

the case of a 30-year fresh start, just the unfunded liability not already in the (gain)/loss base (which is already amortized over 30 years), will go into the new fresh start base. In addition, a fresh start is needed in the following situations:

- 1) When a positive payment would be required on a negative unfunded actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability); or
- 2) When there are excess assets, rather than an unfunded liability. In this situation, a 30-year fresh start is used, unless a longer fresh start is needed to avoid a negative total rate.

It should be noted that the actuary may choose to use a fresh start under other circumstances. In all cases, the fresh start period is set by the actuary at what is deemed appropriate; however, the period will not be less than five years, nor greater than 30 years.

Asset Valuation Method

It is the policy of the CalPERS Board of Administration to use professionally accepted amortization methods to eliminate unfunded accrued liabilities or surpluses in a manner that maintains benefit security for the members of the System while minimizing substantial variations in employer contribution rates. On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will employ an amortization and smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. CalPERS will no longer use an actuarial value of assets and will use the market value of assets. This direct rate smoothing method is equivalent to a method using a 5 year asset smoothing period with no actuarial value of asset corridor and a 25 year amortization period for gains and losses. The change in asset value will also be amortized over 30 years with a 5-year ramp-up/ramp-down.

Actuarial Assumptions

In 2014 CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation. On February 19, 2014 the CalPERS Board of Administration adopted relatively modest changes to the current asset allocation that will reduce the expected volatility of returns. The adopted asset allocation is expected to have a long-term blended return that continues to support a discount rate assumption of 7.5 percent. The Board also approved several changes to the demographic assumptions that more closely align with actual experience. The most significant of these is mortality improvement to acknowledge the greater life expectancies we are seeing in our membership and expected continued improvements. The new actuarial assumptions will be used to set the FY 2016-17 contribution rates for public agency employers. The increase in liability due to new actuarial assumptions will be calculated in the 2014 actuarial valuation and will be amortized over a 20-year period with a 5-year ramp-up/ramp-down in accordance with Board policy. For more details, please refer to the experience study report that can be found at the following link: <http://www.calpers.ca.gov/eip-docs/about/pubs/employer/2014-experience-study.pdf>

Economic Assumptions

Discount Rate

7.5 percent compounded annually (net of expenses). This assumption is used for all plans.

Termination Liability Discount Rate

The discount rate used for termination valuation is a weighted average of the 10 and 30-year US Treasury yields in effect on the valuation date that equal the duration of the pension liabilities. For purposes of this hypothetical termination liability estimate, the discount rate used, 3.72 percent, is the yield on the 30-year US Treasury Separate Trading of Registered Interest and Principal of Securities (STRIPS) as of June 30, 2013. Please note, as of June 30, 2014 the 30-year STRIPS yield was 3.55 percent.

Salary Growth

Annual increases vary by category, entry age, and duration of service. A sample of assumed increases are shown below.

Public Agency Miscellaneous			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1420	0.1240	0.0980
1	0.1190	0.1050	0.0850
2	0.1010	0.0910	0.0750
3	0.0880	0.0800	0.0670
4	0.0780	0.0710	0.0610
5	0.0700	0.0650	0.0560
10	0.0480	0.0460	0.0410
15	0.0430	0.0410	0.0360
20	0.0390	0.0370	0.0330
25	0.0360	0.0360	0.0330
30	0.0360	0.0360	0.0330

Salary Growth (continued)

Public Agency Fire			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1050	0.1050	0.1020
1	0.0950	0.0940	0.0850
2	0.0870	0.0830	0.0700
3	0.0800	0.0750	0.0600
4	0.0740	0.0680	0.0510
5	0.0690	0.0620	0.0450
10	0.0510	0.0460	0.0350
15	0.0410	0.0390	0.0340
20	0.0370	0.0360	0.0330
25	0.0350	0.0350	0.0330
30	0.0350	0.0350	0.0330

Public Agency Police			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1090	0.1090	0.1090
1	0.0930	0.0930	0.0930
2	0.0810	0.0810	0.0780
3	0.0720	0.0700	0.0640
4	0.0650	0.0610	0.0550
5	0.0590	0.0550	0.0480
10	0.0450	0.0420	0.0340
15	0.0410	0.0390	0.0330
20	0.0370	0.0360	0.0330
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

Public Agency County Peace Officers			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1290	0.1290	0.1290
1	0.1090	0.1060	0.1030
2	0.0940	0.0890	0.0840
3	0.0820	0.0770	0.0710
4	0.0730	0.0670	0.0610
5	0.0660	0.0600	0.0530
10	0.0460	0.0420	0.0380
15	0.0410	0.0380	0.0360
20	0.0370	0.0360	0.0340
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

Schools			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1080	0.0960	0.0820
1	0.0940	0.0850	0.0740
2	0.0840	0.0770	0.0670
3	0.0750	0.0700	0.0620
4	0.0690	0.0640	0.0570
5	0.0630	0.0600	0.0530
10	0.0450	0.0440	0.0410
15	0.0390	0.0380	0.0350
20	0.0360	0.0350	0.0320
25	0.0340	0.0340	0.0320
30	0.0340	0.0340	0.0320

- The Miscellaneous salary scale is used for Local Prosecutors.
- The Police salary scale is used for Other Safety, Local Sheriff, and School Police.

Overall Payroll Growth

3.00 percent compounded annually (used in projecting the payroll over which the unfunded liability is amortized). This assumption is used for all plans.

Inflation

2.75 percent compounded annually. This assumption is used for all plans.

Non-valued Potential Additional Liabilities

The potential liability loss for a cost-of-living increase exceeding the 2.75 percent inflation assumption, and any potential liability loss from future member service purchases are not reflected in the valuation.

Miscellaneous Loading Factors

Credit for Unused Sick Leave

Total years of service is increased by 1 percent for those plans that have accepted the provision providing Credit for Unused Sick Leave.

Conversion of Employer Paid Member Contributions (EPMC)

Total years of service is increased by the Employee Contribution Rate for those plans with the provision providing for the Conversion of Employer Paid Member Contributions (EPMC) during the final compensation period.

Norris Decision (Best Factors)

Employees hired prior to July 1, 1982 have projected benefit amounts increased in order to reflect the use of "Best Factors" in the calculation of optional benefit forms. This is due to a 1983 Supreme Court decision, known as the Norris decision, which required males and females to be treated equally in the determination of benefit amounts. Consequently, anyone already employed at that time is given the best possible conversion factor when optional benefits are determined. No loading is necessary for employees hired after July 1, 1982.

Termination Liability

The termination liabilities include a 7 percent contingency load. This load is for unforeseen improvements in mortality.

Demographic Assumptions

Pre-Retirement Mortality

Non-Industrial Death Rates vary by age and gender. Industrial Death rates vary by age. See sample rates in table below. The non-industrial death rates are used for all plans. The industrial

death rates are used for Safety Plans (except for Local Prosecutor safety members where the corresponding Miscellaneous Plan does not have the Industrial Death Benefit).

Age	Non-Industrial Death (Not Job-Related)		Industrial Death (Job-Related)
	Male	Female	Male and Female
20	0.00047	0.00016	0.00003
25	0.00050	0.00026	0.00007
30	0.00053	0.00036	0.00010
35	0.00067	0.00046	0.00012
40	0.00087	0.00065	0.00013
45	0.00120	0.00093	0.00014
50	0.00176	0.00126	0.00015
55	0.00260	0.00176	0.00016
60	0.00395	0.00266	0.00017
65	0.00608	0.00419	0.00018
70	0.00914	0.00649	0.00019
75	0.01220	0.00878	0.00020
80	0.01527	0.01108	0.00021

Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components; 99 percent will become the Non-Industrial Death rate and 1 percent will become the Industrial Death rate.

Post-Retirement Mortality

Rates vary by age, type of retirement and gender. See sample rates in table below. These rates are used for all plans.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00239	0.00125	0.01632	0.01245	0.00443	0.00356
55	0.00474	0.00243	0.01936	0.01580	0.00563	0.00546
60	0.00720	0.00431	0.02293	0.01628	0.00777	0.00798
65	0.01069	0.00775	0.03174	0.01969	0.01388	0.01184
70	0.01675	0.01244	0.03870	0.03019	0.02236	0.01716
75	0.03080	0.02071	0.06001	0.03915	0.03585	0.02665
80	0.05270	0.03749	0.08388	0.05555	0.06926	0.04528
85	0.09775	0.07005	0.14035	0.09577	0.11799	0.08017
90	0.16747	0.12404	0.21554	0.14949	0.16575	0.13775
95	0.25659	0.21556	0.31025	0.23055	0.26108	0.23331
100	0.34551	0.31876	0.45905	0.37662	0.40918	0.35165
105	0.58527	0.56093	0.67923	0.61523	0.64127	0.60135
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board, first used in the June 30, 2009 valuation. For purposes of the post-retirement mortality rates, those revised rates include 5 years of projected on-going mortality improvement using Scale AA published by the Society of Actuaries until June 30, 2010. There is no margin for future mortality improvement beyond the valuation date.

On February 19, 2014 the CalPERS Board adopted new recommended demographic assumption based on the most recent CalPERS Experience Study. These new actuarial assumptions will be implemented for the first time in the June 30, 2014 valuation. For purposes of the post-retirement mortality rates, the revised rates include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.

Marital Status

For active members, a percentage who are married upon retirement is assumed according to member category as shown in the following table.

Member Category	Percent Married
Miscellaneous Member	85%
Local Police	90%
Local Fire	90%
Other Local Safety	90%
School Police	90%

Age of Spouse

It is assumed that female spouses are 3 years younger than male spouses. This assumption is used for all plans.

Terminated Members

It is assumed that terminated members refund immediately if non-vested. Terminated members who are vested are assumed to follow the same service retirement pattern as active members but with a load to reflect the expected higher rates of retirement, especially at lower ages. The following table shows the load factors that are applied to the service retirement assumption for active members to obtain the service retirement pattern for separated vested members:

Age	Load Factor
50	450%
51	250%
52 through 56	200%
57 through 60	150%
61 through 64	125%
65 and above	100% (no change)

Termination with Refund

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans. See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1742	0.1674	0.1606	0.1537	0.1468	0.1400
1	0.1545	0.1477	0.1409	0.1339	0.1271	0.1203
2	0.1348	0.1280	0.1212	0.1142	0.1074	0.1006
3	0.1151	0.1083	0.1015	0.0945	0.0877	0.0809
4	0.0954	0.0886	0.0818	0.0748	0.0680	0.0612
5	0.0212	0.0193	0.0174	0.0155	0.0136	0.0116
10	0.0138	0.0121	0.0104	0.0088	0.0071	0.0055
15	0.0060	0.0051	0.0042	0.0032	0.0023	0.0014
20	0.0037	0.0029	0.0021	0.0013	0.0005	0.0001
25	0.0017	0.0011	0.0005	0.0001	0.0001	0.0001
30	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001
35	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Public Agency Safety			
<u>Duration of Service</u>	<u>Fire</u>	<u>Police</u>	<u>County Peace Officer</u>
0	0.0710	0.1013	0.0997
1	0.0554	0.0636	0.0782
2	0.0398	0.0271	0.0566
3	0.0242	0.0258	0.0437
4	0.0218	0.0245	0.0414
5	0.0029	0.0086	0.0145
10	0.0009	0.0053	0.0089
15	0.0006	0.0027	0.0045
20	0.0005	0.0017	0.0020
25	0.0003	0.0012	0.0009
30	0.0003	0.0009	0.0006
35	0.0003	0.0009	0.0006

The Police Termination and Refund rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff and School Police.

Schools						
<u>Duration of Service</u>	<u>Entry Age 20</u>	<u>Entry Age 25</u>	<u>Entry Age 30</u>	<u>Entry Age 35</u>	<u>Entry Age 40</u>	<u>Entry Age 45</u>
0	0.1730	0.1627	0.1525	0.1422	0.1319	0.1217
1	0.1585	0.1482	0.1379	0.1277	0.1174	0.1071
2	0.1440	0.1336	0.1234	0.1131	0.1028	0.0926
3	0.1295	0.1192	0.1089	0.0987	0.0884	0.0781
4	0.1149	0.1046	0.0944	0.0841	0.0738	0.0636
5	0.0278	0.0249	0.0221	0.0192	0.0164	0.0135
10	0.0172	0.0147	0.0122	0.0098	0.0074	0.0049
15	0.0115	0.0094	0.0074	0.0053	0.0032	0.0011
20	0.0073	0.0055	0.0038	0.0020	0.0002	0.0002
25	0.0037	0.0023	0.0010	0.0002	0.0002	0.0002
30	0.0015	0.0003	0.0002	0.0002	0.0002	0.0002
35	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

Termination with Vested Benefits

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans. See sample rates in tables below.

Public Agency Miscellaneous					
<u>Duration of Service</u>	<u>Entry Age 20</u>	<u>Entry Age 25</u>	<u>Entry Age 30</u>	<u>Entry Age 35</u>	<u>Entry Age 40</u>
5	0.0656	0.0597	0.0537	0.0477	0.0418
10	0.0530	0.0466	0.0403	0.0339	0.0000
15	0.0443	0.0373	0.0305	0.0000	0.0000
20	0.0333	0.0261	0.0000	0.0000	0.0000
25	0.0212	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
5	0.0162	0.0163	0.0265
10	0.0061	0.0126	0.0204
15	0.0058	0.0082	0.0130
20	0.0053	0.0065	0.0074
25	0.0047	0.0058	0.0043
30	0.0045	0.0056	0.0030
35	0.0000	0.0000	0.0000

- When a member is eligible to retire, the termination with vested benefits probability is set to zero.
- After termination with vested benefits, a miscellaneous member is assumed to retire at age 59 and a safety member at age 54.
- The Police Termination with vested benefits rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0816	0.0733	0.0649	0.0566	0.0482
10	0.0629	0.0540	0.0450	0.0359	0.0000
15	0.0537	0.0440	0.0344	0.0000	0.0000
20	0.0420	0.0317	0.0000	0.0000	0.0000
25	0.0291	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Non-Industrial (Not Job-Related) Disability

Rates vary by age and gender for Miscellaneous Plans. Rates vary by age and category for Safety Plans.

Age	Miscellaneous		Fire	Police	County Peace Officer	Schools	
	Male	Female	Male and Female	Male and Female	Male and Female	Male	Female
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
25	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
30	0.0002	0.0002	0.0001	0.0002	0.0001	0.0002	0.0001
35	0.0006	0.0009	0.0001	0.0003	0.0004	0.0006	0.0004
40	0.0015	0.0016	0.0001	0.0004	0.0007	0.0014	0.0009
45	0.0025	0.0024	0.0002	0.0005	0.0013	0.0028	0.0017
50	0.0033	0.0031	0.0005	0.0008	0.0018	0.0044	0.0030
55	0.0037	0.0031	0.0010	0.0013	0.0010	0.0049	0.0034
60	0.0038	0.0025	0.0015	0.0020	0.0006	0.0043	0.0024

- The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- The Police Non-Industrial Disability rates are also used for Other Safety, Local Sheriff and School Police.

Industrial (Job-Related) Disability

Rates vary by age and category.

<u>Age</u>	<u>Fire</u>	<u>Police</u>	<u>County Peace Officer</u>
20	0.0002	0.0007	0.0003
25	0.0012	0.0032	0.0015
30	0.0025	0.0064	0.0031
35	0.0037	0.0097	0.0046
40	0.0049	0.0129	0.0063
45	0.0061	0.0161	0.0078
50	0.0074	0.0192	0.0101
55	0.0721	0.0668	0.0173
60	0.0721	0.0668	0.0173

- The Police Industrial Disability rates are also used for Local Sheriff and Other Safety.
- Fifty Percent of the Police Industrial Disability rates are used for School Police.
- One Percent of the Police Industrial Disability rates are used for Local Prosecutors.
- Normally, rates are zero for Miscellaneous Plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50 percent will become the Non-Industrial Disability rate and 50 percent will become the Industrial Disability rate.

Service Retirement

Retirement rates vary by age, service, and formula, except for the safety 1/2 @ 55 and 2% @ 55 formulas, where retirement rates vary by age only.

Service Retirement

Public Agency Miscellaneous 1.5% @ 65

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.008	0.011	0.013	0.015	0.017	0.019
51	0.007	0.010	0.012	0.013	0.015	0.017
52	0.010	0.014	0.017	0.019	0.021	0.024
53	0.008	0.012	0.015	0.017	0.019	0.022
54	0.012	0.016	0.019	0.022	0.025	0.028
55	0.018	0.025	0.031	0.035	0.038	0.043
56	0.015	0.021	0.025	0.029	0.032	0.036
57	0.020	0.028	0.033	0.038	0.043	0.048
58	0.024	0.033	0.040	0.046	0.052	0.058
59	0.028	0.039	0.048	0.054	0.060	0.067
60	0.049	0.069	0.083	0.094	0.105	0.118
61	0.062	0.087	0.106	0.120	0.133	0.150
62	0.104	0.146	0.177	0.200	0.223	0.251
63	0.099	0.139	0.169	0.191	0.213	0.239
64	0.097	0.136	0.165	0.186	0.209	0.233
65	0.140	0.197	0.240	0.271	0.302	0.339
66	0.092	0.130	0.157	0.177	0.198	0.222
67	0.129	0.181	0.220	0.249	0.277	0.311
68	0.092	0.129	0.156	0.177	0.197	0.221
69	0.092	0.130	0.158	0.178	0.199	0.224
70	0.103	0.144	0.175	0.198	0.221	0.248

Public Agency Miscellaneous 2% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.015	0.018	0.021	0.023	0.026
51	0.009	0.013	0.016	0.018	0.020	0.023
52	0.013	0.018	0.022	0.025	0.028	0.031
53	0.011	0.016	0.019	0.022	0.025	0.028
54	0.015	0.021	0.025	0.028	0.032	0.036
55	0.023	0.032	0.039	0.044	0.049	0.055
56	0.019	0.027	0.032	0.037	0.041	0.046
57	0.025	0.035	0.042	0.048	0.054	0.060
58	0.030	0.042	0.051	0.058	0.065	0.073
59	0.035	0.049	0.060	0.068	0.076	0.085
60	0.062	0.087	0.105	0.119	0.133	0.149
61	0.079	0.110	0.134	0.152	0.169	0.190
62	0.132	0.186	0.225	0.255	0.284	0.319
63	0.126	0.178	0.216	0.244	0.272	0.305
64	0.122	0.171	0.207	0.234	0.262	0.293
65	0.173	0.243	0.296	0.334	0.373	0.418
66	0.114	0.160	0.194	0.219	0.245	0.274
67	0.159	0.223	0.271	0.307	0.342	0.384
68	0.113	0.159	0.193	0.218	0.243	0.273
69	0.114	0.161	0.195	0.220	0.246	0.276
70	0.127	0.178	0.216	0.244	0.273	0.306

Service Retirement

Public Agency Miscellaneous 2% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.015	0.020	0.024	0.029	0.033	0.039
51	0.013	0.016	0.020	0.024	0.027	0.033
52	0.014	0.018	0.022	0.027	0.030	0.036
53	0.017	0.022	0.027	0.032	0.037	0.043
54	0.027	0.034	0.041	0.049	0.056	0.067
55	0.050	0.064	0.078	0.094	0.107	0.127
56	0.045	0.057	0.069	0.083	0.095	0.113
57	0.048	0.061	0.074	0.090	0.102	0.122
58	0.052	0.066	0.080	0.097	0.110	0.131
59	0.060	0.076	0.092	0.111	0.127	0.151
60	0.072	0.092	0.112	0.134	0.153	0.182
61	0.089	0.113	0.137	0.165	0.188	0.224
62	0.128	0.162	0.197	0.237	0.270	0.322
63	0.129	0.164	0.199	0.239	0.273	0.325
64	0.116	0.148	0.180	0.216	0.247	0.294
65	0.174	0.221	0.269	0.323	0.369	0.439
66	0.135	0.171	0.208	0.250	0.285	0.340
67	0.133	0.169	0.206	0.247	0.282	0.336
68	0.118	0.150	0.182	0.219	0.250	0.297
69	0.116	0.147	0.179	0.215	0.246	0.293
70	0.138	0.176	0.214	0.257	0.293	0.349

Public Agency Miscellaneous 2.5% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.021	0.026	0.032	0.038	0.043	0.049
53	0.026	0.033	0.040	0.048	0.055	0.062
54	0.043	0.054	0.066	0.078	0.089	0.101
55	0.088	0.112	0.136	0.160	0.184	0.208
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.083	0.105	0.128	0.150	0.173	0.195
62	0.121	0.154	0.187	0.220	0.253	0.286
63	0.105	0.133	0.162	0.190	0.219	0.247
64	0.105	0.133	0.162	0.190	0.219	0.247
65	0.143	0.182	0.221	0.260	0.299	0.338
66	0.105	0.133	0.162	0.190	0.219	0.247
67	0.105	0.133	0.162	0.190	0.219	0.247
68	0.105	0.133	0.162	0.190	0.219	0.247
69	0.105	0.133	0.162	0.190	0.219	0.247
70	0.125	0.160	0.194	0.228	0.262	0.296

Service Retirement

Public Agency Miscellaneous 2.7% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.028	0.035	0.043	0.050	0.058	0.065
51	0.022	0.028	0.034	0.040	0.046	0.052
52	0.022	0.028	0.034	0.040	0.046	0.052
53	0.028	0.035	0.043	0.050	0.058	0.065
54	0.044	0.056	0.068	0.080	0.092	0.104
55	0.091	0.116	0.140	0.165	0.190	0.215
56	0.061	0.077	0.094	0.110	0.127	0.143
57	0.063	0.081	0.098	0.115	0.132	0.150
58	0.074	0.095	0.115	0.135	0.155	0.176
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.085	0.109	0.132	0.155	0.178	0.202
62	0.124	0.158	0.191	0.225	0.259	0.293
63	0.107	0.137	0.166	0.195	0.224	0.254
64	0.107	0.137	0.166	0.195	0.224	0.254
65	0.146	0.186	0.225	0.265	0.305	0.345
66	0.107	0.137	0.166	0.195	0.224	0.254
67	0.107	0.137	0.166	0.195	0.224	0.254
68	0.107	0.137	0.166	0.195	0.224	0.254
69	0.107	0.137	0.166	0.195	0.224	0.254
70	0.129	0.164	0.199	0.234	0.269	0.304

Public Agency Miscellaneous 3% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.019	0.025	0.030	0.035	0.040	0.046
53	0.025	0.032	0.038	0.045	0.052	0.059
54	0.039	0.049	0.060	0.070	0.081	0.091
55	0.083	0.105	0.128	0.150	0.173	0.195
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.080	0.102	0.123	0.145	0.167	0.189
60	0.094	0.119	0.145	0.170	0.196	0.221
61	0.088	0.112	0.136	0.160	0.184	0.208
62	0.127	0.161	0.196	0.230	0.265	0.299
63	0.110	0.140	0.170	0.200	0.230	0.260
64	0.110	0.140	0.170	0.200	0.230	0.260
65	0.149	0.189	0.230	0.270	0.311	0.351
66	0.110	0.140	0.170	0.200	0.230	0.260
67	0.110	0.140	0.170	0.200	0.230	0.260
68	0.110	0.140	0.170	0.200	0.230	0.260
69	0.110	0.140	0.170	0.200	0.230	0.260
70	0.132	0.168	0.204	0.240	0.276	0.312

Service Retirement

Public Agency Miscellaneous 2% @ 62

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
52	0.0103	0.0132	0.0160	0.0188	0.0216	0.0244
53	0.0131	0.0167	0.0202	0.0238	0.0273	0.0309
54	0.0213	0.0272	0.0330	0.0388	0.0446	0.0504
55	0.0440	0.0560	0.0680	0.0800	0.0920	0.1040
56	0.0303	0.0385	0.0468	0.0550	0.0633	0.0715
57	0.0363	0.0462	0.0561	0.0660	0.0759	0.0858
58	0.00465	0.0592	0.0718	0.0845	0.0972	0.1099
59	0.0578	0.0735	0.0893	0.1050	0.1208	0.1365
60	0.0616	0.0784	0.0952	0.1120	0.1288	0.1456
61	0.0888	0.0788	0.0956	0.1125	0.1294	0.1463
62	0.0941	0.1232	0.1496	0.1760	0.2024	0.2288
63	0.1287	0.1131	0.1373	0.1615	0.1857	0.2100
64	0.1045	0.1197	0.1454	0.1710	0.1967	0.2223
65	0.1045	0.1638	0.1989	0.2340	0.2691	0.3042
66	0.1045	0.1330	0.1615	0.1900	0.2185	0.2470
67	0.1045	0.1330	0.1615	0.1900	0.2185	0.2470
68	0.1045	0.1330	0.1615	0.1900	0.2185	0.2470
69	0.1045	0.1330	0.1615	0.1900	0.2185	0.2470
70	0.1254	0.1596	0.1938	0.2280	0.2622	0.9640

Service Retirement

Public Agency Fire ½ @ 55 and 2% @ 55

Age	Rate	Age	Rate
50	0.01588	56	0.11079
51	0.00000	57	0.00000
52	0.03442	58	0.09499
53	0.01990	59	0.04409
54	0.04132	60	1.00000
55	0.07513		

Public Agency Police ½ @ 55 and 2% @ 55

Age	Rate	Age	Rate
50	0.02552	56	0.06921
51	0.00000	57	0.05113
52	0.01637	58	0.07241
53	0.02717	59	0.07043
54	0.00949	60	1.00000
55	0.16674		

Service Retirement

Public Agency Police 2% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.014	0.014	0.014	0.025	0.045
51	0.012	0.012	0.012	0.012	0.023	0.040
52	0.026	0.026	0.026	0.026	0.048	0.086
53	0.052	0.052	0.052	0.052	0.096	0.171
54	0.070	0.070	0.070	0.070	0.128	0.227
55	0.090	0.090	0.090	0.090	0.165	0.293
56	0.064	0.064	0.064	0.064	0.117	0.208
57	0.071	0.071	0.071	0.071	0.130	0.232
58	0.063	0.063	0.063	0.063	0.115	0.205
59	0.140	0.140	0.140	0.140	0.174	0.254
60	0.140	0.140	0.140	0.140	0.172	0.251
61	0.140	0.140	0.140	0.140	0.172	0.251
62	0.140	0.140	0.140	0.140	0.172	0.251
63	0.140	0.140	0.140	0.140	0.172	0.251
64	0.140	0.140	0.140	0.140	0.172	0.251
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement

Public Agency Fire 2% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.013	0.019
52	0.017	0.017	0.017	0.017	0.027	0.040
53	0.047	0.047	0.047	0.047	0.072	0.107
54	0.064	0.064	0.064	0.064	0.098	0.147
55	0.087	0.087	0.087	0.087	0.134	0.200
56	0.078	0.078	0.078	0.078	0.120	0.180
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.079	0.079	0.079	0.079	0.122	0.182
59	0.073	0.073	0.073	0.073	0.112	0.168
60	0.114	0.114	0.114	0.114	0.175	0.262
61	0.114	0.114	0.114	0.114	0.175	0.262
62	0.114	0.114	0.114	0.114	0.175	0.262
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 3% @ 55						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.019	0.019	0.019	0.019	0.040	0.060
51	0.024	0.024	0.024	0.024	0.049	0.074
52	0.024	0.024	0.024	0.024	0.051	0.077
53	0.059	0.059	0.059	0.059	0.121	0.183
54	0.069	0.069	0.069	0.069	0.142	0.215
55	0.116	0.116	0.116	0.116	0.240	0.363
56	0.076	0.076	0.076	0.076	0.156	0.236
57	0.058	0.058	0.058	0.058	0.120	0.181
58	0.076	0.076	0.076	0.076	0.157	0.237
59	0.094	0.094	0.094	0.094	0.193	0.292
60	0.141	0.141	0.141	0.141	0.290	0.438
61	0.094	0.094	0.094	0.094	0.193	0.292
62	0.118	0.118	0.118	0.118	0.241	0.365
63	0.094	0.094	0.094	0.094	0.193	0.292
64	0.094	0.094	0.094	0.094	0.193	0.292
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement

Public Agency Fire 3% @ 55						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.012	0.012	0.012	0.018	0.028	0.033
51	0.008	0.008	0.008	0.012	0.019	0.022
52	0.018	0.018	0.018	0.027	0.042	0.050
53	0.043	0.043	0.043	0.062	0.098	0.114
54	0.057	0.057	0.057	0.083	0.131	0.152
55	0.092	0.092	0.092	0.134	0.211	0.246
56	0.081	0.081	0.081	0.118	0.187	0.218
57	0.100	0.100	0.100	0.146	0.230	0.268
58	0.081	0.081	0.081	0.119	0.187	0.219
59	0.078	0.078	0.078	0.113	0.178	0.208
60	0.117	0.117	0.117	0.170	0.267	0.312
61	0.078	0.078	0.078	0.113	0.178	0.208
62	0.098	0.098	0.098	0.141	0.223	0.260
63	0.078	0.078	0.078	0.113	0.178	0.208
64	0.078	0.078	0.078	0.113	0.178	0.208
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Age	Public Agency Police 2% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0110	0.0110	0.0110	0.0110	0.0202	0.0361
51	0.0086	0.0086	0.0086	0.0086	0.0158	0.0281
52	0.0183	0.0183	0.0183	0.0183	0.0336	0.0599
53	0.0366	0.0366	0.0366	0.0366	0.0670	0.1194
54	0.0488	0.0488	0.0488	0.0488	0.0893	0.1592
55	0.0629	0.0629	0.0629	0.0629	0.1152	0.2052
56	0.0447	0.0447	0.0447	0.0447	0.0816	0.1455
57	0.0640	0.0640	0.0640	0.0640	0.1170	0.2086
58	0.0471	0.0471	0.0471	0.0471	0.0862	0.1537
59	0.1047	0.1047	0.1047	0.1047	0.1301	0.1908
60	0.1047	0.1047	0.1047	0.1047	0.1289	0.1880
61	0.1047	0.1047	0.1047	0.1047	0.1289	0.1880
62	0.1047	0.1047	0.1047	0.1047	0.1289	0.1880
63	0.1047	0.1047	0.1047	0.1047	0.1289	0.1880
64	0.1047	0.1047	0.1047	0.1047	0.1289	0.1880
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement

Age	Public Agency Fire 2% @ 57					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0052	0.0052	0.0052	0.0052	0.0081	0.0121
51	0.0057	0.0057	0.0057	0.0057	0.0088	0.0131
52	0.0121	0.0121	0.0121	0.0121	0.0187	0.0280
53	0.0326	0.0326	0.0326	0.0326	0.0501	0.0750
54	0.0447	0.0447	0.0447	0.0447	0.0688	0.1030
55	0.0608	0.0608	0.0608	0.0608	0.0935	0.1400
56	0.0545	0.0545	0.0545	0.0545	0.0840	0.1257
57	0.0811	0.0811	0.0811	0.0811	0.01248	0.1869
58	0.0593	0.0593	0.0593	0.0593	0.0913	0.1366
59	0.0547	0.0547	0.0547	0.0547	0.0842	0.1261
60	0.0851	0.0851	0.0851	0.0851	0.1310	0.1961
61	0.0852	0.0852	0.0852	0.0852	0.1312	0.1964
62	0.0852	0.0852	0.0852	0.0852	0.1312	0.1964
63	0.0852	0.0852	0.0852	0.0852	0.1312	0.1964
64	0.0852	0.0852	0.0852	0.0852	0.1312	0.1964
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Service Retirement

Public Agency Police 2.5% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0138	0.0138	0.0138	0.0138	0.0253	0.0451
51	0.0117	0.0117	0.0117	0.0117	0.0215	0.0382
52	0.0249	0.0249	0.0249	0.0249	0.0456	0.0812
53	0.0471	0.0471	0.0471	0.0471	0.0861	0.1535
54	0.0627	0.0627	0.0627	0.0627	0.1148	0.2047
55	0.0764	0.0764	0.0764	0.0764	0.1398	0.2492
56	0.0542	0.0542	0.0542	0.0542	0.0991	0.1767
57	0.0711	0.0711	0.0711	0.0711	0.1300	0.2318
58	0.0565	0.0565	0.0565	0.0565	0.1034	0.1844
59	0.1256	0.1256	0.1256	0.1256	0.1562	0.2290
60	0.1256	0.1256	0.1256	0.1256	0.1547	0.2255
61	0.1256	0.1256	0.1256	0.1256	0.1547	0.2255
62	0.1256	0.1256	0.1256	0.1256	0.1547	0.2255
63	0.1256	0.1256	0.1256	0.1256	0.1547	0.2255
64	0.1256	0.1256	0.1256	0.1256	0.1547	0.2255
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement

Public Agency Fire 2.5% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0065	0.0065	0.0065	0.0065	0.0101	0.0151
51	0.0077	0.0077	0.0077	0.0077	0.0119	0.0178
52	0.0164	0.0164	0.0164	0.0164	0.0254	0.0380
53	0.0419	0.0419	0.0419	0.0419	0.0644	0.0965
54	0.0574	0.0574	0.0574	0.0574	0.0885	0.1324
55	0.0738	0.0738	0.0738	0.0738	0.1136	0.1700
56	0.0662	0.0662	0.0662	0.0662	0.1020	0.2077
57	0.0901	0.0901	0.0901	0.0901	0.1387	0.1639
58	0.0711	0.0711	0.0711	0.0711	0.1095	0.1513
59	0.0656	0.0656	0.0656	0.0656	0.1011	0.2354
60	0.1022	0.1022	0.1022	0.1022	0.1572	0.2356
61	0.1022	0.1022	0.1022	0.1022	0.1574	0.2356
62	0.1022	0.1022	0.1022	0.1022	0.1574	0.2356
63	0.1022	0.1022	0.1022	0.1022	0.1574	0.2356
64	0.1022	0.1022	0.1022	0.1022	0.1574	0.2356
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Service Retirement

Public Agency Police 2.7% @ 57

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0138	0.0138	0.0138	0.0138	0.0253	0.0451
51	0.0123	0.0123	0.0123	0.0123	0.0226	0.0402
52	0.0249	0.0249	0.0249	0.0249	0.0456	0.0812
53	0.0497	0.0497	0.0497	0.0497	0.0909	0.1621
54	0.0662	0.0662	0.0662	0.0662	0.1211	0.2160
55	0.0854	0.0854	0.0854	0.0854	0.1563	0.2785
56	0.0606	0.0606	0.0606	0.0606	0.1108	0.1975
57	0.0711	0.0711	0.0711	0.0711	0.1300	0.2318
58	0.0628	0.0628	0.0628	0.0628	0.1149	0.2049
59	0.1396	0.1396	0.1396	0.1396	0.1735	0.2544
60	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
61	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
62	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
63	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
64	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement

Public Agency Fire 2.7% @ 57

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0065	0.0065	0.0065	0.0065	0.0101	0.0151
51	0.0081	0.0081	0.0081	0.0081	0.0125	0.0187
52	0.0164	0.0164	0.0164	0.0164	0.0254	0.0380
53	0.0442	0.0442	0.0442	0.0442	0.0680	0.1018
54	0.0606	0.0606	0.0606	0.0606	0.0934	0.1397
55	0.0825	0.0825	0.0825	0.0825	0.1269	0.1900
56	0.0740	0.0740	0.0740	0.0740	0.1140	0.1706
57	0.0901	0.0901	0.0901	0.0901	0.1387	0.2077
58	0.0790	0.0790	0.0790	0.0790	0.1217	0.1821
59	0.0729	0.0729	0.0729	0.0729	0.1123	0.1681
60	0.1135	0.1135	0.1135	0.1135	0.1747	0.2615
61	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
62	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
63	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
64	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Service Retirement

Age	Schools 2% @ 55					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.009	0.013	0.015	0.016	0.018
51	0.005	0.010	0.014	0.017	0.019	0.021
52	0.006	0.012	0.017	0.020	0.022	0.025
53	0.007	0.014	0.019	0.023	0.026	0.029
54	0.012	0.024	0.033	0.039	0.044	0.049
55	0.024	0.048	0.067	0.079	0.088	0.099
56	0.020	0.039	0.055	0.065	0.072	0.081
57	0.021	0.042	0.059	0.070	0.078	0.087
58	0.025	0.050	0.070	0.083	0.092	0.103
59	0.029	0.057	0.080	0.095	0.105	0.118
60	0.037	0.073	0.102	0.121	0.134	0.150
61	0.046	0.090	0.126	0.149	0.166	0.186
62	0.076	0.151	0.212	0.250	0.278	0.311
63	0.069	0.136	0.191	0.225	0.251	0.281
64	0.067	0.133	0.185	0.219	0.244	0.273
65	0.091	0.180	0.251	0.297	0.331	0.370
66	0.072	0.143	0.200	0.237	0.264	0.295
67	0.067	0.132	0.185	0.218	0.243	0.272
68	0.060	0.118	0.165	0.195	0.217	0.243
69	0.067	0.133	0.187	0.220	0.246	0.275
70	0.066	0.131	0.183	0.216	0.241	0.270

Miscellaneous

Superfunded Status

Prior to enactment of the Public Employees' Pension Reform Act (PEPRA) that became effective January 1, 2013, a plan in superfunded status (actuarial value of assets exceeding present value of benefits) would normally pay a zero employer contribution rate while also being permitted to use its superfunded assets to pay its employees' normal member contributions.

However, Section 7522.52(a) of PEPRA states, "In any fiscal year a public employer's contribution to a defined benefit plan, in combination with employee contributions to that defined benefit plan, shall not be less than the total normal cost rate..." This means that not only must employers pay their employer normal cost regardless of plan surplus, but also, employers may no longer use superfunded assets to pay employee normal member contributions.

Internal Revenue Code Section 415

The limitations on benefits imposed by Internal Revenue Code Section 415 are taken into account in this valuation. Each year the impact of any changes in this limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. This results in lower contributions for those employers contributing to the Replacement Benefit Fund and protects CalPERS from prefunding expected benefits in excess of limits imposed by federal tax law.

Internal Revenue Code Section 401(a)(17)

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) are taken into account in this valuation. Each year, the impact of any changes in the compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base.

PEPRA Assumptions

The Public Employees' Pension Reform Act of 2013 (PEPRA) mandated new benefit formulas and new member contributions for new members (as defined by PEPRA) hired after January 1, 2013. For non-pooled plans, these new members will first be reflected in the June 30, 2013 non-pooled plan valuations. New members in pooled plans will first be reflected in the new Miscellaneous and Safety risk pools created by the CalPERS Board in November 2012 in response to the passage of PEPRA, also beginning with the June 30, 2013 valuation. Different assumptions for these new PEPRA members are disclosed above.

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APPENDIX B

PRINCIPAL PLAN PROVISIONS

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The following is a description of the principal plan provisions used in calculating costs and liabilities. We have indicated whether a plan provision is standard or optional. Standard benefits are applicable to all members while optional benefits vary among employers. Optional benefits that apply to a single period of time, such as Golden Handshakes, have not been included. Many of the statements in this summary are general in nature, and are intended to provide an easily understood summary of the complex Public Employees' Retirement Law. The law itself governs in all situations.

PEPRA Benefit Changes

The Public Employees' Pension Reform Act of 2013 (PEPRA) requires new benefits and member contributions for new members as defined by PEPRA, that are hired after January 1, 2013. These PEPRA members are reflected in your June 30, 2013 actuarial valuation. Members in pooled plans are reflected in the new Miscellaneous and Safety risk pools created by the CalPERS Board in November 2012 in response to the passage of PEPRA, beginning with the June 30, 2013 valuation.

Service Retirement

Eligibility

A classic CalPERS member or PEPRA Safety member becomes eligible for Service Retirement upon attainment of age 50 with at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). For employees hired into a plan with the 1.5% at 65 formula, eligibility for service retirement is age 55 with at least 5 years of service. PEPRA miscellaneous members become eligible for Service Retirement upon attainment of age 52 with at least 5 years of service.

Benefit

The Service Retirement benefit is a monthly allowance equal to the product of the *benefit factor*, *years of service*, and *final compensation*.

- The *benefit factor* depends on the benefit formula specified in your agency's contract. The table below shows the factors for each of the available formulas. Factors vary by the member's age at retirement. Listed are the factors for retirement at whole year ages:

Miscellaneous Plan Formulas

Retirement Age	1.5% at 65	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60	PEPRA 2% at 62
50	0.5000%	1.092%	1.426%	2.000%	2.000%	2.000%	N/A
51	0.5667%	1.156%	1.522%	2.100%	2.140%	2.100%	N/A
52	0.6334%	1.224%	1.628%	2.200%	2.280%	2.200%	1.000%
53	0.7000%	1.296%	1.742%	2.300%	2.420%	2.300%	1.100%
54	0.7667%	1.376%	1.866%	2.400%	2.560%	2.400%	1.200%
55	0.8334%	1.460%	2.000%	2.500%	2.700%	2.500%	1.300%
56	0.9000%	1.552%	2.052%	2.500%	2.700%	2.600%	1.400%
57	0.9667%	1.650%	2.104%	2.500%	2.700%	2.700%	1.500%
58	1.0334%	1.758%	2.156%	2.500%	2.700%	2.800%	1.600%
59	1.1000%	1.874%	2.210%	2.500%	2.700%	2.900%	1.700%
60	1.1667%	2.000%	2.262%	2.500%	2.700%	3.000%	1.800%
61	1.2334%	2.134%	2.314%	2.500%	2.700%	3.000%	1.900%
62	1.3000%	2.272%	2.366%	2.500%	2.700%	3.000%	2.000%

CALPERS ACTUARIAL VALUATION – June 30, 2013
 SAFETY PLAN OF THE COUNTY OF RIVERSIDE
 PRINCIPAL PLAN PROVISIONS

APPENDIX B

63	1.3667%	2.418%	2.418%	2.500%	2.700%	3.000%	2.100%
64	1.4334%	2.418%	2.418%	2.500%	2.700%	3.000%	2.200%
65	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.300%
66	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.400%
67 & up	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.500%

Safety Plan Formulas

Retirement Age	½ at 55 *	2% at 55	2% at 50	3% at 55	3% at 50
50	1.783%	1.426%	2.000%	2.400%	3.000%
51	1.903%	1.522%	2.140%	2.520%	3.000%
52	2.035%	1.628%	2.280%	2.640%	3.000%
53	2.178%	1.742%	2.420%	2.760%	3.000%
54	2.333%	1.866%	2.560%	2.880%	3.000%
55 & Up	2.500%	2.000%	2.700%	3.000%	3.000%

* For this formula, the benefit factor also varies by entry age. The factors shown are for members with an entry age of 35 or greater. If entry age is less than 35, then the age 55 benefit factor is 50 percent divided by the difference between age 55 and entry age. The benefit factor for ages prior to age 55 is the same proportion of the age 55 benefit factor as in the above table.

PEPRA Safety Plan Formulas

Retirement Age	2% at 57	2.5% at 57	2.7% at 57
50	1.426%	2.000%	2.000%
51	1.508%	2.071%	2.100%
52	1.590%	2.143%	2.200%
53	1.672%	2.214%	2.300%
54	1.754%	2.286%	2.400%
55	1.836%	2.357%	2.500%
56	1.918%	2.429%	2.600%
57 & Up	2.000%	2.500%	2.700%

- The *years of service* is the amount credited by CalPERS to a member while he or she is employed in this group (or for other periods that are recognized under the employer's contract with CalPERS). For a member who has earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance. An agency may contract for an optional benefit where any unused sick leave accumulated at the time of retirement will be converted to credited service at a rate of 0.004 years of service for each day of sick leave.
- The *final compensation* is the monthly average of the member's highest 36 or 12 consecutive months' full-time equivalent monthly pay (no matter which CalPERS employer paid this compensation). The standard benefit is 36 months. Employers have the option of providing a final compensation equal to the highest 12 consecutive months. Final compensation must be defined by the highest 36 consecutive months' pay under the 1.5% at 65 formula. PEPRA members have a cap on the annual salary that can be used to calculate final compensation for all new members based on the Social Security Contribution and Benefit Base. For employees that participate in

Social Security this cap is \$113,700 for 2013 and for those employees that do not participate in social security the cap for 2013 is \$136,440, the equivalent of 120 percent of the 2013 Contribution and Benefit Base. Adjustments to the caps are permitted annually based on changes to the CPI for All Urban Consumers.

- Employees must be covered by Social Security with the 1.5% at 65 formula. Social Security is optional for all other benefit formulas. For employees covered by Social Security, the Modified formula is the standard benefit. Under this type of formula, the final compensation is offset by \$133.33 (or by one third if the final compensation is less than \$400). Employers may contract for the Full benefit with Social Security that will eliminate the offset applicable to the final compensation. For employees not covered by Social Security, the Full benefit is paid with no offsets. Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 if members are not covered by Social Security or \$513 if members are covered by Social Security.
- The Miscellaneous Service Retirement benefit is not capped. The Safety Service Retirement benefit is capped at 90 percent of final compensation.

Vested Deferred Retirement

Eligibility for Deferred Status

A CalPERS member becomes eligible for a deferred vested retirement benefit when he or she leaves employment, keeps his or her contribution account balance on deposit with CalPERS, **and** has earned at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements).

Eligibility to Start Receiving Benefits

The CalPERS classic members and Safety PEPRA members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for Deferred Status and upon attainment of age 50 (55 for employees hired into a 1.5% @ 65 plan). PEPRA Miscellaneous members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for Deferred Status and upon attainment of age 52.

Benefit

The vested deferred retirement benefit is the same as the Service Retirement benefit, where the benefit factor is based on the member's age at allowance commencement. For members who have earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance.

Non-Industrial (Non-Job Related) Disability Retirement

Eligibility

A CalPERS member is eligible for Non-Industrial Disability Retirement if he or she becomes *disabled* and has at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). There is no special age requirement. *Disabled* means the member is unable to perform his or her job because of an illness or injury, which is expected to be permanent or to last indefinitely. The illness or injury does not have to be job related. A CalPERS member must be actively employed by any CalPERS employer at the time of disability in order to be eligible for this benefit.

Standard Benefit

The standard Non-Industrial Disability Retirement benefit is a monthly allowance equal to 1.8 percent of final compensation, multiplied by *service*, which is determined as follows:

- *Service* is CalPERS credited service, for members with less than 10 years of service or greater than 18.518 years of service; or
- *Service* is CalPERS credited service plus the additional number of years that the member would have worked until age 60, for members with at least 10 years but not more than 18.518 years of service. The maximum benefit in this case is 33 1/3 percent of Final Compensation.

Improved Benefit

Employers have the option of providing the Improved Non-Industrial Disability Retirement benefit. This benefit provides a monthly allowance equal to 30 percent of final compensation for the first 5 years of service, plus 1 percent for each additional year of service to a maximum of 50 percent of final compensation.

Members who are eligible for a larger service retirement benefit may choose to receive that benefit in lieu of a disability benefit. Members eligible to retire, and who have attained the normal retirement age determined by their service retirement benefit formula, will receive the same dollar amount for disability retirement as that payable for service retirement. For members who have earned service with multiple CalPERS employers, the benefit attributed to each employer is the total disability allowance multiplied by the ratio of service with a particular employer to the total CalPERS service.

Industrial (Job Related) Disability Retirement

All safety members have this benefit. For miscellaneous members, employers have the option of providing this benefit. An employer may choose to provide the Increased benefit option or the Improved benefit option.

Eligibility

An employee is eligible for Industrial Disability Retirement if he or she becomes disabled while working, where disabled means the member is unable to perform the duties of the job because of a work-related illness or injury, which is, expected to be permanent or to last indefinitely. A CalPERS member who has left active employment within this group is not eligible for this benefit, except to the extent described below.

Standard Benefit

The standard Industrial Disability Retirement benefit is a monthly allowance equal to 50 percent of final compensation.

Increased Benefit (75 percent of Final Compensation)

The increased Industrial Disability Retirement benefit is a monthly allowance equal to 75 percent final compensation for total disability.

Improved Benefit (50 percent to 90 percent of Final Compensation)

The improved Industrial Disability Retirement benefit is a monthly allowance equal to the Workman's Compensation Appeals Board permanent disability rate percentage (if 50 percent or greater, with a maximum of 90 percent) times the final compensation.

For a CalPERS member not actively employed in this group who became disabled while employed by some other CalPERS employer, the benefit is a return of accumulated member contributions with respect to employment in this group. With the standard or increased benefit, a member may also choose to receive the annuitization of the accumulated member contributions.

If a member is eligible for Service Retirement and if the Service Retirement benefit is more than the Industrial Disability Retirement benefit, the member may choose to receive the larger benefit.

Post-Retirement Death Benefit

Standard Lump Sum Payment

Upon the death of a retiree, a one-time lump sum payment of \$500 will be made to the retiree's designated survivor(s), or to the retiree's estate.

Improved Lump Sum Payment

Employers have the option of providing an improved lump sum death benefit of \$600, \$2,000, \$3,000, \$4,000 or \$5,000.

Form of Payment for Retirement Allowance

Standard Form of Payment

Generally, the retirement allowance is paid to the retiree in the form of an annuity for as long as he or she is alive. The retiree may choose to provide for a portion of his or her allowance to be paid to any designated beneficiary after the retiree's death. CalPERS provides for a variety of such benefit options, which the retiree pays for by taking a reduction in his or her retirement allowance. Such reduction takes into account the amount to be provided to the beneficiary and the probable duration of payments (based on the ages of the member and beneficiary) made subsequent to the member's death.

Improved Form of Payment (Post Retirement Survivor Allowance)

Employers have the option to contract for the post retirement survivor allowance.

For retirement allowances with respect to service subject to the modified formula, 25 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. For retirement allowances with respect to service subject to the full or supplemental formula, 50 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. This additional benefit is often referred to as post retirement survivor allowance (PRSA) or simply as survivor continuance.

In other words, 25 percent or 50 percent of the allowance, the continuance portion, is paid to the retiree for as long as he or she is alive, and that same amount is continued to the retiree's spouse (or if no eligible spouse, to unmarried children until they attain age 18; or, if no eligible children, to a qualifying dependent parent) for the rest of his or her lifetime. This benefit will not be discontinued in the event the spouse remarries.

The remaining 75 percent or 50 percent of the retirement allowance, which may be referred to as the option portion of the benefit, is paid to the retiree as an annuity for as long as he or she is alive. Or, the retiree may choose to provide for some of this option portion to be paid to any designated beneficiary after the retiree's death. Benefit options applicable to the option portion are the same as those offered with the standard form. The reduction is calculated in the same manner but is applied only to the option portion.

Pre-Retirement Death Benefits

Basic Death Benefit

This is a standard benefit.

Eligibility

An employee's beneficiary (or estate) may receive the Basic Death benefit if the member dies while actively employed. A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Basic Death benefit.

Benefit

The Basic Death Benefit is a lump sum in the amount of the member's accumulated contributions, where interest is currently credited at 7.5 percent per year, plus a lump sum in the amount of one month's salary for each completed year of current service, up to a maximum of six months' salary. For purposes of this benefit, one month's salary is defined as the member's average monthly full-time rate of compensation during the 12 months preceding death.

1957 Survivor Benefit

This is a standard benefit.

Eligibility

An employee's *eligible survivor(s)* may receive the 1957 Survivor benefit if the member dies while actively employed, has attained at least age 50 for Classic and Safety PEPRAs members and age 52 for Miscellaneous PEPRAs members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death or, if there is no eligible spouse, to the member's unmarried children under age 18. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this 1957 Survivor benefit.

Benefit

The 1957 Survivor benefit is a monthly allowance equal to one-half of the unmodified Service Retirement benefit that the member would have been entitled to receive if the member had retired on the date of his or her death. If the benefit is payable to the spouse, the benefit is discontinued upon the death of the spouse. If the benefit is payable to a dependent child, the benefit will be discontinued upon death or attainment of age 18, unless the child is disabled. The total amount paid will be at least equal to the Basic Death benefit.

Optional Settlement 2W Death Benefit

This is an optional benefit.

Eligibility

An employee's *eligible survivor* may receive the Optional Settlement 2W Death benefit if the member dies while actively employed, has attained at least age 50 for Classic and Safety PEPRAs members and age 52 for Miscellaneous PEPRAs members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Optional Settlement 2W Death benefit.

Benefit

The Optional Settlement 2W Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Special Death Benefit

This is a standard benefit for safety members. An employer may elect to provide this benefit for miscellaneous members.

Eligibility

An employee's *eligible survivor(s)* may receive the Special Death benefit if the member dies while actively employed and the death is job-related. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an *eligible survivor* means the member's unmarried children under age 22. An *eligible survivor* who chooses to receive this benefit will not receive any other death benefit.

Benefit

The Special Death benefit is a monthly allowance equal to 50 percent of final compensation, and will be increased whenever the compensation paid to active employees is increased but ceasing to increase when the member would

have attained age 50. The allowance is payable to the surviving spouse until death at which time the allowance is continued to any unmarried children under age 22. There is a guarantee that the total amount paid will at least equal the Basic Death Benefit.

If the member's death is the result of an accident or injury caused by external violence or physical force incurred in the performance of the member's duty, and there are *eligible* surviving children (*eligible* means unmarried children under age 22) in addition to an eligible spouse, then an **additional monthly allowance** is paid equal to the following:

- if 1 eligible child: 12.5 percent of final compensation
- if 2 eligible children: 20.0 percent of final compensation
- if 3 or more eligible children: 25.0 percent of final compensation

Alternate Death Benefit for Local Fire Members

This is an optional benefit available only to local fire members.

Eligibility

An employee's *eligible survivor(s)* may receive the Alternate Death benefit in lieu of the Basic Death Benefit or the 1957 Survivor Benefit if the member dies while actively employed and has at least 20 years of total CalPERS service. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 18.

Benefit

The Alternate Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) If the member has not yet attained age 50, the benefit is equal to that which would be payable if the member had retired at age 50, based on service credited at the time of death. The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Cost-of-Living Adjustments (COLA)

Standard Benefit

Beginning the second calendar year after the year of retirement, retirement and survivor allowances will be annually adjusted on a compound basis by 2 percent.

Improved Benefit

Employers have the option of providing any of these improved cost-of-living adjustments by contracting for any one of these Class 1 optional benefits. An Improved COLA is not available in conjunction with the 1.5% at 65 formula.

Beginning the second calendar year after the year of retirement, retirement and survivor allowances will be annually adjusted on a compound basis by either 3 percent, 4 percent or 5 percent. However, the cumulative adjustment may not be greater than the cumulative change in the Consumer Price Index since the date of retirement.

Purchasing Power Protection Allowance (PPPA)

Retirement and survivor allowances are protected against inflation by PPPA. PPPA benefits are cost-of-living adjustments that are intended to maintain an individual's allowance at 80 percent of the initial allowance at

retirement adjusted for inflation since retirement. The PPPA benefit will be coordinated with other cost-of-living adjustments provided under the plan.

Employee Contributions

Each employee contributes toward his or her retirement based upon the retirement formula. The standard employee contribution is as described below.

The percent contributed below the monthly compensation breakpoint is 0 percent.
 The monthly compensation breakpoint is \$0 for full and supplemental formula members and \$133.33 for employees covered by the modified formula.
 The percent contributed above the monthly compensation breakpoint depends upon the benefit formula, as shown in the table below.

<u>Benefit Formula</u>	<u>Percent Contributed above the Breakpoint</u>
Miscellaneous, 1.5% at 65	2%
Miscellaneous, 2% at 60	7%
Miscellaneous, 2% at 55	7%
Miscellaneous, 2.5% at 55	8%
Miscellaneous, 2.7% at 55	8%
Miscellaneous, 3% at 60	8%
Miscellaneous, 2% at 62	50% of the Total Normal Cost
Safety, 1/2 at 55	Varies by entry age
Safety, 2% at 55	7%
Safety, 2% at 50	9%
Safety, 3% at 55	9%
Safety, 3% at 50	9%
Safety, 2% at 57	50% of the Total Normal Cost
Safety, 2.5% at 57	50% of the Total Normal Cost
Safety, 2.7% at 57	50% of the Total Normal Cost

The employer may choose to "pick-up" these contributions for the employees (Employer Paid Member Contributions or EPMC). EPMC is prohibited for new PEPRAs members.

An employer may also include Employee Cost Sharing in the contract, where employees agree to share the cost of the employer contribution with or without a change in benefit. These contributions are paid in addition to the member contribution.

Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 and the contribution rate is 6 percent if members are not covered by Social Security. If members are covered by Social Security, the offset is \$513 and the contribution rate is 5 percent.

Refund of Employee Contributions

If the member's service with the employer ends, and if the member does not satisfy the eligibility conditions for any of the retirement benefits above, the member may elect to receive a refund of his or her employee contributions, which are credited annually with 6 percent interest.

1959 Survivor Benefit

This is a pre-retirement death benefit available only to members not covered by Social Security. Any agency joining CalPERS subsequent to 1993 was required to provide this benefit if the members were not covered by Social Security. The benefit is optional for agencies joining CalPERS prior to 1994. Levels 1, 2 and 3 are now closed. Any new agency or any agency wishing to add this benefit or increase the current level must choose the 4th or Indexed Level.

This benefit is not included in the results presented in this valuation. More information on this benefit is available on the CalPERS website at www.calpers.ca.gov.

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APPENDIX C

PARTICIPANT DATA

- **SUMMARY OF VALUATION DATA**
- **ACTIVE MEMBERS**
- **TRANSFERRED AND TERMINATED MEMBERS**
- **RETIRED MEMBERS AND BENEFICIARIES**

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Summary of Valuation Data

	June 30, 2012	June 30, 2013
1. Active Members		
a) Counts	3,374	3,448
b) Average Attained Age	39.03	39.17
c) Average Entry Age to Rate Plan	29.05	28.87
d) Average Years of Service	9.98	10.30
e) Average Annual Covered Pay	\$ 77,565	\$ 78,703
f) Annual Covered Payroll	261,703,717	271,367,032
g) Projected Annual Payroll for Contribution Year	285,970,718	296,530,083
h) Present Value of Future Payroll	2,486,123,931	2,458,352,462
2. Transferred Members		
a) Counts	534	524
b) Average Attained Age	41.84	41.99
c) Average Years of Service	3.26	3.15
d) Average Annual Covered Pay	\$ 78,263	\$ 78,678
3. Terminated Members		
a) Counts	508	530
b) Average Attained Age	40.41	40.88
c) Average Years of Service	2.88	2.96
d) Average Annual Covered Pay	\$ 45,314	\$ 46,060
4. Retired Members and Beneficiaries		
a) Counts	1,980	2,073
b) Average Attained Age	61.70	62.06
c) Average Annual Benefits	\$ 40,739	\$ 42,123
5. Active to Retired Ratio [(1a) / (4a)]	1.70	1.66

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Average Annual Benefits represents benefit amounts payable by this plan only. Some members may have service with another agency and would therefore have a larger total benefit than would be included as part of the average shown here.

Active Members

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Distribution of Active Members by Age and Service

Years of Service at Valuation Date							
Attained Age	0-4	5-9	10-14	15-19	20-25	25+	Total
15-24	112	17	0	0	0	0	129
25-29	254	206	6	0	0	0	466
30-34	166	387	81	0	0	0	634
35-39	99	261	257	51	0	0	668
40-44	48	156	219	135	44	0	602
45-49	28	99	95	101	155	62	540
50-54	15	54	52	43	50	38	252
55-59	11	25	31	23	17	11	118
60-64	2	4	11	4	8	3	32
65 and over	0	0	2	3	1	1	7
All Ages	735	1209	754	360	275	115	3,448

Distribution of Average Annual Salaries by Age and Service

Years of Service at Valuation Date							
Attained Age	0-4	5-9	10-14	15-19	20-25	25+	Average
15-24	\$44,792	\$59,357	\$0	\$0	\$0	\$0	\$46,711
25-29	52,535	66,280	75,540	0	0	0	58,908
30-34	59,353	71,937	80,355	0	0	0	69,718
35-39	64,805	74,753	81,572	93,848	0	0	77,360
40-44	61,834	80,774	86,709	101,086	111,607	0	88,232
45-49	65,313	82,666	84,648	96,930	109,595	112,957	95,990
50-54	57,885	86,016	79,022	96,040	102,278	111,202	91,633
55-59	103,147	90,480	74,422	85,378	98,920	139,606	92,243
60-64	47,706	71,116	74,077	87,423	87,608	125,396	81,921
65 and over	0	0	61,433	59,450	71,825	91,623	66,380
All Ages	\$56,495	\$74,433	\$82,640	\$96,790	\$107,150	\$115,065	\$78,703

Transferred and Terminated Members

Distribution of Transfers to Other CalPERS Plans by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	4	0	0	0	0	0	4	\$56,893
25-29	44	2	0	0	0	0	46	64,008
30-34	65	7	1	0	0	0	73	71,069
35-39	80	13	2	0	0	0	95	79,031
40-44	94	17	6	1	0	0	118	81,001
45-49	66	18	5	2	2	0	93	92,036
50-54	43	8	4	2	0	0	57	74,865
55-59	19	6	1	2	0	0	28	83,747
60-64	7	0	0	0	0	0	7	61,741
65 and over	3	0	0	0	0	0	3	65,831
All Ages	425	71	19	7	2	0	524	78,678

Distribution of Terminated Participants with Funds on Deposit by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	16	0	0	0	0	0	16	\$40,601
25-29	49	2	0	0	0	0	51	42,204
30-34	92	15	0	0	0	0	107	45,033
35-39	70	9	5	0	0	0	84	43,867
40-44	58	20	4	2	0	0	84	47,484
45-49	57	13	19	3	3	1	96	56,272
50-54	38	9	3	1	0	0	51	44,238
55-59	25	3	1	0	0	0	29	37,926
60-64	9	0	0	0	0	0	9	26,369
65 and over	2	1	0	0	0	0	3	40,681
All Ages	416	72	32	6	3	1	530	46,060

Retired Members and Beneficiaries

Distribution of Retirees and Beneficiaries by Age and Retirement Type*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	0	0	2	0	3	6	11
30-34	0	0	5	0	1	2	8
35-39	0	2	11	0	0	1	14
40-44	0	3	28	0	1	1	33
45-49	0	6	44	0	4	4	58
50-54	218	7	65	0	5	6	301
55-59	372	6	91	4	6	13	492
60-64	301	5	97	3	2	17	425
65-69	242	2	74	1	1	22	342
70-74	111	1	57	2	1	18	190
75-79	54	0	21	0	1	20	96
80-84	38	1	15	0	0	22	76
85 and Over	10	0	2	0	0	15	27
All Ages	1346	33	512	10	25	147	2,073

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Age and Retirement Type*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 30	\$0	\$0	\$16,907	\$0	\$13,626	\$7,239	\$10,739
30-34	0	0	15,853	0	53,063	21,965	22,032
35-39	0	7,020	21,674	0	0	18,697	19,368
40-44	0	16,329	24,596	0	43,166	532	23,678
45-49	0	17,457	24,913	0	38,877	38,974	26,075
50-54	59,104	19,089	27,400	0	58,007	24,497	50,619
55-59	54,351	15,517	27,529	26,445	41,796	27,464	47,826
60-64	52,719	8,168	27,005	25,216	37,972	28,709	45,102
65-69	48,085	16,963	29,090	10,806	21,777	23,384	42,018
70-74	38,829	21,640	29,322	31,242	25,598	26,881	34,605
75-79	33,420	0	25,530	0	33,399	23,348	29,595
80-84	29,452	15,947	27,523	0	0	28,702	28,577
85 and Over	26,604	0	36,340	0	0	14,846	20,793
All Ages	\$50,600	\$15,359	\$27,124	\$25,472	\$39,606	\$24,312	\$42,123

Retired Members and Beneficiaries (continued)

Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	578	12	68	2	1	65	726
5-9	390	5	57	4	5	29	490
10-14	215	8	96	3	6	22	350
15-19	101	5	95	0	4	15	220
20-24	36	2	70	1	4	8	121
25-29	18	0	54	0	1	6	79
30 and Over	8	1	72	0	4	2	87
All Years	1346	33	512	10	25	147	2,073

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Years Retired and Retirement Type*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 5 Yrs	\$58,101	\$16,841	\$27,325	\$47,106	\$57,973	\$28,001	\$51,811
5-9	49,030	14,082	38,556	16,083	19,346	27,136	45,587
10-14	44,946	15,880	30,895	25,797	43,212	21,219	38,742
15-19	36,934	11,518	27,706	0	47,968	19,592	31,390
20-24	35,197	16,886	23,153	18,786	50,869	20,110	27,312
25-29	28,214	0	20,664	0	33,399	6,963	21,505
30 and Over	29,415	15,947	20,797	0	36,857	1,768	21,835
All Years	\$50,600	\$15,359	\$27,124	\$25,472	\$39,606	\$24,312	\$42,123

* Counts of members do not include alternate payees receiving benefits while the member is still working. Therefore, the total counts may not match information on page 25 of the report. Multiple records may exist for those who have service in more than one coverage group. This does not result in double counting of liabilities.

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APPENDIX D

DEVELOPMENT OF PEPRA MEMBER CONTRIBUTION RATE

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DEVELOPMENT OF PEPRA MEMBER CONTRIBUTION RATE

The table below shows the determination of the Member contribution rates based on 50 percent of the Total Normal Cost for each respective plan on June 30, 2013.

Assembly Bill (AB) 340 created PEPRA that implemented new benefit formulas and a final compensation period as well as new contribution requirements for new employees. In accordance with Section Code 7522.30(b), "new members ... shall have an initial contribution rate of at least 50 percent of the normal cost rate." The normal cost for the plan is dependent on the benefit levels, actuarial assumptions and demographics of the plan particularly the entry age into the plan. Since the actual demographics of new members was not known during the implementation of PEPRA in December 2012, the normal cost rate was determined based on the average demographics of the members in the current 2 percent at age 55 miscellaneous risk pool and the 3 percent at age 50 safety risk pool.

In analyzing the first set of PEPRA data, CalPERS staff has become concerned that, for most employers, there is insufficient data to produce stable normal costs and member contribution rates. Further, this situation is likely to persist for a number of years as employers gradually bring on more PEPRA members. The larger employers may have sufficient PEPRA members in the first few years but other employers may not have stable rates for a number of years. Staff has concluded that the best approach is to repeat the process – using the normal costs based on the demographics of the risk pools – for the current valuation and work with stakeholders over the next year to determine the best long-term approach to the issue of calculating PEPRA normal costs and member contribution rates. For more information on this topic please refer to the CalPERS Board of Administration agenda item 9a of the May 20th, 2014 meeting which is available on the CalPERS website.

Rate Plan Identifier	Plan	Basis for Current Rate		Rates Effective July 1, 2015			
		Total Normal Cost	Member Rate	Total Normal Cost	Change	Change Needed	Member Rate
25051	Safety County Peace Officers PEPRA	21.40%	10.750%	21.40%	0.00%	No	10.750%
25052	Safety Fire PEPRA	21.40%	10.750%	21.40%	0.00%	No	10.750%

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APPENDIX E

GLOSSARY OF ACTUARIAL TERMS

Glossary of Actuarial Terms

Accrued Liability (also called *Actuarial Accrued Liability* or *Entry Age Normal Accrued Liability*)

The total dollars needed as of the valuation date to fund all benefits earned in the past for *current* members.

Actuarial Assumptions

Assumptions made about certain events that will affect pension costs. Assumptions generally can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability and retirement rates. Economic assumptions include discount rate, salary growth and inflation.

Actuarial Methods

Procedures employed by actuaries to achieve certain funding goals of a pension plan. Actuarial methods include funding method, setting the length of time to fund the Accrued Liability and determining the Actuarial Value of Assets.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Accrued liability, Actuarial Value of Assets and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change to their plan provisions.

Actuarial Value of Assets

The Actuarial Value of Assets used for funding purposes is obtained through an asset smoothing technique where investment gains and losses are partially recognized in the year they are incurred, with the remainder recognized in subsequent years.

This method helps to dampen large fluctuations in the employer contribution rate.

Amortization Bases

Separate payment schedules for different portions of the Unfunded Liability. The total Unfunded Liability of a Risk Pool or non-pooled plan can be segregated by "cause," creating "bases" and each such base will be separately amortized and paid for over a specific period of time. However, all bases are amortized using investment and payroll assumptions from the current valuation. This can be likened to a home having a first mortgage of 24 years remaining payments and a second mortgage that has 10 years remaining payments. Each base or each mortgage note has its own terms (payment period, principal, etc.)

Generally, in an actuarial valuation, the separate bases consist of changes in unfunded liability due to contract amendments, actuarial assumption changes, actuarial methodology changes, and or gains and losses. Payment periods are determined by Board policy and vary based on the cause of the change.

Amortization Period

The number of years required to pay off an Amortization Base.

Annual Required Contributions (ARC)

The employer's periodic required annual contributions to a defined benefit pension plan as set forth in GASB Statement No. 27, calculated in accordance with the plan assumptions. The ARC is determined by multiplying the employer contribution rate by the payroll reported to CalPERS for the applicable fiscal year. However, if this contribution is fully prepaid in a lump sum, then the dollar value of the ARC is equal to the Lump Sum Prepayment.

Classic Member (under PEPRA)

A classic member is a member who joined CalPERS prior to January, 1, 2013 and who is not defined as a new member under PEPRA. (See definition of new member below)

Discount Rate Assumption

The actuarial assumption that was called "investment return" in earlier CalPERS reports or "actuarial interest rate" in Section 20014 of the California Public Employees' Retirement Law (PERL).

Entry Age

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension plan. In most cases, this is the age of the member on their date of hire.

Entry Age Normal Cost Method

An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to yield a rate expressed as a level percentage of payroll. (The assumed retirement age less the entry age is the amount of time required to fund a member's total benefit. Generally, the older a member on the date of hire, the greater the entry age normal cost. This is mainly because there is less time to earn investment income to fund the future benefits.)

Fresh Start

A Fresh Start is when multiple amortization bases are collapsed to one base and amortized together over a new funding period.

Funded Status

A measure of how well funded, or how "on track" a plan or risk pool is with respect to assets versus accrued liabilities. A ratio greater than 100% means the plan or risk pool has more assets than liabilities and a ratio less than 100% means liabilities are greater than assets. A funded ratio based on the Actuarial Value of Assets indicates the progress toward fully funding the plan using the actuarial cost methods and assumptions. A funded ratio based on the Market Value of Assets indicates the short-term solvency of the plan.

GASB 27

Statement No. 27 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting for pensions.

GASB 68

Statement No. 68 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting and financial reporting for pensions. GASB 68 replaces GASB 27 effective the first fiscal year beginning after June 15, 2014.

New Member (under PEPRA)

A new member includes an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was not a member of another public retirement system prior to that date, and who is not subject to reciprocity with another public retirement system.

Normal Cost

The annual cost of service accrual for the upcoming fiscal year for active employees. The normal cost should be viewed as the long term contribution rate.

Pension Actuary

A business professional that is authorized by the Society of Actuaries, and the American Academy of Actuaries to perform the calculations necessary to properly fund a pension plan.

PEPRA

The California Public Employees' Pension Reform Act of 2013

Prepayment Contribution

A payment made by the employer to reduce or eliminate the year's required employer contribution.

Present Value of Benefits (PVB)

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for *current* members.

Rolling Amortization Period

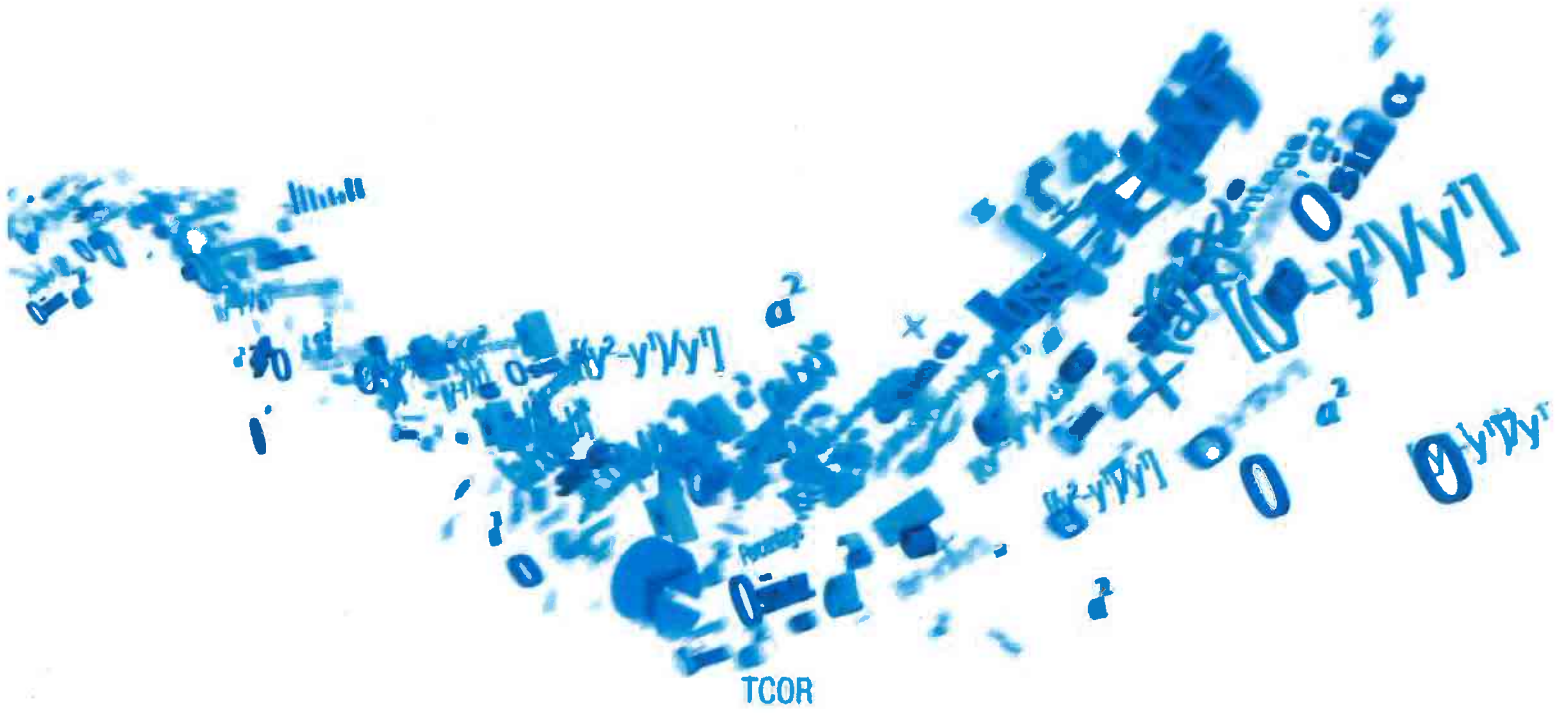
An amortization period that remains the same each year, rather than declining.

Superfunded

A condition existing when a plan's Actuarial Value of Assets exceeds its Present Value of Benefits. Prior to the passage of PEPPRA, when this condition existed on a given valuation date for a given plan, employee contributions for the rate year covered by that valuation could be waived.

Unfunded Liability

When a plan or pool's Actuarial Value of Assets is less than its Accrued Liability, the difference is the plan or pool's Unfunded Liability. If the Unfunded Liability is positive, the plan or pool will have to pay contributions exceeding the Normal Cost.



Actuarial Valuation Report

County of Riverside

County of Riverside Postretirement Benefits Plan

As of July 1, 2014

Executive Summary

Background

The County of Riverside provides retiree medical benefits for eligible retirees enrolled in County sponsored plans. The benefits are provided in the form of:

- Monthly County contributions toward the retiree's premium, and
- \$25 per month to the RSA Trust for RSA law enforcement retirees.

County Contributions

The County of Riverside makes contributions to eligible retirees for their medical plan premiums when the retiree enrolls in a County sponsored health plan. The current monthly amount paid by the County ranges from \$25 – \$256, depending on the retiree's bargaining unit at retirement. The County provided amounts are detailed in Exhibit VIII and summarized as follows:

- **CalPERS Health Benefits program retirees** (Law Enforcement Management, Deputy District Attorneys Association (Deputy DAs), and RSA Public Safety members) are eligible for the greater of the stated Public Employees' Medical and Hospital Care Act (PEMHCA) amounts and the bargaining unit's negotiated amount. The PEMHCA monthly amounts are \$119.00 and \$122.00 in 2014 and 2015, respectively, and increase annually thereafter by Medical CPI. These are the only groups that have inflation-indexed benefits.
- **All other retirees** are eligible for their bargaining unit negotiated amount (i.e. \$25 – \$256). These amounts do not increase in future years to account for inflation.

Note: The County contributes \$25.00 per month to the RSA Benefit Trust for RSA Law Enforcement retirees, and this cost is included in Plan liabilities.

As described above, the majority of participants are eligible to receive benefits that are fixed at current levels. Retirees receiving the PEMHCA benefits are eligible for inflation-indexed benefits. The long term benefit under PEMHCA could be more than 10 times greater than certain fixed benefit amounts in 20 years, as illustrated in Appendix A.

Executive Summary (cont.)

GASB 45

The liabilities and annual costs due to the County's contractual agreements to assist with retiree health care costs are calculated in this actuarial valuation in accordance with Government Accounting Standards Board (GASB) Statement 45. The County adopted GASB 45 for the fiscal year ending June 30, 2008. This report assumes the County will continue to fully pre-fund the County obligations.

It is important to note that only current active and retired participants are valued in this actuarial study. Future new entrants or any projected growth in the County's employee population are not considered.

ARC Development

GASB requires an Annual Required Contribution (ARC) to be developed each year based on the Plan's assets and liabilities. Although GASB does not actually require prefunding, the portion of the ARC that is not funded each year accumulates as a liability on the County's financial statements.

The County amortizes the unfunded liability over an open 30-year period as a level percentage of payroll. It should be noted that pre-funding with an open amortization period is not necessarily expected to fully fund the actuarial accrued liability.

Future GASB Developments

In May 2014, GASB issued an exposure draft of a statement that will change employer accounting and financial reporting for postemployment benefits other than pensions (OPEB). The impact is expected to be similar to that of GASB 67/68 for pension plans, which must be adopted effective for the fiscal year ending June 30, 2015. It is anticipated this new statement for OPEB would be effective for fiscal years beginning after December 15, 2016. The changes include moving unfunded liabilities from footnotes to the balance sheet, the potential for more volatile periodic expense, and a change in the discount rate basis. In order to prepare and effectively manage plans, it is important for agencies to consider and understand the possible ramifications.

Other Developments

The Actuarial Standards Board has issued an amendment to Actuarial Standards of Practice No. 6 – Measuring Retiree Group Benefit Obligations, which may require recognition of certain additional healthcare costs (i.e. implicit subsidy) for pooled health plans. This is expected to impact the CalPERS plans and is effective for measurement dates after March 31, 2015.

Executive Summary (cont.)

Summary of Results

Annual Required Contributions (ARC)

The ARC for fiscal year ending 2015 is \$1,346,000 and is based on an open period, 30-year amortization of the unfunded Actuarial Accrued Liability (AAL).

As the ARC amount is determined based on a level percent of payroll, it is expected to increase as payroll increases. The following table illustrates this assuming actual contributions are equal to the full ARC each year:

	2014-2015	2015-2016	2015-2016
ARC for Safety	\$532,000	\$547,000	\$508,000
ARC for Miscellaneous	\$814,000	\$785,000	\$732,000
Total ARC	\$1,346,000	\$1,332,000	\$1,240,000

It should be noted that the ARC is less than the estimated pay-as-you go contribution for current retirees of \$2,172,000. Thus, the ARC can currently be satisfied through pay-as-you go funding.

Annual OPEB Cost (AOC)

The AOC for the fiscal year ending June 30, 2015 is \$942,000. This is the County's annual expense for its OPEB plan.

Liabilities

There are a few terms to understand related to the Plan's liabilities. The Present Value of Benefits (PVB) represents the actuarial present value of all future benefits expected to be paid to current employees and retirees. The Actuarial Accrued Liability (AAL) is the portion of the PVB attributable to past service. The Normal Cost is the portion of the PVB that is allocated to the current plan year for active employees.

The table below summarizes the liability results:

Present Value of Benefits (PVB)	\$47,088,000
Actuarial Accrued Liability (AAL)	\$40,121,000
Normal Cost	\$960,000

Executive Summary (cont.)

Comparison to Prior Valuation Results

This report is based on a 7.28% discount rate, which assumes the County fully pre-funds in the California Employers' Retiree Benefit Trust (CERBT) Fund Asset Allocation Strategy 1 on an ongoing basis. The following table compares results to the prior valuation results:

	July 1, 2014	July 1, 2013
Liabilities		
Present Value of Benefits (PVB)	\$47,088,000	\$52,809,000
Actuarial Accrued Liability (AAL)	\$40,121,000	\$43,829,000
Normal Cost	\$960,000	\$1,287,000
Plan Assets	\$34,098,000	\$26,764,000
Unfunded AAL	\$6,023,000	\$17,065,000
ARC	\$1,346,000	\$2,343,000

The most significant change in liabilities is due to reductions in assumed plan participation (i.e., election) rates, which were updated to reflect more recent experience. In addition, unfunded liabilities decreased further due to the net result of the following:

- Assets were higher than expected due to contributions made in excess of the ARC and favorable investment return on plan assets.
- Mortality assumptions were revised to reflect updated CalPERS base mortality and a new future improvement basis, resulting in a liability increase.
- Other demographic assumptions were revised to reflect the updated CalPERS experience study, resulting in a liability increase.
- Disability assumption changes impacting the timing of benefits resulted in a liability increase.
- The discount rate changed from 7.36% to 7.28%, resulting in small liability increases.
- Census experience was different than assumed, resulting in a slight actuarial gain.
- The liabilities, by their nature, grow each year as all participants get closer to receiving benefits and active participants accrue additional benefits.

It should be noted that employee groups from Special Districts (Waste, Parks, Flood and RCA) were not included in the valuation results presented in this report.

Executive Summary (cont.)

Effect of Asset Allocation Strategy Selection and the Discount Rate Impact

Beginning in 2011, CalPERS offers three asset allocation strategies for selection by employers who contract to pre-fund their future OPEB costs through CERBT.

The asset allocation and associated expected asset return, and thus the assumed discount rate, have a considerable impact on valuation results and the magnitude of liabilities. CalPERS periodically reviews the expected asset returns and the rates used in this valuation are based on CalPERS revised guidance adopted in October 2014. The following table summarizes financial characteristics of the three strategies:

	Strategy 1	Strategy 2	Strategy 3
Expected 20 Year Return / Discount Rate	7.28%	6.73%	6.12%
Standard Deviation of Expected Returns	11.74%	9.32%	7.14%

All three asset allocation strategies invest to some extent in each of the five asset classes (Global Equity, U.S. Nominal Bonds, U.S. Inflation Linked Bonds, Global Public Real Estate and Commodities). The portion of assets allocated to each asset class varies among the strategies, and thus, the long term expected rate of return and level of risk of each asset allocation is different for each strategy.

Currently, the County utilizes Strategy 1, although it should continue to monitor the return versus risk balance and maintain an asset allocation strategy appropriate for the County's funding and overall financial policies.

In order to understand the impact of strategy selection, we compared valuation results under Strategy 1 to potential results if the County had chosen Strategy 2:

	Asset Allocation Strategy 1 7.28%	Asset Allocation Strategy 2 6.73%
Liabilities		
Present Value of Benefits (PVB)	\$47,088,000	\$51,108,000
Actuarial Accrued Liability (AAL)	\$40,121,000	\$42,946,000
Normal Cost	\$960,000	\$1,084,000
ARC	\$1,346,000	\$1,607,000

The remainder of the report provides details of results based on the 7.28% discount rate.

Effect of Affordable Care Act

We reviewed the impact of the Affordable Care Act on the valuation, including the effect of the Excise Taxes on High Cost Plans. Per our understanding of the substantive plan, any potential additional costs will be passed on to retirees and will not increase the plan's liabilities, unless otherwise negotiated. Other Affordable Care Act provisions are not anticipated to impact the valuation results.

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I Actuarial Valuation Certificate

This report presents the results of the actuarial valuation for the County of Riverside Post-retirement Medical Benefits as of July 1, 2014 for development of the Annual Required Contribution (ARC) and disclosure of items under the Governmental Accounting Standards Board (GASB) Statement 45.

This report was prepared using generally accepted actuarial practices and methods. The actuarial assumptions used in the calculations are individually reasonable and reasonable in aggregate.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as:

- Plan experience differing from that anticipated by the economic or demographic assumptions
- Changes in economic or demographic assumptions
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status)
- Changes in plan provisions or applicable law

The employee and asset data were provided by the County. Aon Hewitt did not audit the employee data and financial information used in this valuation. On the basis of our review of this data, we believe that the information is sufficiently complete and reliable, and that it is appropriate for the purposes intended.

Actuarial computations under GASB 45 are for purposes of fulfilling employer accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations for purposes other than meeting Employer financial accounting requirements may be different from these results. As required by GASB 45, this valuation assumes this will be an ongoing plan. However, this assumption does not imply any obligation by the employer to continue the plan.

This report is intended for the sole use of the County of Riverside. It is intended only to supply information for the County to comply with the stated purpose of the report and may not be appropriate for other business purposes. Reliance on information contained in this report by anyone for other than the intended purposes, puts the relying entity at risk of being misled because of confusion or failure to understand applicable assumptions, methodologies, or limitations of the report's conclusions. Accordingly, no person or entity, including the County of Riverside should base any representations or warranties in any business agreement on any statements or conclusions contained in this report without the written consent of Aon Hewitt.

I Actuarial Valuation Certificate (cont.)

The actuaries whose signatures appear below collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The actuaries are available to answer any questions with regard to the matters enumerated in this report.

Aon Hewitt's¹ relationship with the Plan and the Plan Sponsor is strictly professional. There are no aspects of the relationship that may impair or appear to impair the objectivity of our work.

Respectfully submitted,



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March 16, 2015

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¹ Aon Consulting, Inc. and Hewitt Associates LLC are operating as Aon Hewitt

II Plan Liabilities

The liabilities shown in this exhibit were calculated using a 7.28% discount rate.

The **Present Value of Benefits (PVB)** represents the actuarial present value of all benefits ever to be paid to current employees and retirees. The PVB is as follows:

	Safety Employees	Miscellaneous Employees	Total
PVB			
Retirees	\$9,938,000	\$15,023,000	\$24,961,000
Actives	\$9,634,000	\$12,493,000	\$22,127,000
Total PVB	\$19,572,000	\$27,516,000	\$47,088,000
Number of Retirees as of 6/30/2014	663	1,404	2,067
Number of Actives as of 6/30/2014	3,598	14,553	18,151
PVB Per Retiree	\$15,000	\$10,700	\$12,100
PVB Per Active	\$2,700	\$900	\$1,200

The **Actuarial Accrued Liability (AAL)** is a portion of the PVB attributable to past service. For retirees and fully eligible active employees, the AAL is equal to the PVB. For other active employees, the AAL is the portion of the PVB deemed to be accrued to date. The **Normal Cost** is the portion of the PVB that is allocated to the current plan year for only active employees.

The AAL in this report is based on the Entry Age Normal cost method and has been developed by spreading costs as a level percentage of payroll.

	Safety Employees	Miscellaneous Employees	Total
AAL			
Retirees	\$9,938,000	\$15,023,000	\$24,961,000
Actives	\$6,518,000	\$8,642,000	\$15,160,000
Total AAL	\$16,456,000	\$23,665,000	\$40,121,000
AAL Per Retiree	\$15,000	\$10,700	\$12,100
AAL Per Active	\$1,800	\$600	\$800
Total Normal Cost	\$374,000	\$586,000	\$960,000
Normal Cost per Active	\$104	\$40	\$53

III Plan Assets

The County of Riverside participates in CalPERS' CERBT trust fund. The following table shows the development of assets since the prior valuation.

Assets	July 1, 2013 To June 30, 2014
Assets, Beginning of Year	\$26,764,000
Contributions – Current Retirees	\$2,149,000
Contributions – Pre-Funding	\$2,418,000
Investment Earnings	\$4,962,000
Administrative Expenses	(\$46,000)
Benefit Payments	<u>(\$2,149,000)</u>
Assets at Valuation Date	\$34,098,000
Return on Assets	17.8%

For the fiscal year ending June 30, 2014, the County contributed 195% of their \$2,343,000 ARC. The assets shown as of June 30, 2014 are based on the CERBT annual statement.

The actual return on assets can be compared to the prior year's expected return of 7.36%.

IV Annual Costs

Development of the Annual Required Contribution (ARC)

The ARC amounts shown on this page represent the costs of post-retirement medical benefits to the County under GASB 45 for the fiscal year ending June 30, 2015. This is *not* the same as the "pay-as-you-go" plan cost.

The ARC amounts shown assume payments are made on average in the middle of the year.

The Entry Age Normal method is used to develop the County's OPEB costs. Under this method, the ARC is equal to the Normal Cost plus the amortization of the unfunded AAL over 30 years.

The assets shown below have been allocated in proportion to the AAL for Safety and Miscellaneous groups.

	Safety	Miscellaneous	Total
AAL	\$16,456,000	\$23,665,000	\$40,121,000
Assets	\$13,987,000	\$20,112,000	\$34,098,000
Unfunded AAL	\$2,469,000	\$3,553,000	\$6,023,000
Amortization of UAL	\$145,000	\$208,000	\$353,000
Normal Cost, plus interest	\$387,000	\$606,000	\$993,000
ARC	\$532,000	\$814,000	\$1,346,000

Development of the Annual OPEB Cost (AOC)

The AOC is the accrual basis measure of periodic cost recognized by the County, as developed below for the fiscal year ending June 30, 2015:

Net OPEB Obligation / (Asset), Beginning of Year	(\$28,168,000)
Annual Required Contribution	\$1,346,000
Interest on Net OPEB Obligation / (Asset)	(\$2,051,000)
Adjustment to the ARC (amortization factor of 17.1)	\$1,647,000
Annual OPEB Cost (AOC)	\$942,000

V Projected Benefit Payments

The following table shows the estimated projected net County benefit payments based on the current plan provisions, current plan participants, and the valuation assumptions used in this report. The payments would be equivalent to funding the liabilities on a pay-as-you-go basis.

Fiscal Year Ending June 30	Safety	Miscellaneous	Total
2015	\$659,000	\$1,513,000	\$2,172,000
2016	\$689,000	\$1,586,000	\$2,275,000
2017	\$728,000	\$1,660,000	\$2,388,000
2018	\$781,000	\$1,732,000	\$2,513,000
2019	\$840,000	\$1,806,000	\$2,646,000
2020	\$902,000	\$1,878,000	\$2,780,000
2021	\$968,000	\$1,948,000	\$2,916,000
2022	\$1,039,000	\$2,014,000	\$3,053,000
2023	\$1,110,000	\$2,075,000	\$3,185,000
2024	\$1,182,000	\$2,130,000	\$3,312,000
2025	\$1,258,000	\$2,180,000	\$3,438,000
2026	\$1,336,000	\$2,225,000	\$3,561,000
2027	\$1,417,000	\$2,264,000	\$3,681,000
2028	\$1,499,000	\$2,299,000	\$3,798,000
2029	\$1,583,000	\$2,328,000	\$3,911,000
2030	\$1,667,000	\$2,352,000	\$4,019,000
2031	\$1,750,000	\$2,370,000	\$4,120,000
2032	\$1,833,000	\$2,382,000	\$4,215,000
2033	\$1,915,000	\$2,388,000	\$4,303,000
2034	\$1,994,000	\$2,386,000	\$4,380,000
2035	\$2,069,000	\$2,384,000	\$4,453,000
2036	\$2,142,000	\$2,381,000	\$4,523,000
2037	\$2,211,000	\$2,373,000	\$4,584,000
2038	\$2,278,000	\$2,360,000	\$4,638,000
2039	\$2,341,000	\$2,340,000	\$4,681,000
2040	\$2,398,000	\$2,314,000	\$4,712,000
2041	\$2,449,000	\$2,282,000	\$4,731,000
2042	\$2,493,000	\$2,243,000	\$4,736,000
2043	\$2,531,000	\$2,199,000	\$4,730,000
2044	\$2,563,000	\$2,150,000	\$4,713,000
2045	\$2,587,000	\$2,097,000	\$4,684,000
2046	\$2,604,000	\$2,039,000	\$4,643,000

VI GASB Reporting and Disclosure Information

GASB 45 requires certain items to be disclosed in the footnotes to the County's financial statements, including the following:

- Plan description - Name of plan and identification of the entity that administers plan, Brief description of the types of benefits
- Funding policy - Required contribution rates of plan members, Required contribution rates of employer

In addition, the tables below show required supplementary information to be shown with three years of historical information in the County's financial statements.

Sample information is shown based on the County's adoption of GASB 45 for fiscal year ended June 30, 2008, and the election to use entry age normal cost method with unfunded liability amortized over an open 30 year period. Contributions for the 2013-2014 fiscal year included County Contributions for current retirees of \$2.15 million, and a \$2.42 million contribution to the CalPERS trust.

Development of Net OPEB Obligation (NOO) and Annual OPEB Cost (in thousands)

Fiscal Year	Annual Required Contributions	Actual Contribution	NOO End of Year	Interest on Net OPEB Obligation	Adjustment to the Annual Required Contribution	Annual OPEB Cost	Interest Rate	Amortization Factor
07/08	\$ 4,390	\$ 14,930	\$ (10,540)	\$ 0	\$ 0	\$4,390	7.24%	17.6
08/09	\$ 3,918	\$ 7,105	\$ (13,890)	\$ (763)	\$ (600)	\$3,755	7.24%	17.6
09/10	\$ 4,454	\$ 10,725	\$ (20,377)	\$ (1,006)	\$ (790)	\$4,238	7.24%	17.6
10/11	\$ 3,368	\$ 5,091	\$ (22,456)	\$ (1,579)	\$ (1,223)	\$3,012	7.75%	16.7
11/12	\$ 2,499	\$ 4,895	\$ (25,232)	\$ (1,709)	\$ (1,329)	\$2,119	7.61%	16.7
12/13	\$ 2,615	\$ 3,461	\$ (25,575)	\$ (1,920)	\$ (1,577)	\$2,272	7.61%	16.0
13/14	\$ 2,343	\$ 4,567	\$ (28,168)	\$ (1,882)	\$ (1,513)	\$1,974	7.36%	16.9

Schedule of Funding Progress (in thousands)

Type of Valuation	Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	UAAL as a Percent of Covered Payroll	Interest Rate
Actual	1/1/2007	\$ 0	\$ 48,582	\$ 48,582	0%	\$838,007	5.80%	7.24 -7.75%
Actual	1/1/2008	\$ 10,411	\$ 46,681	\$ 36,270	22.3%	985,494	3.68%	7.24 -7.75%
Actual	1/1/2009	\$ 9,872	\$ 55,288	\$ 45,416	17.9%	1,011,96	4.49%	7.24 -7.75%
Actual	7/1/2010	\$ 14,272	\$ 43,158	\$ 28,886	33.1%	1,030,030	2.80%	7.75%
Actual	7/1/2011	\$ 19,460	\$ 40,166	\$ 20,706	48.4%	1,012,698	2.04%	7.61%
Actual	7/1/2012	\$ 22,572	\$ 42,850	\$ 20,278	52.7%	1,026,755	1.97%	7.61%
Actual	7/1/2013	\$ 26,764	\$ 43,829	\$ 17,065	61.0%	1,096,375	1.56%	7.36%
Actual	7/1/2014	\$ 34,098	\$ 40,121	\$ 6,023	85.0%	1,152,127	0.52%	7.28%

Schedule of Employer Contributions (in thousands)

Fiscal Year Ending:	Annual OPEB Costs	Actual Contribution	Percentage Contribution	Net OPEB Obligation (Asset)
6/30/2008	\$ 4,390	\$ 14,930	340%	\$ (10,540)
6/30/2009	\$ 3,755	\$ 7,105	189%	\$ (13,890)
6/30/2010	\$ 4,238	\$ 10,725	253%	\$ (20,377)
6/30/2011	\$ 3,012	\$ 5,091	169%	\$ (22,456)
6/30/2012	\$ 2,119	\$ 4,895	231%	\$ (25,232)
6/30/2013	\$ 2,272	\$ 3,461	152%	\$ (25,575)
6/30/2014	\$ 1,974	\$ 4,567	231%	\$ (28,168)

VII Participant Information

These table summaries below contain participant demographic information.

Active Employee Age/Service Distribution

Age	Years of Service								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	>35	
<25	455	24							479
25-29	1,245	635	16						1,896
30-34	924	1,367	335	10					2,636
35-39	575	1,083	808	177	3				2,646
40-44	461	891	759	500	103	6			2,720
45-49	360	636	584	411	282	160	1		2,434
50-54	305	548	542	340	268	233	60		2,296
55-59	195	407	455	270	210	171	68	18	1,794
60-64	98	235	270	168	100	63	23	13	970
>65	25	70	96	38	23	22	2	4	280
Total	4,643	5,896	3,865	1,914	989	655	154	35	18,151

Participant Statistics

	Safety Employees	Miscellaneous Employees	Total
<i>Retirees</i>			
Number of retirees	663	1,404	2,067
Average age	62.2	70.4	68.1
Number of retiree spouses	361	351	712
<i>Actives</i>			
Number of actives	3,598	14,553	18,151
Average age	39.1	44.1	43.1
Average past service (years)	10.5	9.9	10.0

VII Participant Information (cont.)

Active Participant Benefit Summary

The table below summarizes the number of participants by bargaining units and the benefits valued. As described in the plan summary and actuarial assumptions sections, certain groups are eligible for PEMHCA benefits not shown in this summary.

Union Code	Description	Bargaining Unit (used to determine contribution)	# Records	2013 Monthly County Contribution	Health Plan	CalPERS Retirement Program
CNF	Confidential	Confidential	244	\$ 256.00	County	Misc
LEM	Law Enforcement Management	LEMU	461	\$ 128.00	CalPERS	Safety
MGT	Management (General)	Management	461	\$ 256.00	County	Misc
MLX	Law Enforcement Exec Staff	LE Exec Staff	15	\$ 256.00	County	Safety
PD7	Public Defender, Prosecution (District Attorney's)	DDAA	384	\$ 256.00	CalPERS	Misc
RSA	RSA Law Enforcement	RSA	2,559	\$ 25.00	RSA	Safety
RSP	RSA Public Safety	RSA Public Safety	563	\$ 119.00	CalPERS	Safety
SE2	SEIU Professional	SEIU	2,579	\$ 25.00	County	Misc
SE8	SEIU Registered Nurses	SEIU	1,053	\$ 25.00	County	Misc
SE9	SEIU Para Professional	SEIU	870	\$ 25.00	County	Misc
SES	SEIU Supervisory	SEIU	1,395	\$ 25.00	County	Misc
UNC	Unrepresented Confidential	Confidential	186	\$ 256.00	County	Misc
UNM	Unrepresented Management	Management	306	\$ 256.00	County	Misc
UP4	LIUNA Inspection and Technical	LIUNA	1,315	\$ 25.00	County	Misc
UP5	LIUNA Trades, Crafts and Labor	LIUNA	901	\$ 25.00	County	Misc
UP6	LIUNA Supporting Services	LIUNA	4,859	\$ 25.00	County	Misc
		County Total	18,151			

* Law Enforcement Management (LEMU), Prosecution (Deputy DAs), and RSA Public Safety members are eligible to receive the greater of the PEMHCA amount or the bargained amount. Currently, LEMU and DDAA are above the PEMHCA amount and RSA Public Safety is at the PEMHCA amount.

Special District (Waste, Parks, Flood and RCA) employees are not included in this valuation.

VII Participant Information (cont.)

Retired Participant Benefit Summary

The table below summarizes the number of current retirees receiving various monthly County contribution amounts:

Age	\$25.00	\$119.00	\$128.00	\$256.00	Total
<40	5		1		6
40-44	6				6
45-49	12	1			13
50-54	62	6	28	4	100
55-59	120	20	55	49	244
60-64	216	19	108	116	459
65-69	315	34	87	81	517
70-74	214	16	66	21	317
75-79	116	4	37	3	160
80-84	95	5	20	3	123
85-89	50		25		75
90-94	28		8		36
>95	10		1		11
Total	1,249	105	436	277	2,067

VIII Summary of Principal Plan Provisions

The following plan provisions are the basis for the calculations in this actuarial valuation.

1. Benefit Eligibility

All employees who retire from active employment within 120 days of separation are eligible for participation. Participants are eligible for service retirement at or after age 50, or disability retirement at an age younger than 50, with at least 5 years of service. Former employees who become eligible for CalPERS pension benefits more than 120 days after separation are not eligible for retiree health benefits.

2. Benefits / Plans Covered

The County contributes a portion of an eligible retiree's medical plan premium under a County sponsored health plan (either at retirement or during a subsequent annual enrollment) for the retiree's lifetime. Contributions are based on the employee's bargaining unit at the time of retirement; as follows:

<i>Bargaining Unit at Retirement</i>	<i>Monthly Contribution</i>			
	2012	2013	2014	2015
Confidential**	\$256.00	\$256.00	\$256.00	\$256.00
LEMU (Management)*	\$128.00	\$128.00	\$128.00	\$128.00
MLX (Executive Staff)**	\$256.00	\$256.00	\$256.00	\$256.00
LIUNA	\$25.00	\$25.00	\$25.00	\$25.00
Management**	\$256.00	\$256.00	\$256.00	\$256.00
District Attorneys (DDAA)*	\$112.00	\$256.00	\$256.00	\$256.00
RSA Law Enforcement	\$25.00	\$25.00	\$25.00	\$25.00
RSA Public Safety*	\$112.00	\$115.00	\$119.00	\$122.00
SEIU	\$25.00	\$25.00	\$25.00	\$25.00
Unrepresented**	\$256.00	\$256.00	\$256.00	\$256.00

* Law Enforcement Management (LEMU), Prosecution (Deputy DAs), and RSA Public Safety members are eligible to receive the greater of the PEMHCA amount or the bargained amount. Currently, LEMU and Prosecution (Deputy DAs) are above the PEMHCA amount and RSA Public Safety is at the PEMHCA amount.

** Confidential, MLX (Executive Staff), Management and Unrepresented retired before 11/1/2005 receive a monthly contribution of \$128 and after 11/1/2005 receive a monthly contribution of \$256.

Future PEMHCA amounts increase at the same rate as Medical CPI. See Appendix A for a projection of the monthly PEMHCA contribution amounts.

Note: The County contributes \$25.00 per month to the RSA Benefit Trust for RSA Law Enforcement retirees. Although the Trust is responsible for providing a benefit with a much larger premium, the County is responsible for the \$25.00 monthly contribution and this benefit is included in Plan liabilities.

3. Survivor Coverage Benefits

Upon the death of the retiree, the eligible surviving spouse receives the same monthly benefit amount for their lifetime.

IX Actuarial Assumptions

1. Actuarial Cost Method

The costs shown in the report were developed using the Entry Age Normal cost method.

The Entry Age Normal (EAN) cost method spreads plan costs for each participant from entry date (assuming the plan existed on the employee's hire date) to the expected retirement date. Under the EAN cost method, the plan's normal cost is developed as a level percentage of pay spread over the participants' working lifetime. For this purpose, pay is assumed to increase 3% per annum. The AAL is the cumulative value, on the valuation date, of prior service costs. For retirees, the AAL is the present value of all projected benefits.

ARC Amortization

The ARC under this method equals the normal cost plus the amortization of the unfunded AAL based on the following:

- 30-year amortization period
- Level percentage of future payroll amounts

The Plan costs are derived by making certain specific assumptions as to the rates of interest, mortality, turnover and other demographic events, which are assumed to hold for many years into the future. Actual experience may differ somewhat from the assumptions and the effect of such differences is spread over all periods. Due to these differences, the costs determined by the valuation must be regarded as estimates of the true Plan costs.

2. Discount Rate

7.28% - This assumes that the County will continue to pre-fund the liabilities in the CERBT Asset Allocation Strategy 1. The 7.28% return is based on a real return assumption of 4.66% a long term expected inflation rate of 2.75% and investment and administrative fees of 0.13%.

3. Payroll Increases

3.00% - This is the annual rate at which total payroll is expected to increase and is used in the funding method to calculate the ARC as a level percent of payroll.

4. Inflation

2.75% - This is the assumed annual rate of inflation for future years.

IX Actuarial Assumptions (cont.)

For demographic assumptions:

- Public Agency Police consists of Law Enforcement Management and Law Enforcement Executive Staff;
- Public Agency County Peace Officer consists of RSA Law Enforcement and RSA Public Safety, and;
- Miscellaneous consists of all other bargaining units.

5. Mortality

Mortality rates are based on the most recent CalPERS mortality table developed in the 1997-2011 CalPERS Experience Study, with generational future improvements using scale MP-2014. Sample rates for the base year mortality are as follows:

Age	Public Agency Police		Public Agency County Peace Officer		Miscellaneous	
	Male	Female	Male	Female	Male	Female
30	0.06%	0.04%	0.06%	0.04%	0.05%	0.03%
40	0.09%	0.07%	0.09%	0.07%	0.08%	0.05%
50	0.18%	0.12%	0.18%	0.12%	0.16%	0.11%
60	0.37%	0.24%	0.37%	0.24%	0.35%	0.22%
70	1.77%	1.26%	1.77%	1.26%	1.77%	1.26%
80	5.28%	3.69%	5.28%	3.69%	5.28%	3.69%
90	16.19%	12.33%	16.19%	12.33%	16.19%	12.33%

6. Turnover

Turnover rates developed in the 1997-2011 CalPERS Experience Study were used in the valuation. The following sample rates are based on age and service:

Public Agency Police

Hire Age	Years of Service						
	0 - 1	5	10	15	20	25	30
30	10.13%	2.49%	1.79%	1.09%	0.17%	0.12%	0.09%
35	10.13%	2.49%	1.79%	0.27%	0.17%	0.12%	0.09%
40	10.13%	2.49%	0.53%	0.27%	0.17%	0.12%	0.09%
45	10.13%	0.86%	0.53%	0.27%	0.17%	0.12%	0.09%
50	10.13%	0.86%	0.53%	0.27%	0.17%	0.12%	0.09%
55	10.13%	0.86%	0.53%	0.27%	0.17%	0.12%	0.00%

IX Actuarial Assumptions (cont.)

Turnover (cont.)

Public Agency County Peace Officer

Hire Age	Years of Service						
	0 - 1	5	10	15	20	25	30
30	9.97%	4.10%	2.93%	1.75%	0.20%	0.09%	0.06%
35	9.97%	4.10%	2.93%	0.45%	0.20%	0.09%	0.06%
40	9.97%	4.10%	0.89%	0.45%	0.20%	0.09%	0.06%
45	9.97%	1.45%	0.89%	0.45%	0.20%	0.09%	0.06%
50	9.97%	1.45%	0.89%	0.45%	0.20%	0.09%	0.06%
55	9.97%	1.45%	0.89%	0.45%	0.20%	0.09%	0.00%

Miscellaneous

Hire Age	Years of Service						
	0 - 1	5	10	15	20	25	30
30	16.06%	7.11%	5.07%	3.47%	0.21%	0.05%	0.01%
35	15.37%	6.32%	4.27%	0.32%	0.13%	0.01%	0.01%
40	14.68%	5.54%	0.71%	0.23%	0.05%	0.01%	0.01%
45	14.00%	1.16%	0.55%	0.14%	0.01%	0.01%	0.01%
50	13.32%	0.97%	0.38%	0.04%	0.01%	0.01%	0.01%
55	12.62%	0.78%	0.21%	0.02%	0.01%	0.01%	0.00%

7. Disability

Disability rates developed in the 1997-2011 CalPERS Experience Study were used in the valuation. Sample rates are as follows:

Age	Public Agency Police		Public Agency County Peace Officer		CalPERS Miscellaneous	
	Male	Female	Male	Female	Male	Female
25	0.18%	0.18%	0.14%	0.14%	0.02%	0.01%
30	0.50%	0.50%	0.26%	0.26%	0.02%	0.02%
35	0.82%	0.82%	0.41%	0.41%	0.05%	0.08%
40	1.14%	1.14%	0.58%	0.58%	0.12%	0.16%
45	1.46%	1.46%	0.80%	0.80%	0.19%	0.22%
50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
55	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

IX Actuarial Assumptions (cont.)

8. Retirement Age

Retirement rates developed in the 1997-2011 CalPERS Experience Study were used in the valuation. Police 3%@50 rates were used for Safety employees (including County Peace Officers) and Miscellaneous 3%@60 rates were used for all other employees. Future valuations will reflect assumptions for new benefit formulas recently adopted by CalPERS, which would have a relatively nominal impact on liabilities as the affected employee group currently comprises a small percentage of the liabilities.

Sample rates are as follows:

Police 3%@50

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	5.00%	5.00%	5.00%	9.90%	24.00%	31.40%	37.90%
51	3.40%	3.40%	3.40%	7.20%	19.80%	26.00%	31.20%
52	3.30%	3.30%	3.30%	7.10%	19.80%	25.90%	31.10%
53	3.90%	3.90%	3.90%	8.00%	21.20%	27.70%	33.30%
54	4.50%	4.50%	4.50%	9.20%	22.90%	30.00%	36.10%
55	5.20%	5.20%	5.20%	10.50%	24.80%	32.30%	38.90%
56	4.20%	4.20%	4.20%	8.70%	22.10%	28.90%	34.70%
57	4.30%	4.30%	4.30%	8.80%	22.30%	29.20%	35.10%
58	5.40%	5.40%	5.40%	10.90%	25.50%	33.30%	40.10%
59	5.40%	5.40%	5.40%	10.80%	25.30%	33.00%	39.80%
60	6.00%	6.00%	6.00%	12.10%	27.20%	35.50%	42.80%
61	4.80%	4.80%	4.80%	9.80%	23.80%	31.10%	37.50%
62	6.10%	6.10%	6.10%	12.20%	27.40%	35.70%	43.10%
63	5.70%	5.70%	5.70%	11.50%	26.30%	34.30%	41.40%
64	6.90%	6.90%	6.90%	13.70%	29.60%	38.50%	46.60%
65	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

IX Actuarial Assumptions (cont.)

Miscellaneous 3%@60

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	1.20%	1.80%	2.40%	3.90%	4.00%	9.10%	9.70%
51	0.90%	1.40%	1.90%	3.40%	3.40%	8.40%	9.00%
52	1.40%	2.00%	2.60%	4.30%	4.40%	9.60%	10.20%
53	1.60%	2.30%	3.10%	4.80%	5.00%	10.20%	10.90%
54	2.60%	3.60%	4.50%	6.50%	7.00%	12.50%	13.40%
55	4.30%	5.70%	7.20%	9.60%	10.50%	16.50%	17.90%
56	4.20%	5.60%	7.00%	9.40%	10.30%	16.20%	17.60%
57	4.90%	6.50%	8.20%	10.80%	11.90%	18.00%	19.60%
58	5.70%	7.60%	9.40%	12.20%	13.60%	19.90%	21.70%
59	7.60%	10.00%	12.30%	15.70%	17.50%	24.40%	26.70%
60	11.40%	14.80%	18.20%	22.60%	25.50%	33.40%	36.80%
61	9.50%	12.30%	15.20%	19.00%	21.40%	28.80%	31.60%
62	13.30%	17.20%	21.10%	26.00%	29.40%	37.80%	41.70%
63	12.90%	16.60%	20.40%	25.20%	28.50%	36.80%	40.50%
64	14.30%	18.50%	22.60%	27.80%	31.50%	40.10%	44.30%
65	20.20%	26.00%	31.80%	38.60%	43.90%	54.20%	60.00%
66	17.70%	22.80%	27.90%	34.00%	38.60%	48.20%	53.30%
67	15.10%	19.40%	23.80%	29.20%	33.10%	42.00%	46.30%
68	13.90%	17.90%	22.00%	27.00%	30.60%	39.10%	43.20%
69	19.00%	24.50%	29.90%	36.40%	41.40%	51.30%	56.80%
70	14.00%	18.20%	22.30%	27.40%	31.00%	39.60%	43.70%
71	16.80%	21.70%	26.50%	32.40%	36.80%	46.10%	51.00%
72	8.2%	10.80%	13.30%	16.80%	18.80%	25.80%	28.40%
73	11.70%	15.10%	18.60%	23.00%	26.00%	34.00%	37.40%
74	13.80%	17.80%	21.80%	26.90%	30.40%	38.90%	43.00%
75	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

9. Annual Medical Inflation ("Trend")

County Contribution: PEMHCA amounts have been determined through 2015 (\$122). After 2015, the PEMHCA amounts will increase at the same rate as the Medical CPI. For valuation purposes, this is assumed to be 4% for all years. This applies to RSA Public Safety, Deputy District Attorney and Law Enforcement Management who were assumed to participate in CalPERS Health Benefits programs and receive the PEMHCA amounts.

All other County contributions are assumed to remain at their current level.

IX Actuarial Assumptions (cont.)

10. Retiree Contributions

Retirees pay the premiums in excess of the County contributions.

11. Dental Benefits

Retirees are eligible for dental benefits if they pay the entire premium. Since dental claims are not assumed to vary with age, costs are expected to be fully paid by retirees and no County liabilities exist.

12. Participants Valued

Only current active and retired participants are directly valued. No future entrants are considered in this valuation.

Certain employees are eligible for retirement benefits at termination but do not immediately elect coverage. Such former employees may still be eligible to elect retiree coverage at a later date. Although the liabilities for such benefits are not directly valued, the County believes that the likelihood of such former employees returning to elect benefit coverage is considerably small, except for RSA, as discussed below. The plan participation assumptions are adjusted to consider this liability.

For RSA, it is anticipated that a significant number of retirees will defer benefits to later years. The RSA retiree liability was loaded 15% to account for such current "deferred" retirees that are not included in the census data.

13. Plan Participation

Assumed plan participation rates of future retirees is as set out in the following table:

Health Plan / Benefit	Assumed Participation Rate
CalPERS health plans	40%
RSA health plans	40% immediate / 40% defer to age 65
County health plans	
\$25 per month benefit	25%
\$256 per month benefit	35%

These percentages were developed based on a review of the County's recent experience.

14. Spousal Coverage Assumption

50% of future eligible retirees are assumed to cover their spouses. Males are assumed to be three years older than their female spouses. Current spousal coverage is used for current retirees.

15. Participants Excluded

Special District (Waste, Parks, Flood and RCA) employees were not included in this valuation.

In addition, liabilities for active Court members are not included in this report.

IX Actuarial Assumptions (cont.)

16. Affordable Care Act

We reviewed the impact of Affordable Care Act on the valuation, including the effect of the Excise Taxes on High Cost Plans. Per our understanding of the substantive plan, any potential additional costs will be passed on to retirees and will not increase the plan's liabilities, unless otherwise negotiated. Other Affordable Care Act provisions are not anticipated to impact the valuation results.

17. Changes in Valuation Assumptions

The following assumptions were changed from the prior valuation:

1) Discount Rate Assumption

2014 – 7.28%

2013 – 7.36%

This change was made based on CERBT's Asset Allocation Strategy 1 expected investment return, which was adopted in October 2014.

2) Mortality

2014 Mortality rates developed in the 1997-2011 CalPERS Experience Study with fully generational future improvements using scale MP-2014.

2013 Mortality rates developed in the 1997-2007 CalPERS Experience Study with fully generational future improvements using scale AA.

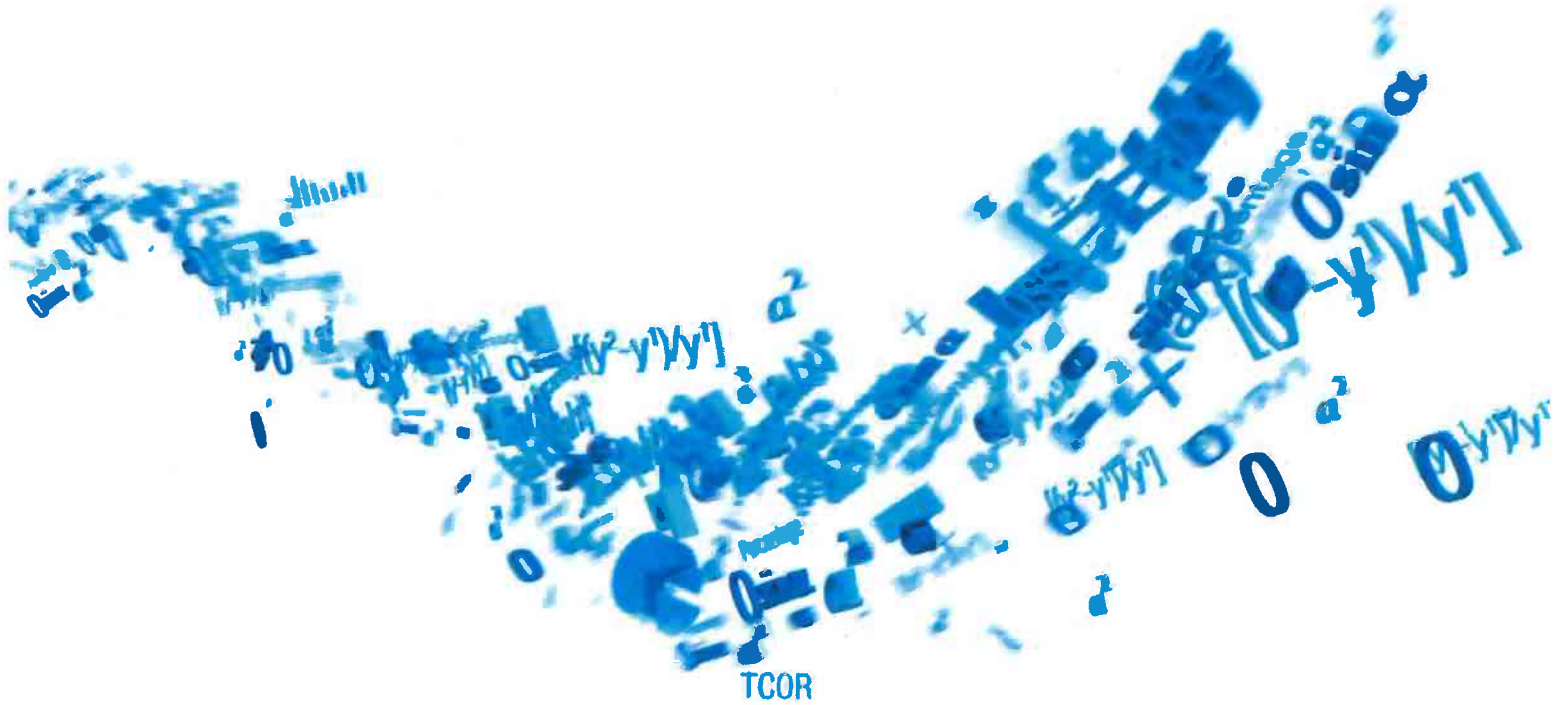
3) Turnover, Disability, Retirement

2014 Rates developed in the 1997-2011 CalPERS Experience Study

2013 Rates developed in the 1997-2007 CalPERS Experience Study

4) Plan Participation Rate

Health Plan / Benefit	2014	2013
CalPERS health plan	40%	70%
RSA health plan	40% immediate 40% defer to age 65	70%
County health plan		
\$25 per month benefit	25%	50%
\$256 per month benefit	35%	50%



Actuarial Valuation Report

County of Riverside

Part-time and Temporary Employees' Retirement Plan

As of July 1, 2014

Executive Summary

Background

The County of Riverside established the Part-Time and Temporary Employees' Retirement Plan to provide retirement benefits to eligible employees as a substitute for benefits under Social Security, as allowed under OBRA '90. The Plan is an IRS Section 401(a) defined benefit plan.

Valuation Results

The purpose of the actuarial valuation of the Plan is to:

- Determine the Plan's funded status and annual costs; and
- Provide information for Government Accounting Standards Board financial disclosure statement.

The following table summarizes the current valuation results as of July 1, 2014, compared to prior year results:

	July 1, 2014	July 1, 2013
Active participant count	2,172	1,919
Funding Contribution (GASB 27 ARC method)		
Actuarial accrued liability (Projected Unit Credit):	\$33,147,373	\$28,706,102
Value of plan assets (smoothed effective 2014)	29,455,755	26,804,528
Funded status for contribution determination	\$3,691,618	\$1,901,574
Contribution, FYE 2016 / 2015	\$122,127	\$252,273
Expected Participant Compensation	\$31,314,000	\$34,133,000*
Contribution as a Percentage of Compensation	0.50%	0.78%*
GASB 68 Expense		
Actuarial accrued liability (Entry Age Normal):	\$29,744,643	\$27,003,504**
Plan assets	31,602,341	26,804,528
Unfunded actuarial accrued liability	(\$1,857,698)	\$198,976**
GASB 68 Annual Pension Expense/(Income), FYE 2016 estimate / 2015	\$143,000	\$41,856**

* Prior valuation results shown include certain full-time actives that did not earn benefits. Adjusted contributions as a percent of compensation would have been 1.01%.

** Amount different than preliminary estimate shown in the 2013 actuarial valuation report

Note that for Fiscal Year Ending 2015 and thereafter, GASB 68 is effective and will be used to determine the County's annual expense (as developed in the report). Effectively, the new statement allows funding and accounting to be determined on a separate basis. The County's funding policy can continue to be based on the ARC developed above, or on another methodology to be determined.

Executive Summary (cont.)

Overall, the plan's unfunded actuarial accrued liability (UAAL) increased from the prior valuation due to the net result of the following:

- Demographic experience was different than expected, which resulted in a liability loss;
- Mortality assumptions were revised to reflect newly released Society of Actuaries base mortality, RP-2014, and future improvements scale, MP- 2014; and
- Assets were higher than expected due to contributions made in excess of the ARC and favorable investment return on plan assets (16.5% actual compared to 6.5% assumed).

90% Funded Status

The County's goal is to maintain a 90% funded status for the Plan. The valuation projects the Plan to be over 90% funded under the cost method used for funding (at a 6.5% discount rate), as shown below:

Projected Actuarial Accrued Liability (AAL), 6/30/2015	\$34,610,709
Projected Market Value of Assets, 6/30/2015	\$33,478,979
Funded Status, 6/30/2015	96.7%

In prior years, a projection of the estimated additional contributions needed to attain a 90% funding level at various future dates had sometimes been provided. However, based on the July 1, 2014 valuation results and assumptions, and a total contribution of 0.50% of covered payroll (ARC rate for the fiscal year ending June 30, 2016), the funding level is not projected to fall below 90% during the next several years.

GASB Changes

In June 2012, GASB released statements No. 67 (financial reporting for pension plans) and No. 68 (employer accounting and financial reporting for pension plans), effective for the County for fiscal years ending June 30, 2014 and June 30, 2015, respectively.

As part of the 2014 actuarial valuation, we will continue to provide GASB 27 financial statement information through June 30, 2014. This report shows development of the annual expense for fiscal year ending June 30, 2015 for GASB 68 purposes. In addition, we provide sample GASB 68 information for fiscal year ending 2015 financial reporting, as well as an estimate of the annual expense for fiscal year ending June 30, 2016 in the appendix. More complete information will be provided when we prepare the update for the July 1, 2015 valuation.

* * *

The following report provides details of the results summarized above. This July 1, 2014 valuation is based on census data provided as of June 30, 2014 for the purpose of providing financial statement disclosure information for the fiscal year ended June 30, 2014, GASB 68 information for the fiscal year ending June 30, 2015, and the Funding Contribution amount for the fiscal year ending June 30, 2016.

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I. Actuarial Certification

This report presents the results of the actuarial valuation for the County of Riverside Part-time and Temporary Employee's Retirement Plan as of July 1, 2014 for the development of the Funding Contribution and disclosure items under Governmental Accounting Standards Board (GASB) Statements No. 27, as amended by GASB No. 50, as well as GASB No. 67 and 68, where applicable.

This report has been prepared using generally accepted actuarial practices and methods. The actuarial assumptions used in the calculations are individually reasonable and reasonable in aggregate.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions
- Changes in economic or demographic assumptions
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status)
- Changes in plan provisions or applicable law

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the County of Riverside as of the valuation date. Aon Hewitt did not audit the employee data and financial information used in this valuation. On the basis of our review of this data, we believe that the information is sufficiently complete and reliable, and that it is appropriate for the purposes intended.

Actuarial computations under GASB are for purposes of fulfilling plan and employer accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations for purposes other than meeting Employer financial accounting requirements may be different from these results.

This report is intended for the sole use of the County of Riverside. It is intended only to supply information for the County of Riverside to comply with the stated purpose of the report and may not be appropriate for other business purposes. Reliance on information contained in this report by anyone for other than the intended purposes, puts the relying entity at risk of being misled because of confusion or failure to understand applicable assumptions, methodologies, or limitations of the report's conclusions. Accordingly, no person or entity, including the County of Riverside, should base any representations or warranties in any business agreement on any statements or conclusions contained in this report without the written consent of Aon Hewitt.

Funded status measurements may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and funded status measurements for company and plan disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions.

I. Actuarial Certification (cont.)

In determining the annual expense and Funding Contribution for the County of Riverside Part-time and Temporary Employees' Retirement Plan and information relating to plan disclosure and reporting requirements, Aon Hewitt may be assisting the appropriate plan fiduciary as it performs tasks that are required for the administration of an employee benefit plan. Aon Hewitt also may be consulting with the employer/plan sponsor (County of Riverside) as it considers alternative strategies for funding the plan, or as it evaluates information relating to employer reporting requirements. Thus, Aon Hewitt potentially will be providing assistance to County of Riverside (and/or certain of its employees) acting in a fiduciary capacity (for the benefit of plan participants and beneficiaries) and to County of Riverside (and/or its executives) acting in a settlor capacity (for the benefit of the employer sponsoring the County of Riverside Part-time and Temporary Employees' Retirement Plan).

The actuaries whose signatures appear below meet the Qualification Standards of the Society of Actuaries to render the actuarial opinion contained herein. The actuaries are available to answer any questions with regard to the matters enumerated in this report.

Aon Hewitt's^{*} relationship with the Plan and the Plan Sponsor is strictly professional. There are no aspects of the relationship that may impair or appear to impair the objectivity of our work.

Respectfully submitted,



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April 16, 2015

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^{*} Aon Consulting, Inc. and Hewitt Associates LLC are operating as Aon Hewitt.
County of Riverside
Part-time and Temporary Employees' Retirement Plan
07/01/2014 Actuarial Valuation Report

II. Summary of Plan Assets

This exhibit develops the asset values used in the valuation.

Statement of Invested Plan Assets as of June 30, 2014

1. Mutual Funds – Equity	\$21,016,011
2. Mutual Funds – Fixed Income	10,064,414
3. Cash and Equivalents (including receivables)	<u>521,916</u>
4. Total Assets held in Trust for Pension Benefits	\$31,602,341

Reconciliation of Plan Assets

1. Market Value of Assets at beginning of Plan Year	\$26,804,528
2. Employer Contributions	\$955,554
3. Employee Contributions	1,394,450
4. Net Investment Income	4,437,066
5. Benefit Payments	(1,761,676)
6. Administrative Expenses	<u>(227,581)</u>
7. Market Value of Assets at end of Plan Year	\$31,602,341

Rate of Return for 2013/2014 Plan year (net of expenses) 16.5%

Development of (Gain)/Loss

1. Expected Investment Earnings (assumed 6.5%)	\$1,753,834
2. Actual Investment Earnings	<u>4,437,066</u>
3. (Gain)/Loss on Assets (1)-(2)	(\$2,683,232)

Smoothed Value of Assets as of June 30, 2014

1. Market Value of Assets at end of Plan Year	\$31,602,341
2. Unrecognized (Gain)/Loss ¹	<u>(2,146,586)</u>
3. Preliminary Smoothed Value of Assets at end of Plan Year (1)+(2)	\$29,455,755
4. Lower Corridor (80% of Market Value)	\$25,281,873
5. Upper Corridor (120% of Market Value)	\$37,922,809
6. Smoothed Value of Assets	<u>\$29,455,755</u>

¹ Schedule of the Current and Prior Asset Gains/(Losses)

Date Established	Original (Gain)/Loss	Years Remaining	Amount recognized	Total Amount Unrecognized
07/01/2014	(\$2,683,232)	5	(\$536,646)	(\$2,146,586)
Total			(\$536,646)	(\$2,146,586)

III. Development of Funding Contribution

The funding policy adopted by the County is independent from the determination of the annual expense and may be prepared using any reasonable method. The amounts shown on this page represent a funding method for the fiscal year ending June 30, 2016 based on the total actuarial annual cost to the County under the GASB 27 ARC methodology. The County may continue to use this method, or select another method. A determination of the annual expense under GASB 68 for reporting purposes is shown in a later section.

The amounts shown assume payments are made at the middle of the year.

Unfunded Actuarial Accrued Liability, as of July 1, 2014	
1. Actuarial Accrued Liability as of 7/1/2014	
a. Actives	\$10,203,530
b. Actives not accruing benefits*	8,346,464
c. Deferred Vested Terminated	9,922,191
d. Retirees	4,675,188
e. Subtotal	33,147,373
2. Actuarial Value of Plan Assets as of 7/1/2014	29,455,755
3. Unfunded Actuarial Accrued Liability (UAAL), (1)-(2)	\$3,691,618
Projected Actuarial Accrued Liability, as of July 1, 2015	
1. Actuarial Accrued Liability as of 7/1/2014	\$33,147,373
2. Normal Cost	850,262
3. Estimated Benefit Payments [†]	(1,500,000)
4. Estimated Interest	2,113,074
5. Estimated Actuarial Accrued Liability as of 6/30/2015	\$34,610,709
Projected Assets, as of July 1, 2015	
1. Market Value of Assets as of 7/1/2014	\$31,602,341
2. Expected Employer Contributions (ARC for the year)	252,273
3. Expected Employee Contributions	1,140,084
4. Expected Expenses**	(225,000)
5. Less Expected Benefit Payments	(1,500,000)
6. Expected Return on Assets	2,043,511
7. Expected Market Value of Assets as of 6/30/2015	\$33,313,209
8. Smoothing Adjustment as of 6/30/2015	(1,609,940)
9. Projected Value of Assets as of 6/30/2015 (with allowance for corridor), (7)+(8)	\$31,703,269
Projected UAAL as of July 1, 2015	\$2,907,440
Funding Contribution, FYE June 30, 2016	
1. 20-year Amortization Payment of Projected UAAL	\$202,398
2. Normal Cost, including interest and administrative expenses**	1,129,232
3. Expected Employee Contributions During Plan Year ending 6/30/2016	1,209,503
4. Funding Contribution, (1)+(2)-(3), not less than 0	\$122,127
Funding Contribution as a Percentage of Pay	
1. Estimated Participant Compensation [‡]	\$31,314,000
2. Amortization of UAAL	0.65%
3. Normal Cost	3.60%
4. Employee Contributions	3.75%
5. Funding Contribution, (2)+(3)-(4), not less than 0	0.50%

* Participants who become full-time employees and transfer to CalPERS are no longer accruing a benefit under the plan

† The estimated benefit payments shown are based on recent benefit payment experience.

** Administrative expense assumption of \$225,000

‡ Based on 3.00% payroll increase assumption.

County of Riverside

Part-time and Temporary Employees' Retirement Plan

07/01/2014 Actuarial Valuation Report

IV. Development of GASB 68 Annual Expense

Determination of 2015 Expense

The expense amounts shown below have been prepared for GASB 68 reporting purposes for the fiscal year ending June 30, 2015.

The following expense amounts are based on a Valuation Date of July 1, 2013 and Measurement Date of July 1, 2014.

Annual Expense, FYE June 30, 2015	
1. Service Cost	\$1,556,594
2. Interest Cost	1,800,053
3. Expected Return on Assets	(1,753,834)
4. Employee Contributions	(1,394,450)
5. Administrative Expense	227,581
6. Amortization of Asset (Gain)/Loss	(536,646)
7. Amortization of Liability (Gain)/Loss	142,558
8. Annual Expense, not less than 0	<u>\$41,856</u>

Development of Items Used in Determination of 2015 Expense

Assets

This section shows the statement of assets as of the measurement date and the reconciliation of assets since the prior measurement. See Summary of Plan Assets exhibit for more detailed information regarding reconciliation of assets for fiscal year ending 2014.

Determination/Recognition of (Gain)/Loss on Plan Assets	
1. Expected Market Value of Assets at 6/30/2014	\$28,919,109
2. Actual Market Value of Assets at 6/30/2014	<u>31,602,341</u>
3. (Gain)/Loss on Assets: (1) - (2)	(\$2,683,232)
4. Amortization Period, in years	<u>5</u>
5. Amortization of (Gain)/Loss, (3) / (4)	<u>(\$536,646)</u>

Amortization Schedule of Asset (Gain)/Loss in FYE 2015 Expense

Date Established	Original (Gain)/Loss Amount	Years Remaining	Net Deferred Outflow / (Inflow) of Resources	Amortization Amount
2014	(\$2,683,232)	5	<u>(\$2,146,586)</u>	<u>(\$536,646)</u>
Total			<u>(\$2,146,586)</u>	<u>(\$536,646)</u>

IV. Development of GASB 68 Annual Expense (cont.)

Liabilities

The Actuarial Accrued Liability as of July 1, 2013 has been prepared using the Entry Age Normal cost method, as required by GASB 68. The following table summarizes the 2014 valuation results compared to the valuation update as of July 1, 2013:

Valuation Date	7/1/2014	7/1/2013
1. Actuarial Accrued Liability	\$29,744,643	\$27,003,504
2. Value of Plan Assets	31,602,341	26,804,528
3. Unfunded Actuarial Accrued Liability (UAAL), (1)-(2)	(\$1,857,698)	\$198,976
4. Normal Cost	\$1,511,755	\$1,556,594
5. Discount Rate	6.50%	6.50%

The following tables summarize the development of the actuarial (gain)/loss on liability and corresponding amortization, which will be used in the GASB 68 expense determination for the fiscal year ending June 30, 2015:

Development of Expected Liability as of July 1, 2014 for GASB 68

1. Actuarial Accrued Liability as of July 1, 2013	\$27,003,504
2. Normal Cost	1,556,594
3. Interest Cost	1,800,053
4. Actual Benefit Payments During the Year	(1,761,676)
5. Expected Actuarial Accrued Liability as of July 1, 2014	\$28,598,475

Development of Future Working Lifetime in (Gain)/Loss

Status	Count	Average Future Working Life
1. Actives	2,172	0.70
2. Actives not accruing benefits	4,410	15.21
3. Deferred Vested Terminated	1,751	0.00
4. Retirees	192	0.00
5. Total/Weighted Average	8,525	8.04

Determination/Recognition of Liability (Gain)/Loss in Expense

1. Expected Actuarial Accrued Liability at 7/1/2014	\$28,598,475
2. Actual Actuarial Accrued Liability at 7/1/2014	29,744,643
3. (Gain)/Loss on Liability: (2) - (1)	1,146,168
4. Amortization Period, in years	8.04
5. Amortization of (Gain)/Loss, (3) / (4)	\$142,558

IV. Development of GASB 68 Annual Expense (cont.)

Amortization Schedule of Liability (Gain)/Loss in FYE 2015 Expense

Differences in Experience

Date Established	Original (Gain)/Loss Amount	Years Remaining	Deferred Outflow of Resources		Deferred Inflow of Resources	
			Outstanding Balance	Amortization Amount	Outstanding Balance	Amortization Amount
2014	\$1,146,168	8.04	\$1,003,610	\$142,558	\$0	\$0
Total			\$1,003,610	\$142,558	\$0	\$0

Changes in Assumptions

None

V. GASB 27 Reporting and Disclosure Information

The following is the sample disclosure information as of June 30, 2014. GASB 27 requires certain items to be disclosed in the footnotes to the Plan's and County's financial statements, including the following:

- Plan description
 - Name of plan and identification of the entity that administers plan
 - Brief description of the types of benefits
- Funding policy
 - Required contribution rates of plan members
 - Required contribution rates of employer

In addition, the tables below show required supplementary information to be shown with three years of historical information in the financial statements.

A. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets [a]	Actuarial Liability (AAL) Projected Unit Credit [b]	Unfunded AAL (UAAL) [b-a]	Funded Ratio [a/b]	Covered Payroll [c]	UAAL as a Percentage of Covered Payroll [(b-a)/c]
6/30/2012	\$23,654,130	\$24,306,815	\$652,685	97.3%	\$32,424,023	2.0%
6/30/2013	\$26,804,528	\$28,706,102	\$1,901,574	93.4%	\$33,138,817	5.7%
6/30/2014	\$31,602,341	\$33,147,373	\$1,545,032	95.3%	\$33,677,746	4.6%

B. Employer Contributions

Year Ended June 30	Actual County Contribution [a]	Annual Required Contribution [b]	Percentage Contributed [a/b]	Annual Pension Cost [c]	Percentage Contributed [a/c]	Net Pension Obligation at End of Year
2012	\$559,257	\$160,463	349%	\$296,652	189%	(\$5,069,486)
2013	\$934,056	\$621,999	150%	\$738,533	126%	(\$5,435,000)
2014	\$955,554	\$334,728	285%	\$359,804	266%	(\$6,030,750)

C. Development of the Net Pension Obligation/(Asset) at June 30, 2014

1. Net Pension Obligation (Asset) at June 30, 2013	(\$5,435,000)
2. a. Annual Required Contribution for FYE June 30, 2014	334,728
b. Interest on Net Pension Obligation	(353,275)
c. Adjustment to Annual Required Contribution	(378,351)
d. Annual pension cost for FY 2014	\$359,804
3. Employer contributions made during 2014	955,554
4. Net Pension Obligation (Asset) at June 30, 2014: (1)+(2d)-(3)	(\$6,030,750)

V. GASB 27 Reporting and Disclosure Information (cont.)

D. Development of the Annual Pension Cost for 2014

1. Annual Required Contribution for FYE June 30, 2014	\$334,728
2. Interest on Net Pension Obligation	(353,275)
3. Adjustment to Annual Required Contribution	(378,351)
4. Annual pension cost for FYE June 30, 2014: (1)+(2)-(3)	\$359,804

E. Schedule of Net Pension Obligation/(Asset) (NPO) and Annual Pension Cost

Fiscal Year Ending	Annual Required Contribution	Actual Contribution	NPO End of Year	Interest on NPO	Adjustment to the ARC	Annual Pension Cost	Interest Rate	Salary Scale	Amortization Factor
6/30/12	\$160,463	\$559,257	(\$5,069,486)	(\$240,344)	(\$376,533)	\$296,652	5.0%	3.0%	12.8
6/30/13	\$621,999	\$1,103,819	(\$5,435,000)	(\$329,517)	(\$360,146)	\$652,629	6.5%	3.0%	11.4
6/30/14	\$334,728	\$955,554	(\$6,030,750)	(\$353,275)	(\$378,351)	\$359,804	6.5%	3.0%	14.4

VI. Participant Information

These exhibit summarizes contain participant demographic information as of June 30, 2014.

Number of Participants:	
Actives	2,172
Full-time Actives (not accruing benefits)*	4,410
Deferred Vested	1,751
Retirees	192
Total	8,525
Participant Compensation – Active Participants Currently Accruing Benefits	
Compensation (prior year)	\$29,516,733
Number of Active Participants below assumed retirement age	2,156
Average Compensation	\$13,691
Actives	
Average Age	36.69
Average Benefit Service (years)	2.33
Full-time Actives	
Average Age	41.95
Average Accrued Annual Benefit	\$438
Deferred Vested	
Average Age	46.45
Average Accrued Annual Benefit	\$1,189
Retired	
Average Age	73.35
Average Annual Benefit	\$2,580

Reconciliation of Participants from Prior Valuation

	Active	Full-time Actives*	Terminated Vested	Retirees and Beneficiaries	Total
As of July 1, 2013	1,919	4,710	2,432	180	9,241
Duplicates	0	0	0	0	0
Classification Change	(187)	187	0	0	0
New Entrants	1,004	203	104	0	1,311
Vested Terminations	(262)	(167)	429	0	0
Rehires	18	12	(30)	0	0
Retired	(4)	(6)	(12)	22	0
Deaths	0	0	0	(10)	(10)
Lump Sum Cash-outs	(316)	(529)	(1,172)	0	(2,017)
Data Correction	0	0	0	0	0
Net Change	(253)	(300)	(681)	12	(716)
As of July 1, 2014	2,172	4,410	1,751	192	8,525

*Participants who become full-time employees and transfer to CalPERS are no longer accruing a benefit under the plan.
County of Riverside
Part-time and Temporary Employees' Retirement Plan
07/01/2014 Actuarial Valuation Report

VI. Participant Information (cont.)

Active Age Distribution as of July 1, 2014

Age	Number of Participants
15-19	149
20-24	367
25-29	366
30-34	306
35-39	213
40-44	178
45-49	154
50-54	154
55-59	138
60-64	72
65-69	38
70-74	21
75 +	16
Total	2,172

Active Career Earnings Distribution as of July 1, 2014

Career Earnings	Number of Participants
Under \$5,000	804
\$5,000 - \$10,000	280
\$10,000 - \$25,000	477
\$25,000 - \$50,000	179
\$50,000 - \$100,000	157
Over \$100,000	275
Total	2,172

This valuation includes the following active participants by category:

Category	Number of participants
▪ Seasonal	231
▪ Resident/Physician	85
▪ Per Diem	664
▪ Temporary	1,192
	2,172

VII. Summary of Plan Provisions

1. **Membership Requirements**

All employees of the County not covered by another retirement plan as provided by Code Section 3121(b)(7)(F).

2. **Career Compensation**

Total amount of compensation, limited annually by the Social Security Wage Base.

3. **Normal or Late Retirement Benefit**

Eligibility: Age 65

Benefit: 2% times Career Compensation, payable as a single life annuity.

4. **Pre-Retirement Death Benefit**

Refund of contributions accumulated with interest at 5% per annum.

5. **Death after Retirement**

None. Benefits are payable for the life of the employee only.

6. **Termination Benefit**

Normal retirement benefit accrued to date of termination.

A lump sum distribution is paid if the actuarial equivalent benefit is less than \$5,000. Actuarial Equivalence for this purpose is based on the greater of the factor produced under the UP1984 unisex mortality table at 6% or the applicable mortality table and interest rate under 417(e).

7. **Vesting**

Benefits are 100% vested immediately.

8. **Member Contributions**

3.75% of compensation per pay period.

VIII. Summary of Actuarial Assumptions

1. Retirement Rates

Actives

Attained Age	Probability of Retirement
65	60%
66-74	50%
75+	100%

Full-time Actives (no longer accruing benefits)

Retirement rates developed in the 1997-2011 CalPERS Experience Study for Miscellaneous were used in the valuation. Sample rates are as follows:

Attained Age	Years of Service						
	5	10	15	20	25	30	35
50	1.20%	1.80%	2.40%	3.90%	4.00%	9.10%	9.70%
55	4.30%	5.70%	7.20%	9.60%	10.50%	16.50%	17.90%
60	11.40%	14.80%	18.20%	22.60%	25.50%	33.40%	36.80%
65	20.20%	26.00%	31.80%	38.60%	43.90%	54.20%	60.00%
70	14.00%	18.20%	22.30%	27.40%	31.00%	39.60%	43.70%
75	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

2. Termination Rates

Actives

Attained Age	Probability of Termination
Under Age 30	65%
30-49	60%
50-64	50%

Full-time Actives (no longer accruing benefits)

Turnover rates developed in the 1997-2011 CalPERS Experience Study for Miscellaneous were used in the valuation. The following sample rates are based on age and service:

Hire Age	Years of Service						
	0 - 1	5	10	15	20	25	30
30	16.06%	7.11%	5.07%	3.47%	0.21%	0.05%	0.01%
35	15.37%	6.32%	4.27%	0.32%	0.13%	0.01%	0.01%
40	14.68%	5.54%	0.71%	0.23%	0.05%	0.01%	0.01%
45	14.00%	1.16%	0.55%	0.14%	0.01%	0.01%	0.01%
50	13.32%	0.97%	0.38%	0.04%	0.01%	0.01%	0.01%
55	12.62%	0.78%	0.21%	0.02%	0.01%	0.01%	0.00%

VIII. Summary of Actuarial Assumptions (cont.)

3. Mortality

Actives

RP-2014 combined annuitant/non-annuitant mortality table with generational future improvement using scale MP-2014.

Full-time Actives (no longer accruing benefits)

Mortality rates are based on the most recent CalPERS mortality table developed in the 1997-2011 CalPERS Experience Study, with generational future improvements using scale MP-2014. Sample rates for the base year are as follows:

Age	Male	Female
30	0.05%	0.03%
40	0.08%	0.05%
50	0.16%	0.11%
60	0.35%	0.22%
70	1.77%	1.26%
80	5.28%	3.69%
90	16.19%	12.33%

4. Interest Rate

Funding Interest Rate – 6.5%

Used as the asset return assumption and based on the long term expected return on plan assets, with consideration given to the recent asset allocation.

Lump Sum Interest Rate – 6%

Used to estimate lump sum benefit amounts and based on the long term expected effective rate used for determining lump sums under plan provisions. Generally, this is based on high quality corporate bonds. This rate is independent on the plan's asset allocation and expected return.

5. Salary Increases

3.00% per year

6. Payroll Growth (used for amortization of unfunded liability)

3.00% per year (same as CalPERS assumption)

7. Actuarial Funding Method

Projected Unit Credit, for funding contribution

Entry Age Normal, for expense under GASB 68

VIII. Summary of Actuarial Assumptions (cont.)

8. Value of Assets

GASB 68 – Market value

Funding – Effective June 30, 2014, smoothed asset value, with differences between actual and expected earnings recognized over a 5 year period, subject to an 80%-120% corridor around market value.

9. Funding Contribution (based on GASB 27 Annual Required Contribution methodology)

20-year Amortization of Unfunded Liability, plus Normal Cost, less expected Employee Contributions

10. Form of Benefit Paid

Lump sums paid for benefits with a present value less than \$5,000. Single life annuities paid for benefits with a present value greater than \$5,000.

11. Administrative Expenses (used in projected expense for development of Funding Contribution and *estimated* GASB 68 expense)

\$225,000 per year

12. Changes in Assumptions and Methods Since the Prior Valuation

- 1) Mortality – mortality table changed from IRS small plan combined table (projection of RP2000 Mortality) plus generational mortality improvements using scale AA to RP-2014 combined annuitant/non-annuitant mortality table with MP-2014 mortality projection scale.
- 2) Demographic Rates (retirement, termination, mortality) for Full-time Actives were changed to be based on the most recent CalPERS rates developed in the 1997-2011 Experience Study for Miscellaneous.
- 3) Value of Assets – for funding contribution, assets are adjusted for differences between actual and expected earnings, which are amortized over a 5 year period.
- 4) Administrative Expenses – increased from \$200,000 to \$225,000 per year to reflect most recent experience

IX. Appendix

Other Information Related to GASB 68 for Year Ended June 30, 2015

Please note: In order to allow GASB 68 expense information to be available before the end of the applicable reporting period, a measurement date one year prior to the end of the reporting period is used (e.g. June 30, 2014 measurement date for Fiscal Year Ending June 30, 2015).

In June 2012, GASB released statement No. 68 (employer accounting and financial reporting for pension plans), effective for the County for the fiscal year ending June 30, 2015.

In this appendix, we provide certain GASB 68 information for the 2015 financial statements for illustration purposes. The disclosure information will be finalized in the update valuation as of July 1, 2015 and the information will replace the reporting under GASB 27.

GASB 68 Prior-Period Adjustment to Net Pension Liability (Balance Sheet) as of July 1, 2014

The prior-period adjustment to the balance sheet occurring on the initial effective date, July 1, 2014, follows:

Applicable Valuation Date	07/01/2013
Applicable Measurement Date	06/30/2014
1. Net Pension (Obligation)/Asset removal at July 1, 2014	\$6,030,750
2. Net Pension Liability at July 1, 2014	
a. Total Pension Liability at Valuation Date	\$27,003,504
b. Plan Fiduciary Net Position at Valuation Date	(26,804,528)
Net Pension Liability (a)+(b)	198,976
3. Prior-period Adjustment (1)+(2)	\$6,229,726

GASB 68 Projected Net Pension Liability as of June 30, 2015

1. Net Pension Liability at July 1, 2014	\$198,976
2. Employer Contributions, FYE June 30, 2015	(955,554)
3. Annual Pension Expense, FYE June 30, 2015	41,856
4. Deferred Outflow of Resources	1,003,610
5. Deferred Inflow of Resources	(2,146,586)
6. Net Pension Liability at June 30, 2015	(\$1,857,698)

IX. Appendix (cont.)

Other Information Related to GASB 68 for Year Ended June 30, 2015 (cont.)

Deferred Outflows and Inflows of Resources

For the year ended June 30, 2015, the County recognized pension expense of \$41,856. At June 30, 2015, the County reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$1,003,610	\$0
Change of Assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	0	2,146,586
Total	\$1,003,610	\$2,146,586

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in pension expense as follows:

Year Ending June 30

2016	(\$394,088)
2017	(\$394,088)
2018	(\$394,088)
2019	(\$394,088)
2020	\$142,558
Thereafter	\$142,558

Sensitivity to Discount Rate

The following presents the net pension liability of the County, calculated using the discount rate of 6.50% as of June 30, 2015, as well as what the County's net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower (5.50%) or 1-percentage point higher (7.50%) than the current rate:

	1% Decrease (5.50%)	Current Rate (6.50%)	1% Increase (7.50%)
Total Pension Liability	\$34,732,853	\$29,744,643	\$25,816,741
Plan Fiduciary Net Position	(\$31,602,341)	(\$31,602,341)	(\$31,602,341)
Net Pension Liability	\$3,130,512	(\$1,857,698)	(\$5,785,600)

IX. Appendix (cont.)

Other Information Related to GASB 68 for Year Ended June 30, 2015 (cont.)

Changes to Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) – (b)
Balances at 06/30/2014	\$27,003,504	\$26,804,528	\$198,976
Changes for the year:			
Service Cost	\$1,556,594		\$1,556,594
Interest Cost	\$1,800,053		\$1,800,053
Differences Between expected and actual experience	\$1,146,168		\$1,146,168
Contributions – Employer		\$955,554	(\$955,554)
Contributions – Employee		\$1,394,450	(\$1,394,450)
Net Investment Income		\$4,437,066	(\$4,437,066)
Benefit Payments, including refunds of employee contributions	(\$1,761,676)	(\$1,761,676)	\$0
Administrative Expenses		(\$227,581)	\$227,581
Other Changes		\$0	\$0
Net Changes	\$2,741,139	\$4,797,813	(\$2,056,674)
Balances at 06/30/2015	\$29,744,643	\$31,602,341	(\$1,857,698)

IX. Appendix (cont.)

Other Information Related to GASB 68 for Year Ended June 30, 2015 (cont.)

2015 GASB 68 Notes to Financial Statements

Please note: In order to allow GASB 68 expense information to be available before the end of the applicable reporting period, a measurement date one year prior to the end of the reporting period is used (e.g. June 30, 2014 measurement date for Fiscal Year Ending June 30, 2015).

Schedule of Changes in the Net Pension Liability and Related Ratios

GASB 68 is effective for fiscal year ending June 30, 2015. The follow exhibit is a 10 year history of change in Net Pension Liability. This Exhibit is not required to be reported on the June 30, 2014 CAFR.

Year Ending June 30,	2015
Total Pension Liability	
Service Cost	\$1,556,594
Interest Cost	\$1,800,053
Changes of Benefit Terms	\$0
Differences Between Expected and Actual Experiences	\$1,146,168
Changes of Assumptions	\$0
Benefit Payments, Including Refunds of Member Contributions	(\$1,761,676)
Net Change in Total Pension Liability	\$1,821,935
Total Pension Liability (Beginning)	\$27,003,504
Total Pension Liability (Ending)	\$29,744,643
Plan Fiduciary Net Position	
Contributions—Employer	\$955,554
Contributions—Member	\$1,394,450
Net Investment Income	\$4,437,066
Benefit Payments, Including Refunds of Member Contributions	(\$1,761,676)
Administrative Expense	(\$227,581)
Other	\$0
Net Change in Plan Fiduciary Net Position	\$4,797,813
Plan Fiduciary Net Position (Beginning)	\$26,804,528
Plan Fiduciary Net Position (Ending)	\$31,602,341
Net Pension Liability (Ending)	(\$1,857,698)
Net Position as a % of Pension Liability	106.25%
Covered-Employee Payroll	\$29,516,733
Net Pension Liability as a % of Payroll	(6.29%)

Notes to Schedule:

- No changes have been made over the 10 year history since GASB 68 has become effective.

IX. Appendix (cont.)

Other Information Related to GASB 68 for Year Ended June 30, 2015 (cont.)

2015 GASB 68 Notes to Financial Statements

Schedule of Contributions

Year Ending June 30,	2015
Actuarially Determined Contributions	\$252,273
Contributions in Relation to the Actuarially Determined Contribution	TBD
Contribution Deficiency/(Excess)	TBD
Covered-Employee Payroll	TBD
Contributions as a Percentage of Covered-Employee Payroll	TBD

Schedule of Investment Returns

GASB 68 is effective for fiscal year ending June 30, 2015. The follow exhibit is a 10 year history of Investment Returns. This Exhibit is not required to be reported on the June 30, 2014 CAFR.

Year Ending June 30,	2015
Annual Money-Weighted Rate of Return, Net of Investment Expense	16.5%

These schedules are presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, pension plans should present information for those years for which information is available

IX. Appendix (cont.)

Development of Annual Expense FYE 2016 under GASB 68 (Estimate)

The estimated expense amount shown below has been prepared for GASB 68 for the fiscal year ending June 30, 2016.

The Actuarial Accrued Liability as of July 1, 2014 has been prepared using the Entry Age Normal cost method, as required by GASB 68. The following estimated expense amounts have been prepared based on a Valuation Date of July 1, 2014 and Measurement Date of July 1, 2015. The expense shown below will be updated in next year's report to reflect actual administrative costs, employee contributions, and any gains or losses with respect to assets and liabilities.

Unfunded Actuarial Accrued Liability, as of July 1, 2014

1. Actuarial Accrued Liability as of 7/1/2014	\$29,744,643
2. Value of Plan Assets as of 7/1/2014	31,602,341
3. Unfunded Actuarial Accrued Liability (UAAL), (1)-(2)	(\$1,857,698)

Estimated Annual Expense, FYE June 30, 2016

4. Service Cost	\$1,512,000
5. Interest Cost	1,984,000
6. Expected Return on Assets	(2,044,000)
7. Employee Contributions	(1,140,000)
8. Administrative Expense	225,000
9. Amortization of Asset (Gain)/Loss	(537,000)
10. Amortization of Liability (Gain)/Loss	143,000
11. Annual Expense/(Income)	\$143,000

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