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Ms. Lisa Driscoll
County Finance Director
County Administrator's Office
651 Pine Street, 10th Floor
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***Recommended Assumptions and Methods for Contra Costa County Other Post Employment
Benefit Plan GASB 45 Actuarial Valuation as of January 1, 2016***

Dear Lisa:

We have prepared and enclosed for your review a summary of recommended assumptions and methods that we intend to use in our January 1, 2016 actuarial valuation of Contra Costa County's retiree health benefits. The enclosed appendices are shown as they would appear in our actuarial valuation report. Appendix B contains the actuarial assumptions and methods, and Appendix C contains a summary of proposed assumption changes.

Please review the proposed assumptions and methods and let us know if the county approves of them. Please note that the discount rate of 5.7% was estimated based on the County's current policy of partially funding its OPEB liabilities. Under GASB 45, the discount rate for partially funded OPEB plans should represent a weighted average of the long term expected return on plan assets held in trust and the long term expected return on the County's general funds. Since the weight is based on the ratio of the actual contribution to the Annual Required Contribution (ARC), we cannot determine a precise discount rate until all other assumptions and methods are selected and the valuation is run. Therefore, the discount rate should be considered an estimate that is potentially subject to change.

If you have any questions, please call me at (415) 394-3740.

Sincerely,

A handwritten signature in black ink, appearing to read "John R. Botsford".

John R. Botsford, FSA, MAAA
Principal and Consulting Actuary

JRB:dyu
enc.

Appendix B. Actuarial Cost Method and Assumptions

Actuarial Cost Method The actuarial cost method used for determining the benefit obligations is the individual Entry Age Normal Cost Method. Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of expected salary for each year of employment between entry age (defined as age at hire) and assumed exit.

The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future normal costs is called the Unfunded Actuarial Accrued Liability (UAAL).

The Actuarial Value of Assets is equal to the market value of assets as of the valuation date. In determining the Annual Required Contribution, the Unfunded AAL is amortized as a level dollar amount over 30 years on a “closed” basis. There are 22 years remaining in the amortization period as of January 1, 2016. The actuarial assumptions are summarized below.

Economic Assumptions

Discount Rate (Liabilities) 5.70%

We have used a discount rate of 5.70% in this valuation to reflect the County’s current policy of partially funding its OPEB liabilities. This rate is derived based on the fund’s investment policy, level of partial funding, and includes a 2.50% long-term inflation assumption. County OPEB Irrevocable Trust assets are invested in the Public Agency Retirement Services’ Highmark Portfolio. Based on the portfolio’s target allocation (shown below), the average return of Trust assets over the next 50 years is expected to be 6.13%, which would be an appropriate discount rate if the County’s annual contribution is equal to the ARC. If the County were to elect not to fund any amount to a Trust, the discount rate would be based on the expected return of the County’s general fund (we have assumed a long term return of 3.50% for the County’s general fund). Since the County is partially funding the Trust with a contribution of \$20 million per year, we used a blended discount rate of 5.70%. This is the same discount rate used in the January 1, 2014 actuarial valuation.

Asset Class	Expected 1-Year Nominal Return	Targeted Asset Allocation
Domestic Equity Large Cap	7.63%	17.0%
Domestic Equity Mid Cap	8.21%	6.0%
Domestic Equity Small Cap	8.81%	8.0%
U.S. Fixed Income	5.00%	38.0%
International	8.60%	9.0%
Global Equity (Developed)	8.21%	7.0%
Real Estate	7.71%	4.0%
Cash	3.27%	1.0%
Alternatives	4.57%	10.0%
Expected Geometric Median Annual Return (50 years)		6.13%

Assumed Salary Increases (Applied to Individual Entry Age Normal Cost Method)

The assumed annual rates of compensation increases used for the EAN actuarial cost method are the same as the assumption used in the December 31, 2014 CCCERA Actuarial Valuation.

Years of Service	General	Safety
Less than 1	13.50%	14.00%
1	10.50%	10.50%
2	8.75%	9.25%
3	7.25%	8.00%
4	6.25%	6.25%
5	5.50%	5.00%
6	5.25%	4.75%
7	5.00%	4.75%
8 or more	4.75%	4.75%

Demographic Assumptions

Below is a summary of the assumed rates for mortality, retirement, disability and withdrawal, which are consistent with assumptions used in the December 31, 2014 CCCERA Actuarial Valuation. These assumptions were adopted by CCCERA in connection with a study of experience during 2010-2012.

Pre / Post Retirement Mortality

Healthy: For General Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set back one year.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set back two years.

Disabled: For General Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set forward six years for males and set forward seven years for females.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected to 2030 with Scale AA, set forward three years.

Beneficiaries: Beneficiaries are assumed to have the same mortality as a General Member of the opposite sex who had taken a service (non-disability) retirement.

Disability

Age	General Tier 3	Safety (All Tiers)
20	0.01%	0.02%
25	0.02%	0.22%
30	0.03%	0.42%
35	0.05%	0.56%
40	0.08%	0.66%
45	0.13%	0.94%
50	0.17%	2.54%

Retirement – For this valuation, we have applied the Tier 3 rates for all General employees and Tier A rates for all Safety employees since nearly all current employees are in these two pension tiers, with the exception of those who were hired after January 1, 2013 as the PEPRA tiers.

Age	General Tier 3	General PEPRA	Safety Tier A	Safety PEPRA
45	0%	0%	2%	0%
46	0%	0%	2%	0%
47	0%	0%	7%	0%
48	0%	0%	7%	0%
49	0%	0%	20%	0%
50	4%	0%	25%	5%
51	3%	0%	25%	4%
52	3%	2%	25%	4%
53	5%	3%	25%	5%
54	5%	3%	25%	5%
55	10%	5%	30%	6%
56	10%	5%	25%	8%
57	10%	6%	25%	12%
58	12%	8%	35%	18%
59	12%	9%	35%	20%
60	15%	10%	40%	20%
61	20%	14%	40%	20%
62	27%	21%	40%	20%
63	27%	21%	40%	20%
64	30%	21%	40%	100%
65	40%	27%	100%	100%
66 – 69	40%	33%	100%	100%
70 – 74	40%	50%	100%	100%
75	100%	100%	100%	100%

Withdrawal – Sample probabilities of terminating employment with the County are shown below for selected years of County service.

Years of Service	General	Safety
Less than 1	13.50%	11.50%
1	9.00%	6.50%
2	9.00%	5.00%
3	6.00%	4.00%
4	4.50%	3.50%
5	4.00%	3.00%
10	2.75%	1.90%
15	2.10%	1.40%
20 or more	2.00%	1.00%

Coverage Election Assumptions

Retiree Coverage – We have assumed 90% of new retirees hired before the exclusion date stated in Appendix A will elect medical and dental coverage at retirement. For employees hired after the exclusion date stated in Appendix A, we assumed 50% will elect to enroll in the health plans without any County subsidy.

Spouse Coverage – We have assumed 50% of new General retirees and 60% of new Safety retirees electing coverage will elect spouse medical and dental coverage at retirement.

Spouse Age – Female spouses are assumed to be three years younger than male spouses.

Dependent Coverage – We have assumed 30% of retirees with no spouse coverage will elect coverage for a dependent child until age 65 and 50% of retirees with spouse coverage will elect coverage for a dependent child until age 65.

Health Plan Election – We have assumed that new retirees will remain enrolled in the same plan they were enrolled in as actives. For actives who waived coverage, we have assumed that they will elect Kaiser plan coverage. For retirees enrolled in either the CalPERS Anthem and Blue Shield plans, we assumed they will transfer to the United Health Care Medicare Supplement plan upon reaching age 65, as the CalPERS health plan no longer offers Anthem or Blue Shield coverage for Medicare eligible retirees.

Valuation of Retiree Premium Subsidy Due to Active Health Costs

Currently, the County and California PERS (PEMHCA) health plans charge the same premiums for retirees who are not yet eligible for Medicare as for active employees. Therefore, the retiree premium rates are being subsidized by the inclusion of active lives in setting rates. (Premiums calculated only based on retiree health claims experience would have resulted in higher retiree premiums.) GASB 45 requires that the value of this subsidy be recognized as a liability in valuations of OPEB costs. To account for the fact that per member health costs vary depending on age (higher health costs at older ages), we calculated equivalent per member per month (PMPM) costs that vary by age based on the age distribution of covered members, and based on relative cost factors by age. The relative cost factors were developed from the Milliman Health Cost GuidelinesTM. Based on the carrier premium rates and relative age cost factors assumptions, we developed age adjusted monthly PMPM health costs for 2016 to be used in valuing the implicit rate subsidy.

Since retirees eligible for Medicare (age 65 and beyond) are enrolled in Medicare supplemental plans, the premiums for retirees with Medicare are determined without regard to active employee claims experience and no such subsidy exists for this group for medical cost.

Medical Cost Inflation Assumption

We assumed future increases to the health costs and premiums are based on the “Getzen” model published by the Society of Actuaries for purposes of evaluating long term medical trend. Under the Patient Protection and Affordable Care Act of 2010, a Federal excise tax will apply for high cost health plans beginning in 2020. A margin to reflect the impact of the excise tax in future years is reflected in the assumed trend. The following table shows the assumed rate increases in future years for Medical premiums.

Calendar Year	County Plans Pre 65	Calendar Year	County Plans Post 65	Calendar Year	PEMHCA Plans Pre 65	Calendar Year	PEMHCA Plans Post 65
2016	4.50%	2016	5.25%	2016	4.50%	2016	5.00%
2017	8.00%	2017	8.25%	2017	8.00%	2017	8.25%
2018	5.50%	2018 – 2021	5.50%	2018 – 2021	5.50%	2018 – 2020	5.50%
2019 – 2020	5.25%	2022 – 2036	5.75%	2022 – 2036	6.25%	2021 – 2036	5.75%
2021 – 2023	5.50%	2037 – 2040	5.50%	2037 – 2038	6.00%	2037 – 2041	5.50%
2024 – 2025	5.75%	2041 – 2043	6.00%	2039 – 2044	5.75%	2042 – 2048	5.25%
2026	6.25%	2044 – 2046	5.75%	2045 – 2057	5.50%	2049 – 2053	5.75%
2027	6.50%	2047	6.00%	2058 – 2063	5.25%	2054 – 2060	5.50%
2028	6.25%	2048	6.25%	2064 – 2065	5.00%	2061 – 2062	5.75%
2029 - 2030	6.50%	2049 – 2053	6.00%	2066 – 2069	4.75%	2063 – 2064	5.50%
2031 – 2036	6.25%	2054 – 2060	5.75%	2070 +	4.50%	2065 – 2067	5.25%
2037 – 2039	6.00%	2061 – 2063	5.50%			2068 – 2069	5.00%
2040 – 2046	5.75%	2064 – 2065	5.25%			2070 – 2091	4.75%
2047 – 2059	5.50%	2066 – 2068	5.00%			2092 +	4.50%
2060 – 2063	5.25%	2069 – 2075	4.75%				
2064 – 2066	5.00%	2076 +	4.50%				
2067 – 2069	4.75%						
2070 +	4.50%						

Dental Cost We assumed Dental costs will increase 4.0% annually.

Appendix C. Changes in Actuarial Cost Method and Assumptions

The following is a list of recommended assumption and method changes from the prior actuarial valuation.

Actuarial Cost Method

We recommend that the actuarial cost method used for determining the benefit obligations be changed from the Projected Unit Credit cost method to the individual Entry Age Normal cost method. This is the actuarial cost method adopted by the GASB board in June 2015 for the upcoming GASB 74/75 standards in which the implementation date for the OPEB Fund under GASB 74 will be for the fiscal year ending June 30, 2017, and for the County under GASB 75 will be for the fiscal year ending June 30, 2018.

Spouse Coverage Election Assumption

We recommend that the spouse coverage election assumption be changed from 50% for all new retirees electing coverage to 50% for all new General retirees electing coverage and 60% for all new Safety retirees electing coverage. Our recommendation is based on a review of the County experience from 2012 to 2015.

Health Cost Inflation Assumption

We developed the medical cost trend for the prior valuation based on the "Getzen" model published by the Society of Actuaries for purposes of evaluating long term medical trend. The medical trend includes the effect of the Patient Protection and Affordable Care Act of 2010, on future health costs. The Consolidated Appropriations Act of 2016 delayed the excise tax on high cost plans from 2018 to 2020, and eliminated the Health Insurer Fee for calendar year 2017 only. The Health Insurer Fee will be assessed again in calendar year 2018. We recommend the medical trend be updated to reflect these recent legislative changes.

Retirement Rates for PEPRA Tier Employees

We recommend the usage of the PEPRA Tier retirement rates developed by CCCERA for employees hired on or after January 1, 2013. The rates are shown in Appendix B.