

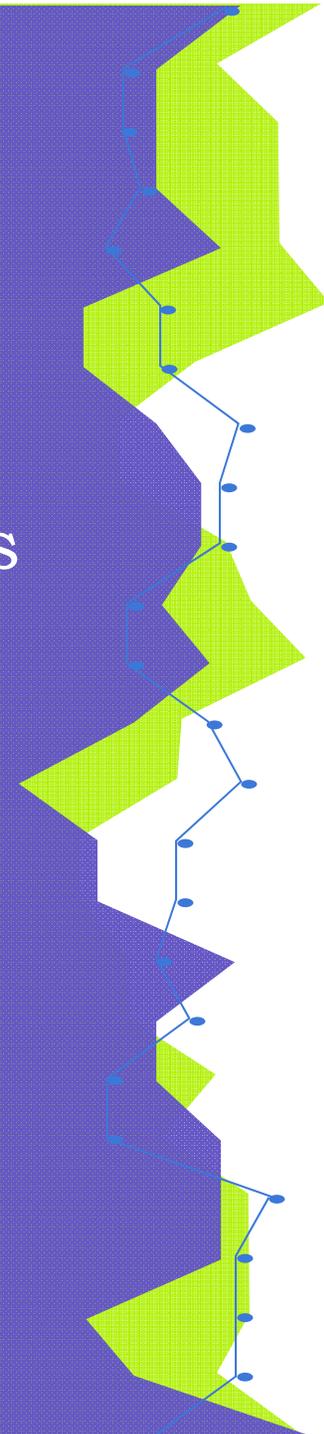
# TCDRS Retirement Presentation

FY2017 BUDGET WORKSHOP

# Benefits Provided

- Deposit Rate 7%
- Matching Rate 200%\*
- Vesting Period 8 years
- Retirement Eligibility
  - Age 60 & 8 years of service
  - 30 years of service
  - Age + years of service = 75
- Guaranteed Interest Rate 7%

\*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
Collin	7	200	8	75	2013	CPI 60%	Active & Retiree
Bexar*	7	200	8	75	2014	Flat 2%	No
Dallas	7	200	10	80	-	-	No
Denton*	7	220	8	75	2012	CPI 80%	Active
El Paso*	7	250	8	75	2016	Flat 1%	No
Fort Bend	7	200	8	75	2014	CPI 10%	No
Harris	7	225	8	75	-	-	No
Hidalgo*	7	200	8	75	2016	CPI 100%	No
Montgomery	6	250	8	75	2013	CPI 10%	No
Tarrant	7	200	8	75	2015	CPI 50%	No
Travis	7	225	8	75	2016	CPI 50%	No
Williamson	7	250	8	75	2016	CPI 60%	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	Retiree Increases 2016	Retiree Death Benefit
Allen	7	200	5	N/A	CPI 70%	Active & Retiree
Frisco	7	200	5	N/A	CPI 70%	Active & Retiree
McKinney	7	200	5	N/A	CPI 70%	Active & Retiree
Plano	7	200	5	N/A	CPI 70%	No
Richardson*	7	200	5	N/A	CPI 50%	No
Wylie	7	200	5	N/A	CPI 70%	Active & Retiree

\*Requires 25 years of service for retirement at any age, all others allows 20 years of service for retirement at any age.

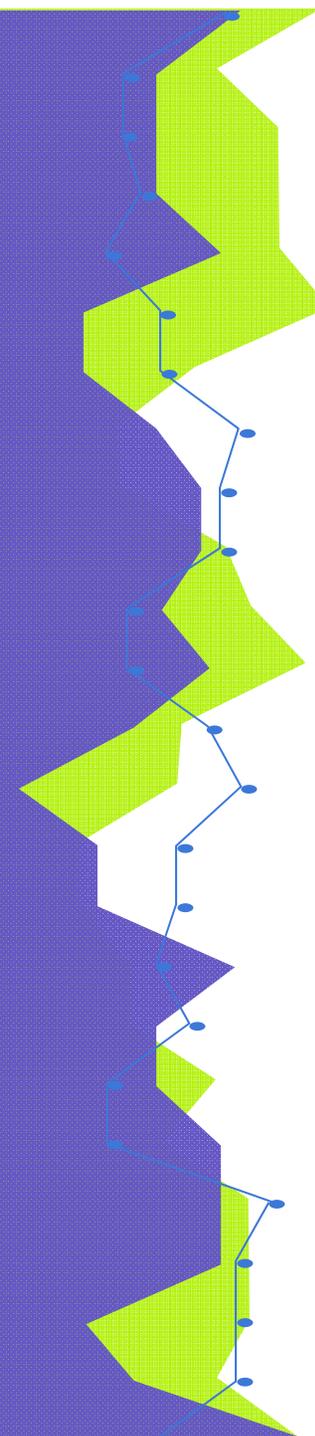


# Portfolio Rate of Return

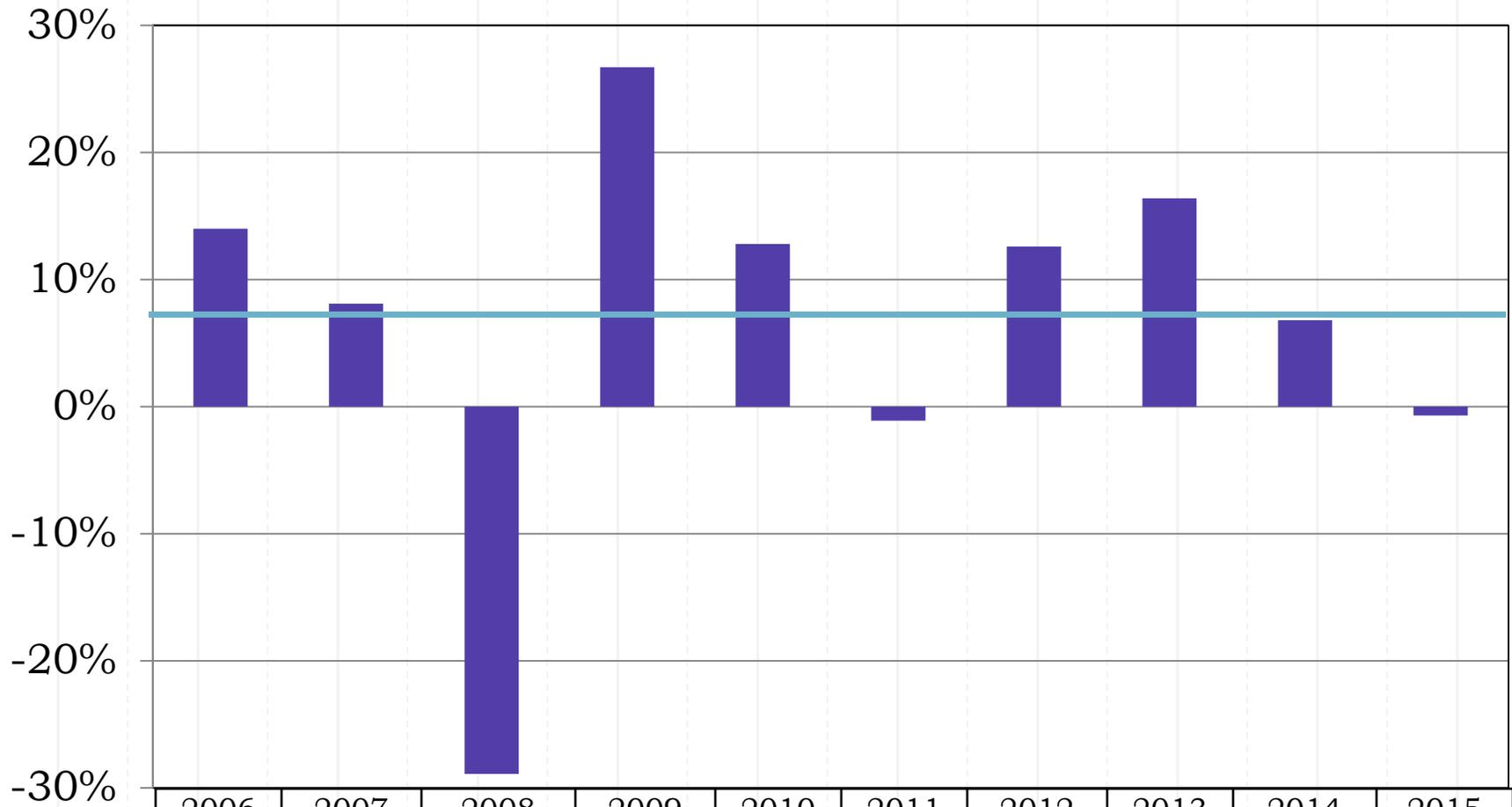
2006	14.0%
2007	8.1%
2008	(28.9)%
2009	26.7%
2010	12.8%
2011	(1.0)%
2012	12.6%
2013	16.4%
2014	6.8%
2015	(0.7)%

Total fund return as of 12/2015

1 year	(0.7)%
3 years	7.3%
5 years	6.6%
10 years	5.5%
20 years	6.8%
30 years	8.3%



# Rate of Return (Illustration Only)



Rate of Return	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Rate of Return	14.00%	8.10%	-28.90%	26.70%	12.80%	-1.0%	12.60%	16.4%	6.8%	-0.7%

— 8% return required to cover guaranteed return

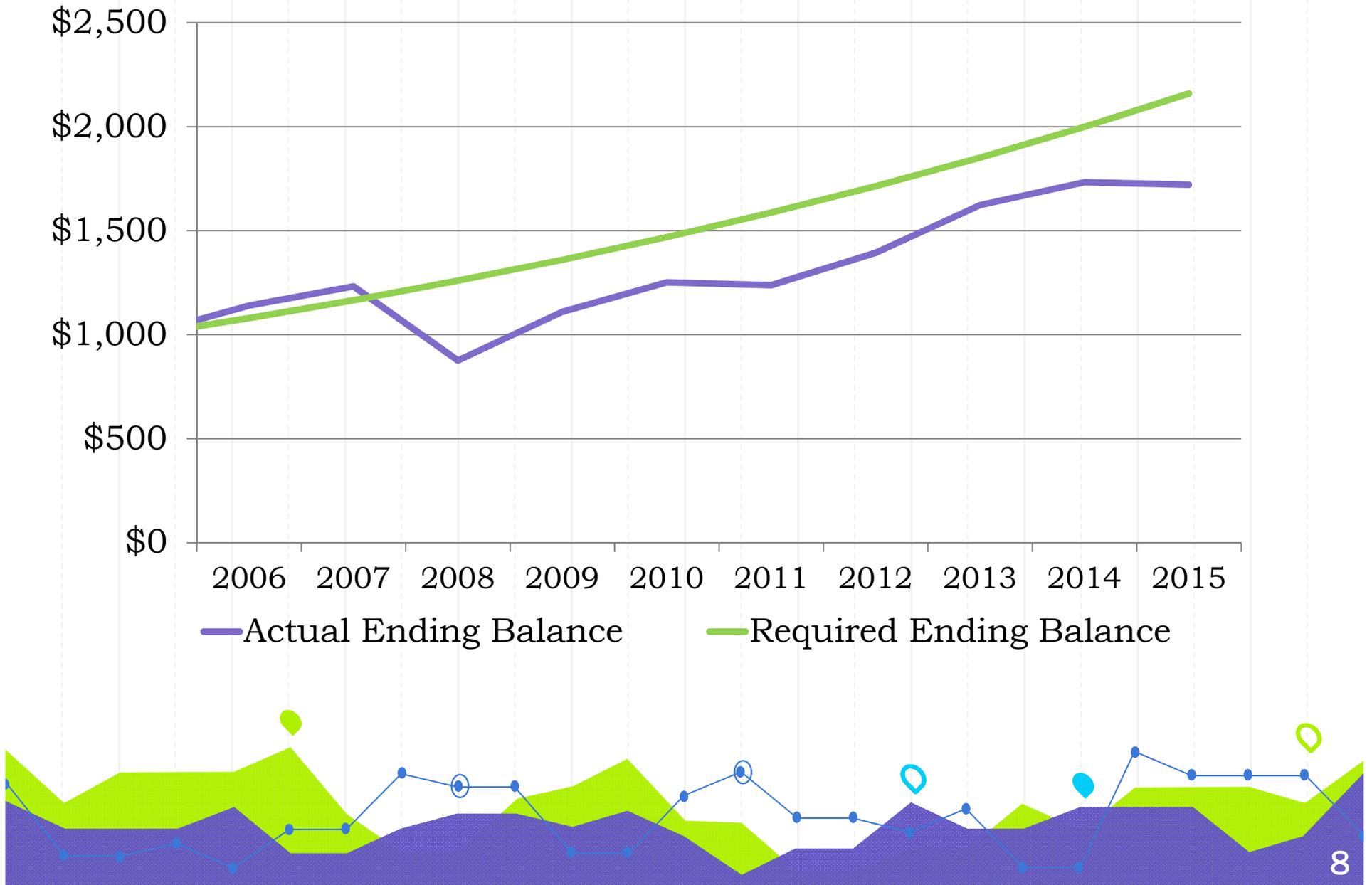


# Rate of Return (Illustration Only)

Year	Required Account Value	Required Rate of Return	Required Ending Balance	Actual Account Value	Actual Return	Actual Ending Balance
2006	\$1,000	\$ 80	\$1,080	\$1,000	\$140	\$1,140
2007	\$1,080	\$ 86	\$1,166	\$1,140	\$ 92	\$1,232
2008	\$1,166	\$ 93	\$1,260	\$1,232	-\$356	\$ 876
2009	\$1,260	\$101	\$1,360	\$876	\$234	\$1,110
2010	\$1,360	\$109	\$1,469	\$1,110	\$142	\$1,252
2011	\$1,469	\$118	\$1,587	\$1,252	-\$ 13	\$1,239
2012	\$1,587	\$127	\$1,714	\$1,239	\$156	\$1,395
2013	\$1,714	\$137	\$1,851	\$1,395	\$229	\$1,624
2014	\$1,851	\$148	\$1,999	\$1,624	\$110	\$1,734
2015	\$1,999	\$160	\$2,159	\$1,734	-\$ 12	\$1,722

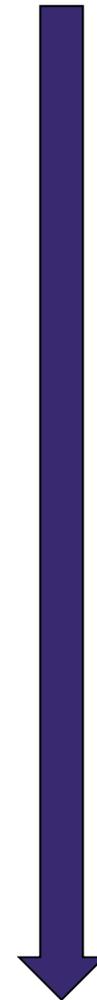
Returns over and under 8% may be allocated to or from reserves, rather than to the account, dependent upon the decision made each year by the TCDRS board. This illustration shows actual returns without taking into account any funds allocated to and from reserves. This calculation does not reflect the smoothing process that occurs for losses and gains over a 5 year time period.

# Rate of Return (Illustration Only)



# Cost

	Normal Rate (%)	UAAL Rate (%)	COLA RATE(%)	Total (%)	County Contribution (%)
2008	9.06	2.69	.18	11.93	12.50
2009	9.09	2.81	.23	12.13	13.00
2010	9.10	3.74	.00	12.84	13.50
<b>Made a lump sum payment of \$1,130,000 in October 2009</b>					
2011	9.38	3.43	.08	12.89	13.50 (original)
2011	7.59	2.92	.08	10.59	13.50 (revised)
<b>Made a lump sum payment of \$5 million in October 2010</b>					
2012	7.57	2.90	.07	10.54	13.50 (original)
2012	7.57	0.00	.07	7.64	7.70 (revised)
<b>Made a lump sum payment of \$35.5 million in October 2011</b>					
2013	7.56	0.45	.05	8.06	8.50 (original)
2013	7.56	0.00	.05	7.61	8.50 (revised)
<b>Made a lump sum payment of \$2,045,000 in October 2012</b>					
2014	7.55	0.51	.00	8.06	8.50 (original)
2014	7.55	0.00	.00	7.55	8.50 (revised)
<b>Made a lump sum payment of \$11,608,062 in November 2013</b>					
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	Not Decided	6.22	8.00 (budgeted)



**Lump sum payments were made to reduce the unfunded actuarial liability**

# Employer Contributions

Calendar Year	Total Employer Deposits	Contributing Employees	Average Cost Per Employee
2006	\$8,563,334	1690	\$5,067
2007	\$10,027,538	1747	\$5,740
2008	\$10,431,480	1809	\$5,766
2009			
Standard Payment	\$11,642,578	1786	\$6,519
Lump Sum Payment	\$1,130,000		\$633
2010			
Standard Payment	\$11,770,220	1755	\$6,707
Lump Sum Payment	\$5,000,000		\$2,849
2011			
Standard Payment	\$11,699,770	1790	\$6,536
Lump Sum Payment	\$35,500,000		\$19,832
2012			
Standard Payment	\$6,702,402	1811	\$3,701
Lump Sum Payment	\$2,045,000		\$1,129
2013			
Standard Payment	\$7,437,259	1824	\$4,077
Lump Sum Payment	\$11,608,062		\$6,364
2014	\$7,222,299	1848	\$3,908
2015	\$7,368,276	1854	\$3,974
<b>Total 2006-2015</b>	<b>\$148,148,218</b>	<b>Average: 1,791</b>	<b>\$82,718</b>

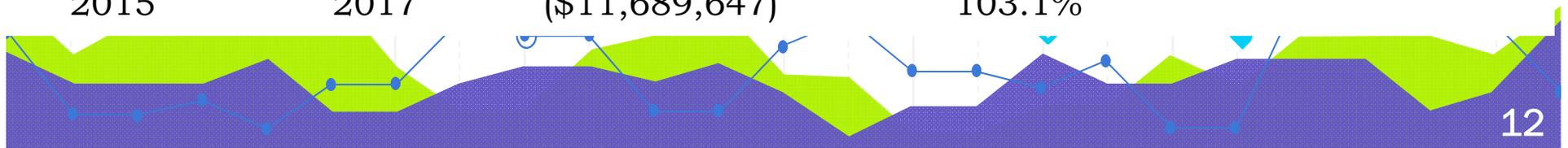
# Unfunded Liability Update

- Currently there is no unfunded liability using the 5 year asset recognition method.
- As of December 2015 our plan has a reserve of \$11,689,647, which is a funded ratio of 103.1%.
- Gains or losses that are smoothed are not reflected in the overfunded/unfunded liability. If an immediate asset recognition method were used instead of a delayed asset recognition the unfunded liability would be \$23,468,041, which is a funded ratio of 93.7%.
- The minimum required contribution rate for 2017 is 6.22%.
- TCDRS did not reach their investment return goal of 8% for 2015. Actuarial gains and losses are smoothed over 5 years and will be recognized over time.



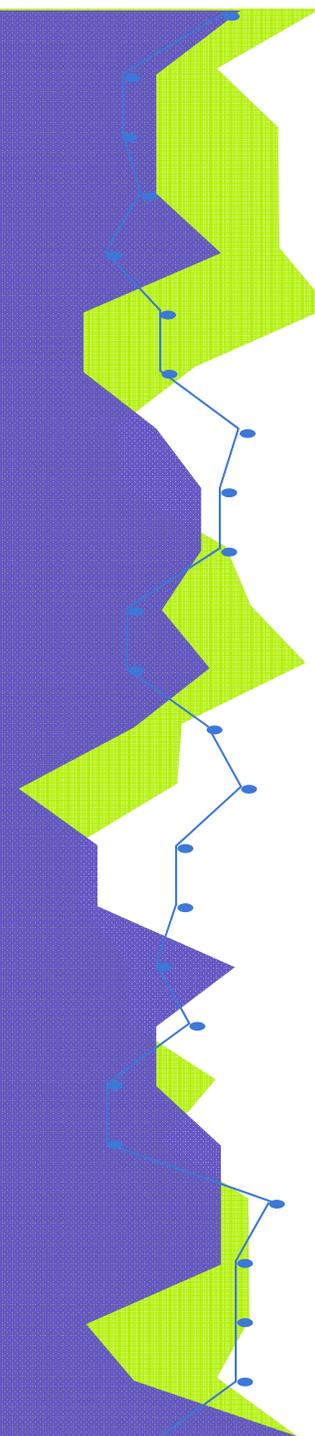
# Unfunded Liability History – 5 Year Asset Recognition Method

Calendar Year End	Budget Year	Unfunded Liability	Funded Percentage	Notes
2006	2008	\$22,774,159	87.7%	
2007	2009	\$24,873,034	88.2%	
2008	2010	\$41,594,399	82.0%	
Made a lump sum payment of \$1,130,000 in October 2009				
2009	2011	\$40,273,716	84.5%	before reduced match
2009	2011	\$36,309,269	85.8%	with reduced match
Made a lump sum payment of \$5 million in October 2010				
2010	2012	\$34,553,355	87.5%	
Made a lump sum payment of \$35.5 million in October 2011				
2011	2013	\$ 2,044,817	99.0%	
Made a lump sum payment of \$2,045,000 in October 2012				
2012	2014	\$ 2,794,438	99.1%	
Made a lump sum payment of \$11,608,062 in November 2013				
2013	2015	(\$14,704,583)	104.5%	
2014	2016	(\$21,504,628)	106.2%	
2015	2017	(\$11,689,647)	103.1%	



# Unfunded Liability

<b>Actual Unfunded Liability as of 12/31/2014</b>	<b>(\$21,505,000)</b>
Adjustment Due to Decrease in Discount Period (formerly notated as interest)	<b>(\$1,935,000)</b>
Scheduled OAAL Drawdown	<b>\$1,076,000</b>
Recognition of Actuarial Asset Gains and Losses for 2011-2015 (using the five-year recognition method)	<b>\$9,337,000</b>
Gain Due to Additional Employer Contributions (Elected Rate greater than Required Rate)	<b>(\$1,599,000)</b>
Loss due to Change in Assumptions and Methods	<b>4,364,000</b>
Gain Due to Greater than Expected Terminations and Withdrawals	<b>(\$831,000)</b>
Net Actuarial Losses from All Other Sources (retirement, death, individual salary increases, payroll growth, disability, etc.)	<b>(\$597,000)</b>
<b>Actual Unfunded Liability as of 12/31/2015</b>	<b>(\$11,690,000)</b>



# Upcoming Calculation Adjustments

## Increase to Annuity Purchase Rate:

- Used to convert TCDRS savings accounts into retirement annuities.
- Current rates were set in 1986.
- Rates will apply to all deposits effective 1/1/2018 onward.
- No impact to benefits already earned or to current retirees.
- Benefit estimates will be available in 2017.

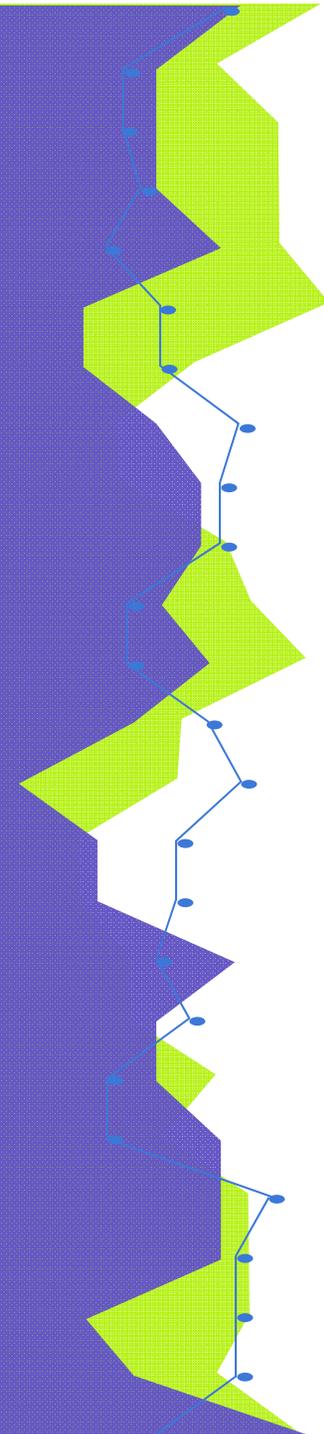
## Actuarial Assumptions Study:

- Will update economic and demographic assumptions used the calculation of employer required contribution rate such as inflation, investment return, and mortality tables.
- New study expected in 2017 to effect 2018 rates.



# GASB Statement 68

- Requires Collin County to report TCDRS pension liability/assets on the CAFR.
- Effective for plan year beginning January 1, 2015.
- Reporting requirements do not change how TCDRS plan funding is calculated.
- Automatic COLAs increase the calculated rate of funding, as they assume annual COLAs for all plan participants continuously into the future and require funding of this liability to be reported on the CAFR.
- Any significant volatility experienced in pension liability will be reflected on the CAFR.



# Court Determination - COLA

- COLA's are funded over a 15 year period.
- Court determines the cost of living increase each year. There are three options:
  - Flat Rate COLA's
  - CPI based COLA's
  - Nothing
- Collin County has historically adopted various COLA options including:
  - 60% to 100% of CPI
  - 3% - 8% Flat Rate
  - No COLA
- Last year, a COLA was not approved for plan year 2016.
- The last COLA elected was 60% of CPI for plan year 2013.
- Beginning in 2017, we will be eligible to adopt a COLA without an automatic COLA designation for that year. In general, we will be eligible for a COLA going forward every 3 years.
- There are 711 individuals currently collecting TCDRS benefits, 306 current employees are eligible to retire now, and 333 additional employees will be eligible to retire in the next 5 years.

# Retiree COLA

- The TCDRS retirement benefit is a fixed benefit payment.
- The costs of goods and services, such as health care expenses, 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.
  - **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



# COLA Options:

The COLA options for the 2017 plan year are:

COLA Type	Percentage	Additional Rate (%)	Estimated Annual Cost *	Estimated Prefunded Cost**
CPI – 60%		.17	\$152,575	\$2,622,253
CPI – 80%		.29	\$260,275	\$4,519,160
CPI – 100%		.42	\$376,950	\$6,666,816
Flat Rate	1%	.11	\$ 98,725	\$1,765,784

\*Based on 2015 Total Gross Wages

\*\* Prefunded based on a 15 year amortization period

- CPI can be in 10% increments.
- The additional rates are added to the required minimum rate of 6.22% for a total percent applied to all payroll dollars. If COLA is prefunded, additional rates are not applied.
- The actual amount received by the retiree will vary.
- If a COLA is elected this year, it will not be assumed that COLAs will continue to be adopted in future years.

# Court Determination Budget Information

- Employer contribution rate to remain at 8%.
- Determination of any retiree COLA

