

# Tulare County Employees' Retirement Association

**GASB 67/68 Report** as of June 30, 2017

**Produced by Cheiron** 

November 2017

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November 1, 2017

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

Dear Members of the Board:

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the Tulare County Employees' Retirement Association (TCERA) and under GASB 68 for participating employers. This information includes:

- Determination of the discount rate as of June 30, 2017,
- Disclosure of the TCERA's Total Pension Liability and Net Pension Liability as of the measurement date,
- Note disclosures and required supplementary information under GASB 67 for TCERA,
- Determination of collective amounts under GASB 68, and
- Schedules for the financial reporting of participating employers under GASB 68.

If you have any questions about the report or would like additional information, please let us know.

Sincerely, Cheiron

David Holland, FSA, EA, FCA, MAAA Consulting Actuary Graham A. Schmidt, ASA, EA, FCA, MAAA Consulting Actuary

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### **SECTION I – BOARD SUMMARY**

The purpose of this report is to provide accounting and financial disclosure information under Government Accounting Standards Board Statements 67 and 68 (as amended by Statement 82) for the Tulare County Employees' Retirement Association and the participating employers. This information includes:

- Determination of the discount rate as of June 30, 2017,
- Disclosure of TCERA's Total Pension Liability and Net Pension Liability as of the measurement date,
- Note disclosures and required supplementary information under GASB 67 for TCERA,
- Determination of collective amounts under GASB 68, and
- Schedules for the financial reporting of participating employers under GASB 68.

### **Highlights**

The measurement date for the Tulare County Employees' Retirement Association (TCERA) is June 30, 2017. Measurements are based on the fair value of assets as of June 30, 2017 and the Total Pension Liability as of the valuation date, June 30, 2017.

The table below provides a summary of the key collective results during this measurement period.

Ta Summary of C	ble I-1 Collec			
		Measurer	nent	Date
		6/30/2017		6/30/2016
Net Pension Liability	\$	475,733,526	\$	419,382,866
Deferred Outflows		(154,439,351)		(166,574,008)
Deferred Inflows		24,361,093		32,481,457
Net Impact on Statement of Net Position	\$	345,655,269	\$	285,290,316
Pension Expense (\$ Amount)	\$	93,980,837	\$	78,019,579
Pension Expense (% of Payroll)		38.62%		32.70%

The Net Pension Liability (NPL) increased by approximately \$56 million since the prior measurement date, primarily due to the changes in assumptions resulting from the recent Experience Study. The investment gains or losses are recognized over five years, and the actuarial liability gains or losses and assumption changes are recognized over the average remaining service life, which is five years. Unrecognized amounts are reported as deferred inflows and deferred outflows.



### **SECTION I – BOARD SUMMARY**

As of the end of the reporting year, the participating employers in TCERA would report a Net Pension Liability of \$475,733,526, collective Deferred Inflows of \$24,361,093, and collective Deferred Outflows of \$154,439,351. Consequently, the net impact on the aggregate of participating employers' Statements of Net Position due to TCERA would be \$345,655,269 at the end of the measurement year. In addition, any contributions between the measurement date and each individual employer's reporting date would be reported as deferred outflows to offset the cash outflow reported.

For the measurement year ending June 30, 2017, the collective annual pension expense is \$93,980,837 or 38.62% of covered-employee payroll. This amount is not equal to the participating employers' contributions to TCERA (\$33,615,885), but instead represents the change in the net impact on participating employer's Statements of Net Position plus employer contributions (\$345,655,269 - \$285,290,316 + \$33,615,885). The collective pension expense is larger than the collective expense for the prior year. Volatility in pension expense from year to year is to be expected. It will largely be driven by investment gains or losses, but other changes can also have a significant impact. A breakdown of the components of the net pension expense is shown in the report.



### **SECTION II - CERTIFICATION**

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the Tulare County Employees' Retirement Association (TCERA) and under GASB 68 for the employers that participate in TCERA. This report is for the use of TCERA, the participating employers, and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for TCERA.

In preparing our report, we relied on information (some oral and some written) supplied by TCERA. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and, changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for TCERA for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

David Holland, FSA, EA, FCA, MAAA Consulting Actuary Graham A. Schmidt, ASA, EA, FCA, MAAA Consulting Actuary



### SECTION III - DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability was 7.32%.

The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the required rates. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the June 30, 2017 actuarial valuation. That policy includes contributions equal to the actuarially determined contribution, reflecting a payment equal to annual Normal Cost and an amount necessary to amortize the total June 30, 2015 Unfunded Actuarial Liability (UAL) as a level percentage of payroll over a closed 19-year period with payments as a level percentage of payroll, assuming payroll increases of 3.00% per year. Subsequent gains and losses are being amortized over new 19-year closed periods, also as a level percentage of payroll.

The UAL and contribution rates do not directly reflect any liability associated with past or future transfers to the Supplemental Retiree Benefit Reserve (SRBR), which the Board has elected not to pre-fund. However, the projection of benefit payments does include the value of the expected benefit payments to the members from the SRBR, based on both the current SRBR assets and the expected future transfers to the SRBR, as estimated using a stochastic model. Those benefit payments result in actuarial losses which are funded through the plan's amortization policy.

Based on these assumptions, TCERA's fiduciary net position was projected to be available to make projected future benefit payments for current members until FYE 2084 when only a portion of the projected benefit payments can be made from the projected fiduciary net position. Projected benefit payments are discounted at the long-term expected return on assets of 7.40% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 3.58% to the extent they are not available. The 7.40% expected return on assets is equal to the 7.25% investment return assumption used in the June 30, 2017 actuarial valuation, plus 0.15% for administrative expenses. The administrative expense adjustment results from the fact that the 7.25% valuation assumption is assumed to be net of both administrative and investment expenses, whereas GASB 67 and 68 require an expected return on assets that is net of investment expenses only.

The single rate that is equivalent to a 7.40% discount rate until the projected fiduciary net position is no longer available to make benefit payments (in FYE 2084), and 3.58% thereafter, is 7.32%. The discount rate used to determine the Total Pension Liability as of June 30, 2017 is therefore 7.32%.

Appendix D shows the details of this calculation.



### SECTION IV – DETERMINATION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) at the end of the measurement year, June 30, 2017, is measured as of a valuation date of June 30, 2017.

Between the June 30, 2016 and June 30, 2017 measurement dates the discount rate was reduced from 7.58% to 7.32% due to the results of the crossover test and a decrease in the assumed investment rate of return. The details of this calculation are shown in Appendix D. The following assumptions were changed as a result of the recent Experience Study: COLA increases, percent married and spousal age difference, merit-based pay increases, termination rates, retirement rates, rates of deferred vested termination, adjustments to base mortality tables for healthy females, and mortality improvement scale for all members. Please see Appendix B of the June 30, 2017 actuarial valuation report for a more detailed description of these assumption changes.

The TPL measurement includes the accrued portion of expected benefit payments associated with the current SRBR assets, as well as the accrued portion of expected benefit payments associated with future anticipated SRBR transfers (as determined using a stochastic model).

The total impact of the assumption changes – the change in discount rate, and changes resulting from the recent Experience Study – increased the TPL measurement by approximately \$70 million as of the end of the measurement year.



### SECTION V – GASB 67 REPORTING INFORMATION

### **Note Disclosures**

The table below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position (i.e., fair value of System assets), and the Net Pension Liability during the measurement year.

Change in Co		ble V-1 e Net Pension	Liab	oility	
			Inc	rease (Decrease)	
	7	Fotal Pension Liability (a)		lan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/2016	\$	1,584,510,200	\$	1,165,127,334	\$ 419,382,866
Changes for the year:					
Service cost		38,202,834			38,202,834
Interest		118,663,755			118,663,755
Changes of benefits		0			0
Differences between expected and actual experience		11,935,775			11,935,775
Changes of assumptions		69,608,066			69,608,066
Contributions - employer				33,615,885	(33,615,885)
Contributions - member				18,190,415	(18,190,415)
Net investment income				132,865,033	(132,865,033)
Benefit payments		(76,961,326)		(76,961,326)	0
Administrative expense				(2,611,562)	 2,611,562
Net changes	-	161,449,104		105,098,444	 56,350,660
Balances at 6/30/2017	\$	1,745,959,304	\$	1,270,225,778	\$ 475,733,526

During the measurement year, the collective NPL increased by approximately \$56 million. The service cost, interest cost, actuarial losses, and recognition of administrative expense increased the collective NPL by approximately \$171 million while contributions and investment income decreased the collective NPL by approximately \$185 million.

There were no changes in benefits during the year. As discussed in Section IV, there were assumption changes, which increased the TPL by approximately \$70 million.

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table on the next page shows the sensitivity of the collective NPL to the discount rate.



### SECTION V – GASB 67 REPORTING INFORMATION

Sensitivity of Collective Net	Per	Table V-2 nsion Liability	to	Changes in Di	sco	unt Rate
		1% Decrease 6.32%		Discount Rate 7.32%		1% Increase 8.32%
Total Pension Liability	\$	1,997,408,479	\$	1,745,959,304	\$	1,541,543,044
Plan Fiduciary Net Position		1,270,225,778		1,270,225,778		1,270,225,778
Collective Net Pension Liability	\$	727,182,701	\$	475,733,526	\$	271,317,266
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		63.6%		72.8%		82.4%

A one percent decrease in the discount rate increases the TPL by approximately 14% and increases the collective NPL by approximately 53%. A one percent increase in the discount rate decreases the TPL by approximately 12% and decreases the collective NPL by approximately 43%.

### **Required Supplementary Information**

The schedules of Required Supplementary Information generally start with information as of the implementation of GASB 67, and eventually will build up to ten years of information. The schedule on the following page shows the changes in collective NPL and related ratios required by GASB for the four years since implementation.



### SECTION V – GASB 67 REPORTING INFORMATION

Schedule of Changes in Col	lecti	Table V-3	n L	iability and R	elaı	ted Ratios	
Sometime of Camargos in Cos		FYE 2017		FYE 2016		FYE 2015	FYE 2014
Total Pension Liability							
Service cost (MOY)	\$	38,202,834	\$	38,307,485	\$	35,167,785	\$ 39,672,236
Interest (includes interest on service cost)		118,663,755		115,715,730		97,472,957	94,276,973
Changes of benefit terms		0		0		0	0
Differences between expected and actual experience		11,935,775		(40,601,821)		7,590,593	0
Changes of assumptions		69,608,066		23,922,527		180,186,807	13,587,893
Benefit payments, including refunds of member contributions		(76,961,326)		(72,332,422)		(68,559,888)	(65,954,107)
Net change in total pension liability	\$	161,449,104	\$	65,011,499	\$	251,858,254	\$ 81,582,995
Total pension liability - beginning		1,584,510,200		1,519,498,702		1,267,640,448	1,186,057,453
Total pension liability - ending	\$	1,745,959,304	\$	1,584,510,200	\$	1,519,498,702	\$ 1,267,640,448
Plan fiduciary net position							
Contributions - employer	\$	33,615,885	\$	31,297,240	\$	30,992,069	\$ 25,953,288
Contributions - member		18,190,415		16,814,551		18,887,422	18,968,800
Change of Assumptions / Other Income		0		0		111,357,446	2,993,705
Net investment income		132,865,033		(20,308,501)		11,043,009	176,883,870
Benefit payments, including refunds of member contributions		(76,961,326)		(72,332,422)		(68,559,888)	(65,954,107)
Administrative expense		(2,611,562)		(2,615,856)		(2,408,394)	(1,638,772)
Net change in plan fiduciary net position	\$	105,098,444	\$	(47,144,988)	\$	101,311,664	\$ 157,206,784
Plan fiduciary net position - beginning		1,165,127,334		1,212,272,322		1,110,960,658	953,753,874
Plan fiduciary net position - ending	\$	1,270,225,778	\$	1,165,127,334	\$	1,212,272,322	\$ 1,110,960,658
Net pension liability - ending	\$	475,733,526	\$	419,382,866	\$	307,226,380	\$ 156,679,790
Plan fiduciary net position as a percentage of the total pension liability		72.75%		73.53%		79.78%	87.64%
Covered payroll*	\$	243,366,102	\$	238,558,790	\$	229,430,663	\$ 234,438,456
Net pension liability as a percentage of covered employee payroll		195.48%		175.80%		133.91%	66.83%

<sup>\*</sup> Payroll for FYE 2014 was determined by the prior actuary. Subsequent payroll figures are based on amounts provided by the participating employers for the respective fiscal year.

If an Actuarially Determined Contribution is calculated, the following schedule (Table V-4) is required. An Actuarially Determined Contribution is a contribution amount determined in accordance with Actuarial Standards of Practice. The full 10 years of information should be shown in this schedule, if it is available. While we cannot confirm whether contribution amounts calculated by the prior actuary were determined in accordance with Actuarial Standards of Practice, we have provided the full 10-year schedule below.



### SECTION V – GASB 67 REPORTING INFORMATION

		So	chedule of C	Table V ollective Em		ributions									
	FYE 2017 FYE 2016 FYE 2015 FYE 2014 FYE 2013 FYE 2012 FYE 2011 FYE 2010 FYE 2009 FYE 2008														
Actuarially Determined Contribution Contributions in Relation to the	\$ 33,615,885	\$ 31,297,240	\$ 30,992,069	\$ 25,953,288	\$ 29,847,226	\$ 25,257,124	\$ 23,434,240	\$ 25,339,346	\$ 22,430,788	\$ 22,691,963					
Actuarially Determined Contribution	33,615,885	31,297,240	30,992,069	25,953,288	29,847,226	25,257,124	23,434,240	25,339,346	22,430,788	22,691,963					
Contribution Deficiency/(Excess)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0					
Covered Payroll	\$ 243,366,102	\$ 238,558,790	\$ 229,430,663	\$ 234,438,456	\$ 230,954,756	\$ 222,634,628	\$219,853,614	\$217,811,354	\$ 227,305,938	\$ 226,836,234					
Contributions as a Percentage of Covered Payroll	13.81%	13.12%	13.51%	11.07%	12.92%	11.34%	10.66%	11.63%	9.87%	10.00%					

<sup>\*</sup> Payroll figures for FYE 2014 and earlier were determined by the prior actuary. Subsequent payroll figures are based on amounts provided by the participating employers for the respective fiscal year.

The notes below summarize the key methods and assumptions used to determine the ADC for FYE 2017.

#### Notes to Schedule

Mortality

Valuation Date 6/30/2015

Timing Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year

Key Methods and Assumptions Used to Determine Contribution Rates:

Asset valuation method 10-year smoothed market

Level percentage of payroll with separate periods for the UAL as of June 30, 2015 (19 years remaining as of 6/30/15), and additional 19-year layers for unexpected

Amortization method changes in UAL after 6/30/15

Discount rate 7.65% Amortization growth rate 3.00% Price inflation 3.00%

Salary increases 3.00% plus merit component based on employee classification and years of service

For General: RP-2014 Combined Healthy Sex Distinct Table, with Generational improvement using Projection Scale MP-2015, increased by 12.1% to reflect Plan

evnerience

For Safety: RP-2014 Combined Healthy Male Table with blue-collar adjustment, with Generational improvement using Projection Scale MP-2015, increased by 4.5%

to reflect Plan experience

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2017 can be found in the June 30, 2015 actuarial valuation report



### SECTION VI – GASB 68 COLLECTIVE AMOUNTS

Employers that participate in TCERA were required to implement GASB 68 for their first fiscal year that commenced after June 15, 2014. The amounts reported as of their fiscal year end (their reporting date) must be based on a measurement date up to 12 months prior to their reporting date. For employers with a reporting date of June 30, their 2017 disclosures can be based on either the June 30, 2016 or 2017 measurement dates. If an employer elects to base their 2017 disclosures on the June 30, 2016 measurement date, the GASB 68 schedules in this report with a measurement date of June 30, 2017 will be used for their 2018 reporting date.

Because TCERA is a cost-sharing multiple-employer pension plan, each employer participating in TCERA must reflect a portion of the collective Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows in their financial statements. This section develops the collective amounts that are allocated to participating employers.

The impact of experience gains or losses and assumption changes on the TPL are recognized in expense over the average expected remaining service life of all active and inactive members of TCERA. As of the measurement date, this recognition period was five years.

During the year, there was an experience loss of approximately \$11.9 million. Approximately \$2.4 million of that loss was recognized as an increase in collective pension expense in the current year and an identical amount will be recognized in each of the next four years, resulting in a collective deferred outflow of resources as of June 30, 2017 of approximately \$9.5 million. Unrecognized net experience gains from prior periods were approximately \$27.9 million, of which \$6.6 million was recognized as a decrease in the collective pension expense in the current year. The combination of gains and losses from this year and in prior periods results in a net collective deferred inflow of resources as of June 30, 2017 of approximately \$11.8 million.

During the year, there were changes in the assumptions that increased the NPL by approximately \$69.6 million. Approximately \$13.9 million of that increase is recognized as an increase in collective pension expense in the current year and an identical amount will be recognized in each of the next four years. Unrecognized assumption changes from prior periods were approximately \$67.7 million, of which \$20.7 million was recognized as an increase in the collective pension expense in the current year. The combination of changes from assumptions this year and in prior periods results in a collective deferred outflow of resources as of June 30, 2017 of approximately \$102.7 million.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of approximately \$47.7 million. Approximately \$9.5 million of that gain was recognized in the current year and an identical amount will be recognized in each of the next four years. Unrecognized net investment losses from prior periods were approximately \$94.4 million, and the net recognition of prior investment experience resulted in a \$17.1 million increase in collective pension expense in the current year. The combination of unrecognized investment gains this year and unrecognized net investment losses from prior periods results in a collective deferred outflow of resources as of June 30, 2017 of approximately \$39.2 million.



### SECTION VI – GASB 68 COLLECTIVE AMOUNTS

The table below summarizes the current balances of collective deferred outflows and deferred inflows of resources along with the net recognition over the next five years.

Table VI- Schedule of Collective Deferred Inflo		and Outflows	of Re	esources		
		Deferred Outflows of Resources	Deferred Inflows of Resources			
Differences between expected and actual experience Changes in assumptions Net difference between projected and actual earnings	\$	12,584,857 102,667,174	\$	24,361,093 0		
on pension plan investments  Total	\$	39,187,320 <b>154,439,351</b>	\$	0 24,361,093		
Amounts reported as deferred outflows and deferred in pension expense as follows:	nflow	rs of resources wil	l be rec	ognized in		
Measurement year ended June 30	:					
2018		37,903,492				
2019 2020		58,457,879 26,939,045				
		6 777 841				
2020 2021 2022		6,777,841 0				

The collective annual pension expense recognized by the participating employers can be calculated two different ways. First, it is the change in the amounts reported on the participating employers' Statements of Net Position that relate to TCERA and are not attributable to employer contributions. That is, it is the change in collective NPL plus the changes in collective deferred outflows and inflows plus participating employer contributions.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the table on the following page, we believe it helps to understand the level and volatility of the collective pension expense.



### **SECTION VI – GASB 68 COLLECTIVE AMOUNTS**

Table V Calculation of Collecti		nsion Expen	ise	
		Measurement	Yea	r Ending
		2017		2016
Change in Net Pension Liability	\$	56,350,660	\$	112,156,486
Change in Deferred Outflows		12,134,657		(96,096,369)
Change in Deferred Inflows		(8,120,364)		30,662,221
Employer Contributions		33,615,885		31,297,240
Pension Expense	\$	93,980,837	\$	78,019,579
Pension Expense as % of Payroll		38.62%		32.70%
Operating Expenses				
Service cost	\$	38,202,834	\$	38,307,485
Employee contributions		(18,190,415)		(16,814,551)
Administrative expenses		2,611,562		2,615,856
Total	\$	22,623,981	\$	24,108,790
Financing Expenses				
Interest cost	\$	118,663,755	\$	115,715,730
Expected return on assets		(85,210,393)		(92,930,595)
Total	\$	33,453,362	\$	22,785,135
Changes				
Benefit changes	\$	0	\$	0
Recognition of assumption changes		34,595,098		20,673,485
Recognition of liability gains and losses		(4,215,090)		(6,602,245)
Recognition of investment gains and losses	_	7,523,486		17,054,414
Total	\$	37,903,494	\$	31,125,654
Pension Expense	\$	93,980,837	\$	78,019,579

First, there are components referred to as operating expenses. These are items directly attributable to the operation of the plan during the measurement year. Service cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating TCERA for the year.

Second, there are the financing expenses: the interest on the Total Pension Liability less the expected return on assets.



### SECTION VI - GASB 68 COLLECTIVE AMOUNTS

The final category is changes. This category will drive most of the volatility in pension expense from year to year. It includes any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses. The total collective pension expense increased by about \$16 million. Financing expenses increased by approximately \$11 million and the recognition of assumption changes increased by approximately \$14 million, which were the most significant items contributing to the change in pension expense.



#### SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

### **Proportionate Shares**

GASB 68 requires that the proportionate share for each employer be determined based on the "employer's projected long-term contribution effort to the pension ... as compared to the total projected long-term contribution effort of all employers ..." Although not required as part of TCERA's GASB 67 reporting requirements, TCERA is following the advice of the AICPA¹ and making a determination of each employer's proportionate share, which will be reviewed by TCERA's auditor.

Proportionate shares for each participating employer are determined based on the ratio of each participating employer's actual contributions to TCERA during the measurement year to the sum of the employer contributions. In Table VII-1, each employer's proportionate amortization share as of June 30, 2017 and June 30, 2016 is determined using this method.

GASB 82, which is effective for reporting periods beginning after June 15, 2016, requires that employer-paid member contributions be classified as employee contributions for purposes of determining each employer's proportionate share. TCERA has indicated that their auditor has determined the amount of such contributions to be immaterial for the purposes of GASB 82.

	Determinati		le VII-1 oyers' Proportio	nate	Share	
		June 30	), 2017		June 30	), 2016
Employer		Employer ontribution	Proportionate Share		Employer ontribution	Proportionate Share
County	\$	31,839,050	94.71429953%	\$	29,741,640	95.02959555%
Courts		1,596,198	4.74834385%		1,405,066	4.48942558%
SPUD		18,790	0.05589685%		15,778	0.05041211%
TCAG		161,847	0.48145977%		134,756	0.43056676%
Total	\$	33,615,885	100.00000000%	\$	31,297,240	100.00000000%

<sup>1</sup> http://www.aicpa.org/interestareas/governmentalauditquality/resources/gasbmatters/dowloadabledocuments/aicpaslgep cs er reporting whitepaper.pdf



#### SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the proportionate share of the collective NPL (under three discount rates), the collective deferred outflows, the collective deferred inflows, and the collective pension expense allocated to each participating employer as of June 30, 2017.

	Schedule of Employer	's' l	Proportion		able VII-2 Share of C	oll	ective Amo	uni	ts at June 3	0, 2	2017	
Employer	Proportionate Share		nare of NPL @ 6.32%	Sl	hare of NPL @ 7.32%		hare of NPL @ 8.32%		Share of Deferred Outflows		Share of Deferred Inflows	Pension Expense
County	94.7143%	\$	688,746,002	\$	450,587,677	\$	256,976,248	\$	146,276,150	\$	23,073,439	\$ 89,013,292
Courts	4.7483%		34,529,135		22,589,464		12,883,077		7,333,311		1,156,748	4,462,533
SPUD	0.0559%		406,472		265,920		151,658		86,327		13,617	52,532
TCAG	0.4815%		3,501,092		2,290,466		1,306,283		743,563		117,289	452,480
Total	100.0000%	\$	727,182,701	\$	475,733,526	\$	271,317,266	\$	154,439,351	\$	24,361,093	\$ 93,980,837

The proportionate share allocated to each individual employer will change on each measurement date. The net effect of the change in proportion on the share of the collective NPL, collective deferred outflows, and collective deferred inflows allocated to each employer becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of TCERA's active and inactive members (five years).

Similarly, the difference between each employer's actual contributions and the employer's proportionate share of collective employer contributions becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of TCERA's active and inactive members (five years).



### SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the change in proportion and the impact of that change in proportion on the proportionate share of the collective NPL, collective deferred outflows, and collective deferred inflows. It also shows any contribution differences.

	Schedu	le of Employ	yers' Change	Table VII-3 s in Propor		ntribution D	iffer	ences		
	<b>Proportion</b>	ate Shares	Im	pact of Chang	ge in Proporti	on		C	ontributions	
Employer	6/30/2016	6/30/2017	Net Pension Liability	Deferred Outflows	Deferred Inflows	Net Effect		F Actual	roportionate Share	Difference
County	95.0296%	94.7143%	\$ (1,322,297)	\$ (525,201)	\$ 102,413	\$ (899,509)	\$	31,839,050	\$ 31,839,050	\$ 0
Courts	4.4894%	4.7483%	1,085,859	431,291	(84,100)	738,669		1,596,198	1,596,198	0
SPUD	0.0504%	0.0559%	23,002	9,136	(1,782)	15,647		18,790	18,790	0
TCAG	0.4306%	0.4815%	213,437	84,775	(16,531)	145,193		161,847	161,847	0
Total	100.0000%	100.0000%	\$ 0	\$ 0	\$ 0	\$ 0	\$	33,615,885	\$ 33,615,885	\$ 0



### SECTION VII - GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the reconciliation of deferred outflows and inflows due to proportion changes for each participating employer from the prior measurement date to the current measurement date.

	Reco	onciliation	n of Deferre	d Out	Table V flows an			e to	) Proportion	n Ch	ıange				
			Deferred	l Outfl	ows						Deferred	l Inflo	ows		
Employer	6	/30/2016	Current Year Net Effect	Reco	gnition	6	5/30/2017		6/30/2016	Yea	rrent ar Net ffect	Rec	ognition	6/30	/2017
County	\$	356,980	\$ 0	\$	118,993	\$	237,987	\$	(1,592,041) \$	\$ (	(899,509)	\$	(633,271)	(1,	358,279)
Courts		1,501,265	738,669		577,687		1,662,247		(866,281)		0		(288,760)	(:	577,521)
SPUD		16,364	15,647		7,942		24,069		(30,320)		0		(8,564)		(21,756)
TCAG		614,032	145,193		225,973		533,252		0		0		0		0
Total	\$	2,488,642	\$ 899,509	\$	930,596	\$	2,457,555	\$	(2,488,642) \$	\$ (	(899,509)	\$	(930,596)	(2,4	157,555)

The table below shows the reconciliation of deferred outflows and inflows due to differences between the proportionate share of contributions and actual contributions made by each employer. Because the proportionate shares are determined based on each employer's share of the contributions, there should be no differences between the actual and proportionate contributions.

	Reconci	liation of l	Deferred Outfl	Table VII-s		) Contribu	tion Differen	ices	
	<u></u>		<b>Deferred Outflo</b>	ows			Deferre	d Inflows	
Employer	6/30/:		urrent Year ference Reco	gnition 6/30	/2017	6/30/2016	Current Year Difference	Recognition	6/30/2017
County	\$	0 \$	0 \$	0 \$	0 \$	0	\$ 0	\$ 0	\$ 0
Courts		0	0	0	0	0	0	0	0
SPUD		0	0	0	0	0	0	0	0
TCAG		0	0	0	0	0	0	0	0
Total	\$	0 \$	0 \$	0 \$	0 \$	0	\$ 0	\$ 0	\$ 0



### SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below summarizes the deferred outflows allocated to each employer for experience, assumption changes, investment returns, proportion changes, and contribution differences.

	Table VII-6 Schedule of Employers' Deferred Outflows at June 30, 2017										
Employer	Proportionate Shares	Experience	Assumption Changes	Investment Return	Proportion Change	Contribution Difference					
County	94.7143%	\$ 11,919,659	\$ 97,240,495	\$ 37,115,995	\$ 237,987	\$ 0					
Courts	4.7483%	597,572	4,874,990	1,860,749	1,662,247	0					
SPUD	0.0559%	7,035	57,388	21,904	24,069	0					
TCAG	0.4815%	60,591	494,301	188,671	533,252	0					
Total	100.0000%	\$ 12,584,857	\$ 102,667,174	\$ 39,187,320	\$ 2,457,555	\$ 0					

The table below summarizes the deferred inflows allocated to each employer for experience, assumption changes, investment returns, proportion changes, and contribution differences.

Table VII-7 Schedule of Employers' Deferred Inflows at June 30, 2017										
Employer	Proportionate Shares	Experience	Assumpt Change		Invest: Retu			roportion Change	Contri Diffe	
County	94.7143%	\$ 23,073,439	\$	0	\$	0	\$	1,858,279	\$	0
Courts	4.7483%	1,156,748		0		0		577,521		0
SPUD	0.0559%	13,617		0		0		21,756		0
TCAG	0.4815%	117,289		0		0		0		0
Total	100.0000%	\$ 24,361,093	\$	0	\$	0	\$	2,457,555	\$	0



### SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the net amount of deferred outflows and inflows to be recognized by each participating employer in each of the next five years and the total thereafter.

Schedule	Table VII-8 Schedule of Employers' Recognition of Deferred Outflows and Inflows at June 30, 2017												
Recognition for Measurement Year Ending													
Employer		2018		2019		2020		2021		2022	1	hereafter	
County	\$	35,385,750	\$	54,853,694	\$	25,103,292	\$	6,239,683	\$	C	) :	\$	0
Courts		2,088,715		3,064,708		1,638,298		469,569		C	)		0
SPUD		20,565		32,054		15,486		6,918		C	)		0
TCAG		408,463		507,424		181,969		61,671		C	)		0
Total	\$	37,903,492	\$	58,457,879	\$	26,939,045	\$	6,777,841	\$	0	) :	\$	0



### SECTION VII - GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

The table below shows the calculation of the pension expense for each participating employer. The calculation is shown first as the sum of the proportionate share of the collective pension expense and the amounts recognized for proportion changes and contribution differences. The right side of the table shows the calculation as the sum of the changes in NPL and deferred amounts not attributable to contributions.

	Schedule of Employers'	Table VII-9 Pension Expense for the M	Ieasurement Year Ending June 30, 2017	
	Collective	Employer	Change in Employer	Employer
Employee		Contribution Pension	Net Pension Deferred Deferred Liability Outflows Inflows	Employer Pension Contributions Expense
Employer	Expense Proportion	Difference Expense	Liability Outflows Inflows	Contributions Expense
County	\$ 89,013,292 \$ (514,277) \$	0 \$ 88,499,014	\$ 52,049,835 \$ 12,137,450 \$ (7,527,320)	\$ 31,839,050 \$ 88,499,014
Courts	4,462,533 288,927	0 4,751,460	3,761,582 (16,077) (590,243)	1,596,198 4,751,460
SPUD	52,532 (622)	0 51,910	54,500 (10,058) (11,322)	18,790 51,910
TCAG	452,480 225,973	0 678,453	484,742 54,429 (22,565)	161,847 678,453
Total	\$ 93,980,837 \$ 0 \$	0 \$ 93,980,837	\$ 56,350,660 \$ 12,165,744 \$ (8,151,451)	\$ 33,615,885 \$ 93,980,837

The table below summarizes the information needed for each employer's schedules of required supplementary information.

	Table VII-10 Schedule of Employers' RSI Information at June 30, 2017											
Employer	Proportionate Shares	Proportionate Share of NPL	Covered Payroll	Share of NPL as a % of Payroll	Plan Fiduciary Net Position as % of TPL	Contractually Required Contribution	Actual Contributions	Contribution Deficiency	Contributions as a % of Payroll			
County	94.7143%	\$ 450,587,677	\$ 229,522,757	196.3%	72.8%	\$ 31,839,050	\$ 31,839,050	\$ 0	13.9%			
Courts	4.7483%	22,589,464	12,390,026	182.3%	72.8%	1,596,198	1,596,198	0	12.9%			
SPUD	0.0559%	265,920	139,029	191.3%	72.8%	18,790	18,790	0	13.5%			
TCAG	0.4815%	2,290,466	1,314,290	174.3%	72.8%	161,847	161,847	0	12.3%			
Total	100.0000%	\$ 475,733,526	\$ 243,366,102	195.5%	72.8%	\$ 33,615,885	\$ 33,615,885	\$ 0	13.8%			



### **APPENDIX A – MEMBERSHIP INFORMATION**

SUMMARY	OF ACT	TVE GENERAL	MEN	MBERSHIP	
	J	une 30, 2016	J	une 30, 2017	Change
General Tier 1					
Count		26		19	-26.9%
Average Age		62.3		62.5	0.2%
Average Service		37.8		34.2	-9.5%
Annual Projected Payroll	\$	1,680,430	\$	1,242,253	-26.1%
Average Annual Pay	\$	64,632	\$	65,382	1.2%
General Tier 2 & 3					
Count		2,481		2,288	-7.8%
Average Age		46.2		46.8	1.2%
Average Service		12.6		13.2	5.0%
Annual Projected Payroll	\$	142,081,908	\$	135,243,680	-4.8%
Average Annual Pay	\$	57,268	\$	59,110	3.2%
General Tier 4					
Count		1,098		1,353	23.2%
Average Age		34.2		34.8	1.8%
Average Service		1.6		2.0	23.8%
Annual Projected Payroll	\$	45,617,162	\$	59,069,274	29.5%
Average Annual Pay	\$	41,546	\$	43,658	5.1%
General Total					
Count		3,605		3,660	1.5%
Average Age		42.7		42.4	-0.7%
Average Service		9.4		9.2	-2.2%
Annual Projected Payroll	\$	189,379,500	\$	195,555,207	3.3%
Average Annual Pay	\$	52,532	\$	53,430	1.7%



### **APPENDIX A – MEMBERSHIP INFORMATION**

SUMMAR	Y OF AC	TIVE SAFETY	MEM	BERSHIP	
	Jı	ıne 30, 2016	Jı	ıne 30, 2017	Change
Safety Tier 1					
Count		2		2	0.0%
Average Age		62.8		63.8	1.7%
Average Service		37.6		38.5	2.5%
Annual Projected Payroll	\$	210,707	\$	215,881	2.5%
Average Annual Pay	\$	105,354	\$	107,941	2.5%
Safety Tier 2 & 3					
Count		713		658	-7.7%
Average Age		41.3		42.1	1.9%
Average Service		12.5		13.3	6.8%
Annual Projected Payroll	\$	49,658,562	\$	47,346,276	-4.7%
Average Annual Pay	\$	69,647	\$	71,955	3.3%
Safety Tier 4					
Count		176		216	22.7%
Average Age		30.6		30.6	-0.1%
Average Service		1.8		2.2	21.1%
Annual Projected Payroll	\$	9,265,110	\$	11,823,408	27.6%
Average Annual Pay	\$	52,643	\$	54,738	4.0%
Safety Total					
Count		891		876	-1.7%
Average Age		39.2		39.3	0.2%
Average Service		10.5		10.7	1.4%
Annual Projected Payroll	\$	59,134,379	\$	59,385,565	0.4%
Average Annual Pay	\$	66,369	\$	67,792	2.1%



### **APPENDIX A – MEMBERSHIP INFORMATION**

SUMMAR	Y OF I	NACTIVE MEN	MBER	SHIP*	
	Ju	ine 30, 2016	Jı	ine 30, 2017	Change
General					
Count		1,607		1,686	4.9%
Average Age		44.7		44.6	-0.2%
Total Contribution Balance	\$	38,126,000	\$	39,175,585	2.8%
Average Contribution Balance	\$	23,725	\$	23,236	-2.1%
Safety					
Count		244		268	9.8%
Average Age		40.2		39.9	-0.8%
Total Contribution Balance	\$	7,616,801	\$	8,887,900	16.7%
Average Contribution Balance	\$	31,216	\$	33,164	6.2%
Total					
Count		1,851		1,954	5.6%
Average Age		44.1		43.9	-0.4%
Total Contribution Balance	\$	45,742,801	\$	48,063,485	5.1%
Average Contribution Balance	\$	24,712	\$	24,597	-0.5%

<sup>\*</sup>Includes unclaimed accounts.



### **APPENDIX A – MEMBERSHIP INFORMATION**

SUMMA	ARY OF	RETIRED MEN	MBER	SHIP	
	Ju	ıne 30, 2016	Ju	ıne 30, 2017	Change
General					
Count		2,473		2,579	4.3%
Average Age		70.4		70.4	0.0%
Total Annual Allowance	\$	48,616,638	\$	51,970,685	6.9%
Average Annual Allowance	\$	19,659	\$	20,151	2.5%
Safety					
Count		467		493	5.6%
Average Age		63.9		64.3	0.7%
Total Annual Allowance	\$	15,675,740	\$	16,699,239	6.5%
Average Annual Allowance	\$	33,567	\$	33,873	0.9%
Total					
Count		2,940		3,072	4.5%
Average Age		69.4		69.4	0.0%
Total Annual Allowance	\$	64,292,378	\$	68,669,924	6.8%
Average Annual Allowance	\$	21,868	\$	22,353	2.2%

Please refer to the June 30, 2017 actuarial valuation report for a more complete summary of the data.



### APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A summary of the actuarial assumptions and methods used to calculate the Total Pension Liability as of June 30, 2017 is provided below. Please refer to the June 30, 2017 actuarial valuation report for a complete description of all other assumptions. The economic and demographic assumptions were selected by the Board. With the exception of the discount rate, administrative expense assumption, and the municipal bond yield, the assumptions used in this report and the June 30, 2017 actuarial valuation report reflect the results of the Experience Study performed by Cheiron covering the period July 1, 2014 through June 30, 2017.

### **Key Actuarial Assumptions**

**Expected Return on** 

Assets

7.40 percent net of investment expenses as of June 30, 2017.

**Municipal Bond** 

Yield

3.58 percent net of investment expenses as of June 30, 2017 (Bond

Buyer 20-year Bond GO Index, June 30, 2017).

**Discount Rate** 7.32 percent.

**Inflation** The cost-of-living as measured by the Consumer Price Index (CPI) will

increase at the rate of 3.00% per year.

**Post Retirement** 

**COLA** 

Benefits are assumed to increase after retirement at the rate of the

Consumer Price Index (CPI) subject to the maximum of 2.7% per year

for Tier 1 and 2.0% per year for Tiers 2-4.

Administrative

**Expenses** 

Administrative Expenses used in the cashflow projection are assumed

to average 0.15% of assets annually.



### APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### **Contribution Allocation Procedure**

The contribution allocation procedure primarily consists of an actuarial cost method, an asset smoothing method, and an amortization method as described below.

### 1. Actuarial Cost Method

The actuarial valuation is prepared using the entry age actuarial cost method (CERL 31453.5). Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age). For members who transferred between plans, entry age is based on original entry into the system. The normal cost for the Plan is based on the sum of the individual normal costs for each member (Individual Entry Age Method).

#### 2. Asset Valuation Method

Beginning in fiscal year 2009, the assets are valued using a ten-year smoothed method based on the difference between the expected market value and the actual market value of the assets, net of expenses, as of June 30 and December 31 of each year. The expected market value at the end of each period is the beginning market value increased with the net increase in the cash flow of funds, all increased with interest at the expected investment return rate assumption.

A 30% asset corridor limit is applied.

### 3. Amortization Method

The Unfunded Actuarial Liability is the difference between the Actuarial Liability and the Actuarial Value of Assets. The UAL (or Surplus) is amortized as a percentage of the projected salaries of present and future members of TCERA. At its October 28, 2015 meeting, the Board adopted 19-year layered amortization of the UAL. Starting as of June 30, 2015 the UAL is amortized over a closed 19-year period as a level percentage of payroll, assuming payroll increases of 3.00% per year. Subsequent changes in the UAL due to experience gains and losses, assumption changes, or plan changes will be amortized over new closed 19-year periods.

### 4. Contributions

The employer (County or District) contributes to the retirement fund a percentage of the total compensation provided for all members based on an actuarial investigation, valuation, and recommendation of the actuary.



### **APPENDIX C – SUMMARY OF PLAN PROVISIONS**

The plan provisions are the same as those summarized in the June 30, 2017 actuarial valuation report.

Plan provisions include liabilities associated with the Supplemental Retiree Benefit Reserve (SRBR).

The county has adopted the financial provisions of Article 5.5 of the 1937 Act for Tiers 1-3. The Article requires that in certain cases, a portion of investment earnings be allocated to a Supplemental Retiree Benefit Reserve (SRBR). Earnings allocated to the SRBR are to be used for the benefit of members in Tiers 1-3. Members of Tier 4 are not eligible for supplemental benefits. (31618)



### APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Normal Cost Contribution - Employer and Employee	UAL Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2018*	\$ 1,270,226	\$ 30,644	\$ 27,692	\$ 1,905	\$ 92,742	\$ 92,677	\$ 1,326,592	\$ 92,742	\$ 0
2019	1,326,592	41,020	32,416	1,990	92,654	97,397	1,402,781	92,654	0
2020	1,402,781	39,361	34,310	2,104	97,507	102,863	1,479,705	97,507	0
2021	1,479,705	37,749	36,069	2,220	102,441	108,377	1,557,239	102,441	0
2022	1,557,239	36,062	38,753	2,336	107,590	113,960	1,636,089	107,590	0
2023	1,636,089	34,353	40,814	2,454	113,525	119,587	1,714,864	113,525	0
2024	1,714,864	32,634	43,115	2,572	119,458	125,218	1,793,801	119,458	0
2025	1,793,801	30,977	46,296	2,691	125,336	130,897	1,873,943	125,336	0
2026	1,873,943	29,358	48,863	2,811	131,136	136,647	1,954,863	131,136	0
2027	1,954,863	27,780	50,404	2,932	136,851	142,421	2,035,685	136,851	0
2028	2,035,685	26,247	52,525	3,054	142,677	148,207	2,116,934	142,677	0
2029	2,116,934	24,744	54,719	3,175	148,500	154,029	2,198,751	148,500	0
2030	2,198,751	23,293	56,987	3,298	154,759	159,881	2,280,854	154,759	0
2031	2,280,854	21,911	59,331	3,421	160,743	165,770	2,363,702	160,743	0
2032	2,363,702	20,563	61,752	3,546	166,877	171,712	2,447,308	166,877	0
2033	2,447,308	19,246	64,252	3,671	172,685	177,726	2,532,176	172,685	0
2034	2,532,176	17,951	66,831	3,798	178,483	183,838	2,618,514	178,483	0
2035	2,618,514	16,688	42,327	3,928	184,203	189,078	2,678,477	184,203	0
2036	2,678,477	15,471	39,142	4,018	189,490	193,160	2,732,742	189,490	0
2037	2,732,742	14,282	26,492	4,099	195,284	196,459	2,770,593	195,284	0
2038	2,770,593	13,105	21,112	4,156	201,234	198,803	2,798,224	201,234	0
2039	2,798,224	11,952	20,781	4,197	206,925	200,586	2,820,420	206,925	0
2040	2,820,420	10,840	20,772	4,231	213,560	201,945	2,836,187	213,560	0
2041	2,836,187	9,772	19,226	4,254	218,999	202,819	2,844,750	218,999	0
2042	2,844,750	8,743	18,860	4,267	224,378	203,206	2,846,915	224,378	0

<sup>\*</sup> Fiduciary Net Position based on financial statements provided by TCERA dated October 30, 2017.



### APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Normal Cost Contribution - Employer and Employee	UAL Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2043	2,846,915	7,748	18,162	4,270	229,472	203,119	2,842,201	229,472	0
2044	2,842,201	6,785	16,011	4,263	234,175	202,486	2,829,044	234,175	0
2045	2,829,044	5,870	15,027	4,244	238,343	201,293	2,808,648	238,343	0
2046	2,808,648	5,010	15,932	4,213	242,307	199,643	2,782,713	242,307	0
2047	2,782,713	4,206	15,915	4,174	245,727	197,571	2,750,504	245,727	0
2048	2,750,504	3,470	15,866	4,126	248,780	195,049	2,711,984	248,780	0
2049	2,711,984	2,815	15,783	4,068	251,084	192,091	2,667,521	251,084	0
2050	2,667,521	2,248	15,666	4,001	252,799	188,716	2,617,350	252,799	0
2051	2,617,350	1,767	15,514	3,926	253,696	184,950	2,561,960	253,696	0
2052	2,561,960	1,366	15,329	3,843	253,788	180,830	2,501,854	253,788	0
2053	2,501,854	1,035	15,112	3,753	253,226	176,385	2,437,408	253,226	0
2054	2,437,408	770	14,864	3,656	251,863	171,651	2,369,173	251,863	0
2055	2,369,173	561	14,586	3,554	249,810	166,662	2,297,618	249,810	0
2056	2,297,618	400	14,283	3,446	247,250	161,447	2,223,052	247,250	0
2057	2,223,052	279	13,953	3,335	244,073	156,032	2,145,909	244,073	0
2058	2,145,909	191	13,598	3,219	240,466	150,443	2,066,456	240,466	0
2059	2,066,456	128	13,222	3,100	236,442	144,698	1,984,962	236,442	0
2060	1,984,962	85	12,826	2,977	232,061	138,815	1,901,650	232,061	0
2061	1,901,650	55	12,414	2,852	227,353	132,810	1,816,722	227,353	0
2062	1,816,722	35	11,988	2,725	222,333	126,696	1,730,383	222,333	0
2063	1,730,383	22	11,551	2,596	217,017	120,488	1,642,831	217,017	0
2064	1,642,831	13	11,105	2,464	211,411	114,201	1,554,274	211,411	0
2065	1,554,274	8	10,653	2,331	205,523	107,850	1,464,931	205,523	0
2066	1,464,931	4	10,199	2,197	199,354	101,451	1,375,034	199,354	0
2067	1,375,034	2	9,744	2,063	192,905	95,022	1,284,834	192,905	0



### APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Normal Cost Contribution - Employer and Employee	UAL Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2068	1,284,834	1	9,289	1,927	186,183	88,579	1,194,594	186,183	0
2069	1,194,594	0	8,838	1,792	179,190	82,144	1,104,594	179,190	0
2070	1,104,594	(0)	8,392	1,657	171,938	75,737	1,015,128	171,938	0
2071	1,015,128	(0)	7,954	1,523	164,440	69,377	926,496	164,440	0
2072	926,496	(0)	7,523	1,390	156,717	63,089	839,001	156,717	0
2073	839,001	0	7,101	1,259	148,791	56,891	752,943	148,791	0
2074	752,943	0	6,689	1,129	140,694	50,807	668,615	140,694	0
2075	668,615	0	6,286	1,003	132,459	44,856	586,296	132,459	0
2076	586,296	0	5,895	879	124,125	39,057	506,243	124,125	0
2077	506,243	0	5,515	759	115,737	33,429	428,691	115,737	0
2078	428,691	0	5,146	643	107,340	27,986	353,840	107,340	0
2079	353,840	0	4,789	531	98,985	22,742	281,855	98,985	0
2080	281,855	0	4,443	423	90,725	17,706	212,856	90,725	0
2081	212,856	0	4,111	319	82,616	12,887	146,918	82,616	0
2082	146,918	0	3,790	220	74,714	8,287	84,061	74,714	0
2083	84,061	0	3,483	126	67,074	3,905	24,248	67,074	0
2084	24,248	0	3,189	36	59,748	0	(32,347)	24,248	35,500
2085	(32,347)	0	2,908	0	52,782	0	(49,874)	0	52,782
2086	(49,874)	0	2,641	0	46,218	0	(43,577)	0	46,218
2087	(43,577)	0	2,389	0	40,090	0	(37,701)	0	40,090
2088	(37,701)	0	2,150	0	34,425	0	(32,275)	0	34,425
2089	(32,275)	0	1,926	0	29,243	0	(27,316)	0	29,243
2090	(27,316)	0	1,717	0	24,554	0	(22,837)	0	24,554
2091	(22,837)	0	1,522	0	20,363	0	(18,841)	0	20,363
2092	(18,841)	0	1,342	0	16,665	0	(15,322)	0	16,665



### APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Normal Cost Contribution - Employer and Employee	UAL Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2093	(15,322)	0	1,177	0	13,347	0	(12,170)	0	13,347
2094	(12,170)	0	1,021	0	10,610	0	(9,588)	0	10,610
2095	(9,588)	0	881	0	8,298	0	(7,417)	0	8,298
2096	(7,417)	0	754	0	6,380	0	(5,625)	0	6,380
2097	(5,625)	0	641	0	4,816	0	(4,175)	0	4,816
2098	(4,175)	0	540	0	3,567	0	(3,027)	0	3,567
2099	(3,027)	0	451	0	2,588	0	(2,137)	0	2,588
2100	(2,137)	0	374	0	1,838	0	(1,465)	0	1,838
2101	(1,465)	0	306	0	1,277	0	(970)	0	1,277
2102	(970)	0	248	0	866	0	(618)	0	866
2103	(618)	0	198	0	573	0	(374)	0	573
2104	(374)	0	156	0	369	0	(213)	0	369
2105	(213)	0	121	0	231	0	(111)	0	231
2106	(111)	0	91	0	141	0	(50)	0	141
2107	(50)	0	67	0	84	0	(16)	0	84
2108	(16)	0	48	0	48	0	(1)	0	48
2109	(1)	0	32	0	27	0	5	0	27
2110	5	0	19	0	15	1	9	0	15
2111	9	0	8	0	8	1	11	0	8
2112	11	0	(0)	0	4	1	7	0	4
2113	7	0	(0)	0	2	0	6	0	2
2114	6	0	(0)	0	1	0	5	0	1
2115	5	0	(0)	0	0	0	5	0	0
2116	5	0	(0)	0	0	0	6	0	0
2117	6	0	(0)	0	0	0	6	0	0
							Discount Rate:	7.40%	3.58%
							Present Value: \$	2,079,792	\$ 29,419
							tal Present Value:	9	\$ 2,109,211
						GAS	B Discount Rate:		7.32%



### APPENDIX E – GLOSSARY OF TERMS

### 1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

#### 2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

#### 3. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

#### 4. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

### 5. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

#### 6. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the plan.



### APPENDIX E – GLOSSARY OF TERMS

### 7. Net Pension Liability

The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position. The Net Pension Liability is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling TCERA's benefit obligations in the event of a plan termination or other similar action.

### 8. Plan Fiduciary Net Position

The fair or Market Value of Assets.

### 9. Reporting Date

The last day of the plan or employer's fiscal year.

### 10. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The Service Cost is the normal cost calculated under the entry age actuarial cost method.

### 11. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the Actuarial Liability calculated under the entry age actuarial cost method.





Classic Values, Innovative Advice