

90 YEARS STRONG

A Look to Our Past; A Plan for Our Future



ANNUAL COMPREHENSIVE FINANCIAL REPORT

**For Fiscal Year Ended
June 30, 2021**



**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, 2021

**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

2021 ANNUAL COMPREHENSIVE FINANCIAL REPORT



1931

The Public Employees Retirement Association of Minnesota was established on April 24, 1931, and officially began operations on July 1. By the end of the first fiscal year, PERA had 2,103 members and just over \$110,000 in assets.



1935

Legislation opened enrollment in PERA. In 1935, 30 counties and 12 cities were participating in PERA with a total membership of 3,000.



1936

On July 28, PERA issued the first pension check in the amount of \$138 to William E. Fay, a Duluth courthouse custodian. PERA membership reached 5,000 members with over \$800,000 in assets.

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Achievement Awards



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Public Employees Retirement Association of Minnesota

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2020

Christopher P. Morill

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, 2020. This was the 28th consecutive year that the government has achieved this prestigious award. 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 continues to meet the Certificate of Achievement Program's requirements and we are submitting it to GFOA to determine its eligibility for another certificate.

Achievement Awards



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, 2020

Christopher P. Morill

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, 2020. 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 continues to conform to the Popular Annual Financial requirements, and we are submitting it to GFOA to determine its eligibility for another award.

Achievement Awards



Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2021

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)

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator

PERA received the 2021 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.

President's Report



December 17, 2021

Dear Members, Annuitants, Beneficiaries, Governmental Employers, and Taxpayers:

On behalf of the Board of Trustees, I am pleased to present the Public Employees Retirement Association (PERA) *Annual Comprehensive Financial Report (ACFR)* for the year ended June 30, 2021. The report provides financial, investment, actuarial, statistical, and other related information about PERA and the pension plans it administers. The information is offered to help readers understand and make reasoned judgments about the sustainability of PERA's funds. Responsibility for the accuracy and completeness of the report rests with PERA's management.

Last year, the spreading novel coronavirus pandemic was the overriding concern world-wide. In the introduction to last year's financial statements I wrote: *"The effects of the pandemic are likely to include economic impacts that will affect individuals, communities and organizations like PERA for some time to come."* Sadly, COVID-19 and its variants continue to harm people and economies.

However, from a strictly financial perspective, there is some good news to report for FY2021. As users of PERA's financial statements remember, the investment markets dropped significantly at the beginning of the pandemic in February and March 2020, and then largely recovered by the June fiscal year-end. This year the markets have experienced unusually high growth. Our investment manager, the State's Board of Investment, reports that PERA's investments have earned a rate of return greater than 30 percent. Because of strong investment returns, the financial condition of PERA's plans improved.

As can be seen from the accompanying table, the value of PERA's investments as a percent of the total pension liability (funded ratio) declined slightly in FY2020 from FY2019 levels and then grew significantly from FY2020 to FY2021:

Funded Status of PERA Plans for the past three years			
Market Value of Assets (GAAP Method)			
	2021	2020	2019
General Employees Plan	87.0%	79.1%	80.2%
Police & Fire Plan	93.7%	80.2%	89.3%
Correctional Plan	101.6%	96.7%	98.2%

The General Employees and Police and Fire Plans are now actuarially funded at their highest level in 20 years. The Correctional Plan is actuarially funded at the highest level in its history. However, only the Correctional Plan appears to be fully funded as of June 30, 2021. Its size—like the Police and Fire Plan—in relation to the General Employees Plan makes it more “volatile.” In other words, gains and losses in the market may have a greater impact, both positive and negative, on the value of those funds as compared to the General Employees Plan.

PERA's actuarial consultant regularly analyzes investment markets to determine a reasonable rate of return that PERA could expect in the future. That rate of return is used to discount expected future pension payments to estimate the Total Pension Liability each year. The liability is then compared to the assets in the plans. The size of the liability varies inversely with the discount rate used to estimate it: the liability goes up when the rate goes down, and vice-versa.

For FY2020, our actuary determined that the 7.5 percent discount rate designated in Minnesota Statutes fell within a "reasonable range" of expected returns. Therefore, 7.5 percent was used to value the total pension liability for both statutory compliance reporting to the legislature and for the Generally Accepted Accounting Principles (GAAP) financial report. This year, the actuary's analysis suggested that 7.5 percent was no longer within a reasonable range. After consulting with the actuary, PERA management adopted a 6.5 percent discount rate for GAAP reporting—that is for the accompanying financial report. While the lower rate decreases the actuarial funding of the plans, the more realistic investment growth predictions help to keep our plans on the path to sustainability.

PERA's plans are financially strong and the discount rate has no bearing on the funds that are currently in the plans. However, PERA will continuously have to respond to emerging financial and social conditions to ensure that our plans are sustainable, both now and in the future. For example, the financial press have reported extensively on "The Great Resignation"—the large number of persons who have left jobs during (and possibly as a by-product) of the pandemic. PERA-covered employers have also seen reductions in staffing. During 2021, all three of PERA's cost-sharing plans saw a reduction in active employees for the first time in more than a decade. That reduction in members may be a one-time event or it may be an early sign of an emerging trend. If active member reductions evolves into a trend, decreasing membership could put substantial pressure on PERA's funding.

Similarly, the press has reported the increase in price-inflation that has emerged during the pandemic. As of October, the Bureau of Labor Statistics reported that consumer inflation was at its highest level in thirty years. PERA's plans offer some inflation protection. However, if the current rate of inflation were to endure for more than a short time, it will reduce the relative value of pension benefits (buying power) for PERA retirees.

PERA's Board of Trustees is committed to achieving full-funding in all of its plans. It is the Board's firm position that by or before 2048, PERA will be fully funded and thereafter benefits will be prefunded. The Board works closely with the Executive Director on understanding the financial variables affecting our plans and identifying ways to evolve the existing plan designs to ensure that all members are paid their earned benefits in-full and on-time now and in the future. As needed, changes that preserve our plans' sustainability while also maintaining fairness and affordability to our members will be recommended by the Board to the legislature.



Thomas Stanley
President
PERA Board of Trustees

Letter of Transmittal



December 17, 2021

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 Public Employee Retirement Association (PERA), it is our pleasure to present the Agency's *Annual Comprehensive Financial Report* (ACFR) for the fiscal year (FY) ended June 30, 2021. The financial report is meant to provide useful information about the certainty, amount, and timing of PERA's cash flows to help our Board members and other stakeholders make reasoned decisions about the safety and soundness of PERA's retirement plans.

The Statements:

PERA's financial reports are prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America. The statements also comply with the reporting requirements of Minnesota State Statutes 356.20. Management is responsible for the completeness and reliability of the information in this report. We believe the enclosed financial statements and disclosures are fairly presented in all material respects. We believe that PERA's internal accounting controls are sufficient to provide reasonable assurance regarding the safekeeping of the Association's assets and the fair presentation of the financial statements and related schedules. However, we understand that the cost of a control should not exceed the benefits to be derived, the objective is to provide reasonable, rather than absolute assurance, and that the financial statements are free of any material misstatements.

The Office of the Legislative Auditor has issued an unmodified opinion on the Public Employees Retirement Association's *Statement of Fiduciary Net Position* as of June 30, 2021 and the related *Statement of Changes in Fiduciary Net Position* for the fiscal year then ended. The independent auditor's report is found at the front of the *Financial Section* of this report.

Management's Discussion and Analysis (MD&A) follows the independent auditor's report to provide a narrative introduction, overview, and analysis of PERA's basic financial statements. The MD&A complements this letter of transmittal and should be read in conjunction with it.

The Association:

In 2021, PERA turned 90 years old. Over the past 90 years, PERA has grown to provide retirement income protection to a wide range of local government employees:

- In 1959 the Police and Fire Plan was opened for employees not covered by local relief associations,
- In 1968 the General Employee Plan coordinated with Social Security,
- In 1999 the Correctional Plan was opened for officers serving in city and county jails, and
- From 2011-2015 the previously independent but financially distressed City of Minneapolis retirement plans were consolidated under PERA

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.

PERA administers five pension plans each of which is accounted for separately:

- Three *cost-sharing*, multiple employer, defined benefit plans: the General Employees Plan; Police and Fire Plan; and Correctional Plan,

- One *agent*, multiple employer, defined benefit plan: the Statewide Volunteer Firefighter (SVF) Plan, and
- One defined contribution plan primarily for elected local officials

Besides acting as trustee for retirement assets and making benefit payments to retirees and other recipients, PERA provides a variety of services to its members including but not limited to:

- Individual benefit determinations and personal benefit statements,
- Preretirement group counseling, and individual retirement benefit counseling,
- An online system (MY PERA) to check their total accumulated contributions and service credits and a benefit calculator to estimate retirement benefits at various ages or dates,
- On-line educational videos and specialized publications on topics of interest to members, and
- A call center from which members and other stakeholders can access information and receive immediate responses to questions

We are pursuing an ambitious plan of improvements to our technology, our policies, and our work practices in order to provide members with the best possible experience when dealing with PERA.

PERA's Business Environment:

In 2020, the central concern for PERA and around the world was the global spread of the corona virus and the wide-spread economic disruption that accompanied the spread of the virus. When we presented last year's report, we hoped that by now the virus would have been beaten or at least under control. The world has not yet won that fight.

The Board of Trustees provides the long-range vision and policy guidance that allows PERA to successfully navigate external risks (such as epidemics and market booms and busts) to achieve a strong financial position. Two of the Board-adopted core values that guide PERA's business practices are:

- **Pre-funding:** setting aside sufficient financial assets during employees' careers to make the employers' promised payments after retirement or disability, and
- **Full funding:** having sufficient assets on hand to cover the present value of promised pension payments as estimated by our actuaries

PERA accumulates assets to fund its pension plans through two primary sources:

- **Net cash flow:** contributions less benefit payments and administrative expenses, and
- **Investment income:** earnings from State Board of Investment managed funds

The values of prefunding and full funding are sometimes difficult to fully realize. In a fully-funded plan the net fiscal position (net assets) of the pension trust would be equal to the "Total Pension Liability" calculated by the actuaries (see *Note 6*). In fact, PERA is underfunded. Over its nine decades, PERA has not been able to fully fund its pension obligations every year. Therefore, PERA's plans have incrementally accumulated an "unfunded" pension liability—a debt owed for pension benefits that have already been earned but for which assets have not yet been set aside. Most public pension plans have unfunded liabilities. Amortizing (paying-off) that accumulated debt and achieving full funding by 2048 is a goal set in statutes by the legislature. PERA desires to achieve that goal sooner.

Besides the necessity to amortize the existing unfunded liability, the maturity of PERA's plans can slow prefunding/fully-funding the total pension liability. As a 90-year-old organization, PERA's plans are, in the plain sense of the word, "mature." Plan maturity has consequences for plan funding and for a plan's sensitivity (risk) to changes in investment income. PERA's actuaries describe a pension plan's maturity using a number of different measures (for examples, please see the annual actuarial reports found on PERA's website). But simply put, a plan matures as its participants age and retire. As a plan matures, the ratio of active, contributing members to benefit-recipients declines; the total liability for benefit payments increases; and, the ratio of accumulated assets held in trust versus the aggregate payroll on which contributions is based becomes larger. The financial consequences of plan maturity are that mature plans generally have negative net cash flow and therefore, are more reliant upon, and sensitive to, changes in investment income than less mature plans.

Letter of Transmittal

Comparison of Plan Maturity Data — FY2017 vs FY2021

	General Plan		Police and Fire Plan		Correctional Plan	
	FY2021	FY2017	FY2021	FY2017	FY2021	FY2017
Measures of Maturity						
Active Employees to Retirees	1.3:1	1.6:1	1:1	1.1:1	2.4:1	3.5:1
Total Estimated Pension Liabilities (000s)	32,888,101	26,484,513	12,169,995	9,268,998	1,019,288	887,461
Assets to Payroll	4.23	3.15	10.4	8.39	4.66	3.01
Consequences of Maturity						
Net Cash Flow	(\$756,696.00)	(\$577,471)	(\$248,185)	(\$238,153)	\$11,690	\$16,314

In the table above, the ratio of total (net) assets to payroll, measures the sensitivity of the plan to changes in investment income. For example the General Plan 4.23 asset to payroll (“asset leverage”) ratio at FY2021 tells us that a 10 percent investment loss in a bear market would be the equivalent of a 42 percent reduction in covered payroll. Five years earlier, in FY2017, a 10 percent investment loss would have been equivalent to a 32 percent decline in covered payroll. In other words, as a plan matures, it is more difficult to recover from investment losses. Because mature plans have higher sensitivity to changes in investment income, plan fiduciaries might wish to reduce the volatility and increase the liquidity of the plan’s investment portfolio over time. Alternatively, the fiduciaries will need to understand that volatility is inevitable and manage both contribution and benefit expectations accordingly.

Fiscal Year 2021 Net Cash Flow:

- The General Employees Fund and Police and Fire Fund net cash flow decreased from FY2020 to FY2021
- The Correctional Fund net cash flow increased from FY2020 to FY2021
- Contribution income increased in all three plans
 - Total active employees in each plan decreased from FY2020 to FY2021
 - But, the decrease in number of employees was more than offset by wage growth resulting in overall contribution increases.
- Benefit payments increased in all three plans
- Administrative expense was materially unchanged

Net Cash Flow — Defined Benefit Plans *(in thousands)*

	General Employees Fund	Police & Fire Fund	Correctional Fund	FY2021 Combined Total	FY2020 Combined Total	Increase (Decrease)
Contributions						
Employer Contributions	\$524,685	\$201,129	\$19,351	\$745,165	\$722,683	\$22,482
Member Contributions	439,488	129,351	12,948	581,787	571,636	10,151
State Contributions	16,000	18,000	0	34,000	29,500	4,500
Total Contributions	980,173	348,480	32,299	1,360,952	1,323,819	37,133
Benefits and Refunds	(1,724,310)	(595,747)	(20,278)	(2,340,335)	(2,280,288)	(60,047)
Administrative Expense (net of "other additions")	(12,559)	(918)	(331)	(13,808)	(12,997)	(811)
Net Cash Flow	(\$756,696)	(\$248,185)	\$11,690	(\$993,191)	(\$969,466)	(\$23,725)

Fiscal Year 2021 Investment Income:

The MD&A gives a more comprehensive review of PERA's results of operations during FY2021, including a close look at the elements of PERA's net cash flow. But the most important element of PERA's story in FY2021 is investment income. Beginning in the Spring of 2020, shortly before the start of the current fiscal year, the investment markets began to rebound sharply from the slump experienced early in the epidemic. The market rebound continued for the entire year. During FY2021, PERA enjoyed remarkably robust returns on our investments. Despite choosing to lower the discount rate and thereby increase the estimated present value of the pension liability for our plans, as of fiscal year-end 2021 the funded status of PERA's General Employees Plan is the best it has been for 20 years. Similarly, the Police and Fire Plan is funded at a level higher than it has been in 15 years and the Correctional Plan is funded at the highest level in its history.

During FY2021, PERA's sensitivity to investment income allowed it to realize a "maturity benefit" from its relatively large asset balances. The investment market rebound in FY2021 saw PERA earn a 30.3 percent return on investments. Because PERA's plans are "mature" and therefore have large portfolios of invested assets, investment return on the three cost-sharing plans totaled \$9.6 billion. FY2021's aggregate return was more than seven times higher than the \$1.3 billion of investment income for the three plans in FY2020. The large investment income significantly increased funded ratios in PERA's plans. A less mature plan with a smaller asset base and greater dependence on contributions would have received a smaller dollar benefit.

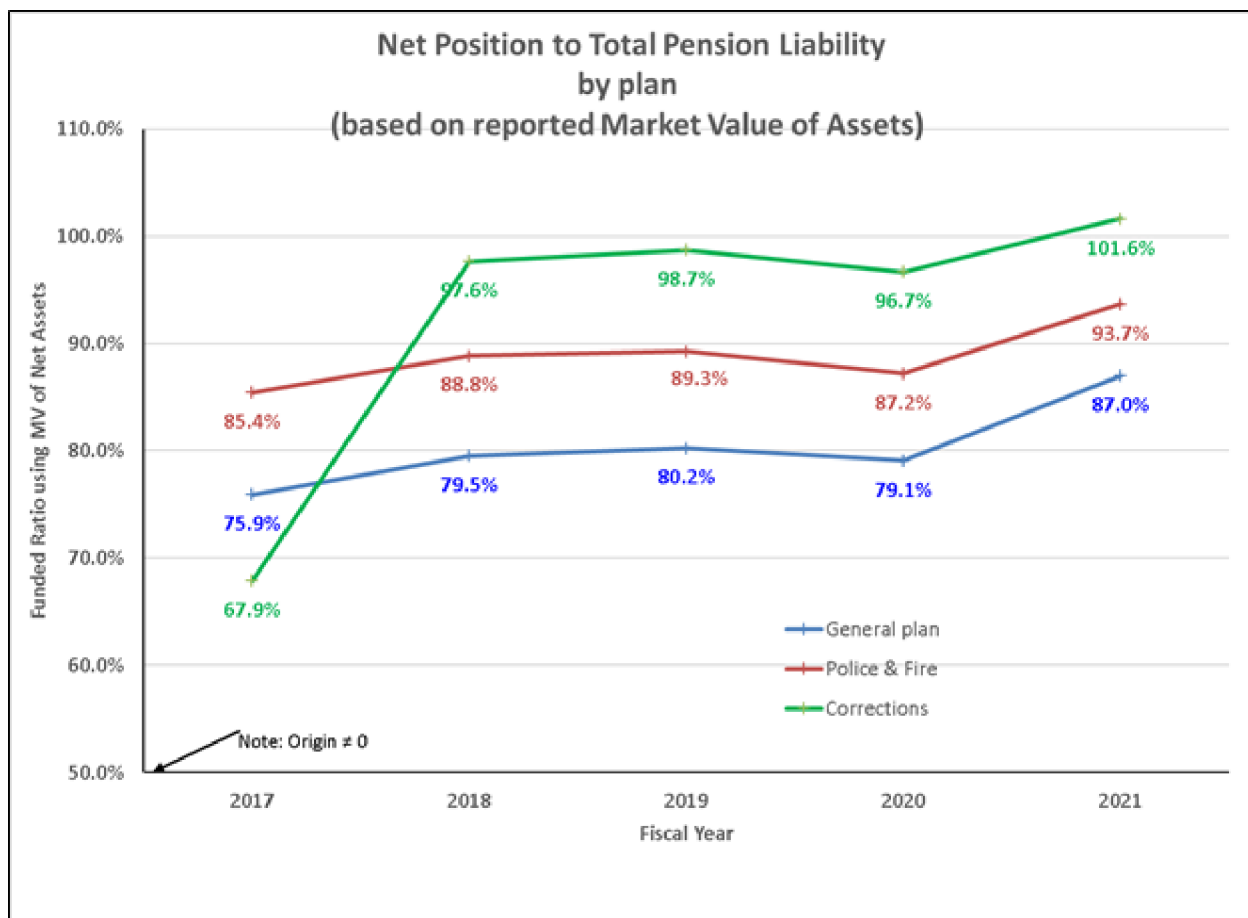
Not only did FY2021's robust return on investments increase funded levels in all of PERA's plans but, PERA realized this return at a particularly opportune time. Our actuaries regularly determine a reasonable rate of return that could be expected on PERA's investment portfolio. This rate of return is used as the discount rate for estimating the present value of future benefit payments (the total pension liability). Other things being equal, if the rate of return/discount rate goes up, the estimated pension liability goes down. Conversely, if the return/discount rate goes down, the estimated liability goes up. In FY2020, PERA was using the State's statutory estimated rate of return of 7.5 percent to estimate ("discount") the total pension liability. In FY2021, the actuaries' analysis showed that a rate between 5.71 percent and 6.61 percent would be more appropriate for PERA. Based on the actuaries' analysis, PERA's management decided to use a 6.5 percent return/discount rate for financial reporting purposes to give a fairer estimate of our financial condition. Management's choice to value the liability using a lower discount rate *increased* the estimated *total pension liability* for PERA's plans as follows:

FY2021 Change in Plan Estimated Total Pension Liability (in 000s)			
Due to Change in Assumed Rate of Return/Discount Rate			
	General Plan	Police and Fire Plan	Correctional Plan
Liability at 6.5% (as reported)	\$32,858,101	\$12,169,995	\$1,019,288
Liability at 7.5% (previous discount rate)	29,215,560	10,793,845	870,567
Increased Liability due to Change from 7.5% to 6.5%	\$3,642,541	\$1,376,150	\$148,721

PERA's Fiscal Year 2021 Financial Condition:

FY2021's strong investment earnings more than offset negative net cash flow and the increased total pension liability that resulted from adopting a lower discount rate for financial reporting. As a result, PERA was able to report increased funded status for all plans as shown below:

Letter of Transmittal



Future Considerations:

PERA had good investment results in FY2021 and is in a strong financial position at the year end. However, there will undoubtedly be future challenges around which the Board of Trustees will have to guide the Agency. As noted in the MD&A, the labor trend that has been reported as “The Great Resignation” may be affecting public employment as well as other industries. Declining public employment could reduce PERA’s funding by decreasing the dollar volume of contributions. In addition, while PERA realized a maturity benefit because of the high rate of investment returns in FY2021, the maturity of PERA’s plans is a sword that cuts two ways: because of our large asset base and heavy reliance on investment income, PERA’s funded status would decline if the actual rate of return were to drop below the estimated 6.5 percent rate. In addition, PERA’s reliance on investment income makes it more vulnerable to illiquid investments.

Finally, just before this report was completed, in October 2021, the Bureau of Labor Statistics reported that inflation had risen 6.2 percent in the previous 12 months. That rate of inflation is the highest in the United States in approximately 30 years. Moreover, it is far higher than the maximum 1.5 percent Cost-Of-Living increase allowed in PERA’s General Employees Plan. High inflation is a particular burden for retired persons on fixed pensions. Depending upon how high inflation rises and how long it lasts, it could create pressure on the Board of Trustees and the legislature to change plan provisions. Some plan changes could cause deterioration in PERA’s funded status or hinder our ability to reach full funding in a timely manner.

Conclusion:

Future challenges notwithstanding, based on the proven skill of our independent investment manager; the carefully reasoned advice of our independent actuaries; and, the leadership of our Board in evolving the design of our plans to keep them sustainable; we are confident that:

- PERA will pay all benefits due to all members in full and on time;

- PERA's funded status will continue to improve and the unfunded liability will be amortized by or before 2048;
- PERA will continue to offer reasonable retirement benefits that help public employers attract and retain staff;
- At an affordable cost to Minnesota taxpayers.

Awards:

PERA received national recognition in pension fund administration and disclosure of financial information. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a *Certificate of Achievement for Excellence in Financial Reporting* to PERA for its ACFR for the fiscal year ended June 30, 2020.

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

Acknowledgments:

We wish to thank the Board of Trustees for their leadership in conducting PERA's affairs in a responsible and financially sound manner.

We wish to thank all the employees at PERA for their consistent, dedicated efforts to serve the interests of our members and other stakeholders.

We especially wish to thank David Andrews, PERA's Controller, and his staff not only for this ACFR but, for the excellent work they do daily in conducting PERA's financial business according to the highest professional standards.

Respectfully Submitted,



Doug Anderson
Executive Director



Michael Hagerty
Chief Finance Officer



Beth Reed
Chief Operating Officer

Board of Trustees & Professional Consultants



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



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



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



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



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



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



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



Kathryn A. Green
Appointed School Board Representative
Trustee since April 2006
Current term expires January 2022



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



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



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

Professional Consultants

Actuary:

Gabriel Roeder Smith & Company

Auditors:

Minnesota Office of the Legislative Auditor
Clifton Larson Allen

Legal Counsel:

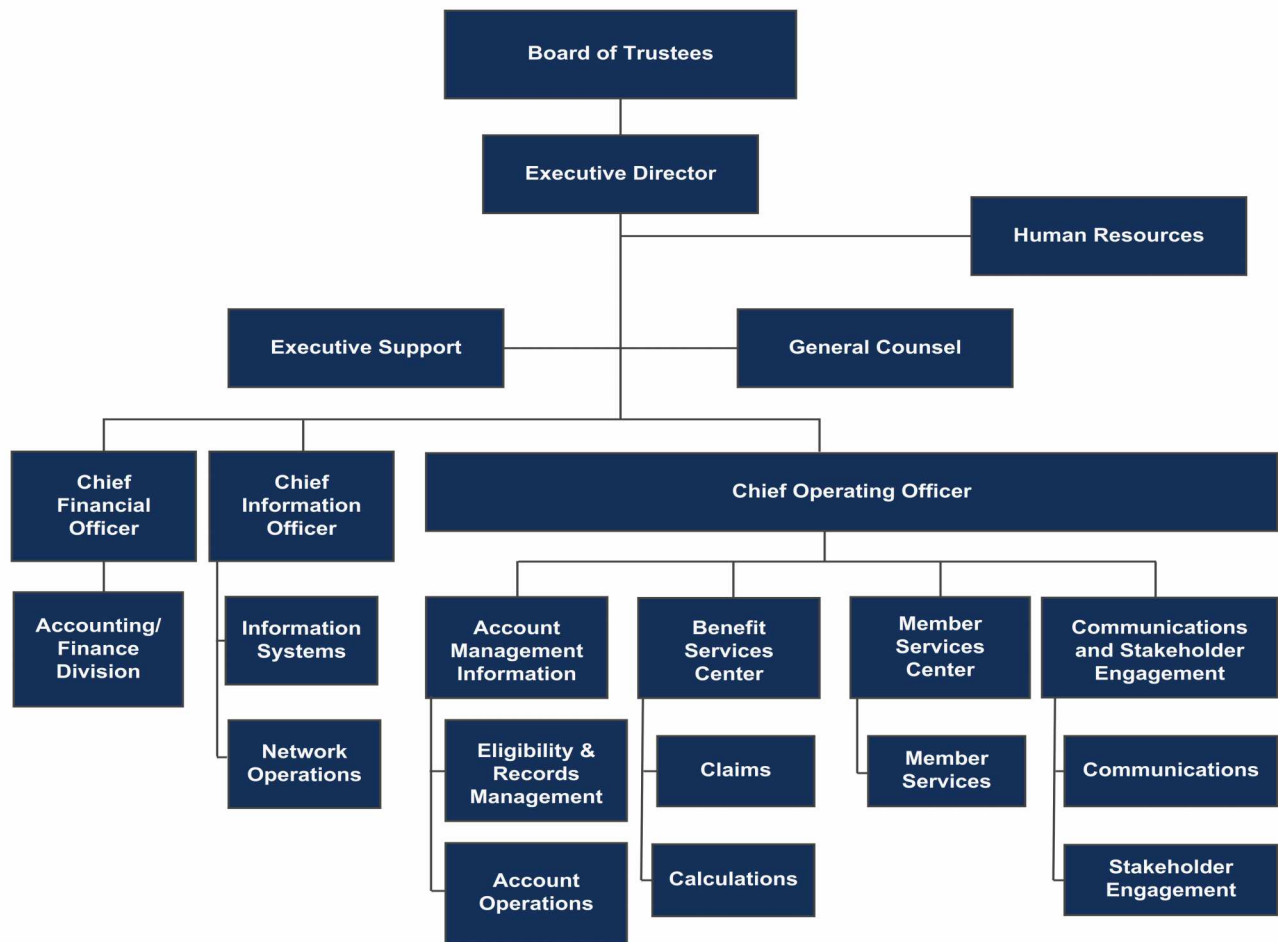
Minnesota Office of Attorney General

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 111 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

2021 ANNUAL COMPREHENSIVE FINANCIAL REPORT



1938

PERA's first executive director, O.M. Ousdigian, joined the agency. Mr. O became known as the father of the entire pension system in the state of Minnesota. He led PERA for 41 years, retiring in 1979.



1947

Membership was opened to all qualifying public employees in the state and no longer required employer approval.



1959

The Police & Fire Plan is created. PERA members employed by sheriff's offices and municipal police and fire departments became members of PERA's Police & Fire Plan.

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Independent Auditor's Report



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

Independent Auditor's Report

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

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

Report on the Financial Statements

We have audited the accompanying financial statements of the Public Employees Retirement Association of Minnesota (PERA), which included the Statement of Fiduciary Net Position as of June 30, 2021, the related Statement of Changes in Fiduciary Net Position, and Notes to the Financial Statements, as listed in the Financial Section of the Table of Contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to PERA's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of PERA's internal controls. Accordingly, we express no such opinion.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independent Auditor's Report

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Public Employees Retirement Association of Minnesota as of June 30, 2021, and the changes in financial position for the fiscal year then ended in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter

Due to the implementation of the Government Accounting Standards Board, Statement No. 84, *Fiduciary Activities*, the Public Employees Retirement Association of Minnesota did not report, in the Statement of Fiduciary Net Position as of June 30, 2021, the Agency Fund. The Agency Fund is an Other Post-Employment Benefit Plan open to local governments on a voluntary basis who wish to make long-term investments through the State Board of Investment. The Government Accounting Standards Board, Statement No. 84, *Fiduciary Activities*, requires that only certain fiduciary activities be reported.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis and the other required supplementary information, as listed in the Financial Section of the Table of Contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to Management's Discussion and Analysis and the other required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information Included with the Financial Statements

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

The supporting schedules, as listed in the Financial Section of the Table of Contents, are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. The supporting schedules have been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supporting schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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

Other Reporting Required by Government Auditing Standards

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



Lori Leysen, CPA
Deputy Legislative Auditor



Tracy Gebhard, CPA
Audit Director

December 17, 2021
Saint Paul, Minnesota

Management Discussion and Analysis

The following *Management Discussion and Analysis* (MD&A) and the related financial statements provide insight into PERA's overall financial condition and results of operations for the fiscal year (FY) ended June 30, 2021. The Agency's financial condition underpins PERA's ability to sustain its pension plans.

The following narrative supplements the financial statements. It should be read in conjunction with the transmittal letter and footnotes to the statements presented elsewhere in this *Annual Comprehensive Financial Report* (ACFR). Readers should also familiarize themselves with the Annual Valuations and periodic Experience Studies prepared by our independent actuaries available on our website (<https://www.mnpera.org/about/financial/>) and with the State Board of Investment's *Annual Report* available at (<http://mn.gov/sbi/>)

Overview of PERA

Fiscal year 2021 was a good year for PERA:

- Because of the rebound in the securities markets after the decline in 2020, investment earnings increased significantly.
- Because of strong investment earnings, fiduciary net position (net assets available to pay pension obligations) grew.
- And, because net assets in each of the three cost-sharing plans grew faster than the corresponding estimated total pension liability, the funded status of each of the three cost-sharing plans improved.

PERA provides pension plans for people who retire from covered local government service in the State of Minnesota and their survivors. PERA has two types of pension plans: defined benefit retirement plans and a defined contribution plan. All of PERA's plans are multiple employer plans.

The defined benefit plans make payments whose amount and timing are determined by statutes applicable to each plan. In PERA's three cost-sharing plans, assets of the participating government employers are pooled for purposes of investment *and* payment. Pooled assets can be used to pay the retirement obligations of any employer in the plan. Under limited circumstances described in the plans, members of the three cost-sharing multiple employer plans may be eligible for non-retirement benefits if they suffer a disability as defined in State Law.

PERA's agent multi-employer Statewide Volunteer Firefighter (SVF) Plan pools the assets of the participating employers for *investment* purposes only. Assets of each department participating in the SVF Plan are available to pay only the plan liabilities of that specific entity. The agent plan can be thought of as a bundle of separate retirement plans each with their own net assets and related actuarial liabilities.

PERA also administers a defined contribution plan primarily for local government elected officials. The plan provides benefits that are limited to member contributions and related investment earnings.

Note 1 to the financial statements contains detailed information about the plans.

PERA's Basic Financial Statements

The following discussion will focus on PERA's three defined benefit, cost-sharing plans. The cost-sharing plans represent an overwhelming share of the pension liabilities of PERA's plans and of the net assets accumulated to pay those liabilities when due. The majority of financial risk to the members, their employers, and ultimately to Minnesota's taxpayers and bond-holders is centered in the cost-sharing plans.

In addition, the Statewide Volunteer Firefighter Plan (SVF) is an agent plan and many of the participating departments are fully funded. Therefore, while the SVF presents a small funding risk to the sponsoring governments and their taxpayers, there is virtually no risk of non-payment to the members of the SVF Plan.

Similarly, the liability for payments from the Defined Contribution Plan (DCP) is limited to the sum of contributions by or for each individual participant plus the cumulative earnings (or loss) on those contributions. The SVF agent plan and the defined contribution plan are not material to understanding PERA's financial condition or the results of its operations.

PERA's *Statement of Fiduciary Net Position* shows a combined Net Position of \$41.3 billion for all pension activities for the fiscal year ended June 30, 2021. By type of plan, fiscal year ended 2021 net position is distributed as follows:

◦ Defined benefit cost-sharing multiple-employer plans	\$41.0 billion	99.27%
◦ Defined benefit agent multiple-employer plan (SVF Plan)	\$0.2 billion	0.49%
◦ Defined contribution plan	\$0.1 billion	0.24%

Statement of Fiduciary Net Position — The “bottom line” of the Fiduciary Statement of Net Position measures the resources PERA has available to pay pension benefits less liabilities owed by PERA to people and businesses other than members. However the statement does not include the actuarially estimated pension liability owed to plan members. Total and Net Pension Liability is disclosed in the *Notes* to the annual report. Fiduciary Net Position must be considered with actuarial valuation reports and other year-end information to get a complete understanding of the financial position and sustainability of PERA's retirement plans.

Because the reported asset value of collateral received for securities lent is fully offset by the reported liability to return that collateral to the borrowers, securities lending collateral has no effect on PERA's net position. Therefore, both the asset and the related liability for securities lending collateral are omitted from the following discussion of PERA's assets and liabilities.

Management Discussion and Analysis

Condensed Schedule of Fiduciary Net Position - Cost-Sharing Plans (in thousands)							
	General Employees Fund	Police & Fire Fund	Correctional Fund	FY 2021 Combined Total	FY 2020 Combined Total	Change \$	Change %
Assets							
Cash & Cash Equivalents	\$440,891	\$181,935	\$16,480	\$639,306	\$1,391,748	(\$752,442)	(54.1%)
Investments	28,112,203	11,210,739	1,019,303	40,342,245	30,957,121	9,385,124	30.3%
Receivables	40,407	12,147	555	53,109	53,719	(610)	(1.1%)
Capital Assets & Other	5,968	0	0	5,968	5,997	(29)	(0.5%)
Total Assets Before Security Lending	28,599,469	11,404,821	1,036,338	41,040,628	32,408,585	8,632,043	26.6%
Security Lending Collateral	1,821,601	726,335	65,928	2,613,864	2,275,583	338,281	14.9%
Total Assets per Statements	30,421,070	12,131,156	1,102,266	43,654,492	34,684,168	8,970,324	25.9%
Liabilities							
Accounts Payable	8,148	6,720	622	15,490	12,070	3,420	28.3%
Accrued Compensated Absences	1,126	0	0	1,126	1,016	110	10.8%
Bonds Payable	2,542	0	0	2,542	3,258	(716)	(22.0%)
Total Liabilities Before Securities Lending	11,816	6,720	622	19,158	16,344	2,814	17.2%
Liability to Return Securities Lending Collateral	1,821,601	726,335	65,928	2,613,864	2,275,583	338,281	14.9%
Total Liabilities Per Statements	1,833,417	733,055	66,550	2,633,022	2,291,927	341,095	14.9%
Total Net Position	\$28,587,653	\$11,398,101	\$1,035,716	\$41,021,470	\$32,392,241	\$8,629,229	26.6%

The Statement of Changes in Fiduciary Net Position reports the changes to the PERA's net position that happened during the year. Additions to net position include contributions from members, members' employers, and others as well as the net appreciation in the fair value of the investment portfolio. Deductions from net position during the year include benefit payments and administrative expenses.

Condensed Schedule of Changes in Fiduciary Net Position - Cost-Sharing Plans *(in thousands)*

	General Employees Fund	Police & Fire Fund	Correctional Fund	FY2021 Combined Total	FY2020 Combined Total	Change \$	Change %
Additions							
Employer Contributions	\$524,685	\$201,129	\$19,351	\$745,165	\$722,683	\$22,482	3.1%
Member Contributions	439,488	129,351	12,948	581,787	571,636	10,151	1.8%
State Contributions	16,000	18,000	0	34,000	29,500	4,500	15.3%
Net Investment Income (Loss)	6,712,710	2,672,826	238,666	9,624,202	1,331,764	8,292,438	622.7%
Other Additions	182	23	1	206	527	(321)	(60.9%)
Total Additions	7,693,065	3,021,329	270,966	10,985,360	2,656,110	8,329,250	313.6%
Deductions							
Benefits	1,666,103	592,687	20,088	2,278,878	2,189,451	89,427	4.1%
Refunds of Contributions	58,027	3,060	2,140	63,227	90,837	(27,610)	(30.4%)
Administrative Expenses	12,741	941	344	14,026	13,524	502	3.7%
Total Deductions	1,736,871	596,688	22,572	2,356,131	2,293,812	62,319	2.7%
Increase (Decrease) in Net Position	5,956,194	2,424,641	248,394	8,629,229	362,298		
Net Position at Beginning of Year	22,631,459	8,973,460	787,322	32,392,241	32,029,943		
Ending Net Position	\$28,587,653	\$11,398,101	\$1,035,716	\$41,021,470	\$32,392,241		

The *Notes to the Financial Statements* are an integral part of the basic financial statements and provide additional information that is necessary for understanding the financial statements.

In addition to the basic financial statements, the following required supplementary information is found after the notes to the financial statements:

1. *Schedule of Changes in Net Pension Liability and Related Ratios*
2. *Schedule of Contributions from Employers and Non-employers*
3. *Schedule of Investment Returns*

Financial Highlights:

The following are observations about items affecting Fiduciary Net Position during FY2021.

- **Combined Fiduciary Net Position** for the cost-sharing plans increased by approximately \$8.6 billion (26.6 percent) from \$32.4 billion at FY2020 to approximately \$41.0 billion at FY2021.
- **Total Pension Liability** is an actuarial *estimate* of the present value of pension benefits already earned by government employees. Combined Total Pension Liability for PERA's three cost-sharing plans increased by approximately \$6.4 billion from \$39.7 billion at FY2020 to approximately \$46.0 billion at FY2021. (\$5.2 billion of the liability change was due to adopting a lower rate of return/discount rate for reporting FY2021 finances).
- **Net Pension Liability** is the Total Pension Liability less Fiduciary Net Position. Although Total Pension Liability increased by approximately \$6.4 billion, because Fiduciary Net Position (net assets) increased by approximately \$8.6 billion, PERA's *Net Pension Liability decreased* by approximately \$2.2 billion from \$7.3 billion at FY2020 to approximately \$5.0 billion at FY2021. Information about Total Pension Liability and Net Pension Liability estimates are disclosed in the *Notes and Required Supplementary Information* of this report.

Management Discussion and Analysis

- **Contributions:** Despite a decrease in total active members in all three cost-sharing plans, total contributions increased by approximately \$37.1 million (2.8 percent) from approximately \$1.32 billion in FY2020 to approximately \$1.36 billion in FY2021.
- **Benefit and Refund Payments** increased approximately \$62.0 million (2.7 percent) from \$2.28 billion during FY2020 to \$2.34 billion in FY2021.
- **Administrative Expenses** (net of other additions) remained virtually unchanged from \$13.0 million in FY2020 to \$13.8 million in FY2021.
- **Net Cash Flow** (contributions less benefit payments and expenses) used \$25.5 million more financial resources in FY2021. Net cash flow *decreased* from negative \$969.5 million net cash flow in FY2020 to negative \$995.0 million in FY2021.
- **Investment Income**, (including increases in fair market value less investment-related expenses), in FY2021 was \$9.6 billion which was \$8.3 billion higher than the \$1.3 billion earned in FY2020. FY2021 investment income more than offset the negative net cash flow of \$995.0 million and the total liability increase of \$5.2 billion caused by decreasing the discount rate used to estimate the total pension liability for PERA's plans from 7.5 percent to 6.5 percent effective 2021.

Analysis:

Over the long run, a defined benefit plan must balance cash in from contributions and investment income with cash out for benefits and expenses as expressed in the equation:

$$\text{Contributions} + \text{Investment Income} = \text{Benefits Paid} + \text{Expenses}$$



During any given year, one side of the equation may be larger than the other side. Differences accumulate in the Fiduciary Net Position which is a reserve for paying future benefits.

Additions to Fiduciary Net Position come from two sources:

- Net Cash Flow, and
- Net Investment Income

Net Cash Flow: From the basic pension equation, net pension cash flow is defined as:

$$\text{Contributions} - \text{Benefits} - \text{Expenses} = \text{Net Cash Flow.}$$

As seen in the table below, cash inflows from contributions increased in FY2021. However, cash outflows for benefits and expenses increased by a greater amount. Therefore, in FY2021 there was an overall *decrease* in Net Cash Flow from negative \$969.5 million in FY2020 to negative \$995.0 million in FY2021.

Net Cash Flow — Defined Benefit Plans (in thousands)						
	General Employees Fund	Police & Fire Fund	Correctional Fund	FY 2021 Combined Total	FY 2020 Combined Total	Increase (Decrease)
Contributions						
Employer Contributions	\$524,685	\$201,129	\$19,351	745,165	\$722,683	\$22,482
Member Contributions	439,488	129,351	12,948	581,787	571,636	10,151
State Contributions	16,000	18,000	0	34,000	29,500	4,500
Total Contributions	980,173	348,480	32,299	1,360,952	1,323,819	37,133
Deductions						
Benefits and Refunds	(1,724,130)	(595,747)	(22,228)	(2,342,105)	(2,280,288)	(61,817)
Administrative Expense	(12,559)	(918)	(343)	(13,820)	(12,997)	(823)
Total Deductions	(1,736,689)	(596,665)	(22,571)	(2,355,925)	(2,293,285)	(62,640)
Net Cash Flow	(\$756,516)	(\$248,185)	\$9,728	(\$994,973)	(\$969,466)	(\$25,507)

Contributions come from three sources: participating employers; active, covered employees; and, non-employer sources. Contributions increased by approximately \$37.1 million, or about 2.8 percent from approximately \$1.32 billion in FY2020 to approximately \$1.36 billion in FY2021. The dollar volume of increase from FY2020 to FY2021 was almost exactly the same as the dollar increase in contributions from FY2019 to FY2020.

Schedule of Contributions: FY2021 versus FY2020 (in thousands)					
Plan	Employer Contributions	Employee Contributions	Other Contributions	Total Contributions FY2021	Total Contributions FY2020
General Employees Fund	\$524,685	\$439,488	\$16,000	\$980,173	\$961,240
Police & Fire Fund	201,129	129,351	18,000	348,480	330,844
Correctional Fund	19,351	12,948	0	32,299	31,735
Total Contributions FY2021	\$745,165	\$581,787	\$34,000	\$1,360,952	
Total Contributions FY2020	\$722,683	\$571,636	\$29,500		\$1,323,819

Management Discussion and Analysis

Employer and Employee Contributions for the three cost-sharing plans, are determined by two factors:

1. Covered-employee payroll which, in turn, is determined by two factors:
 - a. The number of pension-covered employees times (labor volume factor)
 - b. The average pension-eligible compensation per covered employee (labor rate factor)
2. Contribution rates applied to covered payroll are set by the Minnesota State legislature (Minnesota State Statutes, Chapter 353).

The *dollar-volume* of payroll-based contributions to PERA’s cost-sharing plans generally increase at a moderate rate year-over-year because of growth in the number employees and wage growth.

Contribution *rates* did not change between FY2020 and FY2021. For the benefit of local government employers and their taxpayers, PERA strives to maintain its contribution *rates* at a level percentage of covered payroll. Current contribution rates are disclosed in the notes to the statements and other plan provisions can be found in the *Required Supplementary Information* (RSI) for each plan.

However, the Covid epidemic may have had an indirect effect on payroll trends during 2021. As shown in the table below, the number of active employees declined during FY2021 in each of the three cost-sharing plans. This is the first time in ten years that all three funds have experienced a decline in the number of active employees during the same year. It is the second year in a row that both the General and Correctional plans have experienced declines. The drop in employment numbers may be related to the Covid-driven “Great Resignation” that has been reported in various news sources. However, while the number of employees decreased in each of the plans, total compensation (covered payroll) increased in all three plans. Therefore, total contributions increased in each plan during FY2021. Average compensation per employee may have been temporarily inflated during FY2021 possibly because the remaining employees earned more than usual overtime covering for the staff reductions noted above.

Schedule of Changes in Covered Members and Payroll - Multi-Employer Cost-sharing Pension Plan									
Plan	FY2021			FY2020			FY2021 increment (%) over (under) FY2020		
	Covered Payroll (in thousands)	Number of Active Employees	Average Pension-eligible compensation per employee	Covered Payroll (in thousands)	Number of Active Employees	Average Pension-eligible compensation per employee	Total Change (%) in Covered Payroll	Due to change in the Number of Active Employees	Due to change in Average Pension-eligible compensation per employee
General	\$6,761,354	149,281	\$45,293	\$6,698,754	153,741	\$43,572	0.9%	(2.9%)	3.9%
Police and Fire	1,096,195	11,705	\$93,652	1,069,481	12,025	\$88,938	2.5%	(2.7%)	5.3%
Local Corrections	222,093	3,788	\$58,631	217,702	3,855	\$56,473	2.0%	(1.7%)	3.8%
Total	\$8,079,642	164,774		\$7,985,937	169,621				

Other Contributions are set in State statutes and funded through various State revenues. State non-employer contributions include amounts to offset costs incurred by PERA in the past to absorb underfunded local government retirement plans and to help the Police and Fire Plan reach full-funding. In total, State contributions to the three cost-sharing defined benefits plans totaled \$34.0 million and represented 2.5 percent of contributions and 0.003 percent of total additions to net position.

Benefit payments are the principal use of net cash flow. Annual benefit payments from cost-sharing plans in FY2021 were approximately \$2.3 billion or about \$89 million (about 4.1 percent) higher than FY2020 payments of approximately \$2.2 billion. Two factors increased the total amount of benefits paid in FY2021 over FY2020:

1. Number of recipients: Combined, the number of benefit recipients in the three cost-sharing plans grew by 4,324 persons (3.6 percent). Of the \$89 million increase in benefit payments, approximately \$80 million was due to the increased number of persons receiving benefits.
2. Change in average benefit paid per recipient: Combined, Cost-of-Living Adjustments (COLA) to retirees' benefits and higher initial benefits due to higher final salaries for more recent retirees increased total FY2021 benefit payments by approximately \$9 million over FY2020's level.

Schedule of Changes in Benefit Payments and Recipients - Cost-Sharing Multi-Employer Plans									
	FY2021			FY2020			FY2021 percent over (under) FY2020		
	Benefit Payments (in thousands)	Number of Benefit Recipients	Average Benefit per Recipient	Benefit Payments (in thousands)	Number of Benefit Recipients	Average Benefit per Recipient	Benefit Payments	Number of Benefit Recipients	Average Benefit per Recipient
General Employees Fund	\$1,666,103	112,232	15	\$1,604,842	108,492	15	3.8%	3.4%	0.4%
Police & Fire Fund	592,687	11,656	51	567,040	11,201	51	4.5%	4.1%	0.4%
Correctional Fund	20,088	1,572	13	17,569	1,443	12	14.3%	8.9%	5.0%
	<u>\$2,278,878</u>	<u>125,460</u>		<u>\$2,189,451</u>	<u>121,136</u>				

Note: Police and Fire (P&F) Plan benefits appear to be high relative to other plans because members of this plan do not participate in Social Security. Instead, P&F Plan members and their employers pay higher contributions than non-P&F Plan members and consequently receive a higher benefit.

Negative net cash flow by itself is not an alarming fact because a pre-funded pension plan like PERA is expected to grow its investment portfolio over time. As a fund matures, it is a natural and logical result that as the invested asset balances grow, the plans become more reliant on investment income rather than contributions to fund current benefits and future growth. The annual actuarial valuation reports found on PERA's website discuss a number of measures of maturity for each of PERA's plans.

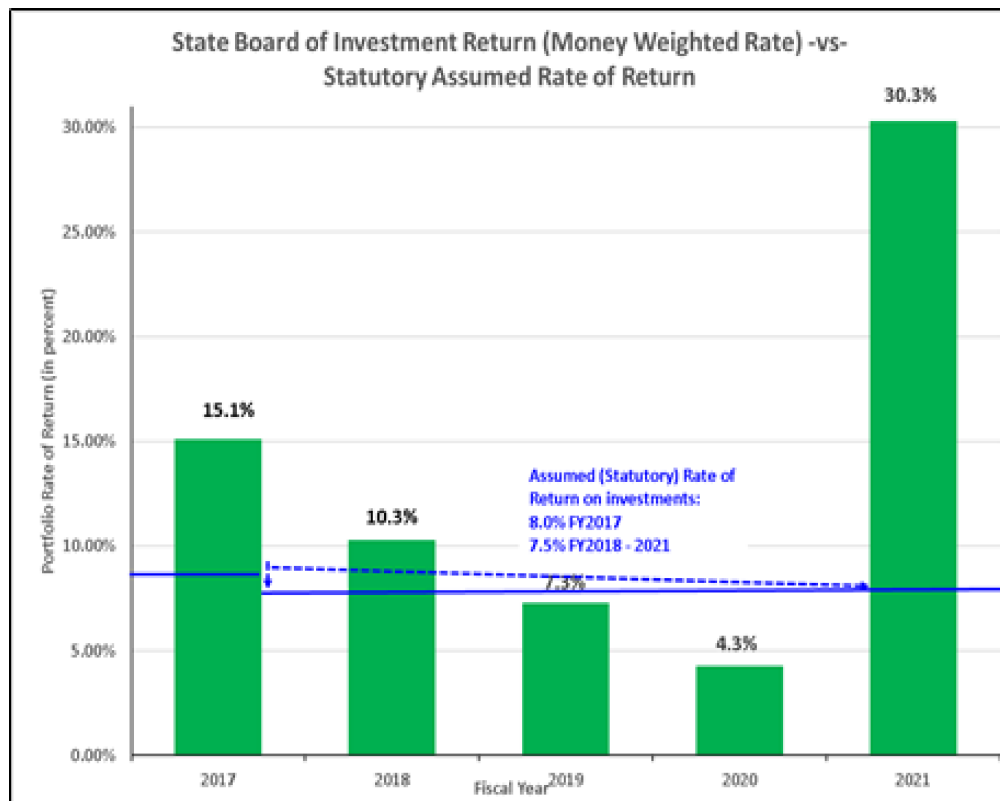
Management Discussion and Analysis

Relative Contribution of Net Cash Flow and Investment Income to Growth of Net Assets — Cost-sharing Pension Plans (in thousands)

	General Employees Fund	Police & Fire Fund	Correctional Fund	FY 2021 Combined Total	FY 2020 Combined Total	Increase (Decrease)
Net Cash Flow	(\$756,516)	(\$248,185)	\$9,728	(\$994,973)	(\$969,466)	(\$25,507)
Net Investment Income	6,712,710	2,672,826	238,666	9,624,202	1,331,764	8,292,438
Increase in Net Position	\$5,956,194	\$2,424,641	\$248,394	\$8,629,229	\$362,298	\$8,266,931

Net Investment Income: Investment markets have rebounded vigorously after the market slump in 2020. Because of the robust market returns PERA earned in the past 12 months, PERA’s retirement funds are in sound financial condition.

1. The investment income during FY2021 for the three cost sharing plans is \$9.6 billion. This is a dramatic increase over the \$1.3 billion earned by the plans in FY2020. SBI calculates PERA earned a money-weighted average rate of 30.3 percent on the plans’ investments.
2. However, more important than any given year’s return is the long-term average return. PERA’s return on investments has been positive each of the past five years. In three of the past five years, actual return on investment has exceeded the statutorily assumed rate of return (7.5 percent). In four of the last five years, PERA’s investment returns have exceeded the FY2021 selected discount rate of 6.5 percent. The five-year average return on PERA’s investments from 2017 to 2021 has been over 13 percent.



To fully appreciate the impact of FY2021 investment earnings one also has to consider the fact that, for financial accounting purposes, PERA adopted a lower discount rate (6.5 percent) to estimate the present value of its pension liabilities. Reducing the rate used to discount the future pension cash flows had the effect of *increasing* the present value of those payments (the total pension liability). Nevertheless, FY2021 investment earnings were so strong that despite using a higher denominator, the funded ratio (net assets divided by the pension liability) of all of PERA's cost-sharing plans increased in FY2021.

PERA's investment managers at the State Board of Investments (SBI) report that, "(t)he SBI's strategic allocation policy is the primary determinant of the asset portfolio's long-term investment return and asset portfolio's risk." (see: *Notes to The Financial Statements No. 2*).

As discussed in the transmittal letter, the 20 plus year bull market in bonds has driven the rate on the "risk-free" ten-year Treasury note down from an average of approximately 6 percent in 2000 to less than 1.5 percent at June 30, 2021. This has caused SBI and other pension investment managers to reallocate investment dollars into riskier asset classes in order to earn the returns necessary to sustain plans. However, greater risk comes not only with greater returns, but also with greater volatility. It is likely that PERA's rate of return on investments will change from year to year.

PERA's independent actuaries review PERA's pension plan assumptions annually. The actuaries canvass capital market participants regularly to evaluate the reasonableness of the rate used to calculate the present value of future pension payments (the total pension liability). For *funding* purposes, State Statute establishes the rate that will be used to measure the pension liability. The State's statutory rate is currently 7.5 percent which is equal to the State's assumed rate of return on investments. However, as noted above, for FY2021 our actuaries determined that 7.5 percent is no longer a reasonable long-term rate of return to assume for investments. Therefore, PERA's management, in consultation with our actuaries have chosen to use 6.5 percent as the discount rate to estimate PERA's total pension liability for *financial reporting* purposes. As discussed, this increased the estimated pension liability used to calculate the funded status of PERA's pension plans.

Note 6 to the financial statements includes a discussion of Net Pension Liability and the funded ratio as well as a sensitivity analysis of the different plans' pension liabilities to changes in the discount rate. Because the estimated value of the pension liability varies inversely with the discount rate, the analysis shows that if PERA had continued to use the more aggressive statutory rate of 7.5 percent to discount its liabilities, the estimated liabilities would have been significantly lower and the reported funded ratio would have been even higher:

Management Discussion and Analysis

Funded Ratio as of June 30, 2021

Assuming Different Discount Rates to Estimate Total Pension Liability (in thousands)

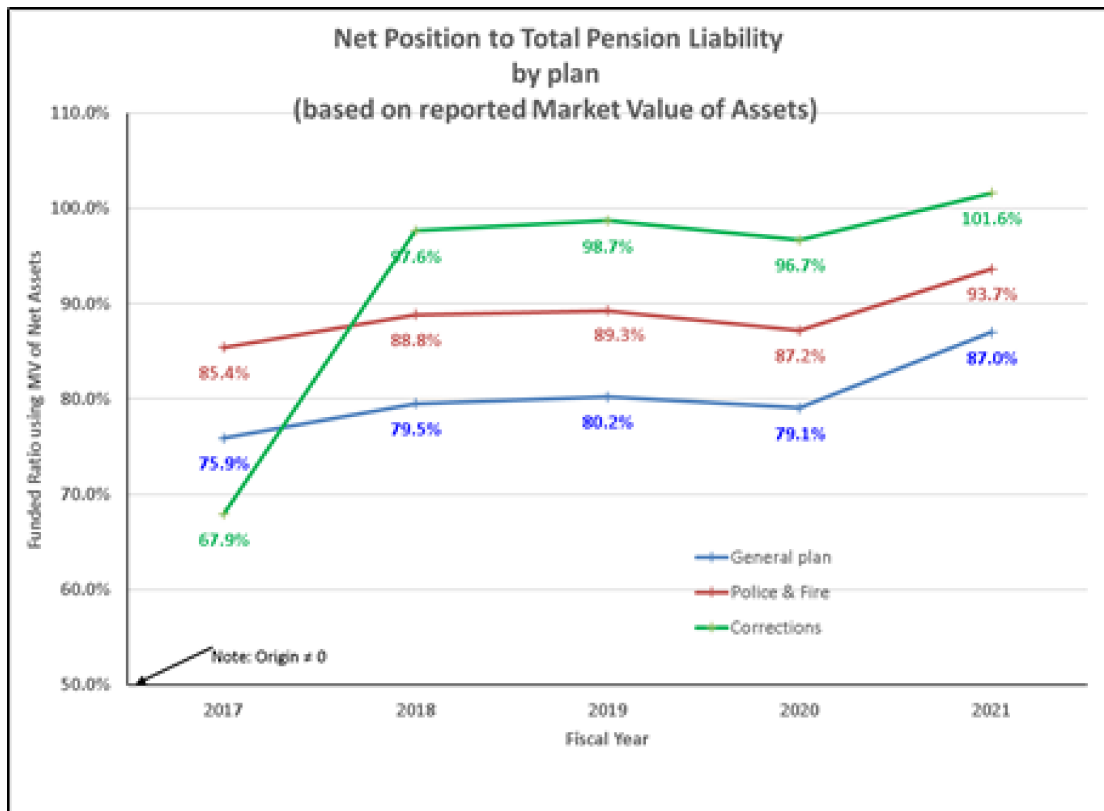
	Total Pension Liability at 6.5% Discount Rate (as reported)			Total Pension Liability at 7.5% Discount Rate (statutory assumed rate)		
	General Plan	Police & Fire Plan	Correctional Plan	General Plan	Police & Fire Plan	Correctional Plan
Total Pension Liability (A)	\$32,858,101	\$12,169,995	\$ 1,019,288	\$29,215,560	\$10,793,845	\$870,567
Fund Fiduciary Net Position (B)	\$28,587,653	\$11,398,101	\$ 1,035,716	\$28,587,653	\$11,398,101	\$ 1,035,716
Funded Ratio: Fiduciary Net Position as a Percentage of Total Pension Liability (B)/(A)	87.0 %	93.7 %	101.6 %	97.9 %	105.6 %	119.0 %

Overall Financial Condition

Is PERA financially better off in FY2021 than it was in FY2020?

The level and trend of the funded ratio provides the best answer to this question. The funded ratio compares our actuaries' estimate of the total pension liability to the value of net assets reported in PERA's financial statements to. The funded ratio is the most important single measure of the financial health of PERA's retirement plans.

Over the past five years, and particularly in FY2021, the funded status of PERA's plans have improved. The funds are financially stronger now than they have been in 20 years. Ten-year schedules of PERA's historical funding ratios using the actuarial value of assets are shown in the *Schedule of Funding Progress* in the *Actuarial Section* of the report.



There will be challenges in the years to come: we have lowered the discount rate we use for financial reporting this year because of uncertainty that investments will continue to earn on average the statutorily assumed rate of 7.5 percent. Inflation is higher than expected and it is uncertain how high it might go or how long it will last. Significant inflation would be a burden to retirees and could create pressure to modify plan features such as Cost-of-Living Adjustment increases.

While FY2021 was an exceptionally good year for PERA's investment performance, as a mature (90 year old) fund, PERA has reached the expected point at which benefit payments to retirees have outstripped contributions from active members and net cash flow is negative (for two out of three plans). However, while these are reasons to be cautious, there is no reason to worry: we are confident that PERA will fully fund its pension plans by the statutory full-funding date of 2048. Furthermore, we are confident that PERA will reach full-funding for all its plans with no disruption in benefit payments, and at an affordable cost to Minnesota's taxpayers.

Additional information about funding and actuarial results are available in the notes to the financial statements, the required supplementary information, and the actuarial section of the ACFR. However, the ACFR is not a substitute for the actuarial reports available on PERA's website. The actuarial valuation reports should be read in conjunction with this financial report.

The annual financial report is meant to provide a general overview of the Minnesota Public Employees Retirement Association's finances for all interested parties. An electronic copy of this report is available at mnpera.org. Questions or requests for additional information should be directed to PERA at 60 Empire Drive, Suite 200, St. Paul, Minnesota, 55103-2088.

Statement of Fiduciary Net Position

As of June 30, 2021 (In thousands)

	Defined Benefit Funds		
	General Employees Fund	Police and Fire Fund	Correctional Fund
Assets			
Cash and Cash Equivalents			
Cash	\$2,482	\$3,673	\$521
Cash Equivalents	438,409	178,262	15,959
Total Cash and Cash Equivalents	440,891	181,935	16,480
Receivables			
Accounts Receivable	38,285	12,125	553
Due from Other Funds	2,122	22	2
Total Receivables	40,407	12,147	555
Investments at Fair Value			
Publicly Traded Equity Securities			
<i>Domestic Equity</i>	9,441,575	3,765,885	343,619
<i>Broad International Stock Pool</i>	4,486,145	1,789,352	163,270
<i>Global Equity Pool</i>	372,812	148,535	13,223
Publicly Traded Debt Securities	6,483,990	2,585,324	234,762
Uninvested Private Equity	2,368,373	943,564	83,939
Private Investments	4,959,308	1,978,079	180,490
Total Investments	28,112,203	11,210,739	1,019,303
Securities Lending Collateral	1,821,601	726,335	65,928
Capital Assets			
Equipment Net of Accumulated Depreciation	404	0	0
Property Net of Accumulated Depreciation	5,564	0	0
Total Capital Assets	5,968	0	0
Total Assets	30,421,070	12,131,156	1,102,266
Liabilities			
Accounts Payable	8,124	5,238	277
Payable to Other Funds	24	1,482	345
Accrued Compensated Absences	1,126	0	0
Bonds Payable	2,542	0	0
Securities Lending Collateral	1,821,601	726,335	65,928
Total Liabilities	1,833,417	733,055	66,550
Net Position Restricted for Pensions	\$28,587,653	\$11,398,101	\$1,035,716

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

Volunteer Firefighter Fund	Defined Contribution Fund	Total
\$0	\$850	\$7,526
6,571	3,808	643,009
6,571	4,658	650,535
104	72	51,139
0	0	2,146
104	72	53,285
51,586	64,926	13,667,591
22,409	4,533	6,465,709
0	0	534,570
64,570	24,693	9,393,339
0	0	3,395,876
0	0	7,117,877
138,565	94,152	40,574,962
0	0	2,613,864
0	0	404
0	0	5,564
0	0	5,968
145,240	98,882	43,898,614
33	21	13,693
0	295	2,146
0	0	1,126
0	0	2,542
0	0	2,613,864
33	316	2,633,371
\$145,207	\$98,566	\$41,265,243

Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2021 (In thousands)

	Defined Benefits Funds		
	General Employees Fund	Police and Fire Fund	Correctional Fund
Additions			
Contributions			
Employer	\$524,685	\$201,129	\$19,351
Member	439,488	129,351	12,948
State of Minnesota	16,000	18,000	0
Total Contributions	980,173	348,480	32,299
Investment Income			
Net Appreciation in Fair Value of Investments	6,733,745	2,681,205	239,415
Less Investment Expense	(27,112)	(10,802)	(969)
Net Investment Income	6,706,633	2,670,403	238,446
From securities lending activities:			
Securities Lending Income	9,015	3,595	327
Borrower Rebates	(1,605)	(640)	(58)
Management Fees	(1,333)	(532)	(49)
Net Income from Securities Lending	6,077	2,423	220
Total Net Investment Income	6,712,710	2,672,826	238,666
Other Additions	182	23	1
Total Additions	7,693,065	3,021,329	270,966
Deductions			
Benefits	1,666,103	592,687	20,088
Refunds of Contributions	58,027	3,060	2,140
Administrative Expenses	12,741	941	344
Total Deductions	1,736,871	596,688	22,572
Net Increase (Decrease) in Net Position	5,956,194	2,424,641	248,394
Net Position Restricted for Pensions			
Beginning of year	22,631,459	8,973,460	787,322
End of year	\$28,587,653	\$11,398,101	\$1,035,716

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

Volunteer Firefighter Fund	Defined Contribution Plan	Total
\$529	\$2,133	\$747,827
0	2,066	583,853
5,059	0	39,059
5,588	4,199	1,370,739
25,052	23,384	9,702,801
(276)	(83)	(39,242)
24,776	23,301	9,663,559
0	0	12,937
0	0	(2,303)
0	0	(1,914)
0	0	8,720
24,776	23,301	9,672,279
2,355	6	2,567
32,719	27,506	11,045,585
5,627	0	2,284,505
0	6,986	70,213
12	279	14,317
5,639	7,265	2,369,035
27,080	20,241	8,676,550
118,127	78,325	32,588,693
\$145,207	\$98,566	\$41,265,243

Notes to the 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).

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. The active membership of MERF is also small with less than ten active members.

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 the Financial Statements

Figure 1: Retirement Plan Summary

General Employees Plan	Police and Fire Plan	Correctional Plan
STATUTORY AUTHORITY:		
<ul style="list-style-type: none"> • <i>Minnesota Statutes</i> Chapters 353 and 356 	<ul style="list-style-type: none"> • <i>Minnesota Statutes</i> Chapters 353 and 356 	<ul style="list-style-type: none"> • <i>Minnesota Statutes</i> Chapters 353E and 356
DATE ESTABLISHED:		
<ul style="list-style-type: none"> • Basic Plan 1931 • Coordinated Plan 1968 • MERF as a separate division in 2010 and merged into the plan in 2015 	<ul style="list-style-type: none"> • 1959 	<ul style="list-style-type: none"> • 1999
TYPE OF PENSION PLAN:		
<ul style="list-style-type: none"> • Cost-sharing multiple-employer defined benefit 	<ul style="list-style-type: none"> • Cost-sharing multiple-employer defined benefit 	<ul style="list-style-type: none"> • Cost-sharing multiple-employer defined benefit
MEMBERSHIP:		
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Licensed police officers and firefighters who meet the membership criteria in <i>Minnesota Statutes</i> 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 	<ul style="list-style-type: none"> • 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:		
<ul style="list-style-type: none"> • 2,100 	<ul style="list-style-type: none"> • 430 	<ul style="list-style-type: none"> • 80

continued on next page

Volunteer Firefighter 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

- 2010 for the lump sum division
- 2016 for the monthly benefit division

- Agent multiple-employer defined benefit

- Any municipal volunteer fire department or independent non-profit firefighting corporation

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Defined Contribution Plan

- *Minnesota Statutes* Chapter 353D and Chapter 356

- 1987

- Multiple-employer defined contribution

- 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

• 1,100

Notes to the Financial Statements

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

General Employees Plan	Police and Fire Plan	Correctional Plan
VESTING:		
<ul style="list-style-type: none"> • 3 years for members hired prior to July 1, 2010 • 5 years for members first hired on or after July 1, 2010 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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:		
<ul style="list-style-type: none"> • Average monthly salary over the highest paid 60 consecutive months or all months if less than 60 	<ul style="list-style-type: none"> • Average monthly salary over the highest paid 60 consecutive months or all months if less than 60 	<ul style="list-style-type: none"> • Average monthly salary over the highest paid 60 consecutive months or all months if less than 60
RETIREMENT ANNUITY FORMULAS:		
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Annuity accrual rate is 3.0% of average salary for each year of credited service 	<ul style="list-style-type: none"> • Annuity accrual rate is 1.9% of average salary for each year of credited service

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 the Financial Statements

B) Participating Members

Figure 2 shows membership totals in PERA’s multiple-employer defined benefit plans as of June 30, 2021. In addition, the Defined Contribution Plan serves approximately 8,000 members.

Figure 2: PERA Membership — Defined Benefit Plans

	General Employees	Police and Fire	Correctional	Volunteer Firefighter	Total
Retirees and beneficiaries receiving benefits	112,232	11,656	1,572	140	125,600
Terminated employees entitled to benefits/refunds but not yet receiving them:					
<i>Vested</i>	66,048	1,813	3,832	1,032	72,725
<i>Non-Vested</i>	81,052	912	2,200	0	84,164
Current, active employees:					
<i>Vested</i>	91,971	8,733	2,098	2,551	105,353
<i>Non-Vested</i>	57,310	2,972	1,690	1,456	63,428
Total	408,613	26,086	11,392	5,179	451,270

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 PERA plans' survivor factors were updated for benefits beginning July 1, 2019. 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 postretirement 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.

Notes to the Financial Statements

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.

Postretirement Increases

General Employees Plan — Annuities, disability benefits, and survivor benefits are increased effective every January 1. Beginning in 2019, the postretirement 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 postretirement 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 postretirement 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

Notes to the Financial Statements

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,

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 the 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 \$21 million billed in fiscal year 2021 but not due from employers until fiscal year 2022. For the Police and Fire Fund, the receivable includes an employer supplemental contribution of \$7.7 million billed in fiscal year 2021 but not due from employers until fiscal year 2022.

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.

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, 2021, the participation shares in the Combined Retirement Fund at fair value totaled approximately 31.4 percent for the General Employees Fund, 12.5 percent for the Police and Fire Fund, and 1.1 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.

Notes to the 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 asset allocation is as follows as of June 30, 2021:

Public Equity	50.0%
Fixed Income	25.0%
Private Markets	25.0%

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:

The following changes were implemented during Fiscal Year 2021.

- The Total Combined Funds allocation to the Fixed Income Program was increased from 20 percent to 25 percent.
- The Fixed Income Program was restructured and now consists of a combined 40 percent Core/Core-plus and Return Seeking Bond allocation; a 40 percent Treasury Protection allocation; and a 20 percent combined Cash plus Short Duration Treasury Ladder allocation.
- The segregation of the Unallocated Investment Funds associated with the Private Markets/Alternatives Program from the dedicated Public Equities Program. The Unallocated Investment Funds are now invested in a strategy using physical securities in combination with an overlay program fully collateralized by cash.
- The use of cash overlay strategies to facilitate rebalancing and enhance portfolio liquidity.
- The use of a currency overlay strategy to more effectively manage the portfolio's non-dollar exposure.
- Implemented a procedure, consistent with all applicable fiduciary duties, to remove publicly traded companies which derive 25 percent or more of their revenue from the extraction and/or production of thermal coal as authorized investments in the SBI's Combined Funds investment portfolio.
- The policy for the upper limit for Private Markets Market Value plus Unfunded Commitments was temporarily increased to a maximum of 45 percent from 35 percent. The SBI staff in conjunction with the Private Market consultant will propose a new permanent recommendation for the management of Unfunded Commitments by the end of Fiscal Year 2023. The temporary policy maintains the current target Market Value level of 25 percent, but allows the portfolio to hold private market investments up to the current statutory limit of 35 percent.

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 has historically undertaken an asset allocation study roughly 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.

While the portfolio's target allocation was adjusted during the year, as described in the above sections, the adjustments were not large enough to warrant an adjustment to the total portfolio long-term expected return on investment. The current long-term expected asset allocation as of June 30, 2021, is shown in **Figure 3**.

Figure 3: 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%

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 4**.

Notes to the Financial Statements

Figure 4: Money-Weighted Rate of Return

Fund	Fiscal Year 2021
General Employees Fund	30.29%
Police and Fire Fund	30.27%
Correctional Fund	30.21%
Volunteer Firefighter Fund	20.61%

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 2021.

G) Accrued Compensated Absences

PERA's employees accrue vacation leave, sick leave, and compensatory leave at various rates within limits specified in collective bargaining agreements. Accumulated amounts for compensated absences are accrued when incurred. Such leave is liquidated in cash primarily at the time of termination of employment. The total liability at June 30, 2021, is \$1,126,000. Of this, \$115,000 is considered a short-term liability and \$1,011,000 is considered a long-term liability. The total increased by \$110,000 during fiscal year 2021.

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.

NOTE 3

Deposits and Investment Risk Disclosures

A) Fair Value Reporting

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

Level 1: 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, 2021, 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 and are liquidated which occur over the life of the investment.

The SBI has 60 investments that are valued at NAV that are currently in the liquidation mode, totaling 2 percent of the NAV value. The majority of the remaining value of investments in liquidation mode will be returned to the SBI within a time period of three to five years. PERA's proportionate share of the unfunded commitments valued at NAV total \$5,259,295,608.

Notes to the Financial Statements

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, 2021 (in thousands)				
	Fair Value	Level 1	Level 2	Level 3
Equity Investments				
Common Stock	\$21,615,202	\$21,601,648	\$13,464	\$90
Real Estate Investment Trust	532,745	532,745	0	0
Other Equity	910,633	512,611	6,423	391,599
Equity Total	23,058,580	22,647,004	19,887	391,689
Fixed Income Investments				
Bank Loans	111,830	0	111,222	608
Asset-Backed Securities	332,079	0	277,059	55,020
Mortgage-Backed Securities	1,034,946	0	1,031,693	3,253
Corporate Bonds	2,111,779	0	2,111,779	0
Government Issues	5,422,785	0	5,422,785	0
Other Debt Instruments	10,510	0	10,510	0
Fixed Income Total	9,023,929	0	8,965,048	58,881
Investment Derivatives				
Rights	54	0	54	0
Warrants	127	0	127	0
Options	(110)	0	(110)	0
Swaps	7,504	0	7,504	0
Investment Derivatives Total	7,575	0	7,575	0
Total Investments by Fair Value	\$32,090,084	\$22,647,004	\$8,992,510	\$450,570
Investments Measured at the Net Asset Value (in thousands)				
	NAV	Percent of NAV	Number of Investments	Unfunded Commitments
Private Equity	\$4,992,194	70%	170	\$3,639,214
Real Estate	569,844	8%	28	674,029
Real Assets	869,128	12%	32	315,766
Private Credit	666,578	10%	41	630,287
NAV Total	\$7,097,744	100%	271	\$5,259,296

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.

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

Notes to the Financial Statements

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 170 Private Equity investments representing 70 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 28 real estate investments representing 8 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 32 Real Assets investments representing 12 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 41 Private Credit investments representing 10 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 2021, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all PERA deposits, eliminating exposure to custodial credit risk.

C) Credit Risk

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

- The aggregate value of these obligations may not exceed 5 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, 2021
AAA	\$343,422
AA	5,791,207
A	280,563
BBB	952,585
BB	578,907
B	568,587
CCC	245,741
CC	16,737
C	770
D	1,097
Unrated Corporate	2,453,715
Total	\$11,233,331

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.

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**.

Notes to the Financial Statements

Figure 7: Interest Rate Risk

Security	Weighted Average Maturity (in years)
Asset-Backed Securities	4.40
Mortgage Backed Securities	4.95
Bank Loans	5.38
Collateralized Mortgage Obligations	6.35
Corporate Debt Obligations	7.85
Municipal Debt Obligations	7.99
Yankee Bonds	8.77
Foreign Country Bonds	8.85
Agency Securities	8.90
US Treasuries	13.65

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, 2021, was distributed among the currencies shown in **Figure 8**.

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

Currency	Cash	Equity	Fixed Income
Euro Currency	\$4,279	\$2,177,786	\$42,812
Japanese Yen	4,331	902,820	0
Pound Sterling	1,796	578,056	12,689
Hong Kong Dollar	1,380	522,492	0
Canadian Dollar	1,895	413,048	12,279
Swiss Franc	215	381,897	0
Australian Dollar	718	261,143	0
South Korean Won	151	249,683	0
New Taiwan Dollar	338	239,266	0
Swedish Krona	308	156,457	0
Danish Krone	311	128,471	0
Brazilian Real	491	84,912	8,200
Yuan Renminbi	1,024	82,088	0
South African Rand	52	49,199	6,046
Singapore Dollar	251	44,187	0
Norwegian Krone	73	36,047	0
Mexican Peso	734	19,741	12,316
Indonesian Rupiah	61	18,236	8,399
Polish Zloty	1,052	12,457	5,772
Thailand Baht	142	15,182	2,057
Hungarian Forint	29	14,523	2,468
New Israeli Sheqel	24	15,127	0
Russian Ruble	194	0	9,737
Malaysian Ringgit	152	7,912	1,830
New Zealand Dollar	16	9,344	0
Uae Dirham	34	7,147	0
Czech Koruna	3	4,339	2,312
Turkish Lira	38	5,337	576
Philippine Peso	27	4,549	0
Romanian Leu	0	1,808	1,710
Qatari Rial	41	3,399	0
Colombian Peso	302	776	2,207
Egyptian Pound	9	355	2,394
Kuwaiti Dinar	18	2,371	0
Chilean Peso	41	2,077	95
Sol	226	0	1,931
Uruguayan Peso	0	0	1,906
Hryvnia	0	0	604
Kazakhstan Tenge	0	0	229
Dominican Peso	0	0	81
Total	\$20,756	\$6,452,232	\$138,650

Notes to the 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, 2021, 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 2021, 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 2021	Fair Value at June 30, 2021	Notional Amount
Futures:			
Equity Futures–Long	\$206,673	\$0	\$1,415
Equity Futures–Short	(\$5,439)	\$0	(\$7)
Fixed Income Futures–Long	(\$26,215)	\$0	\$849,122
Fixed Income Futures–Short	\$46,166	\$0	(\$769,084)
Options:			
Futures Options Bought	(\$2,316)	\$142	\$169
Futures Options Written	\$1,829	(\$251)	(\$1,283)
Currency Forwards Contracts	\$2,272	\$4,523	\$7,763,173
Stock Warrants and Rights:			
Stock Warrants	(\$30)	\$127	\$97
Stock Rights	(\$367)	\$54	\$110
Swaps:			
Credit Default Swaps Written	\$952	\$1,594	\$30,266
Pay Fixed Interest Rate Swaps	\$5,984	\$6,169	\$127,788
Receive Fixed Interest Rate Swaps	\$(400)	\$(251)	\$60,783
Return Swaps Equity	\$(9)	\$(9)	\$(2,294)

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, 2021, the Supplemental Investment Fund – Stable Value Fund portfolio of well diversified high quality investment grade fixed income securities had a fair value of \$1,738,134,021 that is \$62,735,691 above 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 \$28,806,180.

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 19 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, 2021, if all counterparties failed to perform as contracted is \$106,065,040.

Notes to the 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, Subd. 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**.

Investment Type	Amount as of June 30, 2021
Domestic Equities	\$2,506,096
International Equities	130,156
US Government Bonds	340,064
Domestic Corporate Bonds	440,514
International Corporate Bonds	63
Total	\$3,416,893

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 in a collective investment pool. As of June 30, 2021, the investment pool had an average duration of 1.0 day and an average weighted final maturity of 107.98 days for USD collateral. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral. On June 30, 2021, 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, 2021 was \$3,532,436,000 and \$3,416,893,000 respectively. Cash collateral of \$2,613,864,000 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*.

NOTE 4

Capital Assets, Building and Land

Capital assets are presented on the June 30, 2021, *Statement of Fiduciary Net Position* at historical cost, net of accumulated depreciation, as summarized in **Figure 11**. There were no significant leases as of June 30, 2021.

Figure 11: Capital Assets (in thousands)				
	Balance June 30, 2020	Additions	Disposals	Balance June 30, 2021
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	1,680	332	0	2,012
Total Capital Assets being depreciated	12,573	332	0	12,905
Less Accumulated Depreciation for:				
Building (includes generator)	(5,230)	(269)	0	(5,499)
Equipment, Furniture & Fixtures	(1,516)	(92)	0	(1,608)
Total Accumulated Depreciation	(6,746)	(361)	0	(7,107)
Total Capital Assets, Net of Accumulated Depreciation on the Statement of Fiduciary Net Position	\$5,997	(\$29)	\$0	\$5,968

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 the 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 \$7,207,100. 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, 2021, the premium balance as of June 30, 2021, 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
2022	\$684,375	\$40,154	\$43,029	\$767,558
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
	\$2,421,775	\$92,230	\$116,586	\$2,630,591
Total Unpaid Principal, 06/30/21				\$2,421,775
Total Unpaid Premium, 06/30/21				116,586
Accrued Interest, June 2021				3,346
Total Bonds Payable on Statement of Fiduciary Net Position				\$2,541,707

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						
Effective Date	Contributor	General Employees Fund			Police & Fire	Correctional
		Basic	Coordinated	MERF	Fund	Fund
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 was passed in 2018 to extend the full funding date for the General Employees Plan, Police and Fire Plan, and Correctional Plan to 2048. The legislation also increased both employee and employer contribution rates in the Police and Fire Plan to 11.80 percent for employees and to 17.70 percent for employers. As a result of these changes, contribution rates in the General Employees Plan and the Police and Fire Plan are now sufficient to fund the plan by the full funding date of 2048. Contribution rates in the Correctional Plan are not yet sufficient to fully fund the plan by the full funding dates of 2048. The actuarially required contributions are expressed as a level percentage of covered payroll and are determined using an individual entry-age actuarial cost method.

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. Strong asset returns for the fiscal year ending 2021 will accelerate the phasing out of these state contributions, although we do not anticipate them to be phased out during the fiscal year ending 2022.

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 the 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--Also known as Special Leave Without Pay (SLWOP). 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.

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, 2021, calculated in accordance with GASB 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)	\$32,858,101	\$12,169,995	\$1,019,288
Fund Fiduciary Net Position (B)	(28,587,653)	(11,398,101)	(1,035,716)
Net Pension Liability (A-B)	\$4,270,448	\$771,894	\$(16,428)
Fund Fiduciary Net Position as a Percentage of the Total Pension Liability (B/A)	87.0%	93.7%	101.6%

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, 2021, 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, 2.25 percent for the Police and Fire Plan, and 2.25 percent for the Correctional Plan. Benefit increases after retirement are assumed to be 1.25 percent for the General Employees Plan and 2 percent for the Correction 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 29 years of service and 6.0 percent per year thereafter. In the Police and Fire Plan, salary growth assumptions range 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 the 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 used to measure the total pension liability in 2021 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 positions of the General Employees Fund, the Police and Fire Fund, and the Correctional Fund were 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.

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, 2021, calculated using the current discount rate of 6.5 percent, 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 rate.

Figure 15: Sensitivity Analysis (in thousands) Net Pension Liability (Asset) at Different Discount Rates						
	General Employees Fund		Police and Fire Fund		Correctional Fund	
1% Decrease	5.50%	\$8,709,534	5.50%	\$2,450,633	5.50%	\$170,971
Current Discount Rate	6.50%	\$4,270,448	6.50%	\$771,894	6.50%	(\$16,428)
1% Increase	7.50%	\$627,907	7.50%	(\$604,256)	7.50%	(\$165,149)

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. Seven fire departments joined the plan in fiscal year 2021, bringing the total number of fire departments in the Volunteer Firefighter Plan to 194. The amount of assets transferred, \$2,253,000 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 2021 was approximately \$7 million.

Employer pension contributions for PERA employees for the fiscal years ending June 30, 2021, 2020, and 2019 were \$534,637, \$527,014, and \$526,135 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.

C) GASB Pronouncements

PERA implemented GASB Statement No. 84 (GASB 84), *Fiduciary Activities*, revising the requirements for reporting fiduciary activities. The purpose of GASB 84 was to improve consistency, comparability, and to enhance the value provided by the information reported in financial statements. GASB 84 establishes criteria for what qualifies as a fiduciary activity and establishes standards of accounting and financial reporting for those activities. After review, it was determined that the activities accounted for in PERA's Agency Fund do not meet the new GASB 84 criteria for reporting as a fiduciary activity. As a result, the Agency Fund has been removed from the Annual Comprehensive Financial Report.

Schedule of Changes in Net Pension Liability and Related Ratios*

Required Supplementary Information (unaudited, in thousands)

General Employees Fund

	2021	2020
Total Pension Liability		
Service Cost	\$530,547	\$518,112
Interest on the Total Pension Liability	2,102,259	2,053,793
Change of Benefit Terms	0	(65,850)
Difference between Expected and Actual Experience	(154,087)	(30,245)
Assumption Changes	3,476,596	(128,849)
Benefit Payments	(1,666,103)	(1,604,842)
Refund Payments	(58,027)	(84,947)
Net Change in Total Pension Liability	4,231,185	657,172
Total Pension Liability--Beginning	28,626,916	27,969,744
Total Pension Liability--Ending (a)	32,858,101	28,626,916
Plan Fiduciary Net Position		
Contributions--Employer	524,685	509,821
Contributions--Member	439,488	435,419
Contributions--Nonemployer Contributing Entity	16,000	16,000
Net Investment Income	6,712,710	931,041
Benefit Payments	(1,666,103)	(1,604,842)
Refund Payments	(58,027)	(84,947)
Administrative Expenses	(12,741)	(12,268)
Other **	182	267
Net Change in Plan Fiduciary Net Position	5,956,194	190,491
Plan Fiduciary Net Position--Beginning	22,631,459	22,440,968
Plan Fiduciary Net Position--Ending (b)	28,587,653	22,631,459
Net Pension Liability (a)-(b)	\$4,270,448	\$5,995,457
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	87.00%	79.06%
Covered Payroll	\$6,761,354	\$6,698,754
Net Pension Liability as a Percentage of Covered Payroll	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.

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 Liabilities and Related Ratios

General Employees Fund

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. 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.

-Postretirement benefit 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.

Continued

Notes to Schedule of Changes in Net Pension Liabilities 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 postretirement benefit 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 postretirement benefit 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 postretirement benefit 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

	2021	2020
Total Pension Liability		
Service Cost	\$226,012	\$217,127
Interest on the Total Pension Liability	758,002	729,945
Change of Benefit Terms	0	0
Difference between Expected and Actual Experience	128,782	30,348
Assumption Changes	1,361,379	(24,785)
Benefit Payments	(592,687)	(567,040)
Refund Payments	(3,060)	(3,181)
Net Change in Total Pension Liability	1,878,428	382,414
Total Pension Liability--Beginning	10,291,567	9,909,153
Total Pension Liability--Ending (a)	12,169,995	10,291,567
Plan Fiduciary Net Position		
Contributions--Employer	201,129	193,819
Contributions--Member	129,351	123,525
Contributions--Nonemployer Contributing Entity	18,000	13,500
Net Investment Income	2,672,826	368,949
Benefit Payments	(592,687)	(567,040)
Refund Payments	(3,060)	(3,181)
Administrative Expenses	(941)	(924)
Other	23	260
Net Change in Plan Fiduciary Net Position	2,424,641	128,908
Plan Fiduciary Net Position--Beginning	8,973,460	8,844,552
Plan Fiduciary Net Position--Ending (b)	11,398,101	8,973,460
Net Pension Liability (a)-(b)	\$771,894	\$1,318,107
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	93.66%	87.19%
Covered Payroll	\$1,096,195	\$1,069,481
Net Pension Liability as a Percentage of Covered Payroll	70.42%	123.25%

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

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 Liabilities and Related Ratios

Police and Fire Plan

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.

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

-Postretirement benefit 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.

-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.

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

-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 postretirement 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 postretirement 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 postretirement benefit 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 postretirement benefit 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 Liabilities and Related Ratios*

Required Supplementary Information (unaudited, in thousands)

Correctional Fund

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

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

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 Liabilities and Related Ratios

Correctional Plan

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.

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 post-retirement benefit 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.

-Postretirement benefit 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).

-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.

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

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)
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%
2012	\$371,295	\$368,037	\$368,037	\$3,258	\$5,142,592	7.16%

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, 2020
Actuarial Cost Method:	Entry Age Normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	28 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-2019 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% post retirement benefit 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)
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%
2012	\$152,369	\$121,891	\$121,891	\$30,478	\$794,417	15.34%

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, 2020
Actuarial Cost Method:	Entry Age Normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	28 years
Asset Valuation Method:	5-year smoothed market, no corridor
Inflation:	2.50%
Payroll Growth Rate:	3.25%
Salary Increases:	3.25% to 12.25%, 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 2017 valuation pursuant to an experience study of the period 2011 - 2015.
Mortality:	RP-2014 annuitant generational mortality table, projected with mortality improvement scale MP-2019, from a base year of 2006. Male rates adjusted by a factor of 0.96.
Cost-of-Living Increase:	The plan is assumed to pay a 1.00% postretirement benefit increase for all future years.

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)
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%
2012	\$12,473	\$14,320	\$14,320	(\$1,847)	\$164,340	8.71%

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, 2020
Actuarial Cost Method:	Entry Age Normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	28 years
Asset Valuation Method:	5-year smoothed market, no corridor
Inflation:	2.50%
Payroll Growth Rate:	3.25%
Salary Increases:	3.50% to 8.50%, 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 2012 valuation pursuant to an experience study of the period 2006 - 2011 prepared by a former actuary.
Mortality:	RP-2014 annuitant generational mortality table, projected with mortality improvement scale MP-2018, from a base year of 2006. Male rates adjusted by a factor of 0.96.
Cost-of-Living Increase:	The plan is assumed to pay a 2.00% postretirement benefit 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
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, 2021 (in thousands)

	General Employees	Police & Fire Plan	Correctional Plan	SVF	DCP	Total
Source of Expenses						
Outside Money Managers–Equities	\$20,151	\$8,029	\$721	\$57	\$49	\$29,007
Outside Money Managers–Fixed Income	5,050	2,012	180	64	29	7,335
Minnesota State Board of Investment	1,473	587	52	155	5	2,272
AON Investment	164	65	6	0	0	235
Broadridge	106	42	4	0	0	152
Meketa	91	36	3	0	0	130
Albourne	77	31	3	0	0	111
Total Investment Expenses	\$27,112	\$10,802	\$969	\$276	\$83	\$39,242

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

Schedule of Payments to Consultants

For the Fiscal Year Ended June 30, 2021 (in thousands)

Actuary

Gabriel Roeder Smith & Co \$218

Total Actuary **\$218**

Financial Services

Clifton Larson Allen LLP \$105

MMB / OLA Audit Fees 159

SVF Audit Fees 12

Total Financial Services **\$276**

Legal

Administrative Hearings \$9

Attorney General 8

Bureau of National Affairs Inc 10

Ice Miller LLP 14

MMB 8

Total Legal **\$49**

Management Consultants

Activecampaign LLC \$5

Access Information Management of MN Inc 15

Insight Storage Solutions Inc 5

LexisNexis Risk Data Mgmt 3

Logmein USA Inc 2

MSRS 33

Nighthawk Inc 38

Pension Benefit Information LLC 37

USbank 17

Total Management Consultants **\$155**

Medical Evaluations

MMRO \$964

Total Medical Evaluations **\$964**

System Development

Ericksen Ellison & Assoc Inc \$3

MN IT Services 15

Paragon Development Systems 59

Total System Development **\$77**

Total Professional Service Fees **\$1,739**

Schedule of Administrative Expenses

For the Fiscal Year Ended June 30, 2021 (in thousands)

Personnel Expenses:

<i>Staff Salaries</i>	\$8,995
<i>Part-Time, Seasonal Labor</i>	416
<i>Other Benefits</i>	194

Total Personnel Expenses	\$9,605
---------------------------------	----------------

Professional Services:

<i>Actuary</i>	\$218
<i>Financial</i>	276
<i>Legal</i>	49
<i>Management Consultants</i>	155
<i>Medical Evaluations</i>	964
<i>System Development</i>	77

Total Professional Services	\$1,739
------------------------------------	----------------

Communications

<i>Mail & Telephone Services</i>	\$968
<i>Printing & Advertising</i>	87

Total Communications	\$1,055
-----------------------------	----------------

Office Building & Maintenance

<i>Building</i>	\$486
<i>Depreciation - Building</i>	270
<i>Bond Interest</i>	50

Total Office Building & Maintenance	\$806
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Other:

<i>Depreciation - Equipment</i>	\$93
<i>Employee Development</i>	55
<i>Equipment Maintenance</i>	444
<i>Indirect Costs</i>	148
<i>Operating Costs</i>	59
<i>Supplies & Materials</i>	116
<i>Travel</i>	197

Total Other	\$1,112
--------------------	----------------

Total Administrative Expenses	\$14,317
--------------------------------------	-----------------

Allocation of Administrative Expenses:

Defined Benefit Plans

<i>Public Employees Retirement Fund</i>	\$12,741
<i>Public Employees Police and Fire Fund</i>	941
<i>Public Employees Correctional Fund</i>	344
<i>Statewide Volunteer Firefighter</i>	12

Defined Contribution Plan

<i>Defined Contribution Fund</i>	\$279
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Total Administrative Expenses	\$14,317
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INVESTMENT SECTION

2021 ANNUAL COMPREHENSIVE FINANCIAL REPORT



1968

The Coordinated (General) Plan is created. For the first time in PERA's history, the retirement benefits for new hires were coordinated with Social Security while benefits for existing members were not (the Basic Plan).



1980

PERA hosted their first out-state pre-retirement conference at the Sterns County Courthouse in St. Cloud.



1985

PERA became a state agency. Until 1985, PERA was a private agency governed by Minnesota law.

Investment Report



Board Members:
Governor Tim Walz, Chair
State Auditor Julie Blaha
Secretary of State Steve Simon
Attorney General Keith Ellison

Executive Director & Chief Investment Officer:
Mansco Perry III

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%.

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, 2021, the Combined Funds' 20-year annualized return was 8.1%, which exceeded inflation as measured by CPI by 6.0 percentage points. Over the last 10-year period, the Combined Funds returned 10.4%, outperforming the composite index by 0.3%. Investment returns ranked in the 1st percentile over the past 5 and 10-year time periods and in the top 5th 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,



Mansco Perry III
Executive Director and Chief Investment Officer
Minnesota State Board of Investment
November 9, 2021

Investment Results

Fund Performance					
Fund	Rates of Return (Annualized)				
	FY 2021	3-Year	5-Year	10-Year	20-Year
Combined Funds (Active/Retiree)*	30.3%	13.4%	13.1%	10.4%	8.1%
Combined Composite Market Index	28.8%	13.0%	12.6%	10.1%	7.9%

* Percentages are net of all management fees.

Note: 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 2021	3-Year	5-Year	10-Year	20-Year
Public Equity*	42.4%	15.8%	16.0%	12.3%	8.2%
Domestic Equity	45.3%	18.7%	18.2%	14.7%	8.8%
• Domestic Equity Benchmark	44.6%	18.6%	17.8%	14.7%	8.9%
International Equity	36.8%	9.8%	11.3%	6.0%	6.7%
• International Equity Benchmark	35.6%	9.3%	11.1%	5.4%	6.4%
Global Equity***					
• Global Equity Benchmark					
Fixed Income**	(1.3%)	6.8%	4.3%	4.3%	5.1%
Core/Core Plus	2.1%	6.4%	4.0%	4.2%	5.1%
• Core Bonds Benchmark	(0.3%)	5.3%	3.0%	3.4%	4.6%
Return Seeking Fixed Income***					
• Return Seeking Fixed Income Benchmark					
Treasuries	(6.1%)	6.5%			
• Treasuries Benchmark	(6.7%)	6.5%			
Laddered Bond + Cash	0.2%	1.3%	1.2%	0.8%	1.7%
• Laddered Bond + Cash Benchmark	0.1%	1.3%	1.2%	0.6%	1.4%
Private Markets	37.8%	14.0%	15.3%	12.3%	12.6%
Private Equity	49.4%	21.0%	20.3%	16.0%	14.3%
Private Credit	18.4%	9.6%	12.1%	12.1%	11.9%
Resources	16.9%	(4.2%)	3.2%	1.6%	11.6%
Real Estate	14.4%	8.9%	9.3%	11.0%	8.5%

*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.

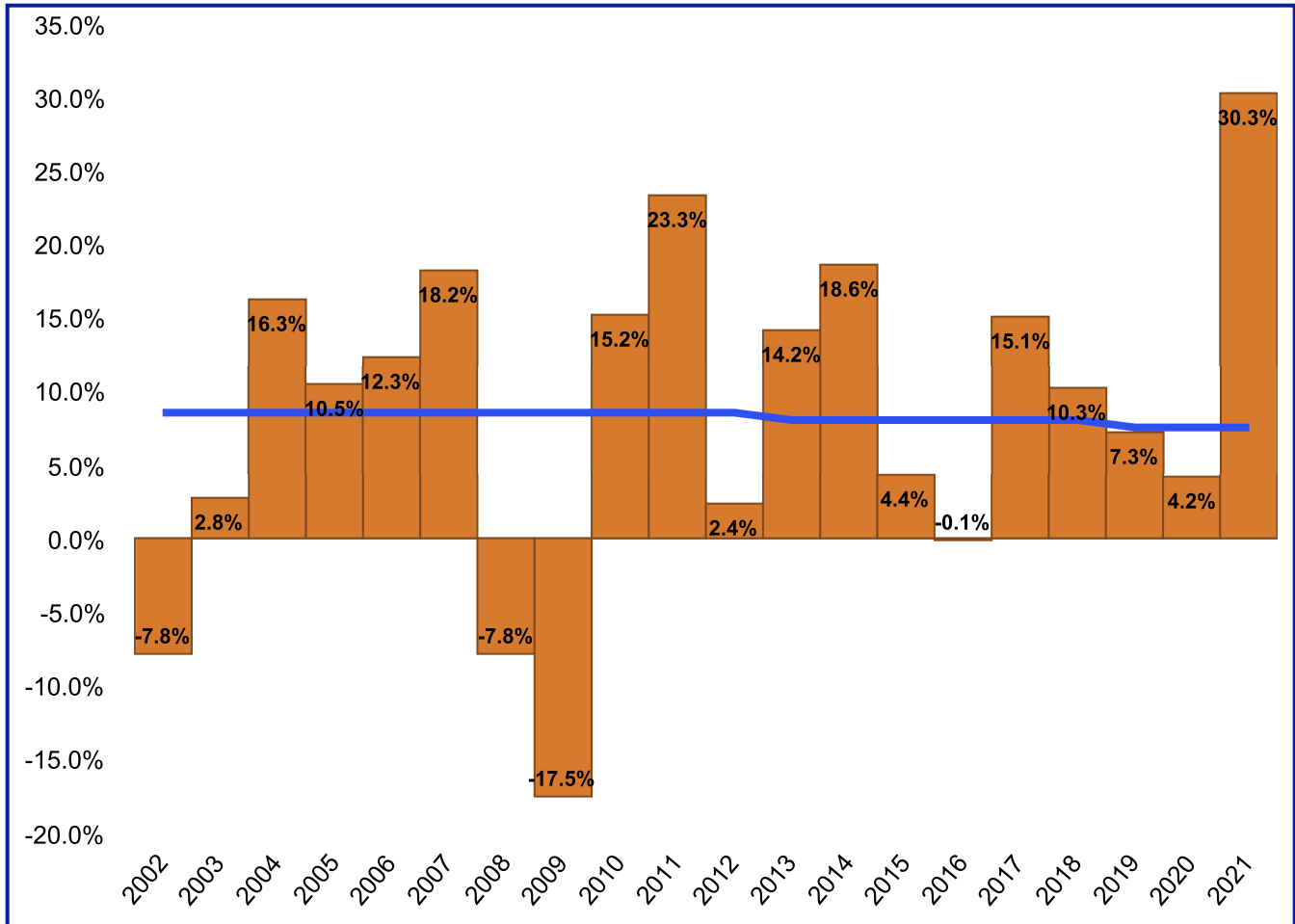
*** The Global Equity and Return Seeking Fixed Income pools were created in the 4th quarter of the fiscal year. Therefore no annualized rate of returned is shown.

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

Investment Results

SBI Investment Return vs Assumed Rate of Return

Assumed Return	Investment Return
8.5% (FY2002 - FY2011)	
8.0% (FY2012 - FY2017)	
7.5% (FY2018 - FY2021)	



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 — 29th 3 Year — 15th 5 Year — 11th 10 year — 7th

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

Asset Allocation

As of June 30, 2021

Combined Funds		
Investment Type	Actual Asset Mix	Long - Term Policy Target
Public Equity	50.0%	50.0%
Fixed Income	24.3%	25.0%
Private Markets	25.7%	25.0%
Total	100%	100%

Percentages are net of all management fees.

List of Largest Assets Held

As of June 30, 2021

Top Ten Equity Holdings (By Fair Value)		
Security	Fair Value (In millions)	% of Portfolio
APPLE INC	\$774.01	1.92%
MICROSOFT CORP	760.45	1.89%
AMAZON.COM INC	561.36	1.39%
FACEBOOK INC CLASS A	309.94	0.77%
ALPHABET INC CL A	276.90	0.69%
ALPHABET INC CL C	256.28	0.64%
TESLA INC	208.99	0.52%
NVIDIA CORP	196.28	0.49%
BERKSHIRE HATHAWAY INC CL B	187.22	0.46%
JOHNSON + JOHNSON	170.84	0.42%

Top Ten Fixed Income Holdings (By Fair Value)				
Security	Fair Value (In millions)	% of Portfolio	Maturity Date	Coupon %
U.S. Treasury N/B	\$194.47	0.48%	11/15/2028	3.125%
U.S. Treasury N/B	172.98	0.43%	11/15/2049	2.375%
U.S. Treasury N/B	124.78	0.31%	5/15/2031	1.625%
U.S. Treasury N/B	124.62	0.31%	1/31/2028	0.750%
U.S. Treasury N/B	112.04	0.28%	5/31/2026	2.125%
U.S. Treasury N/B	107.59	0.27%	5/15/2029	2.375%
U.S. Treasury N/B	95.16	0.24%	5/15/2050	1.250%
U.S. Treasury N/B	91.28	0.23%	2/15/2048	3.000%
U.S. Treasury N/B	88.17	0.22%	8/15/2049	2.250%
U.S. Treasury N/B	87.80	0.22%	8/31/2027	0.500%

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 at Fair Value

For the Fiscal Year Ended June 30, 2021 (in thousands)

	2021 Beginning Fair Value	2021 Ending Fair Value	Percent of Total Fair Value
General Employees Fund			
Publicly Traded Equity Securities			
<i>Domestic Equity</i>	\$9,070,936	\$9,441,575	34%
<i>Broad International Stock Pool</i>	4,415,171	4,486,145	16%
<i>Global Equity Pool</i>	0	372,812	1%
Publicly Traded Debt Securities	4,605,517	6,483,990	23%
Uninvested Private Equity	0	2,368,373	8%
Private Investments	3,536,096	4,959,308	18%
Total Pooled Accounts	\$21,627,720	\$28,112,203	100%

Police and Fire Fund			
Publicly Traded Equity Securities			
<i>Domestic Equity</i>	\$3,597,097	\$3,765,885	34%
<i>Broad International Stock Pool</i>	1,750,845	1,789,352	16%
<i>Global Equity Pool</i>	0	148,535	1%
Publicly Traded Debt Securities	1,826,327	2,585,324	23%
Uninvested Private Equity	0	943,564	8%
Private Investments	1,402,246	1,978,079	18%
Total Pooled Accounts	\$8,576,515	\$11,210,739	100%

Correctional Fund			
Publicly Traded Equity Securities			
<i>Domestic Equity</i>	\$315,770	\$343,619	34%
<i>Broad International Stock Pool</i>	153,697	163,270	16%
<i>Global Equity Pool</i>	0	13,223	1%
Publicly Traded Debt Securities	160,323	234,762	23%
Uninvested Private Equity	0	83,939	8%
Private Investments	123,096	180,490	18%
Total Pooled Accounts	\$752,886	\$1,019,303	100%

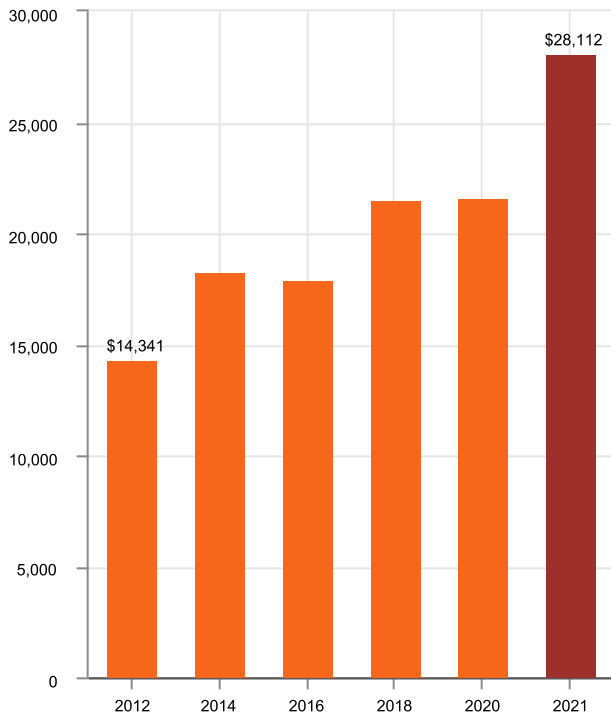
Volunteer Firefighter Fund			
Publicly Traded Equity Securities			
<i>Domestic Equity</i>	\$41,435	\$51,586	37%
<i>Broad International Stock Pool</i>	17,586	22,409	16%
Publicly Traded Debt Securities	53,229	64,570	47%
Total Pooled Accounts	\$112,250	\$138,565	100%

Note: New pooled accounts were added during FY 2021, statement reflects new allocations.

Fair Value of Investments

Last 10 Years (in millions)

General Employees Fund

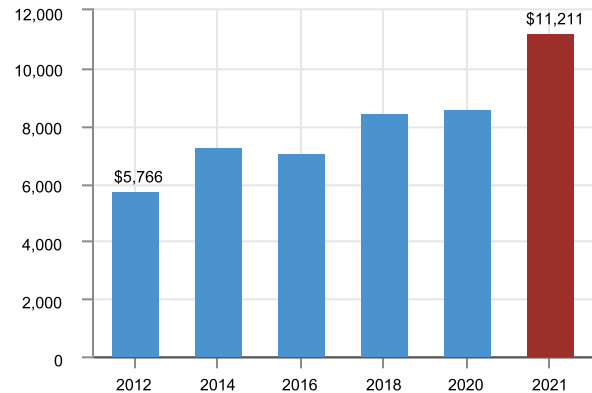


General Employees Fund

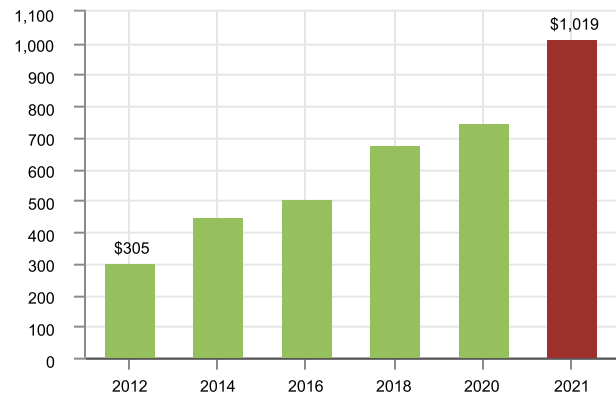
Minneapolis Employees Retirement Fund was merged into the General Employees Fund on January 1, 2015.

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

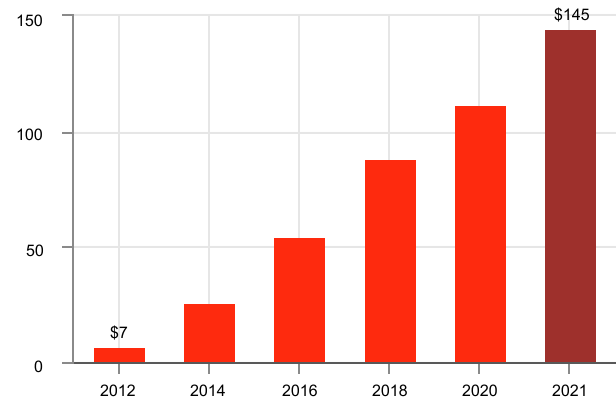
Police and Fire Fund



Correctional Fund



Volunteer Firefighter Fund



Schedule of Investment Fees

For Fiscal Year Ended June 30, 2021 (in thousands)

State Board of Investment	\$2,272
AON Investment	235
Broadridge	152
Meketa	130
Albourne	111
Total	2,900

Outside Money Managers:

Active Domestic Equity:

Zevenbergen Capital	734
Earnest Partners	72
Winslow Capital	344
Barrow Hanley	307
LSV Asset	473
Sands Capital	896
Peregrine Capital	744
Goldman Equity	954
Hotchkis and Wiley	717
Martingale	469
Wellington Management Company LLP	856
Arrowpoint Asset Management LLC	722
Hood River Capital Management LLC	1,024
Rice Hall James & Associates LLC	737
Total	9,049

Passive Domestic Equity:

Blackrock	19
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Passive Domestic Equity Large Cap:

Blackrock Passive	416
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Passive Domestic Equity Small Cap:

Blackrock Passive	6
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Semi Passive Equity

Blackrock	668
JP Morgan	710
Total	1,378

Domestic Bonds:

Columbia	161
Pimco	270
Blackrock Financial Mgmt	307
Dodge & Cox	514
Goldman	390
Neuberger	387
Western Asset Management	547
Total	2,576

Return Seeking Fixed Income

Columbia	416
Pimco	671
Blackrock	556
Ashmore EMD	313
KKR High Yield	211
Oaktree High Yield	216
PGIM FI Mac	218
TCW	35
Payden & Rygel Mav	246
Total	2,882

International Equity:

Acadian Asset	700
State Street Emerging	276
AQR Capital Management	594
Fidelity Investments GPK2	616
JP Morgan Fleming	599
Earnest Partners, LLC	785
Macquarie/Delaware Investments	1,082
Martin Currie, Inc.	1,160
Marathon Asset	589
McKinley Capital	482
Morgan Stanley Dean Witter	1,789
Neuberger Berman Investment	1,337
Pzena Investment Management	1,119
Rock Creek	2,545
Columbia Investments	620
State Street	313
Record Currency	1,786
Earnest Partners, LLC	387
Total	16,779

Global Equity:

Martin Currie Global Equity	277
Ariel Global Equity	433
Baillie Gifford Global Equity	392
Total	1,102

Treasury Protection Pool:

Blackrock Financial	520
Goldman Sachs	560
Neuberger Berman	496
Total	1,576

Ladder Portfolio

Goldman	151
Neuberger	143
Total	294

Uninvested Private Markets

NISA Cash Overlay	200
Blackrock S&P 500	57
Total	257

Supplemental Investment Funds

Galliard - Fixed Income	8
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Total Investment Fees

\$39,242

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

2021 ANNUAL COMPREHENSIVE FINANCIAL REPORT



1987

The Defined Contribution Plan (DCP) was created for elected officials, physicians, and volunteer ambulance personnel.



1996

The Member Service Center was established--originally referred to as the Customer Service Representative program.



2001

PERA's offices moved to the Retirement Systems of Minnesota Building along with MSRS, TRA, and SBI.

Actuary's Certification Letter



| P: 800.521.0498 | www.grsconsulting.com

November 24, 2021

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, 2021. 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 Comprehensive Annual Financial Report. The actuarial reports are available on PERA's website, along with online copies of this and previous Comprehensive Annual Financial Reports. Reading this Comprehensive Annual Financial Report 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 7.5% statutory discount rate. The results would appear less favorable if they were based upon a discount rate that satisfied the requirements of Actuarial Standard of Practice No. 27. For all plans, because the valuations smooth asset returns over five years, the market value of assets is higher than the actuarial value of assets. The funding ratios and contribution sufficiencies/(deficiencies) on both bases are presented in the following table.

Plan	Accrued Liability Funding Ratio		Contribution Sufficiency/ (Deficiency) (% of Pay)		Statutory Amortization Date
	Actuarial Value of Assets	Market Value of Assets	Actuarial Value of Assets	Market Value of Assets	
General	85.26%	97.85%	2.80%	6.16%	2048
Police/Fire	92.01%	105.60%	6.40%	14.72%	2048
Correctional	103.89%	118.97%	2.82%	6.18%	2048

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

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-2019 to MP-2020.

Additionally, the following changes were recognized this year in the funding valuations for the Local Government Correctional Service Retirement Plan and the Public Employees Police and Fire Plan, as recommended in the July 10, 2020 and July 14, 2020 experience study reports:

- The price inflation assumption was decreased from 2.50% to 2.25%.
- The payroll growth assumption was decreased from 3.25% to 3.00%.
- Assumed salary increase rates were changed.
- Assumed rates of retirement were changed.
- Assumed rates of termination were changed.
- Assumed rates of disability were changed.
- The base mortality table for healthy annuitants and employees was changed from the RP-2014 table to the PUB-2010 Public Safety table. The base mortality table for disabled annuitants was changed from the RP-2014 healthy annuitant mortality table to the Pub-2010 Public Safety disabled annuitant mortality table.
- Assumed percent married assumptions were modified, along with minor changes to form of payment assumptions.

GRS performed a brief review of the basic financial and membership data provided to us by the association as of June 30, 2021, 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, investment return, earnings progression and active member payroll growth are specified by State Statute. All other assumptions are based on actual experience with changes recommended by



Actuary's Certification Letter

Board of Trustees
November 24, 2021
Page 3

the actuary, adopted by the PERA Board, and approved by the Legislative Commission on Pensions and Retirement (LCPR). Except as noted in the following paragraph, the assumptions and methods meet the parameters established by Actuarial Standards of Practice.

In our professional judgment, the statutory investment return assumption of 7.50% used in the reports deviates materially from the guidance set forth in Actuarial Standards of Practice No. 27 (ASOP No. 27). In a 2021 analysis of long-term rate of investment return and inflation assumptions, GRS suggested that an investment return assumption in the range of 5.71% to 7.00% would be reasonable for this valuation. Please see our letter dated June 24, 2021 for additional information.

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

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

- Schedule of Funding Progress;
- Determination of Contribution Sufficiency;
- Determination of Actuarial Value of Assets; 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 Comprehensive Annual Financial Report 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, 2021. 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.

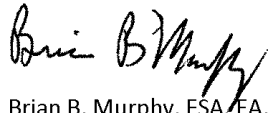
To the best of our knowledge and belief, the valuations were performed in accordance with generally accepted actuarial principles and procedures, current Governmental Accounting Standards Board (GASB) pronouncements, the requirements of Minnesota Statutes, Section 356.215, and the requirements of the 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.



Board of Trustees
November 24, 2021
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Brian B. Murphy and Bonita J. Wurst are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. In addition, Mr. Murphy meets the requirements of “approved actuary” under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c). The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



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BBM/BJW:bd



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 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 2021 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% 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 our professional judgment, would be 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 7.0 percent and 6.5 percent. Those results are provided on the following pages.

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

Actuarial Value of Assets

General Employees Retirement Plan		July 1, 2021 Estimated Valuation Results		
\$ in Billions, Contributions as % of Pay	July 1, 2020	Using 7.5%	Using 7.0%	Using 6.5%
Discount Rate	7.50%	7.50%	7.00%	6.50%
Amortization Period:	28 years	27 years	27 years	27 years
Actuarial Accrued Liability	\$28.6	\$29.5	\$31.4	\$33.2
Actuarial Value of Assets	\$22.8	\$24.9	\$24.9	\$24.9
Unfunded Actuarial Accrued Liability	\$5.8	\$4.6	\$6.5	\$8.3
Funding Ratio	79.6%	84.4%	79.5%	75.1%
Normal Cost plus Expenses, % of Pay	7.86%	7.86%	8.74%	9.62%
Amortization of Unfunded Liability, % of Pay	5.27%	4.11%	5.47%	6.67%
Total Required Contribution, % of Pay	13.13%	11.97%	14.21%	16.29%
Employee plus Employer Contributions	14.53%	14.52%	14.52%	14.52%
Contribution Sufficiency/(Deficiency)	1.40%	2.55%	0.31%	(1.77%)

Police and Fire Retirement Plan		July 1, 2021 Estimated Valuation Results		
\$ in Billions, Contributions as % of Pay	July 1, 2020	Using 7.5%	Using 7.0%	Using 6.5%
Discount Rate	7.50%	7.50%	7.00%	6.50%
Amortization Period:	28 years	27 years	27 years	27 years
Actuarial Accrued Liability	\$10.3	\$10.7	\$11.4	\$12.1
Actuarial Value of Assets	\$9.0	\$9.9	\$9.9	\$9.9
Unfunded Actuarial Accrued Liability	\$1.3	\$0.8	\$1.5	\$2.2
Funding Ratio	87.8%	92.8%	87.5%	82.2%
Normal Cost plus Expenses, % of Pay	20.74%	20.52%	23.06%	26.01%
Amortization of Unfunded Liability, % of Pay	6.97%	4.36%	7.66%	10.94%
Total Required Contribution, % of Pay	27.71%	24.88%	30.72%	36.95%
Employee plus Employer Contributions	29.50%	29.50%	29.50%	29.50%
Minneapolis Police & Fire Contributions	0.70%	0.68%	0.68%	0.68%
State Contributions	1.64%	1.60%	1.60%	1.60%
Contribution Sufficiency/(Deficiency)	4.13%	6.90%	1.06%	(5.17%)

Local Correctional Retirement Plan		July 1, 2021 Estimated Valuation Results		
\$ in Millions, Contributions as % of Pay	July 1, 2020	Using 7.5%	Using 7.0%	Using 6.5%
Discount Rate	7.50%	7.50%	7.00%	6.50%
Amortization Period:	28 years	27 years	27 years	27 years
Actuarial Accrued Liability	\$814.4	\$872.2	\$942.7	\$1,021.7
Actuarial Value of Assets	\$794.2	\$904.5	\$904.5	\$904.5
Unfunded Actuarial Accrued Liability	\$20.2	(\$32.3)	\$38.2	\$117.2
Funding Ratio	97.5%	103.7%	96.0%	88.5%
Normal Cost plus Expenses, % of Pay	13.94%	12.82%	14.33%	16.10%
Amortization of Unfunded Liability, % of Pay	0.52%	(0.81%)	0.96%	2.79%
Total Required Contribution, % of Pay	14.46%	12.01%	15.29%	18.89%
Employee plus Employer Contributions	14.58%	14.58%	14.58%	14.58%
Contribution Sufficiency/(Deficiency)	0.12%	2.57%	(0.71%)	(4.31%)

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 that was issued on 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-2020. Rates are multiplied by a factor of 1.07 for males and 0.98 for females. (2021)
Healthy post-retirement	Pub-2010 Healthy General Employee Mortality Table adjusted for mortality improvements using projection scale MP-2020. Rates are multiplied by a factor of 1.02 for males and 0.90 for females. (2021)
Disabled retirees	Pub-2010 General/Teacher Disabled Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2020. Rates are set forward two years for males and set forward four years for females. (2021)
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. (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.

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 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	<p>Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows:</p> <p>Males:</p> <ul style="list-style-type: none"> 10% elect 25% Joint & Survivor option 15% elect 50% Joint & Survivor option 10% elect 75% Joint & Survivor option 45% elect 100% Joint & Survivor option <p>Females:</p> <ul style="list-style-type: none"> 10% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 30% elect 100% Joint & Survivor option <p>Remaining married members and unmarried members are assumed to elect the Straight Life option.</p> <p>Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.</p>
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-2019 to Scale MP-2020

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%	0.37%	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%	0.07%	0.03%	0.77%	0.79%
40	0.09%	0.04%	0.09%	0.04%	0.99%	1.06%
45	0.12%	0.06%	0.11%	0.05%	1.28%	1.34%
50	0.29%	0.19%	0.15%	0.08%	1.71%	1.59%
55	0.43%	0.26%	0.23%	0.12%	2.21%	1.97%
60	0.65%	0.37%	0.36%	0.19%	2.79%	2.31%
65	0.95%	0.53%	0.51%	0.28%	3.40%	2.60%
70	1.46%	0.86%	0.70%	0.43%	4.06%	3.32%
75	2.47%	1.53%	1.06%	0.71%	5.36%	4.98%
80	4.45%	2.83%	1.69%	1.22%	7.82%	7.98%
85	8.16%	5.34%	7.20%	5.00%	11.74%	12.21%
90	14.16%	9.97%	14.85%	10.86%	18.09%	17.32%

* 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.

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%

General Employees Plan

Year	Salary Scale	% Withdrawals	
	Increase	Male	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-2020 (2021)
Healthy post-retirement	Pub-2010 Healthy Retired Public Safety Mortality Table adjusted for mortality improvements using projection scale MP-2020. Male rates are multiplied by a factor of 0.98. (2021)
Disabled retirees	Pub-2010 Public Safety Disabled Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2020. Males rates are multiplied by a factor of 1.05. (2021)
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. (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.

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	<p>Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows:</p> <p>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</p> <p>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</p> <p>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.</p>
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	<ul style="list-style-type: none"> • The inflation assumption was changed from 2.50% to 2.25%. • The payroll growth assumption was changed from 3.25% to 3.00% • The base mortality table for healthy annuitants was changed from the RP-2014 table to the Pub-2010 Public Safety Mortality table. • The base mortality table for disabled annuitants was changed from the RP-2014 healthy annuitant mortality table to the Pub-2010 Public Safety disabled annuitant mortality table. • The mortality improvement scale was changed from MP-2019 to MP-2020. • Assumed rates of salary increase and rates of retirement were modified as recommended in the July 14, 2020 experience study. • Assumed rates of withdrawal were changed from select and ultimate rates to service-based rates.

Summary of Actuarial Assumptions and Methods

Police and Fire 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%	0.21%	0.17%
40	0.08%	0.06%	0.08%	0.06%	0.24%	0.19%
45	0.13%	0.09%	0.09%	0.07%	0.27%	0.22%
50	0.18%	0.14%	0.11%	0.09%	0.35%	0.29%
55	0.29%	0.27%	0.17%	0.13%	0.49%	0.47%
60	0.52%	0.47%	0.27%	0.18%	0.80%	0.74%
65	0.88%	0.74%	0.42%	0.22%	1.26%	1.02%
70	1.44%	1.19%	0.72%	0.41%	1.87%	1.44%
75	2.51%	2.07%	1.30%	0.81%	3.08%	2.20%
80	4.57%	3.70%	2.44%	1.68%	5.37%	3.70%
85	8.34%	6.55%	7.62%	5.74%	9.01%	6.55%
90	14.70%	11.39%	15.00%	11.39%	15.75%	11.39%

*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.

Years	Vesting Percent if Hired		Age	Disability Retirement	
	Before 7/1/14	After 6/30/14		Male	Female
5	50.00%	0.00%	20	0.11%	0.11%
6	60.00%	0.00%	25	0.14%	0.14%
7	70.00%	0.00%	30	0.21%	0.21%
8	80.00%	0.00%	35	0.34%	0.34%
9	90.00%	0.00%	40	0.54%	0.54%
10	100.00%	50.00%	45	0.62%	0.62%
11	100.00%	55.00%	50	0.95%	0.95%
12	100.00%	60.00%	55	1.30%	1.30%
13	100.00%	65.00%	60	1.30%	1.30%
14	100.00%	70.00%			
15	100.00%	75.00%			
16	100.00%	80.00%			
17	100.00%	85.00%			
18	100.00%	90.00%			
19	100.00%	95.00%			
20+	100.00%	100.00%			

Police and Fire Plan					
Age	Rates of Service	Year	Withdrawal	Salary Scale	
	Retirement		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-2020.								
Healthy Post-retirement	Pub-2010 Healthy Retired Public Safety Mortality Table adjusted for mortality improvements using projections scale MP-2020. 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-2020. 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 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. (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: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>Select Withdrawal Rates</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>27%</td> </tr> <tr> <td>2</td> <td>23%</td> </tr> <tr> <td>3</td> <td>17%</td> </tr> </tbody> </table>	Year	Select Withdrawal Rates	1	27%	2	23%	3	17%
Year	Select Withdrawal Rates								
1	27%								
2	23%								
3	17%								
Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related.								
Allowance for combined service annuity	Liabilities for former members are increased by 35.0% for vested members and 1.0% for non-vested members to account for the effect of some participants having eligibility for a Combined Service Annuity. (2017)								

* Year in parenthesis is the date of adoption.

Correctional 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 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	<p>Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows:</p> <p>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</p> <p>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</p> <p>Remaining married members and unmarried members are assumed to elect the Straight Life option.</p> <p>Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.</p>
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	<ul style="list-style-type: none"> • The inflation assumption was changed from 2.50% to 2.25%. • The payroll growth assumption was changed from 3.25% to 3.00% • The base mortality table for healthy annuitants was changed from the RP-2014 table to the Pub-2010 Public Safety Mortality table. • The base mortality table for disabled annuitants was changed from the RP-2014 healthy annuitant mortality table to the Pub-2010 Public Safety disabled annuitant mortality table. • The mortality improvement scale was changed from MP-2019 to MP-2020. • Assumed rates of salary increase and rates of retirement were modified as recommended in the July 14, 2020 experience study. • Assumed percent of married for active members was lowered to 75%.

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%	0.12%	0.05%
25	0.04%	0.02%	0.04%	0.02%	0.12%	0.08%
30	0.06%	0.04%	0.06%	0.04%	0.18%	0.13%
35	0.07%	0.05%	0.07%	0.05%	0.21%	0.16%
40	0.07%	0.06%	0.07%	0.05%	0.22%	0.18%
45	0.11%	0.08%	0.08%	0.06%	0.24%	0.21%
50	0.17%	0.14%	0.11%	0.08%	0.33%	0.28%
55	0.29%	0.26%	0.17%	0.13%	0.48%	0.47%
60	0.50%	0.44%	0.27%	0.17%	0.78%	0.70%
65	0.82%	0.68%	0.39%	0.20%	1.18%	0.94%
70	1.32%	1.10%	0.66%	0.37%	1.72%	1.33%
75	2.30%	1.94%	1.19%	0.76%	2.82%	2.06%
80	4.22%	3.50%	2.26%	1.59%	4.96%	3.50%
85	7.81%	6.22%	7.14%	5.45%	8.44%	6.22%
90	14.01%	10.92%	14.30%	10.92%	15.01%	10.92%

*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.

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%

Correctional Plan

Rates of Service		Salary Scale	
Age	Retirement	Age	Increase
50	5.00%	20	11.00%
51	5.00%	25	7.75%
52	5.00%	30	6.00%
53	5.00%	35	5.50%
54	7.00%	40	4.75%
55	15.00%	45	4.00%
56	10.00%	50	3.75%
57	11.00%	55	3.50%
58	11.00%	60	3.00%
59	11.00%	65	3.00%
60	15.00%	70+	3.00%
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%		

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]
06/30/2021	\$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%
06/30/2012	\$13,661,682	\$18,598,897	\$4,937,215	73.45%	\$5,142,592	96.0%

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]
06/30/2021	\$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%
06/30/2012	\$5,797,868	\$7,403,295	\$1,605,427	78.31%	\$794,417	202.1%

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]
6/30/2021	\$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%
6/30/2012	\$306,454	\$343,199	\$36,745	89.29%	\$164,340	22.4%

Solvency Test

Last 10 Years (in thousands, unaudited)

General Employees Plan

Valuation Date	Actuarial Accrued Liability For:			Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets		
	Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)		1	2	3
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%	0.0%
6/30/2012	\$2,644,948	\$10,785,022	\$5,168,927	\$13,661,682	100%	100%	4.5%

Police and Fire Plan

Valuation Date	Actuarial Accrued Liability For:			Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets		
	Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)		1	2	3
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%
06/30/12	\$609,387	\$4,654,847	\$2,139,061	\$5,797,868	100%	100%	24.9%

Correctional Plan

Valuation Date	Actuarial Accrued Liability For:			Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets		
	Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)		1	2	3
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%
06/30/12	\$66,254	\$117,016	\$159,929	\$306,454	100%	100%	77.0%

Schedule of Active Members Valuation Data

Last 10 Years

General Employees Plan				
Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/21	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%
06/30/12	139,330	\$5,142,592,000	\$36,909	1.7%

Police and Fire Plan				
Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/21	11,705	\$1,096,195,000	\$93,652	6.0%
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%)
06/30/12	10,865	\$794,417,000	\$73,117	2.5%

Correctional Plan				
Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/21	3,788	\$222,093,000	\$58,631	7.0%
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%)
06/30/12	3,460	\$164,340,000	\$47,497	1.0%

Schedule of Retirees and Beneficiaries

Last 10 Years

General Employees Plan								
Year Ended	Added to Rolls		Removed from Rolls		Year-End Total		% Change in Annual Allowances	Average Annual Allowances
	Number Added	Annual Allowances	Number Removed	Annual Allowances	Number	Annual Allowances		
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
06/30/12	6,145	\$87,604,000	2,431	\$36,693,000	75,535	\$1,015,249,000	5.3%	\$13,441

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

Police and Fire Plan								
Year Ended	Added to Rolls		Removed from Rolls		Year-End Total		% Change in Annual Allowances	Average Annual Allowances
	Number Added	Annual Allowances	Number Removed	Annual Allowances	Number	Annual Allowances		
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
06/30/12	1,786	\$82,541,000	228	\$9,640,000	9,406	\$421,399,000	20.9%	\$44,801

Correctional Plan								
Year Ended	Added to Rolls		Removed from Rolls		Year-End Total		% Change in Annual Allowances	Average Annual Allowances
	Number Added	Annual Allowances	Number Removed	Annual Allowances	Number	Annual Allowances		
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
06/30/12	96	\$1,048,000	17	\$168,000	607	\$5,312,000	19.9%	\$8,751

Determination of Contribution Sufficiency

As of June 30, 2021 (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 %	\$451,014	11.80 %	\$129,328	5.83 %	\$13,694
2. Employer Contributions	7.50 %	520,397	17.70 %	193,993	8.75 %	20,552
3. Employer Supplemental	0.30 %	21,000	0.00 %	0	0.00%	0
4. Minneapolis Police Contributions	0.00%	0	0.41 %	4,490	0.00%	0
5. Minneapolis Fire Contributions	0.00%	0	0.29 %	3,189	0.00%	0
6. State of Minnesota	0.23 %	16,000	1.64 %	18,000	0.00%	0
7. Total	<u>14.53 %</u>	<u>\$1,008,411</u>	<u>31.84 %</u>	<u>\$349,000</u>	<u>14.58 %</u>	<u>\$34,246</u>
B. Actuarially Determined Contributions - M.S. Chapter 356						
1. Normal Cost						
a. Retirement Benefits	5.34 %	\$370,506	14.06 %	\$154,097	7.32 %	\$17,193
b. Disability Benefits	0.19 %	13,195	4.04 %	44,279	2.11 %	4,956
c. Survivor Benefits	0.09 %	6,245	0.55 %	6,028	0.10 %	235
d. Deferred Benefits	1.47 %	102,004	1.43 %	15,673	2.28 %	5,355
e. Refunds	0.52 %	36,080	0.27 %	2,959	0.67 %	1,574
f. Total	<u>7.61 %</u>	<u>528,030</u>	<u>20.35 %</u>	<u>223,036</u>	<u>12.48 %</u>	<u>29,313</u>
2. Amortization of Supplemental Contribution UAAL	3.94 %	273,370	5.00 %	54,800	(0.87)%	(2,043)
3. Allowance for Administrative Expenses	0.18 %	12,489	0.09 %	986	0.15 %	352
4. Total	<u>11.73 %</u>	<u>\$813,889</u>	<u>25.44 %</u>	<u>\$278,822</u>	<u>11.76 %</u>	<u>\$27,622</u>
C. Contribution Sufficiency/ (Deficiency) (A.8 - B.4)	2.80%	\$195	6.40%	\$70	2.82%	\$6,624
Projected annual payroll for fiscal year beginning July 1, 2020		\$6,938,337		\$1,096,003		\$234,885
*The required contribution on a market value of assets basis of payroll is	8.37%		17.12%		8.40%	

Determination of Actuarial Value of Assets

As of June 30, 2021 (in thousands)

General Employees Plan

Fair value of assets available for benefits (a)				\$28,587,653
Calculation of unrecognized return	Original Amount	% Not Recognized	Unrecognized Return	
Year ended June 30, 2021	\$5,043,720	80%	\$4,034,976	
Year ended June 30, 2020	(724,261)	60%	(434,557)	
Year ended June 30, 2019	(44,547)	40%	(17,819)	
Year ended June 30, 2018	479,963	20%	95,993	
Total unrecognized return (b)				3,678,593
Actuarial Value of Assets (a-b)				\$24,909,060

Police and Fire Plan

Fair value of assets available for benefits (a)				\$11,398,101
Calculation of unrecognized return	Original Amount	% Not Recognized	Unrecognized Return	
Year ended June 30, 2021	\$2,009,123	80%	\$1,607,298	
Year ended June 30, 2020	(285,391)	60%	(171,235)	
Year ended June 30, 2019	(17,561)	40%	(7,024)	
Year ended June 30, 2018	190,293	20%	38,059	
Total unrecognized return (b)				1,467,098
Actuarial Value of Assets (a-b)				\$9,931,003

Correctional Plan

Fair value of assets available for benefits (a)				\$1,035,716
Calculation of unrecognized return	Original Amount	% Not Recognized	Unrecognized Return	
Year ended June 30, 2021	\$179,252	80%	\$143,402	
Year ended June 30, 2020	(24,475)	60%	(14,685)	
Year ended June 30, 2019	(671)	40%	(268)	
Year ended June 30, 2018	14,166	20%	2,833	
Total unrecognized return (b)				131,282
Actuarial Value of Assets (a-b)				\$904,434

Schedule of Changes in Unfunded Actuarial Accrued Liabilities (UAAL)

For the Fiscal Year Ended June 30, 2021 (in thousands)

	General Employees Plan	Police and Fire Plan	Correctional Plan
A. UAAL at Beginning of Year (7/1/20)	\$5,834,583	\$1,255,498	\$20,235
B. Change Due to Interest Requirements and Current Rate of Funding			
1. Normal Cost and Expenses	543,288	226,953	32,651
2. Contributions	(980,173)	(348,480)	(32,299)
3. Interest on A, B1, and B2	421,210	89,605	1,531
C. Expected UAAL at End of Year (A+B)	5,818,908	1,223,576	22,118
D. Increase (Decrease) Due to Actuarial Losses (Gains) Because of Experience Deviations from Expected*			
1. Age and Service Retirements	18,716	14,699	40
2. Disability Retirements	(1,569)	69,056	(2,324)
3. Death-in-Service Benefits	(1,021)	(1,244)	(37)
4. Withdrawals	(23,363)	(3,184)	(1,200)
5. Salary Increases	(32,963)	21,860	(750)
6. Investment Income	(1,179,157)	(473,768)	(40,198)
7. Mortality of Annuitants	(34,194)	2,553	(79)
8. Other Items	(92,913)	24,065	171
E. UAAL at End of Year Before Plan Amendments and Changes in Actuarial Assumptions (C+D)	4,472,444	877,613	(22,259)
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	(165,944)	(14,771)	(11,608)
H. Change in Unfunded Actuarial Accrued Liability Due to Changes in Miscellaneous Methodology	0	0	0
I. UAAL at End of Year 6/30/2021 (E+F+G+H)	\$4,306,500	\$862,842	\$(33,867)

* Explanatory Notes

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



STATISTICAL SECTION

2021 ANNUAL COMPREHENSIVE FINANCIAL REPORT



2008

PERA distributed nearly \$1 billion in benefits to over 60,000 retirees across Minnesota.



2010

The Statewide Volunteer Firefighter (SVF) Retirement Plan was created.



2020

Educational programs were changed to virtual webinars, and PERA launched a phone counseling program.

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Introduction



October 19, 2021

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 Paid* for our defined benefit plans, followed by a *Schedule of Benefit Recipients by Type* give more detailed information about the starting benefit payment and the type of benefit selected. In addition, the schedule includes information about how many annuitants chose a joint and survivor option.

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.

A handwritten signature in black ink that reads "David Andrews".

David Andrews
Accounting Director

Schedule of Changes in Fiduciary Net Position

Last 10 Fiscal Years (in thousands)

General Employees Fund*

	2021	2020	2019	2018
Additions				
Employer Contributions	\$524,685	\$509,821	\$515,444	\$488,819
Member Contribution	439,488	435,419	424,044	409,423
State Contributions	16,000	16,000	16,000	16,000
Investment Income	6,712,710	931,041	1,547,224	2,063,582
Other	182	267	154	56
Total Additions to Fiduciary Net Position	7,693,065	1,892,548	2,502,866	2,977,880
Deductions				
Benefits	1,666,103	1,604,842	1,536,071	1,470,450
Refunds	58,027	84,947	65,834	42,589
Administrative Expenses	12,741	12,268	13,470	11,943
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	1,736,871	1,702,057	1,615,375	1,524,982
Change in Fiduciary Net Position	\$5,956,194	\$190,491	\$887,491	\$1,452,898

* 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

	2021	2020	2019	2018
Additions				
Employer Contributions	\$201,129	\$193,819	\$174,817	\$170,781
Member Contribution	129,351	123,525	111,762	105,479
State Contributions	18,000	13,500	13,500	9,000
Investment Income	2,672,826	368,949	609,512	813,966
Other	23	260	54	58
Total Additions to Fiduciary Net Position	3,021,329	700,053	909,645	1,099,284
Deductions				
Benefits	592,687	567,040	547,699	528,468
Refunds	3,060	3,181	3,283	1,902
Administrative Expenses	941	924	1,018	886
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	596,688	571,145	552,000	531,256
Change in Fiduciary Net Position	\$2,424,641	\$128,908	\$357,645	\$568,028

Correctional Fund

	2021	2020	2019	2018
Additions				
Employer Contributions	\$19,351	\$19,043	\$18,676	\$17,871
Member Contributions	12,948	12,692	12,485	11,956
Investment Income	238,666	31,774	50,853	62,962
Other	1	0	0	1
Total Additions to Fiduciary Net Position	270,966	63,509	82,014	92,790
Deductions				
Benefits	20,088	17,569	15,381	13,183
Refunds	2,140	2,709	2,244	1,364
Administrative Expenses	344	332	361	308
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	22,572	20,610	17,986	14,855
Change in Fiduciary Net Position	\$248,394	\$42,899	\$64,028	\$77,935

2017	2016	2015	2014	2013	2012
\$477,888	\$459,978	\$435,265	\$413,677	\$404,099	\$399,660
400,204	375,291	353,765	334,865	328,359	321,976
6,000	6,000	21,575	24,000	24,000	22,750
2,682,901	(20,851)	777,621	2,906,811	2,011,862	338,616
411	431	281	644	8	771
3,567,404	820,849	1,588,507	3,679,997	2,768,328	1,083,773
1,413,448	1,359,176	1,301,396	1,244,332	1,189,398	1,141,353
37,234	37,209	35,706	38,311	35,922	39,743
11,292	11,110	10,377	10,007	10,028	9,822
0	0	0	0	23	0
1,461,974	1,407,495	1,347,479	1,292,650	1,235,371	1,190,918
\$2,105,430	(\$586,646)	\$241,028	\$2,387,347	\$1,532,957	(\$107,145)

2017	2016	2015	2014	2013	2012
\$166,329	\$156,065	\$144,317	\$132,632	\$125,995	\$121,891
101,984	95,172	88,733	81,213	76,434	76,264
9,000	9,000	9,000	9,000	0	0
1,058,942	(8,949)	317,556	1,158,389	806,742	156,926
24	3	84	18	24	488,521
1,336,279	251,291	559,690	1,381,252	1,009,195	843,602
512,379	498,608	481,330	452,462	431,726	386,208
2,119	2,391	1,953	1,633	2,020	1,524
992	906	803	798	755	855
0	0	0	0	0	0
515,490	501,905	484,086	454,893	434,501	388,587
\$820,789	(\$250,614)	\$75,604	\$926,359	\$574,694	\$455,015

2017	2016	2015	2014	2013	2012
\$17,489	\$16,490	\$15,736	\$15,054	\$14,498	\$14,320
11,666	11,008	10,472	10,030	9,609	9,581
78,363	209	20,373	69,451	44,378	7,846
0	0	0	0	0	0
107,518	27,707	46,581	94,535	68,485	31,747
11,033	9,381	7,777	6,711	5,757	4,809
1,478	982	1,057	1,105	1,177	1,332
330	292	247	236	209	229
0	0	0	1	0	0
12,841	10,655	9,081	8,053	7,143	6,370
\$94,677	\$17,052	\$37,500	\$86,482	\$61,342	\$25,377

Schedule of Changes in Fiduciary Net Position

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

Volunteer Firefighter Fund

	2021	2020	2019	2018
Additions				
Employer Contributions	\$529	\$1,051	\$1,181	\$938
State Contribution	5,059	4,580	3,993	3,522
Investment Income	24,776	7,535	7,682	4,681
Other (mainly initial transfer of assets)	2,355	4,802	10,916	8,048
Total Additions to Fiduciary Net Position	<u>32,719</u>	<u>17,968</u>	<u>23,772</u>	<u>17,189</u>
Deductions				
Benefits	5,627	7,057	4,709	4,161
Administrative Expenses	12	48	111	70
Other Deductions**	0	250	0	0
Total Deductions from Fiduciary Net Position	<u>5,639</u>	<u>7,355</u>	<u>4,820</u>	<u>4,231</u>
Change in Fiduciary Net Position	<u>\$27,080</u>	<u>\$10,613</u>	<u>\$18,952</u>	<u>\$12,958</u>

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

Defined Contribution Fund

	2021	2020	2019	2018
Additions				
Employer Contributions	\$2,133	\$2,160	\$2,084	\$2,036
Member Contributions	2,066	2,002	1,957	1,911
Investment Income	23,301	5,227	5,440	6,490
Other	6	0	0	0
Total Additions to Fiduciary Net Position	<u>27,506</u>	<u>9,389</u>	<u>9,481</u>	<u>10,437</u>
Deductions				
Refunds	6,986	3,971	5,959	4,326
Administrative Expenses	279	234	214	211
Total Deductions from Fiduciary Net Position	<u>7,265</u>	<u>4,205</u>	<u>6,173</u>	<u>4,537</u>
Change in Fiduciary Net Position	<u>\$20,241</u>	<u>\$5,184</u>	<u>\$3,308</u>	<u>\$5,900</u>

2017	2016	2015	2014	2013	2012
\$716	\$332	\$226	\$414	\$291	\$118
2,659	1,811	1,430	900	361	153
6,409	1,325	880	2,623	1,082	254
14,206	20,401	4,667	7,953	7,984	3,076
23,990	23,869	7,203	11,890	9,718	3,601
2,700	1,644	1,221	1,096	838	279
61	132	86	71	38	21
0	0	0	0	0	0
2,761	1,776	1,307	1,167	876	300
\$21,229	\$22,093	\$5,896	\$10,723	\$8,842	\$3,301

2017	2016	2015	2014	2013	2012
\$1,822	\$1,965	\$1,850	\$1,755	\$1,734	\$1,674
1,739	1,779	1,698	1,628	1,612	1,547
7,274	999	2,681	8,004	5,625	1,263
7	2	0	0	0	0
10,842	4,745	6,229	11,387	8,971	4,484
5,233	3,755	3,489	2,800	3,399	2,128
137	189	186	171	152	144
5,370	3,944	3,675	2,971	3,551	2,272
\$5,472	\$801	\$2,554	\$8,416	\$5,420	\$2,212

Benefit & Refunds by Type

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

General Employees Fund*

	2021	2020	2019	2018
Benefits by Type				
Retirement	\$1,503,311	\$1,442,689	\$1,373,267	\$1,307,364
Survivor	144,756	142,659	142,187	141,781
Disability	18,036	19,494	20,617	21,305
Total	<u>\$1,666,103</u>	<u>\$1,604,842</u>	<u>\$1,536,071</u>	<u>\$1,470,450</u>
Refund by Type				
Separation	\$43,945	\$59,829	\$43,723	\$30,981
Death	433	542	812	582
Interest/Employer	13,649	24,576	21,299	11,026
Total	<u>\$58,027</u>	<u>\$84,947</u>	<u>\$65,834</u>	<u>\$42,589</u>

* 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

	2021	2020	2019	2018
Benefits by Type				
Retirement	\$463,500	\$445,843	\$432,012	\$416,652
Survivor	64,688	63,210	60,872	59,438
Disability	64,499	57,987	54,814	52,378
Total	<u>\$592,687</u>	<u>\$567,040</u>	<u>\$547,698</u>	<u>\$528,468</u>
Refund by Type				
Separation	\$2,476	\$2,390	\$2,117	\$1,444
Death	0	65	29	0
Interest/Employer	584	726	1,137	458
Total	<u>\$3,060</u>	<u>\$3,181</u>	<u>\$3,283</u>	<u>\$1,902</u>

Correctional Fund

	2021	2020	2019	2018
Benefits by Type				
Retirement	\$16,571	\$14,307	\$12,287	\$10,357
Survivor	811	712	617	529
Disability	2,706	2,550	2,477	2,297
Total	<u>\$20,088</u>	<u>\$17,569</u>	<u>\$15,381</u>	<u>\$13,183</u>
Refund by Type				
Separation	\$1,731	\$2,034	\$1,617	\$1,049
Death	0	38	0	35
Interest/Employer	409	637	627	280
Total	<u>\$2,140</u>	<u>\$2,709</u>	<u>\$2,244</u>	<u>\$1,364</u>

Volunteer Firefighter Fund

	2021	2020	2019	2018
Benefits by Type				
Retirement	\$953	\$903	\$762	\$607
Survivor	84	90	58	49
Lump Sum Benefit	4,590	6,064	3,889	3,505
Total	<u>\$5,627</u>	<u>\$7,057</u>	<u>\$4,709</u>	<u>\$4,161</u>

2017	2016	2015	2014	2013	2012
\$1,250,427	\$1,195,640	\$1,137,897	\$1,081,088	\$1,027,325	\$1,083,809
141,449	140,630	141,178	140,423	138,485	33,342
21,572	22,906	22,321	22,821	23,588	24,202
<u>\$1,413,448</u>	<u>\$1,359,176</u>	<u>\$1,301,396</u>	<u>\$1,244,332</u>	<u>\$1,189,398</u>	<u>\$1,141,353</u>
\$27,513	\$27,601	\$26,179	\$27,962	\$25,885	\$27,723
508	505	731	551	727	752
9,213	9,103	8,796	9,798	9,310	11,268
<u>\$37,234</u>	<u>\$37,209</u>	<u>\$35,706</u>	<u>\$38,311</u>	<u>\$35,922</u>	<u>\$39,743</u>

2017	2016	2015	2014	2013	2012
\$403,053	\$391,952	\$379,068	\$353,620	\$336,220	\$327,956
58,568	58,119	56,523	54,462	52,827	18,268
50,758	48,537	45,739	44,380	42,679	39,984
<u>\$512,379</u>	<u>\$498,608</u>	<u>\$481,330</u>	<u>\$452,462</u>	<u>\$431,726</u>	<u>\$386,208</u>
\$1,599	\$1,540	\$1,423	\$1,179	\$1,243	\$1,079
52	0	0	0	31	6
468	851	530	454	746	439
<u>\$2,119</u>	<u>\$2,391</u>	<u>\$1,953</u>	<u>\$1,633</u>	<u>\$2,020</u>	<u>\$1,524</u>

2017	2016	2015	2014	2013	2012
\$8,555	\$6,954	\$5,528	\$4,427	\$3,518	\$2,790
437	372	278	240	180	23
2,041	2,055	1,971	2,044	2,059	1,996
<u>\$11,033</u>	<u>\$9,381</u>	<u>\$7,777</u>	<u>\$6,711</u>	<u>\$5,757</u>	<u>\$4,809</u>
\$1,129	\$792	\$821	\$844	\$857	\$1,060
45	0	29	0	48	10
304	190	207	261	272	262
<u>\$1,478</u>	<u>\$982</u>	<u>\$1,057</u>	<u>\$1,105</u>	<u>\$1,177</u>	<u>\$1,332</u>

2017	2016	2015	2014	2013	2012
\$554	\$279	\$0	\$0	\$0	\$0
51	23	0	0	0	0
2,095	1,342	1,221	1,096	838	279
<u>\$2,700</u>	<u>\$1,644</u>	<u>\$1,221</u>	<u>\$1,096</u>	<u>\$838</u>	<u>\$279</u>

Summary of Membership

Defined Benefit Plans — Last 10 Years

General Employees Fund

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
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
2012	139,330	75,535	44,354	115,287	374,506

Police and Fire Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
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
2012	10,865	9,406	1,303	971	22,545

Correctional Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
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
2012	3,460	607	2,091	1,727	7,885

Volunteer Firefighter Plan*

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
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

	Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
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	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	1007	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
2012							
Average monthly benefit	\$133	\$290	\$535	\$795	\$1,116	\$1,710	\$2,608
Average high five salary	\$3,545	\$2,427	\$2,713	\$2,992	\$3,270	\$3,953	\$4,712
Number of retirees	645	807	812	657	778	615	1,070

Police and Fire Plan

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
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
2012							
Average monthly benefit	\$565	\$1,028	\$1,980	\$3,201	\$4,110	\$5,244	\$6,670
Average high five salary	\$5,666	\$3,733	\$5,307	\$5,986	\$6,136	\$6,517	\$6,987
Number of retirees	22	20	21	31	56	95	84

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 +
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				
2012							
Average monthly benefit	\$295	\$683	\$1,079				
Average high five salary	\$2,930	\$3,629	\$4,697				
Number of retirees	12	15	52				

*The Correctional Plan was established July 1, 1999.

Volunteer Firefighter Plan**

	Years Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
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, 2021

General Employees Plans

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit				Option Selected					
		A	B	C	D	1	2	3	4	5	6
\$1 - \$250	23,538	21,651	415	1,321	151	14,731	6,813	384	953	491	166
251 - 500	17,694	16,059	267	1,160	208	10,765	4,618	384	1,165	614	148
501 - 750	13,019	11,717	200	927	175	7,584	3,323	346	1027	587	152
751 - 1000	9,934	8,948	148	680	158	5,613	2,482	334	926	490	89
1001 - 1250	7,901	7,097	105	575	124	4,169	2,074	312	802	474	70
1251 - 1500	6,319	5,665	79	458	117	3,157	1,745	316	660	389	52
1501 - 1750	5,249	4,695	87	377	90	2,446	1,422	337	644	334	66
1751 - 2000	4,458	4,059	49	290	60	2,023	1,218	301	569	305	42
2001 - 2250	3,870	3,509	39	270	52	1,627	1,098	254	559	285	47
2251 - 2500	3,345	3,041	43	231	30	1,372	954	206	514	249	50
2501 - 2750	2,920	2,659	37	190	34	1,117	885	203	453	209	53
2751 - 3000	2,447	2,252	25	153	17	935	731	175	352	199	55
3001 - 3250	2,046	1,884	19	134	9	775	625	147	295	152	52
3251 - 3500	1,709	1,558	27	112	12	632	505	116	247	144	65
3501 - 3750	1,402	1,278	19	98	7	509	438	106	215	94	40
3751 - 4000	1,143	1,037	15	87	4	402	350	70	194	89	38
4001 - 4250	947	870	13	63	1	322	299	65	159	65	37
4251 - 4500	745	681	6	58	0	245	238	48	133	56	25
4501 - 4750	649	587	6	53	3	200	214	41	107	58	29
4751 - 5000	526	477	5	41	3	170	170	43	82	40	21
5001 - 5250	394	349	5	39	1	130	116	40	59	26	23
5251 - 5500	394	349	5	39	1	128	135	26	63	32	10
5501 - 5750	294	268	2	23	1	99	92	28	45	18	12
5751 - 6000	247	216	3	28	0	94	66	17	40	19	11
6001 - 6250	206	191	0	15	0	65	58	17	40	18	8
6251 - 6500	145	130	1	14	0	38	46	13	27	13	8
6501 - 6750	131	114	1	16	0	28	48	7	30	9	9
6751 - 7000	81	73	2	6	0	30	20	8	19	2	2
Over 7000	479	418	3	58	0	135	132	53	102	38	19
Totals	112,232	101,832	1,626	7,516	1,258	59,541	30,915	4,397	10,481	5,499	1,399

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.)

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	158	131	9	17	0	1	54	78	6	8	6	6
251 - 500	156	130	3	21	1	1	50	73	1	18	9	5
501 - 750	143	112	10	18	1	2	45	61	8	11	7	11
751 - 1000	154	116	6	30	2	0	54	42	6	25	19	8
1001 - 1250	166	101	5	57	2	1	42	51	4	30	25	14
1251 - 1500	166	99	11	46	6	4	47	47	12	18	21	21
1501 - 1750	216	108	13	87	6	2	46	48	18	32	14	58
1751 - 2000	252	121	14	96	13	8	56	61	8	49	14	64
2001 - 2250	259	119	22	92	16	10	63	55	13	64	8	56
2251 - 2500	317	159	28	76	32	22	73	101	15	47	17	64
2501 - 2750	343	157	30	99	24	33	86	79	28	64	14	72
2751 - 3000	406	197	39	98	15	57	88	119	25	71	15	88
3001 - 3250	701	239	89	283	12	78	111	126	36	79	15	334
3251 - 3500	418	254	12	48	5	99	116	138	40	57	21	46
3501 - 3750	519	316	17	59	10	117	157	170	47	71	22	52
3751 - 4000	533	331	20	50	11	121	156	165	46	79	32	55
4001 - 4250	556	355	12	49	15	125	160	179	54	75	38	50
4251 - 4500	531	376	12	25	17	101	141	152	70	91	28	49
4501 - 4750	571	439	9	34	14	75	158	152	65	91	35	70
4751 - 5000	529	424	8	35	12	50	131	156	69	85	34	54
5001 - 5250	555	473	9	24	7	42	141	143	57	111	38	65
5251 - 5500	581	467	6	28	40	40	139	113	92	97	38	102
5501 - 5750	806	749	2	10	9	36	118	107	71	128	29	353
5751 - 6000	337	291	6	11	10	19	85	100	40	74	30	8
6001 - 6250	320	287	3	8	1	21	89	83	54	58	32	4
6251 - 6500	294	266	3	6	5	14	70	75	52	73	22	2
6501 - 6750	259	238	2	2	3	14	66	90	31	53	17	2
6751 - 7000	222	197	0	9	2	14	59	73	31	47	11	1
Over 7000	1188	1133	2	17	9	27	387	321	163	226	89	2
Totals	11,656	8,385	402	1,435	300	1,134	2,988	3,158	1,162	1,932	700	1,716

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, 2021 (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	217	199	7	6	5	0	123	70	6	8	10	0
251 - 500	183	170	1	10	2	0	98	56	2	19	8	0
501 - 750	181	149	9	11	12	0	83	64	12	15	5	2
751 - 1000	193	168	3	9	13	0	84	71	9	17	10	2
1001 - 1250	173	157	3	2	9	2	74	66	11	11	11	0
1251 - 1500	159	142	2	2	10	3	77	48	4	22	7	1
1501 - 1750	122	102	1	5	4	10	51	43	10	7	10	1
1751 - 2000	106	95	3	0	3	5	49	39	4	9	3	2
2001 - 2250	85	68	1	1	2	13	39	26	2	8	9	1
2251 - 2500	57	39	0	0	1	17	28	19	1	7	2	0
2501 - 2750	38	22	0	1	0	15	18	13	0	2	5	0
2751 - 3000	32	23	1	0	0	8	13	10	0	4	4	1
3001 - 3250	14	12	0	0	0	2	10	3	0	0	1	0
3251 - 3500	5	5	0	0	0	0	4	1	0	0	0	0
3501 - 3750	4	2	1	0	0	1	1	0	1	0	1	1
3751 - 4000	2	2	0	0	0	0	1	0	0	0	1	0
4001 - 4250	0	0	0	0	0	0	0	0	0	0	0	0
4251 - 4500	1	1	0	0	0	0	0	1	0	0	0	0
Totals	1,572	1,356	32	47	61	76	753	530	62	129	87	11

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	25	18	7	0	17	2	6
251 - 500	27	24	3	0	9	11	7
501 - 750	31	23	8	0	11	15	5
751 - 1000	54	54	0	0	11	40	3
Over 1000	3	3	0	0	0	2	1
Totals	140	122	18	0	48	70	22

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 2021

Employer Name	Active Members	% of Total Active Members
HENNEPIN COUNTY	7,678	5.06%
HENNEPIN HEALTHCARE SYSTEM	5,608	3.69%
MINNEAPOLIS SPECIAL ISD-1	5,023	3.31%
RAMSEY COUNTY	3,892	2.56%
CITY OF MINNEAPOLIS	3,404	2.24%
ANOKA-HENNEPIN ISD-11	3,312	2.18%
ST PAUL ISD-625	2,876	1.89%
CITY OF ST PAUL	2,263	1.49%
ROSEMOUNT ISD-196	2,018	1.33%
DAKOTA COUNTY	1,745	1.15%

FY 2012

Employer Name	Active Members	% of Total Active Members
HENNEPIN COUNTY	6,687	4.71%
HENNEPIN HEALTHCARE SYSTEM	4,622	3.26%
MINNEAPOLIS SCHOOL DISTRICT	4,427	3.12%
RAMSEY COUNTY	3,341	2.35%
CITY OF MINNEAPOLIS	3,048	2.15%
ANOKA-HENNEPIN ISD-11	2,605	1.84%
ST PAUL SCHOOL DISTRICT	2,551	1.80%
CITY OF ST PAUL	2,137	1.51%
ROSEMOUNT SCHOOL DISTRICT	1,834	1.29%
OSSEO SCHOOL DISTRICT	1,807	1.27%

Police and Fire Plan*

FY 2021

Employer Name	Active Members	% of Total Active Members
CITY OF MINNEAPOLIS	1,117	9.24%
CITY OF ST PAUL	1,020	8.44%
HENNEPIN COUNTY	322	2.66%
CITY OF DULUTH	286	2.37%
CITY OF ROCHESTER	245	2.03%
RAMSEY COUNTY	207	1.71%
METROPOLITAN COUNCIL	194	1.60%
HENNEPIN HEALTHCARE SYSTEM	183	1.51%
CITY OF ST CLOUD	172	1.42%
WRIGHT COUNTY	161	1.33%

FY 2012

Employer Name	Active Members	% of Total Active Members
CITY OF MINNEAPOLIS	1,251	11.23%
CITY OF ST PAUL	991	8.89%
HENNEPIN COUNTY	329	2.95%
CITY OF DULUTH	275	2.47%
CITY OF ROCHESTER	230	2.06%
RAMSEY COUNTY	205	1.84%
CITY OF ST CLOUD	171	1.53%
HENNEPIN HEALTHCARE SYSTEM	146	1.31%
WRIGHT COUNTY	137	1.23%
METROPOLITAN AIRPORTS COMMISSION	133	1.19%

*A complete listing of 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 2021			FY 2012		
Employer	Active Members	% of Total Active Members	Employer	Active Members	% of Total Active Members
HENNEPIN COUNTY	478	12.49%	HENNEPIN COUNTY	480	13.75%
RAMSEY COUNTY	422	11.03%	RAMSEY COUNTY	402	11.52%
ANOKA COUNTY	227	5.93%	ANOKA COUNTY	202	5.79%
SHERBURNE COUNTY	148	3.87%	DAKOTA COUNTY	100	2.87%
DAKOTA COUNTY	120	3.14%	OLMSTED COUNTY	98	2.81%
CLAY COUNTY	106	2.77%	SHERBURNE COUNTY	91	2.61%
ARROWHEAD REGIONAL CORRECTIONS	95	2.48%	NORTHWESTERN JUVENILE CENTER	90	2.58%
OLMSTED COUNTY	91	2.38%	PRAIRIE LAKES DETENTION CENTER	88	2.52%
SCOTT COUNTY	87	2.27%	STEARNS COUNTY	82	2.35%
STEARNS COUNTY	87	2.27%	SCOTT COUNTY	81	2.32%

Volunteer Firefighter Plan**

FY 2021			FY 2012		
Employer	Active Members	% of Total Active Members	Employer	Active Members	% of Total Active Members
CITY OF COTTAGE GROVE	64	1.33%	CITY OF WILLMAR	51	6.79%
CITY OF OAK GROVE	51	1.06%	CITY OF OTTERTAIL	33	4.39%
CITY OF VADNAIS HEIGHTS VOLUNTEER FIRE DEPARTMENT	50	1.04%	CITY OF GRAND MARAIS	30	3.99%
SPRING LAKE PARK BLAINE MOUNDS VIEW FIRE	49	1.02%	CITY OF LESTER PRAIRIE	30	3.99%
CITY OF VICTORIA	47	0.98%	CITY OF TWIN VALLEY	28	3.73%
CITY OF WILLMAR	45	0.94%	CITY OF SCANDIA	28	3.73%
CITY OF WHITE BEAR LAKE	41	0.85%	CITY OF BRANDON	27	3.60%
ISANTI AREA JOINT FIRE DISTRICT	40	0.83%	SUNBURG FIRE DEPARTMENT	26	3.46%
TOWNSHIP OF BALDWIN	38	0.79%	CITY OF ALDEN	25	3.33%
CITY OF ELY	37	0.77%	TOWNSHIP OF BREITUNG	25	3.33%

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

**A complete listing of 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



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



**PUBLIC EMPLOYEES
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