

City of Sacramento
Additional Continuing Disclosure
Fiscal Year 2015/16

Issue	Sacramento Public Financing Authority 2015 Lease Revenue Bonds (Golden 1 Center) (Federally Taxable)
Par	\$ 272,870,000
Issued	September 24, 2015
CUSIP Numbers	78605QAC1 78605QAD9 78605QAE7 78605QAF4 78605QAG2 78605QAH0 78605QAJ6

Content of Additional Report.

See Exhibit A – SCERS Actuarial Valuation as of June 30, 2016



City of Sacramento

Sacramento City Employees' Retirement System

June 30, 2016
Actuarial Valuation

December 12, 2016

ACTUARIAL VALUATION
CITY OF SACRAMENTO
SACRAMENTO CITY EMPLOYEES' RETIREMENT SYSTEM (SCERS)
DEFINED BENEFIT PLAN

We are pleased to present the results of our June 30, 2016 actuarial valuation of the Sacramento City Employees' Retirement System (SCERS).

The purpose of this valuation is to:

- Determine the System's June 30, 2016 Funded Status, and
- Calculate the fiscal year 2017/18 Actuarially Determined Contribution (ADC).

The information in this report may not be appropriate for purposes other than System funding but may be useful to the City for the System's financial management. Future valuations may differ significantly if the System's experience differs from our assumptions or if there are changes in plan design, actuarial methods or actuarial assumptions. The project scope did not include an analysis of this potential variation.

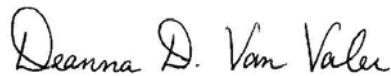
The valuation is based on the System's benefit provisions summarized in Section 9, employee data, and on the System's financial information, all furnished by the City. We reviewed the financial and employee data for reasonableness, including comparing to prior year data, but did not perform an audit.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. As members of the American Academy of Actuaries, meeting Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,



Mary Elizabeth Redding, FSA, MAAA, EA
Vice President



Deanna Van Valer, ASA, MAAA, EA
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SECTION 1

EXECUTIVE SUMMARY

Following are the valuation results. See notes following the table for a description of terms. Results from the June 30, 2015 valuation are provided for comparative purposes.

	-----amounts in \$000's-----		
	June 30, 2015	June 30, 2016	% change
■ Participant Counts			
• Actives	19	16	-15.8%
• Terminated Vesteds & Reciprocals	14	12	-14.3%
• Service Retirees	662	641	-3.2%
• Disableds	145	140	-3.4%
• Beneficiaries	334	329	-1.5%
• Total	1,174	1,138	-3.1%
■ Actuarial Liabilities			
• Present Value of Projected Benefits	\$ 376,767	\$ 366,391	-2.8%
• Actuarial Accrued Liability	376,479	366,141	-2.7%
■ Assets			
• Market Value of Assets	301,263	285,170	-5.3%
• Approximate Annual Rate of Return	4.5%	2.7%	
• Actuarial Value of Assets	293,036	286,675	-2.2%
• Approximate Annual Rate of Return	8.0%	6.2%	
■ Plan Funded Status			
• Actuarial Accrued Liability	376,479	366,141	-2.7%
• Actuarial Value of Plan Assets	293,036	286,675	-2.2%
• Unfunded Actuarial Accrued Liability	83,443	79,466	-4.8%
• Funded Ratio	77.8%	78.3%	0.6%
• Funded Ratio, Market Value Basis	80.0%	77.9%	-2.6%
■ Maturity Ratios			
• Inactive AAL/Total AAL	97.8%	98.1%	
• Inactive Count/Total Count	98.4%	98.6%	
	2016/17	2017/18	% change
■ Annual Cost¹	\$ 8,330	8,267	-0.8%
■ Annual Cost (% Proj. Plan Payroll)¹	953.6%	1144.3%	
■ Annual Cost (% Proj. City Payroll)	2.9%	2.8%	

¹ See page 11 for details.

SECTION 1

EXECUTIVE SUMMARY

Purpose of Actuarial Valuation

The actual costs of a defined benefit plan are determined entirely by the amount of the benefit promise, the actual salaries and service of the plan participants, and how long they and their beneficiaries live to receive payments. An actuarial valuation is a mathematical model which attempts to quantify this actual cost by setting assumptions that, it is hoped, duplicate reality as closely as possible. In addition, the actuarial methodology provides a reasonable plan, or method, towards funding the expected plan costs. This information assists the plan trustees so they can make informed decisions regarding plan investments and how much in contributions will be required from the employer to eventually fully pay the plan's costs.

Summary Information & Results

The Sacramento City Employees' Retirement System (SCERS) is a closed defined benefit pension plan. It has not accepted new members since January 28, 1977, and only 16 active members (out of a total plan membership of 1,138) remain.

Since the last valuation, the plan experienced overall small gains on liabilities and losses on market assets. Plan liabilities decreased more than expected, by a net \$1.1 million. Market value return on assets was less than expected, about 2.7% for the year, resulting in a loss of \$0.6 million on the actuarial value of assets. The July 1, 2016 total plan unfunded actuarial accrued liability (UAAL) is \$79.5 million, as compared to expected UAAL of \$80.0 million.

No actuarial assumption changes were made in the valuation.

The plan's funded ratio on an actuarial value of assets basis is 78.3%, an increase from 77.8% in the prior valuation. The plan's funded ratio using market value of assets basis is 77.9%, a slight decrease from 80.0% in the prior valuation.

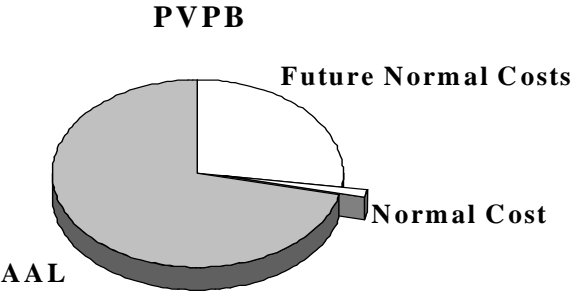
The City's contribution has decreased from \$8.330 million for fiscal year 2016/17 to \$8.267 million for fiscal year 2017/18. The prior valuation projected a 2017/18 contribution of \$7.715 million. The 2017/18 contribution is higher than projected due to the investment loss.

SECTION 1

EXECUTIVE SUMMARY

Definitions

The Present Value of Projected Benefits (PVPB) is the present value of all future benefits for current plan participants. The Actuarial Accrued Liability (AAL) represents the portion of the PVPB attributable to past service. The AAL is recognized over service through the date a participant is expected to commence benefits. Therefore, the AAL is equal to the PVPB for current retirees. The Normal Cost is the portion of the PVPB allocated or earned during the year following the valuation date.



SECTION 2

LIABILITY INFORMATION & FUNDED STATUS

A comparison of the Present Value of Benefits, Actuarial Accrued Liability, Employer Normal Cost, and the Funded Ratio for the current and prior valuations follows. (Note that numbers throughout the report may not add due to rounding.)

(amounts in \$000's)

	June 30, 2015	June 30, 2016
Present Value of Projected Benefits		
■ Active Employees	\$ 8,678	\$ 7,342
■ Vested Terminated & Reciprocal	2,796	2,758
■ Service Retirees	265,580	258,349
■ Disabled Participants	43,990	41,692
■ Beneficiaries	55,724	56,251
■ Total	376,767	366,391

Actuarial Accrued Liability

■ Active Employees	\$ 8,390	\$ 7,092
■ Vested Terminated & Reciprocal	2,796	2,758
■ Service Retirees	265,580	258,349
■ Disabled Participants	43,990	41,692
■ Beneficiaries	55,724	56,251
■ Total	376,479	366,141

2015/16

2016/17

Normal Cost

■ Employer Normal Cost (beginning of year)	\$ 57	\$ 42
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June 30, 2015

June 30, 2016

Plan Funded Status

■ Total Actuarial Accrued Liability	\$ 376,479	\$ 366,141
■ Actuarial Value of Plan Assets	293,036	286,675
■ Unfunded Actuarial Accrued Liability	83,443	79,466
■ Funded Ratio	77.8%	78.3%
■ Market Value of Assets	301,263	285,170
■ Funded Ratio – Market Value Basis	80.0%	77.9%



SECTION 2

LIABILITY INFORMATION & FUNDED STATUS

Details of the June 30, 2016 Present Value of Benefits, Actuarial Accrued Liability and Employer Normal Cost by employee category:

(amounts in \$000's)

	Safety	Miscellaneous	Total
Present Value of Projected Benefits			
■ Active Employees	\$ -	\$ 7,342	\$ 7,342
■ Vested Terminated & Reciprocals	-	2,758	2,758
■ Service Retirees	26,593	231,756	258,349
■ Disabled Participants	19,408	22,284	41,692
■ Beneficiaries	18,271	37,980	56,251
■ Total	<u>64,272</u>	<u>302,120</u>	<u>366,391</u>

Actuarial Accrued Liability

■ Active Employees	-	7,092	7,092
■ Vested Terminated & Reciprocals	-	2,758	2,758
■ Service Retirees	26,593	231,756	258,349
■ Disabled Participants	19,408	22,284	41,692
■ Beneficiaries	18,271	37,980	56,251
■ Total	<u>64,272</u>	<u>301,869</u>	<u>366,141</u>

	Safety	Miscellaneous	Total
Normal Cost			
■ Employer Normal Cost (on June 30, 2016)	\$ 0	\$ 42	\$ 42

SECTION 2

LIABILITY INFORMATION & FUNDED STATUS

Details of the June 30, 2016 Present Value of Benefits, Actuarial Accrued Liability and Employer Normal Cost by benefit section:

(amounts in \$000's)

	Section 175	Sections 302 & 399	Total
Present Value of Projected Benefits			
■ Active Employees	\$ 0	\$ 7,342	\$ 7,342
■ Vested Terminated & Reciprocal	732	2,026	2,758
■ Service Retirees	8,164	250,185	258,349
■ Disabled Participants	2,092	39,600	41,692
■ Beneficiaries	4,388	51,863	56,251
■ Total	<u>15,375</u>	<u>351,016</u>	<u>366,391</u>

Actuarial Accrued Liability

■ Active Employees	0	7,092	7,092
■ Vested Terminated & Reciprocal	732	2,026	2,758
■ Service Retirees	8,164	250,185	258,349
■ Disabled Participants	2,092	39,600	41,692
■ Beneficiaries	4,388	51,863	56,251
■ Total	<u>15,375</u>	<u>350,766</u>	<u>366,141</u>

Normal Cost

	Section 175	Sections 302 & 399	Total
■ Employer Normal Cost (on 6/30/16)	\$ 0	\$ 42	\$ 42

SECTION 3

ASSET INFORMATION

Assets for SCERS are held in trust. Trust monies may be used to pay benefits to plan participants and their beneficiaries. The trust is managed under the direction of the Administration, Investment, and Fiscal Management Board. Asset information is provided by the City of Sacramento, and has not yet been audited.

Asset Reconciliation – Market Value of Assets

Following reconciles the June 30, 2014 through June 30, 2015 and the June 30, 2015 through June 30, 2016 market value of assets.

	(amounts in \$000's)	
	2014/15	2015/16
■ Beginning of Year Balance:	\$ 312,414	\$ 301,263
• Member Contributions	\$ 82	\$ 146 ²
• City Contributions	9,183	8,645
• Investment Income	14,662	8,937
■ Total Additions	23,927	17,728
• Benefit Payments	33,590	32,633
• Member Refunds	201	50
• Investment Expenses	1,287	1,138
■ Total Deductions	35,078	33,821
■ Net Assets at End of Year	301,263	285,170
■ Approximate Return on Assets	4.5%	2.7%

² Includes \$77,000 in member contributions for a deficit account buyback

SECTION 3

ASSET INFORMATION

Asset Allocation – Market Value of Assets

The July 1, 2016 trust asset allocation is provided by the City of Sacramento and based on an allocation strategy of 40% fixed income and 60% equity. Details are shown below.

(amounts in \$000's)

	Market Value	Percentage
■ Cash & Short Term Investments	\$ 14,782	5.2%
■ Receivables	1,686	0.6%
■ Investments		
• US Agencies	\$ 1,430	0.5%
• Corporate Bonds	53,775	18.9%
• Equities	50,326	17.6%
• Exchange Traded Funds	114,915	40.3%
• Mortgage Loans	1,924	0.7%
• Municipal Bonds	<u>49,223</u>	17.3%
■ Total Investments	<u>271,593</u>	
■ Total Assets	288,061	
■ Other Liabilities Payable	<u>(2,891)</u>	<u>-1.0%</u>
■ Net Pension Benefit Trust Assets	285,170	100.0%

Target Allocation by Asset Class

The Administration, Investment and Fiscal Management Board of the Sacramento City Employees' Retirement System most recently adopted a new asset allocation July 1, 2016, as shown below. The fund is rebalanced each year.

	Prior Allocation	Current Allocation
■ Fixed Bonds/Real Estate	<u>40%</u>	<u>40%</u>
Total Fixed	40%	40%
■ Large Cap Growth	35%	35%
■ Equity Income	15%	20%
■ International Equities	<u>10%</u>	<u>5%</u>
Total Equity	<u>60%</u>	<u>60%</u>
Total Fixed & Equity	100%	100%

SECTION 3

ASSET INFORMATION

Discount Rate Development

We recommend the following discount rate assumption for the June 30, 2016 valuation, based upon a 55% confidence level:

Confidence Level	50%	55%	60%
■ Inflation Adjusted Return	7.23%	6.95%	6.69%
■ Investment Expenses ³	<u>0.30%</u>	<u>0.30%</u>	<u>0.30%</u>
■ Net Return after Expenses	6.93%	6.65%	6.39%
■ Discount Rate Assumption		6.50%	

³ Based on average investment expenses for a typical passive investment strategy. This is not plan specific.

SECTION 3

ASSET INFORMATION

Development of Actuarial Value of Assets

The Actuarial Value of Assets is based upon a three year smoothing of market assets. This method reduces volatility in contribution rates, and also reduces volatility in the size of the actuarial gains and losses due to asset returns. Because the plan is frozen to new membership and the membership is primarily composed of retirees and beneficiaries, it is important from a cash flow perspective that asset values used in calculating contribution rates not stray too far from market value. For this reason, a corridor of 15% around the market value is imposed upon the actuarial value.

	(amounts in \$000's)
	2015/16
<ul style="list-style-type: none"> ■ Actuarial Value of Assets, Beginning of Year <ul style="list-style-type: none"> ● Contributions ● Expected Earnings ● Benefit Payments 	\$ 293,036 8,791 18,283 <u>(32,683)</u>
■ Expected Actuarial Value of Assets, End of Year	287,427
■ Market Value of Assets, End of Year	285,170
■ Difference between MVA & Expected AVA	(2,257)
<ul style="list-style-type: none"> ■ Preliminary Actuarial Value of Assets, End of Year <i>(Expected AVA + 1/3 Difference)</i> 	286,675
<ul style="list-style-type: none"> ■ Actuarial Value of Assets Corridor <ul style="list-style-type: none"> ● Cap: 115% of Market Value ● Min: 85% of Market Value 	327,946 242,395
<ul style="list-style-type: none"> ■ Actuarial Value of Assets, End of Year <i>(No greater than Cap, not less than Min)</i> 	286,675
■ Approximate Annual Rate of Return	6.2%

SECTION 4

CONTRIBUTION DEVELOPMENT

Actuarially Determined Contribution

Following is the development of the 2017/18 Actuarially Determined Contribution. The 2016/17 Actuarially Determined Contribution was calculated in the June 30, 2015 actuarial valuation and is shown for comparison.

	(amounts in \$000's)	
Contribution Year	2016/17	2017/18
■ Actuarially Determined Contribution		
• Employer Normal Cost	\$ 43	\$ 30
• UAAL Amortization ⁴	8,287	8,236
• Total Cost	8,330	8,267
■ Projected Plan Payroll	874	722
■ Actuarially Determined Contribution (as a percent of plan payroll)		
• Employer Normal Cost	5.0%	4.2%
• UAAL Amortization	948.6%	1140.1%
• Total Contribution	953.6%	1144.3%
■ Projected Total City Payroll	283,330	295,629
■ Actuarially Determined Contribution (as a percent of total City payroll)		
• Employer Normal Cost	0.0%	0.0%
• UAAL Amortization	2.9%	2.8%
• Total Contribution	2.9%	2.8%

⁴ The Unfunded Actuarial Accrued Liability (UAAL) is being amortized as a level dollar amount over a 14 year open period for the 2016/17 and 2017/18 ADC. As the plan continues to mature, this amortization period will be monitored.

SECTION 5

SCHEDULE OF FUTURE CONTRIBUTIONS

Below are the historic and projected contributions and benefit payments. City contributions for years ending 6/30/2019 and later are estimated assuming 6/30/17 and subsequent market value of assets earn 6.5% and assuming the Actuarially Determined Contribution is contributed each year. These contributions are designed to achieve 100% funding of the system.

Year Ending ⁵	Member Contributions	City Contributions	Benefit Payments
6/30/1990	3,305,000	9,664,000	20,000,000
6/30/1991	1,704,000	6,017,000	20,400,000
6/30/1992	1,818,000	2,984,000	22,000,000
6/30/1993	1,672,000	857,000	23,042,000
6/30/1994	1,432,000	0	24,165,000
6/30/1995	1,320,000	0	24,565,000
6/30/1996	1,228,000	0	25,027,000
6/30/1997	1,080,000	0	23,274,000
6/30/1998	1,090,000	0	23,825,000
6/30/1999	1,136,000	0	24,249,000
6/30/2000	1,079,000	0 ⁶	24,901,000
6/30/2001	989,000	0	25,087,000
6/30/2002	1,011,000	0	25,588,000
6/30/2003	978,000	0	26,619,000
6/30/2004	1,056,000	0	26,772,000
6/30/2005	809,000	0	27,524,000
6/30/2006	789,000	0	28,749,000
6/30/2007	699,000	0	29,604,000
6/30/2008	596,000	3,534,000	29,896,000
6/30/2009	607,000	3,159,000	30,707,000
6/30/2010	377,000	3,431,000	31,719,000
6/30/2011	342,000	10,547,000	33,003,000
6/30/2012	332,000	10,361,000	33,057,000
6/30/2013	219,000	10,573,000	33,237,000
6/30/2014	161,000	9,649,000	33,688,000
6/30/2015	82,000	9,183,000	33,791,000
6/30/2016	69,000	8,645,000	32,683,000
6/30/2017	60,000	8,330,000	32,592,000
6/30/2018	42,000	8,267,000	32,512,000
6/30/2019	29,000	7,920,000	32,316,000
6/30/2020	20,000	7,579,000	32,018,000
6/30/2021	12,000	7,247,000	31,624,000

⁵ Information prior to 6/30/2006 valuation is taken from prior actuary's valuation report. Member contributions and benefit payments for years ending 6/30/2017 and later are estimated.

⁶ Shown as a negative 1.367 million by prior actuary.

SECTION 6

ACTUARIAL (GAIN)/LOSS ANALYSIS

The gain/loss analysis of plan assets, actuarial liability, and unfunded actuarial liability for the one year period between valuation dates:

	(amounts in \$000's)		
	Actuarial Accrued Liability (Gain)/Loss	Actuarial Value of Assets Gain/(Loss)	Unfunded Actuarial Accrued Liability (Gain)/Loss
■ June 30, 2015 Actual Value	\$ 376,479	\$ 293,036	\$ 83,443
■ June 30, 2016 Expected Value	367,259	287,253	80,005
• Actual COLA Less Than Expected (Gain)/Loss	(1,218)		
• Other Demographic (Gain)/Loss	100		
■ Total Liability (Gain)/Loss	(1,118)		
• Investment (Loss)		(578) ⁷	
■ Total Asset Gain/(Loss)		(578)	
■ Total (Gain)/Loss			(540)
■ June 30, 2016 Actual Value	366,141	286,675	79,466

⁷ Includes gain from \$77,000 in member contributions for deficit account buyback.

SECTION 7

SENSITIVITY ANALYSIS

The Plan's June 30, 2016 funded status and 2017/18 fiscal year contribution are shown below at 5.5%, 6.5% and 7.5% discount rates.

Discount Rate	(amounts in \$000's)		
	5.5%	6.5%	7.5%
■ Present Value of Projected Benefits	\$ 399,937	\$ 366,391	\$ 337,656
■ Funded Status			
• Actuarial Accrued Liability	399,601	366,141	337,467
• Actuarial Value of Assets	286,675	286,675	286,675
• Unfunded Actuarial Accrued Liability	112,926	79,466	50,792
■ Funded Ratio	71.7%	78.3%	84.9%
■ 2017/18 Actuarially Determined Contribution			
• Employer Normal Cost	53	30	14
• UAAL Amortization ⁸	11,288	8,236	5,286
• Total Contribution	11,341	8,267	5,301
• Total Employer Contribution (as a percent of Plan payroll)	1569.9%	1144.3%	733.7%
• Total Employer Contribution (as a percent of total City payroll)	3.8%	2.8%	1.8%

The Plan's 2017/18 fiscal year contribution would increase if the amortization period of the Unfunded Actuarial Accrued Liability were shorter. Shown below are results based on the current 14-year period, as well as for 13, 12 and 10 year periods.

Amortization Years	(amounts in \$000's)			
	14	13	12	10
■ 2017/18 Actuarially Determined Contribution				
• Employer Normal Cost	\$ 30	\$ 30	\$ 30	\$ 30
• UAAL Amortization	8,236	8,633	9,100	10,327
• Total Employer Contribution	8,267	8,664	9,130	10,358
• Total Employer Contribution (as a percent of Plan payroll)	1144.3%	1199.2%	1263.8%	1433.8%
• Total Employer Contribution (as a percent of total City payroll)	2.8%	2.9%	3.1%	3.5%

⁸ 14 year period

SECTION 8

HEADCOUNT AND BENEFIT PAYMENT PROJECTION

Headcount and Benefit Payment Projection

Fiscal Year Ending June 30,	Active Count	Term Vested Count	Retiree Count	Benefit Payments (000's)
2017	16	12	1,110	\$ 32,592
2018	11	12	1,085	32,512
2019	7	12	1,056	32,316
2020	5	12	1,024	32,018
2021	3	12	990	31,624
2022	2	12	955	31,153
2023	1	12	917	30,619
2024	1	12	880	30,017
2025	0	12	841	29,362
2026	0	12	803	28,658
2027	0	11	764	27,912
2028	0	11	726	27,127
2029	0	11	687	26,309
2030	0	11	650	25,457
2031	0	11	613	24,572
2032	0	11	577	23,657
2033	0	10	541	22,710
2034	0	10	506	21,733
2035	0	10	472	20,727
2036	0	10	439	19,692
2037	0	9	406	18,630
2038	0	9	374	17,544
2039	0	8	344	16,438
2040	0	8	314	15,319
2041	0	7	285	14,192
2042	0	7	257	13,067
2043	0	6	231	11,952
2044	0	6	206	10,856
2045	0	5	183	9,789
2046	0	5	161	8,759

SECTION 8

HEADCOUNT AND BENEFIT PAYMENT PROJECTION

Fiscal Year Ending June 30,	Active Count	Term Vested Count	Retiree Count	Benefit Payments (000's)
2047	0	4	141	\$ 7,777
2048	0	3	122	6,849
2049	0	3	105	5,979
2050	0	2	89	5,175
2051	0	2	76	4,439
2052	0	2	63	3,777
2053	0	1	53	3,188
2054	0	1	44	2,674
2055	0	1	36	2,231
2056	0	1	29	1,854
2057	0	0	24	1,538
2058	0	0	19	1,277
2059	0	0	15	1,066
2060	0	0	12	898
2061	0	0	10	769
2062	0	0	8	672
2063	0	0	7	599
2064	0	0	6	545
2065	0	0	5	506
2066	0	0	4	475

SECTION 9 PLAN PROVISIONS

A. Plan Effective Date

Originally established effective April 1, 1935.

B. Plan Year

July 1 to June 30.

C. Participation

The plan is closed with no new members since January 28, 1977.

D. Eligibility to Retire

Section 175: Age 70, or age 55 and 20 years of service.

Sections 302 and 399: Age 70, or age 50 and 5 years of service.

E. Vesting

100% vesting with five years of participation.

F. Average Monthly Compensation

Average monthly salary for the 36 months prior to termination.

G. Employee Contributions

Each participant contributes a certain percentage based on his or her age at entry into the plan.

H. Service Retirement Benefit

Section 175:

Average Monthly Compensation times years of service times Benefit Factor. For retirement after age 65 with 20 years of service, benefit is a minimum of \$60 per month.

Sections 302 and 399:

Average Monthly Compensation times years of service times Benefit Factor, but no larger than 75% of final average earnings.

Benefit Factors at sample ages:

<u>Retirement Age</u>	<u>Section 175</u>	<u>Sections 302 and 399</u>
50	n/a	1.10%
55	1.10%	1.75%
60	1.67%	2.40%
65	2.44%	2.40%

SECTION 9 PLAN PROVISIONS

I. Vested Termination Benefit

Return of employee contributions with interest, or if the value is greater than \$500, the member may choose to leave the contributions in the system. The member may become eligible in the future for retirement, disability or death benefits.

J. Non-Industrial (Ordinary) Disability Benefit

Eligibility is ten years of service.

Section 175:

With 16 2/3 years of service: 1½% of final average salary times years of service to disability.

Less than 16 2/3 years of service: Minimum of 1½% of final average salary times years of service would have earned to age 60, or 25% of final average earnings.

Sections 302 and 399:

Not Eligible for Retirement: Lesser of 1½% of Final Average Earnings times years of service or final average earnings times benefit factor at age 50 times years of service at age 50, minimum of 25% of final average earnings.

Eligible for Retirement: Maximum of retirement allowance or 25% of final average earnings.

K. Industrial Disability Benefit

Sections 302 and 399:

Not Eligible for Retirement: 50% of final average earnings.

Eligible for retirement: Maximum of retirement allowance or 50% of final average earnings.

L. Death Benefit – Pre Retirement Eligibility

Return of employee contributions with interest, plus 1/12 of salary in the year preceding death multiplied by the smaller of 6 or years of service.

M. Death Benefit – Post Retirement Eligibility

50% of the member's benefit as if the member retired at the time of death, paid as a lifetime benefit to the spouse.

N. Death Benefit – Post Retirement Death

\$500 paid to the member's estate upon death.

SECTION 9 PLAN PROVISIONS

O. Social Security Reduction at age 62

For members participating in Social Security, their benefit will be reduced at the later of age 62 or actual retirement age. The amount of the reduction is one half of the PIA from Social Security, multiplied by the ratio of the sum of salary earned from the City to the sum of salary from all sources used in the calculation of the Social Security amount. The member's benefit under the System plus the amount received from Social Security cannot be less than the member's benefit under the System calculated with no reductions as of his retirement age. The City applies this offset to service retirees, not to disabled retirees.

P. Reduction Account

A member can choose to reduce his normal contributions to the System by an amount equal to the taxes paid for Social Security coverage. At the time of retirement, the regular retirement benefit will be reduced by the actuarial equivalent of the accumulated value of the reduction of contributions.

Q. Cost of Living

Benefits will be increased each July 1 by the change in the CPI for the San Francisco/Oakland area for the preceding calendar year limited to 3% (with COLA bank).

R. Benefit Forms

Section 175:

Lifetime benefit to the member, which may be actuarially reduced to provide a continuance to a beneficiary.

Section 302 and 399:

Lifetime benefit to the member, with an automatic 50% continuance to the spouse.

SECTION 10

METHODS AND ASSUMPTIONS

Actuarial Methods

The actuarial cost method used for this valuation is the Entry Age Normal (EAN) method. The Present Value of Projected Benefits (PVPB) is the present value of all future benefits for current plan participants. The Actuarial Accrued Liability (AAL) represents the portion of the PVPB attributable to past service. The AAL is recognized over service through the date a participant is expected to commence benefits.

The current unfunded AAL will be amortized over a 14 year rolling period as a level dollar amount. Because the plan is closed the amortization period should be regularly reviewed. Under current Board policy, when the average future life expectancy of the plan participants drops below 5 years, the amortization period will be reduced to no more than 5 years.

Plan funded status based on excess of

- 1) Value of Normal Retirement Benefit in excess of employee contributions over
- 2) Actuarial Value of Assets

The contribution generated by the current valuation will be payable for the City's fiscal year beginning one year later (2017/18). The June 30, 2015 valuation generated a contribution for fiscal year 2016/17.

The Actuarial Value of Assets is a 3-year smoothed market value. Gains and losses will be recognized over a three year period. For June 30, 2006, the first year of this method, the Actuarial Asset Value was set equal to the Market Value. The Actuarial Value of Assets will be limited by a 15% corridor. The Actuarial Value of Assets will be no greater than 115% of Market Value of Assets and no less than 85% of Market Value of Assets.

Data

The City provided participant data as of 7/1/2016. We reviewed the data, but did not perform an audit.

Basis for Assumptions

Mortality assumptions are based on CalPERS 1997-2011 experience study. Mortality improvement is the Society of Actuaries Scale MP-2014, modified slightly as, in our estimate, appropriate to CalPERS base mortality table. Inflation is based on our estimate for the plan's very long time horizon.

SECTION 10

METHODS AND ASSUMPTIONS

Actuarial Assumptions

Assumptions used in the valuation are as follows:

- **Discount Rate**

6.50%, net of investment expenses⁹

- **Inflation**

3.0%

- **Salary Scale**

3.00% CPI

0.50% Merit

- **Social Security Wage Base**

3.25%

- **Termination**

Rates vary based on age and gender. Sample rates follow:

<u>Age</u>	<u>Male</u>	<u>Female</u>
30	9.56%	11.32%
35	6.92%	8.58%
40	4.48%	5.82%
45	2.28%	3.08%
50	0.00%	0.00%

- **Retirement**

Rates vary based on age. Sample rates follow:

<u>Age</u>	<u>Non Sec 175</u>
50	1%
55	6%
60	26%
65	40%
70	100%

⁹ Administrative expenses are not paid from plan assets.

SECTION 10

METHODS AND ASSUMPTIONS

■ **Disability**

Rates vary based on age, gender and if the disability is job-related or not. Sample rates follow:

	<u>Job Related</u>		<u>Ordinary</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	.00075	.00045	.00204	.00123
45	.00192	.00093	.00525	.00252
50	.00351	.00180	.00966	.00495
55	.00502	.00273	.01374	.00747
60	.00639	.003512	.01761	.00969

■ **Healthy Mortality**

CalPERS 1997-2011 Pre-Retirement Mortality table for males and females and CalPERS 1997-2011 Post-Retirement Mortality table for males and females. Sample rates are as follows:

<u>Age</u>	<u>Pre-Retirement</u>		<u>Post-Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	0.16%	0.11%	0.53%	0.49%
60	0.35%	0.22%	0.82%	0.53%
70	0.71%	0.47%	1.77%	1.26%
80	1.34%	1.04%	5.28%	3.69%
90	n/a	n/a	16.19%	12.34%
100	n/a	n/a	34.55%	31.88%

■ **Post-Retirement Disabled Mortality**

For Miscellaneous retirees, CalPERS 1997-2011 Non-Work-Related Disability table for males and females. For Safety retirees, CalPERS 1997-2011 Work-Related Disability table for males and females. Sample rates are as follows:

<u>Age</u>	<u>Non-Work-Related</u>		<u>Work-Related</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	1.78%	1.23%	0.53%	0.49%
60	2.63%	1.51%	0.87%	0.63%
70	3.89%	2.81%	2.21%	1.78%
80	8.23%	6.02%	6.63%	4.98%
90	18.47%	16.08%	16.19%	12.34%
100	34.55%	31.88%	34.55%	31.88%

SECTION 10

METHODS AND ASSUMPTIONS

- **Mortality Improvement Projection**

Mortality projected fully generational with Scale MP-2014 modified to converge to ultimate improvement rates in 2022.

- **Social Security Offset**

Monthly benefits for current retirees and vested terminated assumed to decrease at the later of age 62 or actual retirement, based on the average expected offset of future retirees.

- **Marriage**

85% of male employees and 60% of female employees are assumed to be married. Wives are assumed to be four years younger than husbands.

- **Retirement Age**

Deferred vested members covered under Section 399 are assumed to retire at age 62; those covered under Section 175 are assumed to retire at age 65.

- **Reciprocal Members**

All remaining deferred vested members are assumed to have reciprocity with other retirement systems, and their pay is assumed to increase with salary scale after separation from the City.

SECTION 11 PARTICIPANT DATA

Data Summary

Following summarizes participant demographic information for the June 30, 2015 and June 30, 2016 actuarial valuations.

	June 30, 2015	June 30, 2016
■ Participant Counts		
• Actives	19	16
• Terminated Vesteds	11	9
• Reciprocal	3	3
• Service Retirees	662	641
• Disableds	145	140
• Beneficiaries	334	329
• Total	1,174	1,138
■ Actives		
• Average Age	61.0	62.2
• Average Service	33.5	33.9
• Salary		
> Total	\$ 1,179,884	\$ 1,019,832
> Average	62,099	63,740
• Overall City Payroll	264,491,000	275,973,000
■ Terminated Vesteds & Reciprocal		
• Average Age	65.1	65.9
■ Retirees, Disableds & Beneficiaries		
• Average Age	76.9	77.5
• Average Monthly Benefit	\$ 2,406	\$ 2,463
• Life expectancy	13.2	12.9

SECTION 11 PARTICIPANT DATA

June 30, 2016 Participant Data

Following summarizes participant demographic information for the June 30, 2016 actuarial valuation, broken out by employee category and benefit section.

	Safety		Miscellaneous		Total
	Section 175	Section 302 & 399	Section 175	Section 302 & 399	
■ Actives					
• Count	-	-	-	16	16
• Average Age	n/a	n/a	n/a	62.2	62.2
• Average Service	n/a	n/a	n/a	33.9	33.9
• Salary					
➤ Average	\$ -	\$ -	\$ -	\$63,740	\$63,740
➤ Total (000's)	-	-	-	1,020	1,020
■ Vested Terms & Reciprocals					
• Count	-	-	2	10	12
• Average Age	n/a	n/a	67.8	65.5	65.9
■ All Inactives					
• Count	28	189	37	856	1,110
• Average Age	84.9	81.8	81.2	76.1	77.5
• Avg. Monthly Benefit	\$2,472	\$3,083	\$1,671	\$2,361	\$2,463
■ Service Retirees					
• Count	11	62	17	551	641
• Average Age	87.0	87.1	79.8	75.1	76.6
• Average Retirement Age	55.2	55.1	63.5	59.5	59.1
• Avg. Monthly Benefit	\$3,124	\$4,625	\$2,153	\$2,819	\$2,981
■ Disabled Retirees					
• Count	6	50	4	80	140
• Average Age	85.5	75.5	80.3	73.3	74.8
• Average Retirement Age	47.7	42.1	50.0	48.7	46.3
• Avg. Monthly Benefit	\$2,615	\$2,678	\$1,253	\$1,965	\$2,227
■ Beneficiaries					
• Count	11	77	16	225	329
• Average Age	82.6	81.7	82.8	79.6	80.4
• Avg. Monthly Benefit	\$1,743	\$2,104	\$1,263	\$1,378	\$1,555

SECTION 11 PARTICIPANT DATA

Data Reconciliation 6/30/2015 to 6/30/2016

	Actives	Terminated		Receiving Payments			Total
		Vested	Reciprocal	Disabled	Benefic.	Retirees	
■ June 30, 2015	19	11	3	145	334	662	1,174
• New Hires	-	-	-	-	-	-	-
• Disabled	-	-	-	-	-	-	-
• Terminated	-	-	-	-	-	-	-
• Deceased	-	-	-	(5)	(18)	(24)	(47)
• New Beneficiaries	-	-	-	-	13	-	13
• Retired	(3)	-	-	-	-	3	-
• Adjustment/Cash Out	<u>-</u>	<u>(2)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(2)</u>
■ June 30, 2016	16	9	3	140	329	641	1,138

Active Age/Service

Following are active counts by age and service groups:

Service								
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over	Total
Under 25	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	1	1	2
60-64	-	-	-	1	-	2	9	12
65 & Over	-	-	-	-	-	1	1	2
Total	-	-	-	1	-	4	11	16

Inactives Age/Status/Monthly Benefit

Following are inactive counts and monthly benefit by age and status.

Safety

Age		Service Retirees	Disability Retirees	Beneficiaries	Total
Under 50	Count	-	-	-	-
	Avg. Benefit	-	-	-	-
50-54	Count	-	-	-	-
	Avg. Benefit	-	-	-	-
55-59	Count	-	-	-	-
	Avg. Benefit	-	-	-	-
60-64	Count	-	-	1	1
	Avg. Benefit	-	-	1,932	1,932
65-69	Count	-	8	9	17
	Avg. Benefit	-	3,086	1,762	2,385
70-74	Count	5	21	11	37
	Avg. Benefit	3,289	2,325	2,237	2,429
75-79	Count	2	9	14	25
	Avg. Benefit	4,741	2,621	2,304	2,613
80-84	Count	10	10	18	38
	Avg. Benefit	3,829	3,104	1,913	2,731
85 & Over	Count	56	8	35	99
	Avg. Benefit	4,587	2,681	2,060	3,540
Total	Count	73	56	88	217
	Avg. Benefit	4,399	2,671	2,059	3,004

Miscellaneous

Age		Service Retirees	Disability Retirees	Beneficiaries	Total
Under 50	Count	-	-	-	-
	Avg. Benefit	-	-	-	-
50-54	Count	-	-	3	3
	Avg. Benefit	-	-	1,389	1,389
55-59	Count	3	1	6	10
	Avg. Benefit	3,797	2,908	1,286	2,202
60-64	Count	57	15	12	84
	Avg. Benefit	3,189	1,991	1,120	2,680
65-69	Count	120	17	31	168
	Avg. Benefit	2,805	2,252	1,564	2,520
70-74	Count	122	14	30	166
	Avg. Benefit	2,908	1,611	1,532	2,550
75-79	Count	99	14	30	143
	Avg. Benefit	2,696	2,159	1,624	2,419
80-84	Count	77	13	44	134
	Avg. Benefit	2,763	1,616	1,386	2,199
85 & Over	Count	90	10	85	185
	Avg. Benefit	2,509	1,738	1,186	1,860
Total	Count	568	84	241	893
	Avg. Benefit	2,799	1,931	1,371	2,332