

El Paso County Retirement Plan

ACTUARIAL VALUATION REPORT
as of January 1, 2023





April 25, 2023

The Board of Trustees
El Paso County Retirement Plan
2880 International Circle, Suite N030
Colorado Springs, CO 80910

Re: Actuarial Valuation of the El Paso County Retirement Plan as of January 1, 2023

Dear Board Members:

We are pleased to present our Report on the actuarial valuation of the El Paso County Retirement Plan as of January 1, 2023.

This Report presents the results of the January 1, 2023 actuarial valuation of the El Paso County Retirement Plan. The Report describes the current actuarial condition of the El Paso County Retirement Plan, determines the Actuarially Determined Contribution (ADC), and analyzes changes in these rates.

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the El Paso County Retirement Plan as of the valuation date.

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, ERISA, and the Statements of the Governmental Accounting Standards Board.

The valuation was based upon information, furnished by the Plan, concerning Plan benefits, financial transactions, active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. This report and these calculations are not intended as legal or accounting advice, and we would recommend review by legal counsel for the compliance of these calculations with all relevant agreements.

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

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events for the Pension Plan. 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;
- 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 10.80% employer and 8.00% employee contributions are the rates that comply with the Plan Document. Due to the many factors affecting a retirement system, users of this report should be aware that contributions made at that rate do not necessarily guarantee long-term benefit security.

This report does not include a detailed assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the plan's financial condition.

We believe that the assumptions and methods used in this report are reasonable and appropriate for the purpose for which they have been used. However, other assumptions and methods could also be reasonable and could result in materially different results. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial.

Certification

The undersigned are independent actuaries and consultants. Paul Wood and Bill Detweiler are actuaries and meet the Qualification Standards of the American Academy of Actuaries. Both of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

By 

Paul Wood, ASA, FCA, MAAA
Senior Consultant

By 

Bill Detweiler, ASA, EA, FCA, MAAA
Consultant

Table of Contents

Page

Cover Letter

Section A	Executive Summary.....	2-6
Section B	Valuation Results	8-14
Section C	Plan Assets	16-19
Section D	Summary of Benefit Provisions.....	21-26
Section E	Summary of Participant Data.....	28-37
Section F	GASB Accounting Schedules	39-41
Section G	Actuarial Assumptions and Methods.....	43-49
Section H	Risks Associated with Measuring the Accrued Liability	51-53
Section I	30-Year Baseline Projection	55



SECTION A

EXECUTIVE SUMMARY

Executive Summary

Valuations are prepared annually, as of January 1 of each year, the first day of the fiscal year. The primary purposes of the valuation report are to measure the plan's liabilities, to determine the actuarially determined contribution rate and to analyze changes in the El Paso County Retirement Plan's actuarial position.

In addition, the report provides summaries of the member data, financial data, plan provisions, and actuarial assumptions and methods.

Exhibit A.1 El Paso County Retirement Plan Executive Summary		
	January 1, 2023	January 1, 2022
1. Actuarially Determined Contribution		
a. Total	\$ 40,166,403	\$ 36,741,241
b. Member Contributions	15,615,551	14,187,586
b. Net Employer Contribution	24,550,852	22,553,655
c. Net Employer %	12.58%	12.72%
2. Funded Status		
a. Actuarial Accrued Liability	\$ 724,780,703	\$ 687,487,828
b. Actuarial Value of Assets (AVA)	463,543,092	448,487,993
c. Unfunded Liability (AVA-basis)	261,237,611	238,999,835
d. Funded Ratio (AVA-basis)	64.0%	65.2%
e. Market Value of Assets (MVA)	\$ 431,543,815	\$ 491,482,250
f. Unfunded Liability (MVA-basis)	293,236,888	196,005,578
g. Funded Ratio (MVA-basis)	59.5%	71.5%
3. Summary of Census Data		
a. Actives		
i. Counts ¹	2,987	2,922
ii. Total Annual Projected Compensation ²	\$ 195,194,383	\$ 177,344,819
iii. Average Projected Compensation ²	66,280	61,771
iv. Average Age ²	42.5	42.7
v. Average Service ²	6.7	7.0
b. Members with Refunds Due Counts	523	403
c. Deferred Vested Member Counts ³	345	332
d. Retired and Disabled Member Counts	1,898	1,814
e. Beneficiary Counts	148	136
g. Total Members Included in Valuation	5,901	5,607

¹ Includes 51 members on leave of absence in 2022 and 42 members on leave of absence in 2023.

² Excludes members on leave of absence.

³ Includes 9 deferred disableds and 2 deferred beneficiaries in 2022, and 6 deferred disableds and 2 deferred beneficiaries in 2023.



Financing Objectives

The El Paso County Retirement Plan is supported by member contributions, employer contributions, and net earnings on the investments of the fund. Contribution rates are set in the plan document. Currently the contribution rate is set at 8.00% for members. The contribution rate for employers increased from 10.20% to 10.80% at January 1, 2023. Future increases are planned on January 1 of each year until the ultimate rate of 12.00% is reached on January 1, 2025.

The combined member and employer contributions are intended to be sufficient to pay the normal cost and to amortize the Unfunded Actuarial Accrued Liability (UAAL). Amortization bases for the UAAL are established each year and amortized based on the Board's policy. The Board's policy consists of amortizing the unfunded liability as of January 1, 2019, over a closed 30 year period with each subsequent amortization base created as a result of year to year experience changes over individual 25 year closed periods.

Progress toward Realization of Financing Objectives

The UAAL/(surplus) and the funded ratio (ratio of the actuarial value of assets to the actuarial accrued liability) illustrate the progress toward the realization of certain financing objectives. Based on the actuarial valuation as of January 1, 2023, the Plan has an unfunded liability of \$261.24 million and a funded ratio of 63.96%. The funded ratio decreased from 65.24% to 63.96% and the Net Employer Actuarially Determined Contribution (ADC) decreased, from 12.72% of pay, to 12.58% of pay.

The net employer Actuarially Determined Contribution as a percentage of pay for the year beginning January 1, 2023 is 12.58%. The expected Employer contribution is 10.80% of pay which creates a contribution shortfall of 1.78% of pay. This compares to a shortfall in the prior year of 2.52% of pay. The funded status is projected to slowly increase over the next 30 years. Section I contains the 30-year baseline projection.

Experience During the Year

The plan experienced a liability loss of \$15.08 million during fiscal year 2022. The largest source of this loss was due to salary increases that were greater than expected.

The plan experienced an actuarial asset loss of \$5.81 million during fiscal year 2022. This loss was due to the actuarial value of assets earning a return less than the assumed 7.00% return. The net overall result of the liability gain and the actuarial asset loss was an unfunded liability \$20.89 million higher than expected at January 1, 2023.

Assumptions and methods

There have been no changes in assumptions and methods since the prior valuation. The assumptions are those adopted by the Board in October 2018 based upon the actuary's analysis and recommendations from the Experience Study for the period January 1, 2013 to December 31, 2017. Additionally, the discount rate assumption decreased from 7.50% to 7.00% and the payroll growth rate used to amortize



the unfunded accrued liability increased from 2.50% to 3.00% effective with the January 1, 2021 valuation.

The actuarial assumptions are summarized in Section G of our report.

The results of any 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. The actuarial calculations presented in this Report are intended to provide information for rational decision making.

Benefit Provisions

All of the benefit provisions reflected in this valuation are those which were in effect on January 1, 2023. Since the prior valuation, the employer contributions have been increased from 10.20% to 10.80%. Future increases are planned on January 1 of each year until the ultimate rate of 12.00% is reached on January 1, 2025.

The benefit provisions are summarized in Section D of our Report.

Data

El Paso County staff supplied data for retired, active and inactive members as of January 1, 2023. We did not audit this data, but we did apply a number of tests to the data, and we have concluded that the data is reasonable and consistent with the prior year's data. El Paso County staff also supplied asset data as of January 1, 2023.



Financial Position

Due mostly to larger than expected increases in payroll, the funded ratio on both an actuarial value of assets basis and a market value of assets basis decreased from January 1, 2022 to January 1, 2023.

Exhibit A.2 Funded Status Summary (\$ in millions)		
Valuation Date	January 1, 2023	January 1, 2022
Accrued Liability	\$724.78	\$687.49
Actuarial Value of Assets (smoothed)	463.54	448.49
Unfunded Accrued Liability (AVA basis)	\$261.24	\$239.00
Funded Ratio (AVA basis)	64.0%	65.2%
Market Value of Assets	\$431.54	\$491.48
Unfunded Accrued Liability (MVA basis)	\$293.24	\$196.01
Funded Ratio (MVA basis)	59.5%	71.5%
Market Value Rate of Return	(10.2%)	16.9%
Actuarial Value Rate of Return	5.7%	10.1%

The funded status alone is not appropriate for assessing the need for future contributions. The funded status is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

Investment losses increased the Total Actuarially Determined Contribution by roughly 0.2%. Liability losses increased the Total Actuarially Determined Contribution by approximately 0.5%. Total payroll growth and other factors including the decrease in normal cost decreased the Total Actuarially Determined Contributions by roughly 0.8%. The Employer Net Actuarially Determined Contribution of 12.58% of pay for Fiscal Year 2023 is based on contributions being made throughout the year.

Exhibit A.3 Contribution Summary All Numbers Reported Middle of Year, Percent of Pay		
Fiscal Year Beginning	January 1, 2023	January 1, 2022
Total Normal Cost	11.89%	12.08%
Amortization of UAL	8.36%	8.22%
Assumed Expenses	0.33%	0.42%
Total Actuarially Determined Contribution	20.58%	20.72%
Estimated Member Contribution	8.00%	8.00%
Actuarially Determined Employer Contribution	12.58%	12.72%
Estimated County Contribution	10.80%	10.20%
Contribution Shortfall	1.78%	2.52%

SECTION B

VALUATION RESULTS

Actuarial Accrued Liability

Exhibit B.1 El Paso County Retirement Plan Actuarial Valuation Results Actuarial Accrued Liability		
	January 1, 2023	January 1, 2022
1. Active Members		
a. Retirement Benefits	\$ 233,740,905	\$ 228,596,093
b. Withdrawal Benefits	\$ 6,303,541	2,302,006
c. Disability Benefits	\$ 3,522,992	3,407,978
d. Death Benefits	\$ 3,806,653	3,597,277
f. Total	<u>\$ 247,374,091</u>	<u>\$ 237,903,354</u>
2. Members on Leave of Absence	\$ 1,098,769	\$ 1,145,607
3. Members with Deferred Benefits	\$ 30,804,669	\$ 29,379,268
4. Members Receiving Benefits	<u>\$ 445,503,174</u>	<u>\$ 419,059,599</u>
5. Total	\$ 724,780,703	\$ 687,487,828
6. Actuarial Value of Assets	<u>\$ 463,543,092</u>	<u>\$ 448,487,993</u>
7. Unfunded Actuarial Accrued Liability	\$ 261,237,611	\$ 238,999,835

Normal Cost

Exhibit B.2 El Paso County Retirement Plan Actuarial Valuation Results Normal Cost		
	January 1, 2023	January 1, 2022
1. Total Dollar Normal Cost		
a. Retirement Benefits	\$ 16,423,122	\$ 15,227,241
b. Withdrawal Benefits	5,909,956	5,377,854
c. Disability Benefits	524,077	484,575
d. Death Benefits	358,394	330,040
e. Total	<u>\$ 23,215,549</u>	<u>\$ 21,419,710</u>
2. Normal Cost as a Percentage of Pay	11.89%	12.08%

Present Value of Projected Benefits

Exhibit B.3 El Paso County Retirement Plan Actuarial Valuation Results Present Value of Projected Benefits		
	January 1, 2023	January 1, 2022
1. Active Members		
a. Retirement Benefits	\$ 353,360,072	\$ 338,622,662
b. Withdrawal Benefits	52,809,059	44,232,114
c. Disability Benefits	7,233,936	6,812,583
d. Death Benefits	6,466,314	6,016,751
e. Total	<u>\$ 419,869,381</u>	<u>\$ 395,684,110</u>
2. Members on Leave of Absence	\$ 1,098,769	\$ 1,145,607
3. Members with Deferred Benefits	\$ 30,804,669	\$ 29,379,268
4. Members Receiving Benefits	<u>\$ 445,503,174</u>	<u>\$ 419,059,599</u>
5. Total	<u>\$ 897,275,993</u>	<u>\$ 845,268,584</u>

Actuarially Determined Contribution

Exhibit B.4 El Paso County Retirement Plan Development of the Actuarially Determined Contribution				
Fiscal Year Beginning	January 1, 2023		January 1, 2022	
	Dollar	Percent of Pay	Dollar	Percent of Pay
1. Total Normal Cost	\$ 23,215,549	11.89%	\$ 21,419,710	12.08%
2. Amortization of Unfunded Actuarial Liability	16,312,161	8.36%	14,578,644	8.22%
3. Assumed Administrative Expenses	638,693	0.33%	742,887	0.42%
4. Total Actuarially Determined Contribution (ADC)	\$ 40,166,403	20.58%	\$ 36,741,241	20.72%
5. Estimated Member Contribution	15,615,551	8.00%	14,187,586	8.00%
6. Actuarially Determined Employer Contribution	\$ 24,550,852	12.58%	\$ 22,553,655	12.72%
7. Estimated Employer Contribution	21,080,993	10.80%	18,089,172	10.20%
8. Contribution Shortfall	\$ 3,469,859	1.78%	\$ 4,464,483	2.52%
9. Annual Projected Payroll	\$ 195,194,383		\$177,344,819	

Amortization of Unfunded Actuarial Liability as of January 1, 2023

The Actuarially Determined Contribution (ADC) is calculated in accordance with the Funding Policy adopted by the Board. The unfunded actuarial accrued liability (UAAL) is amortized as a level percent of payroll using a layered approach beginning January 1, 2019. The UAAL as of January 1, 2019 was amortized over a 30-year closed period. Fluctuations in the UAAL due to plan experience different than assumed or changes in actuarial assumptions, methods or plan provisions subsequent to January 1, 2019 are amortized over a 25-year period.

The following summarizes the outstanding bases as of January 1, 2023.

Exhibit B.5 El Paso County Retirement Plan Calcualtion of UAAL Amortization Payment				
UAAL as of January 1, 2023				\$261,237,611
Total Prior Remaining Amortization Bases as of January 1, 2023				<u>240,649,558</u>
2023 Amortization Base as of January 1, 2023				\$20,588,053
2023 Payment (25 years, level percent of pay amortization)				\$1,296,156
		As of January 1, 2023		
Base Year	Initial Base	Remaining Base	Years Remaining	Amortization Payment
2023	\$ 20,588,053	\$ 20,588,053	25	\$ 1,296,156
2022	(10,879,698)	(10,932,759)	24	(705,498)
2021	39,402,891	39,723,705	23	2,631,749
2020	8,697,313	8,725,231	22	594,527
2019	197,244,650	203,133,381	26	12,495,227
Total		\$ 261,237,611		\$ 16,312,161

Plan Experience

Exhibit B.6 El Paso County Retirement Plan Plan Experience for Fiscal Year 2022		
Liabilities		
1. Actuarial Accrued Liability at January 1, 2022		687,487,828
2. Normal Cost for Fiscal Year 2022		21,419,710
3. Benefit Payments during Fiscal Year 2022		46,473,494
4. Interest on Items 1-3 to End of Year		47,262,096
5. Expected Actuarial Accrued Liability at January 1, 2023		709,696,140
6. Actual Actuarial Accrued Liability at January 1, 2023		724,780,703
7. Liability Gain/(Loss)		(15,084,563)
Assets		
8. Actuarial Value of Assets at January 1, 2022	\$	448,487,993
9. Benefit Payments and Expenses during Fiscal Year 2022		47,096,609
10. Contributions during Fiscal Year 2022		36,914,131
11. Interest on Items 8 -10 to End of Year		31,043,800
12. Expected Actuarial Value of Assets at January 1, 2023		469,349,315
13. Actual Actuarial Value of Assets at January 1, 2023		463,543,092
14. Asset Gain/(Loss)		(5,806,223)
Total		
15. Total Gain/(Loss)	\$	(20,890,786)

Plan Experience By Source

Exhibit B.7 Adams County Retirement Plan Plan Experience for Fiscal Year 2022 Gain/(Loss) by Source	
1. Asset Gain/(Loss)	\$ (5,806,223)
2. Liability Gain/(Loss)	
a. Salary Gain/(Loss)	\$ (8,540,750)
b. New Members and Rehire Gain/(Loss)	(2,931,037)
c. Withdrawal Gain/(Loss)	220,420
d. Disability Gain/(Loss)	(43,957)
e. Retirement Gain/(Loss)	(1,831,375)
f. Active Mortality Gain/(Loss)	(54,502)
g. Annuitant Mortality Gain/(Loss)	(781,385)
h. Other Demographic*	(1,121,977)
i. Total	\$ (15,084,563)
3. Total Gain/(Loss)	\$ (20,890,786)

**Includes service purchases*

SECTION C

PLAN ASSETS

Statement of Plan Net Assets

Exhibit C.1
El Paso County Retirement Plan
Statement of Plan Net Assets

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Assets		
Investments, at fair value:		
Cash	\$ 7,291,277	\$ 10,311,753
Domestic Equities	140,012,828	142,693,139
International Equities	77,896,317	92,491,668
Fixed income	69,097,800	92,876,560
Real assets	68,469,368	83,901,494
Multi-asset fund	39,713,033	36,696,833
Hedge fund of funds	16,824,948	17,881,880
Commodities funds	12,856,934	15,284,255
Total cash and investments	<u>\$ 432,162,505</u>	<u>\$ 492,137,582</u>
Receivables	137,031	104,306
Capital Assets, Net	2,679	9,107
Total assets	<u>\$ 432,302,215</u>	<u>\$ 492,250,995</u>
Liabilities and net assets held in trust for benefits		
Accrued liabilities	758,400	768,745
Total payables	<u>\$ 758,400</u>	<u>\$ 768,745</u>
Net assets held in trust for pension benefits	<u><u>\$ 431,543,815</u></u>	<u><u>\$ 491,482,250</u></u>

Statement of Changes in Plan Net Assets

Exhibit C.2
El Paso County Retirement Plan
Statement of Changes in Plan Net Assets

	Year Ended December 31, 2022	Year Ended December 31, 2021
Additions to Net Assets Attributed to:		
Contributions:		
Employer contributions	\$ 19,089,097	\$ 14,078,462
Employees contributions	17,822,474	16,013,442
Other	2,560	2,925,145
Total contributions	<u>\$ 36,914,131</u>	<u>\$ 33,017,049</u>
Investment Income:		
Net appreciation in fair value of investments	\$ (55,451,901)	\$ 67,568,302
Interest and Dividends	8,028,157	7,213,297
Total Investment Income	<u>\$ (47,423,744)</u>	<u>\$ 74,781,599</u>
Less Investment expense	(2,332,213)	(2,822,772)
Net investment income	<u>\$ (49,755,957)</u>	<u>\$ 71,958,827</u>
Total additions	<u>\$ (12,841,826)</u>	<u>\$ 104,975,876</u>
Deductions to Net Assets Attributed to:		
Benefit payments	\$ 40,843,345	\$ 38,072,398
Termination Refunds	5,271,822	4,851,083
Death	358,327	242,864
Administrative expenses	623,115	724,768
Total deductions	<u>\$ 47,096,609</u>	<u>\$ 43,891,113</u>
Change in net assets	(59,938,435)	61,084,763
Net assets held in trust for benefits:		
Beginning of year	491,482,250	430,397,487
End of year	<u><u>\$ 431,543,815</u></u>	<u><u>\$ 491,482,250</u></u>



Actuarial Value of Assets

Exhibit C.3 El Paso County Retirement Plan Development of the Actuarial Value of Assets					
Item			Year Ending December 31, 2022		
1.	Actuarial value of assets, at beginning of year (prior to corridor)		\$	448,487,993	
2.	Market value of assets, at beginning of year		\$	491,482,250	
3.	Net new investments				
a.	Contributions received for prior plan year		\$	36,914,131	
b.	Benefits paid and administrative expenses			(47,096,609)	
c.	Net		\$	(10,182,478)	
4.	Market value of assets, at end of year		\$	431,543,815	
5.	Net MVA earnings [(4) - (2) - (3c)]		\$	(49,755,957)	
6.	Assumed investment return rate			7.00%	
7.	Expected return		\$	34,053,398	
8.	Excess return [(5) - (7)]		\$	(83,809,355)	
9.	Expected actuarial value of assets as of December 31, 2022 [(1) + (3c) + (7)]		\$	472,358,913	
10.	Deferred amounts for fiscal year ending December 31,				
	<u>Year</u>	<u>Gain/(Loss)</u>	<u>20% Recognized This Year</u>	<u>Percent Deferred</u>	<u>Amount Deferred</u>
a.	2022	\$ (83,809,355)	\$ (16,761,871)	80%	\$ (67,047,484)
b.	2021	42,205,158	8,441,032	60%	25,323,094
c.	2020	10,608,136	2,121,627	40%	4,243,255
d.	2019	27,409,286	5,481,857	20%	5,481,858
e.	2018	(40,492,334)	(8,098,466)	0%	-
f.	Total	\$ (44,079,109)	\$ (8,815,821)		\$ (31,999,277)
11.	Asset gain/(loss) to be recognized as of December 31, 2022		\$	(8,815,821)	
12.	80% of Market Value		\$	345,235,052	
13.	120% of Market Value		\$	517,852,578	
14.	Actuarial value of assets [(Item 9 + Item 11), but not more than Item 13 or less than Item 12]		\$	463,543,092	

Annual Rates of Investment Return

Exhibit C.4 Average Annual Rates of Investment Return				
Fiscal Year Ended December 31,	Actuarial Value		Market Value	
	Annual	Cumulative	Annual	Cumulative
1995	11.2 %	11.2 %	21.4 %	21.4 %
1996	12.0	11.6	16.4	18.9
1997	12.4	11.9	16.5	18.1
1998	14.0	12.4	11.4	16.4
1999	13.7	12.7	4.8	14.0
2000	9.5	12.1	0.8	11.7
2001	5.7	11.2	(2.5)	9.5
2002	(2.4)	9.4	(8.0)	7.2
2003	3.0	8.7	26.3	9.1
2004	5.7	8.4	10.9	9.3
2005	6.9	8.2	5.9	9.0
2006	9.9	8.4	14.8	9.5
2007	12.1	8.6	7.3	9.3
2008	(11.5)	7.1	(28.1)	6.1
2009	15.6	7.6	16.1	6.7
2010	2.3	7.3	13.4	7.1
2011	0.0	6.8	(2.0)	6.6
2012	0.7	6.5	12.3	6.9
2013	10.4	6.7	14.4	7.3
2014	9.1	6.8	6.9	7.2
2015	6.3	6.8	(0.7)	6.8
2016	7.7	6.8	9.2	7.0
2017	8.2	6.9	13.5	7.2
2018	5.4	6.8	(2.7)	6.8
2019	6.0	6.8	15.2	7.1
2020	8.1	6.8	9.7	7.2
2021	10.1	7.0	16.9	7.6
2022	5.7	6.9	(10.2)	6.9

SECTION D

SUMMARY OF BENEFIT PROVISIONS

Summary of Benefit Provisions

Based on the Plan Originally effective September 1, 1967 and amended and restated effective January 1, 2022

Participation

Employers included in the Plan are El Paso County, El Paso County Public Health; Pikes Peak Library District; 4th Judicial District Attorney; El Paso County Board of Retirement; and any other agency, district, or governmental organization with employees now in existence or hereafter formed that is authorized for participation in the Plan by the Retirement Board.

Membership in the Retirement Plan is automatic upon the first day of Covered Employment. You are in Covered Employment when you are an elected or appointed official defined as a full-time employee or as a job-share employee by the Employer's Personnel Rules, Regulations and Policies.

You are not eligible to participate in the Retirement Plan if you are (1) officers and employees of any federally funded program that specifically excludes the use of federal funds for retirement programs and (2) leased employees within the meaning of Code Section 414(n)(2).

Member Contributions

Effective January 1, 2014, each member contributes 8.00% of compensation on a monthly basis. Effective July 1, 2005 interest on contributions is credited at a rate of 3.0% per annum compounded annually.

Contribution Accumulation means the sum of the Member's contributions to this Plan, together with the interest rate thereon.

After December 31, 1983 member contributions are picked up and paid by the County as provided in Code Section 414(h).

Employer Contributions

The Employer will contribute an amount that along with member contributions will be sufficient to provide benefits provided by the plan and pay all administrative expenses of the plan. The Employer will contribute an amount that along with member contributions will be sufficient to provide benefits provided by the plan and pay all administrative expenses of the plan. The Employer will contribute according to the following schedule:

- The Employer will contribute at a rate of 10.20% of pay for the period from January 1, 2022 through December 31, 2022.
- The Employer will contribute at a rate of 10.80% of pay for the period from January 1, 2023 through December 31, 2023.
- The Employer will contribute at a rate of 11.40% of pay for the period from January 1, 2024 through December 31, 2024.
- The Employer will contribute at a rate of 12.00% of pay for the period from January 1, 2025 and thereafter.



Credited Service

The sum of Past Service, Membership Service and Purchased Service. The Credited Service is used in determining the amount of pension benefits and benefit eligibility. Past Service includes any period of service rendered as a Full-Time Employee prior to September 1, 1967. Membership Service includes all service rendered as a Full-Time Employee after August 21, 1967. Purchased Service is limited to five years and is subject to the conditions outlined in Article IV Section 7 of the Plan Document. All service is measured in years and months.

Compensation

Compensation is the total regular compensation paid to the member, reflecting the normal regular salary or hourly wage rate, before any payroll deductions for income tax, Social Security, group insurance, or any other purpose, excluding bonuses, extra pay, overtime pay, workers' compensation, single-sum payments received in lieu of accrued vacation and sick leave upon termination of employment or during the course of employment, required contributions by the County under this Plan, or for Social Security, group insurance, retainers' fees under contract, or the like, but including compensation deferred under Sections 125, 403(b), 414(h), or 457 of the Internal Revenue Code.

Final Average Monthly Compensation

- *Members hired prior to January 1, 2022:*

The average compensation of the highest paid 36 successive paid calendar months of Credited Service within the last 120 calendar months of Credited Service.

- *Members hired on or after January 1, 2022:*

The average compensation of the highest paid 60 successive paid calendar months of Credited Service within the last 60 calendar months of Credited Service.

Accrued Benefit (Monthly)

The benefit determined as for normal retirement payable at the member's normal retirement date considering current earnings and service.

Vested Accrued Benefit

Eligibility:

- *Members hired prior to January 1, 2013:*
Five years of Credited Service.
- *Members hired on or after January 1, 2013:*
Eight years of Credited Service.



Benefit:

100% of the Accrued Benefit determined as of the date of termination payable at his Normal Retirement Date. The benefit may be reduced if payment commences before the Normal Retirement Date or the Special Early Retirement Date. The member may elect to receive his accumulated contributions in lieu of all other benefits.

Normal Retirement

Eligibility:

- *Members hired prior to January 1, 2010:*
Attainment of age 62.
- *Members hired on or after January 1, 2010 and prior to January 1, 2013:*
Attainment of age 62 and 5 years of Credited Service.
- *Members hired on or after January 1, 2013:*
Attainment of age 62 and 8 years of Credited Service.

Monthly Benefit:

- *Members hired prior to January 1, 2010:*
2.22% of final average monthly compensation times years of credited service earned through December 31, 2012 plus 2.00% of final average monthly compensation times years of credited service earned on or after January 1, 2013.
Benefit shall not be greater than 75% of the member's final average monthly compensation.
- *Members hired on or after January 1, 2010 and prior to January 1, 2013:*
2.00% of final average monthly compensation times years of credited service.
Benefit shall not be greater than 75% of the member's final average monthly compensation.
- *Members hired on or after January 1, 2013:*
2.00% of final average monthly compensation times years of credited service.
Benefit shall not be greater than 60% of the member's final average monthly compensation.

Regular Early Retirement

Eligibility:

- *Members hired prior to January 1, 2013:*
Attainment of age 55 and 5 years of Credited Service.



- *Members hired on or after January 1, 2013:*

Attainment of age 55 and 8 years of Credited Service.

Benefit:

Vested Accrued Benefit determined as of the Early Retirement Date, reduced by 0.25% for each month payments commence prior to the Normal Retirement Date.

Special Early Retirement

Eligibility:

- *Members hired prior to January 1, 2010:*

Age plus credited service equals 75 or more at termination.

- *Members hired on or after January 1, 2010 and prior to January 1, 2013:*

- Attainment of 5 years of credited service and age plus credited service equals 75 or more at termination.

- *Members hired on or after January 1, 2013:*

Attainment of 8 years of credited service and age plus credited service equals 75 or more at termination. A minimum age of 50 applies to members hired on or after January 1, 2016.

- *Members hired on or after January 1, 2022 (Does not apply to Sworn Officers):*

Attainment of 8 years of credited service and age plus credited service equals 80 or more at termination. Minimum age of 50 applies.

Benefit:

Vested Accrued Benefit determined as of the Special Early Retirement Date, unreduced for early payment.

Disability Retirement

Eligibility:

Total and permanent disability. Member qualifies for disability under the County's long-term disability plan or under Title II of the Social Security Act.

Benefit:

Normal Retirement Benefit considering annual rate of compensation at disability and Credited Service that would have accumulated if employment had continued uninterrupted to the later of the Normal Retirement Date, or the date that the County's long-term disability benefits end.

Benefits commence at Normal Retirement Date, or if later, the first day of the month after payments cease under the County's long-term disability insurance contract. For members hired on



or after January 1, 2022, the disability retirement age is equal to the applicable "retirement age" as defined in Title II of the Federal Social Security Act

Termination Benefit

Members with less than five years of Credited Service receive a refund of the member's contributions.

Pre-Retirement Death Benefit

- *Member is not vested at his death:*

Beneficiary receives member's accumulated contributions at date of death.

- *Member is vested at his death:*

Spouse receives two times member's accumulated contributions at date of death; or

A monthly benefit equal to 60% of the member's vested accrued benefit on his date of death, commencing the first day of the month after the member's death or age 55 whichever is later. If the member dies while in active service, on or after attainment of age 62 or attainment of eligibility for immediate retirement under the rule of 75, the surviving spouse is eligible to receive a monthly benefit payable for life as if the member retired the day before death and elected the 100% joint and survivor annuity.

Pre-Retirement Death Benefit

A lump sum death benefit of \$3,000 is payable to the member's designated beneficiary. In addition, applicable benefits will be paid if the member has elected an option providing for payments to a beneficiary, or has elected the normal form of benefit and dies prior to having received benefits for 120 months, or prior to having received benefits equal to his total accumulated contributions as of the date of his retirement.

Normal Form

- *Members hired prior to January 1, 2022:*
10-year certain and life
- *Members hired on or after January 1, 2022:*
Straight life annuity

Optional Forms

- 100% joint and survivor annuity
- 50% joint and survivor annuity
- 100% joint and survivor annuity with pop up
- 50% joint and survivor annuity with pop up
- Single life annuity



Optional Form Conversion Factors

Optional annuity forms are actuarially equivalent based on 8.00% interest and the 1994 Group Annuity Mortality table blended 50% male and 50% female.

Payment Date

Benefits are paid on the first day of the month following eligibility for receipt.

SECTION E

SUMMARY OF PARTICIPANT DATA

Summary of Census Data

Exhibit E.1 El Paso County Retirement Plan Summary of Census Data		
	January 1, 2023	January 1, 2022
1. Active Members		
a. Counts ¹	2,987	2,922
b. Annual Projected Compensation ²	\$ 195,194,383	\$ 177,344,819
c. Average Annual Compensation ²	\$ 66,280	\$ 61,771
d. Average Age ²	42.5	42.7
e. Average Service ²	6.7	7.0
f. Accumulated Member Contributions with Interest ²	\$ 98,455,492	\$ 78,819,062
2. NonVested Members with Refunds Due		
a. Counts	523	403
b. Amount of Refunds Due	\$ 2,914,664	\$ 2,567,028
3. Deferred Vested Members³		
a. Counts	345	332
b. Annual Deferred Benefits	\$ 3,541,931	\$ 3,359,176
c. Average Benefit	\$ 10,266	\$ 10,118
4. Retired and Disabled Members		
a. Counts	1,898	1,814
b. Annual Benefits	\$ 40,203,948	\$ 37,717,130
c. Average Benefit	\$ 21,182	\$ 20,792
5. Beneficiaries		
a. Counts	148	136
b. Annual Benefits	\$ 1,973,288	\$ 1,801,461
c. Average Benefit	\$ 13,333	\$ 13,246
6. Total Members Included in Valuation	5,901	5,607

¹ Includes 51 members on leave of absence in 2022 and 42 members on leave of absence in 2023.

² Excludes members on leave of absence

³ Includes 9 deferred disableds and 2 deferred beneficiaries in 2022, and 6 deferred disableds and 2 deferred beneficiaries in 2023.



Summary of Changes in Participant Status

Exhibit E.2 Summary of Changes in Participant Status During Fiscal Year 2022						
	Active Members ¹	With Deferred Benefits ²	Retirees	Disabled Retirees	Beneficiaries	Total
As of January 1, 2022	2,922	332	1,803	11	136	5,204
Age retirements	(101)	(16)	116	1		0
Disability retirements						0
Deferred disability		1				1
Deaths	(6)	(1)	(31)		(5)	(43)
Vested terminations	(34)	34				0
Rehires	3	(3)				0
Cashouts	(302)	(2)				(304)
Expiration of benefits			(3)			(3)
Terminated nonvested with refunds due	(191)					(191)
New beneficiary or Alternate Payee					17	17
New entrants during the year ³	696					696
Data correction			1			1
Net change	65	13	83	1	12	174
As of January 1, 2023	2,987	345	1,886	12	148	5,378

¹ Includes 51 members on leave of absence in 2022 and 42 members on leave of absence in 2023.

² Includes 6 deferred disabled members and 2 deferred beneficiaries at January 1, 2023

³ Includes 73 members who were hired and terminated in 2022 with refunds due.

Active Member Counts by Age and Service

Exhibit E.3 Active Member Counts by Age and Service¹ as of January 1, 2023									
Age	Service								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35	
Under 20	6								
20-24	117	1							118
25-29	346	20	1						367
30-34	323	105	9						437
35-39	220	123	65	16					424
40-44	173	92	53	34	9				361
45-49	136	65	36	45	31	4			317
50-54	108	66	40	58	32	17			321
55-59	100	48	53	47	16	4	8	1	277
60-64	75	52	31	36	20	11	5	1	231
Over 65	24	20	17	11	10	1	2	1	86
Total	1,628	592	305	247	118	37	15	3	2,945

¹Excludes 42 members on leave of absence.

Active Member Average Salary by Age and Service

Exhibit E.4 Active Member Average Salary at Valuation Date by Age and Service¹ as of January 1, 2023									
Age	Service								
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35	Total
Under 20	42,949								42,949
20-24	52,733	*							52,698
25-29	59,235	66,679	*						59,737
30-34	61,449	68,830	74,149						63,484
35-39	60,959	73,175	76,952	76,650					67,547
40-44	66,182	73,670	80,003	82,489	93,257				72,330
45-49	61,923	71,418	82,378	79,384	84,056	92,732			71,225
50-54	62,038	69,056	67,488	78,707	89,034	104,134			72,093
55-59	57,910	59,359	68,439	75,660	78,204	87,400	68,733	*	65,072
60-64	61,915	62,410	63,050	65,117	71,322	69,084	66,233	*	63,984
Over 65	69,892	59,329	69,659	66,787	77,152	*	*	*	67,163
Total	60,728	69,035	73,559	76,126	82,571	89,148	65,900	64,078	66,280

¹ Average Salary not shown if group contains less than three members

Inactive Member Annual Benefit Summary by Age

Exhibit E.5 Summary of Inactive Members						
Age	Deferred Members ¹		Retired Members ²		Beneficiaries/QDROs	
	Number of Members	Annual Benefit	Number of Members	Annual Benefit	Number of Members	Annual Benefit
<50	143	\$ 1,637,025	3	\$ 169,679	3	\$ 68,510
50-54	100	1,067,085	36	1,487,813	3	45,796
55-59	77	622,074	164	4,824,399	5	102,668
60-64	25	215,747	342	8,683,877	16	325,839
65-69	0	0	430	9,066,927	15	255,435
70-74	0	0	417	8,349,258	37	370,521
75-79	0	0	275	4,381,000	25	297,555
80-84	0	0	133	2,022,420	22	265,396
85 & Up	0	0	98	1,218,573	22	241,567

¹ Includes 6 deferred disabled and 2 deferred beneficiaries.

² Includes 12 disabled members.

Inactive Member Statistics

Exhibit E.6		
Inactive Member Information as of January 1, 2023		
		Annual Benefit
Participants Receiving Benefits	Counts	Amount
Retired	1,886	\$ 40,028,816
Disabled	12	175,132
Beneficiaries	<u>148</u>	<u>1,973,288</u>
Total	2,046	\$ 42,177,236
Participants with Deferred Benefits		
Deferred Vested	337	\$ 3,436,617
Disabled	6	82,203
Beneficiaries	<u>2</u>	<u>23,111</u>
Total	345	\$ 3,541,931

Active Member Statistics

Exhibit E.7				
Active Member Information as of January 1, 2023				
Active Participants as of January 1, 2022¹	Counts	Average Age	Average Service	Average Payroll
Continuing	2,328	44.3	8.5	\$ 64,182
New	543	36.0	0.6	51,207
Total	2,871	42.7	7.0	\$ 61,771
Active Participants as of January 1, 2023¹				
Continuing	2,322	44.0	8.3	\$ 68,970
New	623	36.7	0.6	55,088
Total	2,945	42.5	6.7	\$ 66,280

¹Excludes 51 members on leave of absence as of January 1, 2022 and 42 members on leave of absence as of January 1, 2023.

Closed Group Projected Participant Counts

Exhibit E.8 Closed Group Projected Participant Counts				
Fiscal Year Ended December 31,	Actives	Participants Receiving Benefits	Participants with Deferred Benefits	Total
2023	2,945	2,190	324	5,459
2024	2,548	2,308	326	5,182
2025	2,234	2,411	335	4,980
2026	1,979	2,506	345	4,830
2027	1,768	2,603	346	4,717
2028	1,588	2,688	353	4,629
2029	1,431	2,771	353	4,555
2030	1,294	2,838	367	4,499
2031	1,170	2,895	373	4,438
2032	1,061	2,937	379	4,377
2033	964	2,974	378	4,316
2034	877	3,002	373	4,252
2035	799	3,021	364	4,184
2036	727	3,034	351	4,112
2037	659	3,041	334	4,034
2038	596	3,042	315	3,953
2039	537	3,032	298	3,867
2040	483	3,022	274	3,779
2041	431	3,003	255	3,689
2042	382	2,984	228	3,594
2043	336	2,953	207	3,496
2044	294	2,926	178	3,398
2045	254	2,885	159	3,298
2046	217	2,843	135	3,195
2047	184	2,792	116	3,092
2048	153	2,733	99	2,985
2049	126	2,672	81	2,879
2050	104	2,608	62	2,774
2051	84	2,536	48	2,668
2052	67	2,462	33	2,562

Closed Group Projected Benefit Payments

Exhibit E.9 10-Year Projected Benefit Payments (Closed Group)				
Fiscal Year Ended December 31,	Actives	Inactives	Total	
2023	\$ 4,888,621	\$42,410,630	\$	47,299,251
2024	6,729,723	42,222,714		48,952,437
2025	8,520,745	41,904,727		50,425,472
2026	10,202,966	41,541,511		51,744,477
2027	11,889,876	41,125,207		53,015,083
2028	13,791,740	40,619,163		54,410,903
2029	15,605,351	40,250,310		55,855,661
2030	17,375,702	39,692,526		57,068,228
2031	19,756,323	39,032,886		58,789,209
2032	22,070,943	38,340,465		60,411,408

History of Refunds

Exhibit E.10 History of Refunds	
Fiscal Year Ended December 31,	Refund Amount
1993	\$ 633,773
1994	544,504
1995	976,233
1996	1,003,922
1997	1,037,519
1998	1,132,847
1999	1,292,444
2000	1,407,960
2001	1,597,686
2002	998,709
2003	1,414,807
2004	1,634,848
2005	1,755,564
2006	1,545,738
2007	1,841,048
2008	1,997,056
2009	1,912,000
2010	1,775,640
2011	2,222,415
2012	1,548,635
2013	2,152,586
2014	1,812,170
2015	2,669,776
2016	2,750,891
2017	2,580,883
2018	3,489,279
2019	3,793,270
2020	2,888,677
2021	4,851,083
2022	5,271,822

SECTION F

HISTORICAL SCHEDULES

Schedule of Funding Progress

Exhibit F.1 El Paso County Retirement Plan Schedule of Funding Progress						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
(1)	(2)	(3)	(4)=(3)-(2)	(5)=(2)/(3)	(6)	(7)=(4)/(6)
1/1/2005	\$219,697,172	\$249,693,945	\$ 29,996,773	88.0%	\$ 92,757,865	32.3%
1/1/2006	234,660,873	270,180,072	35,519,199	86.9%	98,915,975	35.9%
1/1/2007	257,214,257	293,358,174	36,143,917	87.7%	103,402,651	35.0%
1/1/2008	285,740,434	312,549,096	26,808,662	91.4%	105,140,088	25.5%
1/1/2009	249,776,755	331,357,842	81,581,087	75.4%	102,703,108	79.4%
1/1/2010	282,841,807	354,376,983	71,535,176	79.8%	106,956,655	66.9%
1/1/2011	285,036,737	375,801,894	90,765,157	75.8%	112,232,244	80.9%
1/1/2012	280,213,871	393,086,243	112,872,372	71.3%	116,611,366	96.8%
1/1/2013	278,031,207	414,530,914	136,499,707	67.1%	115,762,200	117.9%
1/1/2014	301,765,407	434,464,401	132,698,994	69.5%	124,039,614	107.0%
1/1/2015	324,497,273	457,473,648	132,976,375	70.9%	130,478,820	101.9%
1/1/2016	339,106,141	484,640,011	145,533,870	70.0%	138,679,959	104.9%
1/1/2017	357,495,370	509,493,916	151,998,546	70.2%	146,372,726	103.8%
1/1/2018	378,292,120	531,589,132	153,297,012	71.2%	151,258,230	101.3%
1/1/2019	385,753,041	582,997,691	197,244,650	66.2%	158,714,516	124.3%
1/1/2020	396,034,427	603,800,177	207,765,750	65.6%	163,125,399	127.4%
1/1/2021	417,906,930	665,765,296	247,858,366	62.8%	173,607,206	142.8%
1/1/2022	448,487,993	687,487,828	238,999,835	65.2%	177,344,819	134.8%
1/1/2023	463,543,092	724,780,703	261,237,611	64.0%	195,194,383	133.8%

Schedule of Employer Contributions

Exhibit F.2 El Paso County Retirement Plan Schedule of Employer Contributions				
Fiscal Year Ended December 31,	Actuarially Determined Contribution	Actual County Contribution	Percentage Contributed	
2011	\$ 10,733,979	\$ 7,909,248	73.7%	
2012	11,299,311	8,736,581	77.3%	
2013	13,574,900	8,930,855	65.8%	
2014	10,603,632	10,321,799	97.3%	
2015	10,763,245	10,638,797	98.8%	
2016	11,628,725	11,315,200	97.3%	
2017	12,259,925	11,941,183	97.4%	
2018	12,466,202	12,329,099	98.9%	
2019	16,314,533	12,912,807	79.1%	
2020	17,269,676	14,230,827	82.4%	
2021	22,756,704	14,078,462	61.9%	
2022	22,553,655	19,089,097	84.6%	
2023	24,550,852	TBD	TBD	

Supplementary Information

Exhibit F.3 El Paso County Retirement Plan Supplementary Information	
Valuation Date	January 1, 2023
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Payroll Closed
Remaining Amortization Period	25 Years
Asset Valuation Method	5-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return	7.00%
Projected Salary Increases	Service-based increases from 3.0% to 8.00%
Inflation	2.50%
Cost of Living Adjustments	N/A

SECTION G

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Methods and Assumptions

I. Valuation Date

The valuation date is January 1st 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 uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate including administrative expenses, and (ii) a rate that will amortize the unfunded actuarial liability.

1. The valuation is prepared on the projected benefit basis. The present value of each participant's expected benefit payable at retirement or termination is determined, based on age, service, sex, compensation, and the interest rate assumed to be earned in the future. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of terminating with a service benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of participants and beneficiaries.
2. The employer contributions required to support the benefits of the Plan are determined following a level percent funding approach, and consist of a normal cost contribution including administrative expenses and an accrued liability contribution.
3. The normal contribution is determined using the Entry Age Normal cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of anticipated covered service, would be required in addition to the contributions of the participant to meet the cost of all benefits payable on their behalf.
4. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability. Amortization bases are established each year and amortized as a level percentage of payroll based on the Board's policy. The Board's policy consists of amortizing the unfunded liability as of January 1, 2019, over a closed 30-year period with each subsequent amortization base created as a result of year to year experience changes over individual 25-year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

III. Actuarial Value of Assets

The actuarial value of assets is based on recognizing gains and losses over a five-year period where gains and losses are determined by comparing the projected market value of assets (based on the prior year's market value of assets, cash flows during the year and expected investment returns on those amounts) to the current year's market value of assets. The actuarial value of assets must be between 80% and 120% of market value.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.00% per annum, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% real rate of return. This rate represents the assumed return, net of all investment expenses.
2. Salary increase rate: Inflation rate of 2.50%, plus merit component as shown.

Completed Years of Service	Percentage Increase in Salary		
	Merit	Inflation	Total
0	5.50 %	2.50 %	8.00 %
5	3.25	2.50	5.75
10	2.00	2.50	4.50
15	1.50	2.50	4.00
20	1.00	2.50	3.50
25	0.50	2.50	3.00

1. Wage inflation: 3.00%
2. Amortization Payroll growth: 3.00%

B. Demographic Assumptions

1. Mortality rates (pre- and post-retirement) – The valuation assumes fully generational mortality. The base mortality table used is the RP-2000 Generational Mortality Table. Future mortality improvements are assumed each year using the MP-2017 Scale. Sample rates for 2023 shown below:

Sample Attained Ages	Probability of Death Pre-Retirement	
	Men	Women
20	0.02 %	0.01 %
25	0.04	0.02
30	0.05	0.03
35	0.08	0.05
40	0.09	0.06
45	0.12	0.10
50	0.17	0.16
55	0.27	0.23
60	0.42	0.33
65	0.59	0.44
70	0.70	0.56

Sample Attained Ages	Probability of Death Post-Retirement	
	Men	Women
20	0.02 %	0.01 %
25	0.04	0.02
30	0.05	0.03
35	0.08	0.05
40	0.09	0.06
45	0.12	0.10
50	0.17	0.16
55	0.32	0.25
60	0.58	0.42
65	0.99	0.73
70	1.57	1.22
75	2.62	2.11
80	4.59	3.61
85	8.34	6.35
90	14.82	11.26

2. Mortality rates (post-disablement) – RP-2000 Disabled Mortality Table. Future mortality improvements are assumed each year using the MP-2017 Scale. Sample rates for 2023 shown below:

Sample Attained Ages	Probability of Death Post-Disability	
	Men	Women
20	1.58 %	0.58 %
25	2.10	0.75
30	2.43	0.82
35	2.27	0.76
40	1.90	0.68
45	1.73	0.67
50	2.36	1.07
55	3.11	1.52
60	3.61	1.82
65	3.89	2.11
70	4.43	2.75
75	5.69	3.93
80	7.80	5.70
85	10.67	8.22
90	14.82	11.97

3. Disability rates. Sample rates shown below:

Sample Attained Ages	Probability of Disablement Next Year	
	Men	Women
25	0.03 %	0.03 %
30	0.04	0.04
35	0.06	0.06
40	0.09	0.09
45	0.13	0.13
50	0.20	0.20
55	0.35	0.35
60	0.35	0.35

4. Termination rates (for causes other than death, disability or retirement): Termination rates are based on service. Termination rates are not applied after a member becomes eligible for a retirement benefit. Rates shown below:

Completed Years of Service	Probability of Termination Next Year	
	Men	Women
0	20.00 %	20.00 %
5	9.00	11.00
10	5.50	7.00
15	3.50	4.50
20	3.00	4.00
25	3.00	4.00
30	3.00	4.00
35	3.00	4.00

5. Refund Assumption for Active Members Who Withdraw:

Completed Years of Service	Percent Electing Refund
0-4	100%
5	60%
6	55%
7	50%
8	50%
9	50%
10+	25%

6. Retirement rates

Attained Age	Unreduced	Reduced
< 50	30.00%	
50	30.00%	
51	20.00%	
52	15.00%	
53	15.00%	
54	15.00%	
55	20.00%	5.00%
56	15.00%	5.00%
57	15.00%	7.00%
58	15.00%	5.00%
59	15.00%	7.00%
60	15.00%	12.00%
61	20.00%	10.00%
62	30.00%	
63	20.00%	
64	20.00%	
65	25.00%	
66	30.00%	
67-69	25.00%	
70-74	40.00%	
75+	100.00%	

- C. Expense Loading. Based on an estimate for the year by applying a year of inflation to the actual administrative expenses from Fiscal Year 2022. For 2023, the administrative expense loading is \$638,693.

D. Other Assumptions

1. Percent married: 75% of employees are assumed to be married.
2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
3. Cost of living adjustment: None.
4. Optional forms: Members are assumed to elect the normal form of benefit.
5. Future deferred vested participants are assumed to retire at age 55. Current deferred vested participants are assumed to retire at the earlier of age 57 or the age they meet special early retirement eligibility. Deferred disabled participants are assumed to commence benefits at age 62 (age 67 for members hired on or after January 1, 2022).
6. Pay increase timing: Middle of year.
7. Decrement timing: Decrements of all types are assumed to occur mid-year.
8. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
9. Decrement relativity: Decrement rates are used directly, without adjustment for multiple decrement table effects.
10. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

SECTION H

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY

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.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The computed contribution rate shown on Exhibit B.4 may be considered as a minimum contribution rate that complies with the Board's policy. Actual contributions are set by statute. The timely receipt of the contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the statutory rate 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:

	<u>January 1, 2023</u>	<u>January 1, 2022</u>	<u>January 1, 2021</u>	<u>January 1, 2021</u>	<u>January 1, 2019</u>
Ratio of the market value of assets to total payroll	2.2	2.8	2.5	2.5	2.3
Ratio of actuarial accrued liability to payroll	3.7	3.9	3.8	3.7	3.7
Ratio of actives to retirees and beneficiaries	1.5	1.5	1.5	1.6	1.6
Ratio of net cash flows to market value of assets	-2.3%	-2.2%	-2.1%	-2.9%	-3.3%
Duration of the actuarial accrued liability	12.3	12.3	12.1	N/A	N/A

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 4.0 times the payroll, a return on assets 5% different than assumed would equal 20% 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 5.5 times the payroll, a change in liability 2% other than assumed would equal 11% 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.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

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 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.

SECTION I

30-YEAR BASELINE PROJECTION

Baseline Projections – 8.0% Employee and 10.8% Employer Contributions with Additional Planned Employer Contribution Increases

El Paso County Retirement Plan Projection Results Based on the January 1, 2023 Actuarial Valuation Dollar values shown in Millions 7.00% Discount Rate With Additional Contributions											
Valuation as of January 1,	Market Return for Fiscal Year	Actual Employer Contribution Rate for Fiscal Year	Actual Member Contribution Rate for Fiscal Year	Compensation for Fiscal Year	Employer Contributions for Fiscal Year	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets(AVA)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Market Value of Assets	Funded Ratio Using MVA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2023	7.00%	10.80%	8.00%	\$ 195	\$ 21	\$ 725	\$ 464	\$ 261	64.0%	\$ 432	59.5%
2024	7.00%	11.40%	8.00%	202	23	750	481	269	64.1%	450	59.9%
2025	7.00%	12.00%	8.00%	210	25	776	495	281	63.8%	470	60.5%
2026	7.00%	12.00%	8.00%	217	26	802	509	294	63.4%	492	61.3%
2027	7.00%	12.00%	8.00%	225	27	829	515	314	62.1%	515	62.1%
2028	7.00%	12.00%	8.00%	232	28	857	540	317	63.0%	540	63.0%
2029	7.00%	12.00%	8.00%	240	29	885	566	319	63.9%	566	63.9%
2030	7.00%	12.00%	8.00%	248	30	914	593	321	64.9%	593	64.9%
2031	7.00%	12.00%	8.00%	256	31	944	622	322	65.9%	622	65.9%
2032	7.00%	12.00%	8.00%	265	32	975	653	322	67.0%	653	67.0%
2033	7.00%	12.00%	8.00%	273	33	1,007	686	321	68.1%	686	68.1%
2034	7.00%	12.00%	8.00%	282	34	1,041	721	320	69.3%	721	69.3%
2035	7.00%	12.00%	8.00%	291	35	1,076	758	317	70.5%	758	70.5%
2036	7.00%	12.00%	8.00%	300	36	1,112	798	314	71.8%	798	71.8%
2037	7.00%	12.00%	8.00%	310	37	1,149	840	309	73.1%	840	73.1%
2038	7.00%	12.00%	8.00%	319	38	1,188	885	303	74.5%	885	74.5%
2039	7.00%	12.00%	8.00%	329	39	1,228	933	295	76.0%	933	76.0%
2040	7.00%	12.00%	8.00%	339	41	1,270	984	286	77.5%	984	77.5%
2041	7.00%	12.00%	8.00%	350	42	1,313	1,037	275	79.0%	1,037	79.0%
2042	7.00%	12.00%	8.00%	360	43	1,357	1,094	263	80.6%	1,094	80.6%
2043	7.00%	12.00%	8.00%	371	45	1,403	1,155	248	82.3%	1,155	82.3%
2044	7.00%	12.00%	8.00%	382	46	1,451	1,219	232	84.0%	1,219	84.0%
2045	7.00%	12.00%	8.00%	394	47	1,500	1,287	213	85.8%	1,287	85.8%
2046	7.00%	12.00%	8.00%	405	49	1,550	1,358	192	87.6%	1,358	87.6%
2047	7.00%	12.00%	8.00%	417	50	1,602	1,434	168	89.5%	1,434	89.5%
2048	7.00%	12.00%	8.00%	430	52	1,656	1,515	141	91.5%	1,515	91.5%
2049	7.00%	12.00%	8.00%	443	53	1,711	1,600	111	93.5%	1,600	93.5%
2050	7.00%	12.00%	8.00%	456	55	1,768	1,690	78	95.6%	1,690	95.6%
2051	7.00%	12.00%	8.00%	470	56	1,828	1,786	41	97.7%	1,786	97.7%
2052	7.00%	12.00%	8.00%	484	58	1,888	1,888	1	100.0%	1,888	100.0%
2053	7.00%	12.00%	8.00%	498	60	1,951	1,995	(44)	102.3%	1,995	102.3%
2054	7.00%	12.00%	8.00%	513	62	2,016	2,109	(94)	104.6%	2,109	104.6%
2055	7.00%	12.00%	8.00%	529	63	2,082	2,230	(148)	107.1%	2,230	107.1%