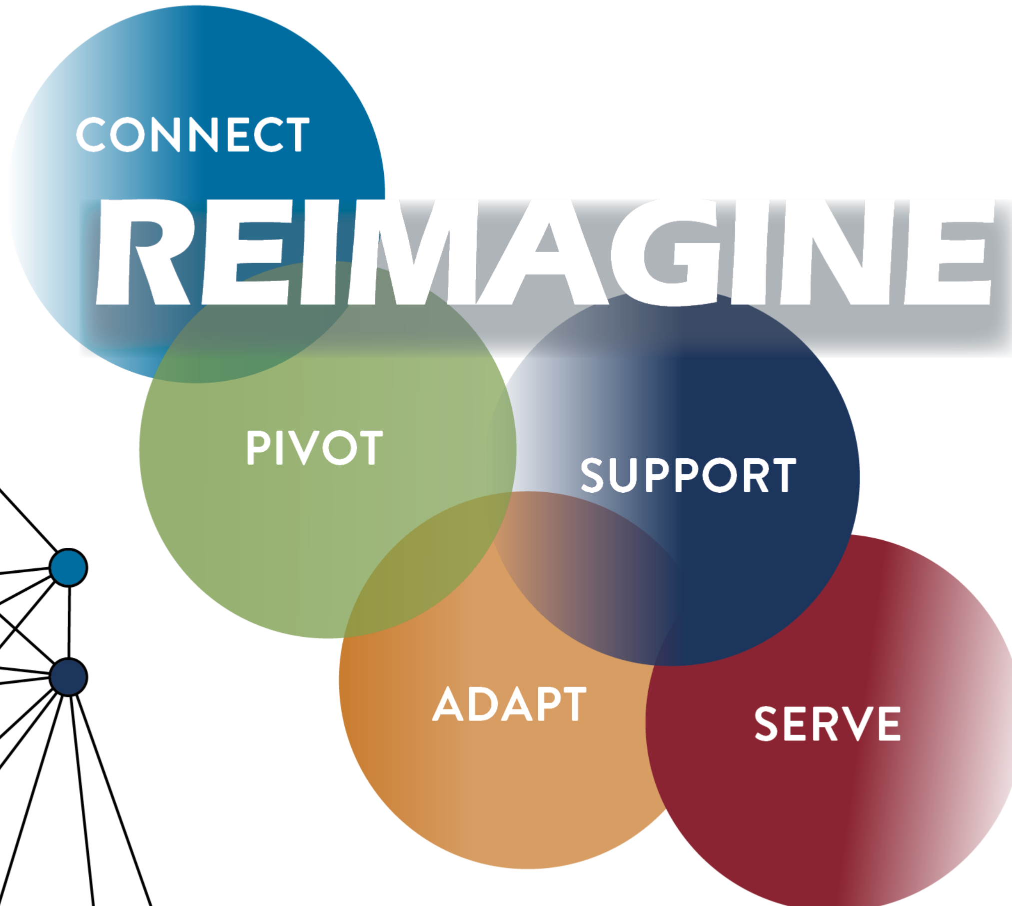
ANNUAL COMPREHENSIVE FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2022



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

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Public Employees Retirement Association of Minnesota

Pension Trust Funds of the State of Minnesota

Annual Comprehensive Financial Report

For the Fiscal Year Ended June 30, 2022

Executive Director
Doug Anderson

Prepared by PERA Finance Division.

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

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INTRODUCTORY SECTION

2022 ANNUAL COMPREHENSIVE FINANCIAL REPORT

CONNECT

As the COVID-19 pandemic evolved, PERA continued to pivot to ensure connection with our members. In May 2022, PERA re-opened its lobby and resumed in-person meetings with retirement counselors while continuing to offer phone-counseling sessions. PERA also embarked on several road trips to Duluth and Mankato providing group and individual informational sessions to members.

Achievement Award

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Public Employees Retirement Association of Minnesota

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2021

Christopher P. Morrill

Executive Director/CEO

Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Public Employees Retirement Association (PERA) for its comprehensive annual financial report for the fiscal year ended June 30, 2021. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current annual comprehensive financial report will continue to meet the Certificate of Achievement Program's requirements and we plan to submit it to GFOA to determine its eligibility for another certificate.

Achievement Award

Government Finance Officers Association

Award for Outstanding Achievement in Popular Annual Financial Reporting

Presented to

Public Employees Retirement Association of Minnesota

For its Annual Financial Report
For the Fiscal Year Ended

June 30, 2021

Executive Director/CEO

Government Finance Officers Association of the United States and Canada (GFOA) awarded an Award for Outstanding Achievement in Popular Annual Financial Reporting to Public Employees Retirement Association (PERA) for its Popular Annual Financial Report for the fiscal year ended June 30, 2021. The award is a prestigious national award recognizing conformance with the highest standards for preparation of popular reports. In order to receive an Award for Outstanding Achievement in Popular Annual Financial Reporting, a government unit must publish a Popular Annual Financial Report, whose contents conform to program standards of creativity, presentation, understandability, and reader appeal.

This award is valid for a period of one year only. We believe our current report will continue to conform to the Popular Annual Financial requirements, and we plan to submit it to GFOA to determine its eligibility for another award.

Achievement Award

PPCC

Public Pension Coordinating Council

Public Pension Standards Award
For Funding and Administration
2022

Presented to

Minnesota Public Employees Retirement Association

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

PERA received the 2022 Public Pension Standards Award for Fund and Administration from the Public Pension Coordinating Council (PPCC). The PPCC separates the standards into Administrative and Funding. To receive the Administration Award, the retirement system must meet the requirements in the five areas of comprehensive benefit program, actuarial, audit, investments, and communications. To receive the Funding Award, the retirement system must meet the requirements for funding adequacy. PERA received both the Administrative and Funding Awards. The PPCC is a coalition that represent public retirement systems in the United States.

Letter of Transmittal

PUBLIC EMPLOYEES
RETIREMENT ASSOCIATION

December 16,2022

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

Dear President and members of PERA Board of Trustees:
On behalf of the management and staff of the Minnesota Public Employees Retirement Association (PERA), it is our pleasure to present the *Annual Comprehensive Financial Report* (ACFR). This document reflects the results of activities undertaken by PERA for the fiscal year ended June 30, 2022.

For PERA, fiscal year 2022 provided an opportunity to reimagine how we continue to achieve our mission and strategic goals as we progress through the COVID-19 pandemic and move forward to a *new normal.* PERA identified the following opportunities, or major initiatives, to ensure we continue to achieve our mission to *administer and promote sustainable retirement plans and provide services our member's value.*

- **Comprehensive Risk-managed Plans** – Fiscal year 2022 saw continued volatility in the investment market. Investment earnings are the largest source of funding for benefits paid. PERA is working with its actuary and the Legislature to understand the volatile measurements and wide ranging forecasts to help ensure plan design decisions keep our retirement plans sustainable.

- **Member Experience** – After closing to the public in response to the COVID-19 pandemic, PERA re-opened its lobby in May of 2022 and welcomed back in-person counseling sessions with retirement counselors in August of 2022. Knowing that some members prefer the ease and convenience of phone counseling sessions, PERA has continued these offerings.

- **Operational Excellence** – The COVID-19 pandemic increased the world's reliance on information technology and PERA was no exception. As PERA continues to move forward, the reliance and demand on information technology continues to increase. In response to the increase in reliance and demand, PERA expanded its Information Systems Division in fiscal year 2022 and will continue to do so in fiscal year 2023.

- **Employer Experience** – PERA continues to expand the resources available to employers with the addition of several new employer videos. In addition, PERA is offering an updated webinar on the leave reporting process. This updated webinar was created in response to the changes we have made after gathering and analyzing employer feedback.

- **Employer of Choice** – In fiscal year 2022, PERA adopted a hybrid work environment for its employees. Recognizing the inherent challenges with this work environment, PERA organized an employee engagement and connectivity work group that meets periodically and assists in identifying opportunities to ensure PERA employees are engaged and connected.

Overview of PERA

PERA provides retirement, disability, and survivor benefits to Minnesota public employees. Created by legislation on April 24, 1931, PERA began operations on July 1, 1931, prior to the Social Security Administration. Currently, PERA administers three cost-sharing, multiple-employer defined benefit retirement plans, the General Employees Plan, the Police and Fire Plan, and the Correctional Plan, one agent, multiple-employer defined benefit plan, the Statewide Volunteer Firefighter Plan, and one defined contribution plan, the Defined Contribution Plan. Additional information about the plans can be found in the *Notes to the Financial Statements* beginning on page 26.

Letter of Transmittal

For the defined benefit plans, PERA serves approximately 463,000 members, including 130,000 retirees and beneficiaries. In addition, PERA works with over 2,800 employers. The fiduciary net position for the defined benefit plans is almost $37.6 billion as of June 30, 2022. Whereas, for its defined contribution plan, PERA serves approximately 8,000 members and 1,100 employers. The fiduciary net position for the defined contribution plan is almost $82.5 million.

Investments

The State Board of Investment (SBI) invests the assets of PERA's retirement plans. All investments undertaken by SBI are governed by the prudent person rule and other standards set forth in Minnesota Statutes, Chapters 11A and 356A. Additional information about SBI and the investment policies, strategies, safeguards, activities, and returns can be found in the *Investment Section* beginning on page 87.

For PERA's three cost-sharing, multiple-employer defined benefit plans, SBI commingles those plan assets along with the assets of the Minnesota State Retirement System, and Teachers Retirement Association into the Combined Funds to capture investment efficiencies. In 2018, SBI adopted a set of Investment Beliefs for managing the assets of the Combined Funds, which include a long-term investment focus while ensuring the ability to pay benefits and a primary mission to maintain the viability of the retirement systems. The Combined Funds assets are allocated in public equity (domestic and international), fixed income, and private markets.

For PERA's agent, multiple-employer defined benefit plan, SBI invests those plan assets into the Volunteer Firefighter Account which is a diversified portfolio of public equity (domestic and international), fixed income, and cash. The objective is to offer a balanced investment approach that will provided favorable long-term risk adjusted returns

As noted above, fiscal year 2022 was marked by significant volatility in the investment market with strong returns for the first six months followed by a sharp decline in returns for the last six months of the fiscal year. The exhibit below shows the investment returns compared to benchmarks for the PERA defined benefit plans. The investment returns presented are based on year-to-date, time-weighted returns.

Investment Returns Compared to Benchmarks - PERA Defined Benefit Plans
Fiscal Year Ended June 30, 2022

Investment Type	Return	Benchmark	Comparison Return vs Benchmark
Combined Funds	(6.4%)	(6.3%)	(0.1%) Underperformed
Pubic Equity	(15.5%)	(15.7%)	0.1% Overperformed
Fixed Income	(10.5%)	(9.6%)	(0.2%) Underperformed
Private Markets (Invested)	24.8%	None	None
Volunteer Firefighter Account	(12.7%)	(12.2%)	(0.5%) Underperformed
Domestic Public Equity	(13.7%)	(13.9%)	0.2% Overperformed
International Public Equity	(17.4%)	(19.4%)	2.0% Overperformed
Fixed Income	(11.7%)	(10.3%)	(1.4%) Underperformed
Cash	0.3%	0.2%	0.1% Overperformed

Letter of Transmittal

Pension Funding

To achieve the required funding necessary to provide the pension benefits, PERA collects member and employer contributions and invests those assets. The investment assets are expected to earn a targeted investment return over the long-term. As PERA has matured, the investment earnings have become the largest source of funding for the benefits.

PERA contracts with an actuarial firm to prepare two annual actuarial valuations, the accounting valuation and the funding valuation, for the three cost-sharing, multiple-employer defined benefit plans. The funding valuation, which this discussion will focus on, is used to determine the financial health of the retirement plans. A comparison of actual fixed statutory contributions to the actuarial required contribution determines whether the plans are on pace to be fully funded by the legislature's full funding target date of 2048. For this purpose, the actuarial value of assets is used. This method smooths assets over a 5-year period to minimize the impact of investment volatility. Additional information about the valuation reports can be found in the *Actuarial Section* beginning on page 99.

PERA's actuary determined, for the second year, that the statutorily defined investment return assumption of 7.5 percent deviates materially from the guidance set forth in the Actuarial Standards of Practice and suggests a range of 5.64 to 6.84 would be reasonable. The exhibit below shows the contribution sufficiency or deficiency and the funding ratios using the statutorily defined investment return assumption of 7.5 percent and the PERA management selected investment return assumption of 6.5 percent, which is within the actuary's suggested range.

Actuarial Valuation for Funding Purposes - PERA Defined Benefit Retirement Plans
As of July 1, 2022 and 2021

	General Employees Fund	Police and Fire Fund	Correctional Fund
Investment Return Assumption of 7.5%			
Contribution Sufficiency (Deficiency), as of 07/01/2022	3.3%	6.8%	3.2%
Contribution Sufficiency (Deficiency), as of 07/01/2021	2.8%	6.4%	2.8%
Funding Ratio - Actuarial Value of Assets, as of 07/01/2022	87.4%	93.1%	105.1%
Funding Ratio - Actuarial Value of Assets, as of 07/01/2021	85.3%	92.0%	103.9%
Investment Return Assumption of 6.5%			
Contribution Sufficiency (Deficiency), as of 07/01/2022	(1.2%)	(5.7%)	(4.2%)
Contribution Sufficiency (Deficiency), as of 07/01/2021	(1.6%)	(5.7%)	(4.1%)
Funding Ratio - Actuarial Value of Assets, as of 07/01/2022	77.7%	82.5%	90.0%
Funding Ratio - Actuarial Value of Assets, as of 07/01/2021	75.8%	81.6%	88.7%

Letter of Transmittal

Regardless of the investment return assumption used and despite the negative investment return for fiscal year 2022, PERA's contribution sufficiency and funded ratio increased slightly when compared to the prior fiscal year. This slight increase is the result of the 5-year smoothing of investment returns. However, when comparing the results using the statutorily defined assumption of 7.5 percent to the management selected assumption of 6.5 percent the contribution sufficiency turned to a contribution deficiency and the funding ratio decreased between 10 to 15 percent for all three defined benefit plans.

Given the recent volatility of investment returns and the wide range of future expectations, the path forward is uncertain. PERA will continue to work with its actuary and the Legislature to ensure any enacted legislation supports the sustainability of the plans.

Report Contents and Structure

This ACFR is designed to comply with the reporting requirements of Minnesota Statutes 356.20. The preparation of this report is the result of the PERA Finance Division under the director of its Chief Financial Officer and in collaboration with its Executive Director. Ultimate responsibility for the integrity of the data presented within this report, including the fair presentation of the financial statements in all material respects, lies with PERA management.

In addition, PERA management is responsible for establishing and maintaining a system of internal controls over financial reporting. The objective of this internal control framework is to provide reasonable, not absolute, assurance that assets are safeguarded against loss, that financial records and reports are reliable, and that PERA complied with all finance-related legal requirements. The concept of reasonable assurance recognizes the relationship between the cost of a control and the benefit likely to be derived, based on the judgment of management. PERA management asserts, to the best of its knowledge, that the internal controls over financial reporting are operating effectively as of June 30, 2022, to meet the purpose for which they were intended.

Inherent limitations exist in the effectiveness of any internal control system, including the possibility of human error, faulty decision making, fraud or management overriding the system. Accordingly, even a well-conceived and operating internal control system may not prevent or detect misstatements in the preparation of financial statements. In addition, any projection of the evaluation of the effectiveness of internal controls may become inadequate due to changing business conditions, or that the degree of PERA compliance with established policies and procedures has deteriorated.

State law permits the Minnesota Office of the Legislative Auditor (OLA), a nonpartisan office in the legislative branch of the state government, to audit the financial statements and related note disclosures contained in this report. The OLA completed this audit in accordance with auditing standards generally accepted in the United States, and the standards applicable to financial audits contained in Government Auditing Standards. The OLA also reviewed the adequacy of our internal controls over financial reporting and compliance with certain legal provisions. The OLA found that PERA's financial statements were presented fairly, in all material respects, and that PERA had no material weaknesses in our internal controls.

Readers are encouraged to review this letter of transmittal along with *Management's Discussion and Analysis* within the *Financial Section* of this report. *Management's Discussion and Analysis* presents financial highlights, condensed PERA financial statements, and an analysis of the PERA defined benefit retirement funds.

Letter of Transmittal

Awards

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 ACFR for the fiscal year ended June 30, 2021. This was the 29th year that PERA has received this prestigious award. To receive this award, a government must publish an easily readable and efficiently organized ACFR. This report must satisfy both generally accepted accounting principles and applicable legal requirements. The award is valid for a period of one year only. We believe our current ACFR continues to meet the *Certificate of Achievement* program's requirements, and we are submitting the ACFR to the GFOA to determine eligibility of the reports for the fiscal year ended June 30, 2022.

The GFOA also awarded an *Award for Outstanding Achievement in Popular Annual Financial Reporting* to PERA for its Popular Annual Financial Report (PAFR) for the fiscal year ended June 30, 2021. The PAFR presents the significant financial information found within the ACFR in a summarized and simplified format. This was the 5th consecutive year PERA received this award. To receive this award, a government must publish a PAFR that conforms to program standards of creativity, presentation, understandability, and reader appeal.

The Public Pension Coordinating Council (PPCC) awarded the *Public Pension Standards Award for Funding and Administration* to PERA for 2022. To receive this award, the retirement system must meet professional standards for plan funding and administration as set forth in the Public Pension Standards. These standards were developed by a coalition of three associations that represent public pension funds who cover the vast majority of public employees in the U.S. They are intended to reflect minimum expectations for public retirement systems management and administration, and serve as a benchmark by which all defined benefit public plans should be measured.

Acknowledgments

This annual report is the result of the combined teamwork of PERA staff under the director of the Board. We would like to extend our sincere appreciation to the Board of Trustees, PERA Finance Division, and all who assisted in and contributed toward the completion of this report.

Respectfully Submitted,

Doug Anderson
Executive Director

Tracy Gebhard
Chief Finance Officer

Board of Trustees & Professional Consultants

The information on this page is as of November 21, 2022

Thomas Stanley, President
Elected General Membership Representative
Trustee since March 2013
Current term expires January 2023

Paul Bourgeois
Elected General Membership Representative
Trustee since February 2011
Current term expires January 2023

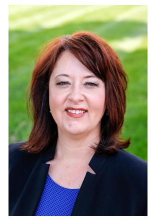
Mary Falk
Appointed General Public Representative
Trustee since June 2015
Current term expires January 2023

Paul Ford
Elected Police & Fire Representative
Trustee since August 2017
Current term expires January 2023

Barb Johnson
Appointed City Representative
Trustee since January 2017
Current term expires January 2025

Scott Schulte
Appointed County Representative
Trustee since March 2021
Current term expires January 2025

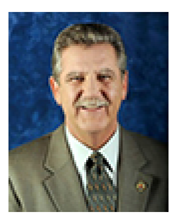
Thomas Rupp, Vice President
Elected General Membership Representative
Trustee since February 2019
Current term expires January 2023



Julie Blaha
State Auditor
Trustee since January 2019
Current term expires January 2023

David Metusalem
Elected Retiree/Disabilitant Representative
Trustee since April 2019
Current term expires January 2023

Kathryn A. Green
Appointed School Board Representative
Trustee since April 2006
Current term expires January 2026



Thomas Thornberg
Appointed Annuitant Representative
Trustee since February 2020
Current term expires January 2024

Professional Consultants

Actuary:
Gabriel Roeder Smith & Company

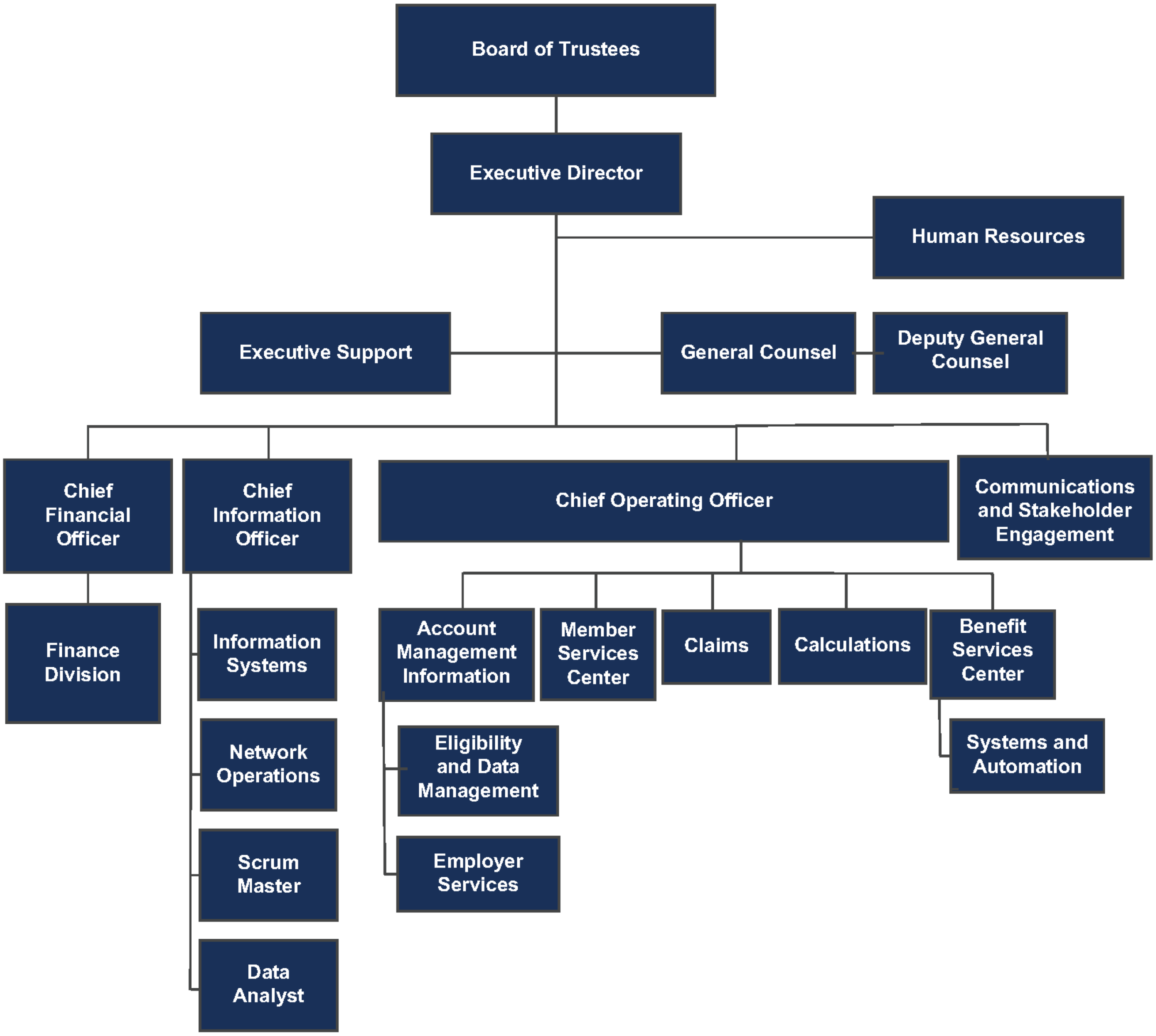
Auditors:
Minnesota Office of the Legislative Auditor
Clifton Larson Allen

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 97 in the *Investment Section* of this ACFR.

Organization Structure, Key Administrative Staff



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.

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FINANCIAL SECTION

2022 ANNUAL COMPREHENSIVE FINANCIAL REPORT

PIVOT

The COVID-19 pandemic forever changed how people work and live. In response to this change, PERA pivoted to a hybrid work environment. Recognizing the inherent challenges with this work environment, PERA organized an employee engagement and connectivity work group that meets periodically and assists in identifying opportunities to ensure PERA employees are engaged and connected.

OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA • Judy Randall, 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 Audit of the Financial Statements

Opinion

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, 2022, 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.

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, 2022, 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.

Basis for Opinion

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. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of PERA and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

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

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about PERA's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions of events, considered in the aggregate, that raise substantial doubt about PERA's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

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 is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to 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. 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.

Supplementary Information

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

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Introductory, Investment, Actuarial, and Statistical Sections, as listed in the Table of Contents, but does not include the basic financial statements and our auditor’s report thereon. Our opinion on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we will issue a report on our consideration of the Public Employees Retirement Association of Minnesota’s internal control 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 control 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* in considering PERA’s internal control over financial reporting and compliance.

Lori Leysen

Kayla Borneman

Lori Leysen, CPA
Deputy Legislative Auditor

Kayla Borneman, CPA
Audit Director

December 16, 2022
Saint Paul, Minnesota

Management's Discussion and Analysis

The management of the Minnesota Public Employees Retirement Association (PERA) present this discussion and analysis of the financial activities of PERA for the fiscal year ended June 30, 2022. Readers are encouraged to use this discussion and analysis in conjunction with the *Letter of Transmittal* beginning on page 9, *Basic Financial Statements* on page 26, and *Notes to the Financial Statements* beginning on page 28 of this report.

Overview of PERA's Pension Plans

PERA administers four defined benefit retirement plans: the General Employees Retirement Plan (General Employees Plan), the Public Employees Police and Fire Plan (Police and Fire Plan), the Public Employees Local Government Correctional Service Retirement Plan (Correctional Plan), and the Statewide Volunteer Firefighter Plan (SVF Plan). PERA also administers one defined contribution plan: the Public Employees Defined Contribution Plan.

Financial Highlights

Overall, the financial condition of PERA deteriorated during fiscal year 2022. PERA's fiduciary net position decreased over $3.6 billion, or 8.8 percent, from $41.2 billion as of June 30, 2021, to $37.6 billion as of June 30, 2022.

For the General Employees Plan, Police and Fire Plan, and Correctional Plan, the investment rate of return, net of fees, was a negative 6.4 percent in 2022. This is significantly lower than the assumed rate of return of 7.5 percent used in the annual actuarial valuations, and slightly less than the negative 6.3 percent benchmark the Minnesota State Board of Investment uses for the Combined Funds. For the SVF Plan, the investment rate of return, net of fees was negative 12.7 percent in 2022. This is less than the negative 12.2 percent benchmark the Minnesota State Board of Investment used for the Volunteer Firefighter account.

Overview of the Financial Statements

The *Annual Comprehensive Financial Report* (ACFR) reflects the activities of PERA as reported in the *Basic Financial Statements*, which begin on page 26. These statements are prepared in conformity with generally accepted governmental accounting principles and are reported using the accrual basis of accounting.

The *Basic Financial Statements* consist of:

- *Statement of Fiduciary Net Position* –This statement provides a point-in-time snapshot of the fund balances at June 30. It reflects the assets available and the liabilities owed which are reported at fair value as of that date. The difference between the sum of total assets and the sum of total liabilities is net position restricted for pensions. This amount is available for payment of future pension benefits or other obligations.

- *Statement of Changes in Fiduciary Net Position* – This statement shows the effect of financial transactions that occurred during the fiscal year where additions less deductions equal net increase (or net decrease) in net position. This net increase or decrease in net position reflects the change in the value of fiduciary net position that occurred between the current and prior year.

Management's Discussion and Analysis

- *Notes to the Financial Statements* – The notes are an integral part of the financial statements that provide additional information relevant to obtaining a full understanding of the financial statements. The notes include a description of PERA and its plans, a summary of significant accounting policies, and information on deposits, investments, contributions, benefits, capital assets, and liabilities, including the net pension liability.

In addition to the *Basic Financial Statements*, the ACFR also includes the *Required Supplementary Information (RSI)* and the *Supplementary Schedules*. The *RSI* consists of three schedules with related notes: *Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Contributions from Employers and Nonemployers,* and *Schedule of Investment Returns*. These schedules present multi-year data designed to provide economic context regarding amounts reported in the financial statements and to provide historical context for each pension fund's fiduciary net position related to the total pension liability. The *Supplementary Schedules* include the *Schedule of Investment Expenses,* the *Schedule of Payments to Consultants,* and the *Schedule of Administrative Expenses.* These schedules summarize the operating expenses PERA incurred during fiscal year 2022 to administer its defined benefit retirement and defined contribution plans.

Financial Analysis

Each of the four defined benefit retirement plans have some characteristics that are different from others, such as membership served, contributions paid, and benefits received. Three of the four defined benefit retirement plans, the General Employees Plan, Police and Fire Plan, and Correctional Plan, have some characteristics in common, such as shared investment pools. The following pages highlight events or conditions that had a significant effect on each plan's financial position or results of operations during fiscal year 2022.

Statement of Fiduciary Net Position

The table below compares the assets and liabilities for PERA defined benefit retirement plans.

Condensed Statement of Fiduciary Net Position - PERA Defined Benefit Retirement Plans
As of June 30, 2022 and 2021
(Dollars in thousands)

	General Employees Fund	Police & Fire Fund	Correctional Fund	SVF	Total
Total Assets, as of 06/30/2022	$27,390,902	$10,960,513	$1,026,419	$132,344	$39,510,178
Total Assets, as of 06/30/2021	30,421,070	12,131,156	1,102,266	145,240	43,799,732
Change in Total Assets	($3,030,168)	($1,170,643)	($75,847)	($12,896)	($4,289,554)
Percentage Change	(10.0%)	(9.6%)	(6.9%)	(8.9%)	(9.8%)
Total Liabilities, as of 06/30/2022	$1,356,717	$545,020	$51,104	$30	$1,952,871
Total Liabilities, as of 06/30/2021	1,833,417	733,055	66,550	33	2,633,055
Change in Total Liabilities	($476,700)	($188,035)	($15,446)	($3)	($680,184)
Percentage Change	(26.0%)	(25.7%)	(23.2%)	(9.1%)	(25.8%)
Total Net Position Restricted for Pensions, as of 06/30/2022	$26,034,185	$10,415,493	$975,315	$132,314	$37,557,307
Total Net Position Restricted for Pensions, as of 06/30/2021	28,587,653	11,398,101	1,035,716	145,207	41,166,677
Change in Net Position Restricted for Pensions	($2,553,468)	($982,608)	($60,401)	($12,893)	($3,609,370)
Percentage Change	(8.9%)	(8.6%)	(5.8%)	(8.9%)	(8.8%)

Management's Discussion and Analysis

Total assets decreased by $4.3 billion, or 9.8 percent to $39.5 billion. This decline can be attributed to a sharp decline in the investment market that occurred in the second half of the fiscal year. Readers can refer to the *Notes to the Financial Statements*, Note 3 for additional information on investments and Note 4 for additional information on capital assets. PERA did not have any significant capital asset activity during fiscal year 2022.

Total liabilities also decreased from fiscal year 2021 to 2022 by $680 million or 25.8 percent. This change is due to a decrease in bonds payable and securities lending collateral. Bonds payable continues to decrease each year with the liability ceasing in fiscal year 2025. Readers can refer to the *Notes to the Financial Statements*, Note 4 for additional information on bonds payable. Securities lending collateral decreased due to the decline in the investment market.

While total liabilities decreased, the decrease only slightly offset the decrease in total assets. As a result, Fiduciary Net Position Restricted for Pensions for all defined benefit retirement plans have decreased by $3.6 billion, or 8.8 percent to almost $37.6 billion as of June 30, 2022.

Statement of Changes in Fiduciary Net Position

The table below compares the total additions by major source and total deductions by type for PERA defined benefit retirement plans.

Condensed Schedule of Changes in Fiduciary Net Position - PERA Defined Benefit Retirement Plans
For the Fiscal Years Ended June 30, 2022 and 2021
(Dollars in thousands)

	Fiscal Year Ended 06/30/2022	Fiscal Year Ended 06/30/2021	Change	Percent Change
Contributions	$1,415,887	$1,366,540	$49,347	3.6%
Total Net Investment Income	(2,535,602)	9,648,978	(12,184,580)	(126.3%)
Other Additions	5,644	2,561	3,083	120.4%
Total Additions	(1,114,071)	11,018,079	(12,132,150)	(110.1%)
Benefits	2,399,674	2,284,505	115,169	5.0%
Refunds of Contributions	80,061	63,227	16,834	26.6%
Administrative Expenses	15,564	14,038	1,526	10.9%
Total Deductions	2,495,299	2,361,770	133,529	5.7%
Net Increase (Decrease) in Net Position Restricted for Pensions	($3,609,370)	$8,656,309	($12,265,679)	(141.7%)
Ending Net Position	$37,557,307	$41,166,677	($3,609,370)	(8.8%)

Total additions decreased over $12.1 billion, or 110.1 percent, to negative $1.1 billion. This change is almost entirely attributable to the fiscal year 2022 investment return of negative 6.4 percent as compared to a 30.3 percent return in 2021. The negative investment return resulted in a decrease in net investment income of almost $12.2 billion. The decrease in net investment income was offset slightly by an increase of over $49 million in contributions due to an increase in current, active members of almost 12,000 or 2.6 percent.

Management's Discussion and Analysis

Total deductions increased over $133.5 million to almost $2.5 billion, an increase of 5.7 percent. The increase is due almost entirely to increased annuity benefit distributions, which rose 5 percent from almost $2.3 billion to almost $2.4 billion. The increase is the result of growth in the number of members receiving benefits, up 3.5 percent to 129,947 members, and payment of benefit increases to retirees and other benefit recipients in January 2022. The benefit increase was 1.5 percent for the General Employees Plan, 1 percent for the Police and Fire Plan, and 2.5 percent for the Correctional Plan. Specifically for the Police and Fire Plan, approximately $16 million of the increase is attributable to an increase in the number and amount of disability benefits paid.

Actuarial Valuation Results

PERA contracts with an actuarial firm to prepare actuarial valuations for the General Employees Plan, Police and Fire Plan, and Correctional Plan on an annual basis. Separate actuarial valuations are prepared for accounting and funding purposes.

Accounting Valuation

The actuarial valuation for accounting purposes is used for financial reporting to provide information about the net pension liability as of a specific point in time using the market value of investment assets. It is required by the Governmental Accounting Standards Board (GASB) to provide a consistent, standardized methodology that allows comparability of amounts and increased transparency of liabilities across U.S. plans complying with GASB 67 and 74. The table below shows the net pension liability as of June 30, 2022 and 2021 along with the change in net pension liability.

Actuarial Valuation for Accounting Purposes - PERA Defined Benefit Retirement Plans
For Fiscal Years Ended June 30, 2022 and 2021
(Dollars in thousands)

	General Employees Fund	Police and Fire Fund	Correctional Fund
Net Pension Liability, year ended 06/30/2022	$7,920,033	$4,351,605	$332,400
Net Pension Liability, year ended 06/30/2021	$4,270,448	$771,894	($16,428)
Change in Net Pension Liability	$3,649,585	$3,579,711	$348,828

For the three defined benefit retirement plans, the net pension liability increased from June 30, 2021 to 2022 due to the sharp decline in the investment market.

Funding Valuation

The actuarial valuation for funding purposes is used to determine the financial health of the retirement plans and how to fund them using the actuarial value of assets, which is smoothed over a 5-year period to minimize the impact of investment volatility. The table below shows the contribution sufficiency or deficiency and the funding ratios presented in the funding valuation reports.

Actuarial Valuation for Funding Purposes - PERA Defined Benefit Retirement Plans
As of July 1, 2022 and 2021

	General Employees Fund	Police and Fire Fund	Correctional Fund
Contribution Sufficiency (Deficiency), as of 07/01/2022	3.3%	6.8%	3.2%
Contribution Sufficiency (Deficiency), as of 07/01/2021	2.8%	6.4%	2.8%
Funding Ratio - Actuarial Value of Assets, as of 07/01/2022	87.4%	93.1%	105.1%
Funding Ratio - Actuarial Value of Assets, as of 07/01/2021	85.3%	92.0%	103.9%
Funding Ratio - Market Value of Assets, as of 07/01/2022	86.2%	91.8%	103.2%
Funding Ratio - Market Value of Assets, as of 07/01/2021	97.9%	105.6%	119.0%

Using the statutorily established investment return assumption of 7.5 percent as shown in the table above, the contribution sufficiency and actuarial value of assets funding ratio improved primarily due to the recognition of deferred investment gains for the three defined benefit retirement plans. However, PERA's actuaries determined that the 7.5 percent investment return assumption deviates materially from the guidance set forth in the Actuarial Standards of Practice and suggests a range of 5.64 to 6.84 would be reasonable. If an investment return assumption within the reasonable range were used the contribution sufficiency and actuarial value of assets funding ratio would be lower. Readers can refer to the table on page 105 of the *Actuarial Section* for information using an investment return assumption of 6.5 percent.

The market value of assets funding ratio for the three defined benefit retirement plans deteriorated primarily due to the sharp decline in the investment market in the second half of fiscal year 2022.

Request for Information

The Annual Comprehensive Financial Report is intended to provide a general overview of the PERA's financial position as of June 30, 2022, and financial activities for fiscal year 2022. If you have any questions or comments concerning the contents of this report, please contact Minnesota Public Retirement Association by mail at 60 Empire Drive, Suite 200, Saint Paul, Minnesota, 55103-2088 or by email at benefits@mnpera.org.

Statement of Fiduciary Net Position

As of June 30, 2022
(In thousands)

	Defined Benefit Funds					
	General Employees Fund	Police and Fire Fund	Correctional Fund	Volunteer Firefighter Fund	Defined Contribution Fund	Total
Assets						
Cash and Cash Equivalents						
Cash	$11,236	$10,126	$467	$0	$103	$21,932
Cash Equivalents	467,297	188,466	15,710	6,730	4,277	682,480
Total Cash and Cash Equivalents	**478,533**	**198,592**	**16,177**	**6,730**	**4,380**	**704,412**
Receivables						
Accounts Receivable	28,819	5,635	741	89	104	35,388
Due from Other Funds	1,851	17	2	0	0	1,870
Total Receivables	**30,670**	**5,652**	**743**	**89**	**104**	**37,258**
Investments at Fair Value						
Publicly Traded Equity Securities						
Domestic Equity	8,580,025	3,435,125	323,582	44,680	56,716	12,440,128
Broad International Stock Pool	3,853,977	1,543,012	145,410	19,541	3,559	5,565,499
Global Equity Pool	268,977	107,165	9,540	0	0	385,682
Publicly Traded Debt Securities	5,965,549	2,385,899	222,439	61,304	18,041	8,653,232
Uninvested Private Equity	314,826	125,288	11,023	0	0	451,137
Private Investments	6,547,264	2,621,319	247,026	0	0	9,415,609
Total Investments	**25,530,618**	**10,217,808**	**959,020**	**125,525**	**78,316**	**36,911,287**
Securities Lending Collateral	**1,345,573**	**538,461**	**50,479**	**0**	**0**	**1,934,513**
Capital Assets						
Equipment Net of Accumulated Depreciation	291	0	0	0	0	291
Property Net of Accumulated Depreciation	5,217	0	0	0	0	5,217
Total Capital Assets	**5,508**	**0**	**0**	**0**	**0**	**5,508**
Total Assets	**27,390,902**	**10,960,513**	**1,026,419**	**132,344**	**82,800**	**39,592,978**
Liabilities						
Accounts Payable	8,058	5,351	275	30	21	13,735
Payable to Other Funds	19	1,208	350	0	293	1,870
Accrued Compensated Absences	1,254	0	0	0	0	1,254
Bonds Payable	1,813	0	0	0	0	1,813
Securities Lending Collateral	1,345,573	538,461	50,479	0	0	1,934,513
Total Liabilities	**1,356,717**	**545,020**	**51,104**	**30**	**314**	**1,953,185**
Net Position Restricted for Pensions	**$26,034,185**	**$10,415,493**	**$975,315**	**$132,314**	**$82,486**	**$37,639,793**

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

Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2022
(In thousands)

	Defined Benefits Funds					
	General Employees Fund	Police and Fire Fund	Correctional Fund	Volunteer Firefighter Fund	Defined Contribution Fund	Total
Additions						
Contributions						
Employer	$546,291	$206,416	$19,227	$998	$2,242	$775,174
Member	457,740	133,023	12,843	0	2,127	605,733
State of Minnesota	16,000	18,000	0	5,349	0	39,349
Total Contributions	**1,020,031**	**357,439**	**32,070**	**6,347**	**4,369**	**1,420,256**
Investment Income						
Net Appreciation in Fair Value of Investments	(1,725,403)	(691,433)	(65,140)	(19,318)	(11,995)	(2,513,289)
Less Investment Expense	(30,154)	(12,058)	(1,113)	(141)	(89)	(43,555)
Net Investment Income	(1,755,557)	(703,491)	(66,253)	(19,459)	(12,084)	(2,556,844)
From securities lending activities:						
Securities Lending Income	11,057	4,424	413	0	0	15,894
Borrower Rebates	(3,288)	(1,316)	(123)	0	0	(4,727)
Management Fees	(1,398)	(559)	(52)	0	0	(2,009)
Net Income from Securities Lending	6,371	2,549	238	0	0	9,158
Total Net Investment Income	**(1,749,186)**	**(700,942)**	**(66,015)**	**(19,459)**	**(12,084)**	**(2,547,686)**
Other Additions (Deductions)	**142**	**(20)**	**0**	**5,522**	**0**	**5,644**
Total Additions	**(729,013)**	**(343,523)**	**(33,945)**	**(7,590)**	**(7,715)**	**(1,121,786)**
Deductions						
Benefits	1,737,905	633,255	23,372	5,142	0	2,399,674
Refunds of Contributions	73,152	4,196	2,713	0	8,067	88,128
Administrative Expenses	13,398	1,634	371	161	298	15,862
Total Deductions	**1,824,455**	**639,085**	**26,456**	**5,303**	**8,365**	**2,503,664**
Net Increase (Decrease) in Net Position	**(2,553,468)**	**(982,608)**	**(60,401)**	**(12,893)**	**(16,080)**	**(3,625,450)**
Net Position Restricted for Pensions						
Beginning of year	28,587,653	11,398,101	1,035,716	145,207	98,566	41,265,243
End of year	**$26,034,185**	**$10,415,493**	**$975,315**	**$132,314**	**$82,486**	**$37,639,793**

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

Notes to Financial Statements

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 current or former county, school, and local public employees, their survivors and dependents. Retirement plans administered by PERA provide a variety of retirement pensions, 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. The governor appoints five trustees. 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 benefit recipients.

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 PERA. 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.

PERA is the administrator of five retirement plans. Each plan has specific membership, contribution, vesting, and benefit provisions. 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 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.

PERA administers three cost-sharing multiple-employer defined benefit retirement plans: the General Employees Retirement Plan (accounted for in the General Employees Fund), the Public Employees 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 (accounted for in the Correctional Fund).

PERA administers one agent multiple-employer defined benefit retirement plan, the Statewide Volunteer Firefighter Retirement Plan (accounted for in the Volunteer Firefighter Fund) and one multiple-employer defined contribution plan, the Public Employees Defined Contribution Plan (accounted for in the Defined Contribution Fund).

Notes to Financial Statements

General Employees Plan

The General Employees Plan encompasses two plans — the PERA Coordinated Plan and the PERA Basic Plan. The Coordinated Plan provides retirement and other benefits in addition to those supplied by Social Security Administration (SSA). The Basic Plan was PERA's original retirement plan and is not coordinated with the SSA. PERA's Basic Plan was closed to new membership in 1968, with the creation of the Coordinated Plan. Today, fewer than five Basic Plan 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 through 2031 ensure the plan remains self-sustaining. Today, fewer than five MERF members remain active public employees.

Statewide Volunteer Firefighter Plan

Funding is provided through Minnesota Fire State Aid based on insurance premiums and administered by the Minnesota Department of Revenue and, if required, annual funding contributions from the governing body associated with the fire department. Additionally, the governing bodies are authorized by statute to make voluntary contributions to their account.

Defined Contribution Plan

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.

Figure 1 presents a summary of the laws, regulations, and administrative rules governing PERA's five 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.

Notes to Financial Statements

Figure 1: Retirement Plan Summary

	General Employees Plan	Police and Fire Plan	Correctional Plan
STATUTORY AUTHORITY:	Minnesota Statutes Chapters 353 and 356	Minnesota Statutes Chapters 353 and 356	Minnesota Statutes Chapters 353E and 356
DATE ESTABLISHED:	Basic Plan:1931 Coordinated Plan:1968 MERF: 2010 Merged with General Plan: 2015	1959	1999
	Cost-sharing multiple-employer defined benefit	Cost-sharing multiple-employer defined benefit	Cost-sharing multiple-employer defined benefit
MEMBERSHIP:	Employees of counties, cities, townships and employees of schools in non-certified positions, and other entities whose revenues are derived from taxation, fees, or assessments	Licensed police officers and firefighters who meet the membership criteria in Minnesota Statutes 353.64 and who are not earning credit in any other PERA retirement plan or in a local relief association for the same services. Effective July 1, 1999 the plan also covers police officers and fire fighters belonging to a local relief association that elected to merge with and transfer assets and administration to PERA	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
APPROXIMATE # OF EMPLOYERS:	2,100	430	80

Notes to Financial Statements

continued on next page

Volunteer Firefighter Plan	Defined Contribution Plan
Minnesota Statutes Chapter 353G and 356 for the lump sum and monthly benefit divisions and Minnesota Statutes Chapter 424A for the monthly benefit division	Minnesota Statutes Chapter 353D and Chapter 356
2010 for the lump sum division 2016 for the monthly benefit division	1987
Agent multiple-employer defined benefit	Multiple-employer defined contribution
Any municipal volunteer fire department or independent non-profit firefighting corporation	Elected and appointed local government officials (except elected county sheriffs who are only eligible if they meet certain qualifications), city managers, emergency medical service personnel, including physicians, employed by or providing service to any participating public ambulance service who are not covered by another public or private pension and any publicly-operated ambulance service that receives an operating subsidy from a governmental entity and elects to participate in the plan
205	1,100

Notes to Financial Statements

Figure 1: Retirement Plan Summary (continued from previous page)

General Employees Plan	Police and Fire Plan	Correctional Plan
VESTING:		
3 years for members hired prior to July 1, 2010 5 years for members first hired on or after July 1, 2010	3 years for members hired prior to July 1, 2010 Prorated basis from 50% after 5 years up to 100% after 10 years for members first hired on or after July 1, 2010 but before July 1, 2014 Prorated basis from 50% after 10 years up to 100 percent after 20 years for members first hired on or after July 1, 2014	3 years for members hired prior to July 1,2010 Prorated basis from 50% after 5 years up to 100% after 10 years for members first hired on or after July 1, 2010
FINAL AVERAGE SALARY:		
Average monthly salary over the highest paid 60 consecutive months or all months if less than 60	Average monthly salary over the highest paid 60 consecutive months or all months if less than 60	Average monthly salary over the highest paid 60 consecutive months or all months if less than 60
RETIREMENT ANNUITY FORMULAS:		
Members hired prior to July 1, 1989, receive the higher of Method 1 or Method 2 formulas. Only Method 2 is used for members hired after June 30, 1989 Method 1: The accrual rate for Coordinated members is 1.2% for each of the first 10 years of service and 1.7% for each additional year. The rates are 2.2% and 2.7%, respectively, for Basic members Method 2: The accrual rate for Coordinated members is 1.7% for all years of service, and 2.7% for Basic members The accrual rates for former MERF members is 2.0% for each of the first 10 years of service and 2.5% for each additional year	Annuity accrual rate is 3.0% of average salary for each year of credited service	Annuity accrual rate is 1.9% of average salary for each year of credited service

Notes to Financial Statements

Volunteer Firefighter Plan	Defined Contribution Plan
Prorated basis from 40% at 5 years to 100% at 20 years.	No vesting requirements for member or employer contributions or earnings
N/A	N/A
Lump-sum division benefits are based on the number of years of service multiplied by a service pension level chosen by the entity sponsoring the fire department from possible levels ranging from $500 per year of service to $15,000 per year of service Monthly division benefits are determined at the individual plan level	N/A

Notes to Financial Statements

B) Participating Members

Figure 2 shows membership totals in PERA's multiple-employer defined benefit plans as of June 30, 2022. In addition, the Defined Contribution Plan serves approximately 8,000 members.

Figure 2: PERA Membership — Defined Benefit Plans

	General Employees Fund	Police and Fire Fund	Correctional Fund	Volunteer Firefighter	Total
Retirees and beneficiaries receiving benefits	115,980	12,107	1,717	143	129,947
Terminated employees entitled to benefits/ refunds but not yet receiving them:					
Vested	68,636	1,864	4,129	1,156	75,785
Non-Vested	84,675	957	2,480	0	88,112
Current, active employees:					
Vested	90,150	8,310	1,960	2,662	103,082
Non-Vested	59,837	3,319	1,604	1,524	66,284
Total	419,278	26,557	11,890	5,485	463,210

C) Benefit Provisions - Cost-sharing Multiple-Employer Defined Benefit Retirement Plans

PERA's defined benefit plans are tax qualified plans under Section 401(a) of the Internal Revenue Code. PERA provides retirement and disability benefits to members, as well as survivors upon the death of eligible members.

Retirement benefits are based on a member's highest average salary for 60 consecutive months 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 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 60 highest-paid consecutive months of public service (high-five salary), or all months of service if less than 60.

Members of the PERA General Employees Plan, Police and Fire Plan, and Correctional Plan 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 percent level of that received by the member at retirement. Selection of a survivor option will result in a reduced pension benefit from the single-life benefit level. The amount of the reduction depends on the age of both the retiring member and the survivor. Due to the passing of the 2018 Omnibus Retirement Bill, plan assumptions, including mortality and investment expectations, were updated and resulted in minimal changes to survivor option reduction factors.

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. For members who terminated public service prior to January 1, 2012, the benefit amount calculated as of the date of termination will increase at a rate of 1 percent per year, compounded annually. Benefit increases accrued until December 31, 2018, at which point all benefit increases are discontinued. For members who terminate public service after December 31, 2011, there is no benefit growth.

Beginning June 30, 2018, if a deferred member returns to the same PERA plan, pension benefit increases will no longer apply to the entire benefit calculation.

Combined Service Annuity and Proportionate Pensions — Retiring members may elect to combine service in a PERA-covered position with service in any of the other eligible Minnesota retirement plans and qualify for a retirement benefit from each plan in which they participated. These covered plans are designated by statute. Vested members qualify for a combined service pension if they have six or more months of service in each covered plan and have not begun to receive a benefit from any of the applicable plans. The retirement annuity from each plan must be based upon the allowable service, accrual rates, and average salary in the applicable plan; any exceptions are specified in statute.

Proportionate Annuities — Members who retired at or over their Social Security full retirement age with at least one year of service qualify for a proportionate pension in the applicable Plan. Benefits are based on the formula of each Plan.

Phased Retirement Option — The Phased Retirement Option (PRO) is a tool that allows employers to meet their workforce needs while employees transition into full retirement. The PRO permits an active member of the General Plan, who is at least age 62, to receive a PERA retirement annuity without a formal termination of employment. However, members must substantially reduce their work hours while participating in the PRO agreement. Availability of positions under this program is at the discretion of the employing unit. Any earnings under the PRO position are not subject to the post retirement annual earnings limits.

Retirement Annuity Formula

General Employees Plan — Method 1 provides that members are eligible for a normal 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) for members who were first hired prior to July 1, 1989. A reduced retirement annuity is payable as early as age 55 with three or more years of service. The reduction is 0.25 percent for each month under age 65. A member with 30 or more years of service may retire at any age with a reduction of 0.25 percent for each month a member is under age 62.

Method 2 provides for a normal retirement annuity at age 65 for members first hired prior to July 1, 1989, or age 66 (the age for unreduced Social Security benefits) for those first hired into public service on or after that date. Early retirement may begin at age 55 with an actuarial reduction for members retiring prior to full retirement age. Members beginning to receive an annuity on or after July 1, 2019, will have actuarial reduction factors phased in over five years that reflect the true actuarial cost of early retirement. These factors recognize recent updates to plan assumptions, including mortality and investment expectations, as well as the removal of the augmentation subsidy.

Police and Fire Plan — A normal retirement annuity is earned when members meet the following conditions: age 55 and vested, or age plus years of service total 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 legislative session, the reduction for Police and Fire Plan early retirement began increasing incrementally in July 2014, culminating to a 5 percent per year reduction as of July 2019.

Correctional Plan — A normal retirement annuity is earned when members meet the following conditions: age 55 and vested, or age plus years of service total at least 90 if first hired prior to July 1, 1989. Early retirement may begin at age 50 with an actuarial reduction in a member's retirement annuity.

Annual Increases

General Employees Plan — Annuities, disability benefits, and survivor benefits are increased effective every January 1. Beginning in 2019, the annual increase will be equal to 50 percent of the the cost-of-living adjustment (COLA) announced by the SSA, with a minimum increase of at least 1.0 percent and a maximum of 1.5 percent. Recipients that have been receiving the annuity or benefit for at least a full year as of the June 30 before the effective date of the increase will receive the full increase. For recipients receiving the annuity or benefit for at least one month but less than a full year as of the June 30 before the effective date of the increase will receive a reduced prorated increase. For members retiring on January 1, 2024, or later, the increase will be delayed until normal retirement age (age 65 if hired prior to July 1, 1989, or age 66 for individuals hired on or after July 1, 1989). Members retiring under Rule of 90 are exempt from the delay to normal retirement.

Police and Fire Plan — Annuities, disability benefits, and survivor benefits are increased effective every January 1. Beginning in 2019, the annual increase is fixed at 1 percent. Recipients that have been receiving the annuity or benefit for at least 36 months as of the June 30 before the effective date of the increase will receive the full increase. For recipients receiving the annuity or benefit for at least 25 months but less than 36 months as of the June 30 before the effective date of the increase will receive a reduced prorated increase.

Correctional Plan — Annuities, disability benefits, and survivor benefits are increased effective every January 1. Beginning in 2019, the annual increase is equal to 100 percent of the COLA announced by SSA, with a minimum increase of at least 1 percent and a maximum of 2.5 percent. If the plan's funding status declines to 85 percent or below for two consecutive years or 80 percent for one year, the maximum will be lowered from 2.5 percent to 1.5 percent. Recipients that have been receiving the annuity or benefit for at least a full year as of the June 30 before the effective date of the increase will receive the full increase. For recipients receiving the annuity or benefit for at least one month but less than a full year as of the June 30 before the effective date of the increase will receive a reduced prorated increase.

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 public service.

D) Benefit Provisions – Statewide Voluntary Firefighter Plan

PERA's Statewide Voluntary Firefighter defined benefit plan is a tax qualified plan under Section 401(a) of the Internal Revenue Code. PERA provides service pensions to members and survivor benefits as well, upon the death of plan members.

An active member of the plan is entitled to a service pension when they have been separated from service for at least 30 days, have reached the age of 50, and have completed at least five years of good time service credit with the fire department as a member of the lump-sum retirement division or, if a member of the monthly benefit retirement division, has completed the minimum vesting requirement as specified in the retirement benefit plan document of the former relief association applicable to the fire department.

The service pension from the lump-sum retirement division is based on completed years of service in the department, the service pension level in effect for the department at termination, and the nonforfeitable percentage of the service pension as specified in statute. The service pension from the monthly benefit retirement division is specified in the retirement benefit plan document of the former relief association applicable to the fire department.

E) 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. 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, Money Market Fund, and Private Market Investments (Alternatives). PERA receives 2 percent of employer contributions paid during the year, plus 0.25 percent 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.

F) 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 not result in a benefit reduction for retirees. Earnings limits are waived for Coordinated Plan members who begin receiving benefits under a PRO agreement. The Defined Contribution Plan and the Volunteer Firefighter Plan only provide lump-sum benefits, there are no earnings limits.

G) 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. Neither the Defined Contribution Plan nor the Volunteer Firefighter Plan has specific disability 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 duty-related disability benefit of 60 percent of salary. The minimum duty-related disability benefit is 47.5 percent for Correctional Plan members. Disability under any other circumstances results in a minimum benefit of 45 percent of salary for Police and Fire Plan members and 19 percent for Correctional Plan members. A duty-related 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 Plan 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.

H) Survivor Benefits

PERA provides survivor 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 General Employees Plan, Correctional Plan, or Police and Fire Plan member. For Police and Fire Plan members, this benefit is based on either 50 percent 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 General Employees Plan 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 on their disability benefit.

For the surviving spouse of a General Employees Plan or Correctional Plan member, there are alternative term-certain benefits of 10, 15, or 20 years duration. The monthly payment, however,

Notes to Financial Statements

may not exceed 75 percent of the member's average highest 60 months of consecutive salary. Survivor benefits are immediately suspended for any survivor charged with causing the death of a PERA 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 percent of the member's average monthly salary. If a General Employees Plan 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.

I) 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 interest, compounded annually. The interest rate is dependent on the timeframe in which the member contributions were received. The interest rate applied is 6 percent prior to June 30, 2011; 4 percent July 1, 2011 through June 30, 2018; and 3 percent July 1, 2018, and thereafter. Employer contributions are not refundable to the member or beneficiary.

A refund of employee 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 an annuitant or benefit recipient dies before all employee contributions are paid in the form of a pension or benefit, 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.

Notes to Financial Statements
NOTE 2

Summary of Significant Accounting Policies

A) Reporting Entity
PERA functions as a separate statutory entity. PERA 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 *Annual Comprehensive Financial Report* with its fiduciary funds. PERA does not have 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.

C) Cash and Cash Equivalents
For PERA's defined benefit and defined contribution funds, 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. The majority of PERA's cash is invested as part of an investment pool with the SBI. PERA's investment in the cash pools is reported as a cash equivalent.

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 $9 million billed in fiscal year 2022 but not due from employers until fiscal year 2023.

Due from other funds represents the reallocation of administrative expenses, which is done annually in October once the fiscal year's expenses have been finalized.

E) Investments
Investment Policy
Article XI of the Minnesota Constitution established the Minnesota State Board of Investment (SBI) to invest all state funds. Membership includes the Minnesota Governor (who the law designates as chair of SBI), State Auditor, Secretary of State, and Attorney General. The legislature also 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 permanent member of the IAC.

Notes to Financial Statements

Minnesota Statutes Chapter 11A allows the commingling of the state's public retirement fund assets in various pooled investment accounts (Combined Funds). Each participating retirement fund owns an undivided participation in the Combined Funds' pooled investment accounts. As of June 30, 2022, the participation shares in the Combined Retirement Fund at fair value totaled approximately 31.4 percent for the General Employees Fund, 12.6 percent for the Police and Fire Fund, and 1.2 percent for the Correctional Fund.

PERA reports investments in the pooled accounts, including assets of the Defined Contribution Fund, 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. PERA recognizes accrued interest as short-term income. *Note 3* provides additional disclosures on fair value reporting of investments.

A majority vote of the SBI Board may amend SBI investment policy. The policy outlines the investment philosophy and guidelines in how the SBI will manage the Combined Fund's investments.

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.

PERA recognizes investment income 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. SBI allocates these expenses 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 SBI, 60 Empire Drive, Suite 355, Saint Paul, Minnesota 55103-2088.

Notes to Financial Statements

Asset Allocation

To match the long-term nature of the pension obligations, the SBI maintains a strategic asset allocation for the Combined Funds that includes allocations to public equity, fixed income, private markets, and cash equivalents. The targeted asset allocation is as follows as of June 30, 2022: 50 percent of the assets are allocated to Public Equity of which 33.5 percent is allocated to Domestic Equity and 16.5 percent is allocated to International Equity; 25 percent of the assets are allocated to Fixed Income of which 10 percent is Core/Core Plus and Return Seeking Bonds, 10 percent is Treasure Protection, and 5 percent is Cash and Laddered Bonds; and 25 percent is Private Markets. If the allocation to Private Markets is less than the 25 percent allocation target, SBI invests the uninvested portion in Public Equities. When the actual asset allocation deviates beyond specified ranges, SBI rebalances assets to achieve the long-term allocation targets.

Significant Investment Changes During the Year

There were no significant investment changes during the Fiscal Year 2022.

Annual Money-Weighted Rate of Return

The annual money-weighted rate of return is a method of calculating period-by-period returns on pension fund investments that adjusts for the changing amounts actually invested. The money-weighted rate of return is calculated as the internal rate of return on pension fund investments, net of pension fund investment expenses. Because the pension funds each have different cash flows throughout the year, they have different money-weighted rates of return. The money-weighted rate of return for each PERA retirement fund is presented in **Figure 3.**

Figure 3: Money-Weighted Rate of Return

Fund	Fiscal Year 2022
General Employees Fund	(6.23%)
Police and Fire Fund	(6.24%)
Correctional Fund	(6.36%)
Volunteer Firefighter Fund	(13.08%)

Long-term Expected Return on Investment

The long-term expected return on investment is based on the asset allocation study completed by the SBI in 2016. The SBI historically undertakes an asset allocation study approximately every five years.

The long-term expected rate of return on pension plan investments was determined using a building-block method. Best estimates for expected future real rates of return (expected returns, net of inflation) were developed for each asset class using both long-term historical returns and long-term capital market expectations from a number of investment management and consulting organizations. The asset class estimates and the target allocations were then combined to produce a geometric, long-term expected real rate of return for the portfolio. Inflation expectations were applied to derive the nominal rate of return for the portfolio.

Notes to Financial Statements

The long-term expected return on investment as of June 30, 2022, is shown in **Figure 4.**

Figure 4: Target Asset Allocation and Long-term Expected Real Rate of Return by Asset Class

Combined Funds

Asset Class	Target Allocation	Long-term Expected Real Rate of Return (Geometric)
Domestic Equity	33.5%	5.10%
International Equity	16.5%	5.30%
Fixed Income	25.0%	0.75%
Private Market	25.0%	5.90%

(1) Public Equity includes Domestic Equity, International Equity and Global Equity for allocation purposes.

(2) Fixed Income includes Core Bonds, Return Seeking Bonds, Treasuries, Cash, and Laddered Bonds.

(3) Private Markets includes Private Equity, Private Credit, Resources, and Real Estate.

Statewide Voluntary Firefighter Fund

Asset Class	Target Allocation	Long-term Expected Real Rate of Return (Geometric)
Domestic Equity	35.0%	5.10%
International Equity	15.0%	5.30%
Bonds	45.0%	0.75%
Cash Equivalents	5.0%	0.00%

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 3 to 10 years for furniture and equipment, and 40 years for the building. PERA's threshold for intangible assets is $1,000,000. PERA did not have any intangible assets in fiscal year 2022.

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. Amounts that are accumulated 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, 2022, is $1,254,000. Of this, $133,000 is considered a short-term liability and $1,121,000 is considered a long-term liability. The total increased by $128,000 during fiscal year 2022.

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 pays administrative expense of departments. 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.

Notes to Financial Statements
NOTE 3
Deposits and Investment Risk Disclosures

A) Fair Value Reporting
Governmental Accounting Standards Board (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: Market valuation approach using quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

Level 2: Market valuation approach using 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;
- 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. Assets classified as a Level 3 typically use the cost approach, income approach, or consensus pricing for a valuation technique.

Net Asset Value (NAV): Investments that do not have a readily determinable fair value are measured using the NAV per share (or its equivalent) as a practical expedient, and are not classified in the fair value hierarchy.

Cash and cash equivalents (investments with less than 12 months to maturity) are not leveled per GASB 72. 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.

In **Figure 5**, Level 3 investments primarily consist of assets where the asset is distressed, or there is not an active market. The fair value of the assets measured at NAV have been determined using the March 31, 2022, values, adjusted for cash flows. The investments measured at NAV are typically not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which occur over the life of the investment. The typical liquidation period for alternative investments including private equity, real estate, real assets and private credit ranges from 3 to 12 years. The majority of the distributions is received during the liquidation period, however it is not uncommon for a minimal amount of the fund to remain open while awaiting final close from the General Partner.

Notes to Financial Statements

As of June 30, 2022, the alternative investments are not expected to be sold at an amount different from the NAV value of the SBI's ownership interest in partner's capital. PERA's proportionate share of unfunded commitments valued at NAV total $5,586,506,440. Unfunded commitments is money that has been committed to an investment but not yet transferred to the General Partner (Investor).

Explanations of investment types follow the exhibit.

Figure 5: Fair Value of PERA Investments*
As of June 30, 2022
(In thousands)

	Fair Value	Level 1	Level 2	Level 3
Equity Investments				
Common Stock	$17,192,098	$17,178,613	$10,427	$3,058
Real Estate Investment Trust	477,200	477,200	0	0
Other Equity	668,157	349,162	4,190	314,805
Equity Total	18,337,455	18,004,975	14,617	317,863
Fixed Income Investments				
Bank Loans	125,575	0	120,122	5,453
Asset-Backed Securities	302,881	0	226,538	76,343
Mortgage-Backed Securities	1,105,632	0	1,089,987	15,645
Corporate Bonds	1,917,211	0	1,917,211	0
Government Issues	4,677,652	0	4,676,886	766
Other Debt Instruments	11,096	0	11,096	0
Fixed Income Total	8,140,047	0	8,041,840	98,207
Investment Derivatives				
Options	(63)	0	(63)	0
Rights	8	8	0	0
Swaps	(738)	0	0	(738)
Warrants	7	7	0	0
Investment Derivatives Total	(786)	15	(63)	(738)
Total Investments at Fair Value	$26,476,716	$18,004,990	$8,056,394	$415,332

Investments Measured at the Net Asset Value (NAV) (in thousands)	NAV	Percent of NAV	Number of Investments	Unfunded Commitments
Private Equity	$6,837,378	73%	190	$3,729,846
Real Estate	818,391	9%	33	890,524
Real Assets	1,051,633	11%	33	292,851
Private Credit	685,910	7%	42	673,286
Total Investments at NAV	$9,393,312	100%	298	$5,586,507

* Cash and cash equivalents are not leveled under GASB Statement No. 72, but are included in the exhibit for informational purposes. Any variance between recorded account balances and the fair value of investments as reported in the exhibit are accounts payable and accounts receivable items on June 30, 2022, and not leveled under GASB Statement No. 72.

Notes to Financial Statements

Investment Types

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 percent of earned income is distributed and that the various investors are not treated differently.

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

Fixed Income Investments

Bank Loans: A floating rate debt instrument issued by corporations, secured by company property, plant, equipment or other assets and typically senior in the capital structure to other liabilities.

Asset-Backed Securities: Bonds or notes backed 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 the principal when the bonds mature. Maturities range from 1 to 30 years.

Government Issues: Securities or bonds issued by any of the 50 states, the territories and their sub- divisions, 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.

Investments Derivatives

Rights: The right to purchase newly issued securities in proportion to an investor's holdings of certain stocks. Generally, they are actively traded and must be exercised within a short period of time.

Warrants: The right to purchase one or more shares of stock. Warrants are usually attached to other issues purchased by an investor. They are often detachable and can be exercised over a long period (five to ten years). A warrant, because it has a value of its own, can be traded.

Notes to Financial Statements

Options: 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.

Swaps: A derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments. Most swaps involve cash flows based on a notional principal amount such as a loan, bond, or currency. Usually, the principal does not change hands. Each cash flow comprises one leg of the swap. One cash flow is generally fixed, while the other is variable and based on a benchmark interest rate, floating currency exchange rate or index price. The most common kind of swap is an interest rate swap, but currency swaps, credit default swaps and total return swaps on a reference security or basket of securities are also common.

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 190 Private Equity investments representing 73 percent 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 33 real estate investments representing 9 percent of the NAV value.

Real Assets: The strategy for real assets investments is to establish and maintain a portfolio of real assets investment vehicles that provide an inflation hedge and additional diversification. Real assets 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 33 Real Assets investments representing 11 percent of the NAV value.

Private Credit: The strategy for private credit 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 42 Private Credit investments representing 7 percent 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 percent of the sum of the insured amount and the market value of the collateral. Throughout fiscal year 2022, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all PERA deposits, eliminating exposure to custodial credit risk.

Notes to Financial Statements

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 percent of the fund for which the state board is investing;
- Participation is limited to 50 percent of a single offering; and
- Participation is limited to 25 percent 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 6**. If a security is rated by only Moody's or S&P that rating will be used.

Figure 6: Credit Risk Exposure (In thousands)

Quality Rating	Fair Value as of June 30, 2022
AAA	$285,365
AA	5,359,687
A	294,965
BBB	1,023,434
BB	516,119
B	459,989
CCC	200,663
CC	23,612
C	1,574
D	2,687
Unrated Corporate	2,080,831
Total	$10,248,926

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. The 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 percent of the overall portfolio and, therefore, there is no material concentration of credit risk.

Notes to Financial Statements

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. Debt securities are held in external investment pools and PERA's share has the weighted average maturities shown in **Figure 7.**

Figure 7: Interest Rate Risk

Security	Weighted Average Maturity (in years)
Asset-Backed Securities	4.35
Bank Loans	5.35
Mortgage Backed Securities	8.09
Corporate Debt Obligations	8.13
Yankee Bonds	8.14
Collateralized Mortgage Obligations	8.62
Foreign Country Bonds	9.32
Municipal Debt Obligations	10.99
Agency Securities	11.18
US Treasuries	12.76

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 the SBI's international equity investment holdings. In order to reduce foreign currency risk, the SBI has developed and implemented a number of 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. The SBI uses a foreign currency overlay manager to implement an active hedging program for its international developed markets passive equity portfolio. In addition, the SBI active managers also have discretion to use forward currency contracts within their portfolios to hedge foreign currency risk as they deem appropriate. PERA's share of foreign security investments at June 30, 2022, was distributed among the currencies shown in **Figure 8.**

Notes to Financial Statements

Figure 8: Foreign Currency Risk (Fair value in thousands)

Currency	Cash	Equity	Fixed Income
Euro Currency	$3,385	$1,901,267	$34,925
Japanese Yen	9,321	738,127	0
Pound Sterling	3,039	569,898	9,292
Canadian Dollar	2,000	423,840	11,827
Hong Kong Dollar	1,587	410,410	0
Swiss Franc	479	350,068	0
Australian Dollar	1,315	249,728	0
New Taiwan Dollar	264	171,925	0
South Korean Won	765	165,638	0
Danish Krone	55	117,656	0
Swedish Krona	292	104,733	0
Brazilian Real	2,143	66,509	8,704
Yuan Renminbi	(9,642)	76,985	6,866
Singapore Dollar	207	46,438	0
South African Rand	45	40,327	5,447
Mexican Peso	1,909	26,364	15,347
Norwegian Krone	244	41,779	0
Indonesian Rupiah	194	28,660	7,487
New Israeli Sheqel	91	20,901	0
Thailand Baht	124	16,848	3,181
Polish Zloty	18	7,914	7,804
Malaysian Ringgit	111	6,354	3,643
Yuan Renminbi Offshore	9,994	0	0
Czech Koruna	229	5,518	3,784
Uae Dirham	21	9,510	0
Hungarian Forint	14	5,236	2,066
Qatari Rial	234	5,969	0
New Zealand Dollar	497	4,891	0
Turkish Lira	(29)	4,327	40
Philippine Peso	32	3,931	0
Kuwaiti Dinar	19	3,635	0
Colombian Peso	53	784	2,794
Chilean Peso	90	2,227	994
Romanian Leu	1	1,436	1,385
Sol	0	0	2,027
Uruguayan Peso	0	0	1,842
Egyptian Pound	7	310	763
Russian Ruble	354	0	646
Hryvnia	50	0	530
Dominican Peso	0	0	73
Total	**$29,512**	**$5,630,143**	**$131,467**

Notes to Financial Statements

G) Derivative Financial Instruments

On behalf of PERA, the 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 the 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 derivative activity is to equitize cash in the portfolio, to adjust the duration of the portfolio, or to off-set current futures positions.

The fair value balances and notional amounts (or face value) at June 30, 2022, classified by derivative instrument type (futures, options, currency forward contracts, stock warrants and stock rights, and swaps), and the changes in fair value for fiscal year 2022, are shown in **Figure 9.** Explanations of each derivative instrument type are presented below.

Figure 9: Derivative Financial Instruments
(In thousands)

Derivative Investment Type	Changes in Fair Value During Fiscal Year 2022	Fair Value at June 30, 2022	Notional Amount
Futures:			
Equity Futures–Long	($47,215)	$0	$1,195
Equity Futures–Short	$1,653	$0	($4)
Fixed Income Futures–Long	($119,106)	$0	$962,453
Fixed Income Futures–Short	$98,885	$0	($735,135)
Options:			
Futures Options Bought	($2,748)	$180	$215
Futures Options Written	$3,146	($652)	($3,456)
Equity Options Bought	$96	$0	$0
Equity Options Written	$19	($40)	($27)
Currency Forwards Contracts	$152,332	$110,517	$12,726,115
Stock Warrants and Rights:			
Stock Warrants	($64)	$7	$53
Stock Rights	($1,066)	$8	$9
Swaps:			
Credit Default Swaps Written	($4,704)	($1,073)	$97,244
Pay Fixed Interest Rate Swaps	$11,405	$11,203	$98,253
Receive Fixed Interest Rate Swaps	($2,375)	($2,568)	$75,120
Return Swaps Equity	($8)	$0	($2,391)

Notes to Financial Statements

Derivative Investment Type Explanations

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 five years or more before expiration. 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.

Swaps: A derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments. Most swaps involve cash flows based on a notional principal amount such as a loan, bond, or currency. Usually, the principal does not change hands. Each cash flow comprises one leg of the swap. One cash flow is generally fixed, while the other is variable and based on a benchmark interest rate, floating currency exchange rate or index price. The most common kind of swap is an interest rate swap, but currency swaps and credit default swaps on a reference security or basket of securities are also common.

Guaranteed Investment Contract

SBI maintains a fully benefit-responsive synthetic guaranteed investment contract for the Supplemental Investment Fund – Stable Value Fund. The investment objective of the Supplemental Investment Fund – Stable Value Fund is to protect investors from loss of their original investment and to provide a competitive interest rate. On June 30, 2022, the Supplemental Investment Fund – Stable Value Fund portfolio of well diversified high quality investment grade fixed income securities had a fair value of $1,619,260,698 that is $75,497,737 below the value protected by the wrap contract. The Supplemental Investment Fund – Stable Value Fund also includes liquid investment pools with a combined fair value of $50,030,366.

Risks

Credit Risk: The SBI is exposed to credit risk through the counterparties in foreign currency forward contracts used to offset the currency risk of a security. PERA is exposed to credit risk through 26 counter parties. These counter parties have S&P credit ratings of BBB+ or better. PERA's proportionate share of the maximum loss that SBI would have recognized as of June 30, 2022, if all counterparties failed to perform as contracted is $400,052,383.

Notes to Financial Statements

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, Subdivision 7 and has, pursuant to a *Securities Lending Authorization Agreement*, authorized State Street Bank and Trust Company (State Street) to lend its securities to broker-dealers and banks pursuant to a form of loan agreement. The amounts shown on the financial statements are PERA's proportionate share of securities loaned, collateral pledged, and loan income that resulted from the lending activity of the investment managers, retained by the SBI, of these investment pools. The types and amounts of securities loaned are presented in **Figure 10.**

Figure 10: Securities Loaned
(In thousands)

Investment Type	Amount as of June 30, 2022
Domestic Corporate Bonds	$149,212
Domestic Equities	2,008,051
International Equities	144,683
US Government Bonds	313,811
Total	**$2,615,757**

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 does not have the ability to pledge or sell collateral securities delivered absent a borrower default. Borrowers were required to deliver collateral for each loan equal to at least 100 percent 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 borrowers 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, 2022, the investment pool had an average duration of 1.02 day and an average weighted final maturity of 108.39 days for USD. 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, 2022, the SBI had no credit risk exposure to borrowers. The market value of collateral held and the fair value of securities on loan from the SBI as of June 30, 2022 was $2,718,707,000 and $2,615,757,000 respectively. Cash collateral of $1,934,513,000 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.*

Notes to Financial Statements

NOTE 4

Capital Assets, Building and Land

Capital assets are presented on the June 30, 2022, *Statement of Fiduciary Net Position* at historical cost, net of accumulated depreciation, as summarized in **Figure 11**. There were no leases as of June 30, 2022 that were reported as required by the Governmental Accounting Standards Board Statement 87.

Figure 11: Capital Assets
(In thousands)

	Balance June 30, 2021	Additions	Disposals	Balance June 30, 2022
Capital Assets, not being depreciated:				
Land	$170	$0	$0	$170
Capital Assets, being depreciated:				
Building (includes generator)	10,893	0	0	10,893
Equipment, Furniture & Fixtures	2,012	0	0	2,012
Total Capital Assets being depreciated	**12,905**	**0**	**0**	**12,905**
Less Accumulated Depreciation for:				
Building (includes generator)	(5,499)	(347)	0	(5,846)
Equipment, Furniture & Fixtures	(1,608)	(113)	0	(1,721)
Total Accumulated Depreciation	**(7,107)**	**(460)**	**0**	**(7,567)**
Total Capital Assets, Net of Accumulated Depreciation on the Statement of Fiduciary Net Position	**$5,968**	**($460)**	**$0**	**$5,508**

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 percent. 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.

Notes to Financial Statements

Figure 12 shows the debt service amounts for which PERA is directly responsible. Pursuant to the joint and several liability clauses 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 $5,104,200. 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, 2022, the premium balance as of June 30, 2022, and interest accrued for the month of June. PERA has no lines of credit or assets pledged as collateral for debt.

Figure 12: Debt Repayment Schedule by Fiscal Year

Fiscal Year	Principal	Interest	Premium	Total
2023	$698,975	$28,807	$40,689	$768,471
2024	673,425	17,217	24,320	714,962
2025	365,000	6,052	8,548	379,600
	$1,737,400	$52,076	$73,557	$1,863,033
Total Unpaid Principal, 06/30/21				$1,737,400
Total Unpaid Premium, 06/30/22				73,557
Accrued Interest, June 2022				2,400
Total Bonds Payable on Statement of Fiduciary Net Position				$1,813,357

Notes to Financial Statements

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 13**.

Figure 13: Retirement Plan Contribution Rates

		General Employees Fund			Police & Fire Fund	Correctional Fund
Effective Date	Contributor	Basic	Coordinated	MERF		
01/01/2020	Member	9.10%	6.50%	9.75%	11.80%	5.83%
	Employer	11.78%	7.50%	9.75%	17.70%	8.75%

Legislation passed in 2018 extended the full funding date for the General Employees Plan, Police and Fire Plan, and Correctional Plan to 2048. The actuarially required contributions to achieve full funding by the full funding date are expressed as a level percentage of covered payroll and are determined using an individual entry-age actuarial cost method.

Using an investment return assumption of 7.5 percent, as required in legislation, results in a contribution sufficiency for the General Employees Plan, Police and Fire Plan, and Correctional Plan. However, using an investment return assumption of 6.5 percent, a rate that can be deemed as reasonable based on actuarial standards, results in a contribution deficiency of 1.2 percent for the General Employees Plan, 5.74 percent for the Police and Fire Plan, and 4.15 percent for the Correctional Plan.

Beginning in fiscal year 2014, the State of Minnesota was required to contribute $9 million each year to the Police and Fire Fund. This state aid will continue until the fund is 90 percent funded, or until the State Patrol Plan (administered by the Minnesota State Retirement System) is 90 percent funded, whichever occurs later. In addition, the state pays $9 million each year on October 1 in direct state aid to the Police and Fire Fund until full funding is reached or July 1, 2048, whichever is earlier.

The Minneapolis Employees Retirement Fund (MERF) was fully merged into the General Employees Fund in fiscal year 2015. Supplemental contribution amounts were recalculated after the merger based on the amount of MERF's unfunded liability as of the merger date. The State of Minnesota will be contributing $16 million and the MERF's employers will be contributing $21 million to the General Employees Fund each year until September 15, 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 percent 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.

Notes to Financial Statements

Employer required contributions are calculated annually for each employer in the Statewide 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.

Purchasing Service Credits

Authorized Leave of Absence: A member may take an authorized leave of absence from their employment covered by PERA. The member may optionally purchase missing employee and employer contributions, plus interest, to restore the lost credit.

Periodic Repetitive Leave: An employer may offer, or mandate, a furlough to all employees. Members participating in the furlough may optionally pay PERA their contributions lost plus interest to restore their high-five salary. Employers are required to remit to PERA the employer portion of the furloughed salary plus interest only after a member payment is received.

Repayment of Refunded Service: A former member who forfeited service credits upon receiving a refund of PERA contributions may repay the refund after having reentered public service for a minimum of six months. This purchase restores the forfeited service credits. Interest charged for a repayment of refund is calculated from the date of the refund at 8.5 percent, compounded annually until June 30, 2015, 8 percent July 1, 2015 through June 30, 2018, and 7.5 percent July 1, 2018 thereafter.

Prior Military Service: Legislation passed during the 2019 Minnesota legislative session provides PERA members the option to actuarially purchase service credit for one or more periods while in the uniformed services, as defined in United States Code, title 38, section 4301 (13). The eligible purchase is for military leave period(s) that occurred before becoming a public employee, or during public employment covered by a PERA pension plan and the member missed the original purchase timeframe.

Notes to Financial Statements

NOTE 6

Net Pension Liability of Employers and Nonemployer Contributing Entity

The components of the Net Pension Liability (NPL) of the cost-sharing defined benefit plans for participating employers and the State of Minnesota (a nonemployer contributing entity in the General Employees Fund) as of June 30, 2022, calculated in accordance with Governmental Accounting Standards Board Statement No. 67, are shown in **Figure 14.**

Figure 14: Net Pension Liability Components (In thousands)

	General Employees Fund	Police and Fire Fund	Correctional Fund
Total Pension Liability (A)	$33,954,218	$14,767,098	$1,307,715
Fund Fiduciary Net Position (B)	(26,034,185)	(10,415,493)	(975,315)
Net Pension Liability (A-B)	**$7,920,033**	**$4,351,605**	**$332,400**
Fund Fiduciary Net Position as a Percentage of the Total Pension Liability (B/A)	**76.7%**	**70.5%**	**74.6%**

A) Actuarial Methods and Assumptions

The total pension liability for each of the cost-sharing defined benefit plans was determined by an actuarial valuation as of June 30, 2022, using the entry age normal actuarial cost method. The long-term rate of return on pension plan investments used in the determination of the total liability is 6.5 percent. This assumption is based on a review of inflation and investments return assumptions from a number of national investment consulting firms. The review provided a range of return investment return rates deemed to be reasonable by the actuary. An investment return of 6.5 percent was deemed to be within that range of reasonableness for financial reporting purposes.

Inflation is assumed to be 2.25 percent for the General Employees Plan, Police and Fire Plan, and the Correctional Plan. Benefit increases after retirement are assumed to be 1.25 percent for the General Employees Plan. Benefit increases are assumed to be 2.00 percent through December 31, 2054 and 1.5 percent thereafter for the Correctional Plan. The Police and Fire Plan benefit increase is fixed at 1 percent per year and that increase was used in the valuation.

Salary growth assumptions in the General Employees Plan range in annual increments from 10.25 percent after one year of service to 3.0 percent after 27 years of service. In the Police and Fire Plan, salary growth assumptions range in annual increments from 11.75 percent after one year of service to 3.0 percent after 24 years of service. In the Correctional Plan, salary growth assumptions range from 11.0 percent at age 20 to 3.0 percent at age 60.

Mortality rates for the General Employees Plan are based on the Pub-2010 General Employee Mortality Table. Mortality rates for the Police and Fire Plan and the Correctional Plans are based on the Pub-2010 Public Safety Employee Mortality tables. The tables are adjusted slightly to fit PERA's experience.

Notes to Financial Statements

Actuarial assumptions for the General Employees Plan are reviewed every four years. The most recent four-year experience study for the General Employees Plan was completed in 2019. The assumption changes were adopted by the Board and became effective with the July 1, 2020 actuarial valuation. The most recent four-year experience studies for the Police and Fire and the Correctional Plan were completed in 2020 were adopted by the Board and became effective with the July 1, 2021 actuarial valuation.

B) Discount Rate

The discount rate for the General Employees Plan used to measure the total pension liability in 2022 was 6.5 percent. 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 Statutes*. 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 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, 2060 and June 30, 2061 respectively. Beginning in fiscal year ended June 30, 2061 for the Police and Fire Fund and June 30, 2062 for the Correctional Fund, projected benefit payments exceed the funds' projected fiduciary net position. Benefit payments projected after were discounted at the municipal bond rate of 3.69 percent (based on the weekly rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"). The resulting equivalent single discount rate of 5.40 percent for the Police and Fire Fund and 5.42 percent for the Correctional Fund was determined to give approximately the same present value of projected benefits when applied to all years of projected benefits as the present value of projected benefits using 6.5 percent applied to all years of projected benefits through the point of asset depletion and 3.69 percent thereafter.

C) Sensitivity Analysis

Figure 15 presents the Net Pension Liability (Asset) of employers and the State of Minnesota for PERA's cost-sharing defined benefit plans as of June 30, 2022, calculated using the current discount rate, as well as what each plan's net pension liability would be if it were calculated using a discount rate that is one percent lower and one percent higher than the current discount rate.

Figure 15: Sensitivity Analysis - Net Pension Liability (Asset) at Different Discount Rates (Dollars in thousands)

	General Employees Fund		Police and Fire Fund		Correctional Fund	
1% Decrease	5.50%	$12,510,107	4.40%	$6,585,596	4.42%	$585,506
Current Discount Rate	6.50%	$7,920,033	5.40%	$4,351,605	5.42%	$332,400
1% Increase	7.50%	$4,155,464	6.40%	$2,545,577	6.42%	$133,402

Notes to Financial Statements

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 retirement plan. Eleven fire departments joined the plan in fiscal year 2022, bringing the total number of fire departments in the Volunteer Firefighter Plan to 205. The amount of assets transferred, $5,476,000 is included in *Other Additions* in *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 13**. Total covered payroll for PERA employees during fiscal year 2022 was approximately $7.7 million.

Employer pension contributions for PERA employees for the fiscal years ending June 30, 2022, 2021, and 2020 were $575,191, $534,637, and $527,014 respectively. Employer contributions 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.

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Schedule of Changes in Net Pension Liability and Related Ratios*

Required Supplementary Information (unaudited, in thousands)

General Employees Fund

	2022	2021	2020
Total Pension Liability			
Service Cost	$648,767	$530,547	$518,112
Interest on the Total Pension Liability	2,098,002	2,102,259	2,053,793
Change of Benefit Terms	0	0	(65,850)
Difference between Expected and Actual Experience	88,206	(154,087)	(30,245)
Assumption Changes	72,199	3,476,596	(128,849)
Benefit Payments	(1,737,905)	(1,666,103)	(1,604,842)
Refund Payments	(73,152)	(58,027)	(84,947)
Net Change in Total Pension Liability	1,096,117	4,231,185	657,172
Total Pension Liability--Beginning	32,858,101	28,626,916	27,969,744
Total Pension Liability--Ending (a)	33,954,218	32,858,101	28,626,916
Plan Fiduciary Net Position			
Contributions--Employer	546,291	524,685	509,821
Contributions--Member	457,740	439,488	435,419
Contributions--Nonemployer Contributing Entity	16,000	16,000	16,000
Net Investment Income	(1,749,186)	6,712,710	931,041
Benefit Payments	(1,737,905)	(1,666,103)	(1,604,842)
Refund Payments	(73,152)	(58,027)	(84,947)
Administrative Expenses	(13,398)	(12,741)	(12,268)
Other **	142	182	267
Net Change in Plan Fiduciary Net Position	(2,553,468)	5,956,194	190,491
Plan Fiduciary Net Position--Beginning	28,587,653	22,631,459	22,440,968
Plan Fiduciary Net Position--Ending (b)	26,034,185	28,587,653	22,631,459
Net Pension Liability (a)-(b)	$7,920,033	$4,270,448	$5,995,457
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	76.67%	87.00%	79.06%
Covered Payroll	$7,042,154	$6,761,354	$6,698,754
Net Pension Liability as a Percentage of Covered Payroll	112.47%	63.16%	89.50%

**This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available.*

***Restated 2016 & 2017 for rounding and other differences; no effect on Plan Fiduciary Net Position.*

Schedule of Changes in Net Pension Liability and Related Ratios*

2019	2018	2017	2016	2015	2014
$494,737	$513,422	$471,706	$434,551	$421,602	$388,391
1,991,061	1,948,853	1,921,869	1,839,388	1,712,534	1,591,756
0	(79,217)	0	0	1,147,198	0
104,946	8,763	280,527	(647,197)	(348,383)	96,123
(120,162)	(262,228)	(853,320)	2,119,742	0	645,499
(1,536,071)	(1,470,450)	(1,413,448)	(1,359,176)	(1,235,303)	(1,109,866)
(65,834)	(42,589)	(37,234)	(37,209)	(35,655)	(38,264)
868,677	616,554	370,100	2,350,099	1,661,993	1,573,639
27,101,067	26,484,513	26,114,413	23,764,314	22,102,321	20,528,682
27,969,744	27,101,067	26,484,513	26,114,413	23,764,314	22,102,321
515,444	488,819	477,888	459,978	435,115	382,251
424,044	409,423	400,204	375,291	353,765	334,495
16,000	16,000	6,000	6,000	0	0
1,547,224	2,063,582	2,682,901	(20,851)	777,504	2,760,854
(1,536,071)	(1,470,450)	(1,413,448)	(1,359,176)	(1,235,303)	(1,109,866)
(65,834)	(42,589)	(37,234)	(37,209)	(35,655)	(38,264)
(13,470)	(11,943)	(11,292)	(11,350)	(10,367)	(9,861)
154	56	411	671	891,914	605
887,491	1,452,898	2,105,430	(586,646)	1,176,973	2,320,214
21,553,477	20,100,579	17,995,149	18,581,795	17,404,822	15,084,608
22,440,968	21,553,477	20,100,579	17,995,149	18,581,795	17,404,822
$5,528,776	$5,547,590	$6,383,934	$8,119,264	$5,182,519	$4,697,499
80.23%	79.53%	75.90%	68.91%	78.19%	78.75%
$6,523,754	$6,298,815	$6,156,985	$5,773,708	$5,549,255	$5,351,920
84.75%	88.07%	103.69%	140.62%	93.39%	87.77%

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

General Employees Fund

2022 Changes

Changes in Actuarial Assumptions

The mortality improvement scale was changed from Scale MP-2020 to Scale MP-2021.

Changes in Plan Provisions

There were no changes in plan provisions since the previous valuation.

2021 Changes

Changes in Actuarial Assumptions

The investment return and single discount rates were changed from 7.50 percent to 6.50 percent, for financial reporting purposes.

The mortality improvement scale was changed from Scale MP-2019 to Scale MP-2020..

Changes in Plan Provisions

There were no changes in plan provisions since the previous valuation.

2020 Changes

Changes in Actuarial Assumptions

The price inflation assumption was decreased from 2.50 percent to 2.25 percent.

The payroll growth assumption was decreased from 3.25 percent to 3.00 percent.

Assumed salary increase rates were changed as recommended in the June 30, 2019 experience study. The net effect is assumed rates that average 0.25 percent less than previous rates.

Assumed rates of retirement were changed as recommended in the June 30, 2019 experience study. The changes result in more unreduced (normal) retirements and slightly fewer Rule of 90 and early retirements.

Assumed rates of termination were changed as recommended in the June 30, 2019 experience study. The new rates are based on service and are generally lower than the previous rates for years 2-5 and slightly higher thereafter.

Assumed rates of disability were changed as recommended in the June 30, 2019 experience study. The change results in fewer predicted disability retirements for males and females.

The base mortality table for healthy annuitants and employees was changed from the RP-2014 table to the Pub-2010 General Mortality table, with adjustments. The base mortality table for disabled annuitants was changed from the RP-2014 disabled annuitant mortality table to the PUB-2010 General/Teacher disabled annuitant mortality table, with adjustments.

The mortality improvement scale was changed from Scale MP-2018 to Scale MP-2019.

The assumed spouse age difference was changed from two years older for females to one year older.

The assumed number of married male new retirees electing the 100 percent Joint & Survivor option changed from 35 percent to 45 percent. The assumed number of married female new retirees electing the 100 percent Joint & Survivor option changed from 15 percent to 30 percent.

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

The corresponding number of married new retirees electing the Life annuity option was adjusted accordingly.

Changes in Plan Provisions

Augmentation for current privatized members was reduced to 2.0 percent for the period July 1, 2020 through December 31, 2023 and 0.0 percent after. Augmentation was eliminated for privatizations occurring after June 30, 2020.

2019 Changes

Changes in Actuarial Assumptions

The mortality projection scale was changed from MP-2017 to MP-2018.

Changes in Plan Provisions

The employer supplemental contribution was changed prospectively, decreasing from $31 million to $21 million per year. The State's special funding contribution was changed prospectively, requiring $16 million due per year through 2031.

2018 Changes

Changes in Actuarial Assumptions

The mortality projection scale was changed from MP-2015 to MP-2017.

The assumed benefit increase was changed from 1 percent per year through 2044 and 2.5 percent per year thereafter to 1.25 percent per year.

Changes in Plan Provisions

The augmentation adjustment in early retirement factors is eliminated over a five-year period starting July 1, 2019, resulting in actuarial equivalence after June 30, 2024.

Interest credited on member contributions decreased from 4 percent to 3 percent, beginning July 1, 2018.

Deferred augmentation was changed to 0.00 percent, effective January 1, 2019. Augmentation that has already accrued for deferred members will still apply.

Contribution stabilizer provisions were repealed.

Annual increases were changed from 1 percent per year with a provision to increase to 2.5 percent upon attainment of 90 percent funding ratio to 50 percent of the Social Security Cost-of-Living Adjustment, not less than 1 percent and not more than 1.5 percent, beginning January 1, 2019.

For retirements on or after January 1, 2024, the first benefit increase is delayed until the retiree reaches normal retirement age; does not apply to Rule of 90 retirees, disability benefit recipients, or survivors.

Actuarial equivalent factors were updated to reflect revised mortality and interest assumptions.

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

2017 Changes

Changes in Actuarial Assumptions

The combined service annuity (CSA) loads were changed from 0.80 percent for active members and 60 percent for vested and non-vested deferred members. The revised CSA load are now 0 percent for active member liability, 15 percent for vested deferred member liability, and 3 percent for non-vested deferred member liability.

The assumed annual increase rate was changed for 1 percent per year for all years to 1 percent per year through 2044 and 2.50 percent per year thereafter.

Changes in Plan Provisions

The State's contribution for the Minneapolis Employees Retirement Fund equals $16.0 million in 2017 and 2018 and $6.0 million thereafter.

The Employer Supplemental Contribution for the Minneapolis Employees Retirement Fund changed from $21,000,000 to $31,000,000 in calendar years 2019 to 2031. The State's contribution changed from $16,000,000 to $6,000,000 in calendar years 2019 to 2031.

2016 Changes:

Changes in Actuarial Assumptions

The assumed annual increase rate was changed from 1 percent per year through 2035 and 2.50 percent per year thereafter to 1 percent per year for all years.

The assumed investment return was changed from 7.90 percent to 7.50 percent. The single discount rate changed from 7.90 percent to 7.50 percent.

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

Changes in Plan Provisions

There have been no changes since the prior valuation.

2015 Changes:

Changes in Actuarial Assumptions

The assumed annual increase rate was changed from 1 percent per year through 2030 and 2.5 percent per year thereafter to 1 percent per year through 2035 and 2.5 percent per year thereafter.

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 increase the fiduciary plan net position by $892 million. Upon consolidation, state and employer contributions were revised; the State's contribution of $6 million, which meets the special funding situation definition, was due September 2015.

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Schedule of Changes in Net Pension Liability and Related Ratios

Required Supplementary Information (unaudited, in thousands)

Police and Fire Fund

	2022	2021	2020
Total Pension Liability			
Service Cost	$282,658	$226,012	$217,127
Interest on the Total Pension Liability	779,519	758,002	729,945
Change of Benefit Terms	0	0	0
Difference between Expected and Actual Experience	187,572	128,782	30,348
Assumption Changes	1,984,805	1,361,379	(24,785)
Benefit Payments	(633,255)	(592,687)	(567,040)
Refund Payments	(4,196)	(3,060)	(3,181)
Net Change in Total Pension Liability	2,597,103	1,878,428	382,414
Total Pension Liability--Beginning	12,169,995	10,291,567	9,909,153
Total Pension Liability--Ending (a)	14,767,098	12,169,995	10,291,567
Plan Fiduciary Net Position			
Contributions--Employer	206,416	201,129	193,819
Contributions--Member	133,023	129,351	123,525
Contributions--Nonemployer Contributing Entity	18,000	18,000	13,500
Net Investment Income	(700,942)	2,672,826	368,949
Benefit Payments	(633,255)	(592,687)	(567,040)
Refund Payments	(4,196)	(3,060)	(3,181)
Administrative Expenses	(1,634)	(941)	(924)
Other	(20)	23	260
Net Change in Plan Fiduciary Net Position	(982,608)	2,424,641	128,908
Plan Fiduciary Net Position--Beginning	11,398,101	8,973,460	8,844,552
Plan Fiduciary Net Position--Ending (b)	10,415,493	11,398,101	8,973,460
Net Pension Liability (a)-(b)	$4,351,605	$771,894	$1,318,107
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	70.53%	93.66%	87.19%
Covered Payroll	$1,127,314	$1,096,195	$1,069,481
Net Pension Liability as a Percentage of Covered Payroll	386.02%	70.42%	123.25%

**This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available*

Schedule of Changes in Net Pension Liability and Related Ratios

2019	2018	2017	2016	2015	2014
$209,098	$203,131	$318,401	$194,352	$187,959	$169,124
703,640	682,903	616,740	658,198	648,233	598,165
0	(50,771)	0	0	0	0
14,491	21,720	37,292	(375,575)	(221,112)	1,813
(19,898)	(42,807)	(2,300,201)	2,650,350	0	323,945
(547,699)	(528,468)	(512,379)	(498,608)	(481,330)	(452,462)
(3,283)	(1,902)	(2,119)	(2,391)	(1,953)	(1,633)
356,349	283,806	(1,842,266)	2,626,326	131,797	638,952
9,552,804	9,268,998	11,111,264	8,484,938	8,353,141	7,714,189
9,909,153	9,552,804	9,268,998	11,111,264	8,484,938	8,353,141
174,817	170,781	166,329	156,065	144,317	132,632
111,762	105,479	101,984	95,172	88,733	81,213
13,500	9,000	9,000	9,000	9,000	9,000
609,512	813,966	1,058,942	(8,949)	317,556	1,158,389
(547,699)	(528,468)	(512,379)	(498,608)	(481,330)	(452,462)
(3,283)	(1,902)	(2,119)	(2,391)	(1,953)	(1,633)
(1,018)	(886)	(992)	(906)	(803)	(798)
54	58	24	3	84	18
357,645	568,028	820,789	(250,614)	75,604	926,359
8,486,907	7,918,879	7,098,090	7,348,704	7,273,100	6,346,741
8,844,552	8,486,907	7,918,879	7,098,090	7,348,704	7,273,100
$1,064,601	$1,065,897	$1,350,119	$4,013,174	$1,136,234	$1,080,041
89.26%	88.84%	85.43%	63.88%	86.61%	87.07%
$1,011,421	$976,657	$944,296	$881,222	$845,076	$820,333
105.26%	109.14%	142.98%	455.41%	134.45%	131.66%

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

Police and Fire Plan

2022 Changes

Changes in Actuarial Assumptions

The mortality improvement scale was changed from Scale MP-2020 to Scale MP-2021.

The single discount rate changed from 6.5% to 5.4%.

Changes in Plan Provisions

There were no changes in plan provisions since the previous valuation.

2021 Changes

Changes in Actuarial Assumptions

The investment return and single discount rates were changed from 7.50 percent to 6.50 percent, for financial reporting purposes.

The inflation assumption was changed from 2.50 percent to 2.25 percent.

The payroll growth assumption was changed from 3.25 percent to 3.00 percent.

The base mortality table for healthy annuitants and employees was changed from the RP-2014 table to the Pub-2010 Public Safety Mortality table. The mortality improvement scale was changed from MP-2019 to MN-2020.

The base mortality table for disabled annuitants was changed from the RP-2014 healthy annuitant mortality table (with future mortality improvement according to Scale MP-2019) to the Pub-2010 Public Safety disabled annuitant mortality table (with future mortality improvement according to Scale MP-2020).

Assumed rates of salary increase were modified as recommended in the July 14, 2020 experience study. The overall impact is a decrease in gross salary increase rates.

Assumed rates of retirement were changed as recommended in the July 14, 2020 experience study. The changes result in slightly more unreduced retirements and fewer assumed early retirements.

Assumed rates of withdrawal were changed from select and ultimate rates to service-based rates. The changes result in more assumed terminations.

Assumed rates of disability were increased for ages 25-44 and decreased for ages over 49. Overall, proposed rates result in more projected disabilities.

Assumed percent married for active female members was changed from 60 percent to 70 percent. Minor changes to form of payment assumptions were applied.

Changes in Plan Provisions

There were no changes in plan provisions since the previous valuation.

2020 Changes

Changes in Actuarial Assumptions

The mortality projection scale was changed from MP-2018 to MP-2019.

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

Changes in Plan Provisions

There have been no changes since the prior valuation.

2019 Changes

Changes in Actuarial Assumptions

The mortality projection scale was changed from MP-2017 to MP-2018.

Changes in Plan Provisions

There have been no changes since the prior valuation.

2018 Changes

Changes in Actuarial Assumptions

The mortality projection scale was changed from MP-2016 to MP-2017.

Changes in Plan Provisions

Annual increases were changed to 1.00 percent for all years, with no trigger.

An end date of July 1, 2048 was added to the existing $9 million state contribution.

New annual state aid will equal $4.5 million in fiscal years 2019 and 2020, and $9 million thereafter until the plan reaches 100 percent funding, or July 1, 2048, if earlier.

Member contributions were changed from 10.8 percent to 11.3 percent of pay, effective January 1, 2019 and 11.8 percent of pay, effective January 1, 2020.

Employer contributions were changed from 16.2 percent to 16.95 percent of pay, effective January 1, 2019 and 17.7 percent of pay, effective January 1, 2020.

Interest credited on member contributions decreased from 4 percent to 3 percent, beginning July 1, 2018.

Deferred augmentation was changed to 0 percent, effective January 1, 2019. Augmentation that has already accrued for deferred members will still apply.

Actuarial equivalent factors were updated to reflect revised mortality and interest assumptions.

2017 Changes

Changes in Actuarial Assumptions

Assumed salary increases were changed as recommended in the June 30, 2016 experience study. The net effect is proposed rates that average 0.34 percent lower than the previous rates.

Assumed rates of retirement were changed, resulting in fewer retirements.

The combined service annuity (CSA) load was 30 percent for vested and non-vested, deferred members. The CSA has been changed to 33 percent for vested members and 2 percent for non-vested members.

The base mortality table for healthy annuitants was changed from the RP-2000 fully generational table to the RP-2014 fully generational table (with a base year of 2006), with male rates adjusted by a factor of 0.96. The mortality improvement scale was changed from Scale AA to Scale MP-2016. The base mortality table for disabled annuitants was changed from the RP-2000 disabled mortality table to the mortality tables assumed for healthy retirees.

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

Assumed termination rates were decreased to 3 percent for the first three years of service. Rates beyond the select period of three years were adjusted, resulting in more expected terminations overall.

Assumed percentage of married female members was decreased from 65 percent to 60 percent.

Assumed age difference was changed from separate assumptions for male members (wives assumed to be three years younger) and female members (husbands assumed to be four years older) to the assumption that males are two years older than females.

The assumed percentage of female members electing joint and survivor annuities was increased.

The assumed annual benefit increase rate was changed from 1 percent for all years to 1 percent per year through 2064 and 2.5 percent thereafter.

The single discount rate was changed from 5.6 percent per annum to 7.5 percent per annum.

Changes in Plan Provisions

There have been no changes since the prior valuation.

2016 Changes:

Changes in Actuarial Assumptions

The assumed annual benefit increase rate was changed from 1 percent per year through 2037 and 2.5 percent per year thereafter to 1 percent per year for all future years.

The assumed investment return was changed from 7.9 percent to 7.5 percent.

The single discount rate changed from 7.9 percent to 5.6 percent.

The assumed future salary increases, payroll growth, and inflation were decreased by 0.25 percent to 3.25 percent for payroll growth and 2.5 percent for inflation.

Changes in Plan Provisions

There have been no changes since the prior valuation.

2015 Changes:

Changes in Actuarial Assumptions

The assumed annual increase rate was changed from 1 percent per year through 2030 and 2.5 percent per year thereafter to 1 percent per year through 2037 and 2.5 percent per year thereafter.

Changes in Plan Provisions:

The annual increase to be paid after the attainment of the 90 percent funding threshold was changed from inflation up to 2.5 percent, to a fixed rate of 2.5 percent.

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Schedule of Changes in Net Pension Liability and Related Ratios

Required Supplementary Information (unaudited, in thousands)

Correctional Fund

	2022	2021	2020
Total Pension Liability			
Service Cost	$36,877	$32,307	$33,172
Interest on the Total Pension Liability	66,604	61,462	57,354
Change of Benefit Terms	0	0	0
Difference between Expected and Actual Experience	(9,042)	(3,822)	(12,083)
Assumption Changes	220,073	137,113	(1,977)
Benefit Payments	(23,372)	(20,088)	(17,569)
Refund Payments	(2,713)	(2,140)	(2,709)
Net Change in Total Pension Liability	288,427	204,832	56,188
Total Pension Liability--Beginning	1,019,288	814,456	758,268
Total Pension Liability--Ending (a)	1,307,715	1,019,288	814,456
Plan Fiduciary Net Position			
Contributions--Employer	19,227	19,351	19,043
Contributions--Member	12,843	12,948	12,692
Net Investment Income	(66,015)	238,666	31,774
Benefit Payments	(23,372)	(20,088)	(17,569)
Refund Payments	(2,713)	(2,140)	(2,709)
Administrative Expenses	(371)	(344)	(332)
Other	0	1	0
Net Change in Plan Fiduciary Net Position	(60,401)	248,394	42,899
Plan Fiduciary Net Position--Beginning	1,035,716	787,322	744,423
Plan Fiduciary Net Position--Ending (b)	975,315	1,035,716	787,322
Net Pension Liability (a)-(b)	$332,400	($16,428)	$27,134
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	74.58%	101.61%	96.67%
Covered Payroll	$220,292	$222,093	$217,702
Net Pension Liability as a Percentage of Covered Payroll	150.89%	(7.40%)	12.46%

* *This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available.*

Schedule of Changes in Net Position Liability and Related Ratios

2019	2018	2017	2016	2015	2014
$30,362	$45,378	$49,202	$25,950	$25,098	$26,488
52,741	53,811	47,336	40,605	37,043	33,955
0	(66,822)	0	0	0	0
(1,846)	1,018	(3,516)	382	(7,892)	(5,327)
(2,206)	(209,457)	(66,147)	310,332	0	(34,168)
(15,381)	(13,183)	(11,033)	(9,381)	(7,777)	(6,711)
(2,244)	(1,364)	(1,478)	(982)	(1,057)	(1,105)
61,426	(190,619)	14,364	366,906	45,415	13,132
696,842	887,461	873,097	506,191	460,776	447,644
758,268	696,842	887,461	873,097	506,191	460,776
18,676	17,871	17,489	16,490	15,736	15,054
12,485	11,956	11,666	11,008	10,472	10,030
50,853	62,962	78,363	209	20,373	69,451
(15,381)	(13,183)	(11,033)	(9,381)	(7,777)	(6,711)
(2,244)	(1,364)	(1,478)	(982)	(1,057)	(1,105)
(361)	(308)	(330)	(290)	(247)	(236)
0	1	0	(2)	(1)	(1)
64,028	77,935	94,677	17,052	37,499	86,482
680,395	602,460	507,783	490,731	453,232	366,750
744,423	680,395	602,460	507,783	490,731	453,232
$13,845	$16,447	$285,001	$365,314	$15,460	$7,544
98.17%	97.64%	67.89%	58.16%	96.95%	98.36%
$214,151	$205,077	$200,103	$188,816	$179,623	$172,041
6.47%	8.02%	142.43%	193.48%	8.61%	4.39%

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

Correctional Plan

2022 Changes

Changes in Actuarial Assumptions

The mortality improvement scale was changed from Scale MP-2020 to Scale MP-2021.

The single discount rate changed from 6.50% to 5.42%.

The benefit increase assumption was changed from 2.00% per annum to 2.00% per annum through December 31, 2054 and 1.50% per annum thereafter.

Changes in Plan Provisions

There were no changes in plan provisions since the previous valuation.

2021 Changes

Changes in Actuarial Assumptions

The investment return and single discount rates were changed from 7.50 percent to 6.50 percent, for financial reporting purposes.

The inflation assumption was changed from 2.50 percent to 2.25 percent.

The payroll growth assumption was changed from 3.25 percent to 3.00 percent.

The base mortality table for healthy annuitants and employees was changed from the RP-2014 table to the Pub-2010 Public Safety Mortality table. The mortality improvement scale was changed from MP-2019 to MN-2020.

The base mortality table for disabled annuitants was changed from the RP-2014 healthy annuitant mortality table (with future mortality improvement according to Scale MP-2019) to the Pub-2010 Public Safety disabled annuitant mortality table (with future mortality improvement according to Scale MP-2020).

Assumed rates of salary increase were modified as recommended in the July 10, 2020 experience study. The overall impact is a decrease in gross salary increase rates.

Assumed rates of retirement were changed as recommended in the July 10, 2020 experience study. The changes result in slightly more unreduced retirements and fewer assumed early retirements.

Assumed rates of withdrawal were changed as recommended in the July 10, 2020 experience study. The new rates predict more terminations, both in the three-year select period (based on service) and the ultimate rates (based on age).

Assumed rates of disability lowered.

Assumed percent married for active members was lowered from 85 percent to 75 percent.

Minor changes to form of payment assumptions were applied.

Changes in Plan Provisions

There have been no changes since the prior valuation.

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

2020 Changes

Changes in Actuarial Assumptions

The mortality projection scale was changed from MP-2018 to MP-2019.

Changes in Plan Provisions

There have been no changes since the prior valuation.

2019 Changes

Changes in Actuarial Assumptions

The mortality projection scale was changed from MP-2017 to MP-2018.

Changes in Plan Provisions

There have been no changes since the prior valuation.

2018 Changes

Changes in Actuarial Assumptions

The single discount rate was changed from 5.96 percent per annum to 7.50 percent per annum.

The mortality projection scale was changed from MP-2016 to MP-2017.

The assumed annual increase was changed from 2.50 percent per year to 2.00 percent per year.

Changes in Plan Provisions

The augmentation adjustment in early retirement factors is eliminated over a five-year period starting July 1, 2019, resulting in actuarial equivalence after June 30, 2024.

Interest credited on member contributions decreased from 4.00 percent to 3.00 percent, beginning July 1, 2018.

Deferred augmentation was changed to 0.00 percent, effective January 1, 2019. Augmentation that has already accrued for deferred members will still apply.

Annual increases were changed from 2.50 percent per year with a provision to reduce to 1.00 percent if the funding status declines to a certain level, to 100 percent of the Social Security Cost of Living Adjustment, not less than 1.00 percent and not more than 2.50 percent, beginning January 1, 2019. If the funding status declines to 85.00 percent for two consecutive years or 80.00 percent for one year, the maximum increase will be lowered to 1.50 percent.

Actuarial equivalent factors were updated to reflect revised mortality and interest assumptions.

2017 Changes

Changes in Actuarial Assumptions

The base mortality table for healthy annuitants was changed from the RP-2000 fully generational table to the RP-2014 fully generational table (with a base year of 2006), with male rates adjusted by a factor of 0.96. The mortality improvement scale was changed from Scale AA to Scale MP-2016, and is applied to healthy and disabled members. The base mortality table for disabled annuitants was changed from the RP-2000 disabled mortality table to the RP-2014 disabled annuitant mortality table (with future mortality improvement according to MP-2016).

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

The combined service annuity (CSA) load was 30.00 percent for vested and non-vested, deferred members. The CSA has been changed to 35.00 percent for vested members and 1.00 percent for non-vested members.

The single discount rate was changed from 5.31 percent per annum to 5.96 percent per annum.

Changes in Plan Provisions

There have been no changes since the prior valuation.

2016 Changes:

Changes in Actuarial Assumptions

The assumed investment return was changed from 7.90 percent to 7.50 percent. The single discount rate changed from 7.90 percent to 5.31 percent.

The assumed future salary increases, payroll growth, and inflation were decreased by 0.25 percent to 3.25 percent for payroll growth and 2.5 percent for inflation.

Changes in Plan Provisions

There have been no changes since the prior valuation.

2015 Changes:

Changes in Actuarial Assumptions

There have been no changes since the prior valuation.

Changes in Plan Provisions

There have been no changes since the prior valuation.

Schedule of Contributions from Employers and Nonemployers

Required Supplementary Information (in thousands)

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)
2022	$368,305	$562,291	$562,291	($193,986)	$7,042,154	7.98%
2021	$448,278	$540,685	$540,685	($92,407)	$6,761,354	8.00%
2020	$455,515	$525,821	$525,821	($70,306)	$6,698,754	7.85%
2019	$453,401	$531,444	$531,444	($78,043)	$6,523,754	8.15%
2018	$609,725	$504,819	$504,819	$104,906	$6,298,815	8.01%
2017	$615,083	$483,888	$483,888	$131,195	$6,156,985	7.86%
2016	$542,151	$465,978	$465,978	$76,173	$5,773,708	8.07%
2015	$523,017	$435,115	$435,115	$87,902	$5,549,255	7.84%
2014	$476,321	$382,251	$382,251	$94,070	$5,351,920	7.14%
2013	$430,773	$372,652	$372,652	$58,121	$5,246,928	7.10%

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 in accordance with Governmental Accounting Standards Board requirements.

Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry Age Normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	27 years
Asset Valuation Method:	5-year smoothed market, no corridor
Inflation:	2.25%
Payroll Growth Rate:	3.00%
Salary Increases:	3.00% to 10.25%, including inflation
Investment Rate of Return:	7.50%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2020 valuation pursuant to an experience study of the period 2014 - 2019.
Mortality:	Pub-2010 General annuitant generational mortality tables, projected with scale MP-2020 from a base year of 2010. Male rates are multiplied by a factor of 1.02 and female rates are multiplied by a factor of 0.90.
Cost-of-Living Increase:	The plan is assumed to pay a 1.25% annual increase for all future years.

Schedule of Contributions from Employers and Nonemployers

Required Supplementary Information (in thousands)

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)
2022	$153,766	$224,416	$224,416	($70,650)	$1,127,314	19.91%
2021	$174,405	$219,129	$219,129	($44,724)	$1,096,195	19.99%
2020	$177,855	$207,319	$207,319	($29,464)	$1,069,481	19.39%
2019	$173,459	$188,317	$188,317	($14,858)	$1,011,421	18.62%
2018	$193,183	$179,781	$179,781	$13,402	$976,657	18.41%
2017	$165,252	$175,329	$175,329	($10,077)	$944,296	18.57%
2016	$189,375	$165,065	$165,065	$24,310	$881,222	18.73%
2015	$197,325	$153,317	$153,317	$44,008	$845,076	18.14%
2014	$163,985	$141,632	$141,632	$22,353	$820,333	17.27%
2013	$189,254	$125,995	$125,995	$63,259	$796,188	15.82%

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 in accordance with Governmental Accounting Standards Board requirements.	
Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry Age Normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	27 years
Asset Valuation Method:	5-year smoothed market, no corridor
Inflation:	2.25%
Payroll Growth Rate:	3.00%
Salary Increases:	3.00% to 11.75%, including inflation
Investment Rate of Return:	7.50%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2021 valuation pursuant to an experience study of the period 2015 - 2019.
Mortality:	Pub-2010 Public Safety Mortality Tables projected with mortality improvement scale MP-2020, from a base year of 2010. Male retiree rates adjusted by a factor of 0.98.
Cost-of-Living Increase:	The plan is assumed to pay a 1.00% annual increase for all future years.

Schedule of Contributions from Employers and Nonemployers

Required Supplementary Information (in thousands)

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)
2022	$13,063	$19,227	$19,227	($6,164)	$220,292	8.73%
2021	$19,167	$19,351	$19,351	($184)	$222,093	8.71%
2020	$19,593	$19,043	$19,043	$550	$217,702	8.75%
2019	$19,466	$18,676	$18,676	$790	$214,151	8.72%
2018	$19,031	$17,871	$17,871	$1,160	$205,077	8.71%
2017	$17,269	$17,489	$17,489	($220)	$200,103	8.74%
2016	$16,446	$16,490	$16,490	($44)	$188,816	8.73%
2015	$13,759	$15,736	$15,736	($1,977)	$179,623	8.76%
2014	$14,606	$15,054	$15,054	($448)	$172,041	8.75%
2013	$14,207	$14,498	$14,498	($291)	$164,820	8.80%

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 in accordance with Governmental Accounting Standards Board requirements.	
Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry Age Normal
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Asset Valuation Method:	5-year smoothed market, no corridor
Inflation:	2.25%
Payroll Growth Rate:	3.00%
Salary Increases:	3.00% to 11.00%, including inflation
Investment Rate of Return:	7.50%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2021 valuation pursuant to an experience study of the period 2015 - 2019.
Mortality:	PUB-2010 annuitant generational Public Safety mortality table projected with mortality improvement scale MP-2020, from a base year of 2010. Males rates adjusted by a factor of 0.98.
Cost-of-Living Increase:	The plan is assumed to pay a 2.00% annual increase for all years.

Schedule of Investment Returns

Required Supplementary Information (unaudited)

Rate of Return for Combined Funds

Year	General Employees Fund	Police and Fire Fund	Correctional Fund	Volunteer Firefighter Fund
2022	(6.23%)	(6.24%)	(6.36%)	(13.08%)
2021	30.29%	30.27%	30.21%	20.61%
2020	4.29%	4.24%	4.24%	6.83%
2019	7.33%	7.31%	7.42%	8.11%
2018	10.47%	10.48%	10.35%	5.83%
2017	15.23%	15.22%	15.22%	10.31%
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 investment expenses.

This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available.

Schedule of Investment Expenses

For the Fiscal Year Ended June 30, 2022
(In thousands)

	General Employees	Police & Fire Plan	Correctional Plan	SVF	DCP	Total
Source of Expenses						
Outside Money Managers--Equities	$20,902	$8,363	$776	$64	$54	$30,159
Outside Money Managers--Fixed Income	6,597	2,633	239	68	29	9,566
Minnesota State Board of Investment	1,768	707	65	9	6	2,555
AON Investment	184	74	7	0	0	265
Broadridge	111	44	4	0	0	159
Meketa	124	50	5	0	0	179
Albourne	468	187	17	0	0	672
Total Investment Expenses	**$30,154**	**$12,058**	**$1,113**	**$141**	**$89**	**$43,555**

A *Schedule of Investment Fee*s 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, 2022
(In thousands)

Actuary	
Gabriel Roeder Smith & Co	*$295*
Total Actuary	**295**
Financial Services	
Clifton Larson Allen LLP	*109*
MMB / OLA Audit Fees	*122*
Total Financial Services	**231**
Legal	
Administrative Hearings	*5*
Attorney General	*10*
CCH Inc	*2*
Ice Miller LLP	*13*
Total Legal	**30**
Management Consultants	
Access Information Management of MN Inc	*22*
CDW	*9*
Do Good	*1*
Getty Images Inc	*4*
Invanti Inc	*3*
Julia A Nicholson	*10*
LexisNexis Risk Data Mgmt	*7*
Logmein USA Inc	*2*
Momentive Inc	*1*
MSRS	*26*
Nighthawk Inc	*51*
OneNeck IT Solutions LLC	*16*
OnSolve LLC	*1*
Paragon Development Systems	*112*
Pension Benefit Information LLC	*80*
Public Employees Retirement Association	*149*
Software House Intl Inc	*1*
USbank	*13*
Total Management Consultants	**508**
Medical Evaluations	
MMRO	*883*
Total Medical Evaluations	**883**
System Development	
Deloitte	*183*
Paragon Development Systems	*65*
Total System Development	**248**
Total Professional Service Fees	**$2,195**

Schedule of Administrative Expenses

For the Fiscal Year Ended June 30, 2022
(In thousands)

Personnel Expenses:	
Staff Salaries	*$10,078*
Part-Time, Seasonal Labor	*280*
Other Benefits	*178*
Total Personnel Expenses	**10,536**
Professional Services:	
Actuary	*295*
Financial	*231*
Legal	*30*
Management Consultants	*508*
Medical Evaluations	*883*
System Development	*248*
Total Professional Services	**2,195**
Communications	
Mail & Telephone Services	*671*
Printing & Advertising	*81*
Total Communications	**752**
Office Building & Maintenance	
Building	*613*
Depreciation - Building	*346*
Bond Interest	*39*
Total Office Building & Maintenance	**998**
Other:	
Depreciation - Equipment	*113*
Employee Development	*28*
Equipment Maintenance	*704*
Indirect Costs	*214*
Operating Costs	*42*
Supplies & Materials	*167*
Travel	*113*
Total Other	**1,381**
Total Administrative Expenses	**15,862**

Allocation of Administrative Expenses:	
Defined Benefit Plans	
Public Employees Retirement Fund	*13,398*
Public Employees Police and Fire Fund	*1,634*
Public Employees Correctional Fund	*371*
Statewide Volunteer Firefighter	*161*
Defined Contribution Plan	
Defined Contribution Fund	*298*
Total Administrative Expenses	**$15,862**

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INVESTMENT SECTION

2022 ANNUAL COMPREHENSIVE FINANCIAL REPORT

ADAPT

Given the recent volatility of the investment returns and the wide range of future expectations, the need to adapt but not overreact is great. PERA is working with its actuary and the Legislature to understand the volatile measurements and wide ranging forecasts to help ensure plan design decisions keep our retirement plans sustainable.

Investment Report

Executive Director & Chief Investment Officer:
Jill E. Schurtz

Minnesota State Board of Investment
60 Empire Drive, Suite 355
St. Paul, MN 55103
Phone: (651) 296-3328
Fax: (651) 296-9572
Email: minn.sbi@state.mn.us
Website: https://mn.gov/sbi/
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 rule. 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 *Minnesota Statutes*, 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 *Minnesota Statutes*, section 11A.24.) In particular, pension fund assets are to be invested for the exclusive benefit of the members of the fund.

INVESTMENT OBJECTIVES AND 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 2018 Legislature reduced the actuarial interest rate assumption for PERA to 7.5%.

Investment Report

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 strategic asset allocation policy target for the Combined Funds as follows:

- Public Equity 50%
- Total Fixed Income 25%
- Private Markets 25%

Based on values as of June 30, 2022, the Combined Funds' 20-year annualized return was 8.2%, which exceeded inflation as measured by CPI by 5.7 percentage points. Over the last 10-year period, the Combined Funds returned 9.4%, outperforming the composite index by 0.3%. Investment returns ranked in the 25th and 17th percentile over the past 5 and 10-year time periods respectively, and in the top 13th percentile over the past 20 years, compared to other public plans with over $20 billion in assets in the Trust Universe Comparison Service.

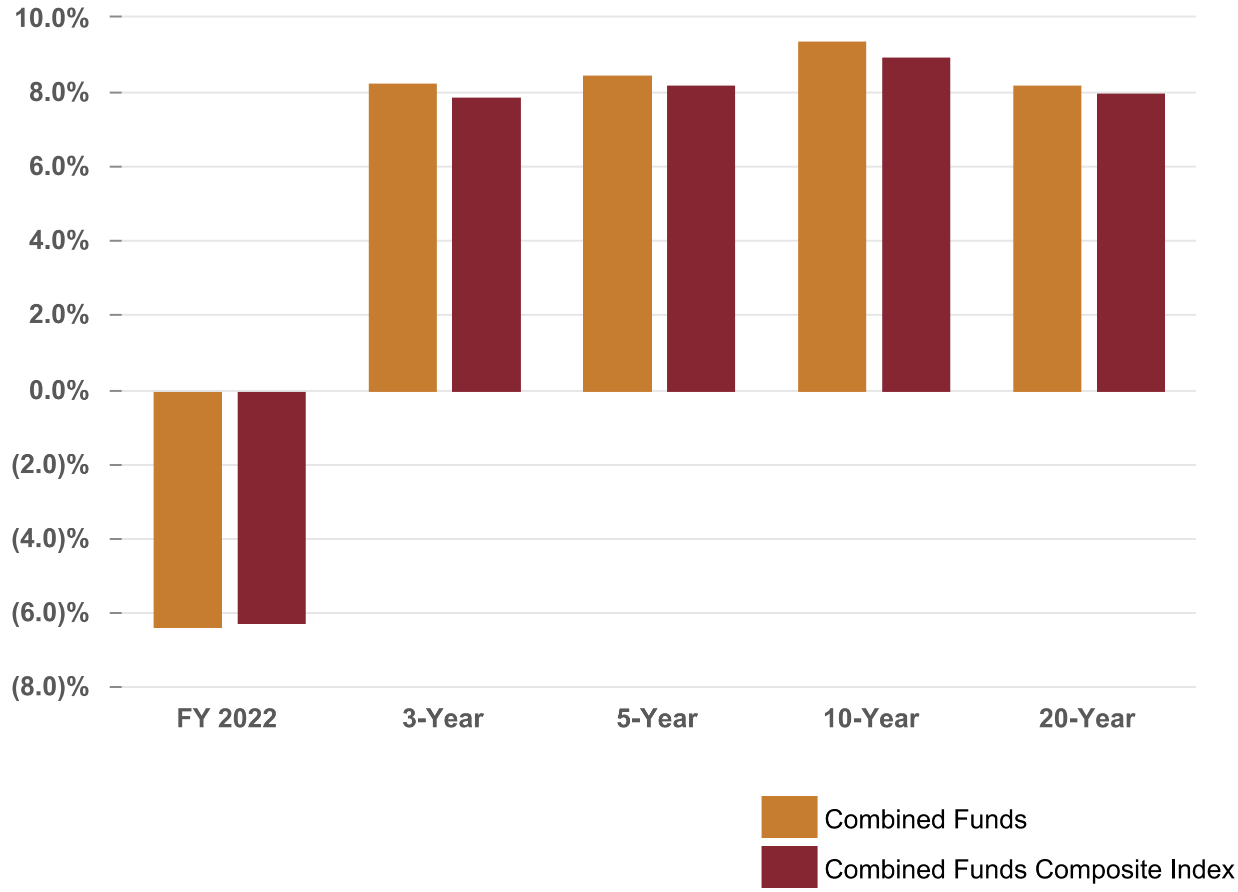
INVESTMENT PRESENTATION

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

Respectfully submitted,

Jill E. Schurtz
Executive Director and Chief Investment Officer
Minnesota State Board of Investment
November 21, 2022

Investment Results



Fund Performance

Fund	FY 2022	3-Year	5-Year	10-Year	20-Year
	Rates of Return (Annualized)				
Combined Funds*	(6.4)%	8.3%	8.5%	9.4%	8.2%
Combined Funds Composite Index	(6.3)%	7.9%	8.2%	9.0%	8.0%

** Percentages are net of all management fees.*

All composite indices are composed of the following market indicators, weighted according to asset allocation:

Public Equity—The Combined Funds Public Equity includes Domestic Equity, International Equity and Global Equity. The Public Equity benchmark is 67 percent Russell 3000 and 33 percent MSCI ACWI ex U.S. (net).

Fixed Income—The Combined Funds Fixed Income program includes Core/Core Plus, Return Seeking Fixed Income, Treasuries and Laddered Bond + Cash. The Total Fixed Income benchmark is 40 percent Bloomberg Barclays U.S. Aggregate Index/ 40 percent Bloomberg Barclays Treasury 5+ Years Index/ 20 percent ICE BofA US 3-Month Treasury Bill.

Investment Results

Investment Returns by Asset Class

Performance of Asset Pools (net of fees)

	Rates of Return (Annualized)				
	FY 2022	**3-Year**	**5-Year**	**10-Year**	**20-Year**
Public Equity*	**(15.5)%**	**7.3%**	**8.1%**	**10.5%**	**8.2%**
Domestic Equity	(14.2)%	9.8%	10.6%	12.6%	9.0%
Domestic Equity Benchmark	(13.9)%	9.7%	10.5%	12.5%	9.1%
International Equity	(17.4)%	2.6%	3.3%	5.6%	6.1%
International Equity Benchmark	(19.4)%	1.3%	2.5%	4.8%	5.8%
Global Equity***	(27.9)%				
Global Equity Benchmark	(15.8)%				
Fixed Income**	**(10.5)%**	**(0.1)%**	**1.8%**	**2.4%**	**4.1%**
Core/Core Plus	(11.7)%	(0.5)%	1.3%	2.1%	4.0%
Core Bonds Benchmark	(10.3)%	(0.9)%	0.9%	1.5%	3.6%
Return Seeking Fixed Income	(12.3)%				
Return Seeking Fixed Income Benchmark	(10.3)%				
Treasuries	(13.5)%	(1.8)%			
Treasuries Benchmark	(13.5)%	(1.8)%			
Laddered Bond + Cash	(0.3)%	0.5%	1.0%	0.7%	1.5%
Laddered Bond + Cash Benchmark	0.2%	0.6%	1.1%	0.6%	1.3%
Private Markets	**24.8%**	**18.7%**	**16.3%**	**13.8%**	**14.0%**
Private Equity	22.1%	23.6%	20.9%	17.5%	15.9%
Private Credit	21.3%	13.0%	12.3%	13.4%	12.6%
Resources	33.8%	5.3%	4.2%	2.9%	13.3%
Real Estate	43.7%	19.4%	15.8%	14.0%	10.3%

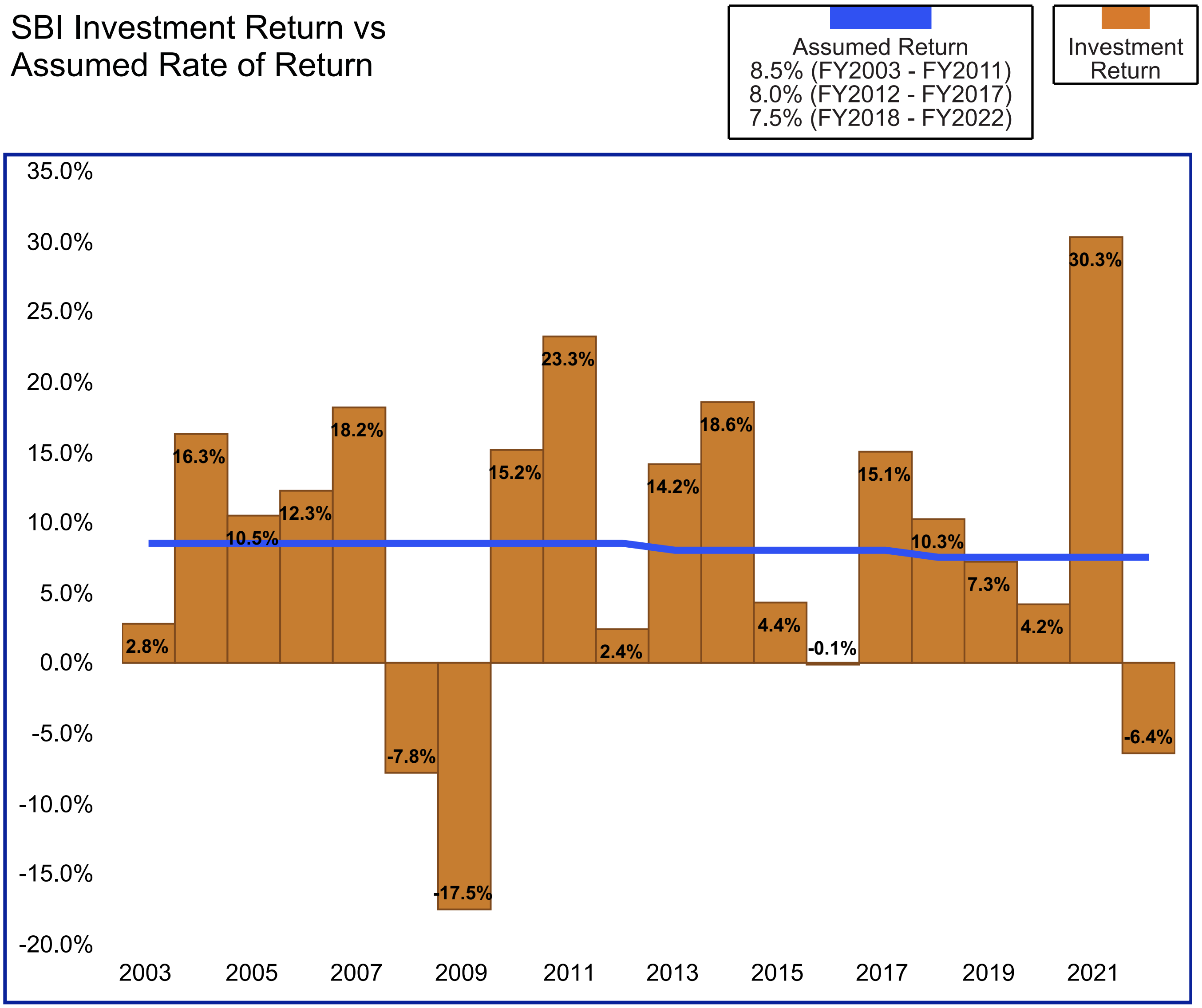
**Prior to 6/30/16 the returns of Domestic and International Equity were not reported as a total Public Equity return.*

*** Since 12/1/2020 the Total Fixed Income includes allocations to Core/Core Plus Bonds, Return Seeking Bonds, Treasuries and Laddered Bond + Cash. From 7/1/2020 to 11/30/2020 Total Fixed Income was Core Bonds, Treasuries and Cash. From 2/1/2018 to 6/30/20 Total Fixed Income was Core Bonds and Treasuries. Prior to 2/1/2018, Total Fixed Income was Core Bonds.*

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

Investment Results

SBI Investment Return vs
Assumed Rate of Return



The State Board of Investment (SBI) has exceeded its assumed rate of return 11 of the past 20 years. Over those 20 years, the SBI has had annualized investment earnings of 8.1 percent.

TUCS Ranking

Percentage Ranking: 1 Year — 67th   3 Year —35th   5 Year — 25th   10 year —17th

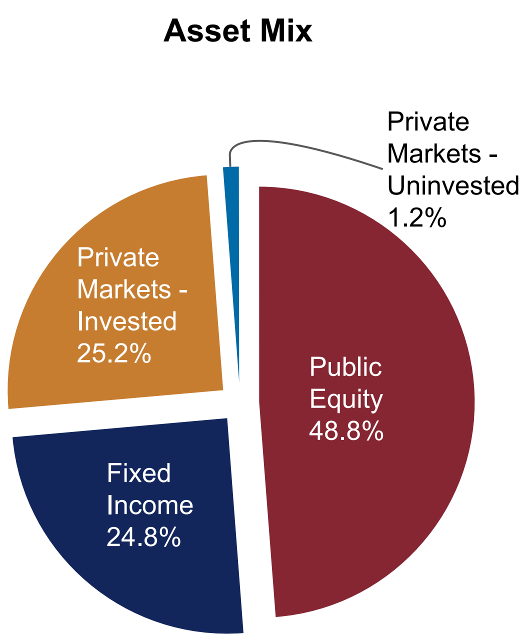
Note: The SBI's returns are ranked against public plans with over $20 billion in assets. All funds in TUCS report their returns gross of fees.

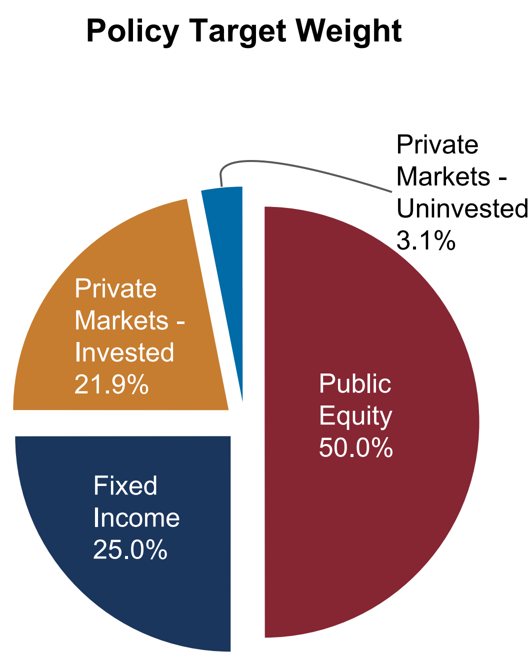
Asset Allocation

As of June 30, 2022

Combined Funds		
Investment Type	**Actual Asset Mix**	**Policy Target Weight**
Public Equity	48.8%	50.0%
Fixed Income	24.8%	25.0%
Private Markets - Invested	25.2%	21.9%
Private Markets - Uninvested	1.2%	3.1%
Total	100%	100%

Percentages are net of all management fees.





List of Largest Assets Held

As of June 30, 2022

Top Ten Equity Holdings (By Fair Value)		
Security	Fair Value (In millions)	% of Portfolio
Apple Inc.	$673.90	1.84%
Microsoft Corp.	655.35	1.79%
Blackrock Long Term Private CA	551.10	1.50%
Amazon.com Inc.	320.62	0.87%
Alphabet Inc. CL A	218.46	0.60%
Tesla Inc.	198.36	0.54%
Alphabet Inc. CL C	194.91	0.53%
UnitedHealth Group Inc.	163.56	0.45%
Johnson & Johnson	160.19	0.44%
Berkshire Hathaway Inc. CL B	158.27	0.43%

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Top Ten Fixed Income Holdings (By Fair Value)				
Security	Fair Value (In millions)	% of Portfolio	Maturity Date	Coupon %
U.S. Treasure N/B	$216.91	0.59%	11/15/2028	3.125%
U.S. Treasure N/B	159.61	0.43%	8/15/2031	1.250%
U.S. Treasure N/B	146.34	0.40%	5/15/2051	2.375%
U.S. Treasure N/B	124.72	0.34%	2/15/2044	3.625%
U.S. Treasure N/B	112.72	0.31%	1/31/2028	0.750%
U.S. Treasure N/B	95.89	0.26%	5/15/2029	2.375%
U.S. Treasure N/B	93.06	0.25%	8/31/2027	0.500%
U.S. Treasure N/B	86.28	0.24%	8/15/2051	2.000%
U.S. Treasure N/B	81.53	0.22%	2/15/2050	2.000%
U.S. Treasure N/B	67.39	0.18%	8/15/2028	2.875%

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

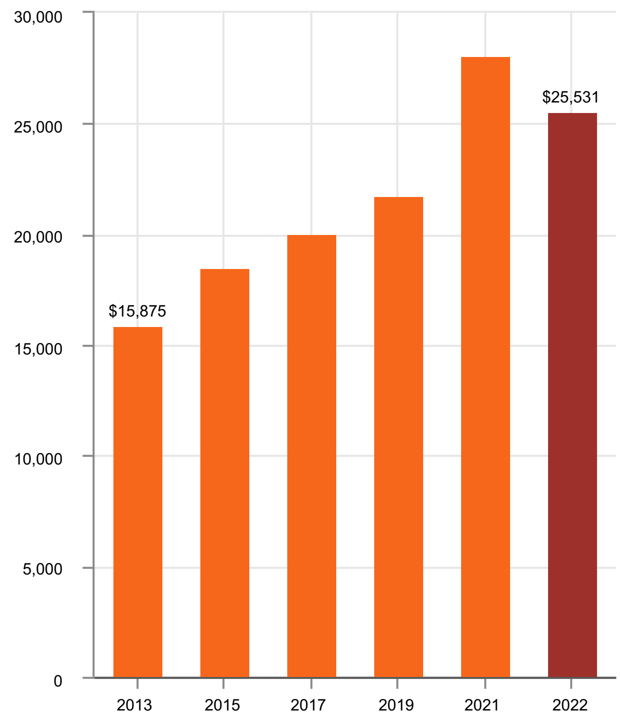
For the Fiscal Year Ended June 30, 2022 (in thousands)

	2022 Beginning Fair Value	2022 Ending Fair Value	Percent of Total Fair Value
General Employees Fund			
Publicly Traded Equity Securities			
Domestic Equity	$9,441,575	$8,580,025	34%
Broad International Stock Pool	4,486,145	3,853,977	15%
Global Equity Pool	372,812	268,977	1%
Publicly Traded Debt Securities	6,483,990	5,965,549	23%
Uninvested Private Equity	2,368,373	314,826	1%
Private Investments	4,959,308	6,547,264	26%
Total Pooled Accounts	**$28,112,203**	**$25,530,618**	**100%**
Police and Fire Fund			
Publicly Traded Equity Securities			
Domestic Equity	$3,765,885	$3,435,125	34%
Broad International Stock Pool	1,789,352	1,543,012	15%
Global Equity Pool	148,535	107,165	1%
Publicly Traded Debt Securities	2,585,324	2,385,899	23%
Uninvested Private Equity	943,564	125,288	1%
Private Investments	1,978,079	2,621,319	26%
Total Pooled Accounts	**$11,210,739**	**$10,217,808**	**100%**
Correctional Fund			
Publicly Traded Equity Securities			
Domestic Equity	$343,619	$323,582	34%
Broad International Stock Pool	163,270	145,410	15%
Global Equity Pool	13,223	9,540	1%
Publicly Traded Debt Securities	234,762	222,439	23%
Uninvested Private Equity	83,939	11,023	1%
Private Investments	180,490	247,026	26%
Total Pooled Accounts	**$1,019,303**	**$959,020**	**100%**
Volunteer Firefighter Fund			
Publicly Traded Equity Securities			
Domestic Equity	$51,586	$44,680	36%
Broad International Stock Pool	22,409	19,541	16%
Publicly Traded Debt Securities	64,570	61,304	48%
Total Pooled Accounts	**$138,565**	**$125,525**	**100%**

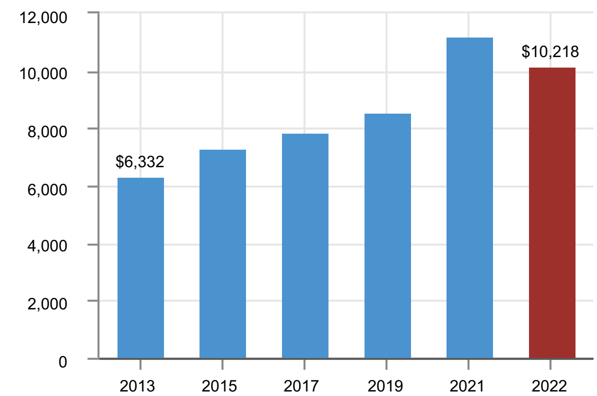
Fair Value of Investments

Last 10 Years (in millions)

General Employees Fund



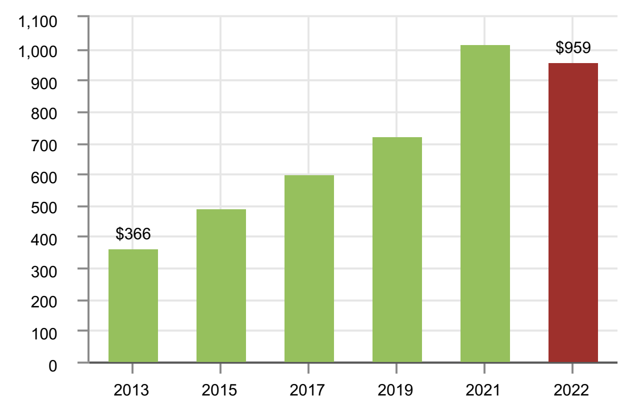
Police and Fire Fund



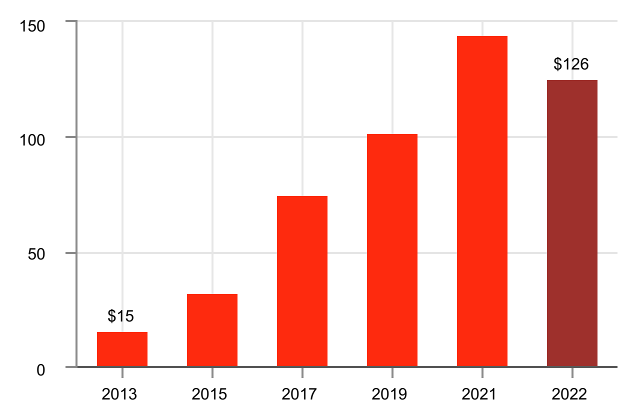
General Employees Fund
Minneapolis Employees Retirement Fund was merged into the General Employees Fund on January 1, 2015.

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

Correctional Fund



Volunteer Firefighter Fund



Schedule of Investment Fees

For Fiscal Year Ended June 30, 2022 (in thousands)

State Board of Investment	$2,555
AON Investment	265
Broadridge	159
Meketa	179
Albourne	672
Total	3,830
Outside Money Managers:	
Active Domestic Equity:	
Zevenbergen Capital	545
Winslow Capital	296
Barrow Hanley	536
LSV Asset	466
Sands Capital	833
Peregrine Capital	785
Goldman Equity	812
Hotchkis and Wiley	723
Martingale	399
Wellington Management Company LLP	715
Arrowmark Asset Management LLC	636
Hood River Capital Management LLC	868
Rice Hall James & Associates LLC	674
Total	8.288
Passive Domestic Equity:	
Blackrock	13
Passive Domestic Equity Large Cap:	
Blackrock Passive	422
Passive Domestic Equity Small Cap:	
Blackrock Passive	3
Semi Passive Equity	
Blackrock	723
JP Morgan	736
Total	1,459
Domestic Bonds:	
Blackrock Financial Mgmt	301
Dodge & Cox	506
Goldman	449
Neuberger	483
Western Asset Management	556
Total	2,295
Return Seeking Fixed Income	
Columbia	$617
Pimco	$876
Blackrock	$865
Ashmore EMD	$598
KKR High Yield	$388
Oaktree High Yield	$403
PGIM FI Mac	$451
Payden & Rygel Mav	$477
TCW	$433
Ashmore	$2
Total	5,110
International Equity:	
Acadian Asset	695
State Street Emerging	231
AQR Capital Management	589
Fidelity Investments GPK2	612
JP Morgan Fleming	611
Earnest Partners, LLC	699
Macquarie/Delaware Investments	978
Martin Currie, Inc.	1,088
Marathon Asset	582
McKinley Capital	484
Morgan Stanley Dean Witter	1,569
Neuberger Berman Investment	1,263
Pzena Investment Management	1,249
Rock Creek	2,358
Columbia Investments	592
State Street	303
Record Currency	3,156
Earnest Partners, LLC	702
Ashmore	2
Total	17,763
Global Equity:	
Martin Currie Global Equity	490
Ariel Global Equity	819
Baillie Gifford Global Equity	628
Total	1,937
Treasury Protection Pool:	
Blackrock Financial	560
Goldman Sachs	616
Neuberger Berman	554
Total	1,730
Ladder Portfolio	
Goldman	217
Neuberger	206
Total	423
Uninvested Private Markets	
NISA Cash Overlay	196
Blackrock S&P 500	78
Total	274
Supplemental Investment Funds	
Galliard - Fixed Income	8
Total Investment Fees	**$43,555**

Note: PERA's assets are commingled in various pooled investment accounts administered by the State Board of Investment (SBI). 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 SBI.

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ACTUARIAL SECTION

2022 ANNUAL COMPREHENSIVE FINANCIAL REPORT

SERVE

PERA continues to serve participating employers by expanding the resources available. In fiscal year 2022, PERA added several new employer videos on its external website. In addition, PERA is offering an updated webinar on the leave reporting process. This updated webinar was created in response to the changes we have made after gathering and analyzing employer feedback.

Actuary's Certification Letter

| P: 800.521.0498 | www.grsconsulting.com

November 18, 2022

Board of Trustees
Public Employees Retirement
Association of Minnesota (PERA)
60 Empire Drive, Suite 200
St. Paul, Minnesota 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, the Public Employees Police and Fire Plan, and the Local Government Correctional Service Retirement Plan as of July 1, 2022. In order to gain a full understanding of the actuarial condition of the plans, it is important to read and understand the full actuarial reports and potentially other relevant information in addition to this Annual Comprehensive Financial Report (ACFR). The actuarial reports are available on PERA's website, along with online copies of this and previous ACFRs. Reading this ACFR is not a substitute for reading the actuarial reports.

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. They are based upon the 7.50% statutory discount rate. The results would appear less favorable if they were based upon a discount rate that satisfied the requirements of the Actuarial Standard of Practice No. 27. For all plans, because the valuations smooth asset gains and losses over five years, the actuarial value of assets is higher than the market value of assets. The funding ratios and contribution sufficiencies/(deficiencies) on both bases are presented in the following table:

	Accrued Liability Funding Ratio		Contribution Sufficiency/ (Deficiency) (% of Pay)		
Plan	**Actuarial Value of Assets**	**Market Value of Assets**	**Actuarial Value of Assets**	**Market Value of Assets**	**Statutory Amortization Date**
General	87.44%	86.24%	3.26%	2.93%	2048
Police/Fire	93.06%	91.75%	6.76%	5.91%	2048
Correctional	105.09%	103.24%	3.19%	2.73%	2048

277 Coon Rapids Boulevard | Suite 212 | Coon Rapids, Minnesota 55433-2629

Board of Trustees
November 18, 2022
Page 2

All of the plans currently have a contribution sufficiency on an Actuarial Value of Assets basis and on a Market Value of Assets basis. A contribution sufficiency means that the fund is expected to meet the goal of full funding by (or before) the statutory amortization date. A contribution deficiency means the opposite; full funding will not be attained by the statutory amortization date.

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 an 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 required 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% is not synonymous with no required future contributions. A plan with a funded status of 100% 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 change was recognized this year in the funding valuations for all plans:

- The mortality improvement scale was updated from MP-2020 to MP-2021.

GRS performed a brief review of the basic financial and membership data provided to us by the association as of June 30, 2022, and determined that the data appears reasonable in comparison to last year. 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 and investment return are specified by State Statute. All other assumptions are defined in the standards for actuarial work adopted by the Legislative Commission on Pensions and Retirement (LCPR), and are based on actual experience with changes recommended by the actuary, adopted by the PERA Board, and approved by the LCPR.

Except as noted in the following paragraph, the assumptions and methods used for funding purposes meet the guidance set by the Actuarial Standards of Practice.

In our professional judgment, the statutory investment return assumption of 7.5% used in the report deviates materially from the guidance set forth in Actuarial Standards of Practice No. 27 (ASOP No. 27). In a 2022 analysis of long-term rate of investment return and inflation assumptions, GRS suggested that an investment return assumption in the range of 5.64% to 6.84% would be reasonable for this valuation. Please see our letter dated July 12, 2022 for additional information.

Actuary's Certification Letter

Board of Trustees
November 18, 2022
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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 ACFR:

- Schedule of Funding Progress;
- Determination of Contribution Sufficiency;
- Determination of Actuarial Value of Assets; and
- 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 ACFR were prepared by PERA based on information included in the actuary's annual valuation.

This report reflects the impact of COVID-19 through June 30, 2022. It does not reflect the ongoing impact of COVID-19, which is likely to influence demographic and investment experience, at least in the short term. We will continue to monitor these developments and their impact on the plans.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

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, Bonita J. Wurst and Sheryl L. Christensen 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 herein. In addition, GRS meets the requirements of "approved

Actuary's Certification Letter

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,
Gabriel, Roeder, Smith & Company

Brian B. Murphy

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

Bonita J. Wurst

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

Sheryl Christensen

Sheryl L. Christensen, FSA, EA, FCA, MAAA

BBM/BJW/SLC:ah

GRS

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 specific set of actuarial methods and assumptions. The schedules found in the *Actuarial Section* of this *Annual Comprehensive Financial Report*, on the other hand, are based on actuarial assumptions and methods specified by Minnesota Statutes or approved by the Legislative Commission on Pensions and Retirement to determine funding requirements. The demographic actuarial assumptions are based on experience studies of PERA's demographics for each plan conducted by PERA's actuary.

PERA's actuary uses the funding actuarial assumptions disclosed on the following pages when preparing the actuarial valuations. This section includes the *Summary of Actuarial Assumptions and Methods* along with the year adopted for each cost-sharing, multiple-employer defined benefit plan.

While some of the actuarial assumptions used for GASB financial reporting purposes are the same as the actuarial assumptions used for funding purposes, there are a few differences. For example, 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 Statutes.

A significant difference in assumptions for fiscal year 2022 is the difference in the investment return assumption. For GASB work, the actuary used an assumption rate that can be deemed reasonable based on actuarial standards. An investment return assumption of 6.5 percent was deemed within the range of reasonableness for financial reporting purposes. However, for funding purposes the actuary has determined that the current 7.5 percent investment return assumption is no longer reasonable. As a result, the actuary has prepared the funding results in the actuarial section based on the statutory rate of 7.5 percent, but included a statement in the certification letter indicating that the prescribed assumption significantly conflicts with what, in their professional judgment, would be deemed reasonable.

To provide information based on rates that would be considered to be in the reasonable range for an investment return assumption, the actuary has prepared estimates on the impact of changing the assumption rate for funding purposes to 6.5 percent and 8.5 percent. In each case, all other assumptions were unchanged from those used to develop the final valuation results. Those results are provided on the following pages.

There were no plan provision changes made in fiscal year 2022. A summary of current plan provisions is available in the *Notes* to the Financial Information.

For a 10-year schedule of actuarially determined and actual contributions, see the *Schedule of Contributions from Employers and Nonemployers* on pages 79 - 81.

The responsibility for establishing and maintaining a funding policy rests with the Minnesota Legislature.

Summary of Actuarial Assumptions and Methods

Actuarial Value of Assets

General Employees Retirement Plan	July 1, 2022 Estimated Valuation Results		
$ in Billions, Contributions as % of Pay	**Using 6.5%**	**Using 7.5%**	**Using 8.5%**
Normal Cost Rate	9.38%	7.65%	6.39%
Amortization of Unfunded Liability			
Level % of Pay to 2048	6.14%	3.41%	0.68%
Expenses, % of Pay	0.19%	0.19%	0.19%
Total Required Contribution, % of Pay	15.71%	11.25%	7.26%
Contribution Sufficiency/(Deficiency), % of Pay	(1.20%)	3.26%	7.25%
Accrued Liability Funding Ratio	77.7%	87.4%	97.5%
Present Value of Projected Benefits (a)	$39.4	$34.3	$30.3
Present Value of Future Normal Costs (b)	$5.4	$4.1	$3.2
Actuarial Accrued Liability (a-b)	$34.0	$30.2	$27.1
Unfunded Accrued Liability	$7.6	$3.8	$0.7

Police and Fire Retirement Plan	July 1, 2022 Estimated Valuation Results		
$ in Billions, Contributions as % of Pay	**Using 6.5%**	**Using 7.5%**	**Using 8.5%**
Normal Cost Rate	25.79%	20.35%	16.29%
Amortization of Unfunded Liability			
Level % of Pay to 2048	11.57%	4.51%	(2.42%)
Expenses, % of Pay	0.15%	0.15%	0.15%
Total Required Contribution, % of Pay	37.51%	25.01%	14.02%
Contribution Sufficiency/(Deficiency), % of Pay	(5.74%)	6.76%	17.75%
Accrued Liability Funding Ratio	82.5%	93.1%	104.0%
Present Value of Projected Benefits (a)	$15.6	$13.4	$11.7
Present Value of Future Normal Costs (b)	$2.8	$2.0	$1.5
Actuarial Accrued Liability (a-b)	$12.8	$11.4	$10.2
Unfunded Accrued Liability	$2.2	$0.8	($0.4)

Local Correctional Retirement Plan	July 1, 2022 Estimated Valuation Results		
$ in Millions, Contributions as % of Pay	**Using 6.5%**	**Using 7.5%**	**Using 8.5%**
Normal Cost Rate	15.73%	12.50%	10.17%
Amortization of Unfunded Liability			
Level % of Pay to 2048	2.84%	(1.27%)	(5.15%)
Expenses, % of Pay	0.16%	0.16%	0.16%
Total Required Contribution, % of Pay	18.73%	11.39%	5.18%
Contribution Sufficiency/(Deficiency), % of Pay	(4.15%)	3.19%	9.40%
Accrued Liability Funding Ratio	90.0%	105.1%	121.4%
Present Value of Projected Benefits (a)	$1,375.2	$1,145.3	$970.0
Present Value of Future Normal Costs (b)	$271.8	$200.6	$152.5
Actuarial Accrued Liability (a-b)	$1,103.4	$944.7	$817.5
Unfunded Accrued Liability	$110.6	($48.1)	($175.3)

Summary of Actuarial Assumptions and Methods

General Employees Plan

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. Unless noted otherwise, the assumptions prescribed are based on the most recent four-year experience study for the period 2014-2018 dated June 27, 2019. The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated October 2016.

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	7.5% per annum. (2018)
Benefit increases after retirement	1.25% per annum. (2018)
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. (2018)
Inflation	2.25% per year. (2020)
Payroll growth	3.00% per year. (2020)
Mortality rates	
Healthy pre-retirement	Pub-2010 General Employee Mortality Table adjusted for mortality improvements using projection scale MP-2021. Rates are multiplied by a factor of 1.07 for males and 0.98 for females.
Healthy post-retirement	Pub-2010 Healthy General Employee Mortality Table adjusted for mortality improvements using projection scale MP-2021. Rates are multiplied by a factor of 1.02 for males and 0.90 for females.
Disabled retirees	Pub-2010 General/Teacher Disabled Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2021. Rates are set forward two years for males and set forward four years for females.
Mortality rate note:	The Pub-2010 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 18 to 80 and the annuitant mortality table contains mortality rates for ages 50 to 120. We have extended the annuitant mortality table as needed for members younger than age 50 who are receiving a benefit by deriving rates based on the employee table and the juvenile table. Similarly, we have extended the employee table as needed for members older than age 80 by deriving rates based on the annuitant table.
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. Note that significant plan changes reflected in this report may result in behavior changes that are not anticipated in the current retirement rates. (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 former members are increased by 15.0% for vested members and 3.0% for non-vested members to account for the effect that some participants have eligibility for a Combined Service Annuity. (2017)

* Year in parenthesis is the date of adoption.

Summary of Actuarial Assumptions and Methods

General Employees Plan

Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll. (1989)
Refund of contributions	For non-vested members, account balances accumulate interest until the assumed commencement date and are discounted back to the valuation date. Active members decrementing after becoming eligible for a deferred benefit are are assumed to take the contributions accumulated with interest if larger than the value of the benefit.
Commencement of deferred	Members receiving deferred annuities (including current benefits 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 one year 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 45% elect 100% Joint & Survivor option Females: 10% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 30% 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 year. This is equivalent to assuming that reported earnings are pensionable earnings for the year ending on the valuation date.
Changes in actuarial assumptions	The mortality improvement scale was changed from Scale MP-2020 to Scale MP-2021

Summary of Actuarial Assumptions and Methods

General Employees Plan

Age in 2021	Percentage of Members Dying Each Year*					
	Healthy Post-Retirement Mortality**		Healthy Pre-Retirement Mortality**		Disability Mortality**	
	Male	Female	Male	Female	Male	Female
20	0.04%	0.01%	0.04%	0.01%	0.36%	0.18%
25	0.03%	0.01%	0.04%	0.01%	0.31%	0.29%
30	0.05%	0.02%	0.05%	0.02%	0.55%	0.51%
35	0.07%	0.03%	0.08%	0.03%	0.78%	0.80%
40	0.09%	0.04%	0.09%	0.04%	1.02%	1.06%
45	0.12%	0.06%	0.11%	0.05%	1.31%	1.33%
50	0.29%	0.18%	0.15%	0.07%	1.71%	1.55%
55	0.42%	0.26%	0.22%	0.12%	2.18%	1.90%
60	0.65%	0.36%	0.35%	0.19%	2.76%	2.27%
65	0.94%	0.53%	0.51%	0.28%	3.38%	2.58%
70	1.44%	0.84%	0.70%	0.42%	4.02%	3.26%
75	2.42%	1.50%	1.04%	0.70%	5.27%	4.87%
80	4.37%	2.77%	1.66%	1.19%	7.69%	7.83%
85	8.06%	5.27%	7.11%	4.93%	11.59%	12.04%
90	14.03%	9.88%	14.72%	10.76%	17.94%	17.16%

* 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.

**Rates are adjusted for mortality improvements using Scale MP-2021, from a base year of 2010.

Age	Disability Retirement	
	Male	Female
20	0.01%	0.01%
25	0.01%	0.01%
30	0.01%	0.01%
35	0.02%	0.02%
40	0.04%	0.04%
45	0.06%	0.05%
50	0.11%	0.10%
55	0.26%	0.14%
60	0.53%	0.21%
65	0.00%	0.00%
70	0.00%	0.00%

Summary of Actuarial Assumptions and Methods

General Employees Plan

Year	Salary Scale Increase	% Withdrawals Male	% Withdrawals Female
1	10.25%	21.50%	21.50%
2	7.25%	16.25%	17.25%
3	6.00%	11.00%	13.00%
4	5.50%	9.00%	11.00%
5	5.00%	8.00%	9.00%
6	4.70%	7.00%	8.50%
7	4.50%	6.25%	8.00%
8	4.40%	5.50%	7.50%
9	4.30%	5.00%	7.00%
10	4.20%	4.50%	6.00%
11	4.00%	4.25%	5.50%
12	3.90%	4.00%	5.25%
13	3.80%	3.75%	5.00%
14	3.70%	3.50%	4.75%
15	3.65%	3.00%	4.25%
16	3.60%	2.75%	3.75%
17	3.50%	2.50%	3.50%
18	3.40%	2.25%	3.00%
19	3.40%	2.00%	2.80%
20	3.40%	1.90%	2.70%
21	3.30%	1.85%	2.60%
22	3.30%	1.80%	2.50%
23	3.30%	1.75%	2.40%
24	3.20%	1.70%	2.30%
25	3.20%	1.65%	2.20%
26	3.10%	1.60%	2.10%
27	3.00%	1.55%	2.00%
28	3.00%	1.50%	1.50%
29	3.00%	1.00%	1.50%
30+	3.00%	1.00%	1.50%

Summary of Actuarial Assumptions and Methods

Police and Fire Plan

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. Unless otherwise noted, the assumptions prescribed are based on the last experience study, dated July 14, 2020. The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated October 2016.

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	7.5% per annum. (2018)
Benefit increases after retirement	1.00% for all years, no trigger. (2018)
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. (2018)
Inflation	2.25% per year. (2021)
Payroll growth	3.00% per year. (2021)
Mortality rates	
Healthy pre-retirement	Pub-2010 Public Safety Employee Mortality Table adjusted for mortality improvements using projection scale MP-2021
Healthy post-retirement	Pub-2010 Healthy Retired Public Safety Mortality Table adjusted for mortality improvements using projection scale MP-2021. Male rates are multiplied by a factor of 0.98.
Disabled retirees	Pub-2010 Public Safety Disabled Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2021. Males rates are multiplied by a factor of 1.05.
Mortality rate note:	The Pub-2010 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 18 to 80 and the annuitant mortality table contains mortality rates fro age 50 to 120. We have extended the annuitant mortality table as needed for members and beneficiaries younger than age 50 who are receiving a benefit by deriving rates based on the employee table and the juvenile table. Similarly, we have extended the employee table as needed for members older than age 80 by deriving rates based on the annuitant table.
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. Note that significant plan changes reflected in this report may result in behavior changes that are not anticipated in the current retirement rates. (2016)
Withdrawal	Service related rates based on actual experience; see table of sample rates. (2021)
Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related. (2021)
Allowance for combined service annuity	Liabilities for former members are increased by 33.0% for vested members and 2.0% for non-vested members to account for the effect of some participants having eligibility for a Combined Service Annuity. (2017)
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll. (1989)

* Year in parenthesis is the date of adoption.

Summary of Actuarial Assumptions and Methods

Refund of contributions	For non-vested members, account balances accumulate interest until the assumed commencement date and are discounted back to the valuation date. Active members decrementing after becoming eligible for a benefit are assumed to take the contributions accumulated with interest if larger than the value of the 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 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 be two years older than females. 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: 7.5% elect 25% Joint & Survivor option 15% elect 50% Joint & Survivor option 12.5% elect 75% Joint & Survivor option 55% elect 100% Joint & Survivor option Females: 15% elect 25% Joint & Survivor option 30% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 20% 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 year. This is equivalent to assuming that reported earnings are pensionable earnings for the year ending on the valuation date.
Changes in actuarial assumptions	The base mortality table for disabled annuitants was changed from the MP-2020 to MN-2021

Summary of Actuarial Assumptions and Methods

Police and Fire Plan

Age in 2021	Percentage of Members Dying Each Year* — Healthy Post-Retirement Mortality** Male	Female	Healthy Pre-Retirement Mortality** Male	Female	Disability Mortality** Male	Female
20	0.04%	0.02%	0.04%	0.02%	0.13%	0.06%
25	0.04%	0.02%	0.04%	0.02%	0.13%	0.08%
30	0.06%	0.04%	0.06%	0.04%	0.18%	0.12%
35	0.07%	0.05%	0.07%	0.05%	0.22%	0.17%
40	0.08%	0.06%	0.08%	0.06%	0.24%	0.19%
45	0.13%	0.08%	0.09%	0.07%	0.27%	0.22%
50	0.18%	0.14%	0.11%	0.08%	0.35%	0.28%
55	0.29%	0.26%	0.17%	0.12%	0.48%	0.46%
60	0.51%	0.46%	0.27%	0.18%	0.80%	0.73%
65	0.87%	0.74%	0.41%	0.22%	1.26%	1.01%
70	1.42%	1.17%	0.71%	0.40%	1.86%	1.41%
75	2.46%	2.02%	1.27%	0.80%	3.03%	2.16%
80	4.49%	3.63%	2.40%	1.65%	5.28%	3.63%
85	8.23%	6.46%	7.52%	5.66%	8.90%	6.46%
90	14.58%	11.29%	14.87%	11.29%	15.62%	11.29%

*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.

**Rates are adjusted for mortality improvements using Scale MP-2021, from a base year of 2010.

Years of Service	Vesting Percent if Hired — Before 7/1/10	After 6/30/10 & Before 7/1/14	After 6/30/14
5	100.00%	50.00%	0.00%
6	100.00%	60.00%	0.00%
7	100.00%	70.00%	0.00%
8	100.00%	80.00%	0.00%
9	100.00%	90.00%	0.00%
10	100.00%	100.00%	50.00%
11	100.00%	100.00%	55.00%
12	100.00%	100.00%	60.00%
13	100.00%	100.00%	65.00%
14	100.00%	100.00%	70.00%
15	100.00%	100.00%	75.00%
16	100.00%	100.00%	80.00%
17	100.00%	100.00%	85.00%
18	100.00%	100.00%	90.00%
19	100.00%	100.00%	95.00%
20+	100.00%	100.00%	100.00%

Age	Disability Retirement — Male	Female
20	0.11%	0.11%
25	0.14%	0.14%
30	0.21%	0.21%
35	0.34%	0.34%
40	0.54%	0.54%
45	0.62%	0.62%
50	0.95%	0.95%
55	1.30%	1.30%
60	1.30%	1.30%

Summary of Actuarial Assumptions and Methods

Police and Fire Plan

	Rates of Service		Withdrawal	Salary Scale	
Age	Retirement	Year	Rates	Year	Increase
50	7.50%	1	6.00%	1	11.75%
51	5.00%	2	4.00%	2	9.25%
52	5.00%	3	2.75%	3	8.00%
53	7.50%	4	2.50%	4	7.00%
54	10.00%	5	2.50%	5	5.50%
55	30.00%	6	2.25%	6	4.80%
56	20.00%	7	2.25%	7	4.60%
57	22.50%	8	2.00%	8	4.30%
58	25.00%	9	2.00%	9	4.10%
59	25.00%	10	2.00%	10	4.00%
60	20.00%	11	1.75%	11	3.90%
61	25.00%	12	1.50%	12	3.80%
62	30.00%	13	1.50%	13	3.70%
63	27.50%	14	1.50%	14	3.60%
64	27.50%	15	1.50%	15	3.50%
65	50.00%	16	1.50%	16	3.50%
66	40.00%	17	1.50%	17	3.50%
67	50.00%	18	1.25%	18	3.50%
68	50.00%	19	1.25%	19	3.40%
69	50.00%	20	1.25%	20	3.40%
70+	100.00%	21+	1.00%	21	3.40%
				22	3.30%
				23	3.15%
				24+	3.00%

Summary of Actuarial Assumptions and Methods

Correctional Plan

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. Unless noted otherwise, the assumptions prescribed are based on the last experience study, dated July 10, 2020.The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated October 2016.

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. (1999)*
Asset Valuation Method	Fair market value smoothed over 5 years. (2008)
Investment return	7.5% per annum. (2018)
Benefit increases after retirement	2.00% per annum. (2018)
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. (2018)
Inflation	2.25% per year. (2021)
Payroll growth	3.00% per year. (2021)
Mortality rates	
Healthy Pre-retirement	Pub-2010 Public Safety Mortality Table adjusted for mortality improvements using projection scale MP-2021.
Healthy Post-retirement	Pub-2010 Healthy Retired Public Safety Mortality Table adjusted for mortality improvements using projections scale MP-2021. Male rates are adjusted by a factor of 0.98.
Disabled retirees	Pub-2010 Public Safety Disabled Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2021. Male rates are adjusted by a factor of 1.05.
Mortality rate note:	The Pub-2010 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 18 to 80 and the annuitant mortality table contains mortality rates for ages 50 to 120. We have extended the annuitant mortality table as needed for members and beneficiaries younger than 50 who are receiving a benefit by deriving rates based on the employee table and the juvenile table. Similarly, we have extended the employee table as needed for members older that age 80 by deriving rates based on the annuitant table.
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 assume to retire in one year. Note that significant plan changes reflected in this report may result in behavior changes that are not anticipated in the current retirement rates. (2016)
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:
Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related.

Withdrawal select rates:

Year	Select Withdrawal Rates
1	27%
2	23%
3	17%

* Year in parenthesis is the date of adoption.

Summary of Actuarial Assumptions and Methods

Correctional Plan`

Allowance for combined service annuity	Liabilities for former members are increased by 35.0% for vested members and 1.0% for non-vested members to account for the effect of some
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll. (1989)
Refund of contributions	For non-vested members, account balances accumulate interest until the assumed commencement date and are discounted back to the valuation date. Active members decrementing after becoming eligible for a benefit are assumed to take the contributions accumulated with interest if larger than the value of the 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	75% 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: 10% elect 25% Joint & Survivor option 15% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 50% elect 100% Joint & Survivor option Females: 10% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 25% 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.
Changes in actuarial assumptions	The base mortality table for disabled annuitants was changed from the MP-2020 to MN-2021

Summary of Actuarial Assumptions and Methods

Correctional Plan

Age in 2021	Percentage of Members Dying Each Year*					
	Healthy Post-Retirement Mortality**		Healthy Pre-Retirement Mortality**		Disability** Mortality	
	Male	Female	Male	Female	Male	Female
20	0.04%	0.02%	0.04%	0.02%	0.13%	0.06%
25	0.04%	0.02%	0.04%	0.02%	0.13%	0.08%
30	0.06%	0.04%	0.06%	0.04%	0.18%	0.12%
35	0.07%	0.05%	0.07%	0.05%	0.22%	0.17%
40	0.08%	0.06%	0.08%	0.06%	0.24%	0.19%
45	0.13%	0.08%	0.09%	0.07%	0.27%	0.22%
50	0.18%	0.14%	0.11%	0.08%	0.35%	0.28%
55	0.29%	0.26%	0.17%	0.12%	0.48%	0.46%
60	0.51%	0.46%	0.27%	0.18%	0.80%	0.73%
65	0.87%	0.74%	0.41%	0.22%	1.26%	1.01%
70	1.42%	1.17%	0.71%	0.40%	1.86%	1.41%
75	2.46%	2.02%	1.27%	0.80%	3.03%	2.16%
80	4.49%	3.63%	2.40%	1.65%	5.28%	3.63%
85	8.23%	6.46%	7.52%	5.66%	8.90%	6.46%
90	14.58%	11.29%	14.87%	11.29%	15.62%	11.29%

*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.

**Rates are adjusted for mortality improvement using Scale MP-2021, form a base year of 2010.

Age	Withdrawal Rates		Disability Retirement	
	Male	Female	Male	Female
20	17.00%	17.00%	0.04%	0.04%
25	17.00%	17.00%	0.06%	0.06%
30	11.00%	13.00%	0.10%	0.08%
35	7.50%	9.00%	0.18%	0.17%
40	5.50%	6.50%	0.21%	0.18%
45	3.50%	4.75%	0.31%	0.39%
50	3.00%	3.00%	0.55%	0.70%
55	0.00%	0.00%	0.78%	0.93%
60	0.00%	0.00%	0.92%	1.30%
65	0.00%	0.00%	1.00%	1.30%

Summary of Actuarial Assumptions and Methods

Correctional Plan

Age	Rates of Service Retirement
50	5.00%
51	5.00%
52	5.00%
53	5.00%
54	7.00%
55	15.00%
56	10.00%
57	11.00%
58	11.00%
59	11.00%
60	15.00%
61	15.00%
62	25.00%
63	25.00%
64	30.00%
65	40.00%
66	50.00%
67	40.00%
68	30.00%
69	40.00%
70+	100.00%

Salary Scale

Age	Increase
20	11.00%
25	7.75%
30	6.00%
35	5.50%
40	4.75%
45	4.00%
50	3.75%
55	3.50%
60	3.00%
65	3.00%
70+	3.00%

Schedule of Funding Progress

Last 10 Years (in thousands, unaudited)

General Employees Plan

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]
06/30/2022	$26,397,045	$30,189,649	$3,792,604	87.44%	$7,042,154	53.9%
06/30/2021	$24,909,060	$29,215,560	$4,306,500	85.26%	$6,761,354	63.7%
06/30/2020	$22,792,333	$28,626,916	$5,834,583	79.62%	$6,698,754	87.1%
06/30/2019	$21,979,022	$27,969,744	$5,990,722	78.58%	$6,523,754	91.8%
06/30/2018	$21,129,746	$27,101,067	$5,971,321	77.97%	$6,298,815	94.8%
06/30/2017	$19,916,322	$25,615,722	$5,699,400	77.75%	$6,156,985	92.6%
06/30/2016	$18,765,863	$24,848,409	$6,082,546	75.52%	$5,773,708	105.3%
06/30/2015	$17,974,439	$23,560,951	$5,586,512	76.29%	$5,549,255	100.7%
06/30/2014	$15,644,540	$21,282,504	$5,637,964	73.51%	$5,351,920	105.3%
06/30/2013	$14,113,295	$19,379,769	$5,266,474	72.82%	$5,246,928	100.4%

Police and Fire Plan

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]
06/30/2022	$10,563,877	$11,351,467	$787,590	93.06%	$1,127,314	69.9%
06/30/2021	$9,931,003	$10,793,845	$862,842	92.01%	$1,096,195	78.7%
06/30/2020	$9,036,069	$10,291,567	$1,255,498	87.80%	$1,069,481	117.4%
06/30/2019	$8,661,613	$9,909,153	$1,247,540	87.41%	$1,011,421	123.3%
06/30/2018	$8,320,094	$9,552,804	$1,232,710	87.10%	$976,657	126.2%
06/30/2017	$7,840,549	$9,199,208	$1,358,659	85.23%	$944,296	143.9%
06/30/2016	$7,385,777	$8,417,621	$1,031,844	87.74%	$881,222	117.1%
06/30/2015	$7,076,271	$8,460,477	$1,384,206	83.64%	$845,076	163.8%
06/30/2014	$6,525,019	$8,151,328	$1,626,309	80.05%	$820,333	198.2%
06/30/2013	$5,932,945	$7,304,032	$1,371,087	81.23%	$796,188	172.2%

Correctional Plan

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]
6/30/2022	$992,811	$944,741	($48,070)	105.09%	$220,292	(21.8%)
6/30/2021	$904,434	$870,567	($33,867)	103.89%	$222,093	(15.2)%
6/30/2020	$794,221	$814,456	$20,235	97.52%	$217,702	9.3%
6/30/2019	$729,570	$758,268	$28,698	96.22%	$214,151	13.4%
6/30/2018	$666,012	$696,842	$30,830	95.58%	$205,077	15.0%
6/30/2017	$595,366	$629,870	$34,504	94.52%	$200,103	17.2%
6/30/2016	$529,879	$553,840	$23,961	95.67%	$188,816	12.7%
6/30/2015	$475,963	$498,052	$22,089	95.56%	$179,623	12.3%
6/30/2014	$410,489	$426,508	$16,019	96.24%	$172,041	9.3%
6/30/2013	$346,778	$381,179	$34,401	90.98%	$164,820	20.9%

Solvency Test

Last 10 Years (in thousands, unaudited)

General Employees Plan

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
6/30/2022	$3,614,311	$20,019,859	$6,555,479	$26,397,045	100%	100%	42.1%
6/30/2021	$3,567,480	$19,086,577	$6,561,503	$24,909,060	100%	100%	34.4%
6/30/2020	$3,471,543	$18,409,104	$6,746,269	$22,792,333	100%	100%	13.5%
6/30/2019	$3,346,315	$17,944,118	$6,679,311	$21,979,022	100%	100%	10.3%
6/30/2018	$3,239,795	$17,185,254	$6,676,018	$21,129,746	100%	100%	10.6%
6/30/2017	$3,148,413	$15,800,416	$6,666,893	$19,916,322	100%	100%	14.5%
6/30/2016	$3,018,468	$15,706,371	$6,123,570	$18,765,863	100%	100%	0.7%
6/30/2015	$2,915,621	$14,666,626	$5,978,704	$17,974,439	100%	100%	6.6%
6/30/2014	$2,827,447	$12,614,999	$5,840,058	$15,644,540	100%	100%	3.5%
6/30/2013	$2,739,037	$11,432,882	$5,207,850	$14,113,295	100%	99%	—%

Police and Fire Plan

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
06/30/22	$1,034,615	$7,453,436	$2,863,416	$10,563,877	100%	100%	72.5%
06/30/21	$1,007,796	$6,980,151	$2,805,898	$9,931.003	100%	100%	69.2%
06/30/20	$990,616	$6,448,667	$2,852,284	$9,036.069	100%	100%	56.0%
06/30/19	$923,025	$6,271,401	$2,714,727	$8,661.613	100%	100%	54.0%
06/30/18	$877,470	$6,021,677	$2,653,657	$8,320.094	100%	100%	53.5%
06/30/17	$821,166	$5,744,606	$2,633,436	$7,840.549	100%	100%	48.4%
06/30/16	$769,533	$5,279,381	$2,368,707	$7,385.777	100%	100%	56.4%
06/30/15	$715,501	$5,310,721	$2,434,255	$7,076.271	100%	100%	43.1%
06/30/14	$662,732	$5,190,447	$2,298,149	$6,525.019	100%	100%	29.2%
06/30/13	$647,401	$4,635,133	$2,021,498	$5,932.945	100%	100%	32.2%

Correctional Plan

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
06/30/22	$88,795	$559,998	$295,948	$992,811	100%	100%	116.2%
06/30/21	$94,212	$473,124	$303,231	$904,434	100%	100%	111.2%
06/30/20	$91,782	$416,648	$306,026	$794,221	100%	100%	93.4%
06/30/19	$89,874	$369,015	$299,379	$729,570	100%	100%	90.4%
06/30/18	$86,410	$326,339	$284,093	$666,012	100%	100%	89.1%
06/30/17	$84,107	$280,963	$264,800	$595,366	100%	100%	87.0%
06/30/16	$81,675	$228,642	$243,523	$526,879	100%	100%	88.9%
06/30/15	$77,771	$194,694	$225,587	$475,963	100%	100%	90.2%
06/30/14	$75,492	$154,273	$196,743	$410,489	100%	100%	91.9%
06/30/13	$70,603	$134,069	$176,507	$346,778	100%	100%	80.5%

Schedule of Active Members Valuation Data

Last 10 Years

General Employees Plan

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/22	149,987	$7,042,154,000	$46,952	3.7%
06/30/21	149,281	$6,761,354,000	$45,293	4.0%
06/30/20	153,741	$6,698,754,000	$43,572	2.9%
06/30/19	154,130	$6,523,754,000	$42,326	2.9%
06/30/18	153,059	$6,298,815,000	$41,153	2.2%
06/30/17	152,867	$6,156,985,000	$40,277	3.8%
06/30/16	148,745	$5,773,708,000	$38,816	1.9%
06/30/15	145,650	$5,549,255,000	$38,100	2.0%
06/30/14	143,343	$5,351,920,000	$37,336	-0.5%
06/30/13	139,763	$5,246,928,000	$37,542	1.7%

Police and Fire Plan

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/22	11,629	$1,127,314,000	$96,940	3.5%
06/30/21	11,705	$1,096,195,000	$93,652	5.3%
06/30/20	12,025	$1,069,481,000	$88,938	3.4%
06/30/19	11,763	$1,011,421,000	$85,983	2.8%
06/30/18	11,673	$976,657,000	$83,668	2.1%
06/30/17	11,522	$944,296,000	$81,956	6.0%
06/30/16	11,398	$881,222,000	$77,314	2.1%
06/30/15	11,157	$845,076,000	$75,744	0.4%
06/30/14	10,879	$820,333,000	$75,405	3.6%
06/30/13	10,940	$796,188,000	$72,778	(0.5)%

Correctional Plan

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/22	3,564	$220,292,000	$61,810	5.4%
06/30/21	3,788	$222,093,000	$58,631	3.8%
06/30/20	3,855	$217,702,000	$56,473	4.6%
06/30/19	3,965	$214,151,000	$54,010	4.8%
06/30/18	3,981	$205,077,000	$51,514	(1.1%)
06/30/17	3,842	$200,103,000	$52,083	5.6%
06/30/16	3,827	$188,816,000	$49,338	1.4%
06/30/15	3,692	$179,623,000	$48,652	1.9%
06/30/14	3,603	$172,041,000	$47,749	1.2%
06/30/13	3,493	$164,820,000	$47,186	(0.7)%

For a summary of changes in the nature of the plan, actuarial methods and assumptions used, and the year change occurred, see the *Summary of Actuarial Assumptions and Methods* on pages 106 - 117.

Schedule of Retirees and Beneficiaries

Last 10 Years

General Employees Plan

Valuation Date	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
06/30/22	7,663	$139,178,027	3,915	$65,283,792	115,980	$1,760,943,656	4.4%	$15,183
06/30/21	7,572	$126,930,158	3,832	$63,936,168	112,232	$1,687,049,421	3.9%	$15,032
06/30/20	6,837	$118,695,452	3,588	$57,858,288	108,492	$1,624,055,431	3.9%	$14,969
06/30/19	6,842	$122,035,019	3,371	$57,475,656	105,243	$1,563,218,267	4.3%	$14,853
06/30/18	6,878	$114,687,040	3,307	$55,454,136	101,772	$1,498,658,904	4.1%	$14,726
06/30/17	7,132	$117,947,000	3,219	$53,791,000	98,201	$1,439,426,000	4.7%	$14,658
06/30/16	6,783	$110,107,000	3,087	$52,933,000	94,288	$1,375,270,000	4.3%	$14,586
06/30/15*	10,537	$241,065,000	3,079	$54,630,000	90,592	$1,318,096,000	16.5%	$14,550
06/30/14	6,700	$104,862,000	2,649	$40,605,000	83,134	$1,131,661,000	6.0%	$13,612
06/30/13	6,166	$92,483,000	2,618	$40,328,000	79,083	$1,067,404,000	5.1%	$13,497

*MERF merged with the General Employees Plan effective January 1, 2015.

Police and Fire Plan

Valuation Date	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
06/30/22	851	$54,242,164	400	$19,306,740	12,107	$644,437,978	5.7%	$53,229
06/30/21	809	$53,357,862	354	$16,938,648	11,656	$609,502,554	6.4%	$52,291
06/30/20	549	$32,891,144	379	$18,134,352	11,201	$573,083,340	2.6%	$51,164
06/30/19	606	$37,676,147	331	$15,535,284	11,031	$558,326,548	4.1%	$50,614
06/30/18	474	$28,399,145	297	$13,622,460	10,756	$536,185,685	2.8%	$49,850
06/30/17	517	$31,389,000	290	$12,513,000	10,579	$521,409,000	3.8%	$49,287
06/30/16	447	$25,711,000	304	$13,615,000	10,352	$502,533,000	2.5%	$48,545
06/30/15	431	$31,109,000	261	$11,409,000	10,209	$490,437,000	4.2%	$48,040
06/30/14	736	$43,581,000	276	$11,214,000	10,039	$470,737,000	7.4%	$46,891
06/30/13	442	$27,616,000	269	$10,645,000	9,579	$438,370,000	4.0%	$45,764

Correctional Plan

Valuation Date	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
06/30/22	184	$4,247,686	39	$605,820	1,717	$24,960,387	17.1%	$14,537
06/30/21	162	$3,630,746	33	$384,756	1,572	$21,318,521	18.0%	$13,561
06/30/20	150	$1,932,914	25	$281,436	1,443	$18,072,531	10.1%	$12,524
06/30/19	137	$2,395,199	12	$162,096	1,318	$16,421,053	15.7%	$12,459
06/30/18	134	$2,471,430	26	$318,480	1,193	$14,187,950	17.9%	$11,893
06/30/17	142	$2,365,000	24	$329,000	1,085	$12,035,000	20.4%	$11,092
06/30/16	118	$1,645,000	15	$146,000	967	$9,999,000	17.6%	$10,340
06/30/15	121	$1,722,000	26	$336,000	864	$8,500,000	19.5%	$9,838
06/30/14	96	$1,131,000	17	$274,000	769	$7,114,000	13.7%	$9,251
06/30/13	100	$1,125,000	17	$180,000	690	$6,257,000	17.8%	$9,068

Determination of Contribution Sufficiency

As of June 30, 2022 (in thousands)

	General Employees Plan		Police and Fire Plan		Correctional Plan	
	Percent of Payroll	Dollar Amount	Percent of Payroll	Dollar Amount	Percent of Payroll	Dollar Amount
A. Statutory Contributions - M.S. Chapter 353						
1. Employee Contributions	6.50 %	$468,743	11.80 %	$133,650	5.83 %	$13,318
2. Employer Contributions	7.50 %	540,854	17.70 %	200,475	8.75 %	19,989
3. Employer Supplemental	0.29 %	21,000	0.00 %	0	0.00%	0
4. Minneapolis Police Contributions	0.00%	0	0.40 %	4,490	0.00%	0
5. Minneapolis Fire Contributions	0.00%	0	0.28 %	3,189	0.00%	0
6. State of Minnesota	0.22 %	16,000	1.59 %	18,000	0.00%	0
7. Total	14.51 %	$1,046,597	31.77 %	$359,804	14.58 %	$33,307
B. Actuarially Determined Contributions - M.S. Chapter 356						
1. Normal Cost						
a. Retirement Benefits	5.38 %	$387,962	14.05 %	$159,134	7.34 %	$16,768
b. Disability Benefits	0.19 %	13,709	4.06 %	45,985	2.12 %	4,843
c. Survivor Benefits	0.09 %	6,491	0.55 %	6,229	0.10 %	228
d. Deferred Benefits	1.46 %	105,289	1.40 %	15,857	2.26 %	5,163
e. Refunds	0.53 %	38,221	0.29 %	3,285	0.68 %	1,553
f. Total	7.65 %	551,672	20.35 %	230,490	12.50 %	28,555
2. Amortization of Supplemental Contribution UAAL	3.41 %	245,902	4.51 %	51,081	(1.27)%	(2,901)
3. Allowance for Administrative Expenses	0.19 %	13,701	0.15 %	1,699	0.16 %	366
4. Total	11.25 %	$811,275	25.01 %	$283,270	11.39 %	$26,020
C. Contribution Sufficiency/ (Deficiency) (A.7 - B.4)	3.26%	$235,322	6.76%	$76,534	3.19%	$7,287
Projected annual payroll for fiscal year beginning July 1, 2021		$7,211,205		$1,132,625		$228,446
*The required contribution on a market value of assets basis of payroll is	11.58%		25.86%		11.85%	

Determination of Actuarial Value of Assets

As of June 30, 2022 (in thousands)

General Employees Plan

Fair value of assets available for benefits (a)				**$26,034,185**
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2022	($3,863,099)	80%	($3,090,479)	
Year ended June 30, 2021	$5,043,720	60%	$3,026,232	
Year ended June 30, 2020	($724,261)	40%	($289,704)	
Year ended June 30, 2019	($44,547)	20%	($8,909)	
Total unrecognized return (b)				**(362,860)**
Actuarial Value of Assets (a-b)				**$26,397,045**

Police and Fire Plan

Fair value of assets available for benefits (a)				**$10,415,493**
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2022	($1,545,237)	80%	($1,236,190)	
Year ended June 30, 2021	$2,009,123	60%	$1,205,474	
Year ended June 30, 2020	($285,391)	40%	($114,156)	
Year ended June 30, 2019	($17,561)	20%	($3,512)	
Total unrecognized return (b)				**(148,384)**
Actuarial Value of Assets (a-b)				**$10,563,877**

Correctional Plan

Fair value of assets available for benefits (a)				**$975,315**
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2022	($143,904)	80%	($115,123)	
Year ended June 30, 2021	$179,252	60%	$107,551	
Year ended June 30, 2020	($24,475)	40%	($9,790)	
Year ended June 30, 2019	($671)	20%	($134)	
Total unrecognized return (b)				**(17,496)**
Actuarial Value of Assets (a-b)				**$992,811**

Schedule of Changes in Unfunded Actuarial Accrued Liabilities (UAAL)

For the Fiscal Year Ended June 30, 2022 (in thousands)

	General Employees Plan	Police and Fire Plan	Correctional Plan
A. UAAL at Beginning of Year (7/1/21)	**$4,306,500**	**$862,842**	**$(33,867)**
B. Change Due to Interest Requirements and Current Rate of Funding			
1. Normal Cost and Expenses	541,428	224,670	29,684
2. Contributions	(1,020,031)	(357,439)	(32,070)
3. Interest on A, B1, and B2	305,040	59,734	(2,630)
C.Expected UAAL at End of Year (A+B)	**4,132,937**	**789,807**	**(38,883)**
D. Increase (Decrease) Due to Actuarial Losses (Gains)Because of Experience Deviations from Expected*			
1. Age and Service Retirements	21,418	7,823	1,707
2. Disability Retirements	(1,842)	73,062	(3,081)
3. Death-in-Service Benefits	(965)	150	(54)
4. Withdrawals	(73,179)	(3,843)	(7,365)
5. Salary Increases	111,005	81,582	5,618
6. Investment Income	(440,495)	(178,561)	(14,335)
7. Mortality of Annuitants	(44,951)	(24,996)	(730)
8. January 1, 2022 Annual Increase	40,357	0	1,358
9. Other Items	(11,101)	28,197	6,434
E. UAAL at End of Year Before Plan Amendments and Changes in Actuarial Assumptions (C+D)	**3,733,184**	**773,221**	**(49,331)**
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	59,420	14,369	1,261
H. Change in Unfunded Actuarial Accrued Liability Due to Changes in Methodology	0	0	0
I. UAAL at End of Year 6/30/2022 (E+F+G+H)	**$3,792,604**	**$787,590**	**$(48,070)**

* 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. January 1 benefit increase is greater than expected, there is a loss, if less, a gain.
9. Miscellaneous gains and losses.

STATISTICAL SECTION

2022 ANNUAL COMPREHENSIVE FINANCIAL REPORT

SUPPORT

The COVID-19 pandemic increased the world's reliance on information technology and PERA was no exception. To support PERA's operations and its increase in reliance and demand on information technology, PERA expanded its Information Systems Division in fiscal year 2022 and will continue to do so in fiscal year 2023.

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Introduction

October 19, 2022

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 statistics 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 Pai*d 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.

Principal Participating Employers shows the top ten participating employers in each plan compared to the top ten employers from ten years ago. In addition, information is displayed on how to view the full-listing of all participating employers and the contributions submitted to PERA. The final schedule, *Privatized Employers*, lists the privatized employers per Minnesota Statute Chapter 325F.

The information contained in this section was produced by PERA's actuary and 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*

	2022	2021	2020	2019
Additions				
Employer Contributions	$546,291	$524,685	$509,821	$515,444
Member Contribution	457,740	439,488	435,419	424,044
State Contributions	16,000	16,000	16,000	16,000
Investment Income	(1,749,186)	6,712,710	931,041	1,547,224
Other	142	182	267	154
Total Additions to Fiduciary Net Position	(729,013)	7,693,065	1,892,548	2,502,866
Deductions				
Benefits	1,737,905	1,666,103	1,604,842	1,536,071
Refunds	73,152	58,027	84,947	65,834
Administrative Expenses	13,398	12,741	12,268	13,470
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	1,824,455	1,736,871	1,702,057	1,615,375
Change in Fiduciary Net Position	**($2,553,468)**	**$5,956,194**	**$190,491**	**$887,491**

** The Minneapolis Employees Retirement Fund merged into the General Employees Retirement Fund on 01/01/2015*
The General Fund has been restated to include Minneapolis Employees Retirement Fund for the ten-year schedule.

Police and Fire Fund

	2022	2021	2020	2019
Additions				
Employer Contributions	$206,416	$201,129	$193,819	$174,817
Member Contribution	133,023	129,351	123,525	111,762
State Contributions	18,000	18,000	13,500	13,500
Investment Income	(700,942)	2,672,826	368,949	609,512
Other	(20)	23	260	54
Total Additions to Fiduciary Net Position	(343,523)	3,021,329	700,053	909,645
Deductions				
Benefits	633,255	592,687	567,040	547,699
Refunds	4,196	3,060	3,181	3,283
Administrative Expenses	1,634	941	924	1,018
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	639,085	596,688	571,145	552,000
Change in Fiduciary Net Position	**$(982,608)**	**$2,424,641**	**$128,908**	**$357,645**

Correctional Fund

	2022	2021	2020	2019
Additions				
Employer Contributions	$19,227	$19,351	$19,043	$18,676
Member Contributions	12,843	12,948	12,692	12,485
Investment Income	(66,015)	238,666	31,774	50,853
Other	0	1	0	0
Total Additions to Fiduciary Net Position	(33,945)	270,966	63,509	82,014
Deductions				
Benefits	23,372	20,088	17,569	15,381
Refunds	2,713	2,140	2,709	2,244
Administrative Expenses	371	344	332	361
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	26,456	22,572	20,610	17,986
Change in Fiduciary Net Position	**$(60,401)**	**$248,394**	**$42,899**	**$64,028**

Schedule of Changes in Fiduciary Net Position

2018	2017	2016	2015	2014	2013
$488,819	$477,888	$459,978	$435,265	$413,677	$404,099
409,423	400,204	375,291	353,765	334,865	328,359
16,000	6,000	6,000	21,575	24,000	24,000
2,063,582	2,682,901	(20,851)	777,621	2,906,811	2,011,862
56	411	431	281	644	8
2,977,880	3,567,404	820,849	1,588,507	3,679,997	2,768,328
1,470,450	1,413,448	1,359,176	1,301,396	1,244,332	1,189,398
42,589	37,234	37,209	35,706	38,311	35,922
11,943	11,292	11,110	10,377	10,007	10,028
0	0	0	0	0	23
1,524,982	1,461,974	1,407,495	1,347,479	1,292,650	1,235,371
$1,452,898	**$2,105,430**	**($586,646)**	**$241,028**	**$2,387,347**	**$1,532,957**

2018	2017	2016	2015	2014	2013
$170,781	$166,329	$156,065	$144,317	$132,632	$125,995
105,479	101,984	95,172	88,733	81,213	76,434
9,000	9,000	9,000	9,000	9,000	0
813,966	1,058,942	-8,949	317,556	1,158,389	806,742
58	24	3	84	18	24
1,099,284	1,336,279	251,291	559,690	1,381,252	1,009,195
528,468	512,379	498,608	481,330	452,462	431,726
1,902	2,119	2,391	1,953	1,633	2,020
886	992	906	803	798	755
0	0	0	0	0	0
531,256	515,490	501,905	484,086	454,893	434,501
$568,028	**$820,789**	**($250,614)**	**$75,604**	**$926,359**	**$574,694**

2018	2017	2016	2015	2014	2013
$17,871	$17,489	$16,490	$15,736	$15,054	$14,498
11,956	11,666	11,008	10,472	10,030	9,609
62,962	78,363	209	20,373	69,451	44,378
1	0	0	0	0	0
92,790	107,518	27,707	46,581	94,535	68,485
13,183	11,033	9,381	7,777	6,711	5,757
1,364	1,478	982	1,057	1,105	1,177
308	330	292	247	236	209
0	0	0	0	1	0
14,855	12,841	10,655	9,081	8,053	7,143
$77,935	**$94,677**	**$17,052**	**$37,500**	**$86,482**	**$61,342**

Schedule of Changes in Fiduciary Net Position

Last 10 Fiscal Years (in thousands)

Volunteer Firefighter Fund

	2022	2021	2020	2019
Additions				
Employer Contributions	$998	$529	$1,051	$1,181
State Contribution	5,349	5,059	4,580	3,993
Investment Income	(19,459)	24,776	7,535	7,682
Other (mainly initial transfer of assets)	5,522	2,355	4,802	10,916
Total Additions to Fiduciary Net Position	(7,590)	32,719	17,968	23,772
Deductions				
Benefits	5,142	5,627	7,057	4,709
Administrative Expenses	161	12	48	111
Other Deductions**	0	0	250	0
Total Deductions from Fiduciary Net Position	5,303	5,639	7,355	4,820
Change in Fiduciary Net Position	**$(12,893)**	**$27,080**	**$10,613**	**$18,952**

**** Other Deductions and Administrative Expenses were restated to reflect departments that transferred out of the Volunteer Firefighter Fund**

Defined Contribution Fund

	2022	2021	2020	2019
Additions				
Employer Contributions	$2,242	$2,133	$2,160	$2,084
Member Contributions	2,127	2,066	2,002	1,957
Investment Income	(12,084)	23,301	5,227	5,440
Other	0	6	0	0
Total Additions to Fiduciary Net Position	(7,715)	27,506	9,389	9,481
Deductions				
Refunds	8,067	6,986	3,971	5,959
Administrative Expenses	298	279	234	214
Total Deductions from Fiduciary Net Position	8,365	7,265	4,205	6,173
Change in Fiduciary Net Position	**$(16,080)**	**$20,241**	**$5,184**	**$3,308**

Schedule of Changes in Fiduciary Net Position

2018	2017	2016	2015	2014	2013
$938	$716	$332	$226	$414	$291
3,522	2,659	1,811	1,430	900	361
4,681	6,409	1,325	880	2,623	1,082
8,048	14,206	20,401	4,667	7,953	7,984
17,189	23,990	23,869	7,203	11,890	9,718
4,161	2,700	1,644	1,221	1,096	838
70	61	132	86	71	38
0	0	0	0	0	0
4,231	2,761	1,776	1,307	1,167	876
$12,958	**$21,229**	**$22,093**	**$5,896**	**$10,723**	**$8,842**

2018	2017	2016	2015	2014	2013
$2,036	$1,822	$1,965	$1,850	$1,755	$1,734
1,911	1,739	1,779	1,698	1,628	1,612
6,490	7,274	999	2,681	8,004	5,625
0	7	2	0	0	0
10,437	10,842	4,745	6,229	11,387	8,971
4,326	5,233	3,755	3,489	2,800	3,399
211	137	189	186	171	152
4,537	5,370	3,944	3,675	2,971	3,551
$5,900	**$5,472**	**$801**	**$2,554**	**$8,416**	**$5,420**

Benefit & Refunds by Type

Defined Benefit Plans - Last 10 Fiscal Years (in thousands)

General Employees Fund*

	2022	2021	2020	2019
Benefits by Type				
Retirement	$1,574,140	$1,503,311	$1,442,689	$1,373,267
Survivor	146,641	144,756	$142,659	$142,187
Disability	17,124	18,036	$19,494	$20,617
Total	$1,737,905	$1,666,103	$1,604,842	$1,536,071
Refund by Type				
Separation	$56,234	$43,945	$59,829	$43,723
Death	745	433	$542	$812
Interest/Employer	16,173	13,649	$24,576	$21,299
Total	$73,152	$58,027	$84,947	$65,834

* The Minneapolis Employees Retirement Fund merged into the General Employees Retirement Fund on 01/01/2015. The General Fund has been restated to include Minneapolis Employees Retirement Fund for the ten year schedule

Police and Fire Fund

	2022	2021	2020	2019
Benefits by Type				
Retirement	$486,560	$463,500	$445,843	$432,012
Survivor	66,167	64,688	$63,210	$60,872
Disability	80,528	64,499	$57,987	$54,814
Total	$633,255	$592,687	$567,040	$547,698
Refund by Type				
Separation	$3,428	$2,476	$2,390	$2,117
Death	0	0	$65	$29
Interest/Employer	768	584	$726	$1,137
Total	$4,196	$3,060	$3,181	$3,283

Correctional Fund

	2022	2021	2020	2019
Benefits by Type				
Retirement	$19,565	$16,571	$14,307	$12,287
Survivor	884	811	$712	$617
Disability	2,923	2,706	$2,550	$2,477
Total	$23,372	$20,088	$18	$15,381
Refund by Type				
Separation	$2,253	$1,731	$2,034	$1,617
Death	2	0	$38	$0
Interest/Employer	458	409	$637	$627
Total	$2,713	$2,140	$2,709	$2,244

Volunteer Firefighter Fund

	2022	2021	2020	2019
Benefits by Type				
Retirement	$1,020	$953	$903	$762
Survivor	87	84	$90	$58
Lump Sum Benefit	4,035	4,590	$6,064	$3,889
Total	$5,142	$5,627	$7,057	$4,709

Benefit & Refunds by Type

2018	2017	2016	2015	2014	2013
$1,307,364	$1,250,427	$1,195,640	$1,137,897	$1,081,088	$1,027,325
141,781	141,449	140,630	141,178	140,423	138,485
21,305	21,572	22,906	22,321	22,821	23,588
$1,470,450	$1,413,448	$1,359,176	$1,301,396	$1,244,332	$1,189,398
$30,981	$27,513	$27,601	$26,179	$27,962	$25,885
582	508	505	731	551	727
11,026	9,213	9,103	8,796	9,798	9,310
$42,589	$37,234	$37,209	$35,706	$38,311	$35,922

2018	2017	2016	2015	2014	2013
$416,652	$403,053	$391,952	$379,068	$353,620	$336,220
59,438	58,568	58,119	56,523	54,462	52,827
52,378	50,758	48,537	45,739	44,380	42,679
$528,468	$512,379	$498,608	$481,330	$452,462	$431,726
$1,444	$1,599	$1,540	$1,423	$1,179	$1,243
0	52	0	0	0	31
458	468	851	530	454	746
$1,902	$2,119	$2,391	$1,953	$1,633	$2,020

2018	2017	2016	2015	2014	2013
$10,357	$8,555	$6,954	$5,528	$4,427	$3,518
529	437	372	278	240	180
2,297	2,041	2,055	1,971	2,044	2,059
$13,183	$11,033	$9,381	$7,777	$6,711	$5,757
$1,049	$1,129	$792	$821	$844	$857
35	45	0	29	0	48
280	304	190	207	261	272
$1,364	$1,478	$982	$1,057	$1,105	$1,177

2018	2017	2016	2015	2014	2013
$607	$554	$279	$0	$0	$0
49	51	23	0	0	0
3,505	2,095	1,342	1,221	1,096	838
$4,161	$2,700	$1,644	$1,221	$1,096	$838

Summary of Membership

Defined Benefit Plans — Last 10 Years

General Employees Fund

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2022	149,987	115,980	68,636	84,675	419,278
2021	149,281	112,232	66,048	81,052	408,613
2020	153,741	108,492	64,672	79,069	405,974
2019	154,130	105,243	63,311	126,116	448,800
2018	153,059	101,772	61,066	138,768	454,665
2017	152,867	98,201	52,274	138,335	441,677
2016	148,745	94,288	52,516	132,416	427,965
2015	145,650	90,592	51,605	125,366	413,213
2014	143,434	83,134	48,505	121,018	396,091
2013	139,763	79,083	45,946	119,509	384,301

Police and Fire Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2022	11,629	12,107	1,864	957	26,557
2021	11,705	11,656	1,813	912	26,086
2020	12,025	11,201	1,686	894	25,806
2019	11,763	11,031	1,620	1,145	25,559
2018	11,673	10,756	1,580	1,188	25,197
2017	11,522	10,579	1,506	1,134	24,741
2016	11,398	10,352	1,490	1,059	24,299
2015	11,157	10,209	1,560	995	23,921
2014	10,879	10,039	1,481	975	23,374
2013	10,940	9,579	1,388	988	22,895

Summary of Membership

Correctional Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2022	3,564	1,717	4,129	2,480	11,890
2021	3,788	1,572	3,832	2,200	11,392
2020	3,855	1,443	3,637	2,184	11,119
2019	3,965	1,318	3,374	2,790	11,447
2018	3,981	1,193	3,165	2,811	11,150
2017	3,842	1,085	2,933	2,624	10,484
2016	3,827	967	2,755	2,359	9,908
2015	3,692	864	2,620	2,139	9,315
2014	3,603	769	2,380	1,936	8,688
2013	3,493	690	2,232	1,816	8,231

Volunteer Firefighter Plan*

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2022	4,186	143	1,156	0	5,485
2021	4,007	140	1,032	0	5,179
2020	3,773	136	968	0	4,877
2019	3,517	137	840	0	4,494
2018	3,256	86	751	0	4,093
2017	2,753	75	560	0	3,388
2016*	1,639	79	928	0	2,646

*The first monthly benefit division participant joined the Volunteer Firefighter Plan on 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 +
2022							
Average monthly benefit	$153	$352	$687	$1,009	$1,351	$1,825	$3,287
Average high five salary	$4,190	$3,091	$3,368	$3,677	$3,991	$4,424	$5,793
Number of retirees	830	1228	906	878	939	712	1,242
2021							
Average monthly benefit	$148	$346	$646	$996	$1,289	$1,684	$3,247
Average high five salary	$4,009	$2,930	$3,132	$3,569	$3,825	$4,086	$5,678
Number of retirees	810	1,116	903	829	946	740	1,242
2020							
Average monthly benefit	$157	$343	$677	$981	$1,312	$1,775	$3,232
Average high five salary	$4,232	$2,910	$3,207	$3,529	$3,893	$4,283	$5,632
Number of retirees	689	950	873	781	809	675	1,204
2019							
Average monthly benefit	$158	$339	$627	$969	$1,301	$1,784	$3,147
Average high five salary	$4,104	$2,813	$3,165	$3,525	$3,752	$4,250	$5,489
Number of retirees	749	1,007	966	885	801	769	1,304
2018							
Average monthly benefit	$164	$331	$599	$921	$1,213	$1,804	$3,018
Average high five salary	$4,145	$2,755	$3,008	$3,435	$3,600	$4,222	$5,304
Number of retirees	691	867	846	880	806	788	1,224
2017							
Average monthly benefit	$154	$333	$614	$866	$1,195	$1,761	$2,956
Average high five salary	$4,170	$2,719	$3,076	$3,283	$3,586	$4,130	$5,190
Number of retirees	630	795	836	841	718	758	1,125
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 retirees	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 retirees	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 retirees	628	853	848	791	807	758	1,218
2013							
Average monthly benefit	$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 retirees	581	791	758	726	778	675	1,088

Schedule of New Retirees and Initial Benefit Paid

Police and Fire Plan

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
2022							
Average monthly benefit	$453	$1,611	$2,453	$3,681	$5,191	$6,772	$8,948
Average high five salary	$5,082	$5,171	$5,790	$7,156	$7,937	$8,621	$9,365
Number of retirees	17	22	20	39	100	140	98
2021							
Average monthly benefit	$347	$1,172	$2,446	$3,781	$5,329	$6,841	$8,825
Average high five salary	$4,008	$4,978	$5,993	$7,312	$8,184	$8,604	$9,270
Number of retirees	14	23	28	32	94	129	119
2020							
Average monthly benefit	$483	$1,496	$2,492	$3,565	$4,958	$6,554	$8,529
Average high five salary	$5,349	$5,165	$6,312	$6,920	$7,560	$8,124	$8,930
Number of retirees	20	21	22	40	64	74	55
2019							
Average monthly benefit	$375	$1,419	$2,580	$3,662	$4,802	$6,252	$8,085
Average high five salary	$4,587	$5,526	$6,377	$7,087	$7,448	$7,840	$8,582
Number of retirees	20	23	22	33	79	108	110
2018							
Average monthly benefit	$838	$1,654	$2,418	$3,188	$4,726	$6,239	$7,705
Average high five salary	$4,969	$5,272	$5,798	$6,380	$7,170	$7,857	$8,149
Number of retirees	15	14	32	30	69	84	64
2017							
Average monthly benefit	$583	$1,370	$2,133	$3,512	$4,321	$5,990	$8,096
Average high five salary	$5,387	$4,615	$5,277	$6,523	$6,772	$7,575	$8,426
Number of retirees	18	25	24	34	59	98	74
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 retirees	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 retirees	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 retirees	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 retirees	8	18	19	23	47	96	60

Schedule of New Retirees and Initial Benefit Paid

Defined Benefit Plans – Last 10 Years

Correctional Plan*

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
2022							
Average monthly benefit	$239	$768	$1,318	$2,001	$2,600		
Average high five salary	$4,419	$4,495	$5,676	$5,878	$6,344		
Number of retirees	26	19	13	29	73		
2021							
Average monthly benefit	$307	$555	$1,080	$1,561	$2,639		
Average high five salary	$4,361	$3,936	$4,366	$5,064	$6,622		
Number of retirees	32	18	19	21	49		
2020							
Average monthly benefit	$351	$654	$1,219	$1,868	$2,454		
Average high five salary	$4,474	$4,147	$4,946	$5,437	$6,383		
Number of retirees	35	18	15	32	32		
2019							
Average monthly benefit	$269	$595	$990	$1,917			
Average high five salary	$3,947	$3,760	$4,447	$5,497			
Number of retirees	26	15	20	62			
2018							
Average monthly benefit	$287	$644	$1,112	$1,963			
Average high five salary	$4,176	$3,799	$4,860	$5,823			
Number of retirees	15	12	27	61			
2017							
Average monthly benefit	$340	$703	$1,088	$1,749			
Average high five salary	$4,463	$4,099	$4,601	$5,524			
Number of retirees	15	17	29	58			
2016							
Average monthly benefit	$201	$552	$1,107	$1,513			
Average high five salary	$3,930	$3,655	$4,713	$4,928			
Number of retirees	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 retirees	15	21	30	37			
2014							
Average monthly benefit	$668	$706	$1,200				
Average high five salary	$3,938	$3,960	$4,797				
Number of retirees	17	23	43				
2013							
Average monthly benefit	$254	$686	$1,193				
Average high five salary	$3,296	$3,904	$4,891				
Number of retirees	17	16	54				

*The Correctional Plan was established July 1, 1999.

Schedule of New Retirees and Initial Benefit Paid

Volunteer Firefighter Plan**

	Years Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
2022							
Average monthly benefit			$483	$1,092			
Average high five salary							
Number of retirees			4	1			
2021							
Average monthly benefit			$412				
Average high five salary**							
Number of retirees			2				
2020							
Average monthly benefit			$391	693	$1,058		
Average high five salary**							
Number of retirees			3	4	1		
2019							
Average monthly benefit			323		$975		
Average high five salary**							
Number of retirees			2		3		
2018							
Average monthly benefit			447		156		1260
Average high five salary**							
Number of retirees			1		10		1
2017							
Average monthly benefit					$722		
Average high five salary**							
Number of retirees					3		
2016*							
Average monthly benefit		166	357	561	771	975	
Average high five salary**							
Number of retirees		1	10	13	48	3	

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

Schedule of Benefit Recipients by Type

As of June 30, 2022

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	24,197	22,261	420	1,373	143	14,908	7,224	406	981	516	162
251 - 500	18,082	16,472	269	1,153	188	10,847	4,860	408	1,185	635	147
501 - 750	13,452	12,143	202	946	161	7,709	3,555	370	1048	624	146
751 - 1000	10,261	9,282	149	689	141	5,755	2,634	352	942	496	82
1001 - 1250	8,129	7,307	106	590	126	4,244	2,187	310	825	494	69
1251 - 1500	6,465	5,809	78	468	110	3,229	1,801	334	656	396	49
1501 - 1750	5,370	4,820	83	384	83	2,469	1,522	349	636	334	60
1751 - 2000	4,625	4,212	49	307	57	2,072	1,309	307	590	303	44
2001 - 2250	4,046	3,681	36	275	54	1,676	1,196	264	564	302	44
2251 - 2500	3,476	3,177	44	229	26	1,407	1,007	233	517	265	47
2501 - 2750	3,068	2,793	37	210	28	1,172	953	204	462	227	50
2751 - 3000	2,575	2,375	27	151	22	1009	778	173	367	199	49
3001 - 3250	2,146	1,985	17	132	12	808	652	162	308	163	53
3251 - 3500	1,814	1,650	24	127	13	665	567	129	248	144	61
3501 - 3750	1,498	1,366	22	102	8	545	466	111	219	112	45
3751 - 4000	1,235	1,135	13	83	4	430	387	84	201	101	32
4001 - 4250	987	906	13	67	1	322	315	74	166	69	41
4251 - 4500	805	742	7	56	0	279	248	48	140	66	24
4501 - 4750	663	607	6	46	4	206	235	43	109	51	19
4751 - 5000	580	532	3	42	3	197	190	42	81	45	25
5001 - 5250	428	382	4	41	1	137	132	40	69	29	21
5251 - 5500	395	352	6	35	2	135	129	28	54	34	15
5501 - 5750	317	287	3	26	1	98	110	31	49	19	10
5751 - 6000	272	241	2	29	0	104	75	22	38	22	11
6001 - 6250	202	181	2	18	1	64	58	18	37	16	9
6251 - 6500	175	160	1	14	0	48	60	17	31	10	9
6501 - 6750	134	120	1	13	0	35	44	9	26	14	6
6751 - 7000	91	87	0	4	0	24	24	10	20	7	6
Over 7000	492	432	5	55	0	149	140	53	93	36	21
Totals	115,980	105,497	1,629	7,665	1,189	60,743	32,858	4,631	10,662	5,729	1,357

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

Schedule of Benefit Recipients by Type

Police and Fire 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	165	132	7	21	1	4	57	82	8	8	5	5
251 - 500	161	136	3	20	1	1	51	76	1	19	11	3
501 - 750	149	117	8	21	1	2	42	68	8	13	9	9
751 - 1000	144	107	5	28	2	2	52	41	5	23	18	5
1001 - 1250	171	106	5	56	2	2	46	51	5	30	25	14
1251 - 1500	176	107	10	51	4	4	48	51	11	16	29	21
1501 - 1750	209	107	11	82	7	2	46	51	19	28	15	50
1751 - 2000	240	118	17	86	9	10	54	59	10	41	14	62
2001 - 2250	264	118	22	97	17	10	62	58	11	67	8	58
2251 - 2500	309	158	26	80	28	17	72	97	15	47	16	62
2501 - 2750	344	158	27	95	25	39	85	88	28	67	15	61
2751 - 3000	402	190	36	102	16	58	85	115	30	69	15	88
3001 - 3250	674	223	85	274	15	77	105	126	35	77	17	314
3251 - 3500	446	265	16	53	7	105	115	159	44	59	20	49
3501 - 3750	516	307	13	55	7	134	155	173	47	70	22	49
3751 - 4000	542	316	21	52	13	140	169	177	46	76	29	45
4001 - 4250	598	363	12	52	13	158	173	198	57	78	42	50
4251 - 4500	542	363	11	30	15	123	153	168	65	89	28	39
4501 - 4750	618	454	12	30	17	105	170	165	73	99	39	72
4751 - 5000	544	410	10	38	11	75	154	156	72	80	32	50
5001 - 5250	570	467	9	29	9	56	141	176	65	110	35	43
5251 - 5500	598	484	7	24	38	45	152	118	89	101	45	93
5501 - 5750	751	686	3	16	8	38	106	115	69	89	24	348
5751 - 6000	453	402	2	12	6	31	120	111	56	114	38	14
6001 - 6250	346	302	6	9	6	23	88	105	53	66	28	6
6251 - 6500	313	283	3	4	4	19	83	85	49	68	27	1
6501 - 6750	266	241	2	4	2	17	62	93	40	54	15	2
6751 - 7000	260	227	1	10	3	19	69	79	39	54	17	2
Over 7000	1336	1272	1	19	9	35	432	381	183	240	99	1
Totals	12,107	8,619	391	1,450	296	1,351	3,147	3,422	1,233	1,952	737	1,616

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

Schedule of Benefit Recipients by Type

As of June 30, 2022 (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	232	212	6	9	5	0	130	76	5	11	10	0
251 - 500	181	168	2	10	1	0	95	58	2	18	8	0
501 - 750	182	156	7	11	8	0	82	67	11	17	4	1
751 - 1000	202	172	5	11	14	0	92	72	9	16	10	3
1001 - 1250	174	155	3	3	10	3	74	67	8	14	11	0
1251 - 1500	166	152	2	2	7	3	76	50	9	23	7	1
1501 - 1750	130	113	1	4	5	7	57	45	11	7	9	1
1751 - 2000	124	111	3	1	1	8	50	54	5	10	3	2
2001 - 2250	98	84	0	2	3	9	44	33	3	9	9	0
2251 - 2500	87	65	2	0	2	18	36	37	1	7	4	2
2501 - 2750	58	41	0	1	0	16	28	18	1	4	7	0
2751 - 3000	39	28	1	0	0	10	15	15	0	5	3	1
3001 - 3250	20	18	0	0	0	2	12	4	0	1	3	0
3251 - 3500	13	13	0	0	0	0	9	3	1	0	0	0
3501 - 3750	6	4	1	0	0	1	2	1	1	0	1	1
3751 - 4000	2	2	0	0	0	0	0	1	0	0	1	0
4001 - 4250	2	1	0	0	0	1	1	0	0	0	1	0
4251 - 4500	1	1	0	0	0	0	0	1	0	0	0	0
Totals	1,717	1,496	33	54	56	78	803	602	67	142	91	12

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 100% Joint & Survivor
C Survivor of Benefit Recipient	**3** 75% Joint & Survivor
D Non-Duty Disability	**4** 50% Joint & Survivor
E Line-of-Duty Disability	**5** 25% Joint & Survivor
	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	22	17	5	0	14	2	6
251 - 500	27	25	2	0	10	9	8
501 - 750	32	26	6	0	11	15	6
751 - 1000	59	57	2	0	11	45	3
Over 1000	3	3	0	0	0	2	1
Totals	143	128	15	0	46	73	24

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 75% Joint & Survivor
C Survivor of Benefit Recipient	**3** 50% Joint & Survivor

Principal Participating Employers

Defined Benefit Plans – Top 10 Listing

General Employees Fund*

FY 2022 Employer Name	Active Members	% of Total Active Members	FY 2013 Employer Name	Active Members	% of Total Active Members
HENNEPIN COUNTY	7,672	5.02%	HENNEPIN COUNTY	6,764	4.75%
HENNEPIN HEALTHCARE SYSTEM	5,424	3.55%	HENNEPIN HEALTHCARE SYSTEM	4,927	3.46%
MINNEAPOLIS SPECIAL ISD-1	4,773	3.12%	MINNEAPOLIS SCHOOL DISTRICT	3,909	2.75%
CITY OF MINNEAPOLIS	3,590	2.35%	RAMSEY COUNTY	3,299	2.32%
RAMSEY COUNTY	3,587	2.35%	CITY OF MINNEAPOLIS	2,941	2.07%
ST PAUL ISD-625	3,110	2.03%	ST PAUL SCHOOL DISTRICT	2,661	1.87%
ANOKA-HENNEPIN ISD-11	2,827	1.85%	ANOKA-HENNEPIN ISD-11	2,620	1.84%
ROSEMOUNT ISD- 196	2,212	1.45%	CITY OF ST PAUL	2,177	1.53%
CITY OF ST PAUL	2,211	1.45%	ROSEMOUNT SCHOOL DISTRICT	1,853	1.30%
DAKOTA COUNTY	1,770	1.16%	OSSEO SCHOOL DISTRICT	1,745	1.23%

Police and Fire Plan*

FY 2022 Employer Name	Active Members	% of Total Active Members	FY 2013 Employer Name	Active Members	% of Total Active Members
CITY OF MINNEAPOLIS	1,046	8.69%	CITY OF MINNEAPOLIS	1,240	11.00%
CITY OF ST PAUL	1,000	8.31%	CITY OF ST PAUL	1,008	8.94%
HENNEPIN COUNTY	318	2.64%	HENNEPIN COUNTY	345	3.06%
CITY OF DULUTH	273	2.27%	CITY OF DULUTH	277	2.46%
CITY OF ROCHESTER	241	2.00%	CITY OF ROCHESTER	228	2.02%
RAMSEY COUNTY	212	1.76%	RAMSEY COUNTY	214	1.90%
HENNEPIN HEALTHCARE SYSTEM	180	1.50%	CITY OF ST CLOUD	167	1.48%
CITY OF ST CLOUD	177	1.47%	HENNEPIN HEALTHCARE SYSTEM	160	1.42%
METROPOLITAN COUNCIL	165	1.37%	WRIGHT COUNTY	136	1.21%
WRIGHT COUNTY	158	1.31%	METROPOLITAN AIRPORTS COMMISSION	131	1.16%

*A complete listing or participating employers can be found at:https://mnpera.org/employers/financial-resource-center/

Continued

Principal Participating Employers

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

Correctional Plan*

FY 2022 Employer	Active Members	% of Total Active Members	FY 2013 Employer	Active Members	% of Total Active Members
HENNEPIN COUNTY	419	11.66%	HENNEPIN COUNTY	478	13.54%
RAMSEY COUNTY	410	11.41%	RAMSEY COUNTY	438	12.41%
ANOKA COUNTY	201	5.59%	ANOKA COUNTY	196	5.55%
SHERBURNE COUNTY	135	3.76%	DAKOTA COUNTY	102	2.89%
DAKOTA COUNTY	114	3.17%	OLMSTED COUNTY	101	2.86%
PRAIRIE LAKES DETENTION CENTER	109	3.03%	SHERBURNE COUNTY	92	2.61%
CLAY COUNTY	94	2.62%	STEARNS COUNTY	87	2.47%
OLMSTED COUNTY	90	2.50%	PRAIRIE LAKES DETENTION CENTER	85	2.41%
STEARNS COUNTY	79	2.20%	SCOTT COUNTY	81	2.30%
ARROWHEAD REGIONAL CORRECTIONS	77	2.14%	WASHINGTON COUNTY	80	2.27%

Volunteer Firefighter Plan**

FY 2022 Employer	Active Members	% of Total Active Members	FY 2013 Employer	Active Members	% of Total Active Members
CITY OF COTTAGE GROVE	56	1.08%	CITY OF WILLMAR	51	3.52%
CITY OF VADNAIS HEIGHTS VOL FIRE DEPT	54	1.04%	CITY OF MELROSE	39	2.69%
CITY OF OAK GROVE	52	1.00%	CITY OF GRANITE FALLS	34	2.35%
CITY OF VICTORIA	50	0.96%	CITY OF OTTERTAIL	33	2.28%
SPRING LAKE PARK BLAINE MOUNDS VIEW FIRE	48	0.92%	CITY OF DENT	33	2.28%
CITY OF WILLMAR	43	0.83%	CITY OF CANBY	32	2.21%
ISANTI AREA JOINT FIRE DISTRICT	43	0.83%	CITY OF MAYER	31	2.14%
CITY OF WHITE BEAR LAKE	41	0.79%	CITY OF NORWOOD YOUNG AMERICA	31	2.14%
CITY OF ELY	41	0.79%	CITY OF FAIRFAX	30	2.07%
CITY OF WACONIA	40	0.77%	TOWNSHIP OF GRAND LAKE	30	2.07%

*A complete listing or participating employers can be found at: :https://mnpera.org/employers/financial-resource-center/
**A complete listing or participating employers can be found at:https://mnpera.org/plan-information/statewide-volunteer-firefighter-retirement-plan/departments-participating-in-the-statewide-plan/

Privatized Employers

Below is a list of privatized employers per *Minnesota Statute* Chapter 325F.

ALLINA RICE COUNTY DISTRICT 1 HOSPITAL
BENEDICTINE LIVING COMMUNITY OF ST PETER
CANNON FALLS MED CENTER - MAYO HEALTH
CEDARVIEW CARE CENTER
CENTRACARE HEALTH - PAYNESVILLE
CENTRACARE HEALTH SYSTEM - SAUK CENTRE
CHRIS JENSEN NURSING HOME LLC
CITY OF GLENCOE REGIONAL HEALTH CENTER
CITY OF GRANITE FALLS HOSPITAL AND MANOR
CITY OF LAKEFIELD COLONIAL NURSING HOME
CITY OF WILLMAR RICE MEMORIAL HOSPITAL
CORNERSTONE NURSING & REHAB CENTER
ESSENTIA BRIDGES MEDICAL CENTER
ESSENTIA HEALTH VIRGINIA LLC
FAIR OAKS LODGE
HARMONY RIVER LIVING CENTER
HUTCHINSON AREA HEALTH CARE
LAKE COUNTY SUNRISE HOME
LAKELAND MEDICAL CENTER
LAKESIDE HEALTH CARE CENTER
OAK TERRACE HEALTH CARE CENTER
PENNINGTON COUNTY OAKLAND PARK NURSING
REDWOOD AREA HOSPITAL
RENVILLE COUNTY HOSPITAL
RENVILLE HEALTH SERVICES
RIDGEVIEW MEDICAL CENTER
SANFORD HEALTH WHEATON MEDICAL CENTER
SANFORD HOSPITAL LUVERNE
SANFORD REGIONAL HOSPITAL WORTHINGTON
SIBLEY MEDICAL CENTER
ST PAUL ARENA COMPANY
SWIFT COUNTY BENSON HOSPITAL
TRAVERSE CARE CENTER
WEINER HOSPITAL, CITY OF MARSHALL
WILLMAR MEDICAL SERVICES LLP
WWWRRR

Public Employees Retirement Association
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