

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	FY2016		FY2015		FY2014		FY2013		FY2012		FY2011		FY2010	
Membership														
Active Members	80,530		79,406		77,243		76,765		76,649		76,755		77,356	
Service Retirees	57,891		56,589		53,774		52,331		50,780		49,079		47,517	
Disabilitants	521		571		563		568		591		602		654	
Survivors	5,091		4,826		4,472		4,269		4,054		3,856		3,682	
Deferred Retirees	13,680		13,314		12,907		12,614		12,201		13,237		12,756	
Nonvested Former Members	<u>31,850</u>		<u>31,026</u>		<u>29,984</u>		<u>28,881</u>		<u>27,591</u>		<u>25,196</u>		<u>23,651</u>	
Total Membership	189,563		185,732		178,943		175,428		171,866		168,725		165,616	
Funded Status														
Accrued Liability	\$26,716,216,000		\$25,562,155,000		\$24,528,506,000		\$23,418,629,000		\$23,024,505,000		\$22,171,493,000		\$22,081,634,000	
Current Assets	<u>\$20,194,279,000</u>		<u>\$19,696,893,000</u>		<u>\$18,181,932,000</u>		<u>\$16,774,626,000</u>		<u>\$16,805,077,000</u>		<u>\$17,132,383,000</u>		<u>\$17,323,146,000</u>	
Unfunded Accrued Liability	\$6,521,937,000		\$5,865,262,000		\$6,346,574,000		\$6,644,003,000		\$6,219,428,000		\$5,039,110,000		\$4,758,488,000	
Funding Ratio	75.59%		77.05%		74.13%		71.63%		72.99%		77.27%		78.45%	
Financing Requirements														
Covered Payroll	\$4,858,593,000		\$4,672,229,000		\$4,353,988,000		\$4,205,399,000		\$4,146,325,000		\$4,106,922,000		\$4,047,547,000	
Benefits Payable	\$1,716,733,000		\$1,630,157,000		\$1,580,120,000		\$1,521,477,000		\$1,485,527,000		\$1,459,550,000		\$1,421,382,000	
Normal Cost	8.79%	\$427,101,000	8.57%	\$400,448,000	8.70%	\$378,843,000	8.40%	\$353,335,000	8.53%	\$353,796,000	8.17%	\$335,649,000	8.36%	\$338,474,000
Administrative Expenses	0.23%	\$11,175,000	0.23%	\$10,746,000	0.22%	\$9,579,000	0.23%	\$9,672,000	0.24%	\$9,951,000	0.24%	\$9,857,000	0.24%	\$9,714,000
Amortiz. of Unfunded Liab.^	<u>9.70%</u>	<u>\$471,284,000</u>	<u>9.07%</u>	<u>\$423,771,000</u>	<u>10.23%</u>	<u>\$445,413,000</u>	<u>10.78%</u>	<u>\$453,342,000</u>	<u>9.98%</u>	<u>\$413,803,000</u>	<u>8.16%</u>	<u>\$335,125,000</u>	<u>7.11%</u>	<u>\$287,781,000</u>
Total Requirements	18.72%	\$909,560,000	17.87%	\$834,965,000	19.15%	\$833,835,000	19.41%	\$816,349,000	18.75%	\$777,550,000	16.57%	\$680,631,000	15.71%	\$635,969,000
Employee Contributions	7.50%	\$364,408,000	7.50%	\$350,438,000	7.50%	\$326,573,000	7.00%	\$294,416,000	6.50%	\$269,572,000	6.00%	\$246,490,000	5.50%	\$222,737,000
Employer Contributions	7.70%	\$374,140,000	7.70%	\$359,806,000	7.70%	\$335,309,000	7.19%	\$302,454,000	6.69%	\$277,520,000	6.16%	\$252,854,000	5.68%	\$229,799,000
Employer Add'l Cont.	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Direct State Funding	0.73%	\$35,587,000	0.76%	\$35,378,000	0.48%	\$21,001,000	0.47%	\$19,954,000	0.52%	\$21,727,000	0.53%	\$21,510,000	0.47%	\$19,049,000
Other Govt. Funding	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.06%	\$2,500,000
Administrative Assessment	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>
Total Contributions	15.94%	\$774,135,000	15.96%	\$745,622,000	15.68%	\$682,883,000	14.67%	\$616,824,000	13.71%	\$568,819,000	12.69%	\$520,854,000	11.71%	\$474,085,000
Total Requirements	18.72%	\$909,560,000	17.87%	\$834,965,000	19.15%	\$833,835,000	19.41%	\$816,349,000	18.75%	\$777,550,000	16.57%	\$680,631,000	15.71%	\$635,969,000
Total Contributions	<u>15.94%</u>	<u>\$774,135,000</u>	<u>15.96%</u>	<u>\$745,622,000</u>	<u>15.68%</u>	<u>\$682,883,000</u>	<u>14.67%</u>	<u>\$616,824,000</u>	<u>13.71%</u>	<u>\$568,819,000</u>	<u>12.69%</u>	<u>\$520,854,000</u>	<u>11.71%</u>	<u>\$474,085,000</u>
Deficiency (Surplus)	2.78%	\$135,425,000	1.91%	\$89,343,000	3.47%	\$150,952,000	4.74%	\$199,525,000	5.04%	\$208,731,000	3.88%	\$159,777,000	4.00%	\$161,884,000
Amortization Target Date	2039		2037		2037		2037		2037		2037		2037	
Actuary	Cavanaugh Macdonald		Cavanaugh Macdonald		Cavanaugh Macdonald		Cavanaugh Macdonald		Cavanaugh Macdonald		Mercer		Mercer	

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.

The information set forth in this report is a compilation of data taken from actuarial valuation reports prepared by each plan's actuary. The LCPR or its staff do not warrant or guarantee its accuracy, reliability or completeness. LCPR staff compiles this information to provide a single source for similar data on the plans, for the sake of convenience and ease of comparison, for use by Minnesota legislators and, secondarily, the public. This information should not be relied on for any "official" purpose. Please refer to the plans' actuarial valuation reports, available on the LCPR website at www.lcpr.leg.mn, for the most accurate, complete and detailed information.

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	FY2009		FY2008		FY2007		FY2006		FY2005		2004		2003	
Membership														
Active Members		77,786		76,515		77,694		79,164		74,552		72,008		71,916
Service Retirees		46,108		43,041		42,679		41,009		35,779		34,581		33,290
Disabilitants		624		641		636		630		581		589		558
Survivors		3,476		3,299		3,223		3,044		2,597		2,479		2,351
Deferred Retirees		12,490		12,168		12,636		11,773		9,880		10,767		9,304
Nonvested Former Members		<u>23,073</u>		<u>22,115</u>		<u>22,914</u>		<u>21,956</u>		<u>19,151</u>		<u>18,223</u>		<u>19,256</u>
Total Membership		163,557		157,779		159,782		157,576		142,540		138,647		136,675
Funded Status														
Accrued Liability		\$23,114,802,000		\$22,230,841,000		\$21,470,314,497		\$20,679,110,879		\$18,021,410,061		\$17,518,783,700		\$16,856,379,000
Current Assets		<u>\$17,882,408,000</u>		<u>\$18,226,985,000</u>		<u>\$18,794,389,076</u>		<u>\$19,035,611,839</u>		<u>\$17,752,917,313</u>		<u>\$17,519,909,350</u>		<u>\$17,384,179,000</u>
Unfunded Accrued Liability		\$5,232,394,000		\$4,003,856,000		\$2,675,925,421		\$1,643,499,040		\$268,492,748		(\$1,125,650)		(\$527,800,000)
Funding Ratio	77.36%		81.99%		87.54%		92.05%		98.51%		100.01%		103.13%	
Financing Requirements														
Covered Payroll		\$4,049,217,000		\$3,846,190,000		\$3,814,373,772		\$3,707,900,584		\$3,389,066,754		\$3,206,759,440		\$3,163,057,000
Benefits Payable		\$1,381,366,000		\$1,330,837,000		\$1,273,093,384		\$1,224,212,024		\$1,048,440,524		\$1,008,410,471		\$978,466,000
Normal Cost	8.88%	\$359,579,000	8.77%	\$337,281,000	9.37%	\$357,343,265	9.43%	\$349,678,399	8.02%	\$271,801,325	8.07%	\$258,898,450	8.84%	\$279,583,000
Administrative Expenses	0.28%	\$11,338,000	0.27%	\$10,385,000	0.29%	\$11,061,684	0.33%	\$12,236,072	0.34%	\$11,522,827	0.39%	\$12,506,362	0.43%	\$13,601,000
Amortiz. of Unfunded Liab.^	<u>7.66%</u>	<u>\$310,170,000</u>	<u>6.04%</u>	<u>\$232,310,000</u>	<u>3.78%</u>	<u>\$144,183,329</u>	<u>2.34%</u>	<u>\$86,764,874</u>	<u>0.69%</u>	<u>\$23,384,561</u>	<u>0.00%</u>	<u>\$0</u>	<u>(0.90%)</u>	<u>(\$28,468,000)</u>
Total Requirements	16.82%	\$681,087,000	15.08%	\$579,976,000	13.44%	\$512,588,278	12.10%	\$448,679,345	9.05%	\$306,708,713	8.46%	\$271,404,812	8.37%	\$264,716,000
Employee Contributions	5.50%	\$222,860,000	5.50%	\$211,704,000	5.51%	\$210,143,378	5.51%	\$204,456,479	5.00%	\$169,453,338	5.00%	\$160,337,972	5.00%	\$158,163,000
Employer Contributions	5.69%	\$230,325,000	5.69%	\$218,752,000	5.72%	\$218,013,895	5.23%	\$193,832,020	5.00%	\$169,453,338	5.00%	\$160,337,972	5.00%	\$158,163,000
Employer Add'l Cont.	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Direct State Funding	0.44%	\$17,948,000	0.50%	\$19,170,000	0.49%	\$18,819,110	0.51%	\$18,819,110	0.00%	\$0	0.00%	\$0	0.00%	\$0
Other Govt. Funding	0.06%	\$2,500,000	0.06%	\$2,500,000	0.07%	\$2,500,000	0.07%	\$2,500,000	0.00%	\$0	0.00%	\$0	0.00%	\$0
Administrative Assessment	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>
Total Contributions	11.70%	\$473,633,000	11.75%	\$452,126,000	11.78%	\$449,476,383	11.31%	\$419,607,609	10.00%	\$338,906,676	10.00%	\$320,675,944	10.00%	\$316,326,000
Total Requirements	16.82%	\$681,087,000	15.08%	\$579,976,000	13.44%	\$512,588,278	12.10%	\$448,679,345	9.05%	\$306,708,713	8.46%	\$271,404,812	8.37%	\$264,716,000
Total Contributions	<u>11.70%</u>	<u>\$473,633,000</u>	<u>11.75%</u>	<u>\$452,126,000</u>	<u>11.78%</u>	<u>\$449,476,383</u>	<u>11.31%</u>	<u>\$419,607,609</u>	<u>10.00%</u>	<u>\$338,906,676</u>	<u>10.00%</u>	<u>\$320,675,944</u>	<u>10.00%</u>	<u>\$316,326,000</u>
Deficiency (Surplus)	5.12%	\$207,454,000	3.33%	\$127,850,000	1.65%	\$63,111,895	0.79%	\$29,071,736	(0.95%)	(\$32,197,963)	(1.54%)	(\$49,271,132)	(1.63%)	(\$51,610,000)
Amortization Target Date	2037		2037		2037		2037		2020		2034		2033	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Milliman USA	

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.

* Reflects 2007 Asset Valuation Method change

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	2002	2001	2000	1999	1998	1997	1996
Membership							
Active Members	71,690	71,097	70,508	68,613	68,247	68,554	68,490
Service Retirees	32,231	31,169	29,525	27,457	25,088	23,678	22,434
Disabilitants	551	518	509	476	454	425	409
Survivors	2,192	2,070	1,912	1,816	1,686	1,578	1,464
Deferred Retirees	8,680	7,959	7,375	7,020	6,356	6,356	5,767
Nonvested Former Members	<u>19,022</u>	<u>19,344</u>	<u>17,833</u>	<u>18,317</u>	<u>16,653</u>	<u>16,653</u>	<u>16,444</u>
Total Membership	134,366	132,157	127,662	123,699	118,484	117,244	115,008
Funded Status							
Accrued Liability	\$16,503,099,000	\$15,903,984,000	\$14,802,441,000	\$13,259,569,000	\$12,046,312,000	\$10,963,637,000	\$10,366,168,000
Current Assets	<u>\$17,378,994,000</u>	<u>\$16,834,024,000</u>	<u>\$15,573,151,000</u>	<u>\$14,011,247,000</u>	<u>\$12,727,546,000</u>	<u>\$11,103,759,000</u>	<u>\$9,541,221,000</u>
Unfunded Accrued Liability	(\$875,895,000)	(\$930,040,000)	(\$770,710,000)	(\$751,678,000)	(\$681,234,000)	(\$140,122,000)	\$824,947,000
Funding Ratio	105.31%	105.85%	105.21%	105.67%	105.66%	101.28%	92.04%
Financing Requirements							
Covered Payroll	\$3,040,422,000	\$2,937,962,000	\$2,813,696,000	\$2,692,960,000	\$2,569,368,000	\$2,475,599,000	\$2,391,385,000
Benefits Payable	\$946,344,000	\$861,788,000	\$755,036,000	\$620,938,000	\$533,851,000	\$427,587,000	\$378,073,000
Normal Cost	8.68% \$264,209,000	9.09% \$267,166,000	9.09% \$255,746,000	9.55% \$257,386,000	9.60% \$246,514,000	9.66% \$238,907,000	10.49% \$250,856,287
Administrative Expenses	0.44% \$13,378,000	0.46% \$13,515,000	0.30% \$8,441,000	0.31% \$8,348,000	0.22% \$5,653,000	0.19% \$4,704,000	0.16% \$3,826,216
Amortiz. of Unfunded Liab.^	<u>(1.55%) (\$47,127,000)</u>	<u>(1.70%) (\$49,945,000)</u>	<u>(1.47%) (\$41,361,000)</u>	<u>0.00% \$0</u>	<u>0.00% \$0</u>	<u>0.00% \$0</u>	<u>2.13% \$50,936,501</u>
Total Requirements	7.57% \$230,460,000	7.85% \$230,736,000	7.92% \$222,826,000	9.86% \$265,734,000	9.82% \$252,167,000	9.85% \$243,611,000	12.78% \$305,619,003
Employee Contributions	5.00% \$152,031,000	5.00% \$146,914,000	5.00% \$140,710,000	5.00% \$134,698,000	5.00% \$128,538,000	5.00% \$123,892,000	6.15% \$147,070,178
Employer Contributions	5.00% \$152,031,000	5.00% \$146,914,000	5.00% \$140,710,000	5.00% \$134,698,000	5.00% \$128,538,000	6.64% \$164,492,000	8.15% \$194,897,878
Employer Add'l Cont.	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Direct State Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Other Govt. Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Administrative Assessment	<u>0.00% \$0</u>	<u>0.00% \$0</u>	<u>0.00% \$0</u>	<u>0.00% \$0</u>	<u>0.00% \$0</u>	<u>0.00% \$0</u>	<u>0.00% \$0</u>
Total Contributions	10.00% \$304,062,000	10.00% \$293,828,000	10.00% \$281,420,000	10.00% \$269,396,000	10.00% \$257,076,000	11.64% \$288,384,000	14.66% \$341,968,055
Total Requirements	7.57% \$230,460,000	7.85% \$230,736,000	7.92% \$222,826,000	9.86% \$265,734,000	9.82% \$252,167,000	9.85% \$243,611,000	12.78% \$305,619,003
Total Contributions	<u>10.00% \$304,062,000</u>	<u>10.00% \$293,828,000</u>	<u>10.00% \$281,420,000</u>	<u>10.00% \$269,396,000</u>	<u>10.00% \$257,076,000</u>	<u>11.64% \$288,384,000</u>	<u>14.66% \$341,968,055</u>
Deficiency (Surplus)	(2.43%) (\$73,602,000)	(2.15%) (\$63,092,000)	(2.08%) (\$58,594,000)	(0.14%) (\$3,662,000)	(0.18%) (\$4,909,000)	(1.79%) (\$44,773,000)	(1.88%) (\$36,349,052)
Amortization Target Date	2032	2031	2030	2020	2020	2020	2020
Actuary	Milliman USA	Milliman USA	Milliman & Robertson	Milliman & Robertson	Milliman & Robertson	Milliman & Robertson	Milliman & Robertson

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	1995		1994		1993		1992		1991		1990		1989	
Membership														
Active Members		67,558		66,514		65,268		65,557		65,093		64,324		64,796
Service Retirees		21,458		20,563		19,343		17,863		16,851		16,133		15,406
Disabilitants		379		345		354		297		280		257		241
Survivors		1,331		1,229		1,113		1,049		955		929		903
Deferred Retirees		5,103		4,499		4,030		3,548		3,134		1,955		1,887
Nonvested Former Members		<u>16,411</u>		<u>16,147</u>		<u>15,994</u>		<u>15,447</u>		<u>15,151</u>		<u>15,356</u>		<u>14,205</u>
Total Membership		112,240		109,297		106,102		103,761		101,464		98,954		97,438
Funded Status														
Accrued Liability		\$9,717,623,000		\$9,115,266,000		\$8,266,059,000		\$7,662,522,000		\$7,213,720,000		\$6,611,074,000		\$6,249,413,000
Current Assets		<u>\$8,348,124,000</u>		<u>\$7,611,935,000</u>		<u>\$7,045,937,000</u>		<u>\$6,324,733,000</u>		<u>\$5,614,924,000</u>		<u>\$5,131,999,000</u>		<u>\$4,567,997,000</u>
Unfunded Accrued Liability		\$1,369,499,000		\$1,503,331,000		\$1,220,122,000		\$1,337,789,000		\$1,598,796,000		\$1,479,075,000		\$1,681,416,000
Funding Ratio	85.91%		83.51%		85.24%		82.54%		77.84%		77.63%		73.09%	
Financing Requirements														
Covered Payroll		\$2,325,059,000		\$2,235,636,000		\$2,156,000,000		\$2,112,401,000		\$2,044,754,000		\$1,931,669,000		\$1,887,073,000
Benefits Payable		\$338,857,000		\$309,036,000		\$256,630,000		\$227,067,000		\$200,415,000		\$179,792,000		\$160,850,000
Normal Cost	10.59%	\$246,223,748	10.63%	\$237,648,107	9.84%	\$212,150,400	9.73%	\$205,536,617	9.06%	\$185,254,712	9.24%	\$178,486,216	8.30%	\$156,627,059
Administrative Expenses	0.16%	\$3,720,094	0.15%	\$3,353,454	0.15%	\$3,234,000	0.40%	\$8,449,604	0.37%	\$7,565,590	0.42%	\$8,113,010	0.30%	\$5,661,219
Amortiz. of Unfunded Liab.^	<u>3.55%</u>	<u>\$82,539,595</u>	<u>3.95%</u>	<u>\$88,307,622</u>	<u>2.76%</u>	<u>\$59,505,600</u>	<u>3.00%</u>	<u>\$63,372,030</u>	<u>3.61%</u>	<u>\$73,815,619</u>	<u>3.45%</u>	<u>\$66,642,581</u>	<u>3.92%</u>	<u>\$73,973,262</u>
Total Requirements	14.30%	\$332,483,437	14.73%	\$329,309,183	12.75%	\$274,890,000	13.13%	\$277,358,251	13.04%	\$266,635,922	13.11%	\$253,241,806	12.52%	\$236,261,540
Employee Contributions	6.51%	\$151,361,341	6.51%	\$145,539,904	4.52%	\$97,451,200	4.54%	\$95,903,005	4.56%	\$93,240,782	4.58%	\$88,470,440	4.59%	\$86,616,651
Employer Contributions	8.15%	\$189,492,309	8.15%	\$182,204,334	8.16%	\$175,929,600	8.18%	\$172,794,402	8.20%	\$167,669,828	8.22%	\$158,783,192	9.07%	\$171,157,521
Employer Add'l Cont.	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Direct State Funding	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Other Govt. Funding	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Administrative Assessment	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$0</u>
Total Contributions	14.66%	\$340,853,649	14.66%	\$327,744,238	12.68%	\$273,380,800	12.72%	\$268,697,407	12.76%	\$260,910,610	12.80%	\$247,253,632	13.66%	\$257,774,172
Total Requirements	14.30%	\$332,483,437	14.73%	\$329,309,183	12.75%	\$274,890,000	13.13%	\$275,003,000	13.04%	\$266,635,922	13.11%	\$253,241,806	12.52%	\$236,261,540
Total Contributions	<u>14.66%</u>	<u>\$340,853,649</u>	<u>14.66%</u>	<u>\$327,744,238</u>	<u>12.68%</u>	<u>\$273,380,800</u>	<u>12.72%</u>	<u>\$273,637,000</u>	<u>12.76%</u>	<u>\$260,910,610</u>	<u>12.80%</u>	<u>\$247,253,632</u>	<u>13.66%</u>	<u>\$257,774,172</u>
Deficiency (Surplus)	(0.36%)	(\$8,370,212)	0.07%	\$1,564,945	0.07%	\$1,509,200	0.41%	\$1,366,000	0.28%	\$5,725,311	0.31%	\$5,988,174	(1.14%)	(\$21,512,632)
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt		Wyatt	

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	1988	1987	1986	1985	1984	1983	1982
Membership							
Active Members	63,326	61,283	60,174	58,533	58,190	57,831	63,573
Service Retirees	14,974	14,582	13,695	12,798	11,885	12,427	10,667
Disabilitants	221	217	222	223	222	0	214
Survivors	869	830	808	781	737	0	654
Deferred Retirees	1,878	1,926	2,088	2,191	0	0	0
Nonvested Former Members	<u>13,310</u>	<u>13,106</u>	<u>12,957</u>	<u>13,628</u>	<u>0</u>	<u>16,842</u>	<u>14,411</u>
Total Membership	94,578	91,944	89,944	88,154	71,034	87,100	89,519
Funded Status							
Accrued Liability	\$5,413,782,000	\$5,000,785,000	\$4,539,359,000	\$4,166,116,000	\$3,716,432,337	\$3,472,264,036	\$3,108,085,664
Current Assets	<u>\$3,806,239,000</u>	<u>\$3,467,205,000</u>	<u>\$2,962,050,000</u>	<u>\$2,585,778,000</u>	<u>\$2,216,249,806</u>	<u>\$1,983,579,211</u>	<u>\$1,710,750,595</u>
Unfunded Accrued Liability	\$1,607,543,000	\$1,533,580,000	\$1,577,309,000	\$1,580,338,000	\$1,500,182,531	\$1,488,684,825	\$1,397,335,069
Funding Ratio	70.31%	69.33%	65.25%	62.07%	59.63%	57.13%	55.04%
Financing Requirements							
Covered Payroll	\$1,752,322,000	\$1,601,809,000	\$1,498,590,000	\$1,393,716,000	\$1,232,356,505	\$1,146,613,563	\$1,129,420,339
Benefits Payable	\$148,243,000	\$125,152,000	\$110,908,000	\$91,606,536	\$75,269,396	\$62,177,636	\$52,692,963
Normal Cost	7.77% \$136,155,419	7.82% \$125,261,464	7.96% \$119,287,764	7.94% \$110,661,050	8.66% \$106,722,073	9.47% \$108,584,304	9.49% \$107,181,990
Administrative Expenses	0.30% \$5,256,966	0.31% \$4,965,608	0.32% \$4,795,488	0.33% \$4,599,263	0.16% \$1,971,770	0.13% \$1,490,598	0.12% \$1,355,304
Amortiz. of Unfunded Liab.^	<u>5.22%</u> <u>\$91,471,208</u>	<u>5.23%</u> <u>\$83,774,611</u>	<u>5.54%</u> <u>\$83,021,886</u>	<u>5.76%</u> <u>\$80,278,042</u>	<u>5.73%</u> <u>\$70,614,028</u>	<u>9.03%</u> <u>\$103,539,205</u>	<u>8.45%</u> <u>\$95,436,019</u>
Total Requirements	13.29% \$232,883,594	13.36% \$214,001,682	13.82% \$207,105,138	14.03% \$195,538,355	14.55% \$179,307,871	18.63% \$213,614,107	18.06% \$203,973,313
Employee Contributions	4.60% \$80,606,812	4.62% \$74,003,576	4.64% \$69,534,576	4.68% \$65,225,909	4.71% \$58,043,991	4.73% \$54,234,822	4.75% \$53,647,466
Employer Contributions	9.09% \$159,286,070	9.09% \$145,604,438	9.13% \$136,821,267	9.15% \$127,525,014	4.71% \$58,043,991	4.73% \$54,234,822	4.75% \$53,647,466
Employer Add'l Cont.	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	4.48% \$55,209,571	3.05% \$34,971,714	3.05% \$34,447,320
Direct State Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Other Govt. Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Administrative Assessment	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>
Total Contributions	13.69% \$239,892,882	13.71% \$219,608,014	13.77% \$206,355,843	13.83% \$192,750,923	13.90% \$171,297,554	12.51% \$143,441,357	12.55% \$141,742,253
Total Requirements	13.29% \$232,883,594	13.36% \$214,001,682	13.82% \$207,105,138	14.03% \$195,538,355	14.55% \$179,307,871	18.63% \$213,614,107	18.06% \$203,973,313
Total Contributions	<u>13.69%</u> <u>\$239,892,882</u>	<u>13.71%</u> <u>\$219,608,014</u>	<u>13.77%</u> <u>\$206,355,843</u>	<u>13.83%</u> <u>\$192,750,923</u>	<u>13.90%</u> <u>\$171,297,554</u>	<u>12.51%</u> <u>\$143,441,357</u>	<u>12.55%</u> <u>\$141,742,253</u>
Deficiency (Surplus)	(0.40%) (\$7,009,288)	(0.35%) (\$5,606,331)	0.05% \$749,295	0.20% \$2,787,432	0.65% \$8,010,317	6.12% \$70,172,750	5.51% \$62,231,061
Amortization Target Date	2009	2009	2009	2009	2009	2009	2009
Actuary	Wyatt	Wyatt	Wyatt	Wyatt	Flott	Flott	Flott

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	1981	1980	1979	1978	1977	1976	1975
Membership							
Active Members	65,189	65,423	64,360	62,683	63,967	64,088	60,457
Service Retirees	9,961	9,411	8,879	8,432	7,842	7,176	6,566
Disabilitants	199	200	179	155	137	120	97
Survivors	645	587	578	556	562	529	538
Deferred Retirees	0	0	0	0	0	0	0
Nonvested Former Members	<u>14,245</u>	<u>13,460</u>	<u>14,530</u>	<u>14,312</u>	<u>17,129</u>	<u>15,894</u>	<u>16,509</u>
Total Membership	90,239	89,081	88,526	86,138	89,637	87,807	84,167
Funded Status							
Accrued Liability	\$2,690,945,880	\$2,361,121,244	\$2,080,173,976	\$1,732,776,686	\$1,462,982,613	\$1,293,764,171	\$1,131,946,700
Current Assets	<u>\$1,462,538,605</u>	<u>\$1,232,115,128</u>	<u>\$1,048,516,231</u>	<u>\$940,345,339</u>	<u>\$822,410,185</u>	<u>\$695,640,890</u>	<u>\$606,495,423</u>
Unfunded Accrued Liability	\$1,228,407,275	\$1,129,006,116	\$1,031,657,745	\$792,431,347	\$640,572,428	\$598,123,281	\$525,451,277
Funding Ratio	54.35%	52.18%	50.41%	54.27%	56.21%	53.77%	53.58%
Financing Requirements							
Covered Payroll	\$1,040,186,471	\$971,670,262	\$899,989,326	\$845,898,496	\$802,761,084	\$752,040,857	\$663,335,223
Benefits Payable	\$43,664,862	\$38,399,281	\$34,612,214	\$31,452,536	\$27,383,954	\$23,029,011	\$19,828,513
Normal Cost	9.52% \$99,025,752	9.55% \$92,794,510	9.58% \$86,218,977	8.89% \$75,200,376	9.11% \$73,131,535	8.72% \$65,577,963	8.76% \$58,108,166
Administrative Expenses	0.10% \$1,040,186	0.10% \$971,670	0.11% \$989,988	0.11% \$930,488	0.10% \$802,761	0.10% \$752,041	0.11% \$729,669
Amortiz. of Unfunded Liab.^	<u>7.93%</u> <u>\$82,486,787</u>	<u>7.67%</u> <u>\$74,527,109</u>	<u>7.46%</u> <u>\$67,139,204</u>	<u>6.14%</u> <u>\$51,938,168</u>	<u>6.40%</u> <u>\$51,376,709</u>	<u>6.20%</u> <u>\$46,626,533</u>	<u>6.02%</u> <u>\$39,932,780</u>
Total Requirements	17.55% \$182,552,726	17.32% \$168,293,289	17.15% \$154,348,169	15.14% \$128,069,032	15.61% \$125,311,005	15.02% \$112,956,537	14.89% \$98,770,615
Employee Contributions	4.76% \$49,512,876	4.78% \$46,445,839	4.30% \$38,699,541	4.32% \$36,542,815	4.84% \$38,828,751	4.36% \$32,788,981	4.38% \$29,054,083
Employer Contributions	4.76% \$49,512,876	4.78% \$46,445,839	4.30% \$38,699,541	4.32% \$36,542,815	4.34% \$34,814,945	4.36% \$32,788,981	4.38% \$29,054,083
Employer Add'l Cont.	3.05% \$31,725,687	3.05% \$29,635,943	3.00% \$26,999,680	3.00% \$25,376,955	3.00% \$24,082,833	2.50% \$18,801,021	2.50% \$16,583,381
Direct State Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Other Govt. Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Administrative Assessment	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>
Total Contributions	12.57% \$130,751,439	12.61% \$122,527,620	11.60% \$104,398,762	11.64% \$98,462,585	12.17% \$97,726,529	11.22% \$84,378,984	11.26% \$74,691,546
Total Requirements	17.55% \$182,552,726	17.32% \$168,293,289	17.15% \$154,348,169	15.14% \$128,069,032	15.61% \$125,311,005	15.02% \$112,956,537	14.89% \$98,770,615
Total Contributions	<u>12.57%</u> <u>\$130,751,439</u>	<u>12.61%</u> <u>\$122,527,620</u>	<u>11.60%</u> <u>\$104,398,762</u>	<u>11.64%</u> <u>\$98,462,585</u>	<u>12.17%</u> <u>\$97,726,529</u>	<u>11.22%</u> <u>\$84,378,984</u>	<u>11.26%</u> <u>\$74,691,546</u>
Deficiency (Surplus)	4.98% \$51,801,286	4.71% \$45,765,669	5.55% \$49,949,408	3.50% \$29,606,447	3.44% \$27,584,476	3.80% \$28,577,553	3.63% \$24,079,069
Amortization Target Date	2009	2009	2009	1997	1997	1997	1997
Actuary	Flott	Flott	Flott	Flott	Flott	Flott	Flott

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	1974	1973	1972	1971	1970	1969	1968
Membership							
Active Members	59,528	59,286	58,192	57,616	53,425	50,152	46,055
Service Retirees	5,985	4,917	4,476	3,884	3,351	2,778	2,505
Disabilitants	80	74	69	66	47	47	39
Survivors	536	496	479	454	454	439	406
Deferred Retirees	0	0	0	0	0	0	0
Nonvested Former Members	<u>18,133</u>	<u>16,717</u>	<u>13,089</u>	<u>11,384</u>	<u>10,061</u>	<u>7,945</u>	<u>0</u>
Total Membership	84,262	81,490	76,305	73,404	67,338	61,361	49,005
Funded Status							
Accrued Liability	\$1,078,633,461	\$877,735,084	\$543,695,637	\$443,057,442	\$385,137,356	\$319,201,924	\$240,558,837
Current Assets	<u>\$538,893,416</u>	<u>\$468,427,531</u>	<u>\$389,407,363</u>	<u>\$324,917,889</u>	<u>\$269,479,109</u>	<u>\$224,941,093</u>	<u>\$192,196,688</u>
Unfunded Accrued Liability	\$539,740,045	\$409,307,553	\$154,288,274	\$118,139,553	\$115,658,247	\$94,260,831	\$48,362,149
Funding Ratio	49.96%	53.37%	71.62%	73.34%	69.97%	70.47%	79.90%
Financing Requirements							
Covered Payroll	\$598,421,409	\$583,341,059	\$549,393,938	\$482,642,693	\$431,774,990	\$386,300,000	\$320,000,000
Benefits Payable	\$16,715,896	\$10,655,203	\$8,359,031	\$7,139,254	\$5,700,849	\$4,370,606	\$3,638,231
Normal Cost	8.84% \$52,900,453	8.94% \$52,150,691	7.56% \$41,534,182	7.75% \$37,404,809	7.92% \$34,196,579	8.23% \$31,792,490	7.20% \$23,040,000
Administrative Expenses	0.10% \$598,421	0.09% \$525,007	0.10% \$549,394	0.10% \$482,643	0.09% \$388,597	0.00% \$0	0.00% \$0
Amortiz. of Unfunded Liab.^	<u>6.69%</u> <u>\$40,034,392</u>	<u>5.09%</u> <u>\$29,692,060</u>	<u>1.70%</u> <u>\$9,339,697</u>	<u>1.45%</u> <u>\$6,998,319</u>	<u>1.37%</u> <u>\$5,915,317</u>	<u>1.33%</u> <u>\$5,137,790</u>	<u>0.69%</u> <u>\$2,208,000</u>
Total Requirements	15.63% \$93,533,266	14.12% \$82,367,758	9.36% \$51,423,273	9.30% \$44,885,770	9.38% \$40,500,494	9.56% \$36,930,280	7.89% \$25,248,000
Employee Contributions	4.40% \$26,330,542	4.45% \$25,958,677	3.93% \$21,591,182	3.96% \$19,112,651	4.00% \$17,271,000	4.11% \$15,876,930	3.60% \$11,520,000
Employer Contributions	3.90% \$23,338,435	3.90% \$22,750,301	3.93% \$21,591,182	3.96% \$19,112,651	4.00% \$17,271,000	4.11% \$15,876,930	3.60% \$11,520,000
Employer Add'l Cont.	2.00% \$11,968,428	2.00% \$11,666,821	2.00% \$10,987,879	2.00% \$9,652,854	2.00% \$8,635,500	2.00% \$7,726,000	1.50% \$4,800,000
Direct State Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Other Govt. Funding	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0	0.00% \$0
Administrative Assessment	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>	<u>0.00%</u> <u>\$0</u>
Total Contributions	10.30% \$61,637,405	10.35% \$60,375,800	9.86% \$54,170,242	9.92% \$47,878,155	10.00% \$43,177,499	10.22% \$39,479,860	8.70% \$27,840,000
Total Requirements	15.63% \$93,533,266	14.12% \$82,367,758	9.36% \$51,423,273	9.30% \$44,885,770	9.38% \$40,500,494	9.56% \$36,930,280	7.89% \$25,248,000
Total Contributions	<u>10.30%</u> <u>\$61,637,405</u>	<u>10.35%</u> <u>\$60,375,800</u>	<u>9.86%</u> <u>\$54,170,242</u>	<u>9.92%</u> <u>\$47,878,155</u>	<u>10.00%</u> <u>\$43,177,499</u>	<u>10.22%</u> <u>\$39,479,860</u>	<u>8.70%</u> <u>\$27,840,000</u>
Deficiency (Surplus)	5.33% \$31,895,861	3.77% \$21,991,958	(0.50%) (\$2,746,970)	(0.62%) (\$2,992,385)	(0.62%) (\$2,677,005)	(0.66%) (\$2,549,580)	(0.81%) (\$2,592,000)
Amortization Target Date	1997	1997	1997	1997	1997	1997	1997
Actuary	Flott	Flott	Flott	Flott	Flott	Flott	Flott

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.

Actuarial Valuation Data by Year

Teachers Retirement Association

(TRA)

	1967		1966		1965		1964		1959		1958	
<u>Membership</u>												
Active Members		43,029		39,710		34,604		33,386		24,680		22,015
Service Retirees		2,279		2,149		2,022		1,914		1,524		1,443
Disabilitants		31		28		21		15		0		0
Survivors		373		357		343		315		0		0
Deferred Retirees		0		0		0		0		0		0
Nonvested Former Members		0		0		0		3,683		3,712		2,981
Total Membership		45,712		42,244		36,990		39,313		29,916		26,439
<u>Funded Status</u>												
Accrued Liability		\$228,026,093		\$205,043,514		\$188,452,999		\$138,888,318		\$128,344,426		\$111,135,545
Current Assets		\$164,155,966		\$142,506,850		\$123,148,877		\$102,813,388		\$56,661,932		\$38,697,202
Unfunded Accrued Liability		\$63,870,127		\$62,536,664		\$65,304,122		\$36,074,930		\$71,682,494		\$72,438,343
Funding Ratio	71.99%		69.50%		65.35%		74.03%		44.15%		34.82%	
<u>Financing Requirements</u>												
Covered Payroll		\$277,000,000		\$220,000,000		\$228,000,000		\$105,230,561		\$109,200,000		\$94,300,000
Benefits Payable		\$3,719,568		\$3,163,455		\$2,959,696		\$2,755,809		\$1,600,000		\$1,500,000
Normal Cost	7.34%	\$20,331,800	7.53%	\$16,566,000	7.61%	\$17,350,800	8.05%	\$8,471,060	10.27%	\$11,214,840	12.00%	\$11,316,000
Administrative Expenses	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Amortiz. of Unfunded Liab.^	0.95%	\$2,631,500	1.40%	\$3,080,000	1.40%	\$3,192,000	1.30%	\$1,367,997	2.40%	\$2,620,800	2.60%	\$2,451,800
Total Requirements	8.29%	\$22,963,300	8.93%	\$19,646,000	9.01%	\$20,542,800	9.35%	\$9,839,057	12.67%	\$13,835,640	14.60%	\$13,767,800
Employee Contributions	3.67%	\$10,165,900	3.76%	\$8,272,000	3.80%	\$8,664,000	4.03%	\$4,240,792	5.14%	\$5,607,420	6.00%	\$5,658,000
Employer Contributions	3.67%	\$10,165,900	3.76%	\$8,272,000	3.80%	\$8,664,000	4.03%	\$4,240,792	5.14%	\$5,607,420	6.00%	\$5,658,000
Employer Add'l Cont.	1.39%	\$3,850,300	1.37%	\$3,014,000	1.37%	\$3,123,600	1.33%	\$1,399,566	0.00%	\$0	0.00%	\$0
Direct State Funding	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Other Govt. Funding	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Administrative Assessment	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$0
Total Contributions	8.73%	\$24,182,100	8.89%	\$19,558,000	8.97%	\$20,451,600	9.39%	\$9,881,150	10.27%	\$11,214,840	12.00%	\$11,316,000
Total Requirements	8.29%	\$22,963,300	8.93%	\$19,646,000	9.01%	\$20,542,800	9.35%	\$9,839,057	12.67%	\$13,835,640	14.60%	\$13,767,800
Total Contributions	8.73%	\$24,182,100	8.89%	\$19,558,000	8.97%	\$20,451,600	9.39%	\$9,881,150	10.27%	\$11,214,840	12.00%	\$11,316,000
Deficiency (Surplus)	(0.44%)	(\$1,218,800)	0.04%	\$88,000	0.04%	\$91,200	(0.04%)	(\$42,092)	2.40%	\$2,620,800	2.60%	\$2,451,800
Amortization Target Date	1997		1997		1997		1997		1997		1997	
Actuary	Flott		Brown		Brown		Brown		Brown		Brown	

^Amortization of the unfunded actuarial accrued liability (UAAL) to the amortization target date.