

AGENDA

- 1. Call to Order** Diana Rosales Ortiz, Board Chair
- 2. Roll Call**
- 3. Approval of Agenda** Diana Rosales Ortiz, Board Chair
- 4. Approval of Meeting Minutes** Diana Rosales Ortiz, Board Chair
 - A. Approval of September 28, 2023 Board Meeting Minutes**
- 5. Approval of Consent Agenda**
- 6. Reports of Committees**
 - A. Rules & Administration Committee - October 26, 2023**
 1. Approval of Committee Recommendation Regarding Proposed Rulemaking Schedule and Rule Change Action Paula Fisher, Committee Chair
 2. Approval of Committee Recommendation Regarding Proposed Policy & Procedures Change Action Paula Fisher, Committee Chair
 - B. Investment Committee - October 26, 2023**
 1. Approval of Committee Recommendation Regarding Active Risk Budget Action Francis Page, Committee Chair
- 7. Unfinished Business**
 - A. Items removed from Consent Agenda if necessary** Action
- 8. New Business**
 - A. Acceptance of FY23 Actuarial Valuations** Action Janie Shaw, Actuary;
Gabriel, Roeder, Smith & Co.
 - C. CIO Report** Informational Michael Shackleford, CIO
 - D. Executive Director's Report** Informational Greg Trujillo, Executive Director
- 9. Public Comment** (Limited to three [3] minutes, at the discretion of the Chair)
- 10. Adjournment**

Any person with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service to attend or participate in the hearing or meeting, please contact Trish Winter at 505-795-0712 or patricia.b.winter@pera.nm.gov at least one week prior to the meeting, or as soon as possible. Public documents, including the agenda and minutes, can be provided in various accessible formats. Please contact Ms. Winter if a summary or other type of accessible format is needed.

PERA Board Meeting
October 26, 2023
CONSENT AGENDA

- 1. Ratification of Retirements** - Benefits processed through: 10/1/2023
 - a. Normal
 - b. Deferred
 - c. Reciprocity to ERA
 - d. Non-Duty Death
 - e. Non-Duty Disability
 - f. Reciprocity to PERA
- 2. Duty & Non-Duty Deaths**
 - a. Michael Gorbitz - 18 months
- 3. Affidavits for Free Military Service:**
 - a.
- 4. Educational Conferences**
 - a. **Diana Rosales Ortiz** - Association of Certified Fraud Examiners (ACFE) Virtual Seminar; Contract and Procurement Fraud; December 5-7, 2023; Registration to be paid by PERA
- 5. Setting of Meetings: November 2023**
 - a. Disability Review Committee November 14, 2023 1:00pm
- 6. Setting of Meetings: December 2023**
 - a. Legislative Committee December 12, 2023 9:00am
 - b. Investment Committee December 12, 2023 following Legislative
 - c. Board Meeting December 12, 2023 following Investments
 - d. Disability Review Committee December 12, 2023 1:00pm

Any person with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service to attend or participate in the hearing or meeting, please contact Trish Winter at 505-476-9305 or patricia.b.winter@pera.nm.gov at least one week prior to the meeting, or as soon as possible. Public documents, including the agenda and minutes, can be provided in various accessible formats. Please contact Ms. Winter if a summary or other type of accessible format is needed.



INVESTED IN TOMORROW.

Rules & Administration Committee Meeting
PERA Building • Senator Fabian Chavez, Jr. Board Room
33 Plaza La Prensa • Santa Fe, NM 87507

Thursday, October 26, 2023
following Investment Committee

Committee Members

Paula Fisher, *Chair*
Diana Rosales-Ortiz, *Vice Chair*
Valerie Barela

Francis Page
Shirley Ragin

AGENDA

1. **Call to Order**
 2. **Roll Call**
 3. **Approval of Agenda**
 4. **New Business**
 - A. **2023/2024 PERA Rulemaking**
 1. Board Memo Regarding Rule Change Informational Francis Page,
 2. Proposed Rule Changes Board Member;
a. 2.80.200 - Disqualifying Factors for Candidates for Anthony Montoya,
Election or Appointment to the Board and General Counsel
Technical Amendments
3. Approval of Proposed Rulemaking Schedule Action
 4. Approval of Notice of Proposed Rulemaking Action
 - B. **Proposed Changes to Board Policies & Procedures**
 1. Policy 7.71: Out-of-State Travel Timeframe Action Valerie Barela
 5. **Adjourn**
-

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INVESTED IN TOMORROW.

INVESTMENT COMMITTEE MEETING
SENATOR FABIAN CHAVEZ JR. BOARD ROOM
PERA BUILDING

October 26, 2023
9:00 am

COMMITTEE MEMBERS

Francis Page, Chair
Paula Fisher, Vice-Chair
The Honorable Treasurer, Laura Montoya
Juan Diaz
Tony Garcia

AGENDA

- 1. Roll Call**
- 2. Approval of Agenda**
- 3. Approval of Meeting Minutes**
A. June 13, 2023 Investment Committee minutes
- 4. New Business**

ITEM		PRESENTER
A	<u>Action Item:</u> Removal of the Active Risk Budget	Michael Shackelford Chief Investment Officer Eileen Neill Verus Advisory
B	<u>Information Item:</u> Investment Policy changes Review <ol style="list-style-type: none">1. Strategic Asset Allocation2. Benchmarks3. Active Risk Budget	Michael Shackelford Chief Investment Officer Eileen Neill Verus Advisory
C	<u>Information Item:</u> Strategy & Performance Review <ol style="list-style-type: none">1. Q2 2023 Portable Alpha2. Bonds Plus Update	James Walsh Albourne
D	<u>Information Item:</u> Investment Division Compliance Update <ol style="list-style-type: none">1. Custody Bank RFP Update2. Fiscal Year End Fee Review3. Manager Selection Activity Report4. Q2 2023 Cash Activity & Rebalance Update5. Q2 2023 Securities Lending Update6. Staffing Update	LeAnne Larrañaga-Ruffy Deputy CIO Sara Hume Senior Portfolio Manager
<u>Education Session –after Board Meeting</u>		

E	<u>Information Item: Infrastructure Education</u>	Kevin Geneiser, Senior Partner Steven Kennedy, IR Director Antin Infrastructure Partners
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5. Adjournment

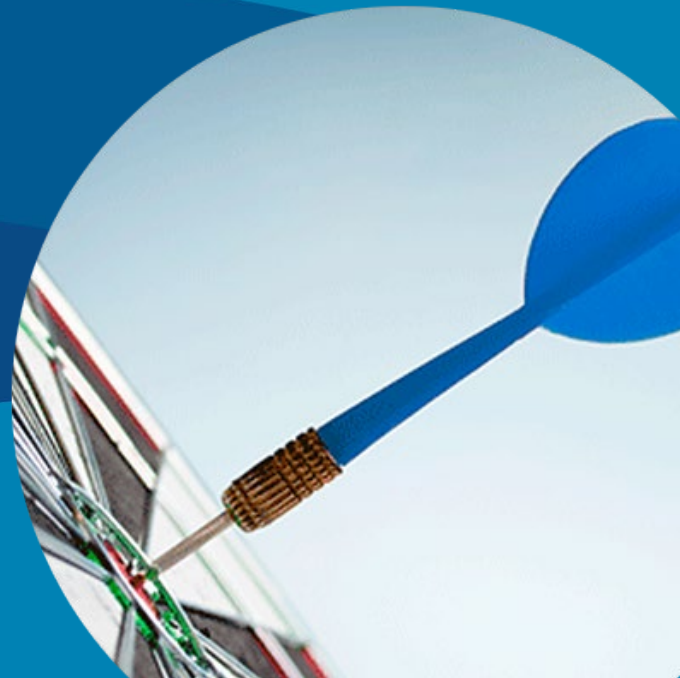
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PERA Valuation Results as of June 30, 2023

Janie Shaw, ASA, EA, MAAA
Krysti Kiesel, ASA, MAAA

October 26, 2023



Agenda

- 2023 Actuarial Valuation Results
 - Highlights/Summary
 - Sources of Changes
 - Assets
 - Membership
- Additional Retirement Funds
- Outlook

Actuarial Valuation

- Prepared as of June 30, 2023, using member data, financial data, benefit and contribution provisions, actuarial assumptions and methods
 - No changes to actuarial assumptions or methods since prior valuation
 - HB106: increased maximum pension benefit from 90% to 100% of final average salary
 - SB145: provided 20% enhanced service credit to certain state police members who had not previously been eligible
- Purposes:
 - Measure the PERA's actuarial liabilities
 - Determine adequacy of current contribution commitments
 - Explain changes in the actuarial condition of PERA
 - Track changes over time
 - Provide outlook on future challenges and issues
 - Prepare GASB 67/68 information and exhibits for PERA ACFR

2023 Valuation Highlights – PERA Divisions

- Significant salary increases increased the unfunded liability and decreased the funded ratio
 - Higher projected payroll equates to more projected contributions, which decreased the amortization period
- Asset returns resulted in an asset loss
- Most of the funds require additional contributions
 - **Municipal General** and **Municipal Police** outside of 25-year funding policy
 - Contributions to **State General** and **Municipal Fire** are not expected to accumulate sufficient assets in order to pay all of the currently scheduled benefits when due
- **State Police** remains over-funded

Results Summary for PERA Divisions

	2023 Valuation	2022 Valuation
Unfunded Liability	\$8.1 billion	\$7.2 billion
Funded Ratio	67.7%	70.0%
Member Contribution*	13.54%	12.99%
Employer Contribution*	16.66%	16.18%
Amortization Period**	53 years	59 years
Actuarially Determined Contribution (25 year)	36.27%	36.57%
Shortfall	6.07%	7.40%

** Contributions scheduled to increase to 14.09% for members and 17.20% for employers by FY2026*

*** Amortization period incorporates scheduled contribution rate increases. Does not incorporate increasing membership in Tier 2.*

Results Summary by PERA Division

	State General	State Police	Muni General	Muni Police	Muni Fire
Unfunded Liability (billion)	\$4.4	(\$0.3)	\$2.1	\$1.0	\$0.9
Funded Ratio	57.6%	124.9%	73.6%	70.9%	55.5%
Member Contribution*	10.92%	9.06%	14.60%	18.37%	20.02%
Employer Contribution*	19.24%	25.65%	11.06%	20.00%	22.80%
Amortization Period**	N/A	0 years	28 years	61 years	N/A
Actuarially Determined Contribution (25 year)	41.51%	7.19%	28.03%	47.45%	58.08%
Shortfall	11.35%	(27.52%)	2.37%	9.08%	15.26%

** For Municipal plans, employee and employer rates will increase by 0.5% of payroll effective July 1, 2024 and July 1, 2025.*

*** Amortization period incorporates scheduled contribution rate increases. Does not incorporate increasing membership in Tier 2.*



Sources of Change in Funded Status

- Salary increases were the biggest factor in the increase in the unfunded liability and decrease of the funded status

	UAAL (Billions)	Funded Status
June 30, 2022 Valuation	\$7.2	70.0%
Expected Increase	+0.2	0.0%
Actual Contributions	-0.1	+0.2%
Investment Returns	+0.2	-0.9%
Demographic Experience	+0.6	-1.6%
Plan Change	+<0.1	-0.1%
June 30, 2023 Valuation	\$8.1	67.6%

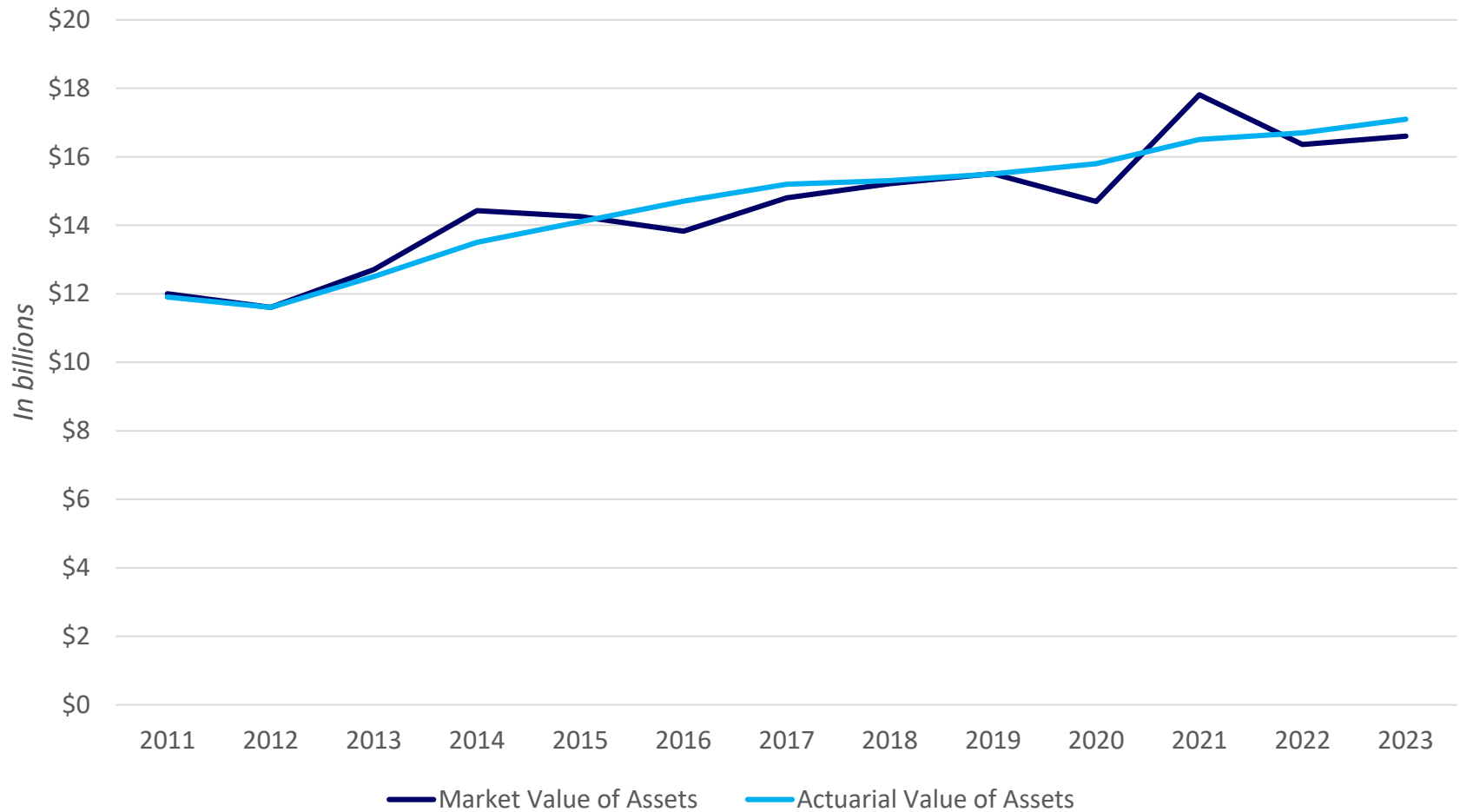
Market Value of Assets

- Fair market value increased from \$16.3 billion to \$16.6 billion as of June 30, 2023
- Approximate return of 5.6% on market value of assets for FY2023
 - \$292 million less in assets than expected

Actuarial Value of Assets

- Actuarial calculations primarily based on actuarial value of assets (AVA), not market value
- AVA recognizes the difference between the expected and actual return on the market value of assets over a four-year period
- Return on AVA was 6.0% in FY 2023
 - \$213 million actuarial asset loss
- \$506 million in net deferred losses
 - Will be recognized over next three years

Actuarial and Market Values of Assets



AVA is 103.0% of MVA
\$506 million in net deferred losses

Census – Actives

- Changes in active membership

	Active Headcount	Change	Annual Payroll	Change
State General	18,570	↑ 1.3%	\$1,134 million	↑ 12.6%
State Police	2,239	↓ 1.5%	\$135 million	↑ 11.3%
Municipal General	20,758	↑ 2.8%	\$1,094 million	↑ 15.2%
Municipal Police	3,645	↑ 1.0%	\$259 million	↑ 13.1%
Municipal Fire	2,643	↑ 6.0%	\$181 million	↑ 16.0%
TOTAL	47,855	↑ 2.0%	\$2,804 million	↑ 13.8%

Census – Annuitants

- Changes in annuitant membership

	Annuitant Headcount	Change	Annuitant Benefits	Change
State General	20,824	↑ 1.8%	\$631 million	↑ 2.9%
State Police	1,798	↑ 2.5%	\$62 million	↑ 3.6%
Municipal General	16,085	↑ 3.2%	\$443 million	↑ 3.7%
Municipal Police	4,228	↑ 2.8%	\$177 million	↑ 4.0%
Municipal Fire	2,281	↑ 2.9%	\$102 million	↑ 4.1%
TOTAL	45,216	↑ 2.5%	\$1,414 million	↑ 3.4%

Legislative Division

	2023 Valuation	2022 Valuation
Unfunded Liability	(\$7.7) million	(\$8.9) million
Funded Ratio	119.6%	123.5%
Member Contribution	\$1,000	\$1,000
Employer Contribution	N/A*	N/A*
Actuarially Determined Contribution (25 years)	\$1.1 million	\$1.0 million

- Decrease in the funded ratio primarily due to no contributions being made during FY2023
- If contributions are not increased, the funded status is expected to continue to decrease

** Legislative Fund scheduled to receive a minimum of \$75,000 every month starting July 2025*

Judges Fund

	2023 Valuation	2022 Valuation
Unfunded Liability	\$76 million	\$73 million
Funded Ratio	60.5%	61.2%
Member Contribution	10.50%	10.50%
Employer Contribution	15.00%	15.00%
Annual Appropriation	\$1.2 million	\$1.2 million
Assumed Docket Fees	\$2.5 million	\$2.5 million
Amortization Period	N/A	107 years
Actuarially Determined Contribution (25 years)	43.87%	44.01%

- Decrease in the funded ratio primarily due to asset losses on the actuarial value of assets
- Currently scheduled contributions are not expected to accumulate sufficient assets in order to pay all of the currently scheduled benefits

Magistrates Fund

	2023 Valuation	2022 Valuation
Unfunded Liability	\$30 million	\$30 million
Funded Ratio	53.1%	52.9%
Member Contribution	10.50%	10.50%
Employer Contribution	15.00%	15.00%
Annual Appropriation	\$1.2 million	\$1.2 million
Assumed Docket Fees	\$364,000	\$364,000
Amortization Period	53 years	N/A
Actuarially Determined Contribution (25 years)	49.12%	48.27%

- Increase in the funded ratio primarily due to higher rates of termination than expected among the active members during the year
- Assumed docket fees based on FY2020. Docket fees in FY2023 were \$265,000
- If future docket fees remain at their current level, the amortization period will be over 100 years.

Volunteer Firefighters Fund

	2023 Valuation	2022 Valuation
Unfunded Liability	\$(34) million	\$(31) million
Funded Ratio	167.7%	161.5%
Fire Protection Fund Contribution	\$750,000	\$750,000
Actuarially Determined Contribution (25 years)	\$0	\$0

- Increase in the funded ratio primarily due to active members accruing less service during the year than expected
- \$750,000 contribution still sufficient

Outlook

- Most funds need additional contributions
- Current amortization period calculations for PERA divisions do not include the impact of an increasing number of Tier 2 members in the future
- As number of Tier 2 members grows, PERA amortization period should improve an additional 10-15 years over time
- Actuarial assumptions to be reviewed before the next valuation during the experience study

Public Employees Retirement Association of New Mexico

Annual Actuarial Valuation - Funding
As of June 30, 2023

DRAFT





October 12, 2023

The Retirement Board
Public Employees Retirement Association
33 Plaza La Prensa
Santa Fe, NM 87507

Re: Actuarial Valuation for Funding Purposes as of June 30, 2023

Members of the Board:

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the Public Employees Retirement Association of New Mexico (PERA) as of June 30, 2023. This report was prepared at the request of the Board and is intended for use by PERA staff and those designated or approved by the Board. This report may be provided to parties other than PERA only in its entirety and only with the permission of the Board.

Actuarial Valuation

The primary purposes of the actuarial valuation report are to determine the adequacy of the current employer contributions for each PERA division, describe the current financial condition of each PERA division, analyze changes in the condition of each PERA division, and provide various summaries of the data.

Plan Provisions

Our actuarial valuation as of June 30, 2023 reflects the benefit and contribution provisions that were in effect as of June 30, 2023. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. The current actuarial assumptions and methods are outlined in Section F of this report.

Data

This valuation was based upon information as of June 30, 2023, furnished by PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Internal Revenue Code and ERISA.

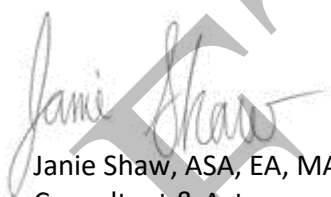
The signing actuaries are independent of the plan sponsor. The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. Finally, each of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Paul Wood, ASA, MAAA
Senior Consultant & Actuary



Janie Shaw, ASA, EA, MAAA
Consultant & Actuary

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SECTION A

EXECUTIVE SUMMARY

Executive Summary

All PERA Divisions

Item	2023	2022
Membership		
• Number of		
- Active members	47,855	46,901
- Retirees, beneficiaries, and disabled	45,216	44,115
- Inactive, vested	7,510	6,973
- Inactive, nonvested	21,021	19,873
- Total	121,602	117,862
• Valuation Payroll	\$ 2,887,875,401	\$ 2,537,114,966
Statutory contribution rates (Effective)	FY 2024	FY 2023
• Members*	13.54%	12.99%
• Employer*	16.66%	16.18%
Additional Annual Appropriation	0	0
Assets		
• Market value (MVA)	\$ 16,553,392,102	\$ 16,309,242,875
• Actuarial value (AVA)	\$ 17,058,022,761	\$ 16,735,492,929
• Return on market value	5.6%	-4.3%
• Return on actuarial value	6.0%	6.1%
Actuarial Information on AVA (smoothed)		
• Normal cost % (Effective)	17.57%	17.78%
• Actuarial accrued liability	\$ 25,200,187,392	\$ 23,924,483,762
• Unfunded actuarial accrued liability (UAAL)	\$ 8,142,164,631	\$ 7,188,990,833
• Funded ratio	67.7%	70.0%
Actuarially Determined Contribution (ADC)		
• ADC Rate	36.27%	36.57%
• ADC Amount	\$ 1,047,432,408	\$ 927,822,943
Total Anticipated Contribution Amount	\$ 872,138,371	\$ 740,076,436
(Excess)/Deficiency of Anticipated Contributions	\$ 175,294,037	\$ 187,746,507
(Excess)/Deficiency of Anticipated Contribution Rate	6.07%	7.40%
Amortization Period	53 years	59 years
Actuarial Information on MVA		
• Unfunded actuarial accrued liability (UAAL)	\$ 8,646,795,290	\$ 7,615,240,887
• Funded ratio	65.7%	68.2%

* For Municipal plans, employee and employer rates will increase by 0.5% of payroll effective July 1, 2024 and July 1, 2025.

Executive Summary

By Individual Division as of June 30, 2023

Item	State General	State Police/ Corrections	Municipal General	Municipal Police	Municipal Fire
Membership					
• Number of					
- Active members	18,570	2,239	20,758	3,645	2,643
- Retirees, beneficiaries, disabled	20,824	1,798	16,085	4,228	2,281
- Inactive, vested	3,741	176	3,044	351	198
- Inactive, nonvested	8,145	608	11,271	722	275
- Total	51,280	4,821	51,158	8,946	5,397
• Valuation Payroll	\$ 1,168,355,029	\$ 138,728,615	\$ 1,127,302,204	\$ 266,885,222	\$ 186,604,331
Statutory contribution rates	FY 2024	FY 2024	FY 2024	FY 2024	FY 2024
• Members*	10.92%	9.06%	14.60%	18.37%	20.02%
• Employer*	19.24%	25.65%	11.06%	20.00%	22.80%
Additional Annual Appropriation	0	0	0	0	0
Assets					
• Market value (MVA)	\$ 5,848,714,490	\$ 1,529,059,278	\$ 5,742,356,294	\$ 2,316,967,974	\$ 1,116,294,066
• Actuarial value (AVA)	\$ 6,027,012,729	\$ 1,575,672,696	\$ 5,917,412,199	\$ 2,387,600,813	\$ 1,150,324,324
Actuarial Information on AVA					
• Normal cost % (Effective)	16.51%	21.32%	15.40%	23.20%	25.72%
• Actuarial accrued liability	\$ 10,462,080,122	\$ 1,261,278,645	\$ 8,035,469,248	\$ 3,369,716,563	\$ 2,071,642,814
• UAAL	\$ 4,435,067,393	\$ (314,394,051)	\$ 2,118,057,049	\$ 982,115,750	\$ 921,318,490
• Funded ratio	57.6%	124.9%	73.6%	70.9%	55.5%
Actuarially Determined Contribution (ADC)					
• ADC Rate	41.51%	7.19%	28.03%	47.45%	58.08%
• ADC Amount	\$ 484,984,173	\$ 9,974,587	\$ 315,982,808	\$ 126,637,038	\$ 108,379,795
Total Anticipated Contribution Amount	\$ 352,375,877	\$ 48,152,702	\$ 289,265,746	\$ 102,403,860	\$ 79,903,975
(Excess)/Deficiency of Anticipated Contributions	\$ 132,608,296	\$ (38,178,115)	\$ 26,717,062	\$ 24,233,178	\$ 28,475,820
(Excess)/Deficiency of Anticipated Contribution Rate	11.35%	-27.52%	2.37%	9.08%	15.26%
Amortization Period	N/A	0 years	28 years	61 years	N/A
Actuarial Information on MVA					
• UAAL	\$ 4,613,365,632	\$ (267,780,633)	\$ 2,293,112,954	\$ 1,052,748,589	\$ 955,348,748
• Funded ratio	55.9%	121.2%	71.5%	68.8%	53.9%

* For Municipal plans, employee and employer rates will increase by 0.5% of payroll effective July 1, 2024 and July 1, 2025.

SECTION B

DISCUSSION

Discussion

Introduction

This report presents the results of the June 30, 2023 actuarial valuation of the Public Employees Retirement Association of New Mexico (PERA).

The primary purposes of this actuarial valuation report are to determine the adequacy of the current State and employer contributions, describe the current financial condition of PERA, analyze the changes in condition of PERA, and provide various summaries of the data.

All of the tables referenced in the following discussion appear in Section C of this report.

Funding Adequacy

The Actuarially Determined Contribution (ADC) according to the funding policy is the contribution rate necessary to fund the annual normal cost of PERA and fully amortize the UAAL over 25 years. The amount calculated is expected to remain a constant percentage of payroll over the remaining amortization period. This ADC is reasonable as of the valuation date. As demonstrated below, the current statutory rates are less than the ADC. This means that the funding period is in excess of the 25-year target set by the Board.

The ADC determined by this valuation and the statutory employer and member contribution rates for FY2024 are noted below:

	Actuarially Determined Contribution	Employer Contribution Rate*	Member Contribution Rate*	Shortfall /(Excess)
State General	41.51%	19.24%	10.92%	11.35%
State Police	7.19%	25.65%	9.06%	-27.52%
Municipal General	28.03%	11.06%	14.60%	2.37%
Municipal Police	47.45%	20.00%	18.37%	9.08%
Municipal Fire	58.08%	22.80%	20.02%	15.26%
All PERA Divisions	36.27%	16.66%	13.54%	6.07%

** For Municipal plans, employee and employer rates will increase by 0.5% of payroll effective July 1, 2024 and July 1, 2025.*

The total unfunded actuarial accrued liability (UAAL) for PERA increased from \$7.2 billion as of June 30, 2022 to \$8.1 billion as of June 30, 2023. Additionally, the funded ratio—actuarial value of assets divided by the actuarial accrued liability—decreased from 70.0% to 67.7%, as of June 30, 2023. **The current contribution rates, including the scheduled increases to member and employer contributions, are expected to eliminate the UAAL in 53 years. Therefore, the Board's goal of eliminating the UAAL in 25 years is not currently being met. The funding period improved by six years compared to last year mainly because of significant payroll growth resulting in higher projected payroll which equates to more projected contributions to the Plan.**

The UAAL was expected to increase to \$7.4 billion (an increase of \$0.2 billion) as of June 30, 2023, primarily because the current contributions are less than the normal cost plus interest accruing on the current UAAL.



The additional \$0.7 billion increase in the UAAL is primarily attributable to salary increases larger than expected and investment losses on the actuarial value of assets. Table 8 provides additional detail on the changes to the UAAL, by division.

The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement system. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Plan Provisions

The plan provisions have been updated since the prior valuation. House Bill 106 passed during the 2023 legislative session and increased the maximum pension benefit from 90% to 100% of final average salary for all PERA divisions. Additionally, Senate Bill 145 passed during the 2023 legislative session and provide the 20% enhanced service credit to certain state police members who had not previously been eligible. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of PERA.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. A review of the impact of a different set of assumptions on the funded status of PERA is outside the scope of this actuarial valuation.

The current actuarial assumptions and methods are outlined in Section F of this report.

System Assets

This report contains several tables that summarize key information with respect to the assets for PERA and the individual divisions, including the Legislative division.

The total market value of assets increased from \$16.3 billion to \$16.6 billion as of June 30, 2023 (excluding the Legislative division). Table 5 reconciles the changes in the fund during the year. Total contributions increased from \$725 million to \$828 million.

Table 6 shows the development of the Actuarial Value of Assets (AVA). The current AVA method recognizes each year's gain or loss over a closed four-year period. The AVA increased from \$16.7 billion to \$17.1 billion as of June 30, 2023 (excluding the Legislative division).

When measured on a market value, the approximate investment return for the fiscal year ending June 30, 2023 was 5.6%. When measured on an actuarial value, the net investment return was 6.0%. Table 7 shows a history of return rates. The PERA ten-year average market return is 6.6%.



Table 8 provides a history of the contributions paid into PERA and the administrative expenses and benefit payments paid out of PERA. PERA paid administrative expenses and benefit payments, in excess of contributions received, of \$717 million (or 4.4% of assets) in fiscal year 2022 and \$656 million (or 4.0% of assets) in fiscal year 2023. PERA should continue to monitor this deficit as it could impact future liquidity needs.

Data

This valuation was based upon information as of June 30, 2023, furnished by PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

The tables in Section G show key census statistics for the various groups included in the valuation.

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SECTION C

TABLES

Table 1
Development of Employer Cost

	<i>All PERA Divisions</i>		<i>State General Division</i>	
	June 30, 2023	June 30, 2022	June 30, 2023	June 30, 2022
1. Payroll				
a. Annual Payroll	\$ 2,803,762,525	\$ 2,463,218,413	\$ 1,134,325,271	\$ 1,006,972,042
b. Valuation Payroll	2,887,875,401	2,537,114,966	1,168,355,029	1,037,181,203
2. Actuarial Accrued Liability for Active Members				
a. Present value of future benefits for active members	\$ 11,318,929,604	\$ 10,120,356,325	\$ 4,332,830,332	\$ 3,879,200,762
b. Less: present value of future normal costs	(3,333,803,542)	(2,936,587,753)	(1,236,758,006)	(1,090,111,684)
c. Actuarial accrued liability	\$ 7,985,126,062	\$ 7,183,768,572	\$ 3,096,072,326	\$ 2,789,089,078
3. Total Actuarial Accrued Liability for:				
a. Retirees and beneficiaries	\$ 16,496,591,558	\$ 16,095,852,486	\$ 6,991,155,185	\$ 6,873,742,444
b. Inactive members	718,469,772	644,862,704	374,852,611	339,527,103
c. Active members (Item 2c)	7,985,126,062	7,183,768,572	3,096,072,326	2,789,089,078
d. Total	\$ 25,200,187,392	\$ 23,924,483,762	\$ 10,462,080,122	\$ 10,002,358,625
4. Actuarial Value of Assets	\$ 17,058,022,761	\$ 16,735,492,929	\$ 6,027,012,729	\$ 5,997,050,627
5. Unfunded Actuarial Accrued Liability (UAAL) (Item 3d - Item 4)	\$ 8,142,164,631	\$ 7,188,990,833	\$ 4,435,067,393	\$ 4,005,307,998
6. Actuarially Determined Contribution (ADC)				
a. Gross normal cost rate	17.57%	17.78%	16.51%	16.52%
b. Administrative expenses	0.50%	0.50%	0.50%	0.50%
c. 25-Year Amortization of UAAL	18.20%	18.29%	24.50%	24.92%
d. Total ADC Rate (Items 6a + 6b + 6c)	36.27%	36.57%	41.51%	41.94%
e. Total ADC Amount (Item 1b * 6d)	\$ 1,047,432,408	\$ 927,822,943	\$ 484,984,173	\$ 434,993,797
7. Statutory and Appropriated Contributions				
a. Employer Contribution Rate (Current)	16.66%	16.18%	19.24%	18.74%
b. Member Contribution Rate (Current)	13.54%	12.99%	10.92%	10.42%
c. Additional Annual Appropriation	0	0	0	0
d. Total Anticipated Contribution Amount	872,138,371	740,076,436	352,375,877	302,442,039
8. ADC Comparison to Anticipated Contributions				
a. (Excess)/Deficiency of Anticipated Contributions	\$ 175,294,037	\$ 187,746,507	\$ 132,608,296	\$ 132,551,758
b. (Excess)/Deficiency in Contribution Rate	6.07%	7.40%	11.35%	12.78%
9. Amortization Period	53 years	59 years	N/A	N/A

Table 1
Development of Employer Cost (cont.)

	<i>State Police/Corrections Division</i>		<i>Municipal General Division</i>	
	<i>June 30, 2023</i>	<i>June 30, 2022</i>	<i>June 30, 2023</i>	<i>June 30, 2022</i>
1. Payroll				
a. Annual Payroll	\$ 134,687,976	\$ 121,017,701	\$ 1,094,468,159	\$ 949,969,039
b. Valuation Payroll	138,728,615	124,648,232	1,127,302,204	978,468,110
2. Actuarial Accrued Liability for Active Members				
a. Present value of future benefits for active members	\$ 662,787,593	\$ 589,550,301	\$ 3,735,855,356	\$ 3,372,080,201
b. Less: present value of future normal costs	(191,487,820)	(174,972,179)	(1,098,636,975)	(973,926,822)
c. Actuarial accrued liability	\$ 471,299,773	\$ 414,578,122	\$ 2,637,218,381	\$ 2,398,153,379
3. Total Actuarial Accrued Liability for:				
a. Retirees and beneficiaries	\$ 775,035,044	\$ 754,249,275	\$ 5,115,943,211	\$ 4,971,560,589
b. Inactive members	14,943,828	13,392,160	282,307,656	253,357,538
c. Active members (Item 2c)	471,299,773	414,578,122	2,637,218,381	2,398,153,379
d. Total	\$ 1,261,278,645	\$ 1,182,219,557	\$ 8,035,469,248	\$ 7,623,071,506
4. Actuarial Value of Assets	\$ 1,575,672,696	\$ 1,502,208,686	\$ 5,917,412,199	\$ 5,787,799,706
5. Unfunded Actuarial Accrued Liability (UAAL) (Item 3d - Item 4)	\$ (314,394,051)	\$ (319,989,129)	\$ 2,118,057,049	\$ 1,835,271,800
6. Actuarially Determined Contribution (ADC)				
a. Gross normal cost rate	21.32%	21.56%	15.40%	15.86%
b. Administrative expenses	0.50%	0.50%	0.50%	0.50%
c. 25-Year Amortization of UAAL	-14.63%	-16.57%	12.13%	12.11%
d. Total ADC Rate (Items 6a + 6b + 6c)	7.19%	5.49%	28.03%	28.47%
e. Total ADC Amount (Item 1b * 6d)	\$ 9,974,587	\$ 6,843,188	\$ 315,982,808	\$ 278,569,871
7. Statutory and Appropriated Contributions				
a. Employer Contribution Rate (Current)	25.65%	25.65%	11.06%	10.47%
b. Member Contribution Rate (Current)	9.06%	9.01%	14.60%	13.97%
c. Additional Annual Appropriation	0	0	0	0
d. Total Anticipated Contribution Amount	48,152,702	43,203,077	289,265,746	239,137,606
8. ADC Comparison to Anticipated Contributions				
a. (Excess)/Deficiency of Anticipated Contributions	\$ (38,178,115)	\$ (36,359,889)	\$ 26,717,062	\$ 39,432,265
b. (Excess)/Deficiency in Contribution Rate	-27.52%	-29.17%	2.37%	4.03%
9. Amortization Period	0 years	0 years	28 years	32 years

Table 1
Development of Employer Cost (cont.)

	<i>Municipal Police Division</i>		<i>Municipal Fire Division</i>	
	June 30, 2023	June 30, 2022	June 30, 2023	June 30, 2022
1. Payroll				
a. Annual Payroll	\$ 259,111,866	\$ 229,103,348	\$ 181,169,253	\$ 156,156,285
b. Valuation Payroll	266,885,222	235,976,448	186,604,331	160,840,973
2. Actuarial Accrued Liability for Active Members				
a. Present value of future benefits for active members	\$ 1,442,474,574	\$ 1,283,524,162	\$ 1,144,981,749	\$ 996,000,899
b. Less: present value of future normal costs	(428,879,328)	(377,960,209)	(378,041,413)	(319,616,859)
c. Actuarial accrued liability	\$ 1,013,595,246	\$ 905,563,953	\$ 766,940,336	\$ 676,384,040
3. Total Actuarial Accrued Liability for:				
a. Retirees and beneficiaries	\$ 2,325,284,096	\$ 2,249,228,296	\$ 1,289,174,022	\$ 1,247,071,881
b. Inactive members	30,837,221	25,569,879	15,528,456	13,016,024
c. Active members (Item 2c)	1,013,595,246	905,563,953	766,940,336	676,384,040
d. Total	\$ 3,369,716,563	\$ 3,180,362,128	\$ 2,071,642,814	\$ 1,936,471,945
4. Actuarial Value of Assets	\$ 2,387,600,813	\$ 2,335,040,372	\$ 1,150,324,324	\$ 1,113,393,538
5. Unfunded Actuarial Accrued Liability (UAAL) (Item 3d - Item 4)	\$ 982,115,750	\$ 845,321,756	\$ 921,318,490	\$ 823,078,407
6. Actuarially Determined Contribution (ADC)				
a. Gross normal cost rate	23.20%	23.31%	25.72%	25.71%
b. Administrative expenses	0.50%	0.50%	0.50%	0.50%
c. 25-Year Amortization of UAAL	23.75%	23.12%	31.86%	33.02%
d. Total ADC Rate (Items 6a + 6b + 6c)	47.45%	46.93%	58.08%	59.23%
e. Total ADC Amount (Item 1b * 6d)	\$ 126,637,038	\$ 110,743,747	\$ 108,379,795	\$ 95,266,108
7. Statutory and Appropriated Contributions				
a. Employer Contribution Rate (Current)	20.00%	19.47%	22.80%	22.26%
b. Member Contribution Rate (Current)	18.37%	17.83%	20.02%	19.53%
c. Additional Annual Appropriation	0	0	0	0
d. Total Anticipated Contribution Amount	102,403,860	88,019,215	79,903,975	67,215,443
8. ADC Comparison to Anticipated Contributions				
a. (Excess)/Deficiency of Anticipated Contributions	\$ 24,233,178	\$ 22,724,532	\$ 28,475,820	\$ 28,050,665
b. (Excess)/Deficiency in Contribution Rate	9.08%	9.63%	15.26%	17.44%
9. Amortization Period	61 years	59 years	N/A	N/A

Table 2
Analysis of Normal Cost

	All PERA Divisions	State General	State Police	Municipal General	Municipal Police	Municipal Fire
1. Gross Normal Cost Rate						
a. Service Retirement	11.41%	10.34%	13.43%	8.88%	18.09%	21.34%
b. Disability Benefits	0.91%	1.05%	2.06%	0.76%	0.57%	0.58%
c. Death Before Retirement	0.88%	0.88%	0.68%	0.99%	0.67%	0.73%
d. Termination	4.37%	4.24%	5.15%	4.77%	3.87%	3.07%
e. Total	17.57%	16.51%	21.32%	15.40%	23.20%	25.72%
2. Administrative Expenses	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
3. Total Normal Cost	18.07%	17.01%	21.82%	15.90%	23.70%	26.22%
4. Less: Member Rate	13.54%	10.92%	9.06%	14.60%	18.37%	20.02%
5. Employer Normal Cost Rate	4.53%	6.09%	12.76%	1.30%	5.33%	6.20%

Table 3
Reconciliation of Plan Net Assets
Total PERA with Legislative Division

	Year Ending	
	June 30, 2023 (1)	June 30, 2022 (2)
1. Market value of assets at beginning of year	\$ 16,354,646,875	\$ 17,813,948,280
2. Revenue for the year		
a. Contributions for the year		
i. Member Contributions	\$ 364,138,526	\$ 314,280,368
ii. Employer Contributions	454,461,748	395,408,293
iii. State Appropriations	0	2,414,400
iv. Service Purchases	9,075,044	12,439,944
v. Total	\$ 827,675,318	\$ 724,543,005
b. Net investment income	\$ 900,552,527	\$ (742,505,048)
c. Total revenue	\$ 1,728,227,845	\$ (17,962,043)
3. Disbursements for the year		
a. Benefit payments	\$ 1,417,002,889	\$ 1,367,737,863
b. Refunds of member contributions	51,448,291	57,591,001
c. Administrative expenses	15,593,783	16,010,498
d. Total expenditures	\$ 1,484,044,963	\$ 1,441,339,362
4. Increase in net assets (Item 2c - Item 3d)	\$ 244,182,882	\$ (1,459,301,405)
5. Market value of assets at end of year (Item 1 + Item 4)	\$ 16,598,829,757	\$ 16,354,646,875
6. Estimated Rate of Return on Market Value of Assets	5.6%	-4.3%

Table 4

Year Ending
June 30, 2023

Table 5
Allocation of Assets Across Divisions

Division	Market Value of Assets	Actuarial Value of Assets	Approximate % of Total Fund Balance
State General	\$ 5,848,714,490	\$ 6,027,012,729	35.4%
State Police	1,529,059,278	1,575,672,696	9.2%
Municipal General	5,742,356,294	5,917,412,199	34.7%
Municipal Police	2,316,967,974	2,387,600,813	14.0%
Municipal Fire	1,116,294,066	1,150,324,324	6.7%
All PERA Divisions (w/o Legislative)	\$16,553,392,102	\$17,058,022,761	100.0%
Legislative	45,437,655	46,822,823	
All PERA Divisions (w/ Legislative)	\$16,598,829,757	\$17,104,845,584	

Table 6
History of Investment Return Rates
Total PERA with Legislative Division

Year Ending June 30 of (1)	Market (2)	Actuarial (3)
2011	22.5%	-1.2%
2012	-0.9%	0.4%
2013	12.9%	10.5%
2014	17.1%	11.9%
2015	1.7%	7.6%
2016	0.4%	7.7%
2017	11.1%	7.0%
2018	6.9%	4.9%
2019	6.3%	5.9%
2020	-1.5%	5.5%
2021	26.5%	9.1%
2022	-4.3%	6.1%
2023	5.6%	6.0%
Average Returns		
Last Five Years:	6.0%	6.5%
Last Ten Years:	6.6%	7.2%

Table 7
History of Cash Flow
Total PERA with Legislative Division

Year Ending June 30,	Distributions and Expenditures				External Cash Flow for the Year	Market Value of Assets	External Cash Flow as Percent of Market Value
	Contributions	Benefit Payments and Refunds	Administrative Expenses	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2013	\$ 520.9	\$ (887.8)	\$ (8.6)	\$ (896.4)	\$ (375.5)	\$ 12,708	-3.0%
2014	548.5	(952.7)	(10.3)	(963.0)	(414.5)	14,429	-2.9%
2015	576.1	(1,012.2)	(9.9)	(1,022.1)	(446.0)	14,256	-3.1%
2016	590.3	(1,069.3)	(10.8)	(1,080.1)	(489.8)	13,827	-3.5%
2017	605.3	(1,129.2)	(11.5)	(1,140.7)	(535.4)	14,799	-3.6%
2018	602.3	(1,183.7)	(12.7)	(1,196.4)	(594.1)	15,210	-3.9%
2019	621.3	(1,248.3)	(13.6)	(1,261.9)	(640.6)	15,508	-4.1%
2020	720.6	(1,299.9)	(14.3)	(1,314.2)	(593.6)	14,692	-4.0%
2021	688.7	(1,355.2)	(12.7)	(1,367.9)	(679.2)	17,814	-3.8%
2022	724.5	(1,425.3)	(16.0)	(1,441.3)	(716.8)	16,355	-4.4%
2023	827.7	(1,468.5)	(15.6)	(1,484.1)	(656.4)	16,599	-4.0%

Amounts in millions

Table 8
Total Experience Gain or Loss

Item	All PERA Divisions	State General	State Police	Municipal General	Municipal Police	Municipal Fire
A. Calculation of total actuarial gain or loss						
1. Unfunded actuarial accrued liability (UAAL), previous year	\$ 7,188,990,833	\$ 4,005,307,998	\$ (319,989,129)	\$ 1,835,271,800	\$ 845,321,756	\$ 823,078,407
2. Normal cost (incl. admin) for the previous year	\$ 466,650,138	\$ 176,836,915	\$ 28,310,635	\$ 160,579,703	\$ 57,182,787	\$ 42,400,917
3. Less: expected contributions for the year	\$ (740,076,436)	\$ (302,442,039)	\$ (43,203,077)	\$ (239,137,606)	\$ (88,019,215)	\$ (67,215,443)
4. Interest at 7.25%						
a. On UAAL	\$ 521,201,835	\$ 290,384,830	\$ (23,199,212)	\$ 133,057,206	\$ 61,285,827	\$ 59,673,185
b. On normal cost	16,916,068	6,410,338	1,026,261	5,821,014	2,072,876	1,537,033
c. On contributions	(26,827,771)	(10,963,524)	(1,566,112)	(8,668,738)	(3,190,697)	(2,436,560)
d. Total	\$ 511,290,132	\$ 285,831,644	\$ (23,739,063)	\$ 130,209,482	\$ 60,168,006	\$ 58,773,658
5. Expected UAAL (Sum of Items 1 - 4)	\$ 7,426,854,667	\$ 4,165,534,518	\$ (358,620,634)	\$ 1,886,923,379	\$ 874,653,334	\$ 857,037,539
6. Actual UAAL	\$ 8,142,164,631	\$ 4,435,067,393	\$ (314,394,051)	\$ 2,118,057,049	\$ 982,115,750	\$ 921,318,490
7. Total gain (loss) for the year (Item 5 - Item 6)	\$ (715,309,964)	\$ (269,532,875)	\$ (44,226,583)	\$ (231,133,670)	\$ (107,462,416)	\$ (64,280,951)
B. Source of gains and (losses)						
8. Contribution (Shortfall)/Surplus with interest	\$ 90,664,499	\$ 38,805,594	\$ 4,005,181	\$ 25,905,659	\$ 13,254,780	\$ 8,754,481
9. Asset gain (loss) for the year	(213,150,022)	(80,572,807)	(16,953,239)	(72,831,056)	(29,369,906)	(13,423,015)
10. Liability experience gain (loss) for the year	(562,312,771)	(218,995,392)	(25,786,120)	(175,874,335)	(88,443,214)	(54,601,436)
11. Assumption change	0	0	0	0	0	0
12. Benefit change	(30,511,670)	(8,770,270)	(5,492,405)	(8,333,938)	(2,904,076)	(5,010,981)
13. Total	\$ (715,309,964)	\$ (269,532,875)	\$ (44,226,583)	\$ (231,133,670)	\$ (107,462,416)	\$ (64,280,951)

Table 9
Solvency Test
As of June 30, 2023

Division	Actuarial Liability For			Total Actuarial Liability (AAL)	Actuarial Value of Assets	Cumulative portion of AAL covered		
	Total Active Member Contributions	Retirees, Beneficiaries and Inactive Members	Active Members (Employer Financed)			Total Active Member Contributions	Retirees, Beneficiaries and Inactive Members	Active Members (Employer Financed)
State General	\$ 1,039,881,622	\$ 7,366,007,796	\$2,056,190,704	\$10,462,080,122	\$ 6,027,012,729	100%	68%	0%
State Police	83,393,516	789,978,872	387,906,257	1,261,278,645	1,575,672,696	100%	100%	100%
Municipal General	1,316,328,786	5,398,250,867	1,320,889,595	8,035,469,248	5,917,412,199	100%	85%	0%
Municipal Police	360,483,796	2,356,121,317	653,111,450	3,369,716,563	2,387,600,813	100%	86%	0%
Municipal Fire	268,750,619	1,304,702,478	498,189,717	2,071,642,814	1,150,324,324	100%	68%	0%
All PERA Divisions	\$ 3,068,838,339	\$17,215,061,330	\$4,916,287,723	\$25,200,187,392	\$17,058,022,761	100%	81%	0%

SECTION D

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. **Other demographic risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The ADC developed on Table 1 may be considered as a minimum contribution that complies with the Board's funding policy and State statute. The timely receipt of the ADC is critical to support the financial health of the System. Users of this report should be aware that contributions made consistent with the ADC do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Ratio of the market value of assets to total payroll	5.9	6.6	7.5	6.1	6.8	6.8	6.7	6.5	6.3	6.9
Ratio of actuarial accrued liability to payroll	9.0	9.7	9.6	9.3	9.8	9.6	9.2	9.1	8.4	8.5
Ratio of actives to retirees and beneficiaries	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.5
Ratio of net cash flow to market value of assets	-4.0%	-4.4%	-3.8%	-4.0%	-4.1%	-3.9%	-3.6%	-3.5%	-3.1%	-2.9%
Duration of the actuarial accrued liability*	10.2	10.1	10.2							

*Duration measure not available before 2021

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the actuarial accrued liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

DRAFT

Risks Measures – Low Default Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the Public Employees Retirement Association of New Mexico (PERA) is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of PERA is set equal to the expected return on the Fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For PERA, the investment return assumption is 7.25%

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 4.90% as of June 30, 2023. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio.

Valuation Accrued Liabilities	LDROM
\$25,200,187,392	\$33,617,143,090

SECTION E

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions for Public Employees Retirement Association of New Mexico

Benefit Tier

Effective July 1, 2013, Senate Bill 27 establishes two tiers of benefits under each PERA coverage plan:

Tier 1

- Current active members employed by a PERA affiliate on June 30, 2013
- Inactive members who did not receive a refund and have employee contributions on account on June 30, 2013
- Currently retired or will retire on or before June 30, 2013

Note: State and Municipal General members hired between July 1, 2010 and June 30, 2013 are grandfathered into Tier 1 coverage plans.

Tier 2

- Active members first hired on or after July 1, 2013
- Members who received a refund of employee contributions on or before June 30, 2013 and return to work for a PERA affiliate on or after July 1, 2013

Normal Retirement Eligibility Conditions

Tier 1

Applicable to all members:

- Any age with 25 or more years of credited service; or
- Age 60 or older with 20 or more years of credited service; or
- Age 61 or older with 17 or more years of credited service; or
- Age 62 or older with 14 or more years of credited service; or
- Age 63 or older with 11 or more years of credited services or
- Age 64 or older with 8 or more years of credited service; or
- Age 65 or older with 5 or more years of credited service.

Applicable to Municipal Police (Plans 3, 4, & 5) and Municipal Fire (Plans 3, 4, & 5) members:

- Any age with 20 or more years of credited service.

Tier 2

Applicable to State General and Municipal General (Plans 1-4) members:

- Age 65 or older with 5 or more years of credited service; or
- Any age if the sum of the member's age and years of credited service equals at least 85, provided member has at least 5 years of credited service.

Applicable to State Police Officers, Adult Correctional Officers, Peace Officers, Juvenile Correctional Officers, Municipal Police, Municipal Fire, and Municipal Detention Officers:

- Age 60 or older with 5 or more years of credited service; or
- Any age with 25 or more years of credited service.

The amount of normal retirement pension is based on:

- The pension accrual factor and maximum pension, as a percent of final average salary, under each coverage plan are shown below:



Vested Termination of Membership (Employment)

Termination of employment and membership with at least 5 years of credited service. Accumulated member contributions must be left on deposit. Payment of the pension is available upon eligibility for normal retirement. In addition, certain disability and survivor pension provisions apply.

Normal and Optional Forms of Payment

The normal form of payment is for life. Optional contingent survivor beneficiary forms of payment are available on an actuarial equivalent basis. Total pension payments can never be less than the member's accumulated contributions.

Survivor Pensions – Death in the Line of Duty

Pensions are paid to the eligible spouse and eligible children if survivor coverage has not been elected under the Elective Survivor Pension Beneficiary provision. The amount of pension payable for life to an eligible spouse is the greater of 1) 50% of final average salary or 2) the accrued normal retirement pension reduced for option B election. The amount of pension payable to each eligible child is an equal share of 25% of final average salary. If there is not an eligible spouse or the eligible spouse dies, and if there are 2 or more eligible children, the amount of pension payable to each eligible child is an equal share of 50% of final average salary. An eligible child is an unmarried natural or adopted child who is under age 18. A child's pension terminates upon death, marriage or reaching age 18. The pension of any remaining eligible children is recalculated whenever a child's pension is terminated.

Survivor Pensions – Death Not in the Line of Duty

Requires 5 years of credited service. Benefit applies to members and vested former members who have not elected coverage under the Elective Survivor Pension Beneficiary provision. Pensions are paid to an eligible spouse OR eligible children. The amount of pension payable for the life of an eligible spouse is the greater of 1) 30% of final average salary or 2) accrued normal retirement pension reduced for option B election. An eligible child pension is paid if there is not an eligible spouse or following the death of an eligible spouse. The pension is payable to each child in equal shares. An eligible child is an unmarried natural or adopted child who is under age 18. A child's pension terminates upon death, marriage or reaching age 18. The pension of any remaining eligible children is recalculated whenever a child's pension is terminated.

Elective Survivor Beneficiary Pension

Applicable to members with 5 years of credited service. Also applicable to vested former members who have elected option B and designated a survivor pension beneficiary who has an insurable interest. The amount of pension is the amount of accrued normal retirement pension under optional form of payment B (100% continuation to beneficiary).

Disability Retirement

Applicable to members with 5 years of credited service. Also applicable to vested former members. The credited service requirement is waived if the disability is incurred in line of duty. The amount of disability pension is the accrued normal retirement pension at time of disability retirement. If the disability is in line of duty, the credited service used is the amount that would have been acquired when first eligible for normal retirement.

Cost of Living Increases

Effective July 1, 2020, there will be no COLA increases for fiscal years 2021, 2022, and 2023 (July 1, 2020, July 1, 2021, and July 1, 2022). In lieu of these COLAs, an annual non-compounding additional payment equal to 2% of annual benefit as of June 30, 2020 (inclusive of all past COLAs) will be payable.

Beginning July 1, 2023 and each July 1 thereafter, the COLA increase will be determined as an amount equal to the smoothed investment rate of return on the actuarial value of assets on June 30 of the preceding calendar year, less the COLA “hurdle rate”*, multiplied by the funded ratio on June 30 of the preceding calendar year; or 0.5%, whichever is greater, subject to the following:

- If the funded ratio of the fund is less than 100% on June 30 of the preceding calendar year, the COLA amount shall not exceed 3.0%.
- If the funded ratio of the fund is greater than or equal to 100% on June 30 of the preceding calendar year, the COLA amount shall not exceed 5.0%.
- The minimum COLA amount for any year will be 0.5%.

* The COLA “hurdle rate” is the investment rate of return required to fund a COLA in excess of 0.5% as determined by the fund’s actuaries.

Pensions are increased by the COLA amount determined above each July 1 subject to the following eligibility periods:

- Retirees who have been retired for at least 2 full calendar years.
- Retirees who attained at least age 65 and have been retired for at least 1 full calendar year.
- Disabled retirees who have been retired for at least 1 full calendar year.
- Survivor beneficiaries who have received a survivor pension for at least 2 full calendar years.
- Survivor beneficiaries of a deceased retiree who otherwise would have been retired for at least 2 full calendar years.

For certain retirees, pensions are increased each July 1 by 2.5% subject to the eligibility periods listed above, provided the conditions below are met:

- Retirees who retired with at least 25 years of service and whose annual pension is \$25,000 or less.
- Disabled retirees whose annual pension is \$25,000 or less.
- Retirees and survivor beneficiaries who attained at least age 75 prior to July 1, 2021.

Service Credit

Tier 1 Members in the State Police and Adult Corrections Officers Coverage Plan and members in the Municipal Detention Officers Coverage Plan receive 1.2 years of credited service for each year of service rendered. All other members receive 1.0 year of credited service for each year of service rendered.

Contributions by Members and Employers

Contributions by members and affiliated public employers are at the following rates shown below. The table reflects the changes resulting from the passage of Senate Bill 72 (2020) and Senate Bill 90 (2021).

Coverage Plan	Employee Contribution Percentage	Employer Contribution Percentage
State Division		
State General Member Coverage Plan 3 ¹	10.92%	19.24%
State Police Officer, Adult Correctional Officer, and Probation and Parole Officer Coverage Plan 1 ²	9.10	25.50
Juvenile Correctional Officer Coverage Plan 2 ¹	8.28	28.37
Municipal Division^{3,4}		
Municipal General Member Coverage Plan 1	9.50%	8.65%
Municipal General Member Coverage Plan 2	11.65	10.80
Municipal General Member Coverage Plan 3	15.65	10.80
Municipal General Member Coverage Plan 4	18.15	13.30
Municipal Detention Officer Member Coverage Plan 1	19.15	18.30
Municipal Police Member Coverage Plan 1	9.50	11.65
Municipal Police Member Coverage Plan 2	9.50	16.65
Municipal Police Member Coverage Plan 3	9.50	20.15
Municipal Police Member Coverage Plan 4	14.85	20.15
Municipal Police Member Coverage Plan 5	18.80	20.15
Municipal Fire Member Coverage Plan 1	12.00	12.65
Municipal Fire Member Coverage Plan 2	12.00	19.15
Municipal Fire Member Coverage Plan 3	12.00	22.90
Municipal Fire Member Coverage Plan 4	16.80	22.90
Municipal Fire Member Coverage Plan 5	20.20	22.90

Interest is credited to member contributions on each June 30 at the rates set annually by the Retirement Board. Effective July 1, 2012, the interest crediting rate for member contributions is 2%.

¹For employees whose annual salary is \$25,000 or less, the employee contribution rates are reduced by 3.0%.

² For employees whose annual salary is \$25,000 or less, the employee contribution rates are reduced by 1.5%.

³For employees whose annual salary is \$25,000 or less, the employee contribution rates are reduced by 2.50% (3.5% for the Fire Coverage Plans).

⁴For all Municipal Coverage Plans, employee and employer rates will increase by 0.5% of payroll effective July 1, 2024 and July 1, 2025.



SECTION F

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019.

I. Valuation Date

The valuation date is June 30 of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation is used to determine the adequacy of the employer contribution rate, the member contribution rate, and any fixed appropriations and to describe the current financial condition of PERA.

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the first step is to determine the contribution rate (level as a percentage of pay) required to provide the benefits to each member, or the normal cost rate. The normal cost rate consists of two pieces: (i) the member's contribution rate, and (ii) the remaining portion of the normal cost rate which is the employer's normal cost rate. The total normal cost rate is based on the benefits payable to each individual active member.

The Unfunded Actuarial Accrued Liability (UAAL) is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution provided in excess of the employer normal cost is applied to amortize the UAAL.

The funding period is calculated as the number of years required to fully amortize the UAAL, assuming that: (a) future market earnings, net of investment-related expenses, will equal 7.25% per year, (b) there will be no liability gains/losses or changes in assumptions, (c) the other active members who leave employment will be replaced by new entrants each year, (d) the total normal cost rate is based on the benefits payable to each individual active member, and (e) employer and member contributions will be paid in accordance with current statutes, including scheduled increases.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

III. Actuarial Value of Assets

The actuarial value of assets is derived as follows: prior year actuarial value of assets is increased by contributions and expected income and reduced by refunds, benefit payments and expenses. To this amount, 25% of the difference between the expected investment income of the actuarial value and actual investment income on the market value for each of the previous four years is added. The returns are computed net of investment-related expenses.

IV. Actuarial Assumptions

Investment Return: 7.25% per year, net of investment-related expenses (composed of an assumed 2.50% inflation rate and a 4.75% real rate of return)

Administrative Expenses: 0.50% of valuation payroll per year

Annual Post-Retirement Cost of Living Adjustment Rate: 1.60% per year beginning July 1, 2023

Salary Increases: All pay increases are assumed to occur at the beginning of the year. The components of the annual increases are:

Attributable to:	Annual Rates of Salary Increases for Sample Years of Service				
	1	5	10	15	20
General Increase in Wage Level Due to:					
Inflation	2.50%	2.50%	2.50%	2.50%	2.50%
Other Factors	0.75	0.75	0.75	0.75	0.75
Increase Due to Merit/Longevity:					
State General	5.00	1.25	0.50	0.00	0.00
State Police	10.25	5.75	1.25	1.25	1.25
State Corrections	9.75	3.50	2.00	1.50	1.50
Municipal General *	2.50	1.50	0.50	0.00	0.00
Municipal Police	7.75	2.75	1.50	0.75	0.75
Municipal Fire	7.75	2.75	1.50	1.25	1.25

* Includes Municipal Detention Officers

Payroll Growth: 3.00% per year, compounded annually.

Decrement Timing: All decrements – mortality, service retirement, disability retirement, and termination of employment for reasons other than death or retirement – are assumed to occur at the beginning of the valuation year.

Mortality Decrements:

The mortality assumptions are based on the RPH-2014 Blue Collar mortality tables with female ages set forward one year. Future improvement in mortality rates is assumed using 60% of the MP-2017 projection scale generationally. For non-public safety group, 25% of in-service deaths are assumed to be duty related and 35% are assumed to be duty-related for public safety groups.

Rates are shown for sample ages in the following schedule. Note that gender distinct mortality rates are used solely for determining the funded status and contribution rate adequacy. All benefit amounts are based on merged gender mortality rates.

Sample Mortality Rates (Base Rates)								
Pre-Commencement			Post-Commencement			Post-Commencement		
Age	Male	Female	Age	Male	Female	Age	Male	Female
25	0.000733	0.000244	35	0.001793	0.001169	80	0.053460	0.042932
30	0.000717	0.000317	40	0.002156	0.001611	85	0.088524	0.072752
35	0.000797	0.000417	45	0.003275	0.002671	90	0.146859	0.125111
40	0.000958	0.000598	50	0.005604	0.004235	95	0.223428	0.197901
45	0.001455	0.001013	55	0.007342	0.005165	100	0.313988	0.291040
50	0.002490	0.001685	60	0.009893	0.006890	105	Disabled retirees use the same assumption as healthy lives.	
55	0.004071	0.002510	65	0.014089	0.010092	110		
60	0.006743	0.003606	70	0.021101	0.016038	115		
65	0.011612	0.005456	75	0.032952	0.026199	120		

Rates of Retirement

First Eligibility Rates: These rates are used to measure the probability of members retiring in the first year eligible for retirement at the indicated ages.

Sample Percent Retiring at First Eligibility by Age									
Ages	State General		State Police		State	Municipal General		Municipal	Municipal
	Male	Female	Tier 1	Tier 2	Corrections	Male	Female	Police	Fire
40	25%	25%	25%	40%	40%	20%	25%	30%	30%
45	25	25	25	40	40	20	25	30	25
50	25	25	25	40	40	20	25	30	20
55	25	25	25	40	40	20	25	30	25
60	30	25	50	40	35	15	25	30	20
65	25	25	100	100	35	15	25	30	20
70	25	20			100	20	15	100	100
75	25	20				20	15		
80	100	100				100	100		

Subsequent Eligibility Rates: These rates are used to measure the probability of members retiring after the first year eligible for retirement at the indicated ages.

Sample Percent Retiring at First Eligibility by Age*										
Ages	State General		State Police**		State	Municipal General		Municipal Police ***		Municipal
	Male	Female	Tier 1	Tier 2	Corrections	Male	Female	Tier 1	Tier 2	Fire
40	25%	25%	35%	20%	20%	20%	25%	35%	40%	30%
45	25	25	35	20	20	20	25	35	40	25
50	25	25	35	20	20	20	25	35	40	20
55	25	25	35	20	20	20	25	35	40	25
60	20	35	50	20	20	15	15	35	30	20
65	30	35	100	100	20	15	10	30	30	20
70	25	20			100	20	15	100	100	100
75	25	20				20	15			
80	100	100				100	100			

* Rates are 70% at 30 years of service for all ages except State General and Municipal General Tier 2 uses 75% at 36 years of service and Municipal Police Tier 1 uses 75% at 26 years of service.

** Rates for State Police Tier 1 are 45% at 27 years of service, 55% at 28 years of service, and 65% at 29 years of service.

*** Rates for Municipal Police Tier 1 are 35% at 21 years of service, 40% at 22 years of service, and 45% at 23 years of service, 55% at 24 years of service, and 65% at 25 years of service.

*** Rates for Municipal Police Tier 2 are 35% at 25 years of service, 40% at 26 years of service, and 45% at 27 years of service, 55% at 28 years of service, and 65% at 29 years of service.

Rates of Withdrawal from Active Membership

The rates are used to measure probabilities of active members terminating for a reason other than disability or death. The rates do not apply to members who are within the retirement rate range. Assumptions for State General and Municipal General are gender distinct and both based on age and service. Assumptions for all other plans are not gender distinct and are service related only; these rates do not vary by age.

State General Males					
Rates of Active Members Terminating During Year					
Sample Ages	Sample Service (Yr):				
	2	4	6	8	10+
20	18.76%	10.86%	8.21%	7.78%	5.11%
25	17.72	11.06	8.10	7.07	4.65
30	16.45	11.27	7.97	6.18	4.13
35	15.31	10.81	7.59	5.58	3.89
40	14.30	9.97	7.08	5.40	3.86
45	13.55	9.06	6.63	5.40	3.86
50	13.26	8.45	6.49	5.40	3.86
55	13.26	8.37	6.49	5.40	3.86
60	13.26	8.37	6.49	5.40	3.86
65	13.26	8.37			
70	13.26	8.37			

State General Females					
Rates of Active Members Terminating During Year					
Sample Ages	Sample Service (Yr):				
	2	4	6	8	10+
20	18.13%	11.95%	8.22%	6.05%	4.83%
25	17.76	11.95	8.02	5.81	4.25
30	17.28	11.89	7.81	5.54	3.55
35	16.34	11.23	7.45	5.28	3.46
40	15.22	10.24	6.99	5.06	3.46
45	14.19	9.20	6.58	4.95	3.46
50	13.52	8.55	6.45	4.80	3.46
55	13.37	8.50	6.45	4.70	3.46
60	13.37	8.50	6.45	4.70	3.46
65	13.37	8.50			
70	13.37	8.50			

Rates of Withdrawal from Active Membership (Continued)

Municipal General Males					
Rates of Active Members Terminating During Year					
Sample Ages	Sample Service (Yr):				
	2	4	6	8	10+
20	21.70%	14.59%	11.29%	8.93%	8.54%
25	20.00	13.52	10.26	8.05	7.32
30	17.73	12.04	8.96	6.94	5.69
35	15.77	10.65	8.01	6.20	4.61
40	14.06	9.37	7.29	5.73	3.92
45	12.80	8.39	6.87	5.58	3.65
50	12.20	8.01	6.79	5.58	3.65
55	12.18	8.01	6.79	5.58	3.65
60	12.18	8.01	6.79	5.58	3.65
65	12.18	8.01			
70	12.18	8.01			

Municipal General Females					
Rates of Active Members Terminating During Year					
Sample Ages	Sample Service (Yr):				
	2	4	6	8	10+
20	24.40%	17.77%	14.41%	11.94%	7.51%
25	21.96	16.06	12.80	10.32	6.38
30	18.85	13.77	10.63	8.16	4.94
35	16.69	11.96	9.08	6.70	4.09
40	15.16	10.49	7.84	5.74	3.67
45	14.28	9.49	6.50	5.31	3.62
50	14.01	9.14	6.50	5.30	3.62
55	14.01	9.14	6.50	5.30	3.62
60	14.01	9.14	6.50	5.30	3.62
65	14.01	9.14			
70	14.01	9.14			

Service Based Rates of Active Members Terminating During Year					
All Ages	Sample Service (Yr):				
	1	3	5	7	8+
State Police	8.00%	7.00%	4.00%	4.00%	4.00%
State Corrections	20.00	16.00	9.00	8.00	5.75
Municipal Detention	22.00	16.00	10.00	10.00	6.00
Municipal Police	14.00	9.50	6.80	5.15	3.50
Municipal Fire	10.00	7.50	5.00	3.30	2.75

Rates of Disability

The rates are used to measure the probabilities of active members becoming disabled. Rates for sample ages follow. For non-public safety groups, 25% disabilities are assumed to be duty related and 35% are assumed to be duty-related for public safety groups.

Rates Becoming Disabled at Indicated Ages (State Division)				
Sample Ages	State General		State	State
	Male	Female	Police	Corrections
25	0.02%	0.02%	0.03%	0.14%
30	0.04	0.03	0.06	0.16
35	0.08	0.06	0.08	0.21
40	0.13	0.12	0.21	0.27
45	0.24	0.20	0.25	0.46
50	0.41	0.39	0.41	0.90
55	0.57	0.61	0.95	1.40
60	0.74	0.73	1.39	1.88
65	0.75	0.73	1.39	1.88

Rates Becoming Disabled at Indicated Ages (Municipal Division)					
Sample Ages	Municipal General		Municipal	Municipal	Municipal
	Male	Female	Detention	Police	Fire
25	0.03%	0.04%	0.06%	0.01%	0.02%
30	0.06	0.04	0.10	0.01	0.02
35	0.09	0.04	0.15	0.05	0.02
40	0.13	0.06	0.22	0.11	0.08
45	0.18	0.14	0.32	0.18	0.08
50	0.30	0.25	0.51	0.28	0.33
55	0.49	0.39	0.85	0.46	0.33
60	0.60	0.51	1.04	0.74	1.17
65	0.62	0.59	1.07	1.08	1.17

Marriage Assumption: All members are assumed to be married for purposes of death-in-service benefits. Spouses are assumed to have no eligible children for death-in-service benefits.

Beneficiary Characteristics: Males are assumed to be three years older than females.

Pop-Up Load: Retiree liabilities were increased by 1% to account for the pop-up provision.

Data Changes: For missing dates of birth for active members, it is assumed they enter the system at the average entry age.

Census Data and Assets

- The valuation was based on members of PERA as of June 30, 2023 and does not take into account future members, with the exception of determining the funding period.
- All census data was supplied by PERA and was subject to reasonable consistency checks.
- There were data elements that were modified for some members as part of the valuation in order to make the data complete. However, the number of missing data items was immaterial.
- Asset data was supplied by PERA.

Other Actuarial Valuation Procedures

- No provision was made in this actuarial valuation for the limitations of Internal Revenue Code Sections 415 or 401(a)17.

Actuarial Model

This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation.

SECTION G

DETAILED SUMMARIES OF MEMBERSHIP DATA

Table A

Summary of Membership Data

	All PERA Divisions	State General	State Police	Municipal General	Municipal Police	Municipal Fire
<u>Actives</u>						
a. Number	47,855	18,570	2,239	20,758	3,645	2,643
b. Total annual payroll	\$ 2,803,762,525	\$ 1,134,325,271	\$ 134,687,976	\$ 1,094,468,159	\$ 259,111,866	\$ 181,169,253
c. Average salary	\$ 58,589	\$ 61,084	\$ 60,155	\$ 52,725	\$ 71,087	\$ 68,547
d. Average age	43.3	45.1	38.7	44.2	37.1	36.9
e. Average service	8.8	9.0	10.4	8.3	9.5	9.7
<u>Vested inactive members</u>						
a. Number	7,510	3,741	176	3,044	351	198
b. Average Age	50.1	50.3	46.9	51.2	42.8	45.2
c. Total annualized deferred monthly benefits	\$ 106,617,455	\$ 56,905,969	\$ 2,479,127	\$ 38,120,554	\$ 6,069,094	\$ 3,042,711
d. Average annualized deferred monthly benefit	\$ 14,197	\$ 15,211	\$ 14,086	\$ 12,523	\$ 17,291	\$ 15,367
<u>Nonvested inactive members</u>						
a. Number	21,021	8,145	608	11,271	722	275
b. Refunds due	\$ 112,866,706	\$ 47,615,840	\$ 2,472,744	\$ 53,531,952	\$ 6,701,118	\$ 2,545,052
c. Average refund due	\$ 5,369	\$ 5,846	\$ 4,067	\$ 4,750	\$ 9,281	\$ 9,255
<u>Service retirees*</u>						
a. Number	37,878	17,514	1,502	13,137	3,714	2,011
b. Average Age	69.1	71.2	64.3	69.9	61.7	63.1
c. Total annualized monthly benefits	\$ 1,255,815,275	\$ 562,370,406	\$ 54,594,901	\$ 385,745,529	\$ 160,992,756	\$ 92,111,683
d. Average annualized monthly benefit	\$ 33,154	\$ 32,110	\$ 36,348	\$ 29,363	\$ 43,348	\$ 45,804
<u>Disabled retirees</u>						
a. Number	1,497	734	53	606	76	28
b. Average Age	60.8	62.1	61.1	60.6	53.3	51.6
c. Total annualized monthly benefits	\$ 29,050,988	\$ 13,693,713	\$ 1,056,331	\$ 11,159,363	\$ 2,317,453	\$ 824,128
d. Average annualized monthly benefit	\$ 19,406	\$ 18,656	\$ 19,931	\$ 18,415	\$ 30,493	\$ 29,433
<u>Beneficiaries</u>						
a. Number	5,841	2,576	243	2,342	438	242
b. Average Age	70.1	70.6	69.7	69.9	66.5	73.2
c. Total annualized monthly benefits	\$ 128,934,974	\$ 54,527,874	\$ 6,349,594	\$ 45,771,033	\$ 13,655,704	\$ 8,630,768
d. Average annualized monthly benefit	\$ 22,074	\$ 21,168	\$ 26,130	\$ 19,544	\$ 31,177	\$ 35,664

*Counts include co-payees as follows:

State General - 408

State Police - 120

Municipal General - 408

Municipal Police - 315

Municipal Fire - 185



Table B
Active Members – All PERA Members
Distribution by Age and Service

Nearest Age	Years of Credited Service at Retirement							Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	
Under 20	269							269
20 to 24	2,460	21						2,481
25 to 29	3,574	942	13					4,529
30 to 34	3,349	2,015	626	50				6,040
35 to 39	2,646	1,720	1,289	835	59			6,549
40 to 44	1,971	1,307	1,137	1,472	511	25		6,423
45 to 49	1,656	1,082	774	1,169	881	149	7	5,718
50 to 54	1,475	1,005	753	1,009	891	318	23	5,474
55 to 59	1,207	869	649	851	734	262	56	4,628
60 & Over	1,453	1,223	910	1,067	689	272	130	5,744
Total	20,060	10,184	6,151	6,453	3,765	1,026	216	47,855

Table C**Number of Annual Retirement Allowances of Benefit Recipients**

Type of Pension	Number	Total Annual Benefits	Average Annual Pension
<u>Service Retirement Pensions</u>			
Single Life Pension Terminating Upon Death*	17,712	\$ 571,934,540	\$ 32,291
Two Life 100% Survivor Pension			
Retired Member Recipient*	14,473	480,670,023	33,211
Survivor Recipient	3,092	82,753,593	26,764
Two Life 50% Survivor Pension			
Retired Member Recipient*	5,497	195,237,575	35,517
Survivor Recipient	1,122	16,701,881	14,886
Single Life with Temporary Child Survivor Pension			
Retired Member Recipient*	188	8,061,586	42,881
Child Recipient	7	270,320	38,617
Total Service Retirement Pensions	42,091	\$ 1,355,629,517	\$ 32,207
<u>Disability Retirement Pensions</u>			
Single Life Pension Terminating Upon Death*	508	\$ 9,629,017	\$ 18,955
Two Life 100% Survivor Pension			
Retired Member Recipient*	793	15,079,884	19,016
Survivor Recipient	231	3,940,909	17,060
Two Life 50% Survivor Pension			
Retired Member Recipient*	199	4,239,287	21,303
Survivor Recipient	30	269,308	8,977
Single Life with Temporary Child Survivor Pension			
Retired Member Recipient*	11	186,704	16,973
Child Recipient	0	0	0
Total Disability Retirement Pensions	1,772	\$ 33,345,110	\$ 18,818
<u>Pre-Retirement Survivor Pensions</u>			
Spouse Recipient	1,313	\$ 24,429,218	\$ 18,606
Child Recipient	40	397,392	9,935
Total Pre-Retirement Survivor Pensions	1,353	\$ 24,826,609	\$ 18,349
Total Pensions Being Paid	45,216	\$ 1,413,801,236	\$ 31,268

*Includes Co-Payees

Table D**Schedule of Retirants Added to and Removed from Rolls**

Division	Number Added	Increase Annual Allowance	Number Removed	Decrease Annual Allowance	Net Change Annual Allowance	Total Retirees & Beneficiaries	Annual Allowance	Increase in Annual Allowance	Average Annual Allowance	% Change in Average Allowance
State General	825	\$ 28,871,285	459	\$ 11,300,573	\$ 17,570,712	20,824	\$ 630,591,992	2.87%	\$ 30,282	1.03%
State Police	69	2,779,958	23	600,124	2,179,834	1,798	62,000,826	3.64%	34,483	1.11%
Municipal General	879	25,276,810	373	9,375,801	15,901,009	16,085	442,675,925	3.73%	27,521	0.47%
Municipal Police	187	9,414,573	73	2,651,203	6,763,370	4,228	176,965,913	3.97%	41,856	1.15%
Municipal Fire	90	4,794,684	21	813,221	3,981,463	2,281	101,566,580	4.08%	44,527	1.11%
All PERA Divisions	2,050	\$ 71,137,310	949	\$ 24,740,922	\$ 46,396,388	45,216	\$ 1,413,801,236	3.39%	\$ 31,268	0.88%

Table E
Distribution of Retirees by Years of Service at Retirement

Division	Years of Credited Service at Retirement*								Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
State General									
Average Monthly Benefit	\$ 1,919	\$ 922	\$ 1,579	\$ 2,288	\$ 3,083	\$ 3,629	\$ 3,885	\$ 2,714	
Number of Retirees	1,387	1,984	2,030	1,952	2,299	6,888	559	17,099	
State Police/Corrections									
Average Monthly Benefit	\$ 3,037	\$ 1,525	\$ 1,735	\$ 2,366	\$ 2,974	\$ 3,574	\$ 4,185	\$ 3,195	
Number of Retirees	112	52	54	79	336	684	65	1,382	
Municipal General									
Average Monthly Benefit	\$ 1,738	\$ 755	\$ 1,316	\$ 2,009	\$ 2,849	\$ 3,449	\$ 3,835	\$ 2,494	
Number of Retirees	884	1,505	1,652	1,545	1,737	4,884	519	12,726	
Municipal Police									
Average Monthly Benefit	\$ 3,330	\$ 1,503	\$ 2,177	\$ 3,399	\$ 3,968	\$ 4,903	\$ 4,769	\$ 3,836	
Number of Retirees	188	65	93	385	2,426	199	41	3,397	
Municipal Fire									
Average Monthly Benefit	\$ 3,825	\$ 2,115	\$ 2,696	\$ 3,641	\$ 4,119	\$ 5,296	\$ 3,980	\$ 4,065	
Number of Retirees	98	24	35	166	1,363	96	44	1,826	
Totals for All Divisions									
Average Monthly Benefit	\$ 2,075	\$ 880	\$ 1,493	\$ 2,343	\$ 3,465	\$ 3,589	\$ 3,913	\$ 2,828	
Number of Retirees	2,669	3,630	3,864	4,127	8,161	12,751	1,228	36,430	

*Does not include retirees missing years of service at retirement (7 State General, 3 Municipal General, and 2 Municipal Police)

Table F
Distribution of Recent Retiree Ages at Retirement

Division	2022-23 Retirees	All Current Retirees
State General		
Number	698	17,106
Average Monthly Benefit at Retirement \$	2,788	\$ 2,714
Average Age at Retirement	61.72	58.05
State Police/Corrections		
Number	58	1,382
Average Monthly Benefit at Retirement \$	3,616	\$ 3,195
Average Age at Retirement	50.33	50.88
Municipal General		
Number	745	12,729
Average Monthly Benefit at Retirement \$	2,395	\$ 2,493
Average Age at Retirement	61.84	58.61
Municipal Police		
Number	152	3,399
Average Monthly Benefit at Retirement \$	4,445	\$ 3,836
Average Age at Retirement	49.97	48.05
Municipal Fire		
Number	77	1,826
Average Monthly Benefit at Retirement \$	4,718	\$ 4,065
Average Age at Retirement	48.97	48.07
Totals for All Current Retirees		
Number	1,730	36,442
Average Monthly Benefit at Retirement \$	2,878	\$ 2,828
Average Age at Retirement	59.79	56.54

SECTION H

GLOSSARY

Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ADC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.),
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC): A calculated contribution for a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the calculated contribution has a normal cost payment and an amortization payment.

Closed Amortization Period: A specific number of years that is counted down by one each year and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: An employer-sponsored retirement benefit that provides workers, upon attainment of designated age and service thresholds, with a monthly benefit based on the employee's salary and length of service. The value of a benefit from a defined benefit plan is generally not affected by the return on the assets that are invested to fund the benefit.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ADC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date

New Mexico Judicial Retirement Fund

Annual Actuarial Valuation - Funding
As of June 30, 2023

DRAFT





October 15, 2023

The Retirement Board
Public Employees Retirement Association
33 Plaza La Prensa
Santa Fe, NM 87507

Re: Actuarial Valuation for Funding Purposes as of June 30, 2023

Members of the Board:

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the New Mexico Judicial Retirement Fund (Judicial Fund) as of June 30, 2023. This report was prepared at the request of the Board and is intended for use by the Public Employees Retirement Association (PERA) staff and those designated or approved by the Board. This report may be provided to parties other than PERA only in its entirety and only with the permission of the Board.

Actuarial Valuation

The primary purposes of the actuarial valuation report are to determine the adequacy of the current State and employer contributions, describe the current financial condition of the Judicial Fund, analyze changes in the condition of the Judicial Fund, and provide various summaries of the data.

Plan Provisions

Our actuarial valuation as of June 30, 2023 reflects the benefit and contribution provisions that were in effect as of June 30, 2023. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. The current actuarial assumptions and methods are outlined in Section F of this report.

Data

This valuation was based upon information as of June 30, 2023, furnished by the PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Internal Revenue Code and ERISA.

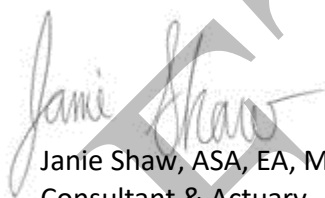
The signing actuaries are independent of the plan sponsor. The undersigned are Members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries. Finally, each of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Paul Wood, ASA, MAAA
Senior Consultant & Actuary



Janie Shaw, ASA, EA, MAAA
Consultant & Actuary

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SECTION A

EXECUTIVE SUMMARY

Executive Summary

Item	2023	2022
Membership		
• Number of		
- Active members	129	131
- Retirees, beneficiaries, and disabled	212	204
- Inactive, vested	26	27
- Inactive, nonvested	5	1
- Total	372	363
• Valuation Payroll	\$ 22,363,621	\$ 21,443,202
Statutory contribution rates	FY 2024	FY 2023
• Members	10.50%	10.50%
• Employer	15.00%	15.00%
Anticipated Annual Docket Fees	2,500,000	2,500,000
Additional Annual Appropriation	1,200,000	1,200,000
Assets		
• Market value (MVA)	\$ 112,660,986	\$ 111,599,592
• Actuarial value (AVA)	\$ 116,320,787	\$ 114,524,130
• Return on market value	5.3%	-3.7%
• Return on actuarial value	5.8%	6.0%
Actuarial Information on AVA (smoothed)		
• Normal cost %	21.44%	21.65%
• Actuarial accrued liability	\$ 192,336,263	\$ 187,176,043
• Unfunded actuarial accrued liability (UAAL)	\$ 76,015,476	\$ 72,651,913
• Funded ratio	60.5%	61.2%
Actuarially Determined Contribution (ADC)		
• ADC Rate	43.87%	44.01%
• ADC Amount	\$ 9,810,921	\$ 9,437,153
Total Anticipated Contribution Amount	\$ 9,402,723	\$ 9,168,017
(Excess)/Deficiency of Anticipated Contributions	\$ 408,198	\$ 269,136
Amortization Period	N/A	107 years
Actuarial Information on MVA		
• Unfunded actuarial accrued liability (UAAL)	\$ 79,675,277	\$ 75,576,451
• Funded ratio	58.6%	59.6%

SECTION B

DISCUSSION

Discussion

Introduction

This report presents the results of the June 30, 2023 actuarial valuation of the Judicial Fund.

The primary purposes of this actuarial valuation report are to determine the adequacy of the current State contributions, describe the current financial condition of the Judicial Fund, analyze the changes in condition of the Judicial Fund, and provide various summaries of the data.

All of the tables referenced in the following discussion appear in Section C of this report.

Funding Adequacy

The Actuarially Determined Contribution (ADC) according to the funding policy is the contribution rate necessary to fund the annual normal cost of the Judicial Fund and fully amortize the UAAL over 25 years. The amount calculated is expected to remain a constant percentage of payroll over the remaining amortization period. The ADC determined by this valuation is 43.87% of pay. This ADC is reasonable as of the valuation date. As described below, the current State contribution rate is less than the ADC. This means that the funding period is in excess of the 25-year target set by the Board.

The State currently contributes 15.0% of pay, a portion of docket fees, and \$100,000 every month until the Judicial Fund is 100% funded. The State contribution is expected to be approximately 31.54% of pay for FY2024. However, the \$100,000 monthly contribution and the docket fees are not expected to increase in the future so it is expected that the State contribution will decrease *as a percentage of payroll* in future years. Members contribute 10.5% of salary, for a total expected contribution equal to 42.04% of pay for FY2024.

The docket fees contributed to the Judicial Fund have been significantly impacted by the pandemic over the past few years. As a result, we have based our long-term projected contributions on the docket fees contributed to the Judicial Fund for FY2020 of approximately \$2.5 million. If docket fees do not increase back to the level they were at in FY2020, future assumed docket fees will need to be reduced to their current level, or approximately \$1.9 million.

It is important for the Board to understand that the currently scheduled contributions are not expected to accumulate sufficient assets in order to pay all of the currently scheduled benefits when due.

The unfunded actuarial accrued liability (UAAL) increased from \$72.7 million as of June 30, 2022 to \$76.0 million as of June 30, 2023. Additionally, the funded ratio—actuarial value of assets divided by the actuarial accrued liability—decreased from 61.2% to 60.5%, as of June 30, 2023. This decrease in the funded ratio was primarily due to asset losses on the actuarial value of assets.

The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement system. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Plan Provisions

There were no changes to plan provisions for this actuarial valuation. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of the Judicial Fund.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. A review of the impact of a different set of assumptions on the funded status of the Judicial Fund is outside the scope of this actuarial valuation. The current actuarial assumptions and methods are outlined in Section F of this report.

System Assets

This report contains several tables that summarize key information with respect to the Judicial Fund assets.

The total market value of assets increased from \$111.6 million to \$112.7 million as of June 30, 2023. Table 5 reconciles the changes in the fund during the year. Outside of the one-time \$20 million appropriation made to the Judicial Fund during fiscal year 2022, the total contributions increased from \$7.6 million to \$8.6 million.

Table 6 shows the development of the Actuarial Value of Assets (AVA). The current AVA method recognizes each year's gain or loss over a closed four-year period. The AVA increased from \$114.5 million to \$116.3 million, as of June 30, 2023.

When measured on a market value, the approximate investment return for the fiscal year ending June 30, 2023 was 5.3%. When measured on an actuarial value, the net investment return was 5.8%. Table 7 shows a history of return rates. The Judicial Fund ten-year average market return is 6.6%.

Table 8 provides a history of the contributions paid into the Judicial Fund and the administrative expenses and benefit payments paid out of the Judicial Fund. The Judicial Fund paid administrative expenses and benefit payments, in excess of contributions received, of \$5.6 million (or 5.0% of assets) in fiscal year 2022 (excluding the one-time \$20 million appropriation) and \$4.7 million (or 4.2% of assets) in fiscal year 2023. PERA should continue to monitor this deficit as it could impact future liquidity needs.

Data

This valuation was based upon information as of June 30, 2023, furnished by PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff. The tables in Section G show key census statistics for the various groups included in the valuation.



SECTION C

TABLES

Table 1
Development of Employer Cost

	June 30, 2023	June 30, 2022
1. Payroll		
a. Annual Payroll	\$ 21,089,910	\$ 18,747,165
b. Valuation Payroll	22,363,621	21,443,202
2. Actuarial Accrued Liability for Active Members		
a. Present value of future benefits for active members	\$ 82,541,833	\$ 78,547,482
b. Less: present value of future normal costs	(29,519,319)	(28,407,761)
c. Actuarial accrued liability	\$ 53,022,514	\$ 50,139,721
3. Total Actuarial Accrued Liability for:		
a. Retirees and beneficiaries	\$ 131,848,761	\$ 128,450,823
b. Inactive members	7,464,988	8,585,499
c. Active members (Item 2c)	53,022,514	50,139,721
d. Total	\$ 192,336,263	\$ 187,176,043
4. Actuarial Value of Assets	\$ 116,320,787	\$ 114,524,130
5. Unfunded Actuarial Accrued Liability (UAAL) (Item 3d - Item 4)	\$ 76,015,476	\$ 72,651,913
6. Actuarially Determined Contribution (ADC)		
a. Gross normal cost rate	21.44%	21.65%
b. Administrative expenses	0.50%	0.50%
c. 25-Year Amortization of UAAL	21.93%	21.86%
d. Total ADC Rate (Items 6a + 6b + 6c)	43.87%	44.01%
e. Total ADC Amount (Item 1b * 6d)	\$ 9,810,921	\$ 9,437,153
7. Statutory and Appropriated Contributions		
a. Employer Contribution Rate	15.00%	15.00%
b. Member Contribution Rate	10.50%	10.50%
c. Anticipated Annual Docket Fees	\$ 2,500,000	\$ 2,500,000
d. Additional Annual Appropriation	\$ 1,200,000	\$ 1,200,000
e. Total Anticipated Contribution Amount	\$ 9,402,723	\$ 9,168,017
8. ADC Comparison to Anticipated Contributions		
a. (Excess)/Deficiency of Anticipated Contributions	\$ 408,198	\$ 269,136
b. (Excess)/Deficiency in Contribution Rate	1.83%	1.26%
9. Amortization Period	N/A	107 years

Table 2
Actuarial Present Value of Future Benefits

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Active Members		
a. Service Retirement	\$ 71,912,872	\$ 68,789,122
b. Disability Benefits	0	0
c. Death Before Retirement	3,041,346	2,788,135
d. Termination	<u>7,587,615</u>	<u>6,970,225</u>
e. Total	\$ 82,541,833	\$ 78,547,482
2. Inactive Members		
a. Vested Terminations	\$ 7,278,489	\$ 8,568,277
b. Non-Vested Terminations	<u>186,499</u>	<u>17,222</u>
c. Total	\$ 7,464,988	\$ 8,585,499
3. Annuitants		
a. Service Retirements	\$ 113,130,852	\$ 109,854,379
b. Beneficiaries	18,395,174	17,769,246
d. Disability Retirements	<u>322,735</u>	<u>827,198</u>
e. Total	\$ 131,848,761	\$ 128,450,823
4. Total Actuarial Present Value of Future Benefits	\$ 221,855,582	\$ 215,583,804

Table 3

Analysis of Normal Cost

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Gross Normal Cost Rate		
a. Service Retirement	16.78%	16.98%
b. Disability Benefits	0.00%	0.00%
c. Death Before Retirement	1.01%	1.01%
d. Termination	3.65%	3.66%
e. Total	<u>21.44%</u>	<u>21.65%</u>
2. Administrative Expenses	0.50%	0.50%
3. Total Normal Cost	21.94%	22.15%
4. Less: Member Rate	10.50%	10.50%
5. Employer Normal Cost Rate	11.44%	11.65%

Table 4
Historical Summary of Active Member Data

Valuation as of June 30,	Active Members		Covered Payroll		Average Salary		Average Age	Average Service
	Number	Percent Increase	\$ Amount	Percent Increase	\$ Amount	Percent Increase		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2014	121	-1.6%	13,163,305	-0.5%	108,788	1.2%	56.6	10.7
2015	127	5.0%	15,084,263	14.6%	118,774	9.2%	56.0	10.4
2016	127	0.0%	15,078,274	0.0%	118,727	0.0%	56.6	10.5
2017	124	-2.4%	14,721,304	-2.4%	118,720	0.0%	56.4	10.9
2018	125	0.8%	15,817,424	7.4%	126,539	6.6%	56.1	11.1
2019	124	-0.8%	15,621,802	-1.2%	125,982	-0.4%	54.7	9.8
2020	123	-0.8%	16,490,136	5.6%	134,066	6.4%	55.0	10.1
2021	128	4.1%	17,165,992	4.1%	134,109	0.0%	54.7	9.1
2022	131	2.3%	18,747,165	9.2%	143,108	6.7%	54.9	7.8
2023	129	-1.5%	21,089,910	12.5%	163,488	14.2%	54.9	8.1

Table 5

Reconciliation of Plan Net Assets

	Year Ending	
	June 30, 2023 (1)	June 30, 2022 (2)
1. Market value of assets at beginning of year	\$ 111,599,592	\$ 101,226,570
2. Revenue for the year		
a. Contributions for the year		
i. Member Contributions	\$ 2,286,017	\$ 1,955,817
ii. Employer Contributions	3,265,742	2,794,036
iii. Docket Fees	1,886,703	1,624,996
iv. State Appropriations	1,200,000	21,200,000
v. Service Purchases	0	0
vi. Total	<u>\$ 8,638,462</u>	<u>\$ 27,574,849</u>
b. Net investment income	\$ 5,808,887	\$ (4,033,191)
c. Total revenue	\$ 14,447,349	\$ 23,541,658
3. Disbursements for the year		
a. Benefit payments	\$ 13,296,526	\$ 13,080,465
b. Refunds of member contributions	0	0
c. Administrative expenses	89,429	88,171
d. Total expenditures	<u>\$ 13,385,955</u>	<u>\$ 13,168,636</u>
4. Increase in net assets (Item 2c - Item 3d)	\$ 1,061,394	\$ 10,373,022
5. Market value of assets at end of year (Item 1 + Item 4)	\$ 112,660,986	\$ 111,599,592
6. Estimated Rate of Return on Market Value of Assets	5.3%	-3.7%

Table 6

Development of Actuarial Value of Assets

	Year Ending June 30, 2023			
1. Actuarial value of assets at beginning of year	\$	114,524,130		
2. Net new investments				
a. Contributions for the year (Table 5: Item 2a.vi)	\$	8,638,462		
b. Disbursements for the year (Table 5: Item 3d)		(13,385,955)		
c. Subtotal	\$	(4,747,493)		
3. Assumed investment return rate for fiscal year		7.25%		
4. Expected return on Actuarial value	\$	8,130,903		
5. Actual net earnings on Market value (Table 5: Item 2b)	\$	5,808,887		
6. Expected Actuarial value of assets (Item 1 + Item 2c + Item 4)	\$	117,907,540		
7. Excess return (Item 5 - Item 4)	\$	(2,322,016)		
8. Development of amounts to be recognized as of June 30, 2023:				
	Original Deferrals of			
Fiscal Year	Excess (Shortfall) of	Portion	Recognized for	this
End	Investment Income	Recognized	valuation	
	(1)	(2)	(3) = (1) * (2)	
2020	\$ (7,724,043)	25%	\$ (1,931,011)	
2021	15,071,271	25%	3,767,818	
2022	(11,372,222)	25%	(2,843,056)	
2023	(2,322,016)	25%	(580,504)	
Total			\$ (1,586,753)	
9. Actuarial value of assets as of June 30, 2023 (Item 6 + Item 8, Column 3)	\$			116,320,787
10. Market value of assets as of June 30, 2023 (Table 5: Item 5)	\$			112,660,986
11. Ratio of actuarial value to market value				103.2%

Table 7
History of Investment Return Rates

Year Ending June 30 of	Market	Actuarial
(1)	(2)	(3)
2011	22.1%	0.7%
2012	-0.6%	0.5%
2013	12.6%	10.6%
2014	16.5%	12.4%
2015	1.7%	7.6%
2016	0.3%	7.3%
2017	10.9%	6.4%
2018	6.9%	4.7%
2019	6.2%	5.8%
2020	-1.4%	5.4%
2021	26.1%	8.9%
2022	-3.7%	6.0%
2023	5.3%	5.8%
Average Returns		
Last Five Years:	6.0%	6.4%
Last Ten Years:	6.6%	7.0%

Table 8
History of Cash Flow

Year Ending June 30,	Distributions and Expenditures				External Cash Flow for the Year	Market Value of Assets	External Cash Flow as Percent of Market Value
	Contributions	Benefit Payments and Refunds	Administrative Expenses	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2014	\$ 4,826.4	\$ (8,822.7)	\$ (63.6)	\$ (8,886.3)	\$ (4,059.9)	\$ 91,141	-4.5%
2015	5,775.5	(9,413.3)	(60.0)	(9,473.3)	(3,697.8)	88,988	-4.2%
2016	5,819.1	(9,858.3)	(64.3)	(9,922.6)	(4,103.5)	84,932	-4.8%
2017	6,159.8	(10,106.8)	(69.1)	(10,175.9)	(4,016.1)	89,616	-4.5%
2018	6,355.1	(10,585.1)	(75.1)	(10,660.2)	(4,305.1)	91,331	-4.7%
2019	6,422.3	(11,452.2)	(79.4)	(11,531.6)	(5,109.3)	91,759	-5.6%
2020	6,466.4	(12,020.9)	(81.9)	(12,102.8)	(5,636.4)	84,871	-6.6%
2021	7,464.6	(12,539.3)	(71.0)	(12,610.3)	(5,145.7)	101,227	-5.1%
2022	7,574.8	(13,080.4)	(88.2)	(13,168.6)	(5,593.8)	111,600	-5.0%
2023	8,638.5	(13,296.6)	(89.4)	(13,386.0)	(4,747.5)	112,661	-4.2%

Amounts in thousands

Contributions for FY2022 exclude a one-time appropriation of \$20 million.

Table 9
Total Experience Gain or Loss

Item (1)	Year Ending	
	June 30, 2023 (2)	June 30, 2022 (3)
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	\$ 72,651,913	\$ 82,510,576
2. Normal cost (incl. admin) for the previous year	\$ 4,731,882	\$ 3,733,987
3. Less: expected contributions for the year	\$ (9,168,017)	\$ (8,334,272)
4. Interest at 7.25%		
a. On UAAL	\$ 5,267,264	\$ 5,982,017
b. On normal cost	171,531	135,357
c. On contributions	(332,341)	(302,117)
d. Total	\$ 5,106,454	\$ 5,815,257
5. Expected UAAL (Sum of Items 1 - 4)	\$ 73,322,232	\$ 83,725,548
6. Actual UAAL	\$ 76,015,476	\$ 72,651,913
7. Total gain (loss) for the year (Item 5 - Item 6)	\$ (2,693,244)	\$ 11,073,635
B. Source of gains and (losses)		
8. Contribution (Shortfall)/Surplus with interest	\$ (548,751)	\$ 19,938,048
9. Asset gain (loss) for the year	(1,586,753)	(1,246,028)
10. Liability experience gain (loss) for the year	(557,740)	(7,618,385)
11. Assumption change	0	0
12. Benefit change	0	0
13. Total	\$ (2,693,244)	\$ 11,073,635

Table 10
Solvency Test

Year Ending June 30, (1)	Actuarial Liability For				Cumulative portion of AAL covered			
	Total Active Member Contributions (2)	Retirees, Beneficiaries and Inactive Members (3)	Active Members (Employer Financed) (4)	Total Actuarial Liability (AAL) (5)	Actuarial Value of Assets (6)	Total Active Member Contributions (7)	Retirees, Beneficiaries and Inactive Members (8)	Active Members (Employer Financed) (9)
2014	\$ 10,878,347	\$ 93,176,816	\$ 29,291,252	\$ 133,346,415	\$ 85,577,431	100%	80%	0%
2015	11,063,301	97,761,695	32,456,159	141,281,155	88,249,418	100%	79%	0%
2016	11,641,376	103,610,547	31,682,987	146,934,910	90,471,110	100%	76%	0%
2017	12,589,634	106,164,363	30,658,789	149,412,786	92,137,316	100%	75%	0%
2018	12,916,868	116,119,124	34,347,300	163,383,292	92,022,272	100%	68%	0%
2019	11,618,040	125,839,968	29,740,527	167,198,535	92,081,178	100%	64%	0%
2020	12,600,961	129,838,667	28,316,019	170,755,647	91,269,164	100%	61%	0%
2021	12,643,172	138,728,163	25,164,155	176,535,490	94,024,914	100%	59%	0%
2022	14,016,425	137,036,322	36,123,296	187,176,043	114,524,130	100%	73%	0%
2023	15,106,629	139,313,749	37,915,885	192,336,263	116,320,787	100%	73%	0%

SECTION D

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. **Other demographic risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The ADC developed on Table 1 may be considered as a minimum contribution that complies with the Board's funding policy and State statute. The timely receipt of the ADC is critical to support the financial health of the System. Users of this report should be aware that contributions made consistent with the ADC do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Ratio of the market value of assets to total payroll	5.3	6.0	5.9	5.1	5.9	5.8	6.1	5.6	5.9	6.9
Ratio of actuarial accrued liability to payroll	9.1	10.0	10.3	10.4	10.7	10.3	10.1	9.7	9.4	10.1
Ratio of actives to retirees and beneficiaries	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9
Ratio of net cash flow to market value of assets	-4.2%	-5.0%	-5.1%	-6.6%	-5.6%	-4.7%	-4.5%	-4.8%	-4.2%	-4.5%
Duration of the actuarial accrued liability*	8.3	8.5	8.3							

*Duration measure not available before 2021

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the actuarial accrued liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Risks Associated with the Level of Docket Fees

As mentioned earlier, the docket fees contributed to the Judicial Fund have been significantly impacted by the pandemic over the past few years. As a result, we have based our long-term projected contributions on the docket fees contributed to the Judicial Fund for FY2020 of approximately \$2.5 million. Even based on the higher FY2020 docket fee amount, the Fund is not expected to reach full funding. This means that additional contributions will be needed to improve the funding levels in the future. To the extent that docket fees do not increase to at least the FY2020 levels in a relatively short period of time, even more contributions will be needed for improvement over time.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Risks Measures – Low Default Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the New Mexico Judicial Retirement Fund (Judicial Fund) is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of the Judicial Fund is set equal to the expected return on the Fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the Judicial Fund, the investment return assumption is 7.25%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 4.90% as of June 30, 2023. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio.

Valuation Accrued Liabilities	LDROM
\$192,336,263	\$241,695,481

SECTION E

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions for Public Employees Retirement Association of New Mexico

Membership

Includes Metropolitan judges and all judges of district courts and justices of the Supreme Court and Court of Appeals. Judges in office on or before July 1, 1980 had the opportunity to choose coverage under the post July 1, 1980 plan upon filing of an irrevocable election prior to December 1, 1980.

Voluntary Retirement

A judge may voluntarily retire:

- 1) At age 65 with 5 or more years of service.
- 2) At age 60 with 15 or more years of service.

For members hired after July 1, 2005:

- 1) At age 65 with 5 or more years of service.
- 2) At age 55 with 16 or more years of service.

For members hired after June 30, 2014:

- 1) At age 65 with 8 or more years of service.
- 2) At age 60 with 15 or more years of service.

Retirement Pension

Pre 7-1-80 plan: 37.5% of one-year final average salary plus 7.5% of one-year final average salary for each year of service in excess of 5 years. Maximum is 75% of one-year final average salary (10 or more years of service). For service credit earned on or after July 1, 2014, 3.5% of five-year final average salary with a maximum of 85% of five-year final average salary.

Post 7-1-80 plan: 75% of one-year final average salary x 5% x (years of service prior to 7/1/2014 (not exceeding 15) plus 5). Maximum is 75% of one-year final average salary (15 or more years of service). For service credit earned on or after July 1, 2014, 3.5% of five-year final average salary with a maximum of 85% of five-year final average salary.

Post 7-1-05 plan: 3.75% of one-year final average salary for each year of service. Maximum is 75% of one-year final average salary (20 or more years of service). For service credit earned on or after July 1, 2014, 3.5% of five-year final average salary with a maximum of 85% of five-year final average salary.

Post 7-1-14 plan: 3.25% of five-year final average salary for each year of service. Maximum is 85% of five-year final average salary.

Total benefit is limited to 85% of five-year final average salary.

Early Retirement Pension

Applicable to judges between the ages of 50 and 60 with 18 or more years of service. The pension is equal to 70% of FAS plus ½% of FAS multiplied by the number of complete years the age at retirement exceeds age 50. Members hired after July 1, 2005 are not eligible for early retirement.

Final Average Salary

For service credit earned before June 30, 2014, the salary received during the last one year in office prior to retirement. For service credit earned on or after July 1, 2014, the average salary received for the highest five-year consecutive period.



Deferred Retirement Pension

If judicial service terminates after 5 years of such service, the judge and spouse retain entitlement to benefits of the Fund. Five-year service requirement is waived if the result of a duty-related disability.

Pre 7-1-80 plan: 37.5% of one-year final average salary plus 7.5% of one-year final average salary for each year of service in excess of 5 years. Maximum is 75% of one-year final average salary (10 or more years of service). For service credit earned on or after July 1, 2014, 3.5% of five-year final average salary with a maximum of 85% of five-year final average salary.

Post 7-1-80 plan: 75% of one-year final average salary x 5% x (years of service prior to 7/1/2014 (not exceeding 15) plus 5). Maximum is 75% of one-year final average salary (15 or more years of service). For service credit earned on or after July 1, 2014, 3.5% of five-year final average salary with a maximum of 85% of five-year final average salary.

Post 7-1-05 plan: 3.75% of one-year final average salary for each year of service. Maximum is 75% of one-year final average salary (20 or more years of service). For service credit earned on or after July 1, 2014, 3.5% of five-year final average salary with a maximum of 85% of five-year final average salary.

Post 7-1-14 plan: 3.25% of five-year final average salary for each year of service. Maximum is 85% of five-year final average salary.

Total benefit is limited to 85% of five-year final average salary.

Payment of the judge's pension commences upon reaching the age and service requirement for voluntary retirement.

Survivor's Pension – Retired Judges

The surviving spouse of a retired judge hired prior to July 1, 2014 receives a pension of 75% of the judge's retirement pension until death. Pension is payable to deceased judge's minor and dependent children if there is no eligible surviving spouse. For a judge hired on or after July 1, 2014, any benefit the surviving spouse receives depends on the payment form elected by the judge at retirement.

Survivor's Pension – Active Judges

Applicable if judge had 5 (8 if hired after June 30, 2014) or more years of service. The surviving spouse of a judge hired prior to July 1, 2014 would receive 75% of the judge's vested pension until death. The surviving spouse of a judge hired after June 30, 2014 would receive the greater of 30% of final average salary or the accrued normal retirement pension under the 100% joint and survivor payment form. Pension is payable to deceased judge's minor and dependent children if there is no eligible surviving spouse.

Disability

Applicable if judge has 5 (8 if hired after June 30, 2014) or more years of service and becomes incapacitated to perform duties of office. The amount of the disability pension is equal to the judge's accrued vested benefit.

Cost of Living Increases

Effective July 1, 2014, there will be no COLA increases for 2014 and 2015. Starting July 1, 2016, annual 2% COLA increases will be subject to PERA's certification based on the Fund's current year and projected next year funded ratio being equal to or greater than 100%. At a minimum, a 2% COLA increase will be granted every third year. COLA increases are subject to the following eligibility periods:

- If member retires prior to July 1, 2014, COLA is payable after retirement has been in effect for at least 2 full calendar years.
- If member retires on or after July 1, 2014 but prior to July 1, 2015, COLA is payable after retirement has been in effect for at least 3 full calendar years.
- If member retires on or after July 1, 2015 but prior to July 1, 2016, COLA is payable after retirement has been in effect for at least 4 full calendar years.
- If member retires on or after July 1, 2016, COLA is payable after retirement has been in effect for at least 7 full calendar years.

If retired on account of disability or if at least age 65, the above waiting period is reduced to 1 full calendar year.

Judge's Contributions

Members contribute 10.5% of salary.

Refund of Judge's Contributions

If a judge leaves service or dies and no pension becomes payable, the accumulated contributions are refunded or paid to the designated beneficiary.

Public Payments

Payroll based contributions: 15.0% of salary. Dollar Contributions: \$38.00 from each civil case docket fee paid in the district court (increased from \$27.25 effective June 19, 1987) plus \$25.00 from each civil case docket fee and \$10.00 from each civil action jury fee paid in the metropolitan courts. The State contributes \$100,000 every month until the Judicial Fund is 100% funded.

Other Service

PERA, MRA and ERA service may be combined with Judicial service for purposes of satisfying age and service requirements once a member has attained one month of Judicial service. When combining service, members may retire under the JRA after satisfying either the JRA or PERA age and service requirements for immediate benefits.

SECTION F

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019.

I. Valuation Date

The valuation date is June 30 of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation is used to determine the adequacy of the State contribution rate and employer contribution rate (both established by statute) and to describe the current financial condition of the New Mexico Judicial Retirement Fund.

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the first step is to determine the contribution rate (level as a percentage of pay) required to provide the benefits to each member, or the normal cost rate. The normal cost rate consists of two pieces: (i) the member's contribution rate, and (ii) the remaining portion of the normal cost rate which is the employer's normal cost rate. The total normal cost rate is based on the benefits payable to each individual active member.

The Unfunded Actuarial Accrued Liability (UAAL) is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution provided in excess of the employer normal cost is applied to amortize the UAAL.

The funding period is calculated as the number of years required to fully amortize the UAAL, assuming that: (a) future market earnings, net of investment-related expenses, will equal 7.25% per year, (b) there will be no liability gains/losses or changes in assumptions, (c) the other active members who leave employment will be replaced by new entrants each year, (d) the total normal cost rate is based on the benefits payable to each individual active member, and (e) employer contributions will remain at current statutory levels.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

III. Actuarial Value of Assets

The actuarial value of assets is derived as follows: prior year actuarial value of assets is increased by contributions and expected income and reduced by refunds, benefit payments and expenses. To this amount, 25% of the difference between the expected investment income of the actuarial value and actual investment income on the market value for each of the previous four years is added. The returns are computed net of investment-related expenses.

IV. Actuarial Assumptions

Investment Return: 7.25% per year, net of investment-related expenses (composed of an assumed 2.50% inflation rate and a 4.75% real rate of return)

Administrative Expenses: 0.50% of valuation payroll per year

Salary Increases: Annual salaries of active members are assumed to increase at an annual rate of 3.25%.

Payroll Growth: 3.00% per year

Decrement Timing: All decrements – mortality, service retirement, disability retirement, and termination of employment for reasons other than death or retirement – are assumed to occur at the middle of the valuation year.

Mortality Decrements:

RPH-2014 Blue Collar mortality table with female ages set forward one year. Future improvement in mortality rates is assumed using 60% of the MP-2017 projection scale generationally.

Sample Mortality Rates (Base Rates)								
Pre-Commencement			Post-Commencement			Post-Commencement		
Age	Male	Female	Age	Male	Female	Age	Male	Female
25	0.000733	0.000244	35	0.001793	0.001169	80	0.053460	0.042932
30	0.000717	0.000317	40	0.002156	0.001611	85	0.088524	0.072752
35	0.000797	0.000417	45	0.003275	0.002671	90	0.146859	0.125111
40	0.000958	0.000598	50	0.005604	0.004235	95	0.223428	0.197901
45	0.001455	0.001013	55	0.007342	0.005165	100	0.313988	0.291040
50	0.002490	0.001685	60	0.009893	0.006890	105	Disabled retirees use the same assumption as healthy lives.	
55	0.004071	0.002510	65	0.014089	0.010092	110		
60	0.006743	0.003606	70	0.021101	0.016038	115		
65	0.011612	0.005456	75	0.032952	0.026199	120		

Rates of Retirement

These rates are used to measure the probability of an eligible judge retiring at the indicated ages.

Sample Ages	Percent Retiring During Year Following Attainment of Indicated Ages
50-54	15 %
55-61	20
62	25
63-74	20
75+	100

A judge was assumed to be eligible for retirement after satisfying the following conditions:

	Pre 7/2005 Hire Date	Post 7/2005 Hire Date	Post 7/2014 Hire Date
Early Retirement Eligibility	Age 50 with 18 years of service	N/A	N/A
Normal Retirement Eligibility	Age 60 with 15 years of service; or age 65 with 5 years of service	Age 55 with 16 years of service; or age 65 with 5 years of service	Age 60 with 15 years of service; or age 65 with 8 years of service

Rates of Disability

There are assumed to be no future disabled retirees.

Rates of Separation from Active Membership

The rates are used to measure probabilities of active members terminating that status for a reason other than disability or death. The rates do not apply to judges who are eligible for retirement.

Sample Ages	Percent of Active Judges Separating Within the Next Year
20-34	1.00 %
37	2.00
42	2.50
47	3.00
52	3.50
57	4.00
62	4.50
65	4.50

Marriage Assumption: All members are assumed to be married for purposes of death-in-service benefits. At retirement, 86% of members are assumed to be married for purposes of valuing death after retirement benefits.

Beneficiary Characteristics: Males are assumed to be three years older than females.

Census Data and Assets

- The valuation was based on members of the New Mexico Judicial Retirement Fund as of June 30, 2023 and does not take into account future members, with the exception of determining the funding period.
- All census data was supplied by PERA and was subject to reasonable consistency checks.
- There were data elements that were modified for some members as part of the valuation in order to make the data complete. However, the number of missing data items was immaterial.
- Asset data was supplied by PERA.

Other Actuarial Valuation Procedures

- No provision was made in this actuarial valuation for the limitations of Internal Revenue Code Sections 415 or 401(a)17.

Actuarial Model

This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation.

SECTION G

DETAILED SUMMARIES OF MEMBERSHIP DATA

Table A

Summary of Membership Data

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
<u>Actives</u>		
a. Number	129	131
b. Total annual payroll	\$ 21,089,910	\$ 18,747,165
c. Average salary	\$ 163,488	\$ 143,108
d. Average age	54.9	54.9
e. Average service	8.1	7.8
<u>Vested inactive members</u>		
a. Number	26	27
b. Average Age	57.3	58.5
c. Total annualized deferred monthly benefits	\$ 910,886	\$ 1,012,248
d. Average annualized deferred monthly benefit	\$ 35,034	\$ 37,491
<u>Nonvested inactive members</u>		
a. Number	5	1
b. Refunds due	\$ 186,499	\$ 17,222
c. Average refund due	\$ 37,300	\$ 17,222
<u>Service retirees*</u>		
a. Number	161	154
b. Average Age	73.0	72.5
c. Total annualized monthly benefits	\$ 11,003,542	\$ 10,507,600
d. Average annualized monthly benefit	\$ 68,345	\$ 68,231
<u>Disabled retirees</u>		
a. Number	1	2
b. Average Age	74.9	70.8
c. Total annualized monthly benefits	\$ 33,081	\$ 76,152
d. Average annualized monthly benefit	\$ 33,081	\$ 38,076
<u>Beneficiaries</u>		
a. Number	50	48
b. Average Age	75.8	75.7
c. Total annualized monthly benefits	\$ 2,434,077	\$ 2,356,891
d. Average annualized monthly benefit	\$ 48,682	\$ 49,102

*Includes 12 co-payees

Table B**Active Members – Distribution by Age and Service**

Nearest Age	Years of Credited Service at Retirement							Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	
Under 20								
20 to 24								
25 to 29								
30 to 34	1							1
35 to 39	2							2
40 to 44	17	3						20
45 to 49	11	8	2					21
50 to 54	7	8	4	3				22
55 to 59	5	7	2	3				17
60 & Over	13	5	14	10	3	1		46
Total	56	31	22	16	3	1	0	129

Table C**Number of Annual Retirement Allowances of Benefit Recipients**

Type of Pension	Number	Total Annual Benefits	Average Annual Pension
<u>Normal Retirement Pensions</u>			
Two Life 75% Survivor Pension			
Retired Member Recipient	149	\$ 10,697,328	\$ 71,794
Survivor Recipient	45	2,179,855	48,441
Co-Payee Recipient	12	306,214	25,518
Total Normal Retirement Pensions	206	\$ 13,183,396	\$ 63,997
<u>Disability Retirement Pensions</u>			
Duty Disability	1	\$ 33,081	\$ 33,081
Non-Duty Disability	0	0	0
Survivor Recipient	0	0	0
Co-Payee Recipient	0	0	0
Total Disability Retirement Pensions	1	\$ 33,081	\$ 33,081
<u>Pre-Retirement Survivor Pensions</u>			
Survivor Spouse Recipient	5	\$ 254,222	\$ 50,844
Survivor Child Recipient	0	0	0
Total Pre-Retirement Survivor Pensions	5	\$ 254,222	\$ 50,844
Total Pensions Being Paid	212	\$ 13,470,700	\$ 63,541

Table D

Schedule of Retirants Added to and Removed from Rolls

Number Added	Increase Annual Allowance	Number Removed	Decrease Annual Allowance	Net Change Annual Allowance	Total Retirees & Beneficiaries	Annual Allowance	Increase in Annual Allowance	Average Annual Allowance	% Change in Average Allowance
11	\$ 700,430	3	\$ 170,373	\$ 530,057	212	\$ 13,470,700	4.10%	\$ 63,541	0.17%

Table E

Distribution of Retirees by Years of Service at Retirement

Division	Years of Credited Service at Retirement								Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
Average Monthly Benefit*	\$ 5,563	\$ 3,934	\$ 5,468	\$ 7,088	\$ 6,005	\$ 8,217	\$ 7,514	\$ 5,980	
Number of Retirees*	19	23	34	43	15	4	10	148	

*Does not include 1 retiree with missing years of service at retirement

Table F

Distribution of Recent Retiree Ages at Retirement

Division	2022-23 Retirees	All Current Retirees
Number	9	149
Average Monthly Benefit at Retirement	\$ 5,354	\$ 5,983
Average Age at Retirement	66.19	62.94

SECTION H

GLOSSARY

Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ADC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.),
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC): A calculated contribution for a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the calculated contribution has a normal cost payment and an amortization payment.

Closed Amortization Period: A specific number of years that is counted down by one each year and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: An employer-sponsored retirement benefit that provides workers, upon attainment of designated age and service thresholds, with a monthly benefit based on the employee's salary and length of service. The value of a benefit from a defined benefit plan is generally not affected by the return on the assets that are invested to fund the benefit.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ADC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date



New Mexico Magistrate Retirement Fund

Annual Actuarial Valuation - Funding
As of June 30, 2023

DRAFT





October 15, 2023

The Retirement Board
Public Employees Retirement Association
33 Plaza La Prensa
Santa Fe, NM 87507

Re: Actuarial Valuation for Funding Purposes as of June 30, 2023

Members of the Board:

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the New Mexico Magistrate Retirement Fund (Magistrate Fund) as of June 30, 2023. This report was prepared at the request of the Board and is intended for use by the Public Employees Retirement Association (PERA) staff and those designated or approved by the Board. This report may be provided to parties other than PERA only in its entirety and only with the permission of the Board.

Actuarial Valuation

The primary purposes of the actuarial valuation report are to determine the adequacy of the current State and employer contributions, describe the current financial condition of the Magistrate Fund, analyze changes in the condition of the Magistrate Fund, and provide various summaries of the data.

Plan Provisions

Our actuarial valuation as of June 30, 2023 reflects the benefit and contribution provisions that were in effect as of June 30, 2023. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. The current actuarial assumptions and methods are outlined in Section F of this report.

Data

This valuation was based upon information as of June 30, 2023, furnished by the PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Internal Revenue Code and ERISA.

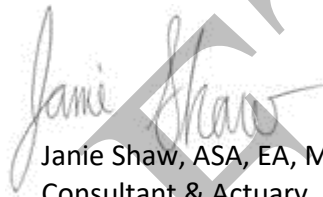
The signing actuaries are independent of the plan sponsor. The undersigned are Members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries. Finally, each of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Paul Wood, ASA, MAAA
Senior Consultant & Actuary



Janie Shaw, ASA, EA, MAAA
Consultant & Actuary

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SECTION A

EXECUTIVE SUMMARY

Executive Summary

Item	2023	2022
Membership		
• Number of		
- Active members	53	62
- Retirees, beneficiaries, and disabled	123	111
- Inactive, vested	18	16
- Inactive, nonvested	6	2
- Total	200	191
• Valuation Payroll	\$ 6,550,035	\$ 7,212,465
Statutory contribution rates	FY 2024	FY 2023
• Members	10.50%	10.50%
• Employer	15.00%	15.00%
Anticipated Annual Docket Fees	364,000	364,000
Additional Annual Appropriation	1,200,000	1,200,000
Assets		
• Market value (MVA)	\$ 32,481,476	\$ 32,399,145
• Actuarial value (AVA)	\$ 33,498,155	\$ 33,285,904
• Return on market value	5.6%	-4.3%
• Return on actuarial value	5.9%	6.0%
Actuarial Information on AVA (smoothed)		
• Normal cost %	19.44%	21.30%
• Actuarial accrued liability	\$ 63,117,773	\$ 62,874,623
• Unfunded actuarial accrued liability (UAAL)	\$ 29,619,618	\$ 29,588,719
• Funded ratio	53.1%	52.9%
Actuarially Determined Contribution (ADC)		
• ADC Rate	49.12%	48.27%
• ADC Amount	\$ 3,217,377	\$ 3,481,457
Total Anticipated Contribution Amount	\$ 3,234,259	\$ 3,403,179
(Excess)/Deficiency of Anticipated Contributions	\$ (16,882)	\$ 78,278
Amortization Period	53 years	N/A
Actuarial Information on MVA		
• Unfunded actuarial accrued liability (UAAL)	\$ 30,636,297	\$ 30,475,478
• Funded ratio	51.5%	51.5%

SECTION B

DISCUSSION

Discussion

Introduction

This report presents the results of the June 30, 2023 actuarial valuation of the Magistrate Fund.

The primary purposes of this actuarial valuation report are to determine the adequacy of the current State contributions, describe the current financial condition of the Magistrate Fund, analyze the changes in condition of the Magistrate Fund, and provide various summaries of the data.

All of the tables referenced in the following discussion appear in Section C of this report.

Funding Adequacy

The Actuarially Determined Contribution (ADC) according to the funding policy is the contribution rate necessary to fund the annual normal cost of the Magistrate Fund and fully amortize the UAAL over 25 years. The amount calculated is expected to remain a constant percentage of payroll over the remaining amortization period. The ADC determined by this valuation is 49.12% of pay. This ADC is reasonable as of the valuation date. As demonstrated below, even though the current statutory rate along with docket fees and additional annual appropriation is currently more than the ADC, the funding period is in excess of the 25-year target set by the Board because the contribution outside of the statutory rates are not expected to increase over time.

The State currently contributes 15.0% of pay, a portion of docket fees, and \$100,000 every month until the Magistrate Fund is 100% funded. The State contribution is expected to be approximately 38.88% of pay for FY2024. However, the \$100,000 monthly contribution and the docket fees are not expected to increase in the future so it is expected that the State contribution will decrease *as a percentage of payroll* in future years. Members contribute 10.5% of salary, for a total expected contribution equal to 49.38% of pay for FY2024.

The docket fees contributed to the Magistrate Fund have been significantly impacted by the pandemic over the past few years. As a result, we have based our long-term projected contributions on the docket fees contributed to the Magistrate Fund for FY2020 of approximately \$364,000. These docket fees are assumed to remain level every year in the future. **If docket fees do not increase back to the level they were at in FY2020, the funded status of the Magistrates Fund will be significantly impacted. For example, if future docket fees remain at their current level of \$265,000, the amortization period will be over 100 years.**

The unfunded actuarial accrued liability (UAAL) increased slightly, equaling \$29.6 million as of June 30, 2023. Additionally, the funded ratio—actuarial value of assets divided by the actuarial accrued liability—increased from 52.9% to 53.1%, as of June 30, 2023. This increase in the funded ratio was primarily due to higher rates of termination than expected among the active members during the year. The amortization period decreased to 53 years. This was primarily due to the turnover experience of the active membership resulting in a decrease in the underlying cost of the Fund (i.e. the normal cost rate).

The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement system. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.



Plan Provisions

There were no changes to plan provisions for this actuarial valuation. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of the Magistrate Fund.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. A review of the impact of a different set of assumptions on the funded status of the Magistrate Fund is outside the scope of this actuarial valuation. The current actuarial assumptions and methods are outlined in Section F of this report.

System Assets

This report contains several tables that summarize key information with respect to the Magistrate Fund assets.

The total market value of assets increased from \$32.4 million to \$32.5 million as of June 30, 2023. Table 5 reconciles the changes in the fund during the year. The total contributions increased from \$3.1 million to \$3.3 million.

Table 6 shows the development of the Actuarial Value of Assets (AVA). The current AVA method recognizes each year's gain or loss over a closed four-year period. The AVA increased from \$33.3 million to \$33.5 million, as of June 30, 2023.

When measured on a market value, the approximate investment return for the fiscal year ending June 30, 2023 was 5.6%. When measured on an actuarial value, the net investment return was 5.9%. Table 7 shows a history of return rates. The Magistrate Fund ten-year average market return is 6.6%.

Table 8 provides a history of the contributions paid into the Magistrate Fund and the administrative expenses and benefit payments paid out of the Magistrate Fund. The Magistrate Fund paid administrative expenses and benefit payments, in excess of contributions received, of \$1.3 million (or 4.0% of assets) in fiscal year 2022 and \$1.7 million (or 5.2% of assets) in fiscal year 2023. PERA should continue to monitor this deficit as it could impact future liquidity needs.

Data

This valuation was based upon information as of June 30, 2023, furnished by PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff. The tables in Section G show key census statistics for the various groups included in the valuation.



SECTION C

TABLES

Table 1
Development of Employer Cost

	June 30, 2023	June 30, 2022
1. Payroll		
a. Annual Payroll	\$ 6,164,080	\$ 6,304,854
b. Valuation Payroll	6,550,035	7,212,465
2. Actuarial Accrued Liability for Active Members		
a. Present value of future benefits for active members	\$ 14,639,274	\$ 22,596,957
b. Less: present value of future normal costs	(5,608,890)	(5,367,115)
c. Actuarial accrued liability	\$ 9,030,384	\$ 17,229,842
3. Total Actuarial Accrued Liability for:		
a. Retirees and beneficiaries	\$ 49,721,606	\$ 42,473,699
b. Inactive members	4,365,783	3,171,082
c. Active members (Item 2c)	9,030,384	17,229,842
d. Total	\$ 63,117,773	\$ 62,874,623
4. Actuarial Value of Assets	\$ 33,498,155	\$ 33,285,904
5. Unfunded Actuarial Accrued Liability (UAAL) (Item 3d - Item 4)	\$ 29,619,618	\$ 29,588,719
6. Actuarially Determined Contribution (ADC)		
a. Gross normal cost rate	19.44%	21.30%
b. Administrative expenses	0.50%	0.50%
c. 25-Year Amortization of UAAL	29.18%	26.47%
d. Total ADC Rate (Items 6a + 6b + 6c)	49.12%	48.27%
e. Total ADC Amount (Item 1b * 6d)	\$ 3,217,377	\$ 3,481,457
7. Statutory and Appropriated Contributions		
a. Employer Contribution Rate	15.00%	15.00%
b. Member Contribution Rate	10.50%	10.50%
c. Anticipated Annual Docket Fees	\$ 364,000	\$ 364,000
d. Additional Annual Appropriation	\$ 1,200,000	\$ 1,200,000
e. Total Anticipated Contribution Amount	\$ 3,234,259	\$ 3,403,179
8. ADC Comparison to Anticipated Contributions		
a. (Excess)/Deficiency of Anticipated Contributions	\$ (16,882)	\$ 78,278
b. (Excess)/Deficiency in Contribution Rate	-0.26%	1.09%
9. Amortization Period	53 years	N/A

Table 2
Actuarial Present Value of Future Benefits

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Active Members		
a. Service Retirement	\$ 10,571,549	\$ 18,531,356
b. Disability Benefits	0	0
c. Death Before Retirement	365,770	410,498
d. Termination	<u>3,701,955</u>	<u>3,655,103</u>
e. Total	\$ 14,639,274	\$ 22,596,957
2. Inactive Members		
a. Vested Terminations	\$ 4,140,185	\$ 3,153,601
b. Non-Vested Terminations	<u>225,598</u>	<u>17,481</u>
c. Total	\$ 4,365,783	\$ 3,171,082
3. Annuitants		
a. Service Retirements	\$ 41,362,289	\$ 33,522,830
b. Beneficiaries	7,193,345	7,767,452
c. Disability Retirements	<u>1,165,972</u>	<u>1,183,417</u>
d. Total	\$ 49,721,606	\$ 42,473,699
4. Total Actuarial Present Value of Future Benefits	\$ 68,726,663	\$ 68,241,738

Table 3 Analysis of Normal Cost

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Gross Normal Cost Rate		
a. Service Retirement	13.07%	14.67%
b. Disability Benefits	0.00%	0.00%
c. Death Before Retirement	0.69%	0.61%
d. Termination	5.68%	6.02%
e. Total	<u>19.44%</u>	<u>21.30%</u>
2. Administrative Expenses	0.50%	0.50%
3. Total Normal Cost	19.94%	21.80%
4. Less: Member Rate	10.50%	10.50%
5. Employer Normal Cost Rate	9.44%	11.30%

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Table 4
Historical Summary of Active Member Data

Valuation as of June 30,	Active Members		Covered Payroll		Average Salary		Average Age	Average Service
	Number	Percent Increase	\$ Amount	Percent Increase	\$ Amount	Percent Increase		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2014	45	9.8%	3,515,567	12.1%	78,124	2.1%	54.3	10.8
2015	60	33.3%	5,065,798	44.1%	84,430	8.1%	53.2	9.0
2016	65	8.3%	5,482,360	8.2%	84,344	-0.1%	54.5	9.1
2017	65	0.0%	5,487,517	0.1%	84,423	0.1%	55.0	9.7
2018	65	0.0%	5,849,815	6.6%	89,997	6.6%	55.8	10.7
2019	65	0.0%	5,849,795	0.0%	89,997	0.0%	54.4	9.2
2020	62	-4.6%	5,914,106	1.1%	95,389	6.0%	55.0	9.5
2021	64	3.2%	6,106,006	3.2%	95,406	0.0%	56.0	9.5
2022	62	-3.1%	6,304,854	3.3%	101,691	6.6%	54.5	8.2
2023	53	-14.5%	6,164,080	-2.2%	116,303	14.4%	50.8	5.1

Table 5

Reconciliation of Plan Net Assets

	Year Ending	
	June 30, 2023	June 30, 2022
	(1)	(2)
1. Market value of assets at beginning of year	\$ 32,399,145	\$ 35,164,297
2. Revenue for the year		
a. Contributions for the year		
i. Member Contributions	\$ 750,943	\$ 672,538
ii. Employer Contributions	1,072,780	960,763
iii. Docket Fees	265,189	224,055
iv. State Appropriations	1,200,000	1,200,000
v. Service Purchases	0	0
vi. Total	\$ 3,288,912	\$ 3,057,356
b. Net investment income	\$ 1,774,875	\$ (1,470,422)
c. Total revenue	\$ 5,063,787	\$ 1,586,934
3. Disbursements for the year		
a. Benefit payments	\$ 4,688,683	\$ 4,320,629
b. Refunds of member contributions	262,550	0
c. Administrative expenses	30,223	31,457
d. Total expenditures	\$ 4,981,456	\$ 4,352,086
4. Increase in net assets (Item 2c - Item 3d)	\$ 82,331	\$ (2,765,152)
5. Market value of assets at end of year (Item 1 + Item 4)	\$ 32,481,476	\$ 32,399,145
6. Estimated Rate of Return on Market Value of Assets	5.6%	-4.3%

Table 6
Development of Actuarial Value of Assets

	Year Ending June 30, 2023	
1. Actuarial value of assets at beginning of year	\$	33,285,904
2. Net new investments		
a. Contributions for the year (Table 5: Item 2a.vi)	\$	3,288,912
b. Disbursements for the year (Table 5: Item 3d)		(4,981,456)
c. Subtotal	\$	(1,692,544)
3. Assumed investment return rate for fiscal year		7.25%
4. Expected return on Actuarial value	\$	2,351,873
5. Actual net earnings on Market value (Table 5: Item 2b)	\$	1,774,875
6. Expected Actuarial value of assets (Item 1 + Item 2c + Item 4)	\$	33,945,233
7. Excess return (Item 5 - Item 4)	\$	(576,998)
8. Development of amounts to be recognized as of June 30, 2023:		
	Original Deferrals of	
Fiscal Year	Excess (Shortfall) of	Portion
End	Investment Income	Recognized
	(1)	(2)
		Recognized for this
		valuation
		(3) = (1) * (2)
2020	\$ (2,665,822)	25%
2021	5,244,746	25%
2022	(3,790,236)	25%
2023	(576,998)	25%
Total		\$ (447,078)
9. Actuarial value of assets as of June 30, 2023 (Item 6 + Item 8, Column 3)	\$	33,498,155
10. Market value of assets as of June 30, 2023 (Table 5: Item 5)	\$	32,481,476
11. Ratio of actuarial value to market value		103.1%

Table 7
History of Investment Return Rates

Year Ending June 30 of	Market	Actuarial
(1)	(2)	(3)
2011	21.7%	0.7%
2012	-0.5%	-0.2%
2013	12.7%	10.8%
2014	16.6%	12.6%
2015	1.7%	7.6%
2016	0.2%	7.5%
2017	11.0%	6.9%
2018	6.9%	4.3%
2019	6.3%	5.7%
2020	-1.4%	5.5%
2021	26.3%	9.0%
2022	-4.3%	6.0%
2023	5.6%	5.9%
Average Returns		
Last Five Years:	6.0%	6.4%
Last Ten Years:	6.6%	7.1%

Table 8
History of Cash Flow

Year Ending June 30,	Distributions and Expenditures				External Cash Flow for the Year	Market Value of Assets	External Cash Flow as Percent of Market Value
	Contributions	Benefit Payments and Refunds	Administrative Expenses	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2014	\$ 1,059.2	\$ (3,705.3)	\$ (24.3)	\$ (3,729.6)	\$ (2,670.4)	\$ 35,185	-7.6%
2015	1,426.2	(3,960.6)	(22.7)	(3,983.3)	(2,557.1)	33,187	-7.7%
2016	1,867.1	(3,991.4)	(23.7)	(4,015.1)	(2,148.0)	31,038	-6.9%
2017	1,885.7	(3,966.3)	(25.0)	(3,991.3)	(2,105.6)	32,225	-6.5%
2018	1,812.2	(4,014.3)	(26.6)	(4,040.9)	(2,228.7)	32,092	-6.9%
2019	1,875.8	(4,081.7)	(27.7)	(4,109.4)	(2,233.6)	31,797	-7.0%
2020	1,943.0	(4,204.1)	(28.3)	(4,232.4)	(2,289.4)	29,071	-7.9%
2021	2,999.4	(4,343.4)	(24.8)	(4,368.2)	(1,368.8)	35,164	-3.9%
2022	3,057.4	(4,320.6)	(31.5)	(4,352.1)	(1,294.7)	32,399	-4.0%
2023	3,288.9	(4,951.3)	(30.2)	(4,981.5)	(1,692.6)	32,481	-5.2%

Amounts in thousands

Table 9
Total Experience Gain or Loss

Item (1)	Year Ending	
	June 30, 2023 (2)	June 30, 2022 (3)
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	\$ 29,588,719	\$ 27,710,816
2. Normal cost (incl. admin) for the previous year	\$ 1,566,478	\$ 1,267,282
3. Less: expected contributions for the year	\$ (3,403,179)	\$ (3,020,091)
4. Interest at 7.25%		
a. On UAAL	\$ 2,145,182	\$ 2,009,034
b. On normal cost	56,785	45,939
c. On contributions	(123,365)	(109,478)
d. Total	\$ 2,078,602	\$ 1,945,495
5. Expected UAAL (Sum of Items 1 - 4)	\$ 29,830,620	\$ 27,903,502
6. Actual UAAL	\$ 29,619,618	\$ 29,588,719
7. Total gain (loss) for the year (Item 5 - Item 6)	\$ 211,002	\$ (1,685,217)
B. Source of gains and (losses)		
8. Contribution (Shortfall)/Surplus with interest	\$ (118,409)	\$ 38,616
9. Asset gain (loss) for the year	(447,078)	(383,977)
10. Liability experience gain (loss) for the year	776,489	(1,339,856)
11. Assumption change	0	0
12. Benefit change	0	0
13. Total	\$ 211,002	\$ (1,685,217)

Table 10
Solvency Test

Year Ending June 30, (1)	Actuarial Liability For				Cumulative portion of AAL covered			
	Total Active Member Contributions (2)	Retirees, Beneficiaries and Inactive Members (3)	Active Members (Employer Financed) (4)	Total Actuarial Liability (AAL) (5)	Actuarial Value of Assets (6)	Total Active Member Contributions (7)	Retirees, Beneficiaries and Inactive Members (8)	Active Members (Employer Financed) (9)
2014	\$ 2,913,700	\$ 40,865,470	\$ 7,361,245	\$ 51,140,415	\$ 32,970,978	100%	74%	0%
2015	3,073,097	41,845,485	7,662,180	52,580,762	32,803,715	100%	71%	0%
2016	3,654,856	41,202,695	8,689,309	53,546,860	33,059,864	100%	71%	0%
2017	4,156,427	40,691,805	9,238,834	54,087,066	33,162,734	100%	71%	0%
2018	4,681,462	41,973,554	11,444,465	58,099,481	32,331,750	100%	66%	0%
2019	4,992,710	45,004,313	8,726,054	58,723,077	31,882,687	100%	60%	0%
2020	5,068,019	45,542,311	7,980,475	58,590,805	31,274,386	100%	58%	0%
2021	5,566,695	46,125,208	8,663,710	60,355,613	32,644,797	100%	59%	0%
2022	5,936,090	45,644,781	11,293,752	62,874,623	33,285,904	100%	60%	0%
2023	4,868,145	54,087,389	4,162,239	63,117,773	33,498,155	100%	53%	0%

SECTION D

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. **Other demographic risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The ADC developed on Table 1 may be considered as a minimum contribution that complies with the Board's funding policy and State statute. The timely receipt of the ADC is critical to support the financial health of the System. Users of this report should be aware that contributions made consistent with the ADC do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Ratio of the market value of assets to total payroll	5.3	5.1	5.8	4.9	5.4	5.5	5.9	5.7	6.6	10.0
Ratio of actuarial accrued liability to payroll	10.2	10.0	9.9	9.9	10.0	9.9	9.9	9.8	10.4	14.5
Ratio of actives to retirees and beneficiaries	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.5
Ratio of net cash flow to market value of assets	-5.2%	-4.0%	-3.9%	-7.9%	-7.0%	-6.9%	-6.5%	-6.9%	-7.7%	-7.6%
Duration of the actuarial accrued liability*	8.2	8.3	8.3							

*Duration measure not available before 2021

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.



Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the actuarial accrued liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Risks Associated with the Level of Docket Fees

As mentioned earlier, the docket fees contributed to the Magistrate Fund have been significantly impacted by the pandemic over the past few years. As a result, we have based our long-term projected contributions on the docket fees contributed to the Magistrate Fund for FY2020 of approximately \$364,000. These docket fees are assumed to remain level every year in the future. If docket fees do not increase back to the level they were at in FY2020, the funded status of the Magistrates Fund will be significantly impacted. For example, if future docket fees remain at their current level of \$265,000, the amortization period will be over 100 years.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

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Risks Measures – Low Default Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the New Mexico Magistrate Retirement Fund (Magistrate Fund) is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of the Magistrate Fund is set equal to the expected return on the Fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the Magistrate Fund, the investment return assumption is 7.25%

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 4.90% as of June 30, 2023. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio.

Valuation Accrued Liabilities	LDROM
\$63,117,773	\$79,429,379

SECTION E

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions for the New Mexico Magistrate Retirement Fund

Membership

Every magistrate while in office shall become a member and shall be subject to the provisions of the Magistrate Retirement Act; provided, however, that a magistrate who, prior to July 1, 2014, applied for and received an exemption from membership shall not become a member until such exemption ends.

Retirement Eligibility

A magistrate who was a member on June 30, 2014 may retire once attaining:

- Age 65 and five (5) years of service credit;
- Age 60 and 15 years of service credit; or
- Any age and 24 years of service credit.

A magistrate who initially became a member on or after July 1, 2014 may retire once attaining:

- Age 65 and eight (8) years of service credit;
- Age 60 and 15 years of service credit; or
- Any age and 24 years of service credit.

A member's total service in all statewide retirement systems (the Public Employees Retirement Act, the Educational Retirement Act, the Judicial Retirement Act, and the Magistrate Retirement Act) shall be combined for determining service credit requirements for normal retirement.

Normal Retirement Benefit

For magistrates who were a member on June 30, 2014, the retirement benefit is equal to the sum of:

- (1) [75% of salary received during last year in office prior to retirement] times 5% times [years of service earned before June 30, 2014 (not exceeding 15 years), plus five years]; and
- (2) 3.50% of FAS times years of service earned after June 30, 2014

The total benefit shall not exceed 85% of FAS.

For magistrates who initially became a member on or after July 1, 2014, the retirement benefit is equal to 3.00% of FAS times years of service. The total benefit shall not exceed 85% of FAS.

Final Average Salary (FAS)

Greatest average salary received for sixty consecutive, but not necessarily continuous, months in office

Normal Form of Payment

For magistrates who were a member on June 30, 2014, the retirement benefit is payable for the life of the member and the member's designated beneficiary. The survivor's pension payable after the death of the member is equal to 75% of the member's pension.

For magistrates who initially became a member on or after July 1, 2014, the retirement benefit is payable for the life of the member. A member may elect another form of payment at retirement.

Deferred Vested Retirement

A magistrate who leaves office with 5 years of service (8 years if initially became a member on or after July 1, 2014) is eligible to receive a retirement benefit once the member reaches an eligible retirement age.

Pre-Retirement Death – Member on June 30, 2014

The surviving spouse of a magistrate who was a member on June 30, 2014 receives a survivor's pension equal to 75% of the magistrate's pension until death. If there is no surviving spouse, a survivor is payable to surviving children, if any.

Pre-Retirement Death – Member on or after July 1, 2014

The surviving spouse of a magistrate who initially became a member on or after July 1, 2014 receives a survivor's pension equal to the greater of (1) the normal retirement benefit calculated at the time of the member's death as though the deceased member had retired the day preceding death under form of payment B (100% Joint and Survivor); and (2) 30% of FAS. The member must have 8 years of service at their death. If there is no surviving spouse, a survivor is payable to surviving children, if any.

Pre-Retirement Death – Duty – Member on or after July 1, 2014

The surviving spouse of a magistrate who initially became a member on or after July 1, 2014 receives a survivor's pension equal to the greater of (1) the normal retirement benefit calculated at the time of the member's death as though the deceased member had retired the day preceding death under form of payment B (100% Joint and Survivor); and (2) 50% of FAS. If there is no surviving spouse, a survivor is payable to surviving children, if any.

Disability

A magistrate with 5 years of service (8 years if initially became a member on or after July 1, 2014) who becomes unable to carry out the duties of that office due to physical or mental disability shall receive a pension calculated in the same manner as the normal retirement benefit. The applicable service credit requirement is waived if the board finds the disability to have been the natural and proximate result of causes arising solely and exclusively out of and in the course of the member's performance of duty as a magistrate.

Cost of Living Increases

Effective July 1, 2016, a 2% COLA is payable to qualified pension recipients if (1) the funded ratio of the fund was equal to or greater than 100% as of June 30 of the preceding calendar year and (2) the projected funded ratio after the COLA is granted is equal to or greater than 100%. Alternatively, a 2% COLA will be granted if no COLA was granted in the last two preceding years.

Cost of Living Increases – Qualified Pension Recipients

If granted, a recipient is eligible to receive a COLA if the recipient is a:

- normal retirement member who retired on or before June 30, 2014 and has been retired for at least two full calendar years;
- normal retirement member who retired between July 1, 2014 and June 30, 2015 and has been retired for at least three full calendar years;
- normal retirement member who retired between July 1, 2015 and June 30, 2016 and has been retired for at least four full calendar years;
- normal retirement member who retired on or after July 1, 2016 and has been retired for at least seven full calendar years;
- normal retirement member who is at least 65 years of age and has been retired for at least one full calendar year;
- disability retirement member who has been retired for at least one full calendar year;
- survivor beneficiary who has received a survivor pension for at least two full calendar years; or
- survivor beneficiary of a deceased retired member who otherwise would have been retired at least two full calendar years.

Member Contributions

Members contribute 10.5% of salary.

Refund of Member Contributions

If a magistrate leaves service or dies and no pension becomes payable, the accumulated contributions are refunded or paid to the designated beneficiary.

Employer Contributions

The State, through the administrative office of the courts, contributes 15% of pay. Additionally, \$25.00 from each civil case docket fee paid in magistrate court and \$10.00 from each civil jury fee paid in magistrate court is paid to the fund. Effective for FYE2021, the State contributes \$100,000 every month until the Magistrate Fund is 100% funded.

SECTION F

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

Generally, the assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. As noted in that experience study report, the primary economic assumptions (investment return assumption, price inflation, wage inflation, and payroll growth), as well as the mortality assumption were adopted by the Board of Trustees based on an experience study investigation for the Public Employees Retirement Associate conducted as of June 30, 2017.

I. Valuation Date

The valuation date is June 30 of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation is used to determine the adequacy of the State contribution rate (established by Legislative appropriation) and employer contribution rate (established by statute) and to describe the current financial condition of the New Mexico Magistrate Retirement Fund.

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the first step is to determine the contribution rate (level as a percentage of pay) required to provide the benefits to each member, or the normal cost rate. The normal cost rate consists of two pieces: (i) the member's contribution rate, and (ii) the remaining portion of the normal cost rate which is the employer's normal cost rate. The total normal cost rate is based on the benefits payable to each individual active member.

The Unfunded Actuarial Accrued Liability (UAAL) is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution provided in excess of the employer normal cost is applied to amortize the UAAL.

The funding period is calculated as the number of years required to fully amortize the UAAL, and is calculated with the use of an open group projection that takes into account: (a) future market earnings, net of investment-related expenses, will equal 7.25% per year, (b) there will be no changes in assumptions, (c) the number of active members will remain unchanged, (d) active members who leave employment will be replaced by new entrants each year, and (e) State and employer contributions will remain consistent with the amounts described in Section E of the valuation report.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

III. Actuarial Value of Assets

The actuarial value of assets is derived as follows: prior year actuarial value of assets is increased by contributions and expected income and reduced by refunds, benefit payments and expenses. To this amount, 25% of the difference between the expected investment income of the actuarial value and actual investment income on the market value for each of the previous four years is added. The returns are computed net of investment-related expenses.

IV. Actuarial Assumptions

Investment Return: 7.25% per year, net of investment-related expenses (composed of an assumed 2.50% inflation rate and a 4.75% real rate of return)

Payroll Growth: Total covered payroll is assumed to increase at an annual rate of 3.00% per year.

Administrative Expenses: 0.50% of valuation payroll per year

Annual Post-Retirement Cost of Living Adjustment Rate: 0.67% per year

Salary Increases: Annual salaries of active members are assumed to increase at an annual rate of 3.25% per year. All pay increases are assumed to occur at the beginning of the year. **Pay rates for magistrates for FYE2023 were known at the time the analysis was conducted and were incorporated into this valuation.**

Decrement Timing: All decrements – mortality, service retirement, disability retirement, and termination of employment for reasons other than death or retirement – are assumed to occur at the beginning of the valuation year.

Mortality Decrements:

RPH-2014 Blue Collar mortality table with female ages set forward one year. Future improvement in mortality rates is assumed using 60% of the MP-2017 projection scale generationally.

Sample Mortality Rates (Base Rates)								
Pre-Commencement			Post-Commencement			Post-Commencement		
Age	Male	Female	Age	Male	Female	Age	Male	Female
25	0.000733	0.000244	35	0.001793	0.001169	80	0.053460	0.042932
30	0.000717	0.000317	40	0.002156	0.001611	85	0.088524	0.072752
35	0.000797	0.000417	45	0.003275	0.002671	90	0.146859	0.125111
40	0.000958	0.000598	50	0.005604	0.004235	95	0.223428	0.197901
45	0.001455	0.001013	55	0.007342	0.005165	100	0.313988	0.291040
50	0.002490	0.001685	60	0.009893	0.006890	105	Disabled retirees use the same assumption as healthy lives.	
55	0.004071	0.002510	65	0.014089	0.010092	110		
60	0.006743	0.003606	70	0.021101	0.016038	115		
65	0.011612	0.005456	75	0.032952	0.026199	120		

Rates of Retirement

These rates are used to measure the probability of an eligible magistrate retiring at the indicated ages.

Ages	Active Magistrates Retiring Within the Year Following Attainment of Indicated Ages
45-49	30 %
60-65	35
66-69	30
70	100

Rates of Disability

There are assumed to be no future disabled retirees.

Rates of Separation from Active Membership

The rates are used to measure probabilities of active members terminating that status for a reason other than disability or death. The rates do not apply to magistrates who are eligible for retirement.

Ages	Percent of Active Magistrate Separating Within the Next Year
20	4.00 %
25	4.00
30	4.50
35	5.00
40	5.50
45	6.00
50	6.50
55	7.00
60	7.50

Marriage Assumption: All members are assumed to be married for purposes of death-in-service benefits. At retirement, 87% of members are assumed to be married for purposes of valuing death after retirement benefits.

Beneficiary Characteristics: Males are assumed to be three years older than females.

Census Data and Assets

- The valuation was based on members of the New Mexico Judicial Retirement Fund as of June 30, 2023 and does not take into account future members, with the exception of determining the funding period.
- All census data was supplied by PERA and was subject to reasonable consistency checks.
- There were data elements that were modified for some members as part of the valuation in order to make the data complete. However, the number of missing data items was immaterial.
- Asset data was supplied by PERA.

Other Actuarial Valuation Procedures

- No provision was made in this actuarial valuation for the limitations of Internal Revenue Code Sections 415 or 401(a)17.

Actuarial Model

This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation.

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SECTION G

DETAILED SUMMARIES OF MEMBERSHIP DATA

Table A

Summary of Membership Data

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
<u>Actives*</u>		
a. Number	53	62
b. Total annual payroll	\$ 6,164,080	\$ 6,304,854
c. Average salary	\$ 116,303	\$ 101,691
d. Average age	50.8	54.5
e. Average service	5.1	8.2
<u>Vested inactive members</u>		
a. Number	18	16
b. Average Age	57.1	57.3
c. Total annualized deferred monthly benefits	\$ 531,541	\$ 403,061
d. Average annualized deferred monthly benefit	\$ 29,530	\$ 25,191
<u>Nonvested inactive members</u>		
a. Number	6	2
b. Refunds due	\$ 225,598	\$ 17,481
c. Average refund due	\$ 37,600	\$ 8,741
<u>Service retirees**</u>		
a. Number	94	81
b. Average Age	71.6	72.4
c. Total annualized monthly benefits	\$ 3,912,350	\$ 3,247,803
d. Average annualized monthly benefit	\$ 41,621	\$ 40,096
<u>Disabled retirees</u>		
a. Number	2	2
b. Average Age	71.0	70.0
c. Total annualized monthly benefits	\$ 99,215	\$ 99,215
d. Average annualized monthly benefit	\$ 49,608	\$ 49,608
<u>Beneficiaries</u>		
a. Number	27	28
b. Average Age	74.8	73.8
c. Total annualized monthly benefits	\$ 920,546	\$ 955,295
d. Average annualized monthly benefit	\$ 34,094	\$ 34,118

* Active count and payroll includes 9 rehired retirees (11 in 2022) who are not eligible to accrue future service. The Fund does collect contributions on this payroll.

** Includes 4 co-payees

Table B**Active Members – Distribution by Age and Service**

Nearest Age	Years of Credited Service at Retirement*							Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	
Under 20								
20 to 24								
25 to 29	1							1
30 to 34								
35 to 39	5							5
40 to 44	6	1						7
45 to 49	3	1	1					5
50 to 54	10	1		1				12
55 to 59	1	3						4
60 & Over	5	2	1	2				10
Total	31	8	2	3	0	0	0	44

* Excludes 9 rehired retirees who are not eligible to accrue future service

Table C**Number of Annual Retirement Allowances of Benefit Recipients**

Type of Pension	Number	Total Annual Benefits	Average Annual Pension
<u>Normal Retirement Pensions</u>			
Two Life 75% Survivor Pension			
Retired Member Recipient	90	\$ 3,863,457	\$ 42,927
Survivor Recipient	25	841,353	\$ 33,654
Co-Payee Recipient	4	48,893	\$ 12,223
Total Normal Retirement Pensions	119	\$ 4,753,703	\$ 39,947
<u>Disability Retirement Pensions</u>			
Duty Disability	0	N/A	N/A
Non-Duty Disability	2	\$ 99,215	\$ 49,608
Survivor Recipient	0	N/A	N/A
Co-Payee Recipient	0	N/A	N/A
Total Disability Retirement Pensions	2	\$ 99,215	\$ 49,608
<u>Pre-Retirement Survivor Pensions</u>			
Survivor Spouse Recipient	2	\$ 79,192	\$ 39,596
Survivor Child Recipient	0	N/A	N/A
Total Pre-Retirement Survivor Pensions	2	\$ 79,192	\$ 39,596
Total Pensions Being Paid	123	\$ 4,932,111	\$ 40,098

Table D**Schedule of Retirants Added to and Removed from Rolls**

Number Added	Increase Annual Allowance	Number Removed	Decrease Annual Allowance	Net Change Annual Allowance	Total Retirees & Beneficiaries	Annual Allowance	Increase in Annual Allowance	Average Annual Allowance	% Change in Average Allowance
14	\$ 700,578	2	\$ 70,780	\$ 629,798	123	\$ 4,932,111	14.64%	\$ 40,098	3.45%

Table E**Distribution of Retirees by Years of Service at Retirement**

Division	Years of Credited Service at Retirement							Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	
Average Monthly Benefit	\$ 2,504	\$ 3,104	\$ 4,354	\$ 4,271	\$ 3,398	\$ 5,524	N/A	\$ 3,577
Number of Retirees	19	22	17	17	11	4	0	90

Table F**Distribution of Recent Retiree Ages at Retirement**

Division	2022-23 Retirees	All Current Retirees
Number	14	90
Average Monthly Benefit at Retirement	\$ 4,242	\$ 3,577
Average Age at Retirement	62.44	60.95

SECTION H

GLOSSARY

Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ADC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.),
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC): A calculated contribution for a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the calculated contribution has a normal cost payment and an amortization payment.

Closed Amortization Period: A specific number of years that is counted down by one each year and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: An employer-sponsored retirement benefit that provides workers, upon attainment of designated age and service thresholds, with a monthly benefit based on the employee's salary and length of service. The value of a benefit from a defined benefit plan is generally not affected by the return on the assets that are invested to fund the benefit.



Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ADC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date



Legislative Division of the Public Employees Retirement Association of New Mexico

Annual Actuarial Valuation - Funding
As of June 30, 2023

DRAFT





October 18, 2023

The Retirement Board
Public Employees Retirement Association
33 Plaza La Prensa
Santa Fe, NM 87507

Re: Actuarial Valuation for Funding Purposes as of June 30, 2023

Members of the Board:

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the Legislative Division of the Public Employees Retirement Association of New Mexico (Legislative Division) as of June 30, 2023. This report was prepared at the request of the Board and is intended for use by the Public Employees Retirement Association (PERA) staff and those designated or approved by the Board. This report may be provided to parties other than PERA only in its entirety and only with the permission of the Board.

Actuarial Valuation

The primary purposes of the actuarial valuation report are to determine the adequacy of the current State contributions, describe the current financial condition of the Legislative Division, analyze changes in the condition of the Legislative Division, and provide various summaries of the data.

Plan Provisions

Our actuarial valuation as of June 30, 2023 reflects the benefit and contribution provisions that were in effect as of June 30, 2023. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. The current actuarial assumptions and methods are outlined in Section F of this report.

Data

This valuation was based upon information as of June 30, 2023, furnished by PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Internal Revenue Code and ERISA.

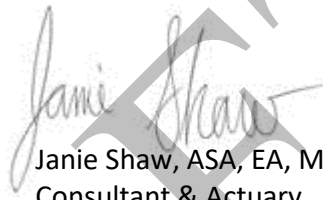
The signing actuaries are independent of the plan sponsor. The undersigned are Members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries. Finally, each of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Paul Wood, ASA, MAAA
Senior Consultant & Actuary



Janie Shaw, ASA, EA, MAAA
Consultant & Actuary

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SECTION A

EXECUTIVE SUMMARY

Executive Summary

Item	2023	2022
Membership		
• Number of		
- Active members	110	113
- Retirees, beneficiaries, and disabled	210	206
- Inactive, vested	15	16
- Inactive, nonvested	17	8
- Total	<u>352</u>	<u>343</u>
Assets		
• Market value (MVA)	\$ 45,437,655	\$ 45,404,000
• Actuarial value (AVA)	\$ 46,822,823	\$ 46,590,656
• Return on market value	5.6%	-4.3%
• Return on actuarial value	6.0%	6.1%
Actuarial Information on AVA (smoothed)		
• Normal cost \$ (MOY)	\$ 1,866,409	\$ 1,815,599
• Actuarial accrued liability	\$ 39,160,702	\$ 37,740,246
• Unfunded actuarial accrued liability (UAAL)	\$ (7,662,121)	\$ (8,850,410)
• Funded ratio	119.6%	123.5%
Expected Member Contribution	\$ 110,000	\$ 113,000
Actuarially Determined Contribution (ADC) Amount*	\$ 1,147,166	\$ 992,668
Actuarial Information on MVA		
• Unfunded actuarial accrued liability (UAAL)	\$ (6,276,953)	\$ (7,663,754)
• Funded ratio	116.0%	120.3%

* Actuarially Determined Contribution, net of member contributions

SECTION B

DISCUSSION

Discussion

Introduction

This report presents the results of the June 30, 2023 actuarial valuation of the Legislative Division.

The primary purposes of this actuarial valuation report are to calculate the State contribution in accordance with the funding policy, describe the current financial condition of the Legislative Division, analyze the changes in condition of the Legislative Division, and provide various summaries of the data.

All of the tables referenced in the following discussion appear in Section C of this report.

Funding Adequacy

The Actuarially Determined Contribution to satisfy the funding policy is the dollar amount necessary to fund the annual normal cost, the expected administrative expenses of the Legislative Division, and fully amortize the UAAL over 25 years in constant dollar amounts. This resulting contribution amount is intended to be the annual appropriation from the State. As the Legislative Division is in a surplus funded position, the annual amortized amount of the surplus offsets some of the Legislative Division's annual normal cost amount. Members also contribute \$1,000 for each year of service. The Actuarially Determined Contribution determined by this actuarial valuation, net of member contributions, is \$1,147,166 compared to \$992,668 from the prior actuarial valuation. This ADC is reasonable as of the valuation date.

The unfunded actuarial accrued liability (UAAL) increased from \$(8.9) million as of June 30, 2022 to \$(7.7) million as of June 30, 2023. Additionally, the funded ratio—actuarial value of assets divided by the actuarial accrued liability—decreased from 123.5% to 119.5%, as of June 30, 2023. This decrease in the funded ratio is primarily due to there being no contributions made to the Legislative Division (outside of member contributions) during FY2023. **If contributions are not increased for the Legislative Division, the funded status is expected to continue to decrease.**

The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement system. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Plan Provisions

There were no changes to plan provisions for this actuarial valuation. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of the Legislative Division.



The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. A review of the impact of a different set of assumptions on the funded status of the Legislative Division is outside the scope of this actuarial valuation.

The current actuarial assumptions and methods are outlined in Section F of this report.

System Assets

This report contains several tables that summarize key information with respect to the total PERA assets as well as the amounts allocated to the Legislative Division.

Table 5 reconciles the changes in the total PERA assets during the year. Table 6 shows the development of the Actuarial Value of Assets (AVA) for all PERA divisions. The current AVA method recognizes each year's gain or loss over a closed four-year period. Table 7 presents the allocation of the PERA assets to each of the divisions.

When measured on a market value, the approximate investment return for the fiscal year ending June 30, 2023 was 5.6%. When measured on an actuarial value, the net investment return was 6.0%. A history of return rates can be found in the PERA actuarial valuation report.

Table 8 provides a history of the contributions paid into the PERA assets and the administrative expenses and benefit payments paid out of PERA. PERA paid administrative expenses and benefit payments, in excess of contributions received, of \$717 million (or 4.4% of assets) in fiscal year 2022 and \$656 million (or 4.0% of assets) in fiscal year 2023. PERA should continue to monitor this deficit as it could impact future liquidity needs.

Data

This valuation was based upon information as of June 30, 2023, furnished by PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

The tables in Section G show key census statistics for the various groups included in the valuation.

SECTION C

TABLES

Table 1
Development of Employer Cost

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Actuarial Accrued Liability for Active Members		
a. Present value of future benefits for active members	\$ 21,551,916	\$ 21,041,426
b. Less: present value of future normal costs	(7,035,215)	(6,085,629)
c. Actuarial accrued liability	<u>\$ 14,516,701</u>	<u>\$ 14,955,797</u>
2. Total Actuarial Accrued Liability for:		
a. Retirees and beneficiaries	\$ 23,522,927	\$ 21,731,723
b. Inactive members	1,121,074	1,052,726
c. Active members (Item 1c)	<u>14,516,701</u>	<u>14,955,797</u>
d. Total	<u>\$ 39,160,702</u>	<u>\$ 37,740,246</u>
3. Actuarial Value of Assets	\$ 46,822,823	\$ 46,590,656
4. Unfunded Actuarial Accrued Liability (UAAL) (Item 2d - Item 3)	\$ (7,662,121)	\$ (8,850,410)
5. Actuarially Determined Contribution (ADC) - Middle of Year		
a. Normal cost	\$ 1,866,409	\$ 1,815,599
b. Administrative expenses	40,000	40,000
c. 25-Year Amortization of UAAL	(649,243)	(749,931)
d. Expected Member Contribution	<u>(110,000)</u>	<u>(113,000)</u>
e. Total ADC Amount (Items 5a + 5b + 5c + 5d, NLT \$0)	<u>\$ 1,147,166</u>	<u>\$ 992,668</u>

Table 2
Actuarial Present Value of Future Benefits

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Active Members		
a. Service Retirement	\$ 21,143,965	\$ 20,642,048
b. Disability Benefits	0	0
c. Death Before Retirement	407,951	399,378
d. Termination	0	0
e. Total	<u>\$ 21,551,916</u>	<u>\$ 21,041,426</u>
2. Inactive Members		
a. Vested Terminations	\$ 1,088,749	\$ 1,035,284
b. Non-Vested Terminations	32,325	17,442
c. Total	<u>\$ 1,121,074</u>	<u>\$ 1,052,726</u>
3. Annuitants		
a. Service Retirements	\$ 19,784,900	\$ 17,846,748
b. Beneficiaries	3,738,027	3,884,975
c. Disability Retirements	0	0
d. Total	<u>\$ 23,522,927</u>	<u>\$ 21,731,723</u>
4. Total Actuarial Present Value of Future Benefits	<u>\$ 46,195,917</u>	<u>\$ 43,825,875</u>

Table 3
Analysis of Normal Cost

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Gross Normal Cost Rate		
a. Service Retirement	\$ 1,833,756	\$ 1,782,172
b. Disability Benefits	0	0
c. Death Before Retirement	32,653	33,427
d. Termination	0	0
e. Total	<u>\$ 1,866,409</u>	<u>\$ 1,815,599</u>
2. Plus: Administrative Expenses	\$ 40,000	\$ 40,000
3. Total Normal Cost	\$ 1,906,409	\$ 1,855,599
4. Less: Member Rate	\$ 110,000	\$ 113,000
5. Employer Normal Cost	\$ 1,796,409	\$ 1,742,599

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Table 4
Historical Summary of Active Member Data

Valuation as of June 30,	Active Members			
	Number	Percent Increase	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)
2014	126	5.9%	59.9	9.3
2015	121	-4.0%	58.5	8.6
2016	122	0.8%	59.6	9.0
2017	111	-9.0%	59.4	9.0
2018	120	8.1%	60.0	9.1
2019	99	-17.5%	59.0	8.9
2020	118	19.2%	59.7	8.7
2021	114	-3.4%	58.3	8.4
2022	113	-0.9%	58.9	7.5
2023	110	-2.7%	58.9	7.4

Table 5
Reconciliation of Plan Net Assets
Total PERA with Legislative Division

	Year Ending	
	June 30, 2023 (1)	June 30, 2022 (2)
1. Market value of assets at beginning of year	\$ 16,354,646,875	\$ 17,813,948,280
2. Revenue for the year		
a. Contributions for the year		
i. Member Contributions	\$ 364,138,526	\$ 314,280,368
ii. Employer Contributions	454,461,748	395,408,293
iii. State Appropriations	0	2,414,400
iv. Service Purchases	9,075,044	12,439,944
v. Total	\$ 827,675,318	\$ 724,543,005
b. Net investment income	\$ 900,552,527	\$ (742,505,048)
c. Total revenue	\$ 1,728,227,845	\$ (17,962,043)
3. Disbursements for the year		
a. Benefit payments	\$ 1,417,002,889	\$ 1,367,737,863
b. Refunds of member contributions	51,448,291	57,591,001
c. Administrative expenses	15,593,783	16,010,498
d. Total expenditures	\$ 1,484,044,963	\$ 1,441,339,362
4. Increase in net assets (Item 2c - Item 3d)	\$ 244,182,882	\$ (1,459,301,405)
5. Market value of assets at end of year (Item 1 + Item 4)	\$ 16,598,829,757	\$ 16,354,646,875
6. Estimated Rate of Return on Market Value of Assets	5.6%	-4.3%

Table 6
Development of Actuarial Value of Assets
Total PERA with Legislative Division

	Year Ending June 30, 2023
1. Actuarial value of assets at beginning of year	\$ 16,782,083,585
2. Net new investments	
a. Contributions for the year (Table 5: Item 2a.v)	\$ 827,675,318
b. Disbursements for the year (Table 5: Item 3d)	(1,484,044,963)
c. Subtotal	(656,369,645)
3. Assumed investment return rate for fiscal year	7.25%
4. Expected return on Actuarial value	\$ 1,192,907,660
5. Expected Actuarial value of assets (Item 1 + Item 2c + Item 4)	\$ 17,318,621,600
6. Actual net earnings on Market value (Table 5: Item 2b)	\$ 900,552,527
7. Excess return (Item 6 - Item 4)	\$ (292,355,133)
8. Development of amounts to be recognized as of June 30, 2023:	

Table 7
Allocation of Assets Across Divisions

Division	Market Value of Assets	Actuarial Value of Assets	Approximate % of Total Fund Balance
State General	\$ 5,848,714,490	\$ 6,027,012,729	35.4%
State Police	1,529,059,278	1,575,672,696	9.2%
Municipal General	5,742,356,294	5,917,412,199	34.7%
Municipal Police	2,316,967,974	2,387,600,813	14.0%
Municipal Fire	1,116,294,066	1,150,324,324	6.7%
All PERA Divisions (w/o Legislative)	\$16,553,392,102	\$17,058,022,761	100.0%
Legislative	45,437,655	46,822,823	
All PERA Divisions (w/ Legislative)	\$16,598,829,757	\$17,104,845,584	

Table 8
History of Cash Flow
Total PERA with Legislative Division

Year Ending June 30, (1)	Distributions and Expenditures				External Cash Flow for the Year (6)	Market Value of Assets (7)	External Cash Flow as Percent of Market Value (8)
	Contributions (2)	Benefit Payments and Refunds (3)	Administrative Expenses (4)	Total (5)			
2013	\$ 520.9	\$ (887.8)	\$ (8.6)	\$ (896.4)	\$ (375.5)	\$ 12,708	-3.0%
2014	548.5	(952.7)	(10.3)	(963.0)	(414.5)	14,429	-2.9%
2015	576.1	(1,012.2)	(9.9)	(1,022.1)	(446.0)	14,256	-3.1%
2016	590.3	(1,069.3)	(10.8)	(1,080.1)	(489.8)	13,827	-3.5%
2017	605.3	(1,129.2)	(11.5)	(1,140.7)	(535.4)	14,799	-3.6%
2018	602.3	(1,183.7)	(12.7)	(1,196.4)	(594.1)	15,210	-3.9%
2019	621.3	(1,248.3)	(13.6)	(1,261.9)	(640.6)	15,508	-4.1%
2020	720.6	(1,299.9)	(14.3)	(1,314.2)	(593.6)	14,692	-4.0%
2021	688.7	(1,355.2)	(12.7)	(1,367.9)	(679.2)	17,814	-3.8%
2022	724.5	(1,425.3)	(16.0)	(1,441.3)	(716.8)	16,355	-4.4%
2023	827.7	(1,468.5)	(15.6)	(1,484.1)	(656.4)	16,599	-4.0%

Amounts in millions

Table 9
Total Experience Gain or Loss

Item (1)	Year Ending	
	June 30, 2023 (2)	June 30, 2022 (3)
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	\$ (8,850,410)	\$ (13,414,247)
2. Normal cost (incl. admin) for the year	\$ 1,858,285	\$ 1,054,879
3. Less: expected contributions for the year	\$ (1,105,668)	\$ (68,400)
4. Interest at 7.25%		
a. On UAAL	\$ (641,655)	\$ (972,533)
b. On normal cost	67,363	38,239
c. On contributions	(40,080)	(2,480)
d. Total	\$ (614,372)	\$ (936,774)
5. Expected UAAL (Sum of Items 1 - 4)	\$ (8,712,165)	\$ (13,364,542)
6. Actual UAAL	\$ (7,662,121)	\$ (8,850,410)
7. Total gain (loss) for the year (Item 5 - Item 6)	\$ (1,050,044)	\$ (4,514,132)
B. Source of gains and (losses)		
8. Contribution (Shortfall)/Surplus with interest	\$ (1,035,906)	\$ 32,953
9. Asset gain (loss) for the year	(625,994)	(478,540)
10. Liability experience gain (loss) for the year	611,856	(807,840)
11. Assumption change	0	0
12. Benefit change	0	(3,260,705)
13. Total	\$ (1,050,044)	\$ (4,514,132)

Table 10
Solvency Test

Year Ending June 30, (1)	Actuarial Liability For				Cumulative portion of AAL covered			
	Total Active Member Contributions (2)	Retirees, Beneficiaries and Inactive Members (3)	Active Members (Employer Financed) (4)	Total Actuarial Liability (AAL) (5)	Actuarial Value of Assets (6)	Total Active Member Contributions (7)	Retirees, Beneficiaries and Inactive Members (8)	Active Members (Employer Financed) (9)
2014	\$ 765,491	\$ 14,602,470	\$ 10,465,381	\$ 25,833,342	\$ 33,392,919	100%	100%	100%
2015	744,611	16,230,264	9,635,456	26,610,331	36,868,121	100%	100%	100%
2016	808,856	16,858,156	10,275,939	27,942,951	40,450,852	100%	100%	100%
2017	753,758	18,105,164	9,197,764	28,056,686	42,479,371	100%	100%	100%
2018	808,527	18,493,679	11,637,539	30,939,745	42,602,900	100%	100%	100%
2019	751,334	21,102,594	9,666,906	31,520,834	43,139,113	100%	100%	100%
2020	823,365	20,052,792	11,269,908	32,146,065	44,466,366	100%	100%	100%
2021	772,206	21,486,872	10,507,454	32,766,532	46,180,779	100%	100%	100%
2022	839,405	22,784,449	14,116,392	37,740,246	46,590,656	100%	100%	100%
2023	869,643	24,644,001	13,647,058	39,160,702	46,822,823	100%	100%	100%

SECTION D

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. **Other demographic risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The ADC developed on Table 1 may be considered as a minimum contribution that complies with the Board's funding policy and State statute. The timely receipt of the ADC is critical to support the financial health of the System. Users of this report should be aware that contributions made consistent with the ADC do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Ratio of actives to retirees and beneficiaries	0.5	0.5	0.6	0.6	0.5	0.7	0.6	0.7	0.7	0.7
Ratio of net cash flow to market value of assets	-5.4%	-5.2%	-4.4%	-2.5%	-4.5%	-4.4%	-2.0%	1.8%	2.2%	2.4%
Duration of the actuarial accrued liability*	8.0	8.0	7.9							

*Duration measure not available before 2021

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the actuarial accrued liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Risks Measures – Low Default Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the Legislative Division of the Public Employees Retirement Association of New Mexico (Legislative Division) is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of the Legislative Division is set equal to the expected return on the Fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the Legislative Division, the investment return assumption is 7.25%

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 4.90% as of June 30, 2023. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio.

Valuation Accrued Liabilities	LDROM
\$39,160,702	\$49,039,544

SECTION E

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions for the Legislative Division of the Public Employees Retirement Association of New Mexico

Members who serve in the New Mexico Legislature have the option to participate in the Legislative Division. Plan 2 applies to State legislators and lieutenant governors who serve terms of office which end after December 31, 2002.

State legislators and lieutenant governors must elect to be a member no later than 180 days after first taking office to be covered under the Legislative Division. Members earn service credit by:

- Fulfilling the obligations of the position of a legislator for more than six months of the calendar year and participate in the legislative session; and
- Making required contributions to PERA for each year of service credit.

Retirement Eligibility

Plan 1 and Plan 1 Enhanced:

Age 65 with 5 or more years of credited service; age 64 with 8 or more years of credited service; age 63 with 11 or more years of credited service; age 60 with 12 or more years of credited service; or any age with 14 or more years of credited service.

Plan 2:

Age 65 with 5 or more years of credited service or any age with 10 or more years of credited service.

Retirement Annuity

Plan 1: \$250 a year times credited service.

Plan 1 Enhanced: \$500 a year times credited service.

Plan 2: 14% of the per diem rate in effect, pursuant to Section 2-1-8 NMSA on the January 1 of the calendar year that the member retires multiplied by 60 and further multiplied by credited service.

Deferred Annuity

A Legislative member who terminates with 5 or more years of credited service may apply for a superannuation annuity upon reaching voluntary retirement date, provided accumulated contributions are not withdrawn. The annuity is based upon Legislative service credit at time of termination.

Survivor Pensions – Death in the Line of Duty

Pensions are paid to the eligible spouse and eligible children if survivor coverage has not been elected under the Elective Survivor Pension Beneficiary provision. The amount of pension payable for life to an eligible spouse is 80% of the accrued normal retirement pension.

Survivor Pensions – Death Not in the Line of Duty

Requires 5 years of credited service. Benefit applies to members and vested former members who have not elected coverage under the Elective Survivor Pension Beneficiary provision. Pensions are paid to an eligible spouse OR eligible children. The amount of pension payable for the life of an eligible spouse is up to 80% of accrued normal retirement pension. An eligible child pension is paid if there is not an eligible spouse or following the death of an eligible spouse. The amount of pension payable to each eligible child



is an equal share of 50% of accrued normal retirement pension. An eligible child is an unmarried natural or adopted child who is under age 18. A child's pension terminates upon death, marriage or reaching age 18. The pension of any remaining eligible children is recalculated whenever a child's pension is terminated.

Member Contributions

Plan 1: \$100 for each year of credited service.

Plan 1 Enhanced: \$200 for each year of credited service.

Plan 2: \$1,000 for each year of credited service.

Elective Survivor Beneficiary Pensions

Applicable to members with 5 or more years of credited service and vested former members who have elected option B and designated a survivor pension beneficiary who has an insurable interest. The amount of pension is the amount of accrued normal retirement pension under optional form of payment B (100% continuation to beneficiary).

Disability Retirement

Applicable to members and vested former members with 5 or more years of credited service. The 5 year credited service requirement is waived if the disability is incurred in the line of duty. The amount of disability pension is the accrued normal retirement pension at time of disability retirement. If the disability is in the line of duty, the credited service used is the amount that would have been acquired when first eligible for normal retirement.

State's Contributions

Annual appropriations to finance portions of benefits not financed by members' contributions, determined by actuarial valuation.

Cost of Living Increases

Effective July 1, 2020, there will be no COLA increases for fiscal years 2021, 2022, and 2023 (July 1, 2020, July 1, 2021, and July 1, 2022). In lieu of these COLAs, an annual non-compounding additional payment equal to 2% of annual benefit as of June 30, 2020 (inclusive of all past COLAs) will be payable.

Beginning July 1, 2023 and each July 1 thereafter, the COLA increase will be determined as an amount equal to the smoothed investment rate of return on the actuarial value of assets on June 30 of the preceding calendar year, less the COLA "hurdle rate,*" multiplied by the funded ratio on June 30 of the preceding calendar year; or 0.5%, whichever is greater, subject to the following:

- If the funded ratio of the fund is less than 100% on June 30 of the preceding calendar year, the COLA amount shall not exceed 3.0%.
- If the funded ratio of the fund is greater than or equal to 100% on June 30 of the preceding calendar year, the COLA amount shall not exceed 5.0%.
- The minimum COLA amount for any year will be 0.5%.

Cost of Living Increases (Continued)

Pensions are increased by the COLA amount determined above each July 1 subject to the following eligibility periods:

- Retirees who have been retired for at least 2 full calendar years.
- Retirees who attained at least age 65 and have been retired for at least 1 full calendar year.
- Disabled retirees who have been retired for at least 1 full calendar year.
- Survivor beneficiaries who have received a survivor pension for at least 2 full calendar years.
- Survivor beneficiaries of a deceased retiree who otherwise would have been retired for at least 2 full calendar years.

For certain retirees, pensions are increased each July 1 by 2.5% subject to the eligibility periods listed above, provided the conditions below are met:

- Retirees who retired with at least 25 years of service and whose annual pension is \$25,000 or less.
- Disabled retirees whose annual pension is \$25,000 or less.
- Retirees and survivor beneficiaries who attained at least age 75 prior to July 1, 2020.

*The COLA “hurdle rate” is the investment rate of return required to fund a COLA in excess of 0.5% as determined by the fund’s actuaries.

SECTION F

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019.

I. Valuation Date

The valuation date is June 30 of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation is used to determine the adequacy of the State contribution and to describe the current financial condition of the Legislative Division.

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the first step is to determine the contribution (as a level dollar amount) required to provide the benefits to each member, or the normal cost. The normal cost consists of two pieces: (i) the member's contribution, and (ii) the remaining portion of the normal cost which is the employer's normal cost. The total normal cost is based on the benefits payable to each individual active member.

The Unfunded Actuarial Accrued Liability (UAAL) is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution provided in excess of the employer normal cost is applied to amortize the UAAL.

The funding period is calculated as the number of years required to fully amortize the UAAL, assuming that: (a) future market earnings, net of investment-related expenses, will equal 7.25% per year, (b) there will be no liability gains/losses or changes in assumptions, (c) the other active members who leave employment will be replaced by new entrants each year, and (d) employer contributions continue to be actuarially determined.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

III. Actuarial Value of Assets

The actuarial value of assets is derived as follows: prior year actuarial value of assets is increased by contributions and expected income and reduced by refunds, benefit payments and expenses. To this amount, 25% of the difference between the expected investment income of the actuarial value and actual investment income on the market value for each of the previous four years is added. The returns are computed net of investment-related expenses.

IV. Actuarial Assumptions

Investment Return: 7.25% per year, net of investment-related expenses (composed of an assumed 2.50% inflation rate and a 4.75% real rate of return)

Annual Post-Retirement Cost of Living Adjustment Rate: 1.60% per year beginning 7/1/2023.

Administrative Expenses: \$40,000

Rates of Separation from Active Membership: None

Rates of Active Member Disability: None

Rate of increase in the per diem: 3.0% per annum. The current assumed per diem rate is \$210 as of July 1, 2023.

The rate of retirement from active membership (effective with the June 30, 2020 valuation): 50% of members eligible for retirement are assumed to retire, with 100% assumed to retire at age 80.

Decrement Timing: All decrements – mortality, service retirement, disability retirement, and termination of employment for reasons other than death or retirement – are assumed to occur at the beginning of the valuation year.

Mortality Decrements:

RPH-2014 Blue Collar mortality table with female ages set forward one year. Future improvement in mortality rates is assumed using 60% of the MP-2017 projection scale generationally.

Sample Mortality Rates (Base Rates)								
Pre-Commencement			Post-Commencement			Post-Commencement		
Age	Male	Female	Age	Male	Female	Age	Male	Female
25	0.000733	0.000244	35	0.001793	0.001169	80	0.053460	0.042932
30	0.000717	0.000317	40	0.002156	0.001611	85	0.088524	0.072752
35	0.000797	0.000417	45	0.003275	0.002671	90	0.146859	0.125111
40	0.000958	0.000598	50	0.005604	0.004235	95	0.223428	0.197901
45	0.001455	0.001013	55	0.007342	0.005165	100	0.313988	0.291040
50	0.002490	0.001685	60	0.009893	0.006890	105	Disabled retirees use the same assumption as healthy lives.	
55	0.004071	0.002510	65	0.014089	0.010092	110		
60	0.006743	0.003606	70	0.021101	0.016038	115		
65	0.011612	0.005456	75	0.032952	0.026199	120		

Marriage Assumption: All members are assumed to be married for purposes of death-in-service benefits.

Beneficiary Characteristics: Males are assumed to be three years older than females.

Form of Payment: Straight life.

Census Data and Assets

- The valuation was based on members of the Legislative Division as of June 30, 2023 and does not take into account future members, with the exception of determining the funding period.
- All census data was supplied by PERA and was subject to reasonable consistency checks.
- There were data elements that were modified for some members as part of the valuation in order to make the data complete. However, the number of missing data items was immaterial.
- Asset data was supplied by PERA.

Other Actuarial Valuation Procedures

- No provision was made in this actuarial valuation for the limitations of Internal Revenue Code Sections 415 or 401(a)17.

Actuarial Model

This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation.

SECTION G

DETAILED SUMMARIES OF MEMBERSHIP DATA

Table A

Summary of Membership Data

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
<u>Actives</u>		
a. Number	110	113
b. Average age	58.9	58.9
c. Average service	7.4	7.5
<u>Vested inactive members</u>		
a. Number	15	16
b. Average Age	58.0	57.5
c. Total annualized deferred monthly benefits	\$ 131,244	\$ 128,170
d. Average annualized deferred monthly benefit	\$ 8,750	\$ 8,011
<u>Nonvested inactive members</u>		
a. Number	17	8
<u>Service retirees*</u>		
a. Number	166	160
b. Average Age	74.9	75.6
c. Total annualized monthly benefits	\$ 1,949,358	\$ 1,808,597
d. Average annualized monthly benefit	\$ 11,743	\$ 11,304
<u>Disabled retirees</u>		
a. Number	0	0
b. Average Age	0	0
c. Total annualized monthly benefits	\$ 0	\$ 0
d. Average annualized monthly benefit	\$ 0	\$ 0
<u>Beneficiaries</u>		
a. Number	44	46
b. Average Age	82.0	81.4
c. Total annualized monthly benefits	\$ 523,221	\$ 531,847
d. Average annualized monthly benefit	\$ 11,891	\$ 11,562

*Includes 4 co-payees

Table B
Active Members
Distribution by Age and Service

Nearest Age	Years of Credited Service at Retirement							Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	
Under 30	2							2
30 to 34								
35 to 39	6	1						7
40 to 44	9	1						10
45 to 49	6		1					7
50 to 54	9	1	4					14
55 to 59	5	4	6	1				16
60 & Over	18	12	8	5	3	6	2	54
Total	55	19	19	6	3	6	2	110

Table C
Number of Annual Retirement Allowances of Benefit Recipients

Type of Pension	Number	Total Annual Benefits	Average Annual Pension
<u>Normal Retirement Pensions</u>			
Single Life Pension Terminating Upon Death	90	\$ 990,721	\$ 11,008
Two Life 100% Survivor Pension			
Retired Member Recipient	61	735,822	\$ 12,063
Survivor Recipient	25	290,072	\$ 11,603
Two Life 50% Survivor Pension			
Retired Member Recipient	18	262,966	\$ 14,609
Survivor Recipient	6	32,680	\$ 5,447
Total Normal Retirement Pensions	200	\$ 2,312,261	\$ 11,561
<u>Pre-Retirement Survivor Pensions</u>			
Spouse Recipient	10	\$ 160,318	\$ 16,032
Total Pre-Retirement Survivor Pensions	10	\$ 160,318	\$ 16,032
Total Pensions Being Paid	210	\$ 2,472,579	\$ 11,774

Table D**Schedule of Retirants Added to and Removed from Rolls**

Number Added	Increase Annual Allowance	Number Removed	Decrease Annual Allowance	Net Change Annual Allowance	Total Retirees & Beneficiaries	Annual Allowance	Increase in Annual Allowance	Average Annual Allowance	% Change in Average Allowance
13	\$ 205,025	9	\$ 72,890	\$ 132,135	210	\$ 2,472,579	5.65%	\$ 11,774	3.64%

Table E**Distribution of Retirees by Years of Service at Retirement**

Division	Years of Credited Service at Retirement								Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
Average Monthly Benefit	\$ 502	\$ 547	\$ 959	\$ 1,156	\$ 1,438	\$ 1,281	\$ 1,800	\$ 993	
Number of Retirees	11	38	51	22	21	8	11	162	

Table F**Distribution of Recent Retiree Ages at Retirement**

Division	2022-23 Retirees	All Current Retirees
Number	13	162
Average Monthly Benefit at Retirement	\$ 1,230	\$ 993
Average Age at Retirement	60.83	63.58

SECTION H

GLOSSARY

Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ADC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.),
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC): A calculated contribution for a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the calculated contribution has a normal cost payment and an amortization payment.

Closed Amortization Period: A specific number of years that is counted down by one each year and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: An employer-sponsored retirement benefit that provides workers, upon attainment of designated age and service thresholds, with a monthly benefit based on the employee's salary and length of service. The value of a benefit from a defined benefit plan is generally not affected by the return on the assets that are invested to fund the benefit.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ADC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date

Volunteer Firefighters Retirement Fund of New Mexico

Annual Actuarial Valuation - Funding
As of June 30, 2023

DRAFT





October 20, 2023

The Retirement Board
Public Employees Retirement Association
33 Plaza La Prensa
Santa Fe, NM 87507

Re: Actuarial Valuation for Funding Purposes as of June 30, 2023

Members of the Board:

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the Volunteer Firefighters Retirement Fund of New Mexico (Volunteer Firefighters Fund) as of June 30, 2023. This report was prepared at the request of the Board and is intended for use by the Public Employees Retirement Association (PERA) staff and those designated or approved by the Board. This report may be provided to parties other than the Volunteer Firefighters Fund only in its entirety and only with the permission of the Board.

Actuarial Valuation

The primary purposes of the actuarial valuation report are to determine the adequacy of the current State contributions, describe the current financial condition of the Volunteer Firefighters Fund, analyze changes in the condition of the Volunteer Firefighters Fund, and provide various summaries of the data.

Plan Provisions

Our actuarial valuation as of June 30, 2023 reflects the benefit and contribution provisions that were in effect as of June 30, 2023. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. The current actuarial assumptions and methods are outlined in Section F of this report.

Data

This valuation was based upon information as of June 30, 2023, furnished by the PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Internal Revenue Code and ERISA.

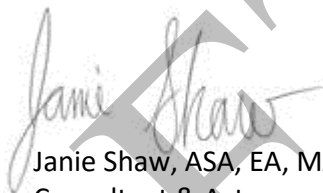
The signing actuaries are independent of the plan sponsor. The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. Finally, each of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Paul Wood, ASA, MAAA
Senior Consultant & Actuary



Janie Shaw, ASA, EA, MAAA
Consultant & Actuary

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SECTION A

EXECUTIVE SUMMARY

Executive Summary

Item	2023	2022
Membership		
• Number of		
- Active members	7,578	7,711
- Retirees, beneficiaries, and disabled	1,680	1,642
- Inactive, vested	271	289
- Inactive, nonvested	18	27
- Total	<u>9,547</u>	<u>9,669</u>
Assets		
• Market value (MVA)	\$ 81,108,104	\$ 78,966,635
• Actuarial value (AVA)	\$ 83,601,347	\$ 81,077,910
• Return on market value	5.6%	-4.3%
• Return on actuarial value	6.0%	6.2%
Actuarial Information on AVA (smoothed)		
• Normal cost \$ (Middle of Year)	\$ 2,002,818	\$ 2,021,826
• Actuarial accrued liability	\$ 49,858,006	\$ 50,211,084
• Unfunded actuarial accrued liability (UAAL)	\$ (33,743,341)	\$ (30,866,826)
• Funded ratio	167.7%	161.5%
Actuarially Determined Contribution (ADC) Amount	\$ 0	\$ 0
Annual Contribution from Fire Protection Fund	\$ 750,000	\$ 750,000
Actuarial Information on MVA		
• Unfunded actuarial accrued liability (UAAL)	\$ (31,250,098)	\$ (28,755,551)
• Funded ratio	162.7%	157.3%

SECTION B

DISCUSSION

Discussion

Introduction

This report presents the results of the June 30, 2023 actuarial valuation of the Volunteer Firefighters Retirement Fund of New Mexico (Volunteer Firefighters Fund).

The primary purposes of this actuarial valuation report are to determine the adequacy of the current State contributions, describe the current financial condition of the Volunteer Firefighters Fund, analyze the changes in condition of the Volunteer Firefighters Fund, and provide various summaries of the data.

All of the tables referenced in the following discussion appear in Section C of this report.

Funding Adequacy

The Actuarially Determined Contribution to satisfy the funding policy is the dollar amount necessary to fund the annual normal cost, the expected administrative expenses of the Volunteer Firefighters Fund, and fully amortize the UAAL over 25 years in constant dollar amounts. This resulting contribution amount is compared to the expected State contribution amount to assess the sufficiency of the State contribution. As the Volunteer Firefighters Fund is in a significant surplus funded position, the annual amortized amount of the surplus offsets the Volunteer Firefighters Fund's annual normal cost amount and expected administrative expenses. The Actuarially Determined Contribution determined by this actuarial valuation is zero. This ADC is reasonable as of the valuation date.

The State currently contributes \$750,000 annually to the Volunteer Firefighters Fund from the State's fire protection fund.

The funding surplus increased from \$30.9 million as of June 30, 2022 to \$33.7 million as of June 30, 2023. Additionally, the funded ratio—actuarial value of assets divided by the actuarial accrued liability—increased from 161.5% to 167.7%, as of June 30, 2023. This increase in the funded ratio was primarily due to demographic gains resulting from active members accruing less service during the year than expected.

The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement system. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Plan Provisions

There were no changes to plan provisions for this actuarial valuation. The current plan provisions are outlined in Section E of this report.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of the Volunteer Firefighters Fund.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. A review of the impact of a different set of assumptions on the funded status of the Volunteer Firefighters Fund is outside the scope of this actuarial valuation.

The current actuarial assumptions and methods are outlined in Section F of this report.

System Assets

This report contains several tables that summarize key information with respect to the Volunteer Firefighters Fund assets.

The total market value of assets increased from \$79.0 million to \$81.1 million as of June 30, 2023. Table 5 reconciles the changes in the fund during the year. Total contributions were exactly \$750,000, as expected.

Table 6 shows the development of the Actuarial Value of Assets (AVA). The current AVA method recognizes each year's gain or loss over a closed four-year period. The AVA increased from \$81.1 million to \$83.6 million, as of June 30, 2023.

When measured on a market value, the approximate investment return for the fiscal year ending June 30, 2023 was 5.6%. When measured on an actuarial value, the net investment return was 6.0%. Table 7 shows a history of return rates. The Volunteer Firefighters Fund ten-year average market return is 6.7%.

Table 8 provides a history of the contributions paid into the Volunteer Firefighters Fund and the administrative expenses and benefit payments paid out of the Volunteer Firefighters Fund. The Volunteer Firefighters Fund paid administrative expenses and benefit payments, in excess of contributions received, of \$2.2 million (or 2.8% of assets) in fiscal year 2022 and in fiscal year 2023. PERA should continue to monitor this deficit as it could impact future liquidity needs.

Data

This valuation was based upon information as of June 30, 2023, furnished by PERA staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by PERA staff.

The tables in Section G show key census statistics for the various groups included in the valuation.



SECTION C

TABLES

Table 1
Development of Employer Cost

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Actuarial Accrued Liability for Active Members		
a. Present value of future benefits for active members	\$ 27,516,946	\$ 27,650,342
b. Less: present value of future normal costs	<u>(10,584,839)</u>	<u>(10,772,604)</u>
c. Actuarial accrued liability	\$ 16,932,107	\$ 16,877,738
2. Total Actuarial Accrued Liability for:		
a. Retirees and beneficiaries	\$ 28,614,532	\$ 28,583,607
b. Inactive members	4,311,367	4,749,739
c. Active members (Item 1c)	<u>16,932,107</u>	<u>16,877,738</u>
d. Total	\$ 49,858,006	\$ 50,211,084
3. Actuarial Value of Assets	\$ 83,601,347	\$ 81,077,910
4. Unfunded Actuarial Accrued Liability (UAAL) (Item 2d - Item 3)	\$ (33,743,341)	\$ (30,866,826)
5. Actuarially Determined Contribution (ADC) - Middle of Year		
a. Normal cost	\$ 2,002,818	\$ 2,021,826
b. Administrative expenses	60,000	60,000
c. 25-Year Amortization of UAAL	<u>(2,859,209)</u>	<u>(2,615,471)</u>
d. Total ADC Amount (Items 5a + 5b + 5c, NLT \$0)	\$ 0	\$ 0

Table 2
Actuarial Present Value of Future Benefits

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Active Members		
a. Service Retirement	\$ 22,560,799	\$ 22,560,923
b. Disability Benefits	0	0
c. Death Before Retirement	387,299	390,366
d. Termination	4,568,848	4,699,053
e. Total	<u>\$ 27,516,946</u>	<u>\$ 27,650,342</u>
2. Inactive Members		
a. Vested Terminations	\$ 4,101,128	\$ 4,404,384
b. Non-Vested Terminations	210,239	345,355
c. Total	<u>\$ 4,311,367</u>	<u>\$ 4,749,739</u>
3. Annuitants		
a. Service Retirements	\$ 27,229,860	\$ 27,459,948
b. Beneficiaries	1,384,672	1,123,659
d. Disability Retirements	0	0
e. Total	<u>\$ 28,614,532</u>	<u>\$ 28,583,607</u>
4. Total Actuarial Present Value of Future Benefits	<u>\$ 60,442,845</u>	<u>\$ 60,983,688</u>

Table 3
Analysis of Normal Cost

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
1. Gross Normal Cost (MOY)		
a. Service Retirement	\$ 1,569,511	\$ 1,564,724
b. Disability Benefits	0	0
c. Death Before Retirement	26,921	28,172
d. Termination	406,386	428,930
e. Total	<u>2,002,818</u>	<u>2,021,826</u>
2. Administrative Expenses	60,000	60,000
3. Total Normal Cost	2,062,818	2,081,826
4. Less: Member Contribution	0	0
5. Employer Normal Cost	2,062,818	2,081,826

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Table 4
Historical Summary of Active Member Data

Valuation as of June 30, (1)	Active Members			
	Number (2)	Percent Increase (3)	Average Age (4)	Average Service (5)
2014	7,499	16.1%	43.0	3.6
2015	8,136	8.5%	42.9	3.6
2016	7,823	-3.8%	42.6	3.7
2017	7,491	-4.2%	42.6	4.0
2018	7,939	6.0%	42.1	3.8
2019	8,182	3.1%	41.9	3.7
2020	8,014	-2.1%	41.9	3.7
2021	7,830	-2.3%	42.0	3.7
2022	7,711	-1.5%	42.3	3.7
2023	7,578	-1.7%	42.8	3.7

Table 5

Reconciliation of Plan Net Assets

	Year Ending	
	June 30, 2023	June 30, 2022
	(1)	(2)
1. Market value of assets at beginning of year	\$ 78,966,635	\$ 84,718,801
2. Revenue for the year		
a. Contributions for the year		
i. Member Contributions	\$ 0	\$ 0
ii. Employer Contributions	0	0
iii. Contribution from Fire Protection Fund	750,000	750,000
iv. Service Purchases	0	0
v. Total	<u>\$ 750,000</u>	<u>\$ 750,000</u>
b. Net investment income	\$ 4,377,450	\$ (3,578,251)
c. Total revenue	\$ 5,127,450	\$ (2,828,251)
3. Disbursements for the year		
a. Benefit payments	\$ 2,909,864	\$ 2,847,231
b. Refunds of member contributions	0	0
c. Administrative expenses	76,117	76,684
d. Total expenditures	<u>\$ 2,985,981</u>	<u>\$ 2,923,915</u>
4. Increase in net assets (Item 2c - Item 3d)	\$ 2,141,469	\$ (5,752,166)
5. Market value of assets at end of year (Item 1 + Item 4)	\$ 81,108,104	\$ 78,966,635
6. Estimated Rate of Return on Market Value of Assets	5.6%	-4.3%

Table 6

Development of Actuarial Value of Assets

	Year Ending June 30, 2023																													
1. Actuarial value of assets at beginning of year	\$	81,077,910																												
2. Net new investments																														
a. Contributions for the year (Table 5: Item 2a.v)	\$	750,000																												
b. Disbursements for the year (Table 5: Item 3d)		(2,985,981)																												
c. Subtotal		(2,235,981)																												
3. Assumed investment return rate for fiscal year		7.25%																												
4. Expected return on Actuarial value	\$	5,797,094																												
5. Actual net earnings on Market value (Table 5: Item 2b)	\$	4,377,450																												
6. Expected Actuarial value of assets (Item 1 + Item 2c + Item 4)	\$	84,639,023																												
7. Excess return (Item 5 - Item 4)	\$	(1,419,644)																												
8. Development of amounts to be recognized as of June 30, 2023:																														
	<table><tr><th>Fiscal Year</th><th>Original Deferrals of</th><th>Portion</th><th>Recognized for this</th></tr><tr><td></td><td>(1)</td><td>(2)</td><td>(3) = (1) * (2)</td></tr><tr><td>2020</td><td>\$ (6,206,995)</td><td>25%</td><td>\$ (1,551,749)</td></tr><tr><td>2021</td><td>12,665,918</td><td>25%</td><td>3,166,480</td></tr><tr><td>2022</td><td>(9,189,985)</td><td>25%</td><td>(2,297,496)</td></tr><tr><td>2023</td><td>(1,419,644)</td><td>25%</td><td>(354,911)</td></tr><tr><td>Total</td><td></td><td></td><td>\$ (1,037,676)</td></tr></table>	Fiscal Year	Original Deferrals of	Portion	Recognized for this		(1)	(2)	(3) = (1) * (2)	2020	\$ (6,206,995)	25%	\$ (1,551,749)	2021	12,665,918	25%	3,166,480	2022	(9,189,985)	25%	(2,297,496)	2023	(1,419,644)	25%	(354,911)	Total			\$ (1,037,676)	
Fiscal Year	Original Deferrals of	Portion	Recognized for this																											
	(1)	(2)	(3) = (1) * (2)																											
2020	\$ (6,206,995)	25%	\$ (1,551,749)																											
2021	12,665,918	25%	3,166,480																											
2022	(9,189,985)	25%	(2,297,496)																											
2023	(1,419,644)	25%	(354,911)																											
Total			\$ (1,037,676)																											
9. Actuarial value of assets as of June 30, 2023 (Item 6 + Item 8, Column 3)	\$	83,601,347																												
10. Market value of assets as of June 30, 2023 (Table 5: Item 5)	\$	81,108,104																												
11. Ratio of actuarial value to market value		103.1%																												

Table 7
History of Investment Return Rates

Year Ending June 30 of	Market	Actuarial
(1)	(2)	(3)
2011	22.4%	-0.7%
2012	-0.4%	1.0%
2013	12.8%	10.6%
2014	17.6%	12.6%
2015	1.8%	7.8%
2016	0.3%	7.2%
2017	11.1%	6.9%
2018	6.9%	4.9%
2019	6.3%	6.0%
2020	-1.5%	5.4%
2021	26.5%	9.1%
2022	-4.3%	6.2%
2023	5.6%	6.0%
Average Returns		
Last Five Years:	6.0%	6.5%
Last Ten Years:	6.7%	7.2%

Table 8
History of Cash Flow

Year Ending June 30,	Distributions and Expenditures				External Cash Flow for the Year	Market Value of Assets	External Cash Flow as Percent of Market Value
	Contributions	Benefit Payments and Refunds	Administrative Expenses	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2014	\$ 750.0	\$ (1,418.9)	\$ (44.3)	\$ (1,463.2)	\$ (713.2)	\$ 61,923	-1.2%
2015	750.0	(1,633.4)	(42.6)	(1,676.0)	(926.0)	62,103	-1.5%
2016	750.0	(1,835.3)	(46.9)	(1,882.2)	(1,132.2)	61,050	-1.9%
2017	750.0	(2,030.8)	(51.8)	(2,082.6)	(1,332.6)	66,401	-2.0%
2018	750.0	(2,318.5)	(57.6)	(2,376.1)	(1,626.1)	69,287	-2.3%
2019	750.0	(2,456.9)	(62.9)	(2,519.8)	(1,769.8)	71,837	-2.5%
2020	750.0	(2,625.8)	(67.2)	(2,693.0)	(1,943.0)	68,837	-2.8%
2021	750.0	(2,758.0)	(60.2)	(2,818.2)	(2,068.2)	84,719	-2.4%
2022	750.0	(2,847.2)	(76.7)	(2,923.9)	(2,173.9)	78,967	-2.8%
2023	750.0	(2,909.9)	(76.1)	(2,986.0)	(2,236.0)	81,108	-2.8%

Amounts in thousands

Table 9
Total Experience Gain or Loss

Item (1)	Year Ending	
	June 30, 2023 (2)	June 30, 2022 (3)
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	\$ (30,866,826)	\$ (28,339,222)
2. Normal cost (incl. admin) for the previous year	\$ 2,097,943	\$ 1,966,355
3. Less: expected contributions for the year	\$ (750,000)	\$ (750,000)
4. Interest at 7.25%		
a. On UAAL	\$ (2,237,845)	\$ (2,054,594)
b. On normal cost	76,050	71,280
c. On contributions	(27,188)	(27,188)
d. Total	\$ (2,188,983)	\$ (2,010,502)
5. Expected UAAL (Sum of Items 1 - 4)	\$ (31,707,866)	\$ (29,133,369)
6. Actual UAAL	\$ (33,743,341)	\$ (30,866,826)
7. Total gain (loss) for the year (Item 5 - Item 6)	\$ 2,035,475	\$ 1,733,457
B. Source of gains and (losses)		
8. Contribution (Shortfall)/Surplus with interest	\$ 0	\$ 0
9. Asset gain (loss) for the year	(1,037,676)	(850,094)
10. Liability experience gain (loss) for the year	3,073,151	2,583,551
11. Assumption change	0	0
12. Benefit change	0	0
13. Total	\$ 2,035,475	\$ 1,733,457

Table 10
Solvency Test

Year Ending June 30,	Actuarial Liability For				Cumulative portion of AAL covered			
	Total Active Member Contributions	Retirees, Beneficiaries and Inactive Members	Active Members (Employer Financed)	Total Actuarial Liability (AAL)	Actuarial Value of Assets	Total Active Member Contributions	Retirees, Beneficiarie s and Inactive Members	Active Members (Employer Financed)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2014	\$ 0	\$ 25,218,190	\$ 16,297,916	\$ 41,516,106	\$ 57,997,323	N/A	100%	100%
2015	0	26,280,594	17,635,798	43,916,392	61,575,304	N/A	100%	100%
2016	0	27,259,993	17,996,285	45,256,278	64,899,802	N/A	100%	100%
2017	0	28,060,938	18,327,515	46,388,453	67,985,320	N/A	100%	100%
2018	0	30,285,764	18,950,008	49,235,772	69,674,334	N/A	100%	100%
2019	0	31,110,078	19,408,782	50,518,860	72,011,279	N/A	100%	100%
2020	0	32,829,521	17,510,145	50,339,666	73,916,369	N/A	100%	100%
2021	0	32,855,811	17,295,152	50,150,963	78,490,185	N/A	100%	100%
2022	0	33,333,346	16,877,738	50,211,084	81,077,910	N/A	100%	100%
2023	0	32,925,899	16,932,107	49,858,006	83,601,347	N/A	100%	100%

SECTION D

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. **Other demographic risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The ADC developed on Table 1 may be considered as a minimum contribution that complies with the Board's funding policy and State statute. The timely receipt of the ADC is critical to support the financial health of the System. Users of this report should be aware that contributions made consistent with the ADC do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Ratio of actives to retirees and beneficiaries	4.5	4.7	4.9	5.2	5.7	5.9	6.2	7.0	8.1	8.4
Ratio of net cash flow to market value of assets	-2.8%	-2.8%	-2.4%	-2.8%	-2.5%	-2.3%	-2.0%	-1.9%	-1.5%	-1.2%
Duration of the actuarial accrued liability*	9.0	9.2	9.3							

*Duration measure not available before 2021

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the actuarial accrued liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Risks Measures – Low Default Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the Volunteer Firefighters Retirement Fund of New Mexico (Volunteer Firefighters Fund) is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of the Volunteer Firefighters Fund is set equal to the expected return on the Fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the Volunteer Firefighters Fund, the investment return assumption is 7.25%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 4.90% as of June 30, 2023. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio.

Valuation Accrued Liabilities	LDROM
\$49,858,006	\$64,247,275

SECTION E

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions for the Volunteer Firefighters Retirement Fund of New Mexico

Membership

Includes any volunteer nonsalaried firefighter who is listed as an active member on the rolls of a fire department and whose first year of service credit was accumulated during or after the year the member attained the age of sixteen. In accordance with applicable statutes, this valuation excludes any member for whom qualifying documentation has not been provided to the retirement system for five consecutive years.

Service Credit

A year of service credit may be granted upon required certification for each year the member:

- (1) attended 50% of all scheduled fire drills for which the fire department held the member responsible to attend;
- (2) attended 50% of all scheduled business meetings for which the fire department held the member responsible to attend; and
- (3) participated in at least 50% of all emergency response calls for which the fire department held the member responsible to attend.

Retirement Eligibility

A member may retire: (1) with a full retirement annuity at age 55 with 25 or more years of service credit or (2) with a reduced retirement annuity at age 55 with 10 or more years of service credit.

Retirement Annuity

The full retirement annuity is \$250 per month. The reduced retirement annuity is \$125 per month.

Surviving Spouse Annuity

The surviving spouse of a deceased annuitant receives an annuity equal to 2/3 of the retirement annuity being paid at the time of the member's death. The annuity ceases upon the surviving spouse's marriage or death.

Surviving Dependent Child

If there is no surviving spouse then a surviving dependent child will receive an annuity equal to 2/3 of the retirement annuity being paid at the time of the member's death. The annuity will cease upon the earlier of the dependent child's 18th birthday or death.

Vested Retirement Annuity

Any member with at least 10 years of service credit who ceases to be a volunteer non-salaried firefighter is eligible for a deferred retirement annuity commencing at age 55. The monthly amount is \$250 if the member has at least 25 years of service credit and \$125 if the member has between 10 and 25 years of service credit.

Public Payments

\$750,000 annually from the State's fire protection fund.



SECTION F

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees based on the experience investigation that covered the four-year period from July 1, 2015 through June 30, 2019

I. Valuation Date

The valuation date is June 30 of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation is used to determine the adequacy of the State contribution and to describe the current financial condition of the Volunteer Firefighters Retirement Fund of New Mexico.

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the first step is to determine the contribution (level as a level dollar amount) required to provide the benefits to each member, or the normal cost. The normal cost consists of two pieces: (i) the member's contribution (if any), and (ii) the remaining portion of the normal cost which is the employer's normal cost. The total normal cost is based on the benefits payable to each individual active member.

The Unfunded Actuarial Accrued Liability (UAAL) is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution provided in excess of the employer normal cost is applied to amortize the UAAL (if any).

The funding period is calculated as the number of years required to fully amortize the UAAL, assuming that: (a) future market earnings, net of investment-related expenses, will equal 7.25% per year, (b) there will be no liability gains/losses or changes in assumptions, (c) the other active members who leave employment will be replaced by new entrants each year, and (d) employer contributions will remain \$750,000.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

III. Actuarial Value of Assets

The actuarial value of assets is derived as follows: prior year actuarial value of assets is increased by contributions and expected income and reduced by refunds, benefit payments and expenses. To this amount, 25% of the difference between the expected investment income of the actuarial value and actual investment income on the market value for each of the previous four years is added. The returns are computed net of investment-related expenses.

IV. Actuarial Assumptions

Investment Return: 7.25% per year, net of investment-related expenses (composed of an assumed 2.50% inflation rate and a 4.75% real rate of return)

Administrative Expenses: \$60,000 which is included in the calculation of the actuarial determined contribution amount.

Decrement Timing: All decrements – mortality, service retirement, disability retirement, and termination of employment for reasons other than death or retirement – are assumed to occur at the middle of the valuation year.

Mortality Decrements:

RPH-2014 Blue Collar mortality table with female ages set forward one year. Future improvement in mortality rates is assumed using 60% of the MP-2017 projection scale generationally.

Sample Mortality Rates (Base Rates)								
Pre-Commencement			Post-Commencement			Post-Commencement		
Age	Male	Female	Age	Male	Female	Age	Male	Female
25	0.000733	0.000244	35	0.001793	0.001169	80	0.053460	0.042932
30	0.000717	0.000317	40	0.002156	0.001611	85	0.088524	0.072752
35	0.000797	0.000417	45	0.003275	0.002671	90	0.146859	0.125111
40	0.000958	0.000598	50	0.005604	0.004235	95	0.223428	0.197901
45	0.001455	0.001013	55	0.007342	0.005165	100	0.313988	0.291040
50	0.002490	0.001685	60	0.009893	0.006890	105	Disabled retirees use the same assumption as healthy lives.	
55	0.004071	0.002510	65	0.014089	0.010092	110		
60	0.006743	0.003606	70	0.021101	0.016038	115		
65	0.011612	0.005456	75	0.032952	0.026199	120		

Rates of Retirement from active membership were as follows:

Ages	Percent of Active Members Retiring Within the Next Year
55	35.0 %
56	30.0
57	25.0
58	20.0
59	20.0
60	20.0
61	20.0
62	25.0
63	25.0
64	25.0
65	25.0
66	25.0
67	25.0
68	25.0
69	25.0
70	100.0

Rates of Separation from Active Membership were as follows:

Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year
ALL	0	12.00 %
	1	11.00
	2	10.00
	3	8.00
	4	6.00
25	5 & Over	4.00
30		4.00
35		4.00
40		4.00
45		4.00
50		5.00
55		5.00
60		6.00

Marriage Assumption: All members are assumed to be married for purposes of death-in-service benefits. At retirement, 90% of members are assumed to be married for purposes of valuing death after retirement benefits.

Beneficiary Characteristics: Males are assumed to be three years older than females.

Form of Payment: A 66-2/3% automatic joint and survivor payment is the assumed normal form of benefit for married members. Straight life is the assumed normal form of benefit for single members.

Average Entry Age: Age 38.3 was assumed in cases where insufficient data was provided. Active members were assumed to accrue 0.65 years of service credit in each future year.

Non-Vested Inactive Members: Members with at least 5 years of service and a last reported date within the last 5 years are valued similarly to deferred vested members in order to recognize potential liability these members hold.

Census Data and Assets

- The valuation was based on members of the Volunteer Firefighters Retirement Fund of New Mexico as of June 30, 2023 and does not take into account future members, with the exception of determining the funding period.
- All census data was supplied by PERA and was subject to reasonable consistency checks.
- There were data elements that were modified for some members as part of the valuation in order to make the data complete. However, the number of missing data items was immaterial.
- Asset data was supplied by the PERA.

Other Actuarial Valuation Procedures

- No provision was made in this actuarial valuation for the limitations of Internal Revenue Code Sections 415 or 401(a)17.

Actuarial Model

This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation.

SECTION G

DETAILED SUMMARIES OF MEMBERSHIP DATA

Table A

Summary of Membership Data

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
<u>Actives</u>		
a. Number	7,578	7,711
b. Average age	42.8	42.3
c. Average service	3.7	3.7
<u>Vested inactive members</u>		
a. Number	271	289
b. Average Age	62.9	61.3
c. Total annualized deferred monthly benefits	\$ 411,000	\$ 439,500
d. Average annualized deferred monthly benefit	\$ 1,517	\$ 1,521
<u>Nonvested inactive members</u>		
a. Number	18	27
<u>Service retirees*</u>		
a. Number	1,515	1,502
b. Average Age	71.1	70.5
c. Total annualized monthly benefits	\$ 2,752,500	\$ 2,742,000
d. Average annualized monthly benefit	\$ 1,817	\$ 1,826
<u>Disabled retirees</u>		
a. Number	0	0
b. Average Age	0.0	0.0
c. Total annualized monthly benefits	\$ 0	\$ 0
d. Average annualized monthly benefit	\$ 0	\$ 0
<u>Beneficiaries</u>		
a. Number	165	140
b. Average Age	75.8	75.7
c. Total annualized monthly benefits	\$ 178,197	\$ 144,998
d. Average annualized monthly benefit	\$ 1,080	\$ 1,036

*Includes 1 co-payee

Table B
Active Members
Distribution by Age and Service

Nearest Age	Years of Credited Service at Retirement							Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	
Under 30	1,695	126	10					1,831
30 to 34	902	156	39	6				1,103
35 to 39	640	159	54	15	4			872
40 to 44	440	152	82	27	11	1		713
45 to 49	380	128	82	30	16	10		646
50 to 54	291	97	65	36	26	14		529
55 to 59	258	121	76	31	18	5	5	514
60 & Over	781	329	147	53	36	19	5	1,370
Total	5,387	1,268	555	198	111	49	10	7,578

Table C
Number of Annual Retirement Allowances of Benefit Recipients

Type of Pension	Number	Total Annual Benefits	Average Annual Pension
<u>Normal Retirement Pensions</u>			
Two Life 66 2/3% Survivor Pension	1,514	\$ 2,751,750	\$ 1,818
Single Life Pension	166	\$ 178,947	\$ 1,078
Total Normal Retirement Pensions	1,680	\$ 2,930,697	\$ 1,744
Total Pensions Being Paid	1,680	\$ 2,930,697	\$ 1,744

Table D**Schedule of Retirants Added to and Removed from Rolls**

Number Added	Increase Annual Allowance	Number Removed	Decrease Annual Allowance	Net Change Annual Allowance	Total Retirees & Beneficiaries	Annual Allowance	Increase in Annual Allowance	Average Annual Allowance	% Change in Average Allowance
56	\$ 91,000	18	\$ 47,301	\$ 43,699	1,680	\$ 2,930,697	1.51%	\$ 1,744	-0.78%

Table E**Distribution of Retirees by Years of Service at Retirement**

Division	Years of Credited Service at Retirement							Total
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	
Average Monthly Benefit*	\$ -	\$ -	\$ 125	\$ 125	\$ 129	\$ 247	\$ 248	\$ 152
Number of Retirees*	-	-	842	239	73	265	56	1,475

*Does not include 39 retirees with missing years of service at retirement

Table F**Distribution of Recent Retiree Ages at Retirement**

Division	2022-23 Retirees	All Current Retirees
Number	50	1,514
Average Monthly Benefit at Retirement	\$ 140	\$ 151
Average Age at Retirement	62.79	61.50

SECTION H

GLOSSARY

Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ADC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.),
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC): A calculated contribution for a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the calculated contribution has a normal cost payment and an amortization payment.

Closed Amortization Period: A specific number of years that is counted down by one each year and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: An employer-sponsored retirement benefit that provides workers, upon attainment of designated age and service thresholds, with a monthly benefit based on the employee's salary and length of service. The value of a benefit from a defined benefit plan is generally not affected by the return on the assets that are invested to fund the benefit.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ADC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date



Investment Principles:

- Achieve a steady, compounding return that minimizes uncompensated risk
- Focus on allocating risk
- Effectively manage costs
- Institute comprehensive risk management
- Keep long term view

Key Strategic Goals:

- Sustain the Trust Fund for current and future retirees
- Set Strategic Asset Allocation to meet the actuarial assumed return over the long run
- Produce returns that meet or exceed benchmarks
- Be cost-efficient

Asset Allocation & Cash Activity:

Fiscal Year-to-Date, the Fund has experienced a decline of \$2.5 Million in its net asset value (NAV); investment gains were about \$85 Million, less paying out \$87.5 Million in benefit payments (this amount represented 36% of the monthly benefit payment).

Change in NAV (FYTD)	
as of: August 31, 2023	
July 1, 2023 Beginning Market Value	16,657,781,731
August 31, 2023 Ending Market Value	16,655,276,659
Market Value Change	(2,505,072)
FYTD Benefit Payments	(87,578,830)
Investment Gain/Losses	85,073,758

At month-end Fund held 15% of tier 1 (liquidity) assets and remains in compliance with the IPS minimum of 10%.

Asset weights at the end of the month were within policy ranges, and in compliance with IPS guidelines:

Asset Allocation			
as of: August 31, 2023	Target	Actual	Range
Global Equity	38.0%	39.0%	+/- 5%
Risk Reduction	17.0%	16.9%	+/- 3%
Credit	19.0%	18.8%	+/- 4%
Real Assets	18.0%	17.3%	+/- 4%
Multi Risk	8.0%	8.1%	+/- 4%



Implementation Update:

In August, one proposal was presented to PRISM and moved forward to receive unanimous agreement by our Portfolio Fit and Process Review Team:

- The Resolute Fund VI is a private equity fund, which will primarily target control investments and strive to create a diversified portfolio of established, well managed, profitable businesses located principally in the U.S. TJC (the manager) primarily targets the following industries: industrials, technology, telecom, power, logistics, consumer, and healthcare.

General Update:

- We are reviewing our strategic asset allocation with our new investment consultant Verus and will make recommendations at the December Investment Committee and Board meetings.
- We are unwinding the portable alpha program due to implementation costs and transparency issues.

Market Summary:

While US and International stocks started the fiscal year up on hopes central banks were done raising rates and economies were rebounding; stock markets have since begun to trade down. US bonds on the other hand started the fiscal year down and continue to trade down as investors demand more yield on longer dated bonds due to more debt issuance from the US Treasury and the biggest buyers, the Fed and banks, becoming net sellers.

On the economy, data remains mixed around whether the US will enter recession in late 2023 or early 2024. Loose fiscal policy and tight monetary policy is a tricky combination for the US, with the Fed minutes indicating the committee is still worried about inflation. However, the tight labor market, and declining inflation, points to a higher probability that the Fed might engineer a much-desired soft landing of the US economy.

Yet, credit conditions are as tight as 2008, and corporate defaults and consumer delinquencies are both rising. Less credit availability and higher interest rates will continue to be a drag on the economy. Further, most economists agree monetary policy acts with a considerable lag (18 to 24 months), and as past rate hikes continue to work through the economy a recession is not out of the question. Thus, capital markets will likely remain vulnerable in late 2023 and early 2024, and volatility will likely continue with downside risk to markets until there is more visibility into the economy.

Performance Summary:

When measuring success in implementation against key strategic goals, PERA's experience is favorable on a relative basis, while lagging on an absolute. First, long-term absolute net returns have fallen below the 7.25% assumed rate of return for most short and intermediate time periods, producing 6.51%, 5.51%, 6.36% and 6.48% for the 3-, 5-, 7-, and 10-year periods. However, when measuring long-term results, the fund remains above this targeted return producing 7.57% and 8.55% for the 30-year and since inception periods. Second, relative results have been significantly favorable, exceeding PERA's diversified Policy Benchmark across most measurable time horizon. Most notably, outpacing the benchmark by 2.77%, 1.46%, 1.07% and 0.73% for the 3-, 5-, 7- and 10-year periods, respectively; displaying strong asset allocation and manager selection attribution. Finally, when measuring PERA's portfolio against national pension peers, on an absolute and risk-adjusted basis, PERA's Sharpe Ratio or risk adjusted returns have been in the top third for most time periods.

Major 1-Year Contributors: Global Public Stock was up 14.26% net and outperformed its benchmark by 0.93%; Active US Equity was up 21.63% net, exceeding its benchmark by 8.30%; Liquid Credit was up 9.19% and outperformed its benchmark by 0.91%; Illiquid Real Assets returned 9.28% and outperformed its benchmark by 17.24%.

Major 1-Year Detractors: Domestic Core Fixed Income was down -1.66% and underperformed its benchmark by -0.47%; and Bonds Plus was down -1.51%, underperforming its benchmark by -0.32%; Liquid Real Assets was down -2.64%, although outperformed its benchmark by 0.99%; and Illiquid Real Estate was down -2.12%, although outperformed its benchmark by 0.46%.

PERFORMANCE

Performance Summary								
as of: August 31, 2023	MTD	3M	FYTD	1-Year	3-Year	5-Year	7-Year	10-Year
Total Fund	-0.8%	2.3%	0.5%	4.5%	6.5%	5.5%	6.4%	6.5%
Policy Index	-2.1%	3.4%	0.1%	4.8%	3.7%	4.0%	5.3%	5.7%
Value Add	1.3%	-1.0%	0.4%	-0.3%	2.8%	1.5%	1.1%	0.7%
Global Equity	-1.1%	5.2%	1.4%	8.7%	10.1%	8.7%	10.4%	9.5%
Policy Index	-2.7%	6.1%	0.7%	12.3%	6.8%	6.6%	8.8%	8.8%
Value Add	1.7%	-0.9%	0.7%	-3.6%	3.2%	2.1%	1.6%	0.7%
Risk Reduction	-0.3%	-0.5%	-0.3%	-0.6%	-3.1%	1.0%	0.7%	2.0%
Policy Index	-0.6%	-1.1%	-0.7%	-1.2%	-4.3%	0.5%	0.3%	1.5%
Value Add	0.3%	0.6%	0.4%	0.5%	1.2%	0.5%	0.4%	0.5%
Credit	0.5%	2.7%	1.8%	6.2%	5.3%	4.0%	4.4%	4.0%
Policy Index	-0.2%	3.8%	1.6%	8.4%	0.0%	2.3%	2.9%	3.5%
Value Add	0.6%	-1.0%	0.2%	-2.2%	5.3%	1.7%	1.4%	0.5%
Real Assets	-0.6%	-0.4%	-0.7%	0.9%	11.5%	6.2%	6.0%	6.0%
Policy Index	-3.5%	2.9%	-0.9%	-4.7%	8.5%	4.2%	5.1%	4.5%
Value Add	2.9%	-3.2%	0.3%	5.5%	3.0%	2.0%	0.9%	1.5%
Multi-Risk	-3.2%	-0.1%	-2.4%	0.3%	2.5%			
Policy Index	-3.2%	0.0%	-2.3%	-0.2%	2.4%			
Value Add	0.0%	-0.1%	-0.1%	0.5%	0.1%			

Risk Summary						
as of: August 31, 2023	Std Dev.	Sharpe	Beta	Alpha	IR	TE
1-Year						
Total Fund	8.0%	0.1%	0.6%	-0.3%	-0.2%	5.5%
Policy Index	13.3%	0.1%	1.0%	0.0%		0.0%
3-Year						
Total Fund	7.8%	0.6%	0.6%	3.3%	0.5%	4.7%
Policy Index	11.8%	0.2%	1.0%	0.0%		0.0%
5-Year						
Total Fund	8.1%	0.5%	0.6%	2.1%	0.2%	5.0%
Policy Index	12.4%	0.2%	1.0%	0.0%		0.0%
7-Year						
Total Fund	7.1%	0.7%	0.6%	2.2%	0.2%	4.3%
Policy Index	10.7%	0.4%	1.0%	0.0%		0.0%
10-Year						
Total Fund	6.9%	0.8%	0.7%	2.0%	0.1%	3.7%
Policy Index	9.5%	0.5%	1.0%	0.0%		0.0%

Staffing Update

- New Investment Account Manager Lesley Adams has joined PERA.

Vacancies:

- Investment Associate (Gov. Ex. FTE)



PERA

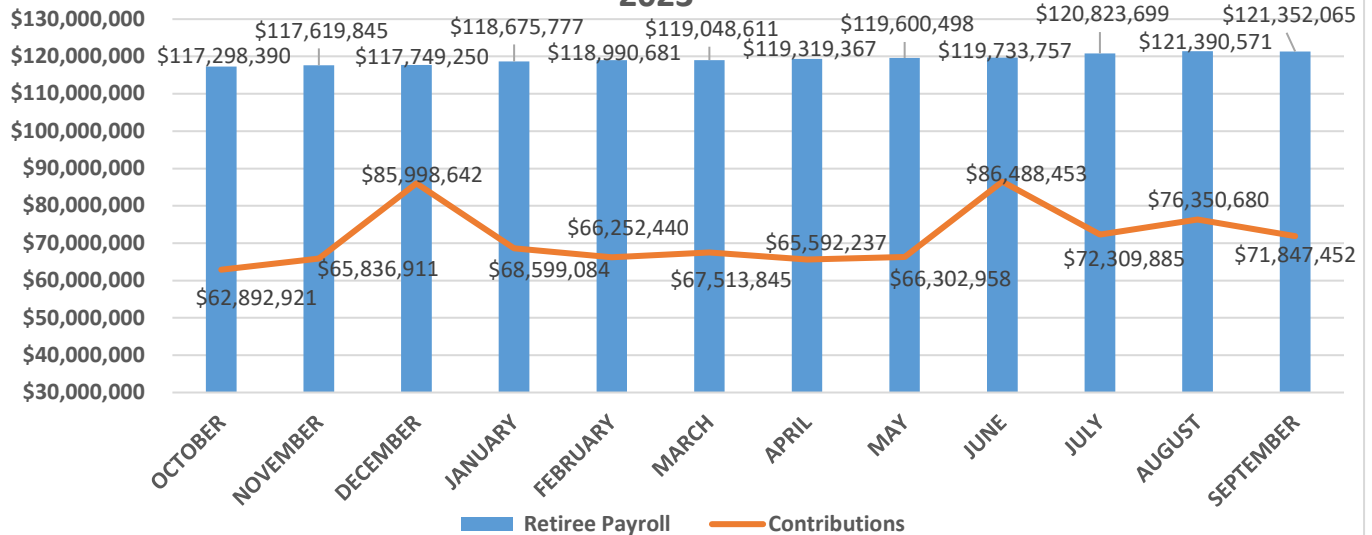
Public Employees
Retirement Association
of New Mexico

EXECUTIVE DIRECTOR'S REPORT PERA BOARD MEETING – October 26, 2023

INVESTED IN TOMORROW.

Retiree Payroll vs: Total Contributions - October 2022 - September

2023

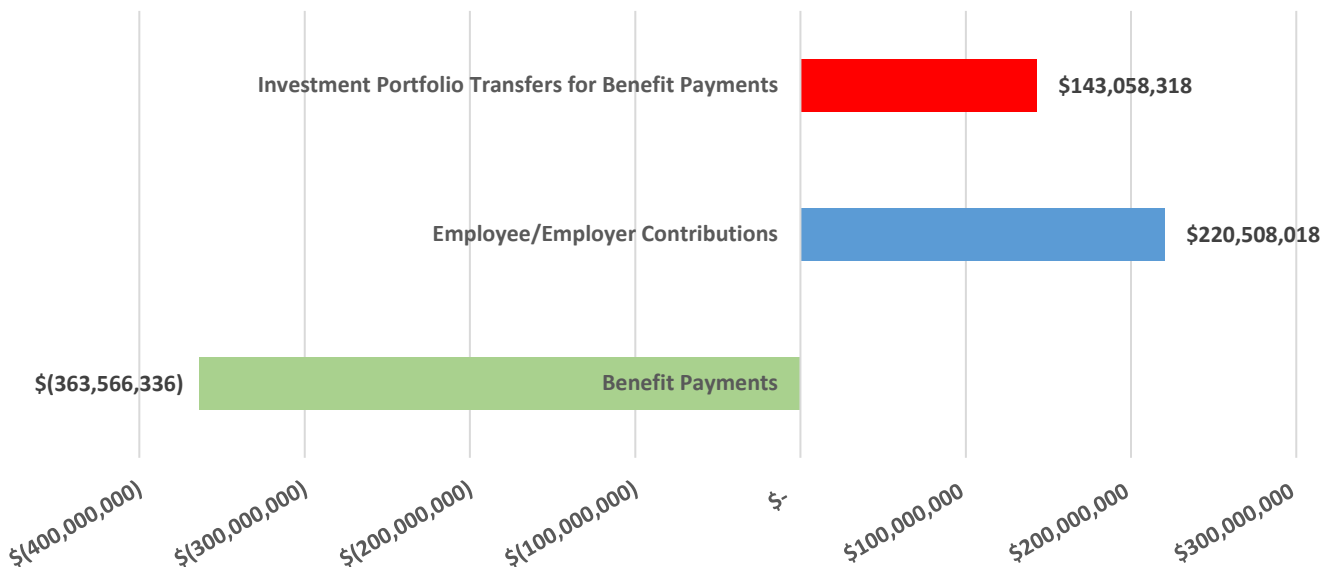


Total Retiree Payroll = \$1,431,602,511

Total Contributions: \$ 855,985,508

**** Due to adjustments to Employer reports contributions amounts are subject to change**

FY24 Contributions: Investment Income & Contributions thru September 2023



**** Total Refunds Paid during this period was \$14,699,903**

VACANCY REPORT			
Position	Division	Date Vacated	Status
Facility Manager	ASD	9/16/2023	Interviewing
Retirement Specialist I	Member Services	9/16/2023	Interviewing
Public Relations Coordinator-Advanced	Outreach	10/20/2023	Interviewing
Retirement Specialist II	Member Services	10/28/2023	Interviewing

PERA has 87 authorized FTE and currently has 4 vacancies.

ADDITIONS/DEPARTURES/PROMOTIONS			
Employee	Position/Division	Date Started/Vacated	Status
Victoria Chavez	Public Relations Coordinator-Advanced /Outreach	10/28/2023	Promotion
Natalie Padilla	Public Relations Coordinator-Advanced /Outreach	10/20/2023	Departure

2023 AIRTIME PURCHASES	
Plan Type	October Purchases
State Plan 3	7
Municipal Plan 1	0
Municipal Plan 2	2
Municipal Plan 3	2
Municipal Plan 4	0
Municipal Detention Plan 1	0
Municipal Fire Plan 5	4
Municipal Police Plan 3	0
Municipal Police Plan 4	0
Municipal Police Plan 5	4
State Police/Corrections Plan	<u>4</u>
TOTAL:	23

2023 AIRTIME PURCHASES	
No. of Months	October Purchases
1	0
2	1
3	0
4	1
5	0
6	2
7	3
8	4
9	1
10	0
11	0
12	<u>11</u>
TOTAL:	24

PERA SmartSave Items of Interest – September 2023		
<u>County by Region North – Peter Rappmund</u>	<u>In-Person Individual and Group Meetings</u>	<u>Virtual Individual and Group Meetings</u>
Bernalillo		4
Colfax		1
Harding		1
McKinley		1
Mora		1
Rio Arriba	2	4
San Juan	161	14
San Miguel		6
Santa Fe	32	53
Statewide	3	28
Taos		5
<u>County by Region Central - Paul Lium</u>	<u>In-Person Individual and Group Meetings</u>	<u>Virtual Individual and Group Meetings</u>
Bernalillo	71	
Cibola	18	
McKinley	4	
Torrance	8	
Valencia	2	
<u>County by Region South - Linda Miller</u>	<u>In-Person Individual and Group Meetings</u>	<u>Virtual Individual and Group Meetings</u>
Catron		1
Chaves	12	17
Dona Ana	7	39
Eddy		4
Grant		7
Lea		8
Lincoln	10	6
Luna	4	11
Otero	2	2
Sierra	5	
Statewide		11
SmartSave Assets as of 9/30/2023 - \$784,289,560		
SmartSave Participants as of 9/30/2023 – 23,415		

2023 Independent Contracts Reviews	
Entity	# of Contracts Reviewed September 2023
NM Aging & Long-Term Services Department	3
Village of Cimarron	1
NM Department of Cultural Affairs	1
NM 2nd Judicial District Attorney's Office	1
NM 9 th Judicial District Attorney's Office	1
NM Taxation & Revenue Department	1
NM Department of Health	1
NM Department of Public Safety	1
NM Administrative Office of the Courts	1
Village of Bosque Farms	1
NM State Land Office	1
NM Regulation & Licensing Department	1
Rio Arriba County (LDWI Program)	<u>1</u>
SubTotal:	15
<u>Reviewed, but "Not in Pay Status"</u>	
NM Office of the State Engineer	2
NM Office of the Superintendent of Insurance	1
NM Aging & Long-Term Services Department	1
NM Corrections Department	<u>1</u>
SubTotal:	5
Total:	20

- Securities Litigation Update: Seeking Lead Plaintiff Status – Verizon Communications Inc. Securities Class Action Litigation