

SECTION 4

ACTUARIAL SECTION

ACTUARIAL SECTION

Caring For Your Future...



ACTUARIAL CERTIFICATION LETTER



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VIA E-MAIL AND USPS

November 17, 2009

Board of Retirement
City of Fresno Employees Retirement System
2828 Fresno Street, Suite 201
Fresno, CA 93721-1327

**Re: City of Fresno Employees Retirement System
June 30, 2008 Actuarial Valuation**

Dear Members of the Board:

The Segal Company prepared the June 30, 2008 annual actuarial valuation of the City of Fresno Employees Retirement System. We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, it is our understanding that the assumptions and methods used for funding purposes meet the parameters of the Governmental Accounting Standards Board Statement No 25.

As part of the June 30, 2008 actuarial valuation, The Segal Company (Segal) conducted an examination of all participant data provided by the Plan's administrative staff for reasonableness. Summaries of the employee data used in performing the actuarial valuations over the past several years are provided in our valuation report. We did not audit the System's financial statements. For actuarial valuation purposes, Plan assets are valued at Actuarial Value. Under this method, the assets used to determine employer contribution rates take into account market value by recognizing the differences between the total return at market value and the expected investment return over a five-year period.

One of the general goals of an actuarial valuation is to establish rates which, over time, will remain level as a percentage of payroll unless Plan benefit provisions are changed. Actuarial funding is based on the Projected Unit Credit Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize any prefunded actuarial accrued liability (PAAL). Actuarial gains and losses are incorporated into the PAAL and are amortized over the same period.



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The PAAL is amortized as a level percentage of payroll over a 15-year period. The progress being made towards meeting the funding objective through June 30, 2008 is illustrated in the Schedule of Funding Progress.

A listing of supporting schedules Segal prepared for inclusion in the actuarial, statistical, and financial sections of the System’s CAFR is provided below:

1. Summary of Actuarial Assumptions and Methods;
2. Solvency test;
3. Actuarial Analysis of Financial Experience; and
4. Schedule of Funding Progress.⁽¹⁾

⁽¹⁾ *The schedule of funding progress is the only schedule that Segal has prepared for the Financial Section of the CAFR. The other schedules, such as the schedule of gross and net employer contributions, in the Financial Section of the CAFR have been prepared by the Retirement System.*

The valuation assumptions included in the Actuarial Section were adopted by the Retirement Board based on the June 30, 2006 Experience Analysis and the June 30, 2007 Economic Assumptions Report. It is our opinion that the assumptions used in the June 30, 2008 valuation produce results, which, in the aggregate, reflect the future experience of the Plan. Actuarial valuations are performed on an annual basis. An experience analysis is performed every three years. The next experience analysis is due to be performed as of June 30, 2009.

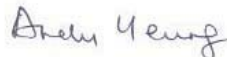
In the June 30, 2008 valuation, the ratio of the valuation assets to actuarial accrued liabilities decreased from 146.8% to 142.2%. The employer’s rate has remained at 0.00% of payroll, while the employee’s rate has increased from 5.02% of payroll to 5.04% of payroll.

The undersigned are members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

Sincerely,



Paul Angelo, FSA, EA, MAAA, FCA
Senior Vice President & Actuary



Andy Yeung, ASA, EA, MAAA
Vice President & Associate Actuary

MYM/kek
Enclosures

SUMMARY OF ASSUMPTIONS AND FUNDING METHOD

These actuarial assumptions and methods based on June 30, 2008 data were adopted by the Employees Retirement Board on January 14, 2009, and were effective for fiscal year 2009.

Assumptions

Valuation Interest Rate	8.25%
Inflation:	3.75%

Post-Retirement Mortality

(a) Service Retirement

Member 1994 Male Group Annuity Mortality Table weighted 65% male and 35% female.

Beneficiary: 1994 Group Annuity Mortality Table weighted 35% male and 65% female.

(b) Disability Retirement

Member: 1981 Disability Mortality Table for General Members, setback four-years

Pre-Retirement Mortality

Based upon the 6/30/2006 Experience Analysis

Withdrawal Rates

Based upon the 6/30/2006 Experience Analysis

Disability Rates

Based upon the 6/30/2006 Experience Analysis

Service Retirement Rates

Based upon the 6/30/2006 Experience Analysis

Assets

Five-year smoothed recognition of realized and unrealized capital gains and losses greater or less than actuarial assumed rate.

Funding Method

The System's liability is being funded on the Projected Unit Credit Actuarial Cost method.

DROP Rates

1st year eligible	40% participation
2nd year eligible	15% participation
3rd & 4th year eligible	10% participation
Thereafter	0% participation

Members are assumed to remain in DROP for 4 years.

Marriage Rates

It is assumed that 80% of all male members and 70% of all female members will be married at retirement.

Wives are 4 years younger than their husbands.

COLA Assumption

3.75% per year; Retiree COLA increases due to CPI are limited to maximum at 3.75% per year.

Salary Scale

Made up of merit and longevity and inflation components. The inflation component is equal to 3.75%; plus 0.25% real across-the-board salary increase. The merit and longevity component varies by service and is illustrated below:

Years Since Hire	Merit & Longevity Assumption
< 1 year	8.00%
1 year	6.00%
2 years	5.00%
3 years	3.70%
4 years	3.10%
5 years	2.10%
6 years	1.10%
7 years	0.90%
8 years	0.70%
9 or more years	0.30%

PROBABILITIES OF SEPARATION PRIOR TO RETIREMENT

Rate (%)		
Mortality		
Tier 1 & Tier 2		
Age	Male	Female
25	0.06	0.03
30	0.08	0.03
35	0.08	0.04
40	0.10	0.07
45	0.15	0.09
50	0.23	0.13
55	0.40	0.21
60	0.71	0.39
65	1.29	0.76

All pre-retirement deaths are assumed to be duty.

Rate (%)				
Disability				
Age	Tier 1		Tier 2	
	Duty	Non-Duty	Duty	Non-Duty
20	0.09	0.00	0.30	0.00
25	0.28	0.01	0.42	0.01
30	0.31	0.01	0.60	0.01
35	0.70	0.03	0.84	0.03
40	0.95	0.12	1.22	0.12
45	1.25	0.25	1.76	0.25
50	2.50	0.20	1.71	0.20
55	7.00	0.00	2.53	0.00
60	0.00	0.00	0.00	0.00

Rate (%)		
Vested Termination (Deferred Vested Benefit)		
Age	Tier 1	Tier 2
20	0.70	0.70
25	0.70	0.70
30	0.70	0.70
35	0.70	0.70
40	0.70	0.60
45	0.60	0.35
50	0.00	0.00
55	0.00	0.00
60	0.00	0.00

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Active/DROP	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
June 30, 2008	Active Members	2245	\$117,793,489	\$52,469	5.3%
	DROP Participants	264	15,316,424	58,017	2.4%
	Totals	2509	\$133,109,913	\$53,053	
June 30, 2007	Active Members	2195	\$109,370,886	\$49,827	4.6%
	DROP Participants	228	12,861,061	56,657	9.3%
	Totals	2423	\$122,231,947	\$50,447	
June 30, 2006	Active Members	2097	\$99,875,529	\$47,628	7.4%
	DROP Participants	222	11,502,836	51,815	4.6%
	Totals	2319	\$111,378,365	\$48,029	
June 30, 2005	Active Members	2061	\$91,411,031	\$44,353	1.7%
	DROP Participants	225	11,146,645	49,541	1.7%
	Totals	2286	\$102,557,676	\$44,863	
June 30, 2004	Active Members	2037	\$88,877,515	\$43,632	2.1%
	DROP Participants	223	10,867,428	48,733	2.0%
	Totals	2260	\$99,744,943	\$44,135	
June 30, 2003	Active Members	2044	\$87,366,386	\$42,743	1.3%
	DROP Participants	209	9,982,140	47,761	5.8%
	Totals	2253	\$97,348,526	\$43,208	
June 30, 2002	Active Members	1994	\$84,149,313	\$42,201	2.5%
	DROP Participants	198	8,936,515	45,134	0.3%
	Totals	2192	\$93,085,828	\$42,466	
June 30, 2001	Active Members	1971	\$81,175,630	\$41,185	3.5%
	DROP Participants	200	9,001,264	45,006	3.7%
	Totals	2171	\$90,176,894	\$41,537	
June 30, 2000	Active Members	1934	\$76,988,782	\$39,808	9.1%
	DROP Participants	178	7,728,203	43,417	4.2%
	Totals	2112	\$84,716,985	\$40,112	
June 30, 1999	Active Members	1902	\$69,370,703	\$36,473	4.5%
	DROP Participants	168	7,001,540	41,676	5.6%
	Totals	2070	\$76,372,243	\$36,895	
June 30, 1998	Active Members	1864	\$65,056,340	\$34,901	-1.40%
	DROP Participants	120	4,737,340	39,478	Base Year
	Totals	1984	\$69,793,680	\$35,178	-0.06%
June 30, 1997	Active Members	1957	\$69,286,627	\$35,405	1.20%
June 30, 1996	Active Members	1930	\$67,499,533	\$34,974	7.40%
June 30, 1995	Active Members	1891	\$61,590,138	\$32,570	6.00%
June 30, 1993	Active Members	2026	\$62,263,875	\$30,732	1.08%
June 30, 1991	Active Members	1879	\$52,133,387	\$27,745	

SCHEDULE OF RETIREES AND BENEFICIARIES ADDED OR REMOVED FROM ROLLS

Year Ended	Added to Rols		Removed from Rols		Rols at End of Year		% Increase in Retiree Allowance	Average Annual Allowance
	Number	Annual Allowance*	Number	Annual Allowance*	Number	Annual Allowance		
June 30, 2009	87	\$1,406,728	(48)	\$(682,366)	1402	\$39,031,190	7.32	\$27,840
June 30, 2008	113	\$3,136,606	(49)	\$(706,739)	1363	\$35,357,509	(11.20)	\$25,941
June 30, 2007	94	\$1,153,762	(45)	\$(614,078)	1299	\$37,948,651	24.17	\$29,214
June 30, 2006	99	\$1,150,756	(44)	\$(523,431)	1250	\$29,409,733	6.32	\$23,528
June 30, 2005	97	\$1,132,389	(56)	\$(579,306)	1195	\$26,444,153	(3.81)	\$22,129
June 30, 2004	109	\$521,390	(62)	\$(689,676)	1154	\$26,548,396	(8.93)	\$23,006
June 30, 2003	83	\$605,134	(40)	\$(455,621)	1107	\$27,963,534	(3.37)	\$25,261
June 30, 2002	102	\$4,826,331	(40)	\$(504,816)	1064	\$27,814,021	11.50	\$26,141
June 30, 2001	43	\$846,004	(32)	\$(374,325)	1002	\$23,492,506	7.45	\$23,446
June 30, 2000	94		(39)		991	\$21,622,858	12.92	\$21,819
June 30, 1999	38		-19		936	\$18,085,727	9.76	\$19,322

* Annual allowance data not available prior to 2001.

SOLVENCY TEST (IN THOUSANDS)

Valuation Date	Aggregate Accrued Liabilities for			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	Active Member Contributions	Retirees and Beneficiaries (Includes Deferred Vested)	Active Members (Employer Financed Portion)		Active Member Contributions	Retirees and Beneficiaries (Includes Deferred Vested)	Active Members (Employer Financed Portion)
6/30/2008	\$90,891	\$475,565	\$123,377	\$980,961	100%	100%	100%
6/30/2007	91,230	421,463	118,612	926,525	100%	100%	100%
6/30/2006	88,538	414,218	111,157	847,516	100%	100%	100%
6/30/2005	88,322	360,303	116,925	790,858	100%	100%	100%
6/30/2004	87,756	352,680	113,930	741,766	100%	100%	100%
6/30/2003	87,876	334,590	123,221	698,885	100%	100%	100%
6/30/2002	85,532	324,254	120,019	748,762	100%	100%	100%
6/30/2001	84,217	300,562	115,707	781,831	100%	100%	100%
6/30/2000	82,588	280,005	108,614	770,649	100%	100%	100%
6/30/1999	85,630	259,886	81,022	702,481	100%	100%	100%
6/30/1998	81,736	240,587	86,852	625,121	100%	100%	100%
6/30/1997	88,020	210,441	103,906	538,055	100%	100%	100%
6/30/1996	81,336	195,619	100,764	460,073	100%	100%	100%
6/30/1994	69,292	185,946	103,164	371,158	100%	100%	100%
6/30/1992	57,006	158,809	105,013	269,203	100%	100%	50.84%

ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE

(Amounts in Thousands)	Plan Years									
	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Prior Valuation Actuarial Accrued Liability	\$631	\$614	\$566	\$554	\$546	\$530	\$501	\$471	\$49	\$31
Expected Increase from Prior Valuation	-	-	-	-	-	29	28	-	-	-
Salary Increase (Greater) Less than Expected	8	7	-	5	5	(9)	3	3	10	(3)
Asset Return (Less) Greater than Expected	-	-	-	7	(34)	-	(7)	27	35	33
Other Experience	10	6	2	-	17	-	-	-	-	2
Economic Assumption Changes	-	(31)	-	-	17	-	-	-	11	(12)
Noneconomic Assumption Changes	-	-	-	-	3	(4)	5	-	(12)	(2)
Normal Cost	22	21	19							
Interest	51	50	46							
Payments	(32)	(36)	(29)							
Change in Valuation Programs and Methods	-	-	10							
Ending Actuarial Accrued Liability	\$690	\$631	\$614	\$566	\$554	\$546	\$530	\$501	\$93	\$49

MAJOR PROVISIONS OF THE RETIREMENT PLAN

ELIGIBLE EMPLOYEES

All non-Fire and Police employees who enter service after July 1, 1952, and are certified from a civil service list for permanent employment.

FINAL AVERAGE SALARY (FAS)

Highest three consecutive-year average.

Requirement: age 55 and 5 years of service.

Benefit: Sum of (1) and (2) times (3)

- (1) 2% of FAS times years of service, not-to-exceed 25 years
- (2) 1% of FAS times years of service in excess of 25 years
- (3) RETIREMENT AGE FACTOR TABLE

Age	Factor	Age	Factor
55	1.000	61	1.140
56	1.020	62	1.180
57	1.040	63	1.220
58	1.060	64	1.260
59	1.080	65	1.300
60	1.100	Add .01 for every quarter after age 65.	

DEFERRED RETIREMENT OPTION (DROP)

An employee who is age 55 with 5 years of service may DROP. Retirement amount is calculated and monthly deposits are made to the employee's DROP account while employee continues to work up to maximum of 10 years.

DISABILITY RETIREMENT

Requirement: 10 years of service.

Benefit: 1.8 percent times FAS times years of service, if exceeds 1/3 of FAS; or 33-1/3%, or service retirement, if higher.

MEMBER CONTRIBUTION RATES

Basic rates on a formula reflecting the age at entry into the System. The rates are such as to provide an average annuity, at age 55, of 1/150 of FAS for each of the first 25 years of service, plus 1/300 of FAS for each year of service after 25. Member cost-of-living rates are designed to pay for one-half of the future cost-of-living increases.

DEATH BEFORE RETIREMENT

- A. Before eligible to retire for disability (less than 5 years):
 - (1) One month's salary for each year of service, not-to-exceed six months.
 - (2) Return of contributions with interest.
- B. While eligible for service retirement:

Fifty percent (50%) of service retirement benefit to eligible beneficiary.
- C. With 5 or more years:

Fifty percent (50%) of service retirement benefit formula at age 55, based on years of service at death.

DEATH AFTER RETIREMENT

Fifty percent (50%) of the member's allowance continued to eligible spouse for life.

WITHDRAWAL OF BENEFITS

If less than five years of service, return of contributions. If more than five years of service, right to have vested deferred retirement benefit at normal retirement date.

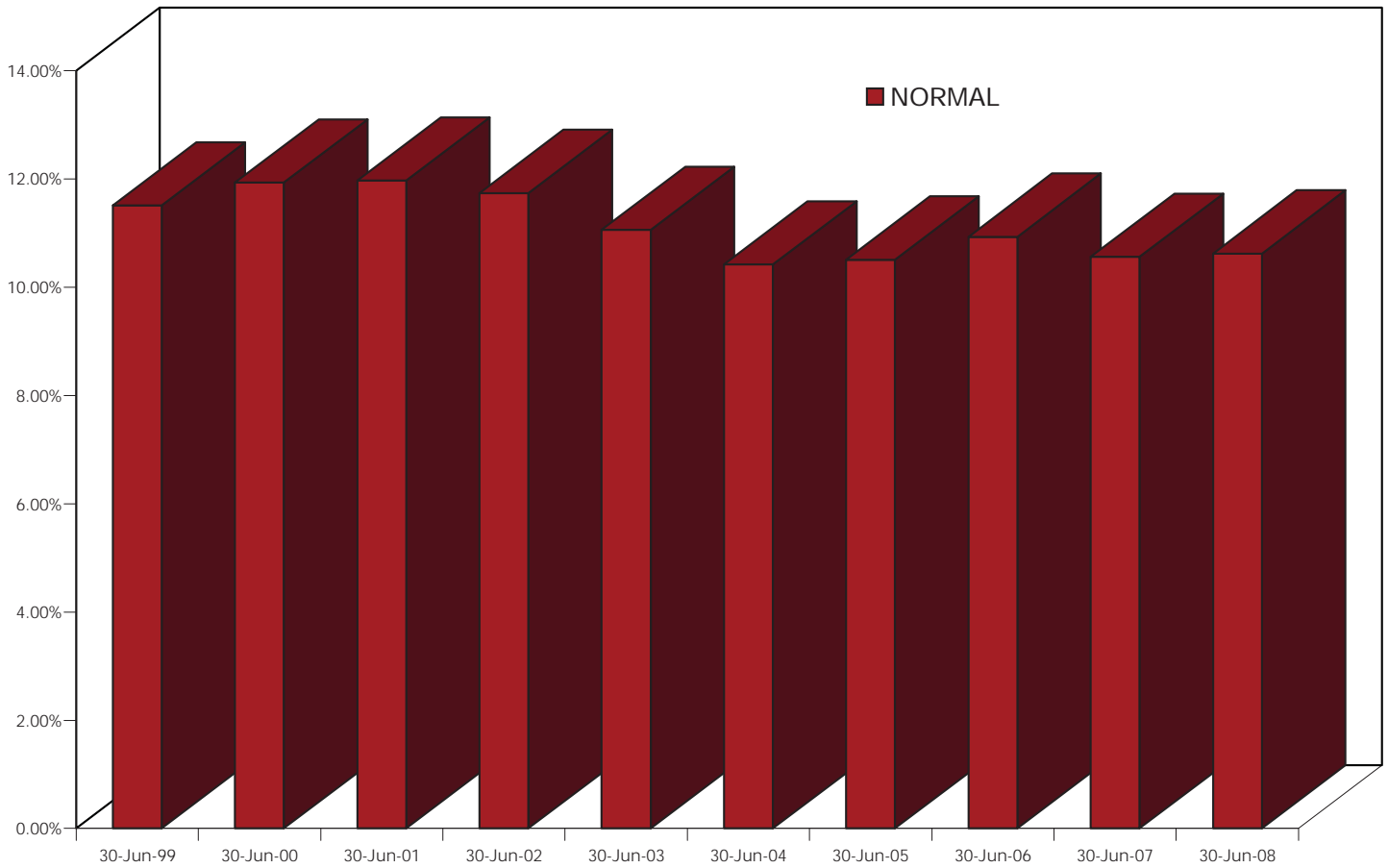
POST RETIREMENT SUPPLEMENTAL BENEFIT (PRSB)

On August 27, 1998, the City Council adopted the Post Retirement Supplemental Benefit (PRSB) Program which is intended to provide assistance to retirees to pay for various post-retirement expenses. Annually, after an actuarial study has been performed, the Retirement Board will review the availability of surplus earnings in the System and determine whether a benefit can be paid to eligible PRSB recipients. If a surplus is declared by the Board, PRSB benefit payments will be calculated for eligible recipients and payments for the following calendar year will begin in January.

COST OF LIVING BENEFITS

Based on the percentage change in Consumer Price Index (U.S. city-average for urban wage earners and clerical works – all items), limited to a five percent (5%) maximum change per year each July 1.

HISTORY OF EMPLOYER NET CONTRIBUTION RATES



VALUATION DATE	30-Jun-99	30-Jun-00	30-Jun-01	30-Jun-02	30-Jun-03	30-Jun-04	30-Jun-05	30-Jun-06	30-Jun-07	30-Jun-08
NORMAL	11.51%	11.93%	11.97%	11.74%	11.06%	10.42%	10.51%	10.93%	10.56%	10.62%
PREFUNDED LIABILITY	11.51%	11.93%	11.97%	11.74%	11.06%	10.42%	10.51%	10.93%	10.56%	10.62%
NET NORMAL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
UNFUNDED LIABILITY	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NET NORMAL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%