

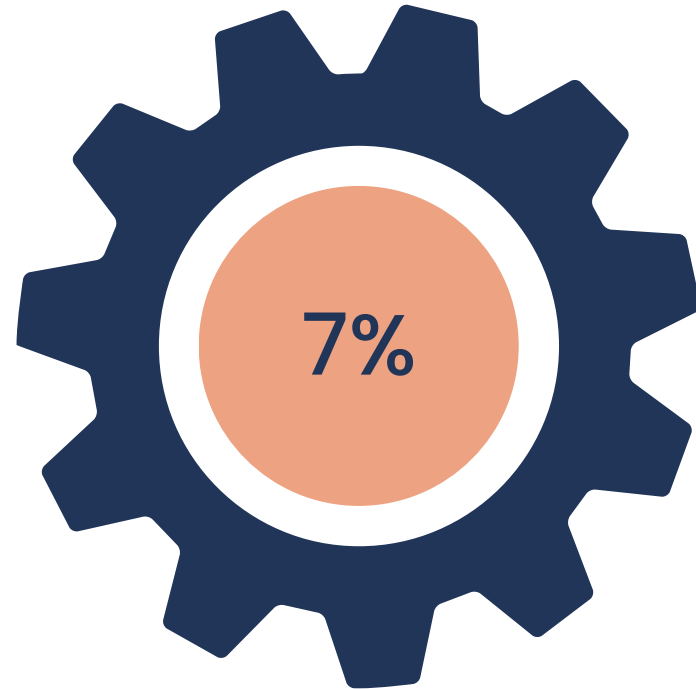


2023 PRESENTATION FOR FY2024 BUDGET

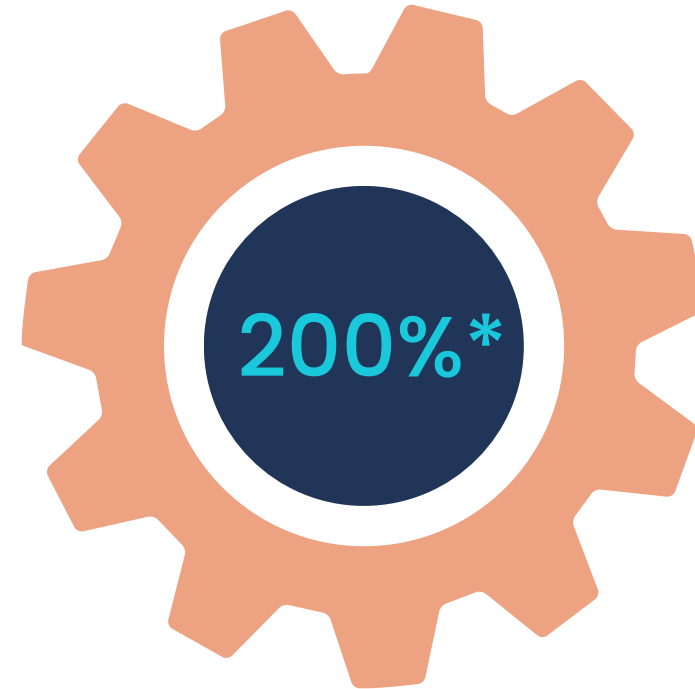
TCDRS RETIREMENT



BENEFITS PROVIDED



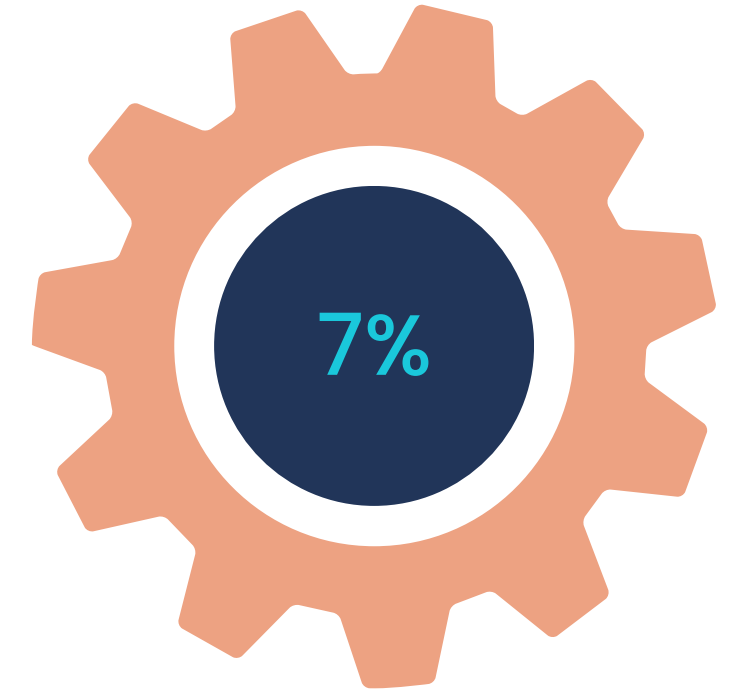
**Employee
Deposit Rate**



Matching Rate



Vesting Period



**Guaranteed
Interest Rate**

Retirement Eligibility

- Age 60 & 8 years of service
- Any age with 30 years of service
- Age + years of service = 75

*For employee contributions made on or after 1/1/2011

COUNTY COMPARISON

County	Employee Contribution %	County Match %	Years of Service for Vesting	Retirement Eligibility Rule	Most Recent Retiree COLA	Type and Rate of Retiree COLA	Group Term Life Benefit
Collin	7%	200%	8	75	2023	CPI 40%	No
Bexar*	7%	200%	8	75	2023	Flat 5%	No
Dallas	7%	200%	10	80	-	-	No
Fort Bend	7%	200%	8	75	2014	CPI 10%	No
Rockwall	7%	200%	8	75	2023	Flat 2%	No
Tarrant	7%	200%	8	75	2023	Flat 1%	No
Denton*	7%	225%	8	75	2023	Flat 3%	Active
Travis	7%	225%	8	75	2023	Flat 3%	No
Montgomery	6%	250%	8	75	2017	CPI 10%	No
Williamson	7%	250%	8	75	2023	Flat 2%	No

*Allows 20 years of service for retirement at any age, all others require 30 years of service for retirement at any age.

CITY COMPARISON

City	Employee Contribution %	City Match %	Years of Service for Vesting	Retirement Eligibility Rule	Rate of Retiree COLA**	Retiree Death Benefit
Allen	7%	200%	5	Age 60 + 5 Years Any Age + 20 Years	CPI 70%	Active & Retiree
Frisco	7%	200%	5	Age 60 + 5 Years Any Age + 20 Years	CPI 70%	Active & Retiree
McKinney	7%	200%	5	Age 60 + 5 Years Any Age + 20 Years	CPI 70%	Active & Retiree
Plano	7%	200%	5	Age 60 + 5 Years Any Age + 20 Years	CPI 70%	No
Richardson	7%	200%	5	Age 60 + 5 Years Any Age + 20 Years	CPI 50%	No
Wylie	7%	200%	5	Age 60 + 5 Years Any Age + 20 Years	CPI 70%	Active & Retiree

All surveyed cities have adopted a repeating COLA that remains in effect until rescinded.

PORTFOLIO RATE OF RETURN – TCDRS

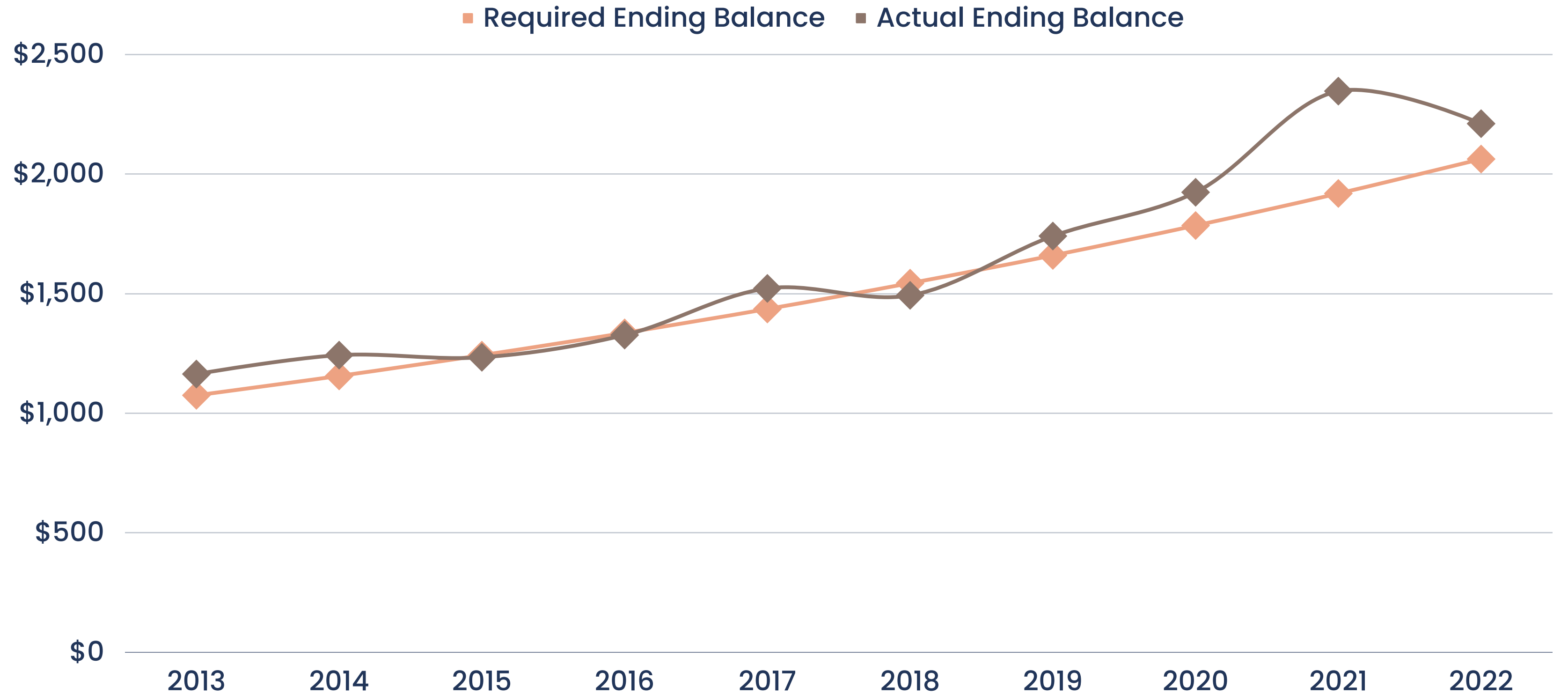
Year	Return
2013	16.4%
2014	6.8%
2015	-0.7%
2016	7.5%
2017	14.7%
2018	-1.9%
2019	16.6%
2020	10.5%
2021	22.0%
2022	-5.8%

Total Fund Return		
	As of 12/2022	As of 12/2021
1 year	-5.8%	22.0%
3 years	8.3%	16.3%
5 years	7.8%	12.1%
10 years	8.3%	10.2%
20 years	7.8%	8.2%
30 years	7.6%	8.2%

10 YEAR RATE OF RETURN (ILLUSTRATION ONLY) – TCDRS

Year	Required Account Value	Required Rate of Return	Required Ending Balance	Actual Account Value	Actual Rate of Return	Actual Ending Balance
2013	\$1,000	\$75	\$1,075	\$1,000	\$164	\$1,164
2014	\$1,075	\$81	\$1,156	\$1,164	\$79	\$1,243
2015	\$1,156	\$87	\$1,243	\$1,243	-\$9	\$1,234
2016	\$1,243	\$93	\$1,336	\$1,234	\$93	\$1,327
2017	\$1,336	\$100	\$1,436	\$1,327	\$195	\$1,522
2018	\$1,436	\$108	\$1,544	\$1,522	-\$29	\$1,493
2019	\$1,544	\$116	\$1,660	\$1,493	\$248	\$1,741
2020	\$1,660	\$125	\$1,785	\$1,741	\$183	\$1,924
2021	\$1,785	\$134	\$1,919	\$1,924	\$423	\$2,347
2022	\$1,919	\$144	\$2,063	\$2,347	-\$136	\$2,211

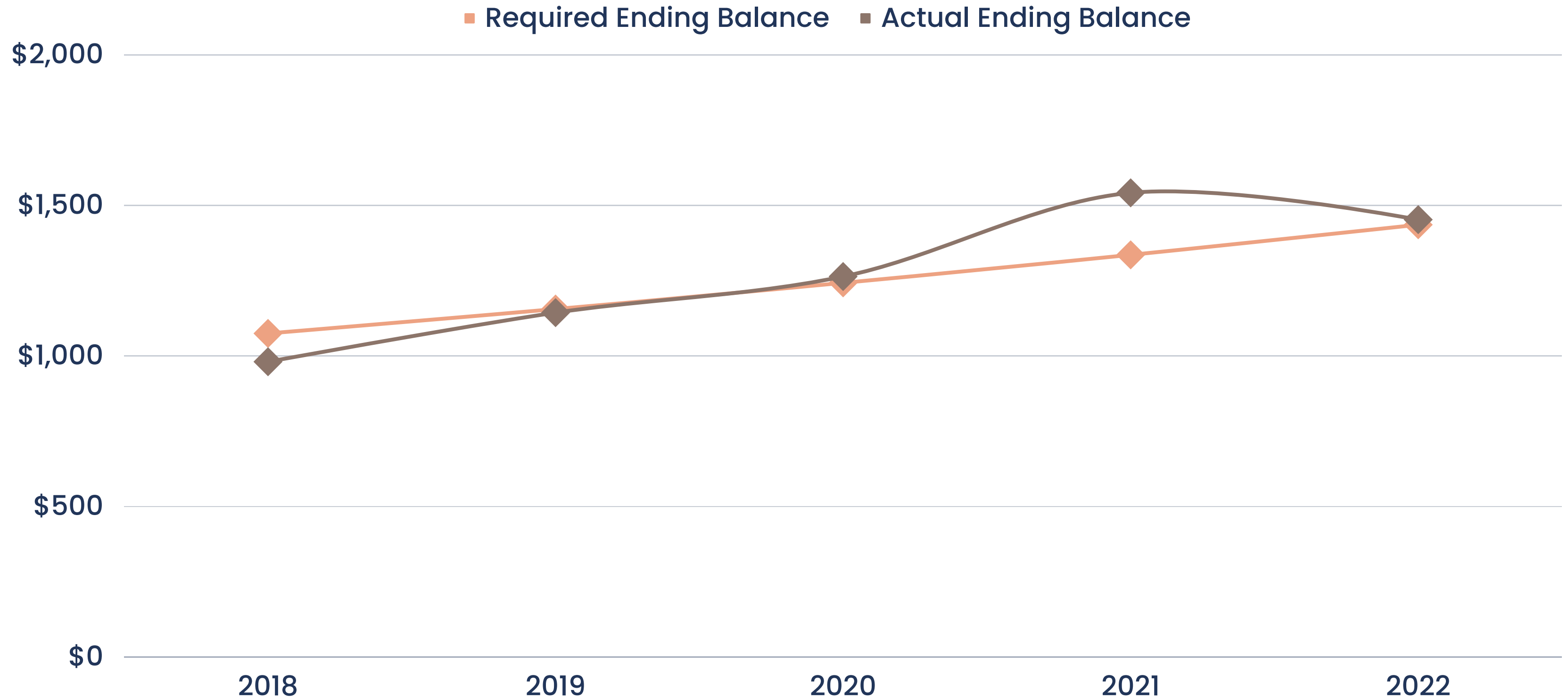
10 YEAR RATE OF RETURN (ILLUSTRATION ONLY) - TCDRS



5 YEAR RATE OF RETURN (ILLUSTRATION ONLY) – TCDRS

Year	Required Account Value	Required Rate of Return	Required Ending Balance	Actual Account Value	Actual Rate of Return	Actual Ending Balance
2018	\$1,000	\$75	\$1,075	\$1,000	-\$19	\$981
2019	\$1,075	\$81	\$1,156	\$981	\$163	\$1,144
2020	\$1,156	\$87	\$1,243	\$1,144	\$120	\$1,264
2021	\$1,243	\$93	\$1,336	\$1,264	\$278	\$1,542
2022	\$1,336	\$100	\$1,436	\$1,542	-\$89	\$1,453

5 YEAR RATE OF RETURN (ILLUSTRATION ONLY) – TCDRS

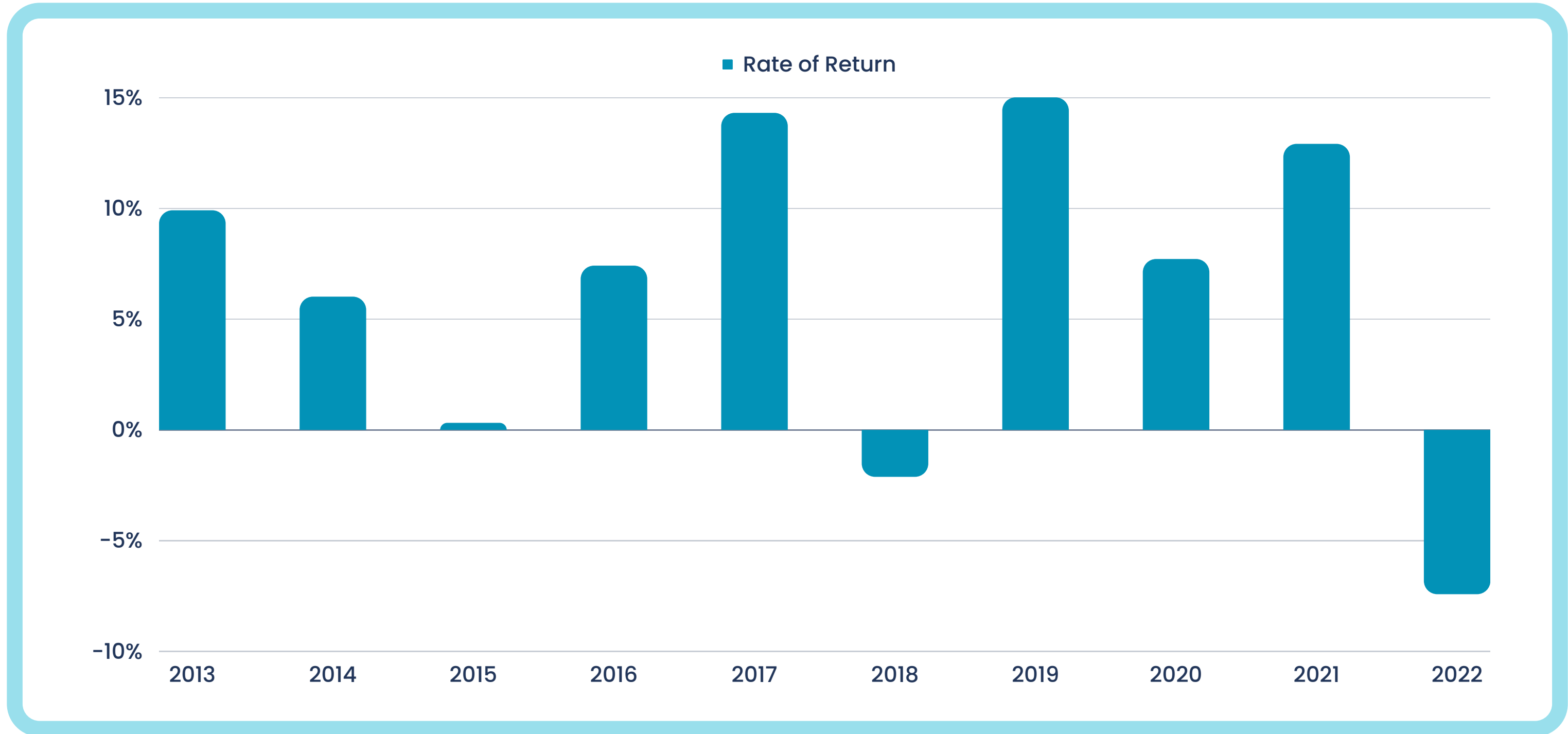


PORTFOLIO RATE OF RETURN – TMRS

Year	Return
2013	9.9%
2014	6.0%
2015	0.3%
2016	7.4%
2017	14.3%
2018	-2.1%
2019	15.0%
2020	7.7%
2021	12.9%
2022	-7.4%

Total Fund Return		
	As of 12/2022	As of 12/2021
1 year	-7.4%	12.9%
3 years	4.1%	12.1%
5 years	4.8%	9.3%
10 years	6.0%	7.8%

RATE OF RETURN (ILLUSTRATION ONLY) – TMRS



	2013	2014	2015	2016	2017	2018	2018	2020	2021	2022
Rate of Return	9.9%	6.0%	0.3%	7.4%	14.3%	-2.1%	15.0%	7.7%	12.9%	-7.4%

6.75% return required to cover guaranteed return for employee accounts

PORTFOLIO RATE OF RETURN COMPARISON

Year	TCDRS Return	TMRS Return
2013	16.4%	9.9%
2014	6.8%	6.0%
2015	-0.7%	0.3%
2016	7.5%	7.4%
2017	14.7%	14.3%
2018	-1.9%	-2.1%
2019	16.6%	15.0%
2020	10.5%	7.7%
2021	22.0%	12.9%
2022	-5.8%	-7.4%

Total Fund Return as of 12/2022		
	TCDRS	TMRS
1 year	-5.8%	-7.4%
3 years	8.3%	4.1%
5 years	7.8%	4.8%
10 years	8.3%	6.0%

COST

Year	Normal Rate (%)	UAAL Rate (%)	COLA Rate (%)	Total (%)	County Contribution (%)
2015	7.43	-1.22	.00	6.21	8.00
2016	7.44	-1.73	.00	5.71	8.00
2017	7.08	-0.86	.00	6.22	8.00
Made a lump sum payment of \$2,471,616 in December 2017 (COLA)					
2018	7.09	-0.32	.00	6.77	8.00
Made a lump sum payment of \$1,160,641 in October 2018					
2019	6.94	0.01	.00	6.95	8.00
Made a lump sum payment of \$13,274,348 in November 2019					
2020	6.93	0.91	.00	7.84	8.00
Made a lump sum payment of \$3,800,554 in August 2020					
2021	6.91	-0.05	.00	6.86	8.00
Made a lump sum payment of \$14,500,000 in October 2021					
2022	8.47	0.54	.00	9.01	9.50
Made a lump sum payment of \$14,591,176 In December 2022 (COLA)					
2023	7.67	0.31	.00	7.98	9.50
2024	7.66	0.41	.00	8.07	9.50

COUNTY RATE COMPARISON

Entity	2023 Required Rate	2023 Elected Rate	2024 Required Rate
Collin	7.98%	9.5%	8.07%
Rockwall	8.70%	9.00%	9.15%
Montgomery	12.02%	12.27%	12.06%
Tarrant	12.63%	19.50%	12.07%
Fort Bend	13.07%	N/A	13.10%
Dallas	13.23%	N/A	12.91%
Bexar	14.04%	14.44%	15.08%
Denton	14.22%	N/A	14.90%
Williamson	15.19%	N/A	15.28%
Travis	16.75%	17.17%	17.60%

CITY RATE COMPARISON

City	2023 Required Rate	2024 Required Rate
Allen	14.46%	15.19%
Frisco	14.12%	14.33%
McKinney	15.09%	15.48%
Plano	16.60%	17.64%
Richardson	14.33%	16.05%
Wylie	14.96%	15.30%

TMRS does not have elected rates. Cities contribute the required rate but have the option to make additional payments during the year

EMPLOYER CONTRIBUTIONS

Calendar Year	Payment Type	Total Employer Deposits	Contributing Employees	Cost Per Employee
2013	Standard Payment	\$7,437,259	1,824	\$4,077
	Lump Sum Payment	\$11,608,062		\$6,364
2014	Standard Payment	\$7,222,299	1,848	\$3,908
2015	Standard Payment	\$7,368,276	1,854	\$3,974
2016	Standard Payment	\$7,652,829	1,898	\$4,032
2017	Standard Payment	\$8,045,603	1,943	\$4,141
	Lump Sum Payment	\$2,471,616		\$1,272
2018	Standard Payment	\$8,721,011	1,943	\$4,488
	Lump Sum Payment	\$1,160,641		\$597
2019	Standard Payment	\$8,839,887	2,010	\$4,398
	Lump Sum Payment	\$13,274,384		\$6,604
2020	Standard Payment	\$9,826,263	1,986	\$4,948
	Lump Sum Payment	\$3,800,554		\$1,914
2021	Standard Payment	\$9,296,008	2,033	\$4,573
	Lump Sum Payment	\$14,500,000		\$7,132
2022	Standard Payment	\$11,757,288	2,082	\$5,647
	Lump Sum Payment	\$14,591,176		\$7,008
2013-2022	Total Payments	\$147,573,156	1,942	\$75,990

UNFUNDED LIABILITY UPDATE

Unfunded liability as of
December 2022:

\$8,352,824

Using the five-year asset recognition method which is a funded ratio of 98.9%.

If an immediate asset recognition method were used instead of a delayed asset recognition the unfunded liability would be \$30,596,486 which is a funded ratio of 96%.

Minimum required
contribution rate
for 2024

8.07%

TCDRS did not meet their investment return goal of 7.5% for 2022. Actual return was -5.8%.

Five-year asset recognition method is used by TCDRS. Actuarial gains and losses are smoothed over 5 years.

LIABILITY HISTORY

Calendar Year End	Budget Year	Five-year Asset Recognition Unfunded Liability	Five-year Asset Recognition Funded Percentage	Immediate Asset Recognition Unfunded Liability	Immediate Asset Recognition Funded Percentage
2013	2015	(\$14,704,583)	104.5%	(\$32,286,282)	109.8%
Made a lump sum payment of \$11,608,062 in November 2013					
2014	2016	(\$21,504,628)	106.2%	(\$27,012,753)	107.8%
2015	2017	(\$11,689,647)	103.1%	\$23,468,041	93.7%
2016	2018	(\$4,076,091)	100.8%	\$22,292,175	95.5%
2017	2019	\$1,160,641	99.8%	\$3,114,182	99.4%
Made a lump sum payment of \$2,471,616 in December 2017 (paid to fund COLA)					
2018	2020	\$13,274,348	97.6%	\$60,434,843	89%
Made a lump sum payment of \$1,160,641 in October 2018					
2019	2021	\$267,254	100.0%	\$3,800,554	99.4%
Made a lump sum payment of \$13,274,348 in November 2019					
2020	2022	\$21,536,178	96.8%	\$24,080,153	96.4%
Made a lump sum payment of \$3,800,554 in August 2020					
2021	2023	\$6,319,320	99.1%	(\$4,474,343)	100.6%
Made a lump sum payment of \$14,500,000 in October 2021					
2022	2024	\$8,352,824	98.9%	\$30,596,486	96%
Made a lump sum payment of \$14,591,176 in December 2022 (paid to fund COLA)					

UNFUNDED LIABILITY

Actual Unfunded Liability as of 12/31/2021	\$6,319,320
Adjustment due to Decrease in Discount Period	\$1,491,938
Scheduled UAAL Change	(\$2,626,130)
Recognition of Investment Gains and Losses for 2019-2023 (Using the Five-year Recognition Method)	\$5,166,218
Gain due to Additional Employer Contributions (Elected Rate greater than Required Rate)	(\$606,426)
Gain due to Additional Employer Contributions (Lump Sum Contribution)	(\$14,591,176)
Loss due to Plan Changes	\$14,591,176
Loss due to payroll and salary increase variations	\$984,722
Gain due to Termination and Withdrawal Experience	(\$776,906)
Loss due to Retirements Different than Expected (Includes disability)	\$5,969
Gain due to Less than Expected Retiree Mortality	(\$1,790,854)
Net Actuarial Loss from All Other Sources (Active death, proportionate service, etc.)	\$184,973
Actual Underfunded Liability as of 12/31/2022	\$8,352,824

UNFUNDED LIABILITY HISTORY

	2017	2018	2019	2020	2022
Actual (Over)/Unfunded Liability as of December 31	\$1,161,000	\$13,274,000	\$267,254	\$21,536,178	\$6,319,320
Adjustment due to Decrease in Discount Period	\$93,000	\$1,062,000	\$302,903	\$2,626,841	\$1,491,938
Scheduled UAAL Change	\$200,000	\$42,000	(\$218,851)	\$1,166,318	(\$2,626,130)
Recognition of Investment Gains and Losses for Previous Five Years (Using the Five-year Recognition Method)	\$12,392,000	\$821,000	\$938,067	(\$3,110,114)	\$5,166,218
Gain/Loss due to Additional Employer Contributions (Elected Rate greater than Required Rate)	(\$1,302,000)	(\$1,238,000)	(\$1,326,544)	(\$1,568,701)	(\$606,426)
Gain/Loss due to Additional Employer Contributions (Lump Sum Contribution)	(\$1,161,000)	(\$13,274,000)	(\$3,800,554)	(\$14,500,000)	(\$14,591,176)
Gain/Loss due Plan Changes					\$14,591,176
Gain/Loss due to Change in Actuarial Assumptions and Methods			\$25,257,661	\$2,861,511	
Gain/Loss due to Greater/Less than Expected Salary Increases	\$1,113,000	\$303,000	\$1,574,395	(\$1,855,587)	\$984,722
Gain/Loss due to Greater/Less than Expected Terminations and Withdrawals	(\$190,000)	(\$611,000)	(\$437,598)	(\$1,040,315)	(\$776,906)
Gain/Loss due to Retirements Different than Expected (Includes Disability)	(\$7,000)	(\$329,000)	(\$60,197)	(\$262,963)	\$5,969
Gain/Loss due to Greater/Less than Expected Retiree Mortality	\$975,000	\$143,000	(\$1,099,343)	\$230,787	(\$1,790,854)
Net Actuarial Gain/Loss from All Other Sources (Active Death, Proportionate Service, Etc.)	\$0	\$74,000	\$138,985	\$235,365	\$184,973
Actual Under/Overfunded Liability as of December 31 the Following Year	\$13,274,000	\$267,000	\$21,536,178	\$6,319,320	\$8,352,824

GASB STATEMENT 68

- Requires Collin County to report TCDRS pension liability/assets on the Comprehensive Annual Financial Report.
- Reporting requirements do not change how TCDRS plan funding is calculated.

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- Any significant volatility experience in pension liability will be reflected on the Comprehensive Annual Financial Report.

- Repeating Cost of Living Adjustments (COLAs) increase the calculated rate of financial reporting, as they assume annual COLAs for all plan participants continuously into the future and require this pension liability to be reported on the Comprehensive Annual Financial Report.
- The repeating COLA designation has no effect on the plan funding. It does not impact the plan's funded ratio or the required contribution rate, which are calculated for the purpose of funding the plan.

COST OF LIVING ADJUSTMENT (COLA)

- The TCDRS retirement benefit is a fixed benefit payment.
- The costs of goods and services, such as health care expenses, may go up each year due to inflation.
- A Cost of Living Adjustment (COLA) restores some of the purchasing power that the benefit loses over time.
- Electing a COLA is only effective for one plan year and is reassessed on a year-to-year basis. Court determines if a cost of living increase will be awarded each year.

Calendar Year	Budget Year	COLA Type	Lump Sum Payment to Fund COLA
2017	2018	40% CPI	\$2,471,616
2022	2023	40% CPI	\$14,591,176



There are three options:

- **Flat Rate COLA:** Flat percentage increase is applied to all retiree benefits.
- **CPI-based COLA:** Based on how much inflation has occurred since each employee retired. Adjustments for one retiree could differ from that of another retiree if they retired at different times.
- **No COLA.**



RETIREE COLA

COLAs are funded over a 15-year period.

Collin County has historically adopted various COLA options including:

- 40% to 100% of CPI
- 1% - 8% Flat Rate
- No COLA

The last COLA adopted was 40% CPI, which was approved for plan year 2023.

985

Individuals collecting TCDRS benefits as of the end of December 2022, an increase of 38 since the prior year.

403

Active employees eligible to retire.

371

Additional employees who will be eligible to retire in the next 5 years.

Pre-funded cost to add COLA in 2023:

Type of COLA	Pre-fund Cost
40% of CPI	\$8,670,640
60% of CPI	\$22,721,527
80% of CPI	\$37,279,393
1% Flat Rate	\$3,250,437

COURT DETERMINATION BUDGET INFORMATION

- Employer contribution rate
- Payment of any lump sum contribution for unfunded liability
- Determination of any retiree COLA