

Employees Retirement System of Texas

August 31, 2004
Actuarial Valuation Report
for Plan Year Beginning
September 1, 2004
and
Fiscal Year Ending
August 31, 2004



**TOWERS
PERRIN**

HR SERVICES



EMPLOYEES RETIREMENT SYSTEM OF TEXAS

ACTUARIAL VALUATION REPORT

PREPARED AS OF AUGUST 31, 2004

This report describes the results of an actuarial valuation of the Employees Retirement System of Texas. The Employees Retirement System of Texas retained Towers Perrin to perform this actuarial valuation for the purposes of determining (1) the funding status for the plan year September 1, 2004 through August 31, 2005; and (2) financial statement disclosure and reporting information for the fiscal year ending August 31, 2004.

The consulting actuaries are members of the Society of Actuaries and other professional actuarial organizations and meet their "General Qualification Standard for Prescribed Statements of Actuarial Opinions" relating to pension plans.

The calculations were made as of August 31, 2004. In preparing the results presented in this report, we have relied upon information provided to us regarding plan provisions, plan participants, and plan assets as of August 31, 2004. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness but have not audited it. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information.

The actuarial assumptions and the accounting policies and methods employed in this report have been selected by the plan sponsor, with the concurrence of Towers Perrin.

The funding determination portion of this actuarial valuation has been conducted in accordance with principles of practice prescribed by the Actuarial Standards Board and the requirements of the Texas Government Code.

The financial statement disclosure portion of this actuarial valuation has been conducted according to our understanding of Statements No. 25 and 27 of the Government Accounting Standards Board. The Government Accounting Standards Board requires the use of reasonable assumptions. The actuarial assumptions used are identical to the assumptions used for the funding determination portion of the valuation.

The results shown in this report are reasonable actuarial results. However, a different set of results could also be considered reasonable actuarial results, since the Actuarial Standards of Practice describe a "best-estimate range" for each assumption, rather than a single best-estimate value. Thus, reasonable results differing from those presented in this report could have been developed by selecting different points within the best-estimate ranges for various assumptions.

The information contained in this report was prepared for the internal use of the Employees Retirement System of Texas and its auditors in connection with our actuarial valuation of the pension plan. It is not intended nor necessarily suitable for other purposes.

Towers Perrin



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EMPLOYEES RETIREMENT SYSTEM OF TEXAS

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EMPLOYEES RETIREMENT SYSTEM OF TEXAS

FUNDING DETERMINATION

A. KEY VALUATION RESULTS

The key results from the current actuarial valuation, along with comparable figures from the prior valuation, are as follows:

	<u>August 31, 2004 Valuation</u>	<u>August 31, 2003 Valuation</u>
Total Contribution Rate	12.000%	12.000%
Total Normal Cost		
— percent of payroll	12.450%	12.258%
— dollars	\$574,778,721	\$588,499,147
Actuarial Value of Assets (AV)	\$20,036,646,562	\$19,478,554,993
Actuarial Accrued Liability (AAL)	\$20,591,847,998	\$19,959,111,546
Funded Ratio (AV/AAL)	97.3%	97.6%
Net Asset/(Liability) Balance (AV – AAL)	(\$555,201,436)	(\$480,556,553)
Amortization Period in Years	Infinite	Infinite
Total Contribution to Fund Total Normal Cost plus Amortize the Net Liability Balance, if any, over 31 years as a level percentage of payroll	13.121%	12.817%
Valuation Payroll	\$4,616,760,675	\$4,800,611,900
Reported Payroll	\$4,557,079,610	\$4,738,994,284
Active Members	133,349	142,163

B. DETERMINATION OF FUNDED STATUS AND AMORTIZATION PERIOD

The current valuation has been determined based on the actuarial assumptions summarized in Appendix D and the actuarial cost method described in Appendix E.

The actuarial assumptions are used to predict the likelihood of various benefits becoming payable from the plan, the size of those benefits, and the estimated value today of those future benefits. Actual experience may deviate from these assumptions, resulting in actuarial gains and losses.

The actuarial cost method is a budgeting technique, used to allocate total estimated plan liabilities over past, current and future years. Thus, the choice of the cost method does not affect the overall long-term plan costs, but only the incidence of when those costs are reflected. The cost method is designed to give plan costs as a relatively level percentage of payroll if characteristics of the member group do not change significantly.

An actuarial valuation is the process by which the actuarial assumptions and cost method are applied to actual plan provisions, assets, and member data, to develop a funding level sufficient to provide for future benefit payments, the actual ultimate value of which is not now known.

C. CHANGES SINCE LAST VALUATION

Since the prior valuation, there were no changes in actuarial assumptions, actuarial cost methods, actuarial procedures, or plan provisions.

D. PLAN EXPERIENCE

For fiscal year 2004 the rate of investment return on the market value of assets was approximately 11.6%. The actuarial value of assets is a smoothed value that recognizes only 20% of outstanding investment gains and losses. The rate of investment return on the actuarial (smoothed) value of assets was approximately 6.4% for fiscal year 2004, which was less than the 8.0% assumed rate. As of August 31, 2004 the market value of assets was \$1.2 billion less than the actuarial value. Unless the market value earns significantly more than 8% over the next few years (on the average), unrecognized investment losses will gradually be reflected in the actuarial value of assets and the funded ratio will decrease.

The net liability balance of \$480.6 million as of the August 31, 2003 actuarial valuation increased by approximately \$74.6 million to \$555.2 million as of the August 31, 2004 valuation. The following table shows the components of this change for 2004 (all amounts in millions of dollars):

Expected change in net asset/(liability) balance:		
Interest on net asset/(liability) balance		(\$38.4)
Member and State contribution greater/(less) than normal cost		<u>(12.4)</u>
Total		(\$50.8)
Actuarial gains/(losses) from:		
Service retirements, disability retirement, death-in-service benefits, withdrawal payments and merit, promotion and longevity pay increases		(166.2)
Across-the-board pay increases		400.9
Death after retirement		76.2
Investment income		(309.8)
Other		
— purchases of refunded service or service not previously established	(22.0)	
— Proportionate Retirement Program	<u>(2.9)</u>	
— Total		<u>(24.9)</u>
Total actuarial gains/(losses)		(\$23.8)
Change in net asset/(liability) balance due to changes in actuarial assumptions and plan provisions		<u>0.0</u>
Change in net asset/(liability) balance:		(\$74.6)

The net actuarial loss of \$23.8 million indicates that actual experience since the last valuation was less favorable than expected. The most significant factor was investment return (on the actuarial value of assets) that was less than the assumed rate. There were actuarial experience gains and losses from other sources, such as across-the-board pay increases, more retirements than expected, the Proportionate Retirement Program, purchases of refunded service or service not previously established, and other demographic factors.

E. DISTRIBUTIONS OF NORMAL COST

<u>Type of Benefit</u>	<u>Percent of Payroll</u>	
	<u>August 31, 2004</u>	<u>August 31, 2003</u>
Service Retirement	9.012%	8.903%
Nonoccupational Disability	0.328	0.326
Occupational Disability	0.022	0.021
Death	0.241	0.236
Termination	2.597	2.522
Expenses	<u>0.250</u>	<u>0.250</u>
Total	12.450%	12.258%

F. ACTUARIAL BALANCE SHEET

	<u>August 31, 2004</u>	<u>August 31, 2003</u>
<u>Actuarial Assets:</u>		
Actuarial Value of Tangible Assets	\$20,036,646,562	\$19,478,554,993
Actuarial Present Value of Future Normal Costs		
Member	\$2,248,977,273	\$2,359,025,573
Employer	<u>2,323,943,183</u>	<u>2,362,170,940</u>
Total	<u>\$4,572,920,456</u>	<u>\$4,721,196,513</u>
Total	\$24,609,567,018	\$24,199,751,506
<u>Actuarial Liability:</u>		
Actuarial Present Value of Benefits		
Active members		
— service retirement	\$12,764,777,842	\$12,661,844,659
— nonoccupational disability	350,167,811	356,941,540
— occupational disability	12,596,149	12,912,674
— death before retirement	256,136,279	255,381,615
— termination	<u>946,750,221</u>	<u>991,930,447</u>
— total	\$14,330,428,302	\$14,279,010,935
Inactive members	672,396,482	621,155,984
Annuitants	<u>10,161,943,670</u>	<u>9,780,141,140</u>
Total	\$25,164,768,454	\$24,680,308,059
<u>Net Asset/(Liability) Balance:</u>	(\$555,201,436)	(\$480,556,553)

Refer to Appendix B for additional detail regarding assets.

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

APPENDIX A

SUMMARY OF PLAN PROVISIONS

A. MEMBERS

All employees of state agencies in a full-time or part-time position and elected state officials.

B. SERVICE RETIREMENT BENEFITS

Service Retirement Eligibility:

Last day of any month following attainment of:

- age 60 and 5 years of service, or
- the sum of age and service is at least 80, or
- age 55 and 10 years of service as a commissioned peace officer or a custodial officer, or
- age 50 and 20 years of service as a commissioned peace officer or a custodial officer, or
- age 60 and 8 years of elected class service, or
- age 50 and 12 years of elected class service.

Standard Service Retirement Annuity:

Monthly annuity payable for life equal to 2.3% of average monthly compensation times years of service. Average monthly compensation is the highest 36 month average. The standard service retirement annuity may not be less than \$150 nor more than 100% of average monthly compensation. For elected class members, a monthly annuity payable for life equal to 2.3% of the State salary of a district judge times years of service.

Optional Service Retirement Benefits:

Five optional forms and partial lump sum option assumed actuarially equivalent to standard annuity.

Automatic Increase:

For elected class members only, adjusted automatically as the state salary of a district judge increases.

C. DISABILITY RETIREMENT BENEFITS

Occupational Disability Retirement:

Monthly annuity payable for life equal to 2.3% of average monthly compensation on date of injury/onset of illness times years of service, with a minimum of the greater of 35% of average monthly compensation or \$150 and a maximum of 100% of average monthly compensation. Average monthly compensation is the average of the highest 36 months of salary.

Nonoccupational Disability Retirement:

Monthly annuity payable for life equal to 2.3% of average monthly compensation times years of service, with a maximum of 100%. Average monthly compensation is the average of the highest 36 months of salary. The minimum service credit for elected class members is 8 years.

Eligibility for nonoccupational disability retirement benefits is 8 years of elected class service, or 6 years of elected class service plus 2 years of military service established before 1/1/78 or 10 years of employee class service.

Optional Disability Retirement Benefits:

Five optional forms assumed actuarially equivalent to standard annuity.

Automatic Increase:

For elected class members only, adjusted automatically as the state salary of a district judge increases.

D. DEATH BENEFITS

Before Retirement:

10 or More Years of Service, or Less Than 10 Years of Service But Eligible to Retire and Survived By a Spouse or Minor Children:

Death benefit plan filed by member, beneficiary, or estate payable as a lifetime annuity or 10-year certain annuity. Amount calculated as if the member had retired while eligible for retirement, reduced for the selected optional form of payment (either Option 1 or Option 4).

Less Than 10 Years of Service and Not Eligible to Retire, or Eligible to Retire but Not Survived by a Spouse or Minor Children, or if Selected in Lieu of a Death Benefit Plan:

Refund of member's contributions with interest plus, if member is contributing at the date of death, 5% of the member's accumulated contributions for each full year of service with a maximum of 100% of the member's accumulated contributions.

Occupational Death:

Additional benefit paid to the surviving spouse or dependent children equal to one year's salary based on rate at the time of death.

Member With at Least 8 Years of Elected Class Service:

If not eligible for death benefit plan, spouse receives life annuity equal to one-half of member's accrued benefit at age 60. If no surviving spouse, refund of contributions plus interest and, if a contributing member, 5% of the account times years of service with a maximum of 100%.

After Retirement:

For standard annuity and option based on optional form selected, not less than excess of accumulated contributions at retirement over the monthly annuity benefits paid before the annuity terminates. In addition, a lump sum death benefit of \$5,000 is paid.

E. VESTED BENEFITS AFTER TERMINATION OF EMPLOYMENT

Service Retirement Benefit:

Deferred retirement benefit with 5 or more years of service, forfeitable if contributions withdrawn or death occurs before retirement. (8 years of service for elected class members.)

Nonoccupational Disability Benefit:

10 or more years of service. Nonoccupational disability benefit forfeitable if contributions withdrawn before disability.

Death Benefit:

Vested in death benefit plan if 10 years of service, forfeitable if contributions withdrawn before death.

F. WITHDRAWAL BENEFITS

Refund of member's contributions plus interest at an annual rate of 5%. Withdrawal cancels membership and forfeits all other benefits.

G. CONTRIBUTIONS

Members:

Legislators: 8% of gross salary.

All others: 6% of compensation, which includes base salary and longevity and hazardous duty pay but excludes overtime pay. Member contributions cease when a member has accrued a benefit of 100% of average compensation.

State of Texas: The State contribution is 6.00% of payroll. Additional State contributions are made for lump sum death benefits for retirees, for allowable service credits not previously established, and annual membership fees.

H. CHANGES IN PLAN PROVISIONS

Since the prior valuation, there were no changes in plan provisions.

I. REFERENCES

For a complete description of all of the provisions of the law which describe the Employees Retirement System of Texas, see Texas Government Code, Title 8, Subtitle B. Alternatively, the staff of the Employees Retirement System of Texas can provide more of the details of the provisions.

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

APPENDIX B

SUMMARY OF ASSETS

A. SOURCE OF INFORMATION

Towers Perrin used the plan asset data provided without audit.

B. VALUES

	August 31, 2004	August 31, 2003
Market Value of Plan Assets	\$18,797,737,524	\$17,467,381,128
Actuarial Value of Total Assets	\$20,036,646,562	\$19,478,554,993

The calculation of the actuarial value of assets is based on the market-related value of plan assets, with five-year smoothing of unexpected returns. The market-related value is equal to the value of net assets held in trust for pension benefits (fair value of investments plus the carrying value [net of depreciation] of other assets and liabilities) as of the valuation date.

Specifically, the actuarial value of assets is determined as the expected value of plan assets as of the valuation date plus 20% of the difference between the market-related value and the expected value. The expected value equals the actuarial value of plan assets as of the prior valuation date, plus contributions, less benefit payments and administrative expenses, all accumulated at the assumed rate of interest to the current valuation date.

C. ASSET RECONCILIATION

1.	Value of Plan Assets, August 31, 2003	\$17,467,381,128
2.	Contributions	585,609,768
3.	Net Transfers from TRS	32,468,264
4.	Benefits paid	1,270,311,860
5.	Net administrative expenses	11,675,374
6.	Investment return	1,994,265,598
7.	Value of Plan Assets, August 31, 2004: (1)+(2)+(3)-(4)-(5)+(6)	\$18,797,737,524

D. DEVELOPMENT OF ACTUARIAL VALUE OF PLAN ASSETS

1.	Actuarial Value of Plan Assets, August 31, 2003	\$19,478,554,993
2.	Contributions	585,609,768
3.	Net Transfers from TRS	32,468,264
4.	Benefits paid	1,270,311,860
5.	Expenses	11,675,374
6.	Expected investment return at 8%	1,531,728,030
7.	Expected Value of Plan Assets, August 31, 2004: (1)+(2)+(3)-(4)-(5)+(6)	\$20,346,373,821
8.	Market-related Value of Plan Assets, August 31, 2004	18,797,737,524
9.	Difference: (8)-(7)	(1,548,636,297)
10.	Adjustment to expected value: 20% x (9)	(309,727,259)
11.	Actuarial Value of Plan Assets, August 31, 2004: (7)+(10)	\$20,036,646,562

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

APPENDIX C

SUMMARY OF MEMBER DATA AND RELATED LIABILITIES

A. MEMBER DATA AS OF AUGUST 31, 2004

The results in this actuarial valuation report are based on the member and annuitant data provided by ERS. All actuarial computations performed by Towers Perrin are directly dependent on the accuracy and completeness of the information provided.

We have reviewed this data for reasonableness and consistency, but we have not audited it. During our review, we discovered a small number of missing and inconsistent data items. We discussed these issues with ERS staff and worked closely with them to get the best data possible, given the implementation of new systems during the 2004 plan year. In a few cases, we made approximations and assumptions to adjust the missing and inconsistent data. We believe that the number and degree of any missing or inconsistent data items were immaterial and had no significant impact on the validity of the actuarial valuation results.

Member data collected as of August 31, 2004 has been used as the basis for performing this valuation.

Section B contains a summary of active members used in the current valuation. The summary is based on age on the last birthday and completed years of service as of August 31, 2004, and pay determined from reported contributions for August 2004 for contributing members and from reported pay for noncontributing active members.

Section C contains a summary of annuitant data used in the current valuation. The annuitant summary is based on the monthly benefit reported as of August 31, 2004.

B. SUMMARY DATA ON ACTIVE AND INACTIVE MEMBERS

	<u>August 31, 2004</u>	<u>August 31, 2003</u>
<u>Active Members</u>		
Number:		
Male	62,134	65,992
Female	<u>71,215</u>	<u>76,171</u>
Total	133,349	142,163
Average Annual Rate of Salary:	\$34,174	\$33,335
Average Years of Service Credit:	9.2	8.6
Average Age:	42.7	41.9
Accumulated Member Contributions:	\$2,937,938,414	\$2,817,054,001
<u>Inactive Members</u>		
Vested:		
Male	5,075	4,753
Female	<u>7,607</u>	<u>7,154</u>
Total	12,682	11,907
Accumulated Member Contributions:	\$357,656,213	\$326,031,485
Nonvested:		
Male	18,870	17,924
Female	<u>23,106</u>	<u>22,040</u>
Total	41,976	39,964
Accumulated Member Contributions:	\$72,554,730	\$64,756,757

These figures exclude those who retired August 31, because they were included as retirees in the valuation. The average annual rate of salary is based on the member contributions for the month of August for contributing members and reported pay for noncontributing active members.

The following four tables show additional detail for active members, by classification.

LECO MEMBERS

ANALYSIS OF PARTICIPANT DATA AS OF SEPTEMBER 1, 2004

ACTIVE PARTICIPANT DISTRIBUTION BY AGE AND COMPLETED YEARS OF SERVICE

Age Last Birthday	Completed Years of Service											Total				
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34		Over 34			
15-19	Number	177	44	2	0	0	0	0	0	0	0	0	0	0	0	223
	Tot Pay	3,934,954	1,009,480	55,332	0	0	0	0	0	0	0	0	0	0	0	4,999,766
	Avg Pay	22,231	22,943	27,666	0	0	0	0	0	0	0	0	0	0	0	22,420
20-24	Number	874	726	684	346	221	87	0	0	0	0	0	0	0	0	2,938
	Tot Pay	20,086,694	18,087,476	17,949,458	9,430,162	6,237,752	2,536,192	0	0	0	0	0	0	0	0	74,327,734
	Avg Pay	22,982	24,914	26,242	27,255	28,225	29,152	0	0	0	0	0	0	0	0	25,299
25-29	Number	580	603	722	518	475	1,337	50	0	0	0	0	0	0	0	4,285
	Tot Pay	14,251,268	16,017,886	20,730,694	14,518,810	14,047,496	42,087,338	1,671,598	0	0	0	0	0	0	0	123,325,090
	Avg Pay	24,571	26,564	28,713	28,029	29,574	31,479	33,432	0	0	0	0	0	0	0	28,781
30-34	Number	452	449	618	412	480	2,328	997	18	0	0	0	0	0	0	5,754
	Tot Pay	11,111,310	12,160,252	17,501,236	11,739,464	14,477,196	77,073,282	34,405,360	632,104	0	0	0	0	0	0	179,100,204
	Avg Pay	24,583	27,083	28,319	28,494	30,161	33,107	34,509	35,117	0	0	0	0	0	0	31,126
35-39	Number	342	354	410	312	349	1,834	1,419	707	33	0	0	0	0	0	5,760
	Tot Pay	8,295,098	9,335,810	11,546,902	8,622,128	10,104,818	60,217,586	50,251,380	27,294,032	1,208,052	0	0	0	0	0	186,875,806
	Avg Pay	24,255	26,372	28,163	27,635	28,954	32,834	35,413	38,605	36,608	0	0	0	0	0	32,444
40-44	Number	287	292	385	276	287	1,508	1,293	595	18	0	0	0	0	0	6,063
	Tot Pay	7,001,396	7,636,238	10,609,156	7,812,750	8,476,924	47,844,688	44,512,192	44,763,952	24,917,792	783,454	0	0	0	0	204,358,542
	Avg Pay	24,395	26,152	27,556	28,307	29,536	31,727	34,426	39,897	41,879	43,525	0	0	0	0	33,706
45-49	Number	204	240	277	210	269	1,326	1,034	746	677	292	7	0	0	0	5,282
	Tot Pay	5,012,878	6,130,594	7,634,224	5,822,286	7,814,832	41,819,786	35,230,288	29,053,072	31,413,748	14,899,346	300,266	0	0	0	185,131,320
	Avg Pay	24,573	25,544	27,560	27,725	29,051	31,538	34,072	38,945	46,401	51,025	42,895	0	0	0	35,049
50-54	Number	165	173	227	165	202	1,128	1,005	560	151	107	41	0	0	0	3,924
	Tot Pay	3,994,666	4,503,872	6,194,812	4,583,896	5,902,586	35,594,762	34,268,256	21,396,108	6,602,314	5,913,350	2,461,310	0	0	0	131,415,932
	Avg Pay	24,210	26,034	27,290	27,781	29,221	31,556	34,098	38,207	43,724	55,265	60,032	0	0	0	33,490
55-59	Number	137	136	146	128	158	834	678	319	76	31	15	6	0	0	2,664
	Tot Pay	3,311,024	3,463,974	3,884,496	3,519,040	4,534,408	25,954,232	22,969,086	11,450,160	3,129,700	1,594,714	889,594	341,116	0	0	85,041,544
	Avg Pay	24,168	25,470	26,606	27,493	28,699	31,120	33,878	35,894	41,180	51,442	59,306	56,853	0	0	31,923
60-64	Number	50	59	74	61	61	396	284	132	17	2	1	3	0	0	1,140
	Tot Pay	1,247,198	1,495,102	2,009,260	1,627,570	1,737,924	12,318,400	9,560,754	4,691,720	669,982	75,372	49,930	222,014	0	0	35,705,226
	Avg Pay	24,944	25,341	27,152	26,681	28,491	31,107	33,665	35,543	39,411	37,686	49,930	74,005	0	0	31,320
Over 64	Number	8	15	25	11	23	102	60	21	6	0	0	1	0	0	272
	Tot Pay	195,708	348,030	634,788	317,380	649,584	3,214,768	2,114,884	725,396	270,978	0	0	39,870	0	0	8,511,386
	Avg Pay	24,464	23,202	25,392	28,853	28,243	31,517	35,248	34,543	45,163	0	0	39,870	0	0	31,292
Total	Number	3,276	3,091	3,570	2,439	2,525	10,880	6,820	3,625	1,555	450	64	10	10	10	38,305
	Tot Pay	78,442,194	80,188,714	98,750,358	67,993,486	73,983,520	348,651,034	234,983,798	140,006,544	68,212,566	23,266,236	3,701,100	603,000	1,218,792,550	0	1,218,792,550
	Avg Pay	23,945	25,943	27,661	27,878	29,300	32,046	34,455	38,622	43,867	51,703	57,830	60,300	0	0	31,818

Average Age = 40.4 Average Service = 8.1



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ALL OTHER ERS MEMBERS

ANALYSIS OF PARTICIPANT DATA AS OF SEPTEMBER 1, 2004

ACTIVE PARTICIPANT DISTRIBUTION BY AGE AND COMPLETED YEARS OF SERVICE

Age Last Birthday	Completed Years of Service													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34			
15-19	Number	127	37	4	2	0	0	0	0	0	0	0	0	0	170
	Tot Pay	2,026,106	544,626	41,490	47,666	0	0	0	0	0	0	0	0	0	2,659,888
	Avg Pay	15,954	14,720	10,373	23,833	0	0	0	0	0	0	0	0	0	15,646
20-24	Number	1,133	786	640	523	247	135	0	0	0	0	0	0	0	3,464
	Tot Pay	23,720,654	16,924,032	13,729,790	11,478,760	5,555,922	3,163,108	0	0	0	0	0	0	0	74,572,266
	Avg Pay	20,936	21,532	21,453	21,948	22,494	23,430	0	0	0	0	0	0	0	21,528
25-29	Number	1,233	1,159	1,216	1,332	1,008	1,594	59	0	0	0	0	0	0	7,601
	Tot Pay	31,264,618	30,693,748	34,143,936	39,410,402	29,526,024	46,276,310	1,922,068	0	0	0	0	0	0	213,237,106
	Avg Pay	25,357	26,483	28,079	29,587	29,292	29,032	32,577	0	0	0	0	0	0	28,054
30-34	Number	999	816	1,096	1,348	1,198	3,794	1,318	71	0	0	0	0	0	10,640
	Tot Pay	26,307,082	23,144,970	32,696,754	41,333,280	38,914,898	127,635,358	45,210,950	2,596,680	0	0	0	0	0	337,839,972
	Avg Pay	26,333	28,364	29,833	30,663	32,483	33,641	34,303	36,573	0	0	0	0	0	31,752
35-39	Number	817	667	848	1,089	977	3,641	3,267	1,303	132	0	0	0	0	12,741
	Tot Pay	21,779,810	19,022,834	25,398,162	33,320,498	30,272,640	124,635,410	125,271,684	51,307,494	4,961,076	0	0	0	0	435,969,608
	Avg Pay	26,658	28,520	29,951	30,597	30,985	34,231	38,345	39,376	37,584	0	0	0	0	34,218
40-44	Number	741	653	809	967	899	3,302	3,519	2,840	1,481	166	0	0	0	15,377
	Tot Pay	20,246,344	18,294,854	23,578,466	29,485,432	28,903,640	111,754,876	138,333,564	124,985,838	62,420,274	6,519,394	0	0	0	564,522,682
	Avg Pay	27,323	28,017	29,145	30,492	32,151	33,845	39,310	44,009	42,147	39,273	0	0	0	36,712
45-49	Number	642	589	789	939	823	3,165	3,326	2,699	2,218	1,437	81	0	0	16,708
	Tot Pay	17,596,136	17,583,794	23,496,634	28,667,924	26,181,328	109,800,766	130,118,138	113,898,598	99,755,460	62,801,494	3,471,986	0	0	633,362,258
	Avg Pay	27,393	29,854	29,780	30,530	31,812	34,692	39,122	42,200	44,975	43,703	42,864	0	0	37,908
50-54	Number	474	468	619	789	675	2,634	3,079	2,348	1,801	1,226	348	12	0	14,473
	Tot Pay	13,410,850	13,718,456	19,282,438	24,695,758	22,488,152	92,019,180	120,135,366	97,145,398	78,260,456	56,577,160	16,490,238	670,582	0	554,894,034
	Avg Pay	28,293	29,313	31,151	31,300	33,316	34,935	39,018	41,374	43,454	46,148	47,386	55,882	0	38,340
55-59	Number	299	303	406	500	459	1,920	2,248	1,707	756	386	280	71	0	9,335
	Tot Pay	9,596,744	8,997,796	12,447,354	16,266,078	15,425,230	67,838,044	87,490,614	67,583,030	31,127,786	17,406,622	14,726,746	3,717,040	0	352,623,084
	Avg Pay	32,096	29,696	30,659	32,532	33,606	35,332	38,919	39,592	41,174	45,095	52,596	52,353	0	37,774
60-64	Number	105	118	143	207	201	872	673	458	178	123	72	42	0	3,192
	Tot Pay	3,198,632	3,286,088	4,472,042	6,712,078	6,362,188	29,609,090	25,600,972	18,928,736	7,441,444	5,686,356	3,460,300	1,982,866	0	116,740,792
	Avg Pay	30,463	27,848	31,273	32,425	31,653	33,955	38,040	41,329	41,806	46,231	48,060	47,211	0	36,573
Over 64	Number	35	46	52	81	80	288	216	126	44	23	8	10	0	1,009
	Tot Pay	890,938	1,163,614	1,578,826	2,472,202	2,572,336	9,071,950	8,145,282	5,187,418	1,944,882	1,256,562	537,858	615,352	0	35,437,220
	Avg Pay	25,455	25,296	30,362	30,521	32,154	31,500	37,710	41,170	44,202	54,633	67,232	61,535	0	35,121
Total	Number	6,605	5,642	6,622	7,777	6,567	21,345	17,705	11,552	6,610	3,361	789	135	0	94,710
	Tot Pay	170,027,914	153,374,812	190,865,892	233,890,078	206,202,358	721,804,092	682,228,638	481,633,192	285,911,378	150,247,588	38,687,128	6,985,840	3,321,858	910
	Avg Pay	25,742	27,184	28,823	30,075	31,400	33,816	38,533	41,693	43,254	44,703	49,033	51,747	0	35,074

Average Age = 43.6 Average Service = 9.7



**TOWERS
PERRIN**
HR SERVICES

ALL ACTIVE MEMBERS

ANALYSIS OF PARTICIPANT DATA AS OF SEPTEMBER 1, 2004

ACTIVE PARTICIPANT DISTRIBUTION BY AGE AND COMPLETED YEARS OF SERVICE

Age Last Birthday	Completed Years of Service													Total		
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34				
15-19	Number	304	81	6	2	0	0	0	0	0	0	0	0	0	0	393
	Tot Pay	5,961,060	1,554,106	96,822	47,666	0	0	0	0	0	0	0	0	0	0	7,659,654
	Avg Pay	19,609	19,186	16,137	23,833	0	0	0	0	0	0	0	0	0	0	19,490
20-24	Number	2,007	1,512	1,324	869	468	222	0	0	0	0	0	0	0	0	6,402
	Tot Pay	43,807,348	35,011,508	31,679,248	20,908,922	11,793,674	5,699,300	0	0	0	0	0	0	0	0	148,900,000
	Avg Pay	21,827	23,156	23,927	24,061	25,200	25,673	0	0	0	0	0	0	0	0	23,258
25-29	Number	1,813	1,765	1,938	1,850	1,483	2,931	109	0	0	0	0	0	0	0	11,889
	Tot Pay	45,515,886	46,733,234	54,874,630	53,929,212	43,573,520	88,363,648	3,593,666	0	0	0	0	0	0	0	336,583,796
	Avg Pay	25,105	26,478	28,315	29,151	29,382	30,148	32,969	0	0	0	0	0	0	0	28,311
30-34	Number	1,451	1,270	1,715	1,763	1,679	6,124	2,315	89	0	0	0	0	0	0	16,406
	Tot Pay	37,418,392	35,341,222	50,299,690	53,283,344	53,399,294	204,817,540	79,616,310	3,228,784	0	0	0	0	0	0	517,404,576
	Avg Pay	25,788	27,828	29,329	30,223	31,804	33,445	34,391	36,278	0	0	0	0	0	0	31,538
35-39	Number	1,160	1,031	1,258	1,409	1,326	5,476	4,686	2,010	165	0	0	0	0	0	18,521
	Tot Pay	30,176,608	28,704,662	36,945,064	42,526,546	40,377,458	184,860,196	175,523,064	78,601,526	6,169,128	0	0	0	0	0	623,884,252
	Avg Pay	26,014	27,842	29,368	30,182	30,451	33,758	37,457	37,389	37,389	0	0	0	0	0	33,685
40-44	Number	1,028	950	1,194	1,247	1,186	4,831	4,819	3,963	2,076	0	0	0	0	0	21,478
	Tot Pay	27,247,740	26,156,092	34,187,622	37,704,382	37,380,564	160,298,450	183,086,182	169,756,990	87,338,066	0	0	0	0	0	770,459,536
	Avg Pay	26,506	27,533	28,633	30,237	31,518	33,181	37,993	42,835	42,070	0	0	0	0	0	35,872
45-49	Number	849	835	1,068	1,157	1,092	4,516	4,381	3,449	2,896	88	0	0	0	0	22,060
	Tot Pay	22,809,614	23,852,088	31,334,258	35,114,810	33,996,160	152,894,898	166,526,994	143,266,022	131,176,408	3,772,252	0	0	0	0	822,444,344
	Avg Pay	26,866	28,565	29,339	30,350	31,132	33,856	38,011	41,538	45,296	42,867	0	0	0	0	37,282
50-54	Number	641	648	847	958	878	3,780	4,099	2,914	1,956	389	12	0	0	0	18,455
	Tot Pay	17,514,416	18,556,228	25,484,450	29,591,954	28,492,438	128,397,612	155,081,700	118,775,758	85,188,714	18,951,548	670,582	0	0	0	689,195,910
	Avg Pay	27,324	28,636	30,088	30,889	32,452	33,968	37,834	40,760	43,553	48,719	55,882	0	0	0	37,345
55-59	Number	437	445	552	631	618	2,769	2,941	2,039	844	295	78	0	0	0	12,066
	Tot Pay	12,989,128	12,693,970	16,331,850	20,090,218	19,966,838	94,972,606	111,296,956	79,655,162	35,212,656	15,616,340	4,065,356	0	0	0	441,892,416
	Avg Pay	29,723	28,526	29,587	31,839	32,309	34,299	37,843	39,066	41,721	45,567	52,120	0	0	0	36,623
60-64	Number	155	182	217	273	262	1,276	963	595	198	75	46	0	0	0	4,369
	Tot Pay	4,445,830	4,817,190	6,481,302	8,565,674	8,100,112	42,259,108	35,395,978	23,662,144	8,227,526	3,619,130	2,212,080	0	0	0	153,656,702
	Avg Pay	28,683	26,468	29,868	31,376	30,916	33,118	36,755	39,768	41,553	48,255	48,089	0	0	0	35,170
Over 64	Number	43	63	77	93	103	400	280	152	52	9	14	0	0	0	1,310
	Tot Pay	1,086,646	1,620,544	2,213,614	2,891,282	3,221,920	12,821,736	10,288,965	5,948,814	2,324,760	639,558	676,822	0	0	0	44,998,424
	Avg Pay	25,271	25,723	28,748	31,089	31,281	32,054	36,746	39,137	44,707	71,062	48,344	0	0	0	34,350
Total	Number	9,888	8,782	10,196	10,252	9,095	32,325	24,593	15,211	8,187	856	150	0	0	0	133,349
	Tot Pay	248,972,668	235,040,844	289,928,550	304,654,610	280,301,978	1,075,385,094	920,409,816	622,895,200	355,637,258	173,629,924	42,598,828	7,624,840	0	0	4,557,079,610
	Avg Pay	25,179	26,764	28,436	29,717	30,819	33,268	37,426	40,950	43,439	49,765	50,832	0	0	0	34,174

Average Age = 42.7 Average Service = 9.3



C. ANNUITANT BENEFITS AS OF AUGUST 31, 2004

Type of Annuity	Number of Accounts	Monthly Payment
Service Retirements and Beneficiaries:		
Male Annuitants:		
Straight Life	12,158	\$21,736,989
Joint & Full	6,306	10,206,987
Joint & One-Half	5,132	11,099,994
Life With 60 Months Certain	267	479,715
Life With 120 Months Certain	779	1,299,008
Joint & Three-Fourths	3,356	7,420,131
Annuity Certain	<u>173</u>	<u>120,906</u>
Male Total	28,171	\$52,363,730
Female Annuitants:		
Straight Life	24,625	\$32,214,582
Joint & Full	1,226	1,542,322
Joint & One-Half	1,656	2,677,152
Life With 60 Months Certain	337	499,692
Life With 120 Months Certain	581	706,884
Joint & Three-Fourths	473	728,017
Annuity Certain	<u>317</u>	<u>248,744</u>
Female Total	<u>29,215</u>	<u>\$38,617,393</u>
Total Service Retirements	57,386	\$90,981,123
TRS Reimbursing ERS	4,036	\$2,887,416
ERS Reimbursing TRS	<u>1,692</u>	<u>427,007</u>
Net ERS Service Retirements	59,078	\$88,520,714

Type of Annuity	Number of Accounts	Monthly Payment
Disability Retirements:		
Male Annuitants:		
Straight Life	820	\$808,374
Joint & Full	182	159,273
Joint & One-Half	74	75,799
Life With 60 Months Certain	14	12,240
Life With 120 Months Certain	31	27,694
Joint & Three-Fourths	64	55,906
Annuity Certain	<u>0</u>	<u>0</u>
Male Total	1,185	\$1,139,286
Female Annuitants:		
Straight Life	1,313	1,027,058
Joint & Full	78	66,081
Joint & One-Half	60	54,049
Life With 60 Months Certain	10	8,856
Life With 120 Months Certain	40	31,372
Joint & Three-Fourths	17	18,126
Annuity Certain	<u>0</u>	<u>0</u>
Female Total	1,518	\$1,205,542
Total Disability Retirements	2,703	\$2,344,828
TRS Reimbursing ERS	118	41,838
ERS Reimbursing TRS	<u>64</u>	<u>13,134</u>
Net ERS Disability Retirements	2,767	\$2,316,124
TOTAL SERVICE AND DISABILITY RETIREMENTS	60,089	\$93,325,951
TRS Reimbursing ERS	4,154	2,929,254
ERS Reimbursing TRS	<u>1,756</u>	<u>440,141</u>
NET ERS SERVICE AND DISABILITY RETIREMENTS	61,845	\$90,836,838

D. AVERAGE AGE, SERVICE AND BENEFIT OF ANNUITANTS AS OF AUGUST 31, 2004

	Number of Annuitants	Average			Service at Retirement
		Monthly Benefit	Age at Retirement	Age at 08/31/2004	
All Annuitants in Pay Status					
Elected Class	680	\$2,474.76	55.85	69.58	15.18
Law Enforcement & Custodial Officers	4,498	\$2,053.14	53.90	62.35	26.90
Regular State Employees	<u>54,615</u>	\$1,508.89	58.54	67.68	22.56
Total ERS	59,793	\$1,560.82	58.16	67.30	22.80
Service Retirees (Excludes Disability Retirees & Beneficiaries)					
Elected Class	524	\$2,581.20	56.68	68.48	14.42
Law Enforcement & Custodial Officers	3,878	\$2,173.09	54.28	61.56	27.29
Regular State Employees	<u>46,182</u>	\$1,587.12	59.51	67.76	22.81
Total ERS	50,584	\$1,642.35	59.08	67.29	23.07
Disability Retirees					
Elected Class	1	\$1,770.60	57.97	75.81	9.08
Law Enforcement & Custodial Officers	141	\$928.55	44.55	57.31	8.34
Regular State Employees	<u>2,587</u>	\$862.30	50.44	60.86	15.21
Total ERS	2,729	\$866.06	50.14	60.68	14.85
Beneficiaries					
Elected Class	155	\$2,119.48	53.00	73.22	17.79
Law Enforcement & Custodial Officers	479	\$1,413.00	53.55	70.24	29.19
Regular State Employees	<u>5,846</u>	\$1,177.00	54.42	70.08	23.83
Total ERS	6,480	\$1,216.98	54.32	70.16	24.08
All Annuitants Not Yet in Pay Status					
Law Enforcement & Custodial Officers:					
— With LECOSRF Benefit	296	\$1,366.50	43.84	45.64	21.55

E. RETIREMENT MEMBERS BY TYPE OF BENEFIT AS OF AUGUST 31, 2004

Amount of Monthly Benefit	Number of Annuitants	Type of Retirement			Option Selected				
		Service	Disability	Life	Option 1	Option 2	Option 3	Option 4	Option 5
0 – 300	3,851	3,738	113	2,284	789	260	52	331	135
300 – 600	9,323	8,483	840	6,836	1,329	486	80	286	306
600 – 900	9,373	8,471	902	6,921	1,182	602	86	239	343
900 – 1,200	7,658	7,211	447	5,493	954	666	81	166	298
1,200 – 1,500	6,426	6,185	241	4,302	853	716	82	130	343
1,500 – 2,000	8,456	8,297	159	5,203	1,100	1,213	120	172	648
2,000 – 2,500	6,678	6,633	45	3,850	802	1,213	58	150	605
2,500 – 3,000	4,759	4,748	11	2,429	609	985	48	118	570
3,000 – 4,000	3,909	3,904	5	2,024	498	758	41	70	518
4,000 – 10,999	<u>1,412</u>	<u>1,408</u>	<u>4</u>	<u>726</u>	<u>201</u>	<u>229</u>	<u>14</u>	<u>25</u>	<u>217</u>
Total*	61,845	59,078	2,767	40,068	8,317	7,128	662	1,687	3,983

* Includes 1,756 TRS annuitants reimbursed by ERS and 296 LECOSRF annuitants not yet eligible to begin an annuity from ERS.

F. RETIREEES AND BENEFICIARIES ADDED TO AND REMOVED FROM THE ANNUITY PAYROLLS

Employees Retirement Fund	Number of Annuitants	Benefit Amount		Average Annual Benefit
		Monthly	Annually	
August 31, 2003	58,975	\$87,025,653.85	\$1,044,307,846	\$17,708
Added to Rolls	4,048	5,471,050.55	65,652,607	
Removed from Rolls	(1,515)	(2,175,430.99)	(26,105,172)	
(est). Other Beneficiaries (est).	<u>337</u>	<u>515,565.07</u>	<u>6,186,781</u>	
August 31, 2004	61,845*	\$90,836,838.48	\$1,090,042,062	\$17,625

* Includes 1,756 TRS annuitants reimbursed by ERS and includes 296 LECOSRF annuitants not yet eligible to begin an annuity from ERS

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

APPENDIX D

SUMMARY OF RECOMMENDED ACTUARIAL ASSUMPTIONS

A. ACTUARIAL ASSUMPTIONS

Investment Rate of Return:	8.0% per year, compounded annually.
Administrative Expenses:	0.25% of pay per year.
Salary Increases:	
Employee Class Members:	Salary increase rates include 4.0% annual increase for inflation plus increases for merit, promotion and longevity. See sample rates.
Elected Class Members:	Legislators receive no increases, but district judge salary used for benefits is expected to increase 4.0% annually. Others expected to receive 4.0% increase, with district judge salary used if greater.
Payroll Growth:	4.0% per year, compounded annually.
Cost-of-Living Increases for Elected Class Members:	4.0% per year, compounded annually.
Mortality:	
Active Lives:	Tables based on ERS experience; see sample rates.
Service Retirees and Beneficiaries:	1994 Group Annuity Mortality, male and female tables.
Disability Retirees:	Table based on ERS experience; see sample rates.

Disability Retirement:			
Rates of Disability Retirement:	Graded tables based on ERS experience.		
Option Selection Percentage:	<u>Standard</u>	<u>Option 1</u>	<u>Option 4</u>
Male Members	50%	40%	10%
Female Members	75%	15%	10%
Beneficiary Characteristics:			
Male Members	Member is three years older than female beneficiary.		
Female Members	Member is same age as male beneficiary.		
Termination of Employment:	Graded tables based on ERS experience; see sample rates.		
Withdrawal of Contributions:	Graded tables based on ERS experience; see sample rates.		
Service Retirement:			
Rates of Service Retirement:	Graded tables based on ERS experience; see sample rates.		
Form of Payment:	Standard Annuity (Life Annuity)		
Credited Service:	Assumed one year earned in each future year employed. Service credit at service retirement and at death in service is assumed to be increased by 2.6% for Regular members and 4.6% for LECO members for accumulated leave.		
Transfers from ERS to TRS:			
Contributing ERS Members:	3% of regular state employee and LECO members who cease contributing to ERS will transfer ERS service credit to TRS.		
Noncontributing ERS Members:	Records of ERS and TRS are matched to determine former ERS members who are currently actively contributing under TRS.		

TRS Retirement Age:

Former ERS members who are or become contributing TRS members are assumed to continue to earn service credit under TRS until first eligible for unreduced service retirement benefits, retire at the time and transfer ERS service credit to TRS.

TRS Salary Increases:

5.5% per year.

Death Benefit Plan:

Option Selection Percentage:

Option 1

Option 4

Male Members

75%

25%

Female Members

60%

40%

Beneficiary Characteristics:

Male Members

Member is three years older than female beneficiary.

Female Members

Member is same age as male beneficiary.

Missing Data:

Entry age is assumed to be age 30 for the employee class and age 45 for the elected class and sex is assumed to be male if data is missing. The number of missing data items was immaterial.

B. SAMPLE RATES

Annual Salary Increases for Merit, Promotion and Longevity – Regular State Members:

Age	Male and Female – Based on Years of Service						
	0	1	2–4	5–9	10–14	15–19	20+
20	6.8%	5.2%	4.7%	4.6%			
25	6.7	5.2	4.7	4.3	3.9%		
30	6.0	5.2	4.4	3.8	3.6	3.2%	
35	5.5	4.7	4.2	3.5	3.3	3.0	3.0%
40	5.5	4.5	4.0	3.4	3.0	2.7	2.6
45	5.3	4.5	3.9	3.3	2.9	2.6	2.4
50	4.9	4.5	3.8	3.2	2.7	2.3	2.2
55	4.5	4.3	3.5	2.9	2.4	2.0	1.8
60	2.9	2.9	2.6	2.4	2.3	1.9	1.8

Annual Salary Increases for Merit, Promotion and Longevity – LECO Members:

Age	Male and Female – Based on Years of Service		
	0	1	2+
20	10.0%	4.5%	2.0%
25	10.0	4.5	2.0
30	10.0	4.5	2.0
35	10.0	4.5	2.0
40	10.0	4.5	2.0
45	10.0	4.5	2.0
50	10.0	4.5	2.0
55	10.0	4.5	2.0
60	10.0	4.5	2.0

Annual Rates of Termination – Regular State Members:

Age	Male and Female – Based on Years of Service										
	0	1	2	3	4	5–6	7–9	10–14	15–19	20–24	25+
20	49%	31%	27%	25%	19%	19%	11%	6%	3%	2%	0%
25	32	26	23	19	17	17	10	6	3	2	0
30	25	22	18	17	14	14	9	6	3	2	0
35	24	20	16	14	12	12	8	5	3	2	0
40	22	18	15	13	10	10	8	5	3	2	0
45	22	16	12	11	9	7	6	5	3	2	0
50	22	14	12	10	9	7	6	4	3	2	0
55	20	13	10	8	7	5	5	4	3	2	0
60	23	18	16	13	12	10	0	0	0	0	0

Annual Rates of Termination – LECO Members:

Males and Females – Based on Years of Service													
Age	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10-14</u>	<u>15-19</u>	<u>20+</u>
20	29%	25%	18%	18%	17%	17%	16%	11%	11%	11%	0%	0%	0%
25	25	20	16	16	15	14	14	10	10	10	10	0	0
30	24	19	15	15	11	10	10	10	9	9	9	0	0
35	24	15	13	13	10	10	9	8	8	7	6	2	0
40	23	14	10	10	10	10	9	7	7	7	6	2	0
45	21	13	9	9	9	9	8	7	7	7	5	2	0
50	19	10	8	8	6	5	5	5	5	5	5	2	0
55	18	10	8	8	6	5	5	4	4	4	4	2	0
60	25	22	10	10	6	5	5	0	0	0	0	0	0

Annual Rates of Termination – Elected Class Members: 5% for all ages

Annual Rates of Withdrawal of Employee Contributions by Vested Terminated Members – Based on Years of Service:

Age	Regular State Members				LECO Members			
	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20+</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20+</u>
20-24	100%	100%	0%	0%	100%	0%	0%	0%
25-34	85	80	60	0	90	85	80	0
35-44	75	65	60	50	85	75	65	0
45-54	65	55	50	35	75	65	55	0
55+	55	45	40	25	65	0	0	0

All Elected Class Vested Terminated Members are assumed not to withdraw employee contributions

Active Mortality Rates – Regular State Members:

Age	Occupational		Nonoccupational	
	Females	Males	Females	Males
20	0.001%	0.002%	0.026%	0.036%
25	0.001	0.002	0.026	0.048
30	0.001	0.002	0.032	0.059
35	0.001	0.002	0.043	0.063
40	0.001	0.002	0.064	0.079
45	0.001	0.002	0.088	0.118
50	0.001	0.002	0.129	0.195
55	0.001	0.002	0.207	0.336
60	0.001	0.002	0.400	0.608
65	0.001	0.002	0.777	1.109

Active Mortality Rates – LECO Members:

Age	Occupational		Nonoccupational	
	Females	Males	Females	Males
20	0.001%	0.003%	0.034%	0.044%
25	0.001	0.003	0.035	0.058
30	0.001	0.003	0.042	0.071
35	0.001	0.003	0.057	0.076
40	0.001	0.003	0.085	0.097
45	0.001	0.003	0.117	0.144
50	0.001	0.003	0.171	0.237
55	0.001	0.003	0.275	0.408
60	0.001	0.003	0.533	0.739
65	0.001	0.003	1.036	1.349

Active Mortality Rates – Elected Class Members: Same as Nonoccupational Active Mortality Rates for Regular State Members

Disability Retirement Rates – Regular State Members:

Age	Occupational	Nonoccupational	
	Female & Males	Females	Males
20	0.003%	0.000%	0.000%
25	0.003	0.000	0.000
30	0.003	0.028	0.057
35	0.003	0.087	0.135
40	0.004	0.186	0.144
45	0.007	0.302	0.213
50	0.008	0.430	0.308
55	0.011	0.724	0.514
60	0.015	0.000	0.000
65	0.018	0.000	0.000

Disability Retirement Rates – LECO Members:

Age	Occupational (Females & Males)		Nonoccupational
	Total	Non-Total	Females & Males
20	0.0002%	0.0008%	0.000%
25	0.0002	0.0008	0.000
30	0.0006	0.0024	0.016
35	0.0012	0.0048	0.054
40	0.0018	0.0072	0.101
45	0.0028	0.0112	0.169
50	0.0040	0.0160	0.284
55	0.0048	0.0192	0.424
60	0.0054	0.0216	0.000
65	0.0052	0.0208	0.000

Disability Retirement Rates – Elected Class Members: Same as Nonoccupational Disability Retirement Rates for Regular State Members

Service Retirement Rates – Regular State Employees:

First Year Eligible to Retire

<u>Age</u>	<u>Females</u>	<u>Males</u>
36-44	0%	0%
45-49	45	20
50	50	40
51-54	50	40
55	50	50
56-59	50	50
60	25	20
61-64	15	20
65	15	20
66-69	15	20
70+	100	100

After First Year Eligible to Retire

<u>Age</u>	<u>Females</u>						<u>Males</u>				
	<u>0-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>0-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>
36-44	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
45-49	0	0	0	0	0	25	0	0	0	0	0
50	0	0	0	0	0	25	0	0	0	0	10
51-54	0	0	0	0	30	25	0	0	0	20	10
55	0	0	0	0	30	30	0	0	0	15	10
56-59	0	0	0	30	30	30	0	0	25	15	10
60	10	20	30	30	30	30	15	20	25	30	20
61-64	10	20	25	30	30	30	15	20	25	30	20
65	15	20	30	30	50	50	15	25	30	40	40
66-69	15	20	20	20	25	25	15	20	20	15	15
70+	100	100	100	100	100	100	100	100	100	100	100

Service Retirement Rates – LECO Members:

First Year Eligible to Retire

<u>Age</u>	<u>Females</u>	<u>Males</u>
36-44	1%	1%
45-49	3	3
50	39	25
51-54	16	12
55	16	12
56-59	16	12
60	31	21
61-64	31	11
65	46	37
66-69	23	18
70+	100	100

After First Year Eligible to Retire

<u>Age</u>	<u>Females</u>		
	<u>0-9</u>	<u>10-19</u>	<u>20+</u>
36-44	0%	0%	1%
45-49	0	0	2
50	0	0	30
51-54	0	0	12
55	0	12	24
56-59	0	12	12
60	24	24	24
61-64	24	24	24
65	35	35	35
66-69	18	18	18
70+	100	100	100

<u>Age</u>	<u>Males</u>									
	<u>0-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-23</u>	<u>24</u>	<u>25-26</u>	<u>27</u>	<u>28</u>	<u>29-34</u>	<u>35+</u>
36-44	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%
45-49	0	0	0	3	3	3	3	3	3	3
50	0	0	26	29	30	45	47	50	50	60
51-54	0	0	13	14	15	11	12	12	14	14
55	0	12	13	30	30	22	24	25	30	30
56-59	0	12	13	14	13	11	12	12	14	14
60	21	24	26	43	45	45	47	50	50	60
61-64	11	24	26	29	30	28	29	31	36	36
65	37	41	45	50	50	40	40	43	50	50
66-69	18	20	22	24	25	19	20	21	24	24
70+	100	100	100	100	100	100	100	100	100	100

Service Retirement Rates – Elected Class Members:

<u>Age</u>	<u>Male & Female</u>
50-59	10%
60-64	15%
65-74	20%
75+	100%

Mortality Rates – Retirees and Beneficiaries:

Age	Service Retirees & Beneficiaries (1994 GAM)		Disability Retirees*	
	Females	Males	Females	Males
15	0.0216%	0.0345%	2.50%	3.38%
20	0.0284	0.0507	2.50	3.38
25	0.0291	0.0661	2.50	3.38
30	0.0351	0.0801	2.25	2.53
35	0.0478	0.0851	2.03	1.95
40	0.0709	0.1072	1.99	1.97
45	0.0973	0.1578	2.13	2.25
50	0.1428	0.2579	2.44	2.68
55	0.2294	0.4425	2.80	3.37
60	0.4439	0.7976	3.14	4.42
65	0.8636	1.4535	3.52	5.09
70	1.3730	2.3730	3.90	5.91
75	2.2686	3.7211	4.67	7.16
80	3.9396	6.2027	7.09	10.15
85	6.7738	9.7240	10.72	15.98
90	11.6265	15.2931	16.82	25.25
95	18.6213	23.3606	25.25	37.89
100	27.6427	31.7238	37.89	56.84
105	38.3597	40.7224	56.84	85.27
110	48.2325	48.6745	100.00	100.00
115	50.0000	50.0000	100.00	100.00
120	100.0000	100.0000	100.00	100.00

* For females, assumption is 95% of PBGC disabled mortality grading to 100% from age 85 to 90. For males, assumption is 70% of PBGC disabled mortality grading to 100% from age 60 to 90.

C. CHANGES IN ACTUARIAL ASSUMPTIONS

Since the prior valuation, actuarial assumptions were not changed.

EMPLOYEES RETIREMENT SYSTEM OF TEXASAPPENDIX EDESCRIPTION OF ACTUARIAL METHODS AND PROCEDURES**A. ACTUARIAL COST METHOD - NORMAL COST AND ACTUARIAL ACCRUED LIABILITY**

The method used to determine the normal cost and actuarial accrued liability is the entry age actuarial cost method, described below:

Entry age is determined as the member's age on the valuation date minus years of service credit as of the valuation date.

On the actuarial valuation date, the actuarial present values of projected benefits and valuation earnings for each active employee included in the actuarial valuation whose attained age is less than the assumed latest retirement age are determined at the individual's entry age. For each such individual, the individual normal cost is the actuarial present value of projected benefits at entry age, divided by the actuarial present value of valuation earnings at entry age, multiplied by the individual's valuation earnings for the valuation year. The sum of all individual normal costs is the normal cost for the valuation year.

The excess on the actuarial valuation date of the actuarial present value of projected benefits for all individuals included in the actuarial valuation over the sum of the actuarial present values of future individual normal costs is the actuarial accrued liability. The excess of the actuarial accrued liability over the actuarial value of plan assets is the unfunded actuarial accrued liability. If the unfunded actuarial accrued liability is negative, the excess of the actuarial value of plan assets over the actuarial accrued liability is called the net asset balance.

The actuarial gain (loss) is a measure of the difference between actual experience and that expected based upon the actuarial assumptions between two actuarial valuation dates. Under this actuarial cost method, the actuarial gains (losses) are directly calculated and reduce (increase) the unfunded actuarial accrued liability.

Adjustments to the unfunded actuarial accrued liability can result from changes in actuarial assumptions and plan provisions. Such adjustments are determined by calculating, as of the actuarial valuation date, the increase or decrease in the unfunded actuarial accrued liability resulting from the change.

B. ACTUARIAL VALUE OF PLAN ASSETS

The actuarial value of plan assets is based on the market-related value of plan assets, with five-year smoothing of unexpected returns. The market-related value is equal to the value of net assets held in trust for pension benefits (fair value of investments plus the carrying value [net of depreciation] of other assets and liabilities) as of the valuation date.

Specifically, the actuarial value of assets is determined as the expected value of plan assets as of the valuation date plus 20% of the difference between the market-related value and the expected value. The expected value equals the actuarial value of plan assets as of the prior valuation date, plus contributions, less benefit payments and administrative expenses, all accumulated at the assumed rate of interest to the current valuation date.

C. OTHER ACTUARIAL VALUATION PROCEDURES

No provision was made in this actuarial valuation for the limitations of Internal Revenue Code Section 415.

Valuation payroll (earnings applied to the current valuation year) is the expected payroll for the fiscal year following the valuation date. It is based on reported payroll determined from August member contributions increased to reflect the across-the-board salary increase percentage effective on or after September 1 and projected according to the actuarial assumptions for the upcoming fiscal year.

No liability was included for benefits which are funded by special State appropriations.

State appropriations for membership fees have been ignored.

D. CHANGES IN ACTUARIAL METHODS AND PROCEDURES

No changes in the actuarial cost method or procedures have been adopted since the prior actuarial valuation.

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

APPENDIX F

GASB 25 AND 27 REPORTING

A. DISCLOSURE OF PENSION INFORMATION

Actuarial calculations under Statement No. 25 of the Governmental Accounting Standards Board (GASB 25) are for purposes of providing the required supplementary information to the financial statement of the plan. The calculations and disclosures reported in this section have been made on a basis consistent with our understanding of GASB 25.

Beginning with the fiscal year ending August 31, 1996, the System has prepared the plan's financial statements in accordance with GASB 25, which supersedes GASB 5 for the plan's financial reporting. Effective with the fiscal year ending August 31, 1998, the State has prepared financial statements in accordance with Statement No. 27 of the Governmental Accounting Standards Board (GASB 27), which supersedes GASB 5 for the employer's financial reporting.

B. SCHEDULE OF FUNDING PROGRESS

	Actuarial Valuation Date	
	August 31, 2004	August 31, 2003
1. Actuarial Value of Assets	\$20,036,646,562	\$19,478,554,993
2. Actuarial Accrued Liability (AAL)	\$20,591,847,998	\$19,959,111,546
3. Unfunded AAL (UAAL): (2)-(1)	\$555,201,436	\$480,556,553
4. Funded Ratio: (1)÷(2)	97.3%	97.6%
5. Covered Payroll (Valuation Payroll as of the Actuarial Valuation Date)	\$4,616,760,675	\$4,800,611,900
6. UAAL as a Percentage of Covered Payroll: (3)÷(5)	12.0%	10.0%

C. SCHEDULE OF EMPLOYER CONTRIBUTIONS

	Year Ended August 31	
	2005	2004
1. Actuarial Valuation Date	August 31, 2004	August 31, 2003
2. Annual Required Contribution (ARC)		
a. Employer's Normal Cost (Percentage of Covered Payroll)	6.450%	6.258%
b. UAAL	\$555,201,436	\$480,556,553
c. Amortization of UAAL	\$27,432,078	\$23,743,931
d. Amortization of UAAL (Percentage of Covered Payroll)	0.594%	0.495%
e. ARC (Percentage of Covered Payroll): (a)+(d)	7.044%***	6.753%***
f. Covered Payroll	\$4,616,760,675*	\$4,624,389,682**
g. ARC: (e)x(f)	\$325,204,622	\$312,285,035
3. Employer Contributions		\$278,844,513
4. Percentage Contributed: (3)÷(2)(g)		89.3%
5. Excess Contributions/ (Contribution Deficiencies): (3)-(2)(g)		(\$33,440,522)

* Valuation payroll as of the actuarial valuation date. After the end of the fiscal year, the dollar amount of the ARC will be recalculated based on the actual payroll for the fiscal year.

** Estimated covered payroll for the fiscal year calculated from the actual State contributions for the fiscal year and the appropriated State contribution rate.

*** ARC equals employer's normal cost plus the amount to amortize the UAAL over 40 years (see "Notes to Trend Data").

D. ANNUAL PENSION COST AND NET PENSION OBLIGATION

The State's annual pension cost and net pension obligation for the current and prior year were as follows:

	Year Ended August 31	
	2005	2004
1. Annual required contribution (ARC)	\$325,204,622*	\$312,285,035
2. Interest on net pension obligation	(9,976,159)	(12,275,873)
3. Adjustment to annual required contribution	(6,161,430)	(7,581,768)
4. Annual pension cost, APC: (1)+(2)-(3)	\$321,389,893	\$307,590,930
5. Employer contributions		(\$278,844,513)
6. Increase/(decrease) in net pension obligation: (4)+(5)		\$28,746,417
7. Net pension obligation beginning of year	(\$124,701,993)	(\$153,448,410)
8. Net pension obligation end of year: (6)+(7)		(\$124,701,993)

* After the end of the fiscal year, the dollar amount of the ARC will be recalculated based on actual payroll for the fiscal year.

E. NOTES TO TREND DATA

	Year Ended August 31	
	2005	2004
Actuarial Cost Method	Entry Age	Entry Age
Amortization Method	Level Percent Open	Level Percent Open
Remaining Amortization Period (Years)	40.00**	40.00
Asset Valuation Method	5-year smoothed market	5-year smoothed market
Actuarial Assumptions:		
Investment Rate of Return*	8.0%	8.0%
Projected Salary Increases*	5.80% –10.8%	5.80% –10.8%
* Includes Inflation at Cost-of-living Adjustments	4.0%	4.0%
– employee class	None	None
– elected class	4.0%	4.0%

** After the end of the year, the amortization period will be recalculated based on the revised dollar amounts of the ARC and APC.

F. SOLVENCY TEST

	Actuarial Accrued Liabilities	Valuation Assets	Portion of AAL Covered by Valuation Assets
	<hr/>	<hr/>	<hr/>
Active Member Contributions (includes Non-contributing)	\$3,368,149,356	\$3,368,149,356	100.0%
Retirees and Beneficiaries	10,161,943,670	10,161,943,670	100.0%
Active Members (Employer Financed Portion)	<u>7,061,754,972</u>	<u>6,506,553,536</u>	92.1%
Total	\$20,591,847,998	\$20,036,646,562	

EMPLOYEES RETIREMENT SYSTEM OF TEXASAPPENDIX GACTUARIAL METHODOLOGY AND PENSION TERMINOLOGYA. ACTUARIAL METHODOLOGY

This section summarizes the conceptual methodology used in preparing the Actuarial Balance Sheet in this valuation.

Actuarial Methodology

The actuarial valuation of a defined benefit plan is comprised of two separate processes.

First, the actuarial present value, as of the actuarial valuation date, of both current and projected benefits to be paid under the plan is determined. In determining the actuarial present value of these benefits, actuarial assumptions must be made as to the number of members eventually receiving benefits, the amount of benefits to be paid, and the portion of the benefit obligation to be covered by future investment earnings.

Second, the financing of these benefit obligations on an advance basis is established. An actuarial cost method is applied to determine the Actuarial Accrued Liability, which is the amount of the eventual cost that has accrued as of the actuarial valuation date. The actuarial cost method also establishes the Normal Cost, which is the rate at which future costs will accrue annually after the actuarial valuation date.

Actuarial Assumptions

The true cost of a member's pension benefit is not known until the final benefit payment has been made. Consequently, the exact cost of plan benefits for the current employee group will not be determinable for 50 to 75 years. Since provision for this cost must be made prior to the exact determination, a model is established that will estimate the future cost of plan benefits. The model utilizes parameters which require assumptions as to the future occurrences of various events affecting the demographic profile of the employee group and the assets of the pension fund. Such actuarial assumptions include death, retirement, termination, disability, salary increases and investment return. Current and long-term economic factors, the nature of the covered workforce, and significant features of the plan must be considered in the selection of a set of actuarial assumptions to assure the reasonableness of the results predicted by the actuarial assumptions.

While care is taken in the selection of actuarial assumptions, actual experience is expected to deviate from these actuarial assumptions over the short term. The suitability of the actuarial assumptions is measured by how closely the experience of the plan, on a long-term basis, conforms to projected results. Deviations from projected results are called actuarial gains and losses. Periodic actuarial valuations will measure the extent of these gains and losses as of an actuarial valuation date. If either actuarial gains or losses predominate, then it is possible that one or more of the actuarial assumptions is no longer appropriate. Thus, actuarial assumptions must be continually monitored for reasonableness and subsequent cost estimates may be modified accordingly. While individual actuarial assumptions are intended to be representative, it is the aggregate effect of all actuarial assumptions working together that determines their appropriateness.

Actuarial Liabilities

Actuarial liabilities include the actuarial present value of all future benefits and expenses. To determine the actuarial present value of all future benefits, the probability of future events which establish benefit payments is forecast utilizing the actuarial assumptions. The plan provisions and current employee data are used to forecast the amount of benefits to be paid. Actuarial assumptions for survival among retired members are used to estimate the duration of these benefit payments. Each probable benefit payment is then discounted to the actuarial valuation date using the actuarial assumption for investment return. These discounted payments are then summed to arrive at the total actuarial present value of benefits.

Assets

The assets at any time are equal to the sum of present assets in the pension fund plus future assets. Future assets will result from future contributions and future investment return on all assets.

Actuarial Balance Sheet

The actuarial balance sheet of a retirement plan displays the fundamental financial status of the plan on the actuarial valuation date. As stated previously, the actuarial liabilities are the sum of the actuarial present value of all future projected benefit payments to current active and inactive plan members. Current assets in the pension fund plus the actuarial present value of future contributions comprise the total assets of the plan.

Actuarial Cost Method

To determine the funding requirements of the plan, it is necessary to adopt an actuarial cost method. The choice of the actuarial cost method does not affect the actuarial balance sheet financial status, which is a function only of the plan provisions, actuarial assumptions, employee data and assets. However, the actuarial cost method has a direct impact on the incidence of the funding requirements. The actuarial cost method allocates the actuarial present value of future employer contributions between the past and future, and thus establishes the Unfunded Actuarial Accrued Liability and Normal Cost, respectively.

The funding requirements for each plan year equal the Normal Cost for that year plus an amortization payment in respect of the Unfunded Actuarial Accrued Liability.

B. PENSION TERMINOLOGY

The following terms are defined in accordance with standard pension terminology adopted by the actuarial profession.

Accumulated Plan Benefit

The amount of an individual's benefit (whether or not vested) as of a specified date, determined in accordance with the terms of a pension plan and based on compensation (if applicable) and service to that date.

Actuarial Accrued Liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as mortality, withdrawal, disablement, and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; and other relevant items.

Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, in the form of a Normal Cost and an Actuarial Accrued Liability.

Actuarial Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Actuarial Present Value

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarial Value of Plan Assets

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

Amortization Payment

That portion of the pension plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Projected Benefits

Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.

Unfunded Actuarial Accrued Liability

The Excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

C. ACCOUNTING TERMINOLOGY

The following terms are defined in accordance with accounting profession terminology.

Actuarial Present Value of Total Projected Benefits

The value as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Total projected benefits include all benefits estimated to be payable to all plan members as a result of their service through the valuation date and their expected future service.

Amortization Period (Closed or Open Basis)

A closed amortization period is a specific number of years that is counted from one date and, therefore, declines to zero with the passage of time. An open amortization period is one that begins again or is recalculated at each actuarial valuation date.

Annual Pension Cost

A measure of the periodic cost of an employer's participation in a defined benefit pension plan.

Annual Required Contributions of the Employer (ARC)

The employer's periodic required contributions to a defined benefit pension plan, calculated in accordance with the parameters.

Contribution Deficiencies (Excess Contributions)

The difference between the annual required contributions of the employer (ARC) and the employer's actual contributions in relation to the ARC.

Employer's Contribution

Contributions made in relation to the annual required contributions of the employer (ARC).

Funded Ratio

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Investment Return Assumption (Discount Rate)

The rate used to adjust a series of future payments to reflect the time value of money.

Level Dollar Amortization Method

The amount to be amortized is divided into equal dollar amounts to be paid over a given number of years; part of each payment is interest and part is principal (similar to a mortgage payment on a building). Because payroll can be expected to increase as result of inflation, level dollar payments generally represent a decreasing percentage of payroll.

Level Percentage of Projected Payroll Amortization Method

Amortization payments are calculated so that they are a constant percentage of the projected payroll of active plan members over a given number of years. The dollar amount of the payments generally will increase over time as payroll increases due to inflation; in dollars adjusted for inflation, the payments can be expected to remain level.

Market-Related Value of Plan Assets

A term used with reference to the actuarial value of assets. A market-related value may be market value (or estimated market value) or a calculated value that recognizes changes in market value over a period of, for example, three to five years.

Net Pension Obligation (NPO)

The cumulative difference since the effective date of GASB Statement between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost

For GASB Statements 25 and 27, the term refers to employer normal cost.

Parameters

The set of requirements for calculating actuarially determined pension information included in financial reports.

Payroll Growth Rate

An actuarial assumption with respect to future increases in total covered payroll attributable to inflation; used in applying the level percentage of projected payroll amortization method.

Pension Expenditures/Expense

The amount recognized by an employer in each accounting period for contributions to a pension plan.