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Tulare County Employees' Retirement Association

**Report on the Actuarial
Valuation as of June 30, 2012**

**TULARE COUNTY
EMPLOYEES' RETIREMENT
ASSOCIATION**

**REPORT ON THE
ACTUARIAL VALUATION
AS OF JUNE 30, 2012**

November 26, 2012

Board of Retirement
Tulare County Employees'
Retirement Association
136 N. Akers
Visalia, CA 93291

Members of the Board:

We are pleased to present our report on the actuarial valuation of the Tulare County Employees' Retirement Association (TCERA) as of June 30, 2012. The actuarial valuation is based on unaudited financial information and member data provided by TCERA and summarized in this report.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures, using an actuarial cost method which we believe is reasonable. This report fully and fairly discloses the actuarial position of the plan.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable expectations, and represent our best estimate of the anticipated experience under the plan. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 8.

I am an Enrolled Actuary and a Member of the American Academy of Actuaries. I meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained in this report and am available to answer any questions you may have. This report has been prepared in accordance with all applicable Actuarial Standards of Practice.

We look forward to discussing this report with the Board and wish to express our appreciation for the invaluable cooperation extended to us by the Retirement Staff during the course of this study.

Respectfully submitted,



Charles E. Chittenden, FSA, EA, MAAA
Principal and Consulting Actuary

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Section 1: Executive Summary

The table below summarizes the principal results from the current and the prior valuations.

<u>Item</u>	<u>Actuarial Valuation as of</u>		<u>Change Between Years</u>	
	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>Amount</u>	<u>Percent</u>
Contribution Summary*				
Average Employer Contribution Rate	12.55%	13.25%	0.70%	5.6%
Estimated Employer Contributions	\$27,586,000	\$29,499,000	\$1,913,000	6.9%
Average Member Contribution Rate	8.10%	8.13%	0.03%	0.4%
Estimated Member Contributions	\$17,750,000	\$18,053,000	\$303,000	1.7%
Value of Assets				
Market Value of Assets	\$1,001,315,160	\$971,490,447	(\$29,824,713)	-3.0%
Rate of Return for Last 12 Months	21.83%	-1.30%	-23.12%	-105.9%
Market Value of Assets Excluding Reserves	\$849,290,804	\$826,557,190	(\$22,733,614)	-2.7%
Actuarial Value of Assets	\$969,635,647	\$981,945,613	\$12,309,966	1.3%
Rate of Return for Last 12 Months	3.78%	3.05%	-0.73%	-19.4%
GASB No. 25 Funded Status				
Actuarial Accrued Liability	\$1,072,144,238	\$1,101,456,271	\$29,312,033	2.7%
Unfunded Actuarial Accrued Liability/(Surplus)	\$102,508,591	\$119,510,658	\$17,002,067	16.6%
Funded Ratio	90.40%	89.10%	-1.30%	-1.4%
Summary of Data				
Active Participants	4,197	4,291	94	2.2%
Participants with Deferred Benefits	1,761	1,742	-19	-1.1%
Retired Participants and Beneficiaries	<u>2,313</u>	<u>2,424</u>	<u>111</u>	4.8%
Total	8,271	8,457	391	4.8%
Retired Participant Statistics				
Total Annual Allowance	\$45,224,268	\$48,974,812	\$3,750,544	8.3%
Average Annual Allowance	\$19,552	\$20,204	\$652	3.3%
Active Participant Statistics				
Total Annual Compensation	\$219,853,614	\$222,634,628	\$2,781,014	1.3%
Average Annual Compensation	\$52,384	\$51,884	(\$500)	-1.0%
Average Age	43.21	43.15	-0.06	-0.1%
Average Service	9.65	9.61	-0.04	-0.4%
Key Assumptions				
Interest rate	7.75%	7.75%	0.00%	0.0%
Inflation	4.00%	4.00%	0.00%	0.0%

* Weighted by June 30, 2012 payroll.

Section 1: Executive Summary

Purpose

Buck Consultants has prepared this report to present the results of the June 30, 2012 actuarial valuation of the Tulare County Employees' Retirement Association (TCERA). The main purposes of the report are to:

1. Review the experience of TCERA over the past year and identify reasons for changes in costs;
2. Recommend economic assumptions to be used in computing TCERA liabilities and costs;
3. Calculate the annual contribution required to fund TCERA in accordance with actuarial principles;
4. Project any emerging trends in TCERA costs;
5. Present items required for disclosure under Statement No. 25 of the Governmental Accounting Standards Board (GASB).

Significant Changes Since Last Year

No changes in actuarial methods have been made since last year.

Contribution Rates

During the year, the return on the actuarial value of assets was 3.05%, 4.85% less than the actuarial assumption of 7.90%. This was partially offset by a gain on the actuarial liability in fiscal 2012. The net result is an increase in the recommended County contribution rate from 12.55% as of June 30, 2011, to 13.25% as of June 30, 2012.

The contribution rates reflect the economic and non-economic assumptions recommended in the June 30, 2011, Experience Study.

Asset Returns

During the twelve months ended June 30, 2012, TCERA assets had an investment loss of 1.30% on a market value basis and an investment gain of 3.05% on an actuarial value basis, compared to the actuarial assumption of 7.90%.

Section 1: Executive Summary

Funding Ratio - GASB 25

The Governmental Accounting Standards Board Statement No. 25 (GASB 25) requires that the funding progress be shown based on the same funding method which was used to develop the system's contribution requirements, the Entry Age Normal Cost funding method. The funding ratio decreased from 90.4% on June 30, 2011, to 89.1% on June 30, 2012.

Noneconomic Assumptions

A triennial experience study of the members of TCERA was performed last year. We analyzed the plan experience during the three-year period from July 1, 2008, through June 30, 2011, regarding service retirements, deaths, disabilities and terminations of employment, and compared the number of actual terminations to the incidence expected using the prior actuarial assumptions. Where the results differed materially, we recommended modifying the assumptions. We anticipate that we will use these new actuarial assumptions until the next experience analysis, which is due to be performed at the time of the June 30, 2014, actuarial valuation.

We have reflected both age and service in determining eligibility for applying the decrements.

Economic Assumptions

To ensure that the same inflationary expectations are consistently included in all of the economic assumptions, we have used a building block approach in developing these assumptions. That is, we assumed that the investment return earned over the long-term comprises inflation and the real rate of return. In addition, we have assumed future salary increases comprise inflation, merit and longevity increases.

Inflation Assumption

We are using a 4.00% long-term level of inflation.

Investment Return Assumption

Based upon future anticipated long-term returns on TCERA's targeted asset mixes, we are also using a 3.75% future real rate of return. In combination, these assumptions equate to a 7.75% long-term investment return assumption. Since interest is credited semi-annually, the nominal rate of 3.875% produces an effective annual rate of 7.90%.

Section 1: Executive Summary

Salary Increase Assumption

We incorporated the same inflation assumption, 4.00%, into the long-term salary increase assumption. The overall effect of the merit and longevity increases is to add approximately 0.35% to 2.30% to the total salary increase assumption. Our assumptions vary by years of service and by division.

Actuarial Value of Assets

The Board has adopted an actuarial value of assets method that recognizes the difference between expected and actual market returns, net of expenses, over a 10-year period. The market value of assets was \$971,490,447 including the reserve accounts and the net current actuarial value of assets under this method was \$981,945,613, not including the Supplemental Retiree Benefit Reserve or the Contingency Reserve.

Actuarial Balance Sheet

The actuarial balance sheet compares the present value of all future benefits anticipated to be paid for the current membership with the sources of funds to be used to provide these benefits. It illustrates that if recommended contribution levels made in the future prove out over time, current assets plus future employer and member contributions will be adequate to meet future benefit payments for the current membership.

Interest Crediting Policy

The Retirement Board has adopted an interest crediting policy following the provisions of Section 5.5 of the 1937 Act. The target interest rate for reserves is the actuarially assumed rate. Reserves are first credited with the rate of return on the actuarial value of assets each six months, but no more than the actuarial assumption. Next, any actuarially determined returns in excess of the actuarial assumption are split 50-50 between the regular reserves and the Supplemental Retiree Benefits Reserve.

Section 2: Assets

Assets

The following discussion focuses on the assets of TCERA, which is a key component in the determination of TCERA's funding status.

Financial Exhibits

Exhibit 2.1 presents a statement of net Plan assets at Market Value

Exhibit 2.2 presents a statement of changes in net Plan assets

Exhibit 2.3 presents the derivation of the Actuarial Value of Assets

Exhibit 2.4 presents the derivation of the asset gain and loss for the year

Exhibit 2.5 presents the historical returns on TCERA's assets

Market Value of Assets

Represents the fair market value of assets as of June 30, 2012 as reported by TCERA.

Actuarial Value of Assets

The Board has adopted an actuarial value of assets method that recognizes the difference between expected and actual market returns, net of expenses, over a 10-year period. The market value of assets was \$971,490,447 including reserves and the net current actuarial value of assets under this method was \$981,945,613, not including the Supplemental Retiree Benefit Reserve or the Contingency Reserve.

Valuation Assets

Represents the actuarial value of the fund, less the value of any special reserves that have been set aside for benefits that are to be funded outside the actuarially determined contribution rates. As of the valuation date, there are two special reserves: the Supplemental Retiree Benefits Reserve and the Contingency Reserve.

Asset Returns

During the twelve months ended June 30, 2012, TCERA assets had an investment loss of 1.30% on a market value basis and an investment return of 3.05% on an actuarial value basis, compared to the actuarial assumption of 7.90%.

Section 2: Assets

EXHIBIT 2.1 – STATEMENT OF PLAN NET ASSETS AS OF JUNE 30, 2012

ASSETS	<u>June 30 2012</u> Combined
Current Assets	
Checking/Savings	
1110 · Cash in County Treasury	8,085,562.29
1120 · Cash in Custodial Account	6,757,844.81
1130 · Short Term Investments	47,561,630.97
1140 · Securities Lending Collateral	52,199,160.68
1150 · Impaired Assets	210,588.36
Total Checking/Savings	<u>114,814,787.11</u>
Other Current Assets	
1310 · Fixed Income – Market	268,171,692.81
1340 · Equities – Market	497,376,062.00
1370 · Real Estate – Market	
1371 · Accrued Performance Fees	-686,955.00
1370 · Real Estate – Market – Other	13,735,863.84
Total 1370 · Real Estate – Market	13,048,908.84
1375 – Real Estate – REIT	54,803,854.96
1385 – Hedge Funds	26,779,688.16
1386 – Private Equity	41,701,480.27
1387 – Commodities Fund	35,159,084.04
1390 – Futures Overlay	2,773,426.27
Total Other Current Assets	<u>939,814,197.35</u>
Total Current Assets	1,054,628,984.46
Fixed Assets	
1501 · Building and Improvements	888,580.13
1505 · Office Equipment & Computer Sys	201,762.60
1506 · Project in Process CPAS	1,879,895.53
1511 · Allowance for Depreciation	-410,132.46
1512 · Land	370,345.69
Total Fixed Assets	<u>2,930,451.49</u>
Other Assets	
1710 · Open Trades Sales	29,903,222.25
1730 · Investment Income Receivable	2,415,787.06
1735 · Real Estate Income Receivable	16,397.00
1750 · Members Contribution Receivable	664,879.23
1770 · County Contribution Receivable	89,895.90
1780 · Advances Rec- Holding Corp	955,591.00
1790 · Other Receivables	63.11
Total Other Assets	<u>34,045,835.55</u>
TOTAL ASSETS	<u><u>1,091,605,271.50</u></u>

Section 2: Assets

EXHIBIT 2.1 – STATEMENT OF PLAN NET ASSETS AS OF JUNE 30, 2012

LIABILITIES & EQUITY

Liabilities

Current Liabilities

Other Current Liabilities

2010 · Sec Lndg Collateral Payable	52,199,160.68
2020 · Open Trades – Purchases	64,073,484.66
2030 · Accounts Payable – Inv	876,960.60
2040 · Refunds Payable	1,694,234.50
2050 · Other Payables	99,206.37
2100 · Payroll Liabilities	29,683.72

Total Other Current Liabilities 118,972,730.53

Total Current Liabilities 118,972,730.53

Long Term Liabilities

2060 · Accrual For Benefits At Termination	81,463.39
2070 · Advances Payable – TCERA	955,591.00

Total Long Term Liabilities 1,037,054.39

Total Liabilities 120,009,784.92

Equity

3110 · Member Deposit Reserve	231,490,697.68
3120 · Other Reserves – Unapportioned	-151,693.65
3210 · County Advanced Reserves	
3210.1 · County Advanced Reserves	416,886,904.97
3210.2 · County Advanced Reserves - Other	4,051.66
Total 3210 · County Advanced Reserves	416,890,956.63
3310 · Retiree Reserves	333,647,096.47
3320 · Supp. Retiree Benefit Reserve	113,749,341.86
3410 · Contingency Reserve	31,183,914.62
3510 · Market Stabilization	-155,388,423.00
3900 · Retained earnings	30,954,724.17
Net Income	-30,781,128.20

Total Equity 971,595,486.58

TOTAL LIABILITIES & EQUITY 1,091,605,271.50

Assets Received October 15, 2012

Section 2: Assets

EXHIBIT 2.2 – STATEMENT OF CHANGES IN PLAN NET ASSETS

Ordinary Income/Expense	
Income	
4110 · Interest Income (TCERA & TCERA Prop)	8,916,018.13
4120 · Dividend Income	6,276,799.10
4130 · Real Estate Income	6,560,019.50
4140 · Other Investment Income	448,465.91
4200 · Lease Payments from TCERA	54,518.04
4310 · Commission Rebates	25,226.55
4410 · Securities Lending Income	94,280.49
4510 · Realized Gains/Losses	23,592,918.11
4610 · Employee Contributions	16,470,845.43
4620 · Employer Contributions	<u>25,257,123.53</u>
Total Income	87,696,214.79
Expense	
5110 · Benefit Payments	54,334,974.26
5120 · Refunds	4,354,187.26
5210 · Investment Management Fees	3,926,522.88
5250 · Inv.Consultant/Custodial Fees	426,261.84
5270 · Securities Lending Expense	-82,013.68
5275 · Real Estate Investment Expense	0.00
5276 · Real Estate Mgr Fees	1,490,466.90
5280 · Other Investment Expense	29,937.60
5310 · Legal Fees	0.00
5410 · Actuarial Study Fees	119,727.00
5420 · Ret. Information System Exp.	0.00
5450 · Compensated Benefit Expense	-1,210.72
5500 · Administrative Expense	1,537,465.16
5750 · TCERA Property Admin. Expense	26,148.28
5910 · Depreciation of Fixed Assets	<u>38,059.94</u>
Total Expense	<u>66,200,526.72</u>
Net Ordinary Income	21,495,688.07
Other Income/Expense	
Other Income	
4520 · Unrealized Gains/Losses	-52,277,613.00
4525 · Unrealized Gains/Losses – Build/Land	0.00
5000 · Other Income	<u>796.73</u>
Total Other Income	<u>-52,276,816.27</u>
Net Other Income	<u>-52,276,816.27</u>
Net Income	<u><u>-30,781,128.20</u></u>

Assets Received October 15, 2012

Section 2: Assets

EXHIBIT 2.3 – ACTUARIAL VALUE OF ASSETS

<u>Six Month Period From</u>	<u>Six Month Period To</u>	<u>Total Actual Market Return (net)</u>	<u>Expected Market Return (net)</u>	<u>Investment Gain (Loss)</u>	<u>Deferred Factor</u>	<u>Deferred Return</u>
7/07	12/07	(8,184,032)	41,163,240	(49,347,273)	0	0
1/08	6/08	(73,673,654)	40,424,031	(114,097,685)	0.10	(11,409,768)
7/08	12/08	(206,287,879)	37,876,305	(244,164,185)	0.60	(146,498,511)
1/09	6/09	5,932,310	29,502,818	(23,570,509)	0.65	(15,320,831)
7/09	12/09	111,719,499	29,390,608	82,328,891	0.70	57,630,224
1/10	6/10	(33,675,854)	33,673,605	(67,349,458)	0.75	(50,512,094)
7/10	12/10	130,581,862	32,462,428	98,119,434	0.80	78,495,547
1/11	6/11	49,953,925	37,183,527	12,770,398	0.85	10,854,838
7/11	12/11	(58,996,703)	39,029,015	(98,025,719)	0.90	(88,223,147)
1/12	6/12	46,133,182	36,032,847	10,100,335	0.95	9,595,319
1. Total deferred return						(155,388,423)
2. Market Value of Assets as of June 30, 2012*						971,490,447
3. Actuarial Value of Assets including Reserves as of June 30, 2012 (2) – (1)						1,126,878,870
4. Non-valuation reserves and designations:						
Supplemental Retiree Benefit Reserve						113,749,342
Reserve for Interest Fluctuation (Contingency Reserve)						31,183,915
Total						144,933,256
5. Final Actuarial Value of Assets excluding Reserves as of June 30, 2012 (3) – (4)						981,945,613

* The market value of assets was last updated August 27, 2012 and does not include changes incorporated into the assets on page 7 of \$971,595,486.58.

Section 2: Assets

EXHIBIT 2.4 – ASSET GAIN/LOSS

		<u>Market Value</u>		<u>Actuarial Value¹</u>
Total as of June 30, 2011	\$	1,001,315,160	\$	969,635,647
Changes During the Year				
Employer Contributions		25,257,124		25,257,124
Member Contributions		16,470,845		16,470,845
Benefit Payments		(54,334,974)		(54,334,974)
Refunds		(4,354,187)		(4,354,187)
Investment Expenses		(5,909,692)		(5,909,692)
Administrative Expenses		(1,563,613)		(1,563,613)
Investment Return		(5,390,215)		36,744,464
Total assets as of June 30, 2012	\$	971,490,447	\$	981,945,613
Expected Investment Return	\$	78,433,931	\$	75,931,249
Expected Assets	\$	1,062,787,898	\$	1,028,605,703
Asset Gain/(Loss)	\$	(91,297,451)	\$	(46,660,090)
Gross Return	\$	(5,390,215)	\$	36,744,464
Net of Expenses	\$	(12,863,521)	\$	29,271,159
Gross of Expenses		-0.54%		3.84%
Net of Expenses		-1.30%		3.05%

¹ Actuarial Value of Assets excludes the Supplemental Retiree Benefit Reserve and the Contingency Reserve.

Section 2: Assets

EXHIBIT 2.5 – HISTORICAL RETURNS ON TCERA ASSETS

Year Ended June 30,	Annualized Rate of Return at Market Value	Annualized Rate of Return at Actuarial Value	Increase in Consumer Price Index**
2007	18.35%	10.48%	2.70%
2008	-7.80%	10.12%	5.00%
2009	-20.79%	5.09%	-1.40%
2010	10.29%	3.62%	1.10%
2011	21.83%	3.78%	3.60%
2012	-1.30%	3.05%	1.70%
Compound Average*	2.30%	5.98%	2.10%

* Since fiscal 2007

** Based on All Urban Consumer - U.S. City Average, June indices

Section 3: Liabilities

Liabilities	This section focuses on TCERA's actuarial liabilities and the cost components that are derived from those liabilities.
Actuarial Value of Assets	Represents the amount of assets already accumulated by TCERA at Actuarial Value (item 1 in Exhibit 3.1).
Present Value of Future Member Contributions	Represents the present value of the contributions anticipated to be received in the future from the current members (item 2 in Exhibit 3.1).
Present Value of Future Employer Normal Cost Contributions	Represents the present value of future employer normal costs with respect to current members (item 3 in Exhibit 3.1).
Unfunded Actuarial Accrued Liability (Surplus)	Represents the difference between the present value of the benefits to be paid from TCERA and the total of the existing assets plus the present value of the future normal costs and future member contributions. In the text we will abbreviate it as UAAL. The UAAL is amortized as a level percentage of payroll over a rolling 15-year period.
Total Actuarial Assets	Represents the total of all current assets at actuarial value plus the value of all future member and employer contributions for normal cost plus current and future employer costs to amortize the UAAL (item 5 in Exhibit 3.1).
Present Value of Benefits	The valuation determines the amount and timing of all future payments that will be made by TCERA. For active members, the present value of benefits includes the value of all benefits earned to date and all benefits to be earned in the future. For all members, the present value of benefits includes the value of benefits payable to members and survivors over their remaining lifetimes. The present value is then determined by discounting these payments at the assumed interest rate to June 30, 2012, the date of the valuation. The present value of supplemental benefits is shown at reserve values (items 6 to 12 in Exhibit 3.1).

Section 3: Liabilities

Actuarial Accrued Liability

Employer contributions have been determined under the Entry Age Normal Actuarial Cost Method, permitted by Government Code Section 31453.5. The Entry Age Normal method defines the Normal Cost as the level percentage of salary necessary to fund the projected future benefit over the period from the date of entry to the date of separation from active service. The Actuarial Accrued Liability is the cost allocated to years prior to the actuarial valuation date; it is the excess of the total value of benefits over the value of future member contributions and the value of future employer Normal Costs. The difference between the Actuarial Accrued Liability and the actuarial value of assets is called the Unfunded Actuarial Accrued Liability.

Unfunded Actuarial Accrued Liability

The valuation compares the actuarial value of assets to the Actuarial Accrued Liabilities. The shortfall, if any, is called the Unfunded Actuarial Accrued Liability (UAAL) and is amortized as a level percentage of payroll over a rolling 15-year period.

Actuarial Gain and Loss

The difference between the UAAL and the expected UAAL is an actuarial gain or loss. The actuarial gain and loss comprises two components: a liability gain and loss (from other sources, such as salary growth, turnover and retirement patterns and life expectancies different from expected) and an asset gain or loss (from investment experience different from expected).

Funded Ratio

Measures the portion of the AAL already funded by the current assets at actuarial value.

Supplemental Retiree Benefits Reserve (Article 5.5)

The financial provisions of Article 5.5 of the 1937 Act have been adopted by the County. This Article provides that a specific portion of TCERA's investment earnings be allocated to a Supplemental Retiree Benefits Reserve (SRBR). Amounts allocated to the SRBR are to be used for the benefit of retired members and beneficiaries pursuant to Government Code Section 31618.

Level One: \$18.00 per month for each of the first 20 years of service (some benefit grandfathering applies).

Section 3: Liabilities

Benefit is subject to a vesting schedule of 50% after 10 years of service, uniformly grading up to 100% at 20 years of service.

Level Two: 85% Purchasing Power COLA based on COLA accumulation banks.

We have made the following assumptions in our valuation of the Level Two benefits.

- Future increases in the CPI will be sufficient to trigger the automatic COLA guaranteed under the Tier the member is in (that is 3% for Tier 1 and 2% for Tier 2). Liabilities will be greater if future increases are in excess of the guaranteed COLA.
- This higher cost exposure would be offset (fully or partially) by any future excess earnings that are credited to the SRBR. We did not assume any offset of the purchasing power by benefits received under Level One.

Level Three: 60% survivor benefit for retirees who marry after retirement, have been married for at least two years at time of death to a spouse, at least age 55 at time of retiree's death and if the member elected the Unmodified Allowance retirement option.

Section 3: Liabilities

EXHIBIT 3.1 – ACTUARIAL BALANCE SHEET

<u>ASSETS</u>	
1. Actuarial value of assets (including special reserves)	\$ 1,126,878,870
2. Present value of future contributions by members	178,825,028
3. Present value of future employer contributions for normal cost	187,487,573
4. Present value of other future employer contributions (UAAL)	119,510,658
5. Total actuarial assets	\$ 1,612,702,129
<u>LIABILITIES</u>	
6. Present value of retirement allowances payable to retired members and their survivors	\$ 570,366,586
7. Present value of service retirement allowances payable to presently active members and their survivors	704,606,142
8. Present value of allowances payable to current and future vested terminated members and their survivors	79,353,250
9. Present value of disability retirement allowances payable to presently active members and their survivors	76,909,935
10. Present value of death benefits payable on behalf of presently active members	21,920,525
11. Present value of members' contributions to be returned upon withdrawal	14,612,434
12. Special Reserves	31,183,915
13. SRBR	113,749,342
14. Miscellaneous Liabilities	0
15. Total actuarial liabilities	\$ 1,612,702,129

EXHIBIT 3.2 – ACTUARIAL ACCRUED LIABILITY

16. Present value of future benefits (items 6 to 11)	\$ 1,467,768,872
17. Present value of future contributions by members and employers (items 2 and 3)	366,312,601
18. Actuarial accrued liability (item 16 minus item 17)	1,101,456,271
19. Actuarial value of assets (excluding special reserves)	981,945,613
20. Unfunded actuarial accrued liability (UAAL) (item 18 minus item 19)	\$ 119,510,658
21. Funded ratio	89.10%

Section 3: Liabilities

EXHIBIT 3.3 – ACTUARIAL GAIN AND LOSS

1. Unfunded actuarial accrued liability as of July 1, 2011		\$	102,508,591
2. Change due to contributions:			
(a) Normal cost	\$	34,960,534	
(b) Interest on (a)		1,380,941	
(c) Interest on (1)		8,098,179	
(d) Contributions (member and employer)		(41,727,969)	
(e) Interest on (d)		<u>(1,648,255)</u>	
(f) Net change: (a)+(b)+(c)+(d)+(e)	\$		1,063,430
3. Expected unfunded actuarial accrued liability: (1)+(2)	\$		103,572,021
4. Change due to actuarial (gain)/loss from asset sources	\$		46,660,090
5. Liability (gain)/loss	\$		(30,721,453)
6. Assumption changes	\$		<u>0</u>
7. Unfunded actuarial accrued liability as of June 30, 2012: (3)+(4)+(5)+(6)	\$		119,510,658

EXHIBIT 3.4 – SUPPLEMENTAL RETIREE BENEFITS RESERVE

We show below the June 30, 2012, present value of the supplemental retiree benefits payable on behalf of all currently retired members and future retired members from the current active and inactive membership.

Present Value of Benefits For	June 30, 2012
Level One	
1. Current Retirees	\$ 62,578,542
2. Inactive Members	5,324,113
3. Active members	<u>55,948,112</u>
4. Subtotal	\$ 123,850,767
Level Two	
5. Supplemental COLA for those who have lost at least 15% of Purchasing Power	\$ 1,922,129
Level Three	
6. Supplemental Spousal Death Benefit	\$ 609,450
7. Total SRBR Combined Liability: (4)+(5)+(6)	\$ 126,382,346
8. Supplemental Retiree Benefits Reserve (SRBR)	\$ 113,749,342
9. Net Reserve: (8)-(7)	\$ (12,633,004)

Section 4: Member Contribution Rates

A summary of the current and recommended average employee contribution rates is provided below.

Member Contributions

This section focuses on the determination of the member contribution rates to TCERA.

Member Basic Contributions

Government Code Sections 31621.5 (Tier 1) and 31621.2 (Tiers 2 and 3) set forth the basis for the determination of the normal rates of contribution for General members. Government Code Section 31639.5 (Tier 1) and 31639.25 (Tier 2 and Tier 3) set forth the basis for the normal rates of contribution for Safety members.

The law further provides that the contribution rates of members will be based on the age nearest birthday at the time of entrance into TCERA. Section 31453 states that no adjustment will be included in the rates of contribution for time prior to the effective date of any revisions.

Member Basic Contributions are based on entry age into TCERA and the following actuarial assumptions:

1. Actuarial investment return (7.90%)
2. Salary increase (see Section 8)
3. Life expectancy

The basic employee contribution rates for General members were calculated on a unisex basis using the RP-2000 Generational Mortality Table (weighted 30% male and 70% female), with no collar or age adjustment. The Safety basic employee rates were based upon the RP-2000 Generational Mortality Table (weighted 75% male and 25% female), with adjustment for blue-collar workers.

Cost-of-Living Contributions

The employee portion of the cost-of-living provision is expressed as a percentage of the employees' contribution rates ignoring the cost-of-living provision. The percentage are:

	<u>Tier 1</u>	<u>Tiers 2 and 3</u>
2011 Actual	58.15%	18.96%
2012 Recommended	56.06%	19.15%

Section 4: Member Contribution Rates

A summary of the current and recommended average employee contribution rates is provided below:

2011 Actual	Average Member Basic and Cost of Living Contribution Rates			
	General		Safety	
	<u>Tier 1</u>	<u>Tier 2 & 3</u>	<u>Tier 1</u>	<u>Tier 2 & 3</u>
Recommended Rates	4.76%	7.62%	6.71%	9.87%

2012 Recommended	Average Member Basic and Cost of Living Contribution Rates			
	General		Safety	
	<u>Tier 1</u>	<u>Tier 2 & 3</u>	<u>Tier 1</u>	<u>Tier 2 & 3</u>
Recommended Rates	4.65%	7.64%	6.52%	9.86%

Section 4: Member Contribution Rates

Recommended employee rates at sample ages are shown below.

RECOMMENDED MEMBER CONTRIBUTION RATES

Sample General Member Contribution Rates* Benefits Under Section 31676.12				
	Basic	With 3% Automatic Cost of Living Increases	Basic	With 2% Automatic Cost of Living Increases
Entry	<u>Tier 1</u>	<u>Tier 1</u>	<u>Tier 2 & 3</u>	<u>Tier 2 & 3</u>
<u>Age</u>				
25	2.94%	4.59%	5.64%	6.72%
35	3.63%	5.66%	6.95%	8.28%
45	4.46%	6.96%	8.45%	10.07%
*These are the full rates payable by the member. Contribution rates for the first \$161.54 of bi-weekly salary are one-third lower for members covered by Social Security.				

Sample Safety Member Contribution Rates*				
	Basic	With 3% Automatic Cost of Living Increases	Basic	With 2% Automatic Cost of Living Increases
Entry	<u>Tier 1</u>	<u>Tier 1</u>	<u>Tier 2 & 3</u>	<u>Tier 2 & 3</u>
<u>Age</u>				
25	4.30%	6.71%	8.24%	9.82%
35	5.00%	7.81%	9.46%	11.27%
45	5.49%	8.57%	10.37%	12.36%
*These are the full rates payable by the member. Contribution rates for the first \$161.54 of bi-weekly salary are one-third lower for members covered by Social Security.				

The following pages set forth the complete set of members' contribution rates with and without the automatic cost of living benefit. The interest rate, mortality table, inflation rate and cost of living benefit are indicated on the bottom of the table.

Section 4: Member Contribution Rates

GENERAL TIER 1 MEMBERS' RECOMMENDED CONTRIBUTION RATES (expressed as a percentage of bi-weekly compensation) Benefits Under Section 31676.12

Entry Age	Total		Entry Age	Total	
	First \$161.54	Over \$161.54		First \$161.54	Over \$161.54
16	2.53%	3.79%	38	4.01%	6.02%
17	2.59%	3.89%	39	4.10%	6.16%
18	2.64%	3.96%	40	4.20%	6.29%
19	2.70%	4.04%	41	4.29%	6.43%
20	2.76%	4.14%	42	4.39%	6.59%
21	2.82%	4.23%	43	4.48%	6.73%
22	2.87%	4.31%	44	4.59%	6.88%
23	2.93%	4.40%	45	4.63%	6.96%
24	3.00%	4.49%	46	4.70%	7.04%
25	3.06%	4.59%	47	4.74%	7.12%
26	3.12%	4.68%	48	4.79%	7.19%
27	3.20%	4.79%	49	4.85%	7.27%
28	3.26%	4.88%	50	4.90%	7.35%
29	3.32%	4.99%	51	4.95%	7.43%
30	3.40%	5.10%	52	5.01%	7.51%
31	3.46%	5.20%	53	5.06%	7.58%
32	3.54%	5.31%	54	5.12%	7.68%
33	3.62%	5.43%	55	5.17%	7.76%
34	3.70%	5.54%	56	5.23%	7.83%
35	3.78%	5.66%	57	5.27%	7.91%
36	3.85%	5.77%	58	5.32%	7.99%
37	3.93%	5.90%	59	5.38%	8.07%

The employee portion of the cost-of-living provision is 56.06% of the employee's normal contribution rate.

Interest:	7.90%
Inflation:	4.00%
COLA:	3.00%
Mortality:	RP 2000 Mortality Table projected to 2021, with no collar adjustment or age adjustment (weighted 30% male and 70% female)

Section 4: Member Contribution Rates

GENERAL TIER 2 AND TIER 3 MEMBERS' RECOMMENDED CONTRIBUTION RATES (expressed as a percentage of bi-weekly compensation) Benefits Under Section 31676.12

Entry Age	Total		Entry Age	Total	
	First \$161.54	Over \$161.54		First \$161.54	Over \$161.54
16	3.71%	5.56%	38	5.89%	8.83%
17	3.79%	5.68%	39	6.02%	9.02%
18	3.87%	5.80%	40	6.15%	9.22%
19	3.96%	5.93%	41	6.28%	9.42%
20	4.04%	6.05%	42	6.42%	9.64%
21	4.12%	6.18%	43	6.54%	9.82%
22	4.21%	6.31%	44	6.64%	9.96%
23	4.30%	6.45%	45	6.71%	10.07%
24	4.40%	6.59%	46	6.79%	10.19%
25	4.48%	6.72%	47	6.86%	10.29%
26	4.58%	6.86%	48	6.93%	10.40%
27	4.67%	7.01%	49	7.02%	10.52%
28	4.78%	7.16%	50	7.09%	10.63%
29	4.87%	7.30%	51	7.16%	10.75%
30	4.97%	7.46%	52	7.23%	10.85%
31	5.08%	7.61%	53	7.32%	10.97%
32	5.18%	7.78%	54	7.40%	11.09%
33	5.30%	7.95%	55	7.47%	11.20%
34	5.41%	8.11%	56	7.54%	11.32%
35	5.52%	8.28%	57	7.61%	11.43%
36	5.64%	8.46%	58	7.90%	11.86%
37	5.75%	8.64%	59+	8.21%	12.32%

The employee portion of the cost-of-living provision is 19.15% of the employee's normal contribution rate.

Interest:	7.90%
Inflation:	4.00%
COLA:	2.00%
Mortality:	RP 2000 Mortality Table projected to 2021, with no collar adjustment or age adjustment (weighted 30% male and 70% female)

Section 4: Member Contribution Rates

SAFETY TIER 1 MEMBERS' RECOMMENDED CONTRIBUTION RATES (expressed as a percentage of bi-weekly compensation) Benefits Under Section 31664

Entry Age	Total		Entry Age	Total	
	First \$161.54	Over \$161.54		First \$161.54	Over \$161.54
20	4.00%	6.01%	35	5.21%	7.81%
21	4.09%	6.13%	36	5.26%	7.88%
22	4.18%	6.27%	37	5.31%	7.96%
23	4.28%	6.41%	38	5.35%	8.04%
24	4.37%	6.56%	39	5.40%	8.11%
25	4.47%	6.71%	40	5.46%	8.19%
26	4.57%	6.86%	41	5.51%	8.27%
27	4.68%	7.02%	42	5.56%	8.35%
28	4.79%	7.19%	43	5.62%	8.42%
29	4.91%	7.37%	44	5.67%	8.50%
30	4.96%	7.44%	45	5.71%	8.57%
31	5.01%	7.51%	46	5.77%	8.65%
32	5.06%	7.58%	47	5.82%	8.72%
33	5.10%	7.66%	48	5.87%	8.80%
34	5.15%	7.74%	49+	5.91%	8.86%

The employee portion of the cost-of-living provision is 56.06% of the employee's normal contribution rate.

Interest:	7.90%
Inflation:	4.00%
COLA:	3.00%
Mortality:	RP 2000 Mortality Table projected to 2021, with blue collar adjustment (weighted 75% male and 25% female)

Section 4: Member Contribution Rates

SAFETY TIER 2 AND TIER 3 MEMBERS' RECOMMENDED CONTRIBUTION RATES (expressed as a percentage of bi-weekly compensation) Benefits Under Section 31664

Entry Age	Total		Entry Age	Total	
	First \$161.54	Over \$161.54		First \$161.54	Over \$161.54
20	5.85%	8.78%	35	7.51%	11.27%
21	5.98%	8.97%	36	7.58%	11.38%
22	6.11%	9.17%	37	7.65%	11.49%
23	6.26%	9.38%	38	7.72%	11.59%
24	6.40%	9.59%	39	7.80%	11.70%
25	6.54%	9.82%	40	7.88%	11.81%
26	6.70%	10.04%	41	7.95%	11.92%
27	6.85%	10.28%	42	8.02%	12.03%
28	6.98%	10.47%	43	8.09%	12.14%
29	7.09%	10.63%	44	8.16%	12.25%
30	7.15%	10.73%	45	8.23%	12.36%
31	7.22%	10.83%	46	8.30%	12.46%
32	7.29%	10.94%	47	8.38%	12.56%
33	7.36%	11.05%	48	8.69%	13.03%
34	7.44%	11.16%	49+	9.02%	13.54%

The employee portion of the cost-of-living provision is 19.15% of the employee's normal contribution rate.

Interest:	7.90%
Inflation:	4.00%
COLA:	2.00%
Mortality:	RP 2000 Mortality Table projected to 2021, with blue collar adjustment (weighted 75% male and 25% female)

Section 5: Employer Contribution Rates

Employer Contributions

This section focuses on the determination of the employer contribution rates to TCERA.

Employer Contribution rates

Employer contributions have been determined under the Entry Age Normal Actuarial Cost Method, permitted by Government Code Section 31453.5. The Entry Age Normal method defines the Normal Cost as the level percentage of salary necessary to fund the projected future benefit over the period from the date of entry to the date of separation from active service. The Actuarial Accrued Liability is the cost allocated to years prior to the actuarial valuation date; it is the excess of the total value of benefits over the value of future member contributions and the value of future Normal Costs. The difference between the Actuarial Accrued Liability and the plan assets is called the Unfunded Actuarial Accrued Liability (UAAL) and is funded (amortized) as a level percentage of payroll over a rolling 15-year period.

The contribution rates reflect deviations from the current economic and noneconomic assumptions. During the year, the return on the actuarial value of assets was 3.78%, 4.12% less than the actuarial assumption of 7.90%. In addition there was a gain in actuarial liability. The combination of an asset loss and a liability gain resulted in an overall experience loss and an increase in the recommended County contribution rate from 12.55% as of June 30, 2011, to 13.25% as of June 30, 2012.

The average employer contribution rate increased from 12.55% as of June 30, 2011, to 13.25% as of June 30, 2012, for the following reasons:

June 30, 2011, Recommended Employer Rate	12.55%
Changes during the year due to:	
Asset gain/loss	1.82%
Change in actuarial liability	-1.12%
Change in actuarial assumptions	0.00%
Total changes	0.70%
June 30, 2012, Recommended Employer Rate	13.25%

The following charts specify the recommended employer contributions and components thereof (expressed as a level percentage of payroll) for this valuation. A breakdown between normal cost and UAAL is provided.

Section 5: Employer Contribution Rates

NORMAL COST AND UAAL RATE BREAKDOWN (% OF PAYROLL)

2011	Current and Recommended Contribution Rate Breakdown					
	Tier 1 Members		Tier 2 & 3 Members		All Members	
	<u>Current</u>	<u>Recommended*</u>	<u>Current</u>	<u>Recommended*</u>	<u>Current</u>	<u>Recommended*</u>
General						
Normal Cost	7.75%	10.86%	6.50%	7.21%	6.54%	7.32%
UAAL Amortization	<u>2.95%</u>	<u>3.28%</u>	<u>2.95%</u>	<u>3.28%</u>	<u>2.95%</u>	<u>3.28%</u>
Total Cost	10.70%	14.14%	9.45%	10.49%	9.49%	10.60%
Safety						
Normal Cost	20.46%	15.09%	13.49%	12.27%	13.61%	12.32%
UAAL Amortization	<u>8.31%</u>	<u>6.53%</u>	<u>8.31%</u>	<u>6.53%</u>	<u>8.31%</u>	<u>6.53%</u>
Total Cost	28.77%	21.62%	21.80%	18.80%	21.92%	18.85%
*Weighted by June 30, 2011 payroll.						
Average Rate for Total Group:			Current	12.39%		
			Recommended	12.55%		

2012	Current and Recommended Contribution Rate Breakdown					
	Tier 1 Members		Tier 2 & 3 Members		All Members	
	<u>Current</u>	<u>Recommended*</u>	<u>Current</u>	<u>Recommended*</u>	<u>Current</u>	<u>Recommended*</u>
General						
Normal Cost	10.86%	10.25%	7.21%	7.33%	7.32%	7.40%
UAAL Amortization	<u>3.28%</u>	<u>3.81%</u>	<u>3.28%</u>	<u>3.81%</u>	<u>3.28%</u>	<u>3.81%</u>
Total Cost	14.14%	14.06%	10.49%	11.14%	10.60%	11.21%
Safety						
Normal Cost	15.0%	13.92%	12.27%	12.30%	12.32%	12.32%
UAAL Amortization	<u>6.53%</u>	<u>7.35%</u>	<u>6.53%</u>	<u>7.35%</u>	<u>6.53%</u>	<u>7.35%</u>
Total Cost	21.6%	21.27%	18.80%	19.65%	18.85%	19.67%
*Weighted by June 30, 2012 payroll.						
Average Rate for Total Group:			Current	12.55%		
			Recommended	13.25%		

Section 5: Employer Contribution Rates

NORMAL COST AND UAAL RATE BREAKDOWN (BY \$ AMOUNT)

2011	Current and Recommended Contribution Breakdown *					
	Tier 1 Members		Tier 2 & 3 Members		All Members	
	<u>Current</u>	<u>Recommended</u>	<u>Current</u>	<u>Recommended</u>	<u>Current</u>	<u>Recommended</u>
General						
Normal Cost	454,000	537,000	10,475,000	11,749,000	10,929,000	12,286,000
UAAL Amortization	173,000	163,000	4,754,000	5,345,000	4,927,000	5,508,000
Total Cost	627,000	700,000	15,229,000	17,094,000	15,856,000	17,794,000
Safety						
Normal Cost	184,000	142,000	6,732,000	6,259,000	6,916,000	6,401,000
UAAL Amortization	75,000	61,000	4,147,000	3,330,000	4,222,000	3,391,000
Total Cost	258,000	203,000	10,878,000	9,589,000	11,136,000	9,792,000
*Weighted by June 30, 2011 payroll.						
Total Contribution for Total Group:				Current	26,992,000	
				Recommended	27,586,000	

2012	Current and Recommended Contribution Breakdown *					
	Tier 1 Members		Tier 2 & 3 Members		All Members	
	<u>Current</u>	<u>Recommended</u>	<u>Current</u>	<u>Recommended</u>	<u>Current</u>	<u>Recommended</u>
General						
Normal Cost	462,000	436,000	11,880,000	12,078,000	12,342,000	12,514,000
UAAL Amortization	139,000	162,000	5,404,000	6,278,000	5,543,000	6,440,000
Total Cost	601,000	598,000	17,285,000	18,356,000	17,886,000	18,954,000
Safety						
Normal Cost	92,000	85,000	6,503,000	6,519,000	6,595,000	6,604,000
UAAL Amortization	40,000	45,000	3,461,000	3,896,000	3,501,000	3,941,000
Total Cost	132,000	130,000	9,964,000	10,415,000	10,096,000	10,545,000
*Weighted by June 30, 2012 payroll.						
Total Contribution for Total Group:				Current	27,982,000	
				Recommended	29,499,000	

Section 5: Employer Contribution Rates

Tulare County Employees' Retirement Association
Recommended Employer Contribution rates from the June 30, 2012 Actuarial Valuation
Rates to be Effective July 1, 2013

General – Includes 31676.12 Benefits	Tier 1	Tiers 2 & 3	Total
Aggregate Normal Cost Rate	10.25%	7.33%	7.40%
Rate on first \$161.54 of Biweekly Compensation	6.99%	5.03%	5.07%
Rate on Biweekly Compensation in excess of first \$161.54	10.48%	7.55%	7.63%
Aggregate UAAL Rate	3.81%	3.81%	3.81%
Rate on first \$161.54 of Biweekly Compensation	2.60%	2.61%	2.61%
Rate on Biweekly Compensation in excess of first \$161.54	3.90%	3.92%	3.92%
Total Rate	14.06%	11.14%	11.21%
Rate on first \$161.54 of Biweekly Compensation	9.59%	7.64%	7.68%
Rate on Biweekly Compensation in excess of first \$161.54	14.38%	11.47%	11.55%

Safety	Tier 1	Tiers 2 & 3	Total
Aggregate Normal Cost Rate	13.92%	12.30%	12.32%
Rate on first \$161.54 of Biweekly Compensation	9.41%	8.39%	8.40%
Rate on Biweekly Compensation in excess of first \$161.54	14.11%	12.58%	12.60%
Aggregate UAAL Rate	7.35%	7.35%	7.35%
Rate on first \$161.54 of Biweekly Compensation	4.97%	5.01%	5.01%
Rate on Biweekly Compensation in excess of first \$161.54	7.45%	7.52%	7.52%
Total Rate	21.27%	19.65%	19.67%
Rate on first \$161.54 of Biweekly Compensation	14.38%	13.40%	13.41%
Rate on Biweekly Compensation in excess of first \$161.54	21.56%	20.10%	20.12%

Section 5: Employer Contribution Rates

Tulare County Employees' Retirement Association
Recommended Employer Contribution rates from the June 30, 2012 Actuarial Valuation
Rates to be Effective July 1, 2013

General and Safety - Includes 31676.12 Benefits	Tier 1	Tiers 2 & 3	Total
Aggregate Normal Cost Rate	10.71%	8.54%	8.59%
Rate on first \$161.54 of Biweekly Compensation	7.19%	5.70%	5.73%
Rate on Biweekly Compensation in excess of first \$161.54	10.95%	8.79%	8.84%
Aggregate UAAL Rate	4.25%	4.67%	4.66%
Rate on first \$161.54 of Biweekly Compensation	2.79%	3.09%	3.08%
Rate on Biweekly Compensation in excess of first \$161.54	4.36%	4.81%	4.80%
Aggregate Rate	14.96%	13.21%	13.25%
Rate on first \$161.54 of Biweekly Compensation	9.98%	8.79%	8.81%
Rate on Biweekly Compensation in excess of first \$161.54	15.31%	13.60%	13.64%

General and Safety - Includes 31676.12 Benefits	Tier 1	Tiers 2 & 3	Total
Aggregate Normal Cost Dollars	520,661	18,602,214	19,122,875
Dollars on first \$161.54 of Biweekly Compensation	22,335	1,009,857	1,032,192
Dollars on Biweekly Compensation in excess of first \$161.54	498,326	17,592,357	18,090,683
Aggregate UAAL Dollars	207,001	10,170,150	10,377,151
Dollars on first \$161.54 of Biweekly Compensation	8,678	547,247	555,925
Dollars on Biweekly Compensation in excess of first \$161.54	198,323	9,622,903	9,821,226
Aggregate Dollars	727,662	28,772,364	29,500,026
Dollars on first \$161.54 of Biweekly Compensation	31,013	1,557,104	1,588,117
Dollars on Biweekly Compensation in excess of first \$161.54	696,649	27,215,260	27,911,909

Section 5: Employer Contribution Rates

Tulare County Employees' Retirement Association
Recommended Employer Contribution Rates from the June 30, 2012 Actuarial Valuation
Rates to be Effective July 1, 2013

Strathmore Public Utility District – Includes 31676.12 Benefit	Tier 1	Tiers 2 & 3	Total
Aggregate Normal Cost Rate	10.25%	7.33%	7.40%
Rate on first \$161.54 of Biweekly Compensation	6.99%	5.03%	5.07%
Rate on Biweekly Compensation in excess of first \$161.54	10.48%	7.55%	7.63%
Aggregate UAAL Rate	5.37%	5.37%	5.37%
Rate on first \$161.54 of Biweekly Compensation	3.63%	3.63%	3.63%
Rate on Biweekly Compensation in excess of first \$161.54	5.44%	5.44%	5.44%
Total Rate	15.62%	12.70%	12.77%
Rate on first \$161.54 of Biweekly Compensation	10.62%	8.66%	8.70%
Rate on Biweekly Compensation in excess of first \$161.54	15.92%	12.99%	13.07%

Section 6: Recommendations

Recommendations

We recommend that, pending a review of our recent study of the effects of reducing the investment return assumption, the current inflation rate assumption remain at 4.00% and the current investment return assumption remain at 7.90%.

We recommend that the Board adopt the member and employer contribution rates as of June 30, 2012, as shown in the prior sections. These rates, which reflect the current economic assumptions, are based on the Entry Age Normal Actuarial Cost Method and the actuarial value of assets, with an Unfunded Actuarial Accrued Liability amortized as a level percentage of payroll over a rolling 15-year period.

This combination of assumptions and methods reflects our best judgment of future long-term experience for TCERA.

Section 7: GASB Disclosures and CAFR Information



A Xerox Company

November 26, 2012

Board of Retirement
Tulare County
Employees' Retirement Association
136 N. Akers
Visalia, CA 93291

Members of the Board:

Buck Consultants, LLC is the Consulting Actuary for the Tulare County Employees' Retirement Association (TCERA). The date of the most recent actuarial valuation was June 30, 2012. We perform valuations for TCERA annually, and in performing each valuation, we conduct an examination of all participant data for reasonableness.

Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize the unfunded actuarial accrued liability (UAAL). As of June 30, 2012, the remaining amortization period for the UAAL was 15 years. The funding objective of the Plan is to establish contribution rates that, over time, will remain as a level percentage of payroll and will fully fund the liability for each participant by the participant's retirement date.

For actuarial valuation purposes, Plan assets are valued at Actuarial Value. Under this method, the assets used to determine employer contribution rates take into account the expected market value, and spread all gains and losses (returns above or below expected returns) over ten years. TCERA's financial statements are audited by an outside auditor.

Our firm has prepared all of the schedules presented in the actuarial report. TCERA staff members extract, summarize, and reformat our schedules for the Comprehensive Annual Financial Report. The actuarial assumptions shown in the schedules were selected by Buck as being appropriate for use under the Plan and Buck is solely responsible for the trend schedules presented in this report. An analysis of the Plan's noneconomic experience was performed as of June 30, 2008 to establish the validity of these assumptions. The assumptions used this valuation produce results that, in the aggregate, reasonably approximate the anticipated future experience of the Plan. The next experience analysis is due to be performed as of June 30, 2012.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the parameters of the Governmental Accounting Standards Board Statements No. 25 and 43, to the extent applicable. I am an Enrolled Actuary and a Member of the American Academy of Actuaries. I meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice.

Respectfully submitted,

A handwritten signature in cursive script that reads "Charlie E. Chittenden".

Charlie Chittenden, FSA, EA, MAAA
Principal and Consulting Actuary

Section 7: GASB Disclosures and CAFR Information

GASB and CAFR Information	This section focuses on the required GASB disclosures and the required CAFR information.
GASB 25 Schedule of Funding Progress	GASB 25 established reporting and disclosures for defined benefit pension plans. The required Schedule of Funding Progress shows a historical comparison of TCERA's assets and liabilities, using the same actuarial method used for funding TCERA.
GASB 25 Schedule of Employer Contributions	The required Schedule of Employer Contributions compares the actual employer contributions to the "Annual Required Contributions" (ARC). The ARC is the employer contribution determined under GASB 25 standards (normal cost and amortization of unfunded actuarial accrued liabilities) using the actuarial funding method used for funding TCERA.
Actuarial Analysis of Financial Experience	The annual CAFR requires the disclosure of historical sources of actuarial gains and losses.
Retiree and Beneficiary Experience	The annual CAFR requires the disclosure of historical summary data for retired members.
Solvency Test	The annual CAFR requires the disclosure of a "Solvency Test." This test compares actuarial assets to actuarial accrued liabilities, applying assets to active member contributions first, then to inactive and retired members and then to the remaining active member liabilities.

Section 7: GASB Disclosures and CAFR Information

EXHIBIT 7.1 – GASB 25 SCHEDULE OF FUNDING PROGRESS (\$ in Thousands)

<u>Actuarial Valuation Date</u>	<u>Actuarial Value of Assets*</u>	<u>Actuarial Accrued Liability (AAL)</u>	<u>Unfunded AAL (UAAL)</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>UAAL as a Percent of Covered Payroll</u>
6/30/00	517,197	470,141	(47,056)	110.0%	143,211	(32.9)%
6/30/01	574,417	491,228	(83,189)	116.9%	142,970	(58.2)%
6/30/02	612,469	561,377	(51,092)	109.1%	158,263	(32.3)%
6/30/03	634,249	608,505	(25,744)	104.2%	162,397	(15.9)%
6/30/04	665,244	649,649	(15,595)	102.4%	158,032	(9.9)%
6/30/05	681,618	714,656	33,038	95.4%	164,777	20.1%
6/30/06	729,899	792,844	62,945	92.1%	186,949	33.7%
6/30/07	800,967	846,030	45,063	94.7%	204,803	22.0%
6/30/08	879,051	946,414	67,363	92.9%	226,836	29.7%
6/30/09	919,179	996,747	77,568	92.2%	227,306	34.1%
6/30/10	946,640	1,033,211	86,570	91.6%	217,811	39.7%
6/30/11	969,681	1,072,144	102,509	90.4%	219,854	46.6%
6/30/12	981,946	1,101,456	119,511	89.1%	222,635	53.7%

*Amounts prior to 6/30/05 supplied by previous actuaries.

EXHIBIT 7.2 – GASB 25 SCHEDULE OF EMPLOYER CONTRIBUTIONS

<u>Year Ended</u>	<u>Annual Required Contribution</u>	<u>Percentage Contributed</u>
6/30/00	20,790	100%
6/30/01	18,872	100%
6/30/02	6,186	100%
6/30/03	5,245	100%
6/30/04	9,595	100%
6/30/05	10,502	100%
6/30/06	12,443	100%
6/30/07	17,975	100%
6/30/08	22,692	100%
6/30/09	22,431	100%
6/30/10	25,339	100%
6/30/11	23,434	100%
6/30/12	25,257	100%

Section 7: GASB Disclosures and CAFR Information

EXHIBIT 7.3 - ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE (DOLLARS IN THOUSANDS)

<u>Plan Year Ending</u>	<u>Actuarial (Gains)/Losses</u>			<u>Changes in Plan Provisions</u>	<u>Changes in Assumptions/Methods</u>	<u>Total (Gain)/Loss</u>
	<u>Asset Sources</u>	<u>Liability Sources</u>	<u>Total</u>			
6/30/2008	(17,758)	64,991	47,233	0	(21,636)	25,597
6/30/2009	178,344	(16,730)	161,614	0	(153,681)	7,933
6/30/2010	39,254	(32,639)	6,615	0	0	6,615
6/30/2011	38,745	(8,771)	29,974	0	(15,647)*	14,327
6/30/2012	46,660	(30,721)	15,939	0	0	15,939

* Includes changes due to Audit correction

EXHIBIT 7.4 - RETIREE AND BENEFICIARY EXPERIENCE

<u>Plan Year Ending</u>	<u>At Beginning of Year</u>	<u>At End of Year</u>	<u>Retiree Payroll</u>	<u>% Increase in Retiree Payroll</u>	<u>Average Annual Allowances</u>
6/30/2008	1,913	2,007	\$34,244,000	10.4%	\$17,062
6/30/2009	2,007	2,099	\$37,486,000	9.5%	\$17,859
6/30/2010	2,099	2,181	\$41,495,000	10.7%	\$19,026
6/30/2011	2,181	2,313	\$45,224,000	9.0%	\$19,552
6/30/2012	2,313	2,424	\$48,975,000	8.3%	\$20,204

EXHIBIT 7.5 - SOLVENCY TEST (Dollars In Thousands)

<u>Valuation Date</u>	<u>Actuarial Accrued Liabilities For</u>			<u>Actuarial Accrued Liabilities</u>	<u>Valuation Assets</u>	<u>Portion of Accrued Liabilities Covered by Valuation Assets</u>		
	<u>(1) Active Member Contributions</u>	<u>(2) Retirees and Beneficiaries</u>	<u>(3) Active Members</u>			<u>(1)</u>	<u>(2)</u>	<u>(3)</u>
6/30/2008	207,652	415,349	323,413	946,414	879,051	100%	100%	79.2%
6/30/2009	208,638	453,205	334,904	996,747	919,179	100%	100%	76.8%
6/30/2010	223,373	506,035	303,803	1,033,211	946,640	100%	100%	71.5%
6/30/2011	228,275	546,553	297,316	1,072,144	969,636	100%	100%	65.5%
6/30/2012	231,491	570,367	299,598	1,101,456	981,946	100%	100%	60.1%

Section 8: Summary of Actuarial Assumptions

Actuarial Assumptions

This section focuses on the actuarial assumptions used to perform the valuation.

Actuarial Assumptions

To carry out an actuarial valuation of the assets and liabilities of TCERA, the actuary must first adopt assumptions with respect to each of the following items:

Noneconomic assumptions

- ◆ The probabilities of members separating from active service on account of nonvested and vested withdrawal, retirement for service, death and disability, and
- ◆ The mortality rates to be experienced among retired persons.

Economic assumptions

- ◆ Interest earnings to be realized on the funds over many years in the future, and
- ◆ The relative increases in a member's salary from the date of the valuation to the date of separation from active service.

Noneconomic Assumptions

Rates of Separation from Active Service

We performed an experience study for the period from July 1, 2008, to June 30, 2011. On the basis of this study we adjusted the probabilities of separation from service. These adjusted probabilities were incorporated in our 2011 valuation. This report reflects the same probabilities of separation.

A complete list of the current rates of separation from active service can be found in Exhibits 8.1 – 8.6. These rates should be viewed in the aggregate rather than examining each of them separately. This is due to the interdependency of the rates. For example, if turnover were to increase, there would be fewer retirements.

Section 8: Summary of Actuarial Assumptions

Economic Assumptions

Inflation

In setting the economic assumptions, we take a building block approach. Specifically, we first look at the rate of inflation, which underlies both the total rate of return and the salary scale assumptions. To aid us in determining an appropriate inflation rate for TCERA, we have reviewed long-term historical inflation averages, recent trends, and the assumptions adopted by other public retirement systems. It should be noted that we have placed more emphasis on long-term historical averages and long-term future predictions than on the more recent, short-term trends. This helps to minimize fluctuations, which are more apparent in short term trends.

The rate of inflation is an important assumption used in valuing TCERA's liabilities. This assumption underlies both the investment return assumption and the salary increase assumption. These in turn directly impact the employer and employee contribution rates.

If the pattern of inflation during the last 90-year period is analyzed, it may be extrapolated that the current low rates will not continue into the future indefinitely.

Because of the cyclical nature of inflation and the long-term nature of TCERA's liabilities, we believe that it is appropriate to assume that the average inflation rate to be experienced over the next 30 to 50 years (which is approximately the lifetime of TCERA's present obligations) will be between 3.50% and 4.50%.

Based on the information presented in the economic assumption section of our experience study, we recommend that the current inflation rate assumption remain at 4.00%. We understand that the economic assumptions are under review.

Section 8: Summary of Actuarial Assumptions

Economic Assumptions

Real Rate of Return

In an effort to forecast the expected long-term rate of return on the assets, we use a capital market model (Described in Schedule 5 of the Experience Report) in which individual asset class returns are estimated under a wide variety of simulated economic environments based on their underlying relationships to key economic variables, and then rolled up into a forecast of the performance of a portfolio invested in accordance with the target allocation. The model is calibrated to current economic and market conditions, and trends to a state of equilibrium. Over a 20-year period, the 50th percentile rate of return forecast for such a portfolio is approximately 7.9%.

Applying TCERA's target asset allocation to the our model's real rates of return produces a real rate of return of approximately 4.85%. After adjusting for expenses and potential adverse future experience, we believe that a real rate of return of 3.75% provides a reasonable degree of conservatism when used with a 4.00% inflation rate. Thus, we recommend that the 7.75% investment return assumption be continued. In addition, since the reserves are credited semi-annually, the 7.75% rate of investment return is compounded to an effective rate of 7.90%. Again, we understand that the rate of return assumption is under review.

Section 8: Summary of Actuarial Assumptions

Economic Assumptions

Salary Scale

The salary scale assumption is developed in a similar manner. The inflation rate is combined with merit and longevity increases to produce a total salary scale assumption.

Merit and Longevity Increases

The merit and longevity component of the total salary scale assumption reflects increases in members' salaries due to promotions, advances in pay grades, etc. These increases are dependent on an individual's membership and are graded downward as members' age.

The overall effect of the merit and longevity increases is to add approximately 1.80% to the total salary scale assumption.

Section 8: Summary of Actuarial Assumptions

The Entry Age Normal Actuarial Cost Method was used in conjunction with the following actuarial assumptions. The UAAL is being funded as a level percentage of payroll over a rolling 15 year period.

1. Interest: 7.90% per annum (7.75% compounded semi-annually).
2. Interest Credited to Employee Accounts: 7.90% per annum (7.75% compounded semi-annually).
3. Inflation: 4.00% per annum.
4. Asset Valuation: Smoothed actuarial value (over 10 years) beginning with fiscal 2009, with no corridor around market value.
5. Salary Scale: See Exhibit 8.7
6. Spouses and Dependents: 88% of General male, 75% of General female and 95% of Safety male, 80% of Safety female active employees assumed married at retirement, with wives assumed three years younger than husbands.
7. Rates of Termination of Employment: See Exhibits 8.1 – 8.3
8. Years of Life Expectancy After Retirement (Exhibit 8.4):
 - General Males - RP-2000 Generational Mortality Table for Males, with no collar or age adjustment.
 - General Females - RP-2000 Generational Mortality Table for Females, with no collar or age adjustment.
 - Safety - RP-2000 Generational Mortality Table for Males, with blue-collar adjustment, and no setback.

Section 8: Summary of Actuarial Assumptions

9. Years of Life Expectancy After Disability Retirement (Exhibits 8.5 and 8.6):
- General Males - RP-2000 Disabled Annuitant Mortality Table for Males, with no setback.
 - General Females - RP-2000 Disabled Annuitant Mortality Table for Females, with no setback.
 - Safety Males - RP-2000 Disabled Annuitant Mortality Table for Males, with a 2-year setback.
 - Safety Females - RP-2000 Disabled Annuitant Mortality Table for Females, with a 2-year setback.
10. Life Expectancy After Retirement for Employee Contribution Rate Purposes
- The basic employee contribution rates for General members were calculated on a unisex basis using the RP-2000 Mortality Table projected to 2021 (weighted 30% male and 70% female), with no collar or age adjustment.
 - The basic employee contribution rates for Safety members were based upon the RP-2000 Mortality Table projected to 2021 (weighted 75% male and 25% female), with adjustment for blue-collar workers.
11. Reciprocity Assumption: 65% of members who terminate with a vested benefit are assumed to enter a reciprocal system.
12. Deferral Age for Vested Terminations: Age 60 for General members; age 53 for Safety members.

Section 8: Summary of Actuarial Assumptions

EXHIBIT 8.1 – PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE GENERAL MEMBERS – MALES, RECOMMENDED ASSUMPTIONS

Age	Total Death	Percent Duty	Withdrawal			Ordinary Disability	Duty Disability	Service Retirement		
			svc < 3	svc 3 to 5	svc>5			Svc <15	Svc 15 to 20	Svc=20+
20	0.000345	36.59%	0.15000	0.09000	0.05000	0.00000	0.00000			
21	0.000357	36.59%	0.15000	0.09000	0.05000	0.00000	0.00010			
22	0.000366	36.59%	0.15000	0.09000	0.05000	0.00000	0.00010			
23	0.000373	36.59%	0.15000	0.09000	0.05000	0.00000	0.00010			
24	0.000376	36.59%	0.15000	0.09000	0.05000	0.00000	0.00010			
25	0.000376	42.22%	0.15000	0.09000	0.05000	0.00010	0.00010			
26	0.000378	42.22%	0.15000	0.09000	0.05000	0.00010	0.00010			
27	0.000382	42.22%	0.15000	0.09000	0.05000	0.00010	0.00010			
28	0.000393	42.22%	0.15000	0.09000	0.05000	0.00010	0.00010			
29	0.000412	42.22%	0.15000	0.09000	0.05000	0.00010	0.00010			
30	0.000444	42.22%	0.15000	0.09000	0.04000	0.00020	0.00010			
31	0.000499	45.83%	0.15000	0.09000	0.04000	0.00020	0.00010			
32	0.000562	45.83%	0.15000	0.09000	0.04000	0.00020	0.00010			
33	0.000631	45.83%	0.15000	0.09000	0.04000	0.00020	0.00010			
34	0.000702	45.45%	0.15000	0.09000	0.04000	0.00020	0.00010			
35	0.000773	49.15%	0.15000	0.10000	0.03000	0.00030	0.00010			
36	0.000841	49.15%	0.15000	0.10000	0.03000	0.00030	0.00020			
37	0.000904	48.48%	0.15000	0.10000	0.03000	0.00030	0.00020			
38	0.000964	48.48%	0.15000	0.10000	0.03000	0.00040	0.00020			
39	0.001021	50.72%	0.15000	0.10000	0.03000	0.00040	0.00030			
40	0.001079	48.28%	0.09000	0.10000	0.02000	0.00040	0.00040			
41	0.001142	50.33%	0.09000	0.10000	0.02000	0.00050	0.00050			
42	0.001215	50.33%	0.09000	0.10000	0.02000	0.00050	0.00060			
43	0.001299	50.00%	0.09000	0.10000	0.02000	0.00060	0.00070			
44	0.001397	52.33%	0.09000	0.10000	0.02000	0.00060	0.00080			
45	0.001508	51.61%	0.09000	0.07500	0.01000	0.00080	0.00100			
46	0.001616	53.61%	0.09000	0.07500	0.01000	0.00090	0.00120			
47	0.001734	53.14%	0.09000	0.07500	0.01000	0.00100	0.00140			
48	0.001860	56.11%	0.09000	0.07500	0.01000	0.00110	0.00160			
49	0.001995	56.79%	0.09000	0.07500	0.01000	0.00120	0.00180			
50	0.002138	57.58%	0.09000	0.07500	0.00700	0.00140	0.00200	0.0300	0.0240	0.0330
51	0.002449	57.14%	0.09000	0.07500	0.00700	0.00160	0.00250	0.0300	0.0240	0.0330
52	0.002667	57.81%	0.09000	0.07500	0.00700	0.00180	0.00300	0.0300	0.0240	0.0330
53	0.002916	57.41%	0.09000	0.07500	0.00700	0.00200	0.00350	0.0300	0.0240	0.0330
54	0.003196	57.99%	0.09000	0.07500	0.00700	0.00220	0.00400	0.0300	0.0240	0.0330
55	0.003624	59.24%	0.09000	0.07500	0.00450	0.00240	0.00450	0.0800	0.0640	0.0880
56	0.004200	60.45%	0.09000	0.07500	0.00450	0.00260	0.00500	0.0800	0.0640	0.0880
57	0.004693	61.36%	0.09000	0.07500	0.00450	0.00280	0.00550	0.0800	0.0640	0.0880
58	0.005273	62.28%	0.09000	0.07500	0.00450	0.00300	0.00600	0.0800	0.0640	0.0880
59	0.005945	62.96%	0.09000	0.07500	0.00450	0.00320	0.00650	0.0800	0.0640	0.0880
60	0.006747	0.00%	0.09000	0.07500	0.00300	0.00340	0.00700	0.1400	0.1120	0.1540
61	0.007676	0.00%	0.09000	0.07500	0.00300	0.00360	0.00750	0.1400	0.1120	0.1540
62	0.008757	0.00%	0.09000	0.07500	0.00300	0.00380	0.00800	0.1400	0.1120	0.1540
63	0.010012	0.00%	0.09000	0.07500	0.00300	0.00400	0.00850	0.1400	0.1120	0.1540
64	0.011280	0.00%	0.09000	0.07500	0.00300	0.00420	0.00900	0.1400	0.1120	0.1540
65	0.012737	0.00%						0.2000	0.1600	0.2200
66	0.014409	0.00%						0.2000	0.1600	0.2200
67	0.016075	0.00%						0.2000	0.1600	0.2200
68	0.017871	0.00%						0.2000	0.1600	0.2200
69	0.019802	0.00%						0.2000	0.1600	0.2200
70	0.022206	0.00%						0.3000	0.2400	0.3300
71	0.024570	0.00%						0.3000	0.2400	0.3300
72	0.027281	0.00%						0.3000	0.2400	0.3300
73	0.030387	0.00%						0.3000	0.2400	0.3300
74	0.033900	0.00%						0.3000	0.2400	0.3300
75	0.037834	0.00%						1.0000	1.0000	1.0000

Section 8: Summary of Actuarial Assumptions

EXHIBIT 8.2 – PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE GENERAL MEMBERS – FEMALES, RECOMMENDED ASSUMPTIONS

Age	Total Death	Percent Duty	Withdrawal			Ordinary Disability	Duty Disability	Service Retirement	
			svc < 3	svc 3 to 5	svc > 5			Svc < 15	Svc = 15+
20	0.000191	36.59%	0.13000	0.10000	0.04000	0.00000	0.00010		
21	0.000192	36.59%	0.13000	0.10000	0.04000	0.00000	0.00010		
22	0.000194	36.59%	0.13000	0.10000	0.04000	0.00000	0.00010		
23	0.000197	36.59%	0.13000	0.10000	0.04000	0.00000	0.00010		
24	0.000201	36.59%	0.13000	0.10000	0.04000	0.00000	0.00010		
25	0.000207	42.22%	0.13000	0.10000	0.04000	0.00010	0.00010		
26	0.000214	42.22%	0.13000	0.10000	0.04000	0.00010	0.00010		
27	0.000223	42.22%	0.13000	0.10000	0.04000	0.00010	0.00010		
28	0.000235	42.22%	0.13000	0.10000	0.04000	0.00010	0.00010		
29	0.000248	42.22%	0.13000	0.10000	0.04000	0.00010	0.00010		
30	0.000264	42.22%	0.13000	0.10000	0.04000	0.00010	0.00010		
31	0.000307	45.83%	0.13000	0.10000	0.04000	0.00010	0.00010		
32	0.000350	45.83%	0.13000	0.10000	0.04000	0.00010	0.00010		
33	0.000394	45.83%	0.13000	0.10000	0.04000	0.00010	0.00010		
34	0.000435	45.45%	0.13000	0.10000	0.04000	0.00010	0.00010		
35	0.000475	49.15%	0.13000	0.10000	0.02500	0.00070	0.00010		
36	0.000514	49.15%	0.13000	0.10000	0.02500	0.00070	0.00010		
37	0.000554	48.48%	0.13000	0.10000	0.02500	0.00070	0.00010		
38	0.000598	48.48%	0.13000	0.10000	0.02500	0.00110	0.00010		
39	0.000648	50.72%	0.13000	0.10000	0.02500	0.00110	0.00010		
40	0.000706	48.28%	0.09000	0.09000	0.01500	0.00120	0.00010		
41	0.000774	50.33%	0.09000	0.09000	0.01500	0.00130	0.00010		
42	0.000852	50.33%	0.09000	0.09000	0.01500	0.00140	0.00010		
43	0.000937	50.00%	0.09000	0.09000	0.01500	0.00140	0.00010		
44	0.001029	52.33%	0.09000	0.09000	0.01500	0.00150	0.00020		
45	0.001124	51.61%	0.09000	0.09000	0.01500	0.00160	0.00020		
46	0.001223	53.61%	0.09000	0.09000	0.01500	0.00180	0.00030		
47	0.001326	53.14%	0.09000	0.09000	0.01500	0.00200	0.00030		
48	0.001434	56.11%	0.09000	0.09000	0.01500	0.00240	0.00040		
49	0.001550	56.79%	0.09000	0.09000	0.01500	0.00260	0.00050		
50	0.001676	57.58%	0.09000	0.09000	0.01400	0.00280	0.00060	0.0300	0.0500
51	0.001852	57.14%	0.09000	0.09000	0.01000	0.00300	0.00070	0.0300	0.0500
52	0.002018	57.81%	0.09000	0.09000	0.01000	0.00320	0.00080	0.0300	0.0500
53	0.002207	57.41%	0.09000	0.09000	0.01000	0.00340	0.00100	0.0300	0.0500
54	0.002424	57.99%	0.09000	0.09000	0.01000	0.00380	0.00110	0.0300	0.0500
55	0.002717	59.24%	0.09000	0.09000	0.01000	0.00420	0.00120	0.0420	0.0700
56	0.003090	60.45%	0.09000	0.09000	0.01000	0.00440	0.00130	0.0420	0.0700
57	0.003478	61.36%	0.09000	0.09000	0.01000	0.00460	0.00140	0.0420	0.0700
58	0.003923	62.28%	0.09000	0.09000	0.01000	0.00480	0.00150	0.0420	0.0700
59	0.004441	62.96%	0.09000	0.09000	0.01000	0.00500	0.00160	0.0420	0.0700
60	0.005055	0.00%	0.09000	0.09000	0.00000	0.00520	0.00180	0.0780	0.1300
61	0.005814	0.00%	0.09000	0.09000	0.00000	0.00540	0.00200	0.0780	0.1300
62	0.006657	0.00%	0.09000	0.09000	0.00000	0.00580	0.00220	0.0780	0.1300
63	0.007648	0.00%	0.09000	0.09000	0.00000	0.00600	0.00240	0.0780	0.1300
64	0.008619	0.00%	0.09000	0.09000	0.00000	0.00620	0.00260	0.0780	0.1300
65	0.009706	0.00%						0.1320	0.2200
66	0.010954	0.00%						0.1320	0.2200
67	0.012163	0.00%						0.1320	0.2200
68	0.013445	0.00%						0.1320	0.2200
69	0.014860	0.00%						0.1320	0.2200
70	0.016742	0.00%						0.1800	0.3000
71	0.018579	0.00%						0.1800	0.3000
72	0.020665	0.00%						0.1800	0.3000
73	0.022970	0.00%						0.1800	0.3000
74	0.025458	0.00%						0.1800	0.3000
75	0.028106	0.00%						1.0000	1.0000

Section 8: Summary of Actuarial Assumptions

EXHIBIT 8.3 – PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE SAFETY MEMBERS, RECOMMENDED ASSUMPTIONS

Age	Total Death	Percent Duty	Withdrawal			Ordinary Disability	Duty Disability	Service Retirement		
			svc < 3	svc 3 to 5	svc>5			Svc <15	Svc <15	Svc <15
20	0.000345	36.59%	0.20000	0.08000	0.04500	0.00000	0.00110			
21	0.000357	36.59%	0.20000	0.08000	0.04500	0.00000	0.00120			
22	0.000366	36.59%	0.20000	0.08000	0.04500	0.00000	0.00130			
23	0.000373	36.59%	0.20000	0.08000	0.04500	0.00000	0.00150			
24	0.000376	36.59%	0.20000	0.08000	0.04500	0.00000	0.00180			
25	0.000376	42.22%	0.20000	0.08000	0.04500	0.00050	0.00230			
26	0.000378	42.22%	0.20000	0.08000	0.04500	0.00050	0.00280			
27	0.000382	42.22%	0.20000	0.08000	0.04500	0.00050	0.00320			
28	0.000393	42.22%	0.20000	0.08000	0.04500	0.00050	0.00320			
29	0.000412	42.22%	0.20000	0.08000	0.04500	0.00050	0.00400			
30	0.000726	42.22%	0.20000	0.08000	0.03500	0.00070	0.00500			
31	0.000800	45.83%	0.20000	0.08000	0.03500	0.00070	0.00570			
32	0.000875	45.83%	0.20000	0.08000	0.03500	0.00070	0.00600			
33	0.000949	45.83%	0.20000	0.08000	0.03500	0.00070	0.00620			
34	0.001019	45.45%	0.20000	0.08000	0.03500	0.00070	0.00640			
35	0.001087	49.15%	0.20000	0.08000	0.03400	0.00090	0.00640			
36	0.001150	49.15%	0.20000	0.08000	0.01000	0.00090	0.00650			
37	0.001206	48.48%	0.20000	0.08000	0.01000	0.00090	0.00660			
38	0.001262	48.48%	0.20000	0.08000	0.01000	0.00090	0.00670			
39	0.001315	50.72%	0.20000	0.08000	0.01000	0.00090	0.00670			
40	0.001371	48.28%	0.20000	0.08000	0.01000	0.00120	0.00680			
41	0.001434	50.33%	0.20000	0.08000	0.01000	0.00120	0.00690			
42	0.001508	50.33%	0.20000	0.08000	0.01000	0.00120	0.00690			
43	0.001591	50.00%	0.20000	0.08000	0.01000	0.00140	0.00700			
44	0.001686	52.33%	0.20000	0.08000	0.01000	0.00160	0.00710			
45	0.001793	51.61%	0.10000	0.06000	0.01000	0.00190	0.00980	0.0300	0.0500	0.1300
46	0.001894	53.61%	0.10000	0.06000	0.01000	0.00210	0.00980	0.0300	0.0500	0.1300
47	0.002006	53.14%	0.10000	0.06000	0.01000	0.00260	0.00980	0.0300	0.0500	0.1300
48	0.002128	56.11%	0.10000	0.06000	0.01000	0.00300	0.00980	0.0300	0.0500	0.1300
49	0.002264	56.79%	0.10000	0.06000	0.01000	0.00350	0.00980	0.0300	0.0500	0.1300
50	0.002412	57.58%	0.10000	0.06000	0.00000	0.00400	0.01000	0.0300	0.0500	0.1300
51	0.002758	57.14%	0.10000	0.06000	0.00000	0.00440	0.01250	0.0300	0.0500	0.1300
52	0.003000	57.81%	0.10000	0.06000	0.00000	0.00490	0.01500	0.0300	0.0500	0.1300
53	0.003283	57.41%	0.10000	0.06000	0.00000	0.00540	0.01750	0.0300	0.0500	0.1300
54	0.003599	57.99%	0.10000	0.06000	0.00000	0.00580	0.02000	0.0150	0.0250	0.0650
55	0.004081	59.24%	0.05000	0.06000	0.00000	0.00650	0.02250	0.0600	0.1000	0.2600
56	0.004717	60.45%	0.05000	0.06000	0.00000	0.00750	0.02380	0.0384	0.0640	0.1664
57	0.005242	61.36%	0.05000	0.06000	0.00000	0.00840	0.02510	0.0384	0.0640	0.1664
58	0.005853	62.28%	0.05000	0.06000	0.00000	0.00960	0.02650	0.0384	0.0640	0.1664
59	0.006545	62.96%	0.05000	0.06000	0.00000	0.01100	0.02810	0.0450	0.0750	0.1950
60	0.007361	0.00%						0.0600	0.1000	0.2600
61	0.008282	0.00%						0.0600	0.1000	0.2600
62	0.009344	0.00%						0.0600	0.1000	0.2600
63	0.010563	0.00%						0.0600	0.1000	0.2600
64	0.011776	0.00%						0.1500	0.2500	0.6500
65	0.013170	0.00%						0.1500	0.2500	0.6500
66	0.014769	0.00%						0.1500	0.2500	0.6500
67	0.016364	0.00%						0.1500	0.2500	0.6500
68	0.018068	0.00%						0.3000	0.5000	1.0000
69	0.019901	0.00%						0.3000	0.5000	1.0000
70	0.022206	0.00%						1.0000	1.0000	1.0000

Section 8: Summary of Actuarial Assumptions

In addition to the rates of termination, we have assumed that a percentage of members who terminate will elect a deferred pension with the remainder taking a refund. The percentage of terminated who defer their benefit are shown below:

	<u>Electing to Defer Payment to Retirement</u>			
	<u>Svc <10</u>	<u>Svc 10 to 15</u>	<u>Svc 15to 20</u>	<u>Svc 20+</u>
General Males	5%	5%	25%	75%
General Females	5%	5%	30%	80%
Safety	5%	10%	50%	100%

Section 8: Summary of Actuarial Assumptions

EXHIBIT 8.4 – YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT RECOMMENDED ASSUMPTIONS

Age	General		Safety		Age	General		Safety	
	Male	Female	Male	Female		Male	Female	Male	Female
20	61.09	63.63	60.71	60.71	55	27.36	29.54	27.24	27.24
21	60.10	62.64	59.73	59.73	56	26.43	28.61	26.32	26.32
22	59.12	61.65	58.75	58.75	57	25.52	27.69	25.42	25.42
23	58.14	60.66	57.76	57.76	58	24.62	26.78	24.53	24.53
24	57.16	59.67	56.78	56.78	59	23.72	25.88	23.64	23.64
25	56.17	58.68	55.80	55.80	60	22.84	24.98	22.77	22.77
26	55.19	57.69	54.82	54.82	61	21.96	24.10	21.90	21.90
27	54.21	56.70	53.84	53.84	62	21.10	23.23	21.05	21.05
28	53.23	55.71	52.86	52.86	63	20.25	22.37	20.21	20.21
29	52.25	54.72	51.87	51.87	64	19.42	21.53	19.39	19.39
30	51.27	53.73	50.89	50.89	65	18.60	20.70	18.58	18.58
31	50.29	52.74	49.93	49.93	66	17.80	19.89	17.78	17.78
32	49.31	51.76	48.97	48.97	67	17.01	19.09	17.00	17.00
33	48.34	50.77	48.01	48.01	68	16.24	18.31	16.24	16.24
34	47.37	49.79	47.05	47.05	69	15.48	17.53	15.48	15.48
35	46.40	48.81	46.09	46.09	70	14.74	16.77	14.74	14.74
36	45.43	47.83	45.14	45.14	71	14.00	16.03	14.00	14.00
37	44.47	46.85	44.19	44.19	72	13.29	15.31	13.29	13.29
38	43.51	45.87	43.24	43.24	73	12.58	14.60	12.58	12.58
39	42.54	44.90	42.29	42.29	74	11.90	13.90	11.90	11.90
40	41.58	43.92	41.34	41.34	75	11.23	13.22	11.23	11.23
41	40.62	42.95	40.39	40.39	76	10.58	12.55	10.58	10.58
42	39.67	41.97	39.44	39.44	77	9.95	11.90	9.95	9.95
43	38.71	41.00	38.49	38.49	78	9.34	11.27	9.34	9.34
44	37.75	40.03	37.55	37.55	79	8.76	10.65	8.76	8.76
45	36.80	39.07	36.60	36.60	80	8.20	10.05	8.20	8.20
46	35.84	38.10	35.65	35.65	81	7.66	9.47	7.66	7.66
47	34.89	37.14	34.71	34.71	82	7.15	8.91	7.15	7.15
48	33.94	36.18	33.77	33.77	83	6.67	8.36	6.67	6.67
49	32.99	35.22	32.83	32.83	84	6.22	7.84	6.22	6.22
50	32.05	34.26	31.89	31.89	85	5.79	7.34	5.79	5.79
51	31.10	33.31	30.95	30.95	86	5.38	6.87	5.38	5.38
52	30.16	32.36	30.01	30.01	87	5.00	6.43	5.00	5.00
53	29.22	31.41	29.08	29.08	88	4.65	6.02	4.65	4.65
54	28.29	30.47	28.16	28.16	89	4.32	5.65	4.32	4.32
					90	4.03	5.31	4.03	4.03

General Males: RP 2000 Generational Mortality Table for Males, with no collar or age adjustment

General Females: RP 2000 Generational Mortality Table for Females, with no collar or age adjustment

Safety Males: RP 2000 Mortality Table for Males, with blue collar adjustment, and no setback

Safety Females: RP 2000 Mortality Table for Females, with blue collar adjustment, and no setback

Section 8: Summary of Actuarial Assumptions

**EXHIBIT 8.5 – YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT
GENERAL MEMBERS – CURRENT ASSUMPTIONS**

Age	Years of Life Expectancy		Age	Years of Life Expectancy	
	Male	Female		Male	Female
20	31.51	47.16	55	15.98	21.73
21	30.51	46.16	56	15.55	21.09
22	30.20	45.50	57	15.12	20.46
23	29.89	44.84	58	14.70	19.83
24	29.57	44.17	59	14.27	19.22
25	29.24	43.50	60	13.86	18.62
26	28.90	42.82	61	13.44	18.02
27	28.55	42.14	62	13.03	17.43
28	28.20	41.45	63	12.62	16.85
29	27.84	40.76	64	12.21	16.27
30	27.47	40.06	65	11.80	15.70
31	27.09	39.36	66	11.39	15.14
32	26.71	38.65	67	10.99	14.58
33	26.31	37.94	68	10.59	14.04
34	25.90	37.22	69	10.20	13.50
35	25.49	36.49	70	9.81	12.98
36	25.07	35.76	71	9.43	12.46
37	24.63	35.03	72	9.05	11.96
38	24.19	34.28	73	8.69	11.47
39	23.73	33.54	74	8.33	11.00
40	23.27	32.79	75	7.99	10.53
41	22.80	32.03	76	7.65	10.09
42	22.31	31.26	77	7.33	9.65
43	21.81	30.49	78	7.02	9.23
44	21.30	29.72	79	6.72	8.81
45	20.78	28.94	80	6.43	8.42
46	20.25	28.15	81	6.16	8.03
47	19.73	27.38	82	5.89	7.66
48	19.23	26.62	83	5.63	7.29
49	18.73	25.88	84	5.38	6.94
50	18.25	25.15	85	5.14	6.61
51	17.78	24.44	86	4.90	6.28
52	17.32	23.74	87	4.66	5.97
53	16.86	23.06	88	4.41	5.67
54	16.42	22.39	89	4.16	5.39
			90	3.90	5.12

Males: RP 2000 Disabled Annuitant Mortality Table for Males, and no setback

Females: RP 2000 Disabled Annuitant Mortality Table for Females, and no setback

Section 8: Summary of Actuarial Assumptions

EXHIBIT 8.6 – YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT SAFETY MEMBERS – CURRENT ASSUMPTIONS

Age	Years of Life Expectancy		Age	Years of Life Expectancy	
	Male	Female		Male	Female
20	33.51	49.16	55	16.86	23.06
21	32.51	48.16	56	16.42	22.39
22	31.51	47.16	57	15.98	21.73
23	30.51	46.16	58	15.55	21.09
24	30.20	45.50	59	15.12	20.46
25	29.89	44.84	60	14.70	19.83
26	29.57	44.17	61	14.27	19.22
27	29.24	43.50	62	13.86	18.62
28	28.90	42.82	63	13.44	18.02
29	28.55	42.14	64	13.03	17.43
30	28.20	41.45	65	12.62	16.85
31	27.84	40.76	66	12.21	16.27
32	27.47	40.06	67	11.80	15.70
33	27.09	39.36	68	11.39	15.14
34	26.71	38.65	69	10.99	14.58
35	26.31	37.94	70	10.59	14.04
36	25.90	37.22	71	10.20	13.50
37	25.49	36.49	72	9.81	12.98
38	25.07	35.76	73	9.43	12.46
39	24.63	35.03	74	9.05	11.96
40	24.19	34.28	75	8.69	11.47
41	23.73	33.54	76	8.33	11.00
42	23.27	32.79	77	7.99	10.53
43	22.80	32.03	78	7.65	10.09
44	22.31	31.26	79	7.33	9.65
45	21.81	30.49	80	7.02	9.23
46	21.30	29.72	81	6.72	8.81
47	20.78	28.94	82	6.43	8.42
48	20.25	28.15	83	6.16	8.03
49	19.73	27.38	84	5.89	7.66
50	19.23	26.62	85	5.63	7.29
51	18.73	25.88	86	5.38	6.94
52	18.25	25.15	87	5.14	6.61
53	17.78	24.44	88	4.90	6.28
54	17.32	23.74	89	4.66	5.97
			90	4.41	5.67

Males: RP 2000 Disabled Annuitant Mortality Table for Males, with a 2-year setback

Females: RP 2000 Disabled Annuitant Mortality Table for Females, with a 2-year setback

Section 8: Summary of Actuarial Assumptions

EXHIBIT 8.7 – SALARY INCREASE ASSUMPTION

Years of Service	General Members	Safety Members
0	6.00%	6.30%
1	5.80%	6.15%
2	5.80%	6.15%
3	5.75%	6.10%
4	5.75%	6.10%
5	5.75%	6.00%
6	5.75%	6.00%
7	5.75%	6.00%
8	5.70%	6.00%
9	5.70%	6.00%
10	5.70%	6.00%
11	5.70%	6.00%
12	5.70%	6.00%
13	5.70%	5.95%
14	5.70%	5.95%
15	5.70%	5.95%
16	4.35%	5.95%
17	4.35%	5.95%
18	4.35%	5.95%
19	4.35%	5.95%
20 or more	4.35%	4.40%

Note: Salary scale assumption reflects 4.00% for inflation and graded merit and longevity.

Section 9: Member Data

The June 30, 2012, actuarial valuation of TCERA was based on the following data. For comparison, we also show a summary of the June 30, 2011, statistical information.

SUMMARY OF RETIRED MEMBERSHIP			
	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>Percentage Change During the Period</u>
GENERAL			
Number	1,961	2,058	4.95%
Total Annual Allowance	\$34,253,416	\$37,246,457	8.74%
Average Total Monthly Allowance	1,456	1,508	3.61%
SAFETY			
Number	352	366	3.98%
Total Annual Allowance	\$10,970,852	\$11,728,355	6.90%
Average Total Monthly Allowance	2,597	2,670	2.82%
TOTAL			
Number	2,313	2,424	4.80%
Total Annual Allowance	\$45,224,268	\$48,974,812	8.29%
Average Total Monthly Allowance	\$1,629	\$1,684	3.33%

SUMMARY OF INACTIVE MEMBERSHIP*			
	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>Percentage Change During the Period</u>
GENERAL			
Number	1,554	1,533	-1.35%
SAFETY			
Number	207	209	0.97%
TOTAL			
Number	1,761	1,742	-1.08%

*Includes unclaimed accounts.

Section 9: Member Data

SUMMARY OF ACTIVE MEMBERSHIP			
	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>Percentage Change During the Period</u>
GENERAL TIER 1			
Number	79	68	-13.9%
Annual Payroll*	\$4,949,279	\$4,252,229	-14.1%
Average Monthly Salary	\$5,221	\$5,211	-0.2%
Average Age	58.92	59.37	0.8%
Average Service	30.90	31.89	3.2%
GENERAL TIER 2 & 3			
Numbers	3,304	3,374	2.1%
Annual Payroll*	\$162,955,607	\$164,771,319	1.1%
Average Monthly Salary	\$4,110	\$4,070	-1.0%
Average Age	43.88	43.90	0.0%
Average Service	9.13	9.12	-0.1%
SAFETY TIER 1			
Number	10	6	-40.0%
Annual Payroll*	\$941,177	\$610,767	-35.1%
Average Monthly Salary	\$7,843	\$8,483	8.2%
Average Age	57.92	58.21	0.5%
Average Service	32.22	33.54	4.1%
SAFETY TIER 2 & 3			
Number	804	843	4.9%
Annual Payroll*	\$51,007,551	\$53,000,313	3.9%
Average Monthly Salary	\$5,287	\$5,239	-0.9%
Average Age	38.74	38.75	0.0%
Average Service	9.45	9.62	1.8%
TOTAL			
Number	4,197	4,291	2.2%
Annual Payroll*	\$219,853,614	\$222,634,628	1.3%
Average Monthly Salary	\$4,365	\$4,324	-1.0%
Average Age	43.21	43.15	-0.1%
Average Service	9.65	9.61	-0.4%

* Represents the annualization of active members' pay rates on June 30.

Section 9: Member Data

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE GENERAL MEMBERS
AS OF JUNE 30, 2012
TIER 1 – MALES**

Current Age	Years of Service							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	2	2
	0	0	0	0	0	0	51,780	51,780
55-59	0	0	0	0	0	0	8	8
	0	0	0	0	0	0	73,111	73,111
60-64	0	0	0	0	1	0	10	11
	0	0	0	0	98,768	0	88,554	89,482
65-69	0	0	0	0	0	0	1	1
	0	0	0	0	0	0	76,441	76,441
70 & Over	0	0	0	0	0	0	1	1
	0	0	0	0	0	0	52,147	52,147
Total	0	0	0	0	1	0	22	23
	0	0	0	0	98,768	0	77,390	78,319

Section 9: Member Data

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE GENERAL MEMBERS
AS OF JUNE 30, 2012
TIER 1 – FEMALES**

Current Age	Years of Service							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	8	8
	0	0	0	0	0	0	53,486	53,486
55-59	0	1	1	2	0	3	14	21
	0	38,826	56,865	42,821	0	47,843	66,997	60,134
60-64	0	0	0	1	1	1	12	15
	0	0	0	52,491	71,028	37,991	38,314	41,419
65-69	0	0	0	0	0	0	1	1
	0	0	0	0	0	0	45,655	45,655
70 & Over	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
Total	0	1	1	3	1	4	35	45
	0	38,826	56,865	46,044	71,028	45,380	53,465	52,392

Section 9: Member Data

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE GENERAL MEMBERS
AS OF JUNE 30, 2012
TIER 2 & 3 – MALES**

Current Age	Years of Service							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	27	2	0	0	0	0	0	29
	30,728	32,734	0	0	0	0	0	30,866
25-29	74	13	1	0	0	0	0	88
	39,792	39,447	71,500	0	0	0	0	40,101
30-34	79	50	12	0	0	0	0	141
	45,803	52,130	46,673	0	0	0	0	48,121
35-39	63	43	13	3	0	0	0	122
	50,294	53,233	50,587	87,665	0	0	0	52,280
40-44	30	33	28	15	0	0	0	106
	40,173	56,131	61,135	47,311	0	0	0	51,688
45-49	34	39	22	18	8	0	0	121
	46,122	57,357	60,439	63,974	64,319	0	0	56,205
50-54	31	39	28	8	19	7	0	132
	54,174	51,402	61,104	50,016	79,476	77,644	0	59,460
55-59	21	36	29	15	13	11	8	133
	52,938	62,454	62,118	55,776	74,896	74,601	54,614	61,874
60-64	13	24	16	11	6	4	1	75
	63,497	58,210	68,311	48,675	59,200	103,907	168,545	63,870
65-69	4	8	12	4	0	0	0	28
	98,217	52,163	51,626	60,752	0	0	0	59,739
70 & Over	2	3	2	0	2	0	0	9
	64,545	62,973	37,491	0	52,377	0	0	55,305
Total	378	290	163	74	48	22	9	984
	46,225	54,549	59,082	55,938	72,046	80,897	67,273	53,766

Section 9: Member Data

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE GENERAL MEMBERS
AS OF JUNE 30, 2012
TIER 2 & 3 – FEMALES**

Current Age	Years of Service							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	3	0	0	0	0	0	0	3
	27,763	0	0	0	0	0	0	27,763
20-24	52	0	0	0	0	0	0	52
	30,893	0	0	0	0	0	0	30,893
25-29	202	66	0	0	0	0	0	268
	38,068	39,213	0	0	0	0	0	38,350
30-34	154	160	60	0	0	0	0	374
	40,191	44,888	42,524	0	0	0	0	42,575
35-39	102	100	104	20	0	0	0	326
	38,226	46,643	45,975	42,642	0	0	0	43,551
40-44	89	82	104	43	8	0	0	326
	42,451	47,724	46,037	46,838	49,020	0	0	45,661
45-49	67	64	79	40	28	5	0	283
	40,337	48,213	44,854	47,029	45,693	59,934	0	45,201
50-54	44	53	90	50	39	14	6	296
	44,684	48,522	46,943	55,581	55,489	54,794	62,044	50,152
55-59	29	42	78	39	31	12	6	237
	47,538	49,734	50,405	46,974	49,545	61,901	83,098	50,668
60-64	19	44	45	33	26	6	3	176
	42,411	43,335	50,316	44,363	57,639	58,502	44,889	47,870
65-69	3	12	12	8	1	5	0	41
	33,323	47,038	47,738	45,471	38,769	79,508	0	49,691
70 & Over	2	2	2	1	1	0	0	8
	33,433	35,570	33,423	34,805	38,601	0	0	34,782
Total	766	625	574	234	134	42	15	2,390
	39,512	45,818	46,559	47,956	51,847	60,908	67,034	44,920

Section 9: Member Data

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE SAFETY MEMBERS
AS OF JUNE 30, 2012
TIER 1 – TOTAL**

Current Age	Years of Service							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
55-59	3	0	0	0	0	0	2	5
	67,723	0	0	0	0	0	137,359	95,577
60-64	1	0	0	0	0	0	0	1
	119,585	0	0	0	0	0	0	119,585
65-69	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
Total	4	0	0	0	0	0	2	6
	80,688	0	0	0	0	0	137,359	99,579

Section 9: Member Data

**AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY
OF ACTIVE SAFETY MEMBERS
AS OF JUNE 30, 2012
TIER 2 & 3 – TOTAL**

Current Age	Years of Service							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 19	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
20-24	31	1	0	0	0	0	0	32
	45,009	54,103	0	0	0	0	0	45,293
25-29	106	41	0	0	0	0	0	147
	48,834	60,782	0	0	0	0	0	52,166
30-34	91	79	11	0	0	0	0	181
	50,614	62,696	66,588	0	0	0	0	56,858
35-39	60	40	33	3	0	0	0	136
	52,664	63,692	72,900	78,431	0	0	0	61,386
40-44	42	25	29	22	1	0	0	119
	55,524	64,016	68,836	71,564	59,729	0	0	63,553
45-49	31	12	17	21	11	13	0	105
	56,520	75,413	63,628	75,541	77,041	92,771	0	70,272
50-54	16	9	5	11	11	9	1	62
	56,936	71,313	67,628	75,969	75,097	92,278	118,244	72,604
55-59	13	9	0	4	2	2	1	31
	55,077	86,501	0	72,686	78,391	73,230	119,114	71,213
60-64	7	8	5	2	1	2	1	26
	54,319	73,425	67,441	63,386	65,687	74,027	87,230	66,638
65-69	2	1	0	1	0	0	0	4
	98,957	60,633	0	69,815	0	0	0	82,091
70 & Over	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
Total	399	225	100	64	26	26	3	843
	51,696	64,980	68,914	73,735	75,220	89,655	108,196	61,055

Section 9: Member Data

**AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION
OF RETIRED GENERAL MEMBERS
AS OF JUNE 30, 2012
TOTAL**

Current Age	Years of Retirement							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	10	3	1	0	0	0	0	14
	10,487	13,640	14,998	0	0	0	0	11,485
45-49	7	1	2	0	0	0	0	10
	17,254	20,329	14,508	0	0	0	0	17,012
50-54	45	9	3	2	0	0	0	59
	12,598	14,846	11,436	6,273	0	0	0	12,667
55-59	117	65	11	5	1	0	0	199
	21,086	13,818	10,623	10,210	5,649	0	0	17,783
60-64	195	109	50	12	4	1	2	373
	25,839	15,385	10,523	12,472	12,765	4,331	5,691	19,995
65-69	167	188	101	34	8	4	4	506
	26,277	21,883	15,700	9,478	11,115	9,376	7,379	20,882
70-74	48	90	101	45	22	2	1	309
	16,369	24,827	18,405	13,134	11,490	12,259	12,112	18,639
75-79	5	13	55	64	45	27	10	219
	12,731	13,040	16,251	18,010	12,327	12,213	12,216	15,006
80-84	1	3	10	41	63	38	17	173
	23,442	34,108	16,405	16,049	16,241	11,996	9,163	14,929
85 & Over	0	1	1	9	28	57	100	196
	0	42,134	5,127	15,421	21,356	17,726	11,824	15,187
Total	595	482	335	212	171	129	134	2,058
	22,789	19,569	15,609	14,509	15,054	14,437	11,293	18,098

Section 9: Member Data

**AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION
OF RETIRED SAFETY MEMBERS
AS OF JUNE 30, 2012
TOTAL**

Current Age	Years of Retirement							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	4	6	3	0	0	0	0	13
	34,963	17,437	16,603	0	0	0	0	22,637
45-49	2	3	7	4	0	0	0	16
	29,152	28,176	23,697	22,016	0	0	0	24,798
50-54	18	7	2	5	0	1	0	33
	19,845	22,101	22,674	23,443	0	28,720	0	21,309
55-59	33	22	1	8	1	2	0	67
	46,643	32,422	26,085	22,634	23,543	32,731	0	38,040
60-64	11	32	13	7	5	0	1	69
	57,642	46,210	28,719	31,170	23,765	0	20,644	41,214
65-69	8	25	23	19	3	2	2	82
	38,759	45,268	35,275	24,660	28,717	21,791	15,983	35,163
70-74	0	1	4	10	10	4	6	35
	0	20,702	25,905	28,137	18,996	16,809	17,692	21,973
75-79	0	0	1	8	10	7	4	30
	0	0	36,213	37,052	28,719	30,784	19,973	30,507
80-84	0	0	0	0	3	5	8	16
	0	0	0	0	20,261	27,895	11,770	18,401
85 & Over	0	0	0	0	0	1	4	5
	0	0	0	0	0	667	19,742	15,927
Total	76	96	54	61	32	22	25	366
	39,983	38,420	29,845	27,063	23,952	25,483	16,471	32,045

Section 9: Member Data

**AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION
OF RETIRED GENERAL AND SAFETY MEMBERS
AS OF JUNE 30, 2012
TOTAL**

Current Age	Years of Retirement							TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30 & OVER	
Below 45	14	9	4	0	0	0	0	27
	17,480	16,171	16,202	0	0	0	0	16,854
45-49	9	4	9	4	0	0	0	26
	19,898	26,214	21,655	22,016	0	0	0	21,804
50-54	63	16	5	7	0	1	0	92
	14,669	18,020	15,931	18,537	0	28,720	0	15,697
55-59	150	87	12	13	2	2	0	266
	26,708	18,522	11,911	17,855	14,596	32,731	0	22,885
60-64	206	141	63	19	9	1	3	442
	27,537	22,381	14,278	19,361	18,876	4,331	10,675	23,308
65-69	175	213	124	53	11	6	6	588
	26,848	24,627	19,331	14,920	15,915	13,515	10,247	22,873
70-74	48	91	105	55	32	6	7	344
	16,369	24,782	18,691	15,862	13,836	15,293	16,895	18,978
75-79	5	13	56	72	55	34	14	249
	12,731	13,040	16,608	20,125	15,307	16,036	14,432	16,873
80-84	1	3	10	41	66	43	25	189
	23,442	34,108	16,405	16,049	16,424	13,845	9,997	15,223
85 & Over	0	1	1	9	28	58	104	201
	0	42,134	5,127	15,421	21,356	17,432	12,128	15,206
Total	671	578	389	273	203	151	159	2,424
	24,736	22,700	17,585	17,314	16,457	16,046	12,107	20,204

Section 9: Member Data

SUMMARY OF ANNUAL RETIREMENT ALLOWANCES AS OF JUNE 30, 2012

GENERAL MEMBERS

	<u>Number</u>	<u>Annual Allowance</u>
Service		
Males	688	\$ 15,060,373
Females	942	16,489,828
Total	<u>1,630</u>	<u>\$ 31,550,201</u>
Disability		
Males	58	\$ 1,038,858
Females	105	1,711,895
Total	<u>163</u>	<u>\$ 2,750,753</u>
Beneficiaries		
Males	71	\$ 597,956
Females	194	2,347,547
Total	<u>265</u>	<u>\$ 2,945,503</u>
Total	<u>2,058</u>	<u>\$ 37,246,457</u>

SAFETY MEMBERS

	<u>Number</u>	<u>Annual Allowance</u>
Service		
Males	194	\$ 7,667,855
Females	31	901,905
Total	<u>225</u>	<u>\$ 8,569,760</u>
Disability		
Males	70	\$ 1,809,777
Females	20	411,378
Total	<u>90</u>	<u>\$ 2,221,155</u>
Beneficiaries		
Males	3	\$ 43,834
Females	48	893,606
Total	<u>51</u>	<u>\$ 937,440</u>
Total	<u>366</u>	<u>\$ 11,728,355</u>

Section 10: Summary of Major Plan Provisions

Eligibility	First pay period following date of employment.
Final Average Salary	Highest 12 consecutive months of compensation earnable for Tier 1 members and highest 36 consecutive months of compensation earnable for Tier 2 and Tier 3 members.
Service Retirement	<p>Early retirement</p> <p>Age 50 and 10 years or 30 years for General and 20 years for Safety. Any member who reaches age 70 may retire regardless of service.</p> <p>Benefit</p> <p><i>General Members:</i> For service prior to July 1, 2005: Benefits under Section 31676.11 (Tier 1) and Section 31676.1 (Tier 2 and Tier 3): 1/60 of final average salary times years of service times factor in the table on the following page.</p> <p>For service after June 30, 2005: Benefits under Section 31676.12 (all Tiers): 1/50 of final average salary times years of service times factor in the table on the following page.</p> <p><i>Safety Members:</i> Benefits under Section 31664: 2% of final average salary times years of service times factor in the table on the following page.</p>

Section 10: Summary of Major Plan Provisions

Benefit Factors	General	General	General	Safety
	Tier 1	Tiers 2 & 3	All Tiers	
<u>Age</u>	<u>31676.11</u>	<u>31676.1</u>	<u>31676.12</u>	<u>31664</u>
41				.6258
42				.6625
43				.7004
44				.7397
45				.7805
46				.8226
47				.8678
48				.9085
49				.9522
50	.7454	.7091	.6681	1.0000
51	.7882	.7457	.7056	1.0516
52	.8346	.7816	.7454	1.1078
53	.8850	.8181	.7882	1.1692
54	.9399	.8556	.8346	1.2366
55	1.0000	.8954	.8850	1.3099
56	1.0447	.9382	.9399	1.3099
57	1.1048	.9846	1.0000	1.3099
58	1.1686	1.0350	1.0447	1.3099
59	1.2365	1.0899	1.1048	1.3099
60	1.3093	1.1500	1.1686	1.3099
61	1.3608	1.1947	1.2365	1.3099
62	1.4123	1.2548	1.3093	1.3099
63	1.4638	1.3186	1.3093	1.3099
64	1.5153	1.3865	1.3093	1.3099
65	1.5668	1.4593	1.3093	1.3099

Non Service Connected Disability Retirement 20% if 5 years of service plus 2% for each of the next ten years or service retirement benefit (if eligible).

Service Connected Disability Retirement Greater of 50% of final average salary or service retirement benefit (if eligible).

Integration with Social Security All members' benefits are integrated with Social Security. Benefits based on the first \$161.54 of bi-weekly final average salary are reduced by 1/3.

Section 10: Summary of Major Plan Provisions

Death Before Retirement	<p>If non-service connected before eligible to retire, this benefit is a refund of contributions plus 1/12 of last year's salary per year of service up to 6 years.</p> <p>If eligible for non-service connected disability or service retirement the benefit is 60% of member's accrued allowance.</p> <p>If service connected death, the benefit is 50% of salary.</p>
Death After Retirement	<p>For service retirement or non-service connected disability, the benefit is 60% of member's allowance payable to an eligible spouse.</p> <p>For service connected disability, the benefit is 100% of member's allowance payable to an eligible spouse.</p> <p>\$5,000 lump sum benefit payable to member's beneficiary.</p>
Vesting	<p>After five years of Service</p> <p>Must leave contributions on deposit.</p>
Member Contributions	<p>Based on entry age. Members with 30 or more years of service do not pay member contributions.</p>
Maximum Benefit	<p>100% of final average salary</p>
Cost-Of-Living Benefits	<p>Payable April 1. Up to 3% COLA for Tier 1 members (2% for Tier 2 and Tier 3 members), depending on CPI (Los Angeles–Riverside–Orange) changes for the prior calendar year.</p>

Section 10: Summary of Major Plan Provisions

Supplemental Retiree Benefits Reserve

Level One

A monthly benefit of up to \$360 is provided for members with 20 or more years of service. For members with less than 20 years of service, the benefit is provided in the following schedule:

Years of Service	% of \$360 Full Benefit	Years of Service	% of \$360 Full Benefit
Less than 10	0.00%	15	75.0%
10	50.0%	16	80.0%
11	55.0%	17	85.0%
12	60.0%	18	90.0%
13	65.0%	19	95.0%
14	70.0%	20 +	100.0%

Only years of service with Tulare County are considered. After a member's death, a continuance will be paid to an eligible spouse at one half of the amount payable to the retired member.

The changing of the SRBR benefits created the possibility that some of the current retirees would receive a lower benefit. This possibility was avoided by setting the new SRBR benefit to be no less than the prior benefit.

Level Two

In addition to the \$360 benefit described above, the Board authorized that the SRBR provide a supplemental COLA for retirees and beneficiaries who have lost at least 15% of their purchasing power as measured by their COLA banks.

This program is designed to maintain retiree purchasing power at a minimum of 85% of its original value. For example, Tier 1 members, who retired on or before April 1, 1974, have lost 66% of their original purchasing power (as measured by their COLA bank). These members would receive a Level Two benefit equal to 51% (66% minus 15%) of their benefit.

Level Three

60% survivor benefits to a spouse not married to the member at retirement. To be eligible this spouse must be at least age 55 at the date of the retired members death, be married for at least two years and the member must have elected the Unmodified Allowance retirement option.

Section 11: Glossary of Terms

Following is a glossary of some of the commonly used actuarial terms.

<i>Actuarial Accrued Liability</i>	The portion, as determined by a particular cost method, of the total present value of benefits that is attributable to past service credit.
<i>Actuarial Gain (Loss)</i>	A measure of the difference between actual and expected experience based upon a set of actuarial assumptions. Examples include higher than expected salary increases (loss) and a higher return on fund assets than anticipated (gain).
<i>Actuarial Present Value</i>	Also referred to as the present value of benefits. It is the value, as of a specified date, of an amount payable in the future, where the amount has been adjusted to reflect both the time value of money and the probability that the payment is actually made.
<i>Amortization or UAAL Payment</i>	That portion of the pension plan contribution which is designed to pay off (amortize) the unfunded actuarial accrued liability in a systematic fashion. Equivalently, it is a series of periodic payments required to pay off a debt.
<i>Annual Amount</i>	Estimated contributions due for the year in order to ensure the orderly funding of the pension plan (equal to the contribution rate multiplied by the annual payroll). The annual amount is comprised of normal cost and UAAL payments.
<i>Entry Age Actuarial Cost Method</i>	This method assumes that the annual costs are the level premiums needed from entry age until retirement age to fund the ultimate retirement benefit. These premiums are expressed as a percentage of salary. The portion of this actuarial present value allocated to a valuation year is called the normal cost.
<i>Final Average Salary</i>	The average amount of compensation earned over a specified number of consecutive months preceding retirement during which compensation was highest.
<i>Funding Policy</i>	The policy for the amounts and timing of contributions to be made by the employer, members and any other sources to provide the benefits promised by the pension plan.

Section 11: Glossary of Terms

<i>Noneconomic Actuarial Assumptions</i>	Probabilities that members will separate from active service for causes such as retirement, disability, death and withdrawal, as well as rates of post-retirement mortality. The probabilities reflect the experience of TCERA's membership.
<i>Normal Cost</i>	The ongoing annual cost allocated to the system by a particular actuarial cost method for providing benefits (future cost). Normal cost payments are made during the working lifetime of the member.
<i>Unfunded Actuarial Accrued Liability</i>	The excess of the actuarial accrued liability over the actuarial value of assets.
<i>Vested Benefit</i>	The benefit an employee is entitled to even if the employee separates from active service prior to normal retirement age.