
2013	10,940	9,579	1,388	988	22,895
2014	10,879	10,039	1,481	975	23,374
2015	11,157	10,209	1,560	995	23,921
2016	11,398	10,352	1,490	1,059	24,299

Correctional Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2007	3,566	275	1,337	1,291	6,469
2008	3,710	318	1,520	1,473	7,021
2009	3,715	386	1,683	1,525	7,309
2010	3,521	441	1,895	1,605	7,462
2011	3,510	528	1,981	1,624	7,643
2012	3,460	607	2,091	1,727	7,885
2013	3,493	690	2,232	1,816	8,231
2014	3,603	769	2,380	1,936	8,688
2015	3,692	864	2,620	2,139	9,315
2016	3,827	967	2,755	2,359	9,908

Volunteer Firefighter Plan*

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2016	1,639	79	928	0	2,646

* The first monthly benefit division participant joined the Volunteer Firefighter Plan January 1, 2016.

Schedule of New Retirees and Initial Benefit Paid

Defined Benefit Plans – Last 10 Years

General Employees Plans

	Years of Credited Service						
	0-4	5-9	10-14	15-19	20-24	25-29	30+
2016							
Average monthly benefit	$142	$317	$576	$864	$1,193	$1,802	$2,877
Average high five salary	$3,772	$2,731	$2,896	$3,189	$3,496	$4,171	$5,080
Number of retirants	619	875	821	776	793	810	1,187
2015							
Average monthly benefit	$139	$309	$571	$866	$1,134	$1,781	$2,771
Average high five salary	$3,714	$2,500	$2,830	$3,236	$3,422	$4,109	$4,911
Number of retirants	579	901	864	808	814	813	1,174
2014							
Average monthly benefit	$139	$308	$588	$808	$1,199	$1,750	$2,809
Average high five salary	$3,716	$2,563	$2,953	$3,027	$3,534	$4,009	$4,963
Number of retirants	628	853	848	791	807	758	1,218
2013							
Average monthly beneift	$145	$303	$546	$823	$1,188	$1,677	$2,737
Average high five salary	$3,499	$2,529	$2,777	$3,074	$3,456	$3,914	$4,895
Number of retirants	581	791	758	726	778	675	1,088
2012							
Average monthly benefit	$133	$290	$535	$795	$1,116	$1,710	$2,608
Average high five salary	$3,545	$2,427	$2,713	$2,992	$3,270	$3,953	$4,712
Number of retirants	645	807	812	657	778	615	1,070
2011							
Average monthly benefit	$123	$273	$507	$758	$1,143	$1,625	$2,550
Average high five salary	$3,348	$2,290	$2,553	$2,845	$3,365	$3,873	$4,686
Number of retirants	563	763	698	626	664	508	1,074
2010							
Average monthly benefit	$116	$266	$498	$748	$1,110	$1,608	$2,432
Average high five salary	$3,371	$2,263	$2,573	$2,891	$3,280	$3,743	$4,466
Number of retirants	405	585	583	521	593	436	853
2009							
Average monthly benefit	$119	$234	$464	$724	$1,023	$1,553	$2,423
Average high five salary	$3,348	$2,115	$2,519	$2,830	$3,093	$3,624	$4,458
Number of retirants	429	571	483	563	511	400	657
2008							
Average monthly benefit	$109	$246	$412	$713	$1,010	$1,448	$2,287
Average high five salary	$3,147	$2,218	$2,266	$2,796	$3,094	$3,441	$4,271
Number of retirants	416	585	544	513	554	466	715
2007							
Average monthly benefit	$109	$223	$411	$672	$909	$1,390	$2,304
Average high five salary	$3,031	$2,017	$2,263	$2,659	$2,856	$3,346	$4,282
Number of retirants	387	556	503	563	481	462	681

Police and Fire Plan

	Years of Credited Service						
	0-4	5-9	10-14	15-19	20-24	25-29	30+
2016							
Average monthly benefit	$565	$1,363	$2,130	$3,152	$4,403	$5,649	$7,322
Average high five salary	$6,026	$5,244	$5,110	$6,023	$6,821	$7,171	$7,613
Number of retirants	20	17	18	30	59	91	44
2015							
Average monthly benefit	$278	$1,559	$2,202	$3,290	$4,232	$5,791	$7,394
Average high five salary	$5,703	$5,563	$5,631	$6,172	$6,553	$7,299	$7,401
Number of retirants	16	16	27	33	56	81	47
2014							
Average monthly benefit	$375	$1,358	$2,081	$3,070	$4,479	$5,611	$6,952
Average high five salary	$4,290	$4,612	$5,379	$5,815	$6,730	$7,018	$7,233
Number of retirants	17	33	37	63	93	205	135
2013							
Average monthly benefit	$639	$1,322	$1,949	$2,941	$4,299	$5,407	$7,163
Average high five salary	$6,439	$4,978	$4,830	$5,533	$6,274	$6,741	$7,350
Number of retirants	8	18	19	23	47	96	60
2012							
Average monthly benefit	$565	$1,028	$1,980	$3,201	$4,110	$5,244	$6,670
Average high five salary	$5,666	$3,733	$5,307	$5,986	$6,136	$6,517	$6,987
Number of retirants	22	20	21	31	56	95	84
2011							
Average monthly benefit	$406	$1,340	$2,019	$2,837	$4,117	$5,189	$6,590
Average high five salary	$4,976	$5,685	$5,189	$5,288	$6,101	$6,489	$6,885
Number of retirants	11	13	23	22	76	74	109
2010							
Average monthly benefit	$342	$760	$1,709	$2,869	$3,829	$5,261	$6,214
Average high five salary	$4,262	$3,685	$4,378	$5,326	$5,709	$6,499	$6,598
Number of retirants	9	12	15	26	49	71	70
2009							
Average monthly benefit	$293	$1,071	$1,531	$2,514	$3,716	$4,932	$5,977
Average high five salary	$4,376	$5,036	$3,810	$4,817	$5,619	$6,071	$6,227
Number of retirants	12	15	11	20	30	85	67
2008							
Average monthly benefit	$452	$1,035	$1,657	$2,852	$3,638	$4,675	$5,542
Average high five salary	$4,660	$5,078	$4,384	$5,409	$5,455	$5,813	$5,978
Number of retirants	14	15	20	13	39	87	56
2007							
Average monthly benefit	$474	$1,116	$2,095	$2,195	$3,355	$4,815	$5,685
Average high five salary	$6,090	$5,363	$5,687	$4,125	$5,049	$5,923	$5,970
Number of retirants	5	15	13	22	47	119	66

Continued

Schedule of New Retirees and Initial Benefit Paid

Defined Benefit Plans – Last 10 Years (continued from previous page)

Correctional Plan*

	Years of Credited Service						
	0-4	5-9	10-14	15-19	20-24	25-29	30+
2016							
Average monthly benefit	$201	$552	$1,107	$1,513			
Average high five salary	$3,930	$3,655	$4,713	$4,928			
Number of retirants	13	21	20	48			
2015							
Average monthly benefit	$501	$758	$1,106	$1,510			
Average high five salary	$4,436	$3,924	$4,364	$5,218			
Number of retirants	15	21	30	37			
2014							
Average monthly benefit	$668	$706	$1,200				
Average high five salary	$3,938	$3,960	$4,797				
Number of retirants	17	23	43				
2013							
Average monthly beneift	$254	$686	$1,193				
Average high five salary	$3,296	$3,904	$4,891				
Number of retirants	17	16	54				
2012							
Average monthly benefit	$295	$683	$1,079				
Average high five salary	$2,930	$3,629	$4,697				
Number of retirants	12	15	52				
2011							
Average monthly benefit	$369	$580	$976				
Average high five salary	$3,436	$3,548	$4,572				
Number of retirants	18	12	40				
2010							
Average monthly benefit	$476	$508	$835				
Average high five salary	$3,571	$3,847	$4,215				
Number of retirants	9	14	27				
2009							
Average monthly benefit	$413	$677					
Average high five salary	$3,621	$4,041					
Number of retirants	16	43					
2008							
Average monthly benefit	$422	$625					
Average high five salary	$2,633	$4,127					
Number of retirants	9	27					
2007							
Average monthly benefit	$183	$553					
Average high five salary	$2,671	$3,993					
Number of retirants	8	25					

*The Correctional Plan was established July 1, 1999.

Volunteer Firefighter Plan*

	Years of Credited Service						
	0-4	5-9	10-14	15-19	20-24	25-29	30+
2016							
Average monthly benefit		$166	$357	$561	$771	$975	
Average high five salary**							
Number of retirants		1	10	13	48	3	

* The first monthly benefit division participant joined the Volunteer Firefighter Plan January 1, 2016.
** The monthly benefit is based on years of service, not salary.

Schedule of Benefit Recipients by Type

As of June 30, 2016

General Employees Plans

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit A	B	C	D	Option Selected 1	2	3	4	5	6
$1 - $250	20,249	18,525	413	1,061	250	13,703	4,880	285	790	384	207
251 - 500	15,263	13,699	266	1,008	290	10,056	3,194	285	1,011	518	199
501 - 750	11,347	9,970	239	865	273	7,096	2,379	255	952	448	217
751 - 1,000	8,422	7,437	149	620	216	5,143	1,759	231	781	390	118
1,001 - 1,250	6,770	5,943	131	501	195	3,809	1,539	253	693	382	94
1,251 - 1,500	5,335	4,688	96	395	156	2,784	1,221	246	663	336	85
1,501 - 1,750	4,439	3,893	89	351	106	2,224	1,005	264	595	275	76
1,751 - 2,000	3,629	3,228	61	253	87	1,759	815	229	525	233	68
2,001 - 2,250	3,083	2,719	49	248	67	1,382	693	191	518	242	57
2,251 - 2,500	2,678	2,331	50	246	51	1,123	642	171	474	205	63
2,501 - 2,750	2,187	1,954	41	166	26	888	542	137	371	173	76
2,751 - 3,000	1,806	1,617	21	151	17	733	448	132	307	121	65
3,001 - 3,250	1,578	1,396	32	133	17	614	423	109	241	119	72
3,251 - 3,500	1,278	1,139	23	110	6	485	335	87	228	90	53
3,501 - 3,750	1,055	938	16	100	1	385	291	57	195	81	46
3,751 - 4,000	872	767	20	80	5	283	261	54	179	48	47
4,001 - 4,250	719	641	7	71	0	235	214	41	142	56	31
4,251 - 4,500	604	542	5	56	1	185	183	30	127	44	35
4,501 - 4,750	536	469	7	57	3	175	165	43	89	34	30
4,751 - 5,000	396	335	6	54	1	120	116	37	74	30	19
5,001 - 5,250	382	331	4	47	0	120	131	24	71	29	7
5,251 - 5,500	280	246	1	33	0	104	69	25	53	17	12
5,501 - 5,750	241	212	3	26	0	72	71	19	57	14	8
5,751 - 6,000	205	180	0	25	0	68	58	13	43	13	10
6,001 - 6,250	154	133	1	20	0	45	43	12	33	12	9
6,251 - 6,500	117	106	0	11	0	29	32	9	33	8	6
6,501 - 6,750	102	86	2	14	0	41	29	6	20	4	2
6,751 - 7,000	103	92	0	11	0	25	25	12	36	4	1
Over 7,000	458	399	4	55	0	123	134	33	122	31	15
Totals	**94,288**	**84,016**	**1,736**	**6,768**	**1,768**	**53,809**	**21,697**	**3,290**	**9,423**	**4,341**	**1,728**

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 100% J&S
C Survivor of Benefit Recipient	**3** 75% J&S
D Disability	**4** 50% J&S
	5 25% J&S
	6 Other (Death, Term-certain, Children's Benefits, etc.)

Police and Fire Plan

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit A	B	C	D	E	Option Selected 1	2	3	4	5	6
$1 - $250	248	220	8	18	2	0	152	68	5	10	5	8
251 - 500	143	116	4	22	1	0	54	55	1	18	7	8
501 - 750	130	99	13	15	1	2	46	45	8	14	5	12
751 - 1,000	146	109	5	29	3	0	53	37	4	28	15	9
1,001 - 1,250	146	83	12	46	4	1	40	43	4	24	15	20
1,251 - 1,500	179	84	16	73	5	1	41	38	10	24	17	49
1,501 - 1,750	217	97	26	80	9	5	46	48	16	26	5	76
1,751 - 2,000	252	103	29	97	14	9	55	45	9	48	12	83
2,001 - 2,250	274	138	31	62	33	10	74	67	9	47	12	65
2,251 - 2,500	304	121	45	88	25	25	60	77	19	43	11	94
2,501 - 2,750	389	178	48	99	21	43	101	85	21	65	11	106
2,751 - 3,000	666	186	135	285	18	42	89	88	26	63	15	385
3,001 - 3,250	411	266	19	46	14	66	115	113	40	62	19	62
3,251 - 3,500	448	285	16	38	10	99	149	120	44	60	18	57
3,501 - 3,750	479	325	26	49	14	65	139	123	41	66	34	76
3,751 - 4,000	513	368	12	44	13	76	154	141	51	71	28	68
4,001 - 4,250	467	360	9	19	18	61	140	113	54	77	29	54
4,251 - 4,500	592	462	12	39	23	56	163	122	69	92	32	114
4,501 - 4,750	532	446	8	34	15	29	124	129	65	94	35	85
4,751 - 5,000	512	441	10	17	11	33	127	97	54	116	36	82
5,001 - 5,250	555	456	5	22	50	22	123	89	85	92	34	132
5,251 - 5,500	890	843	3	9	11	24	120	74	66	134	26	470
5,501 - 5,750	296	252	6	7	15	16	81	66	46	59	32	12
5,751 - 6,000	259	243	2	7	0	7	71	53	46	58	27	4
6,001 - 6,250	244	222	4	3	7	8	53	60	42	65	21	3
6,251 - 6,500	200	188	1	3	2	6	56	53	31	43	16	1
6,501 - 6,750	158	140	0	6	4	8	44	43	20	41	10	0
6,751 - 7,000	153	149	0	2	2	0	45	31	25	39	13	0
Over 7,000	549	524	1	7	9	8	165	91	84	150	57	2
Totals	**10,352**	**7,504**	**506**	**1,266**	**354**	**722**	**2,680**	**2,214**	**995**	**1,729**	**597**	**2,137**

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 100% J&S
C Survivor of Benefit Recipient	**3** 75% J&S
D Non-Duty Disability	**4** 50% J&S
E Line-of-Duty Disability	**5** 25% J&S
	6 Other

Continued

Schedule of Benefit Recipients by Type

As of June 30, 2016 (continued from previous page)

Correctional Plan

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit					Option Selected					
		A	B	C	D	E	1	2	3	4	5	6
$1 - $250	159	145	4	7	3	0	100	38	5	11	5	0
251 - 500	136	128	2	5	1	0	78	32	2	17	7	0
501 - 750	165	133	5	7	20	0	83	52	10	14	5	1
751 - 1,000	155	127	2	5	21	0	74	52	11	13	4	1
1,001 - 1,250	133	114	2	0	13	4	64	40	7	10	10	2
1,251 - 1,500	95	77	2	1	6	9	50	25	6	7	6	1
1,501 - 1,750	43	34	3	1	1	4	23	14	1	3	0	2
1,751 - 2,000	36	23	1	1	1	10	17	11	1	4	2	1
2,001 - 2,250	14	4	0	0	0	10	6	6	1	1	0	0
2,251 - 2,500	16	3	0	0	0	13	13	3	0	0	0	0
2,501 - 2,750	9	3	0	0	0	6	6	2	0	0	1	0
2,751 - 3,000	3	2	0	0	0	1	2	1	0	0	0	0
3,001 - 3,250	2	1	0	0	0	1	0	0	1	0	1	0
3,251 - 3,500	1	1	0	0	0	0	1	0	0	0	0	0
Totals	**967**	**795**	**21**	**27**	**66**	**58**	**517**	**276**	**45**	**80**	**41**	**8**

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 100% J&S
C Survivor of Benefit Recipient	**3** 75% J&S
D Non-Duty Disability	**4** 50% J&S
E Line-of-Duty Disability	**5** 25% J&S
	6 Other

Volunteer Firefighter Plan

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit			Option Selected		
		A	B	C	1	2	3
$1 - $250	3	2	1	0	0	2	1
251 - 500	17	16	0	1	9	8	0
501 - 750	17	11	0	6	0	17	0
751 - 1,000	42	42	0	0	3	39	0
Totals	**79**	**71**	**1**	**7**	**12**	**66**	**1**

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 75% J&S
C Survivor of Benefit Recipient	**3** Other

Principal Participating Employers

Defined Benefit Plans – Top 10 Listing

General Employees Plans*

FY2016

Employer	Active Members	% of Total Active Members
Hennepin County	7,484	4.94%
Hennepin Healthcare Sys.	5,689	3.75%
Minneapolis Sch. Dist.	4,364	2.88%
City of Minneapolis	3,571	2.36%
Ramsey County	3,388	2.24%
St. Paul School District	2,760	1.82%
Anoka-Hennepin Sch. Dist.	2,697	1.78%
City of St. Paul	2,427	1.60%
Rosemount Sch. Dist.	1,845	1.22%
Anoka County	1,828	1.21%

FY2007

Employer	Active Members	% of Total Active Members
Hennepin County	10,245	7.01%
Minneapolis Sch. Dist.	5,757	3.94%
City of Minneapolis	3,755	2.57%
Ramsey County	3,199	2.19%
St. Paul Sch. Dist.	3,144	2.15%
Anoka-Hennepin Sch. Dist.	2,732	1.87%
City of St. Paul	2,104	1.44%
St. Louis County	2,004	1.37%
Osseo School District	1,966	1.34%
Anoka County	1,913	1.31%

Police and Fire Plan*

FY2016

Employer	Active Members	% of Total Active Members
City of Minneapolis	1,275	10.81%
City of St. Paul	1,032	8.75%
Hennepin County	325	2.75%
City of Duluth	288	2.44%
City of Rochester	236	2.00%
Ramsey County	213	1.81%
Hennepin Healthcare Sys.	189	1.60%
Metropolitan Council	181	1.53%
City of St. Cloud	172	1.46%
Wright County	135	1.14%

FY2007

Employer	Active Members	% of Total Active Members
City of Minneapolis	1,211	11.30%
City of St. Paul	832	7.76%
Hennepin County	479	4.47%
Ramsey County	235	2.19%
City of Duluth	219	2.04%
City of Rochester	183	1.71%
City of St. Cloud	167	1.56%
Metro Airports Comsn	129	1.20%
Wright County	120	1.12%
Anoka County	115	1.07%

*A complete listing of employers can be found at http://bit.ly/1wTO3zG.

Continued

Statistical Section

Principal Participating Employers

Defined Benefit Plans – Top 10 Listing (continued from previous page)

Correctional Plan*

FY2016

Employer	Active Members	% of Total Active Members
Hennepin County	496	12.86%
Ramsey County	487	12.63%
Anoka County	240	6.22%
Sherburne County	133	3.45%
Olmsted County	121	3.14%
Dakota County	119	3.09%
Prairie Lakes Det. Cent.	96	2.49%
Northwestern MN Juv. Cent.	92	2.39%
Arrowhead Regional Cor.	89	2.31%
Stearns County	88	2.28%

FY2007

Employer	Active Members	% of Total Active Members
Hennepin County	641	17.98%
Ramsey County	419	11.75%
Anoka County	236	6.62%
Olmsted County	160	4.49%
Sherburne County	117	3.28%
St. Louis County	100	2.80%
Dakota County	88	2.47%
Stearns County	78	2.19%
Beltrami County	77	2.16%
Washington County	72	2.02%

Volunteer Firefighter Plan**

FY2016

Employer	Active Members	% of Total Active Members
Spring Lake Park	63	3.84%
Aitkin	27	1.65%
Cambridge	27	1.65%
Oak Grove	27	1.65%
Waconia	27	1.65%
Brandon	26	1.59%
Granite Falls	26	1.59%
Lester Prairie	25	1.53%
Willmar	25	1.53%
Alden	24	1.46%

FY2010

Employer	Active Members	% of Total Active Members
Ottertail City	27	23.68%
Alborn Township	23	20.18%
Twin Valley City	21	18.42%
Manchester City	16	14.04%
North Star Township	16	14.04%
DeGraff City	11	9.65%

*A complete listing of employers can be found at http://bit.ly/1wTO3zG.
**The Volunteer Firefighter Plan was established January 1, 2010.
A complete listing of employers can be found at http://bit.ly/SVF_forms.

Public Employees Retirement Association
Pension Trust Funds of the State of Minnesota

60 Empire Drive, Suite 200, Saint Paul, Minnesota 55103-2088