January 22, 2016

Mr. David A. Houser
Auditor-Controller
County of Butte
25 County Center Drive
Oroville, CA 95965

Re: County of Butte ("County") GASB 45 Valuation

Dear Mr. Houser:

This report sets forth the results of our GASB 45 actuarial valuation of the County's retiree health insurance program as of July 1, 2015.

In June, 2004 the Governmental Accounting Standards Board (GASB) issued accrual accounting standards for retiree healthcare benefits, GASB 43 and GASB 45. GASB 43/45 require public employers such as the County to perform periodic actuarial valuations to measure and disclose their retiree healthcare liabilities for the financial statements of both the employer and the trust, if any, set aside to pre-fund these liabilities. The County must obtain actuarial valuations of its retiree health insurance program under GASB 43/45 not less frequently than once every two years.

To accomplish these objectives the County selected Demsey, Filliger and Associates (DF&A) to perform an actuarial valuation of the retiree health insurance program as of July 1, 2015. This report may be compared with the valuation performed by DF&A as of July 1, 2013, to see how the liabilities have changed since the last valuation. We are available to answer any questions the County may have concerning the report.

Financial Results

We have determined that the amount of actuarial liability for County-paid retiree benefits is $104,601,694 as of July 1, 2015. This represents the present value of all benefits expected to be paid by the County for its current and future retirees. If the County were to place this amount in a fund earning interest at the rate of 4.5% per year, and all other actuarial assumptions were exactly met, the fund would have exactly enough to pay all expected benefits.

This includes benefits for 530 retirees as well as 2,166 active employees who may become eligible to retire and receive benefits in the future. It excludes employees hired after the valuation date.

When we apportion the $104,601,694 into past service and future service components under the Projected Unit Credit Cost Method, the past service liability (or "Accrued Liability") component is $64,108,286 as of July 1, 2015. This represents the present value of all benefits earned to date assuming that an employee earns retiree healthcare benefits ratably over his or her career. The $64,108,286 is comprised of liabilities of $39,196,567 for active employees and $24,911,719 for retirees. The County has adopted an irrevocable trust sponsored by CalPERS ("CERBT") for the pre-funding of retiree healthcare benefits. Trust assets have an actuarial value of $295,827 as of July 1, 2015, so the Unfunded Accrued Liability (called the UAL, equal to the AL less assets) is $63,812,459.

We have determined that County of Butte's "Annual Required Contributions", or "ARC", for the fiscal year 2015-16, is $7,710,808. The $7,710,808 is comprised of the present value of benefits accruing in the current year, called the "Service Cost", and a 30-year amortization of the UAL. We estimate that the County will pay approximately $2,408,698 for the 2015-16 fiscal year in healthcare costs for its retirees, so the difference between the accrual accounting expense (ARC) and pay-as-you-go is an increase of $5,302,110.

There are two adjustments to the ARC that are required in order to determine the County's Annual OPEB Cost (AOC) for the 2015-16 fiscal year. We have calculated these adjustments based on a Net OPEB Obligation (NOO) of $23,558,715 as of June 30, 2015, resulting in an AOC for 2015-16 of $7,324,644.

We show these numbers in the table on the next page and in Exhibit II. All amounts are net of expected future retiree contributions, if any.

County of Butte

Annual Liabilities and Expense under

GASB 45 Accrual Accounting Standard

<u>Projected Unit Credit Cost Method</u>

Item	Amounts for Fiscal 2015-16
Present Value of Future Benefits (PVFB)	
Active	$79,689,975
Retired	24,911,719
Total: PVFB	**$104,601,694**
Accrued Liability (AL)	
Actives	$39,196,567
Retired	24,911,719
Total: AL	**$64,108,286**
Assets	(295,827)
Total: Unfunded AL	**$63,812,459**
Annual Required Contributions (ARC)	
Service Cost At Year-End	$3,793,263
30-year Amortization of Unfunded AL	3,917,545
Total: ARC	**$7,710,808**
Adjustments to ARC	
Interest on Net OPEB Obligation*	1,060,142
Adjustment to ARC*	(1,446,306)
Total: Annual OPEB Cost (AOC) for 2015-16	**$7,324,644**

*Amounts based on June 30, 2015 Net OPEB Obligation of $23,558,715.

The ARC of $7,710,808, shown above, should be used for both the 2015-16 and 2016-17 fiscal years, but the Annual OPEB Cost for the 2016-17 fiscal year must include an adjustment based on the Net OPEB Obligation (NOO) as reported in the June 30, 2016 financial statement, which has not yet been determined precisely.

We determined the actuarial asset value of $295,827 by taking the trust fund's June 30, 2015 market value without adjustment.

When the County begins preparation of the June 30, 2016 government-wide financial statements, DF&A will provide the County and its auditors with complimentary assistance in preparation of footnotes and required supplemental information for compliance with GASB 45 (and GASB 43, if applicable).

Differences from Prior Valuation

The most recent prior valuation was completed as of July 1, 2013 by DF&A. The AL (Accrued Liability) as of that date was $47,629,292 (see page 3 of the prior report), compared to $64,108,286 as of July 1, 2015. In this section, we provide a reconciliation between the two numbers so that it is possible to trace the AL from one actuarial report to the next.

Several factors have caused the AL to change since 2013. The AL increases as employees accrue more service and get closer to receiving benefits. There are actuarial gains/losses from one valuation to the next, and changes in actuarial assumptions and methodology for the current valuation. To summarize, the most important changes were as follows:

1. There was a gain (a decrease in the AL) of $2,316,701 due to increases in healthcare premiums and statutory minimum contributions less than expected.
2. We changed the assumed rate of medical inflation (CPI) used to index the PERS statutory minimum contribution from 4.0% to 3.5%. This change decreased the AL by $2,071,832.
3. There was a gain (a decrease in the AL) of $16,321 due to a decrease in the PERS Health administrative fee from 0.33% of premium to 0.32% of premium.
4. We changed to more up-to-date mortality tables. This change increased the AL by $2,108,280.
5. We increased the healthcare trend rate to 8% for 2015-16 graded down to an ultimate of 5% over the next three years. This change increased the AL by $830,411.
6. We included the "implicit subsidy" as required by Actuarial Standard of Practice Number 6 (ASOP 6). Please see page 8 for details. This change increased the AL by $18,454,388.
7. We increased the discount rate from 4.0% to 4.5% to reflect the County's initial contribution into the PERS Trust, CERBT. This change decreased the AL by $3,473,098.
8. There was a net census gain (a decrease in the AL) of $1,777,308.

The estimated changes to the AL from July 1, 2013 to July 1, 2015 are as follows:

Changes to AL	AL
AL as of 7/1/13	**$47,629,292**
Passage of time	4,741,175
Premium increases < expected	(2,316,701)
Change in medical CPI assumption	(2,071,832)
Change in PERS Health admin fee	(16,321)
Change in mortality tables	2,108,280
Change in healthcare trend rate	830,411
Valuation of implicit subsidy	18,454,388
Change in discount rate	(3,473,098)
Census (gain)	(1,777,308)
AL as of 7/1/15	**$64,108,286**

Funding Schedules

There are many ways to approach the pre-funding of retiree healthcare benefits. In the *Financial Results* section, we determined the annual expense for all County-paid benefits. The expense is an orderly methodology, developed by the GASB, to account for retiree healthcare benefits. However, the GASB 45 expense has no direct relation to amounts the County may set aside to pre-fund healthcare benefits.

The table on the next page provides the County with three alternative schedules for funding (as contrasted with expensing) retiree healthcare benefits. The schedules all assume that the retiree fund earns, or is otherwise credited with, 4.5% per annum on its investments, a starting trust value of $295,827 as of July 1, 2015, and that contributions and benefits are paid mid-year.

The schedules are:

1. A level contribution amount for the next 20 years.
2. A level percent of the Unfunded Accrued Liability.
3. A constant percentage (3%) increase for the next 20 years.

We provide these funding schedules to give the County a sense of the various alternatives available to it to pre-fund its retiree healthcare obligation. The three funding schedules are simply three different examples of how the County may choose to spread its costs.

By comparing the schedules, you can see the effect that early pre-funding has on the total amount the County will eventually have to pay. Because of investment earnings on fund assets, the earlier contributions are made, the less the County will have to pay in the long run. Of course, the advantages of pre-funding will have to be weighed against other uses of the money.

The table on the following page shows the required annual outlay under the pay-as-you-go method and each of the above schedules. **The three funding schedules include the "pay-as-you-go" costs; therefore, the amount of pre-funding is the excess over the "pay-as-you-go" amount.**

Treatment of Implicit Subsidy

We exclude the implicit subsidy from these funding schedules because we do not recommend that the County pre-fund for the full age-adjusted costs reflected in the GASB 45 liabilities shown in the first section of this report. If the County's premium structure changes in the future to explicitly charge under-age 65 retirees for the full actuarial cost of their benefits, this change will be offset by a lowering of the active employee rates (all else remaining equal), resulting in a direct reduction in County operating expenses on behalf of active employees from that point forward. For this reason among others, we believe that pre-funding of the full GASB liability would be redundant.

County of Butte

Sample Funding Schedules (Closed Group)

Starting Trust Value of $295,827 as of July 1, 2015

Fiscal Year Beginning	Pay-as-you-go	Level Contribution for 20 years	Level % of Unfunded Liability	Constant Percentage Increase
2015	$2,408,698	$5,255,475	$9,071,614	$4,083,657
2016	2,302,465	5,255,475	7,903,226	4,206,166
2017	2,508,386	5,255,475	6,911,322	4,332,351
2018	2,737,551	5,255,475	6,089,183	4,462,322
2019	2,858,531	5,255,475	5,410,347	4,596,191
2020	2,961,820	5,255,475	4,844,029	4,734,077
2021	3,115,895	5,255,475	4,370,647	4,876,099
2022	3,242,558	5,255,475	3,978,007	5,022,382
2023	3,383,807	5,255,475	3,650,906	5,173,054
2024	3,647,990	5,255,475	3,379,149	5,328,246
2025	3,719,471	5,255,475	3,160,154	5,488,093
2026	3,890,712	5,255,475	2,973,734	5,652,736
2027	4,020,165	5,255,475	2,819,626	5,822,318
2028	4,219,467	5,255,475	2,689,686	5,996,987
2029	4,270,944	5,255,475	2,582,898	6,176,897
2030	4,368,126	5,255,475	2,487,409	6,362,204
2031	4,440,852	5,255,475	2,403,242	6,553,070
2032	4,640,854	5,255,475	2,326,940	6,749,662
2033	4,777,890	5,255,475	2,262,400	6,952,152
2034	4,769,429	5,255,475	2,204,036	7,160,716
2035	4,710,092	0	2,144,156	0
2036	4,705,341	0	2,080,902	0
2037	4,641,597	0	2,017,001	0
2038	4,485,828	0	1,950,292	0
2039	4,478,293	0	1,878,170	0
2040	4,379,171	0	1,806,984	0
2041	4,229,159	0	1,733,567	0
2042	4,099,589	0	1,657,046	0
2043	3,896,005	0	1,579,038	0
2044	3,772,271	0	1,498,227	0
2045	3,578,936	0	1,417,892	0
2046	3,361,899	0	1,336,719	0
2047	3,269,863	0	1,255,066	0
2048	3,123,211	0	1,176,497	0
2049	3,013,954	0	1,099,764	0
2050	2,924,979	0	1,025,799	0
2055	2,368,739	0	696,378	0
2060	1,798,782	0	430,375	0
2065	1,245,207	0	199,238	0
2070	764,344	0	83,755	0

Note to auditor: when calculating the employer OPEB contribution for the year ending on the statement date, we recommend multiplying the actual County-paid premiums on behalf of retirees by a factor of 1.5038 to adjust for the implicit subsidy.

Actuarial Assumptions

In order to perform the valuation, the actuary must make certain assumptions regarding such items as rates of employee turnover, retirement, and mortality, as well as economic assumptions regarding healthcare inflation and interest rates. Our assumptions are based on a standard set of assumptions we have used for similar valuations, modified as appropriate for the County. For example, turnover rates are taken from a standard actuarial table, T-5, increased by 40% at all ages. This assumption matches the County's historic turnover patterns. Retirement rates were also based on recent County retirement patterns. Both assumptions should be reviewed in the next valuation to see if they are tracking well with experience.

The discount rate of 4.5% is based on our best estimate of expected long-term plan experience. It is in accordance with our understanding of the guidelines for selection of this rate under GASB 45 for partially funded plans such as the County's. The healthcare trend rates are based on our analysis of recent County experience and our knowledge of the healthcare environment.

For purposes of projecting the PEMHCA administrative fee and the medical portion of the County stipend, we used the average equivalent single-retiree premium based on current retiree health plan selection. A complete description of the actuarial assumptions used in the valuation is set forth in the "Actuarial Assumptions" section.

Projected Annual Pay-as-you go Costs

As part of the valuation, we prepared a projection of the expected annual cost to the County to pay benefits on behalf of its retirees on a pay-as-you-go basis. These numbers are computed on a closed group basis, assuming no new entrants, and are net of retiree contributions. Projected pay-as-you-go costs for selected years are as follows:

FYB	Pay-as-you-go
2015	$2,408,698
2016	2,302,465
2017	2,508,386
2018	2,737,551
2019	2,858,531
2020	2,961,820
2025	3,719,471
2030	4,368,126
2035	4,710,092
2040	4,379,171
2045	3,578,936
2050	2,924,979
2055	2,368,739
2060	1,798,782
2065	1,245,207
2070	764,344

Valuation of Implicit Subsidy

In past GASB 45 valuations for the County, we have availed ourselves of the "community rating" exception to PERS Health (PEMHCA). This exception has permitted an actuary to ignore the effects of the use of a blended premium for active employees and early retirees (those under age 65) as is the case for PEMHCA. This unique treatment of PEMHCA resulted in actuarial estimates for PEMHCA agencies that were significantly lower than for most other insurance providers, and has been prevailing practice among California-based actuarial firms. The Actuarial Standards Board has amended Actuarial Standard of Practice Number 6 (ASOP 6) to virtually eliminate this practice for valuations beginning with the July 1, 2015 fiscal year. As shown on page 4 of this report, the Accrued Liability for the County's implicit subsidy is approximately $18.5 million. See footnote on page 6 for an adjustment that should be made when the Net OPEB Obligation is rolled forward. The new GASB OPEB standards, expected to take effect in 2017-18, contain guidance that will require actuaries to continue to include this subsidy, where applicable, for all future OPEB valuations. Please feel free to call us at (818) 718-1266 if you would like further explanation of this change.

Breakdown by Employee/Retiree Group

Exhibit I, attached at the end of the report, shows a breakdown of the GASB 45 components (ARC, AL, Service Cost, and PVFB) by bargaining unit (or non-represented group) and separately by active employees (future retirees) and current retirees.

Net OPEB Obligation (NOO) and Annual OPEB Cost (AOC)

Exhibit II, attached at the end of the report, shows a development of the County's Net OPEB Obligation ("NOO") and the Annual OPEB Cost ("AOC") for the years 2009-10 through 2015-16.

Effect of Changes in Discount Rate

Exhibit III, attached at the end of the report, shows the valuation results at 6.12%, 6.73% and 7.28% discount rates. These rates are representative of the discount rates the County might be able to use if it were adopt strategies 3, 2, and 1 (respectively) of CalPERS' OPEB trust, CERBT, fully fund the ARC each year, and use a Margin for Adverse Deviations (MAD) of 0%. These numbers are for illustrative purposes only and do not constitute a promise that DF&A will certify to any of these assumption sets for future valuations.

Certification

The actuarial certification, including a caveat regarding limitations of scope, if any, is contained in the "Actuarial Certification" section on page 15.

We have enjoyed working with the County on this project and are available to answer any questions you may have concerning any information contained herein.

Sincerely,
DEMSEY, FILLIGER AND ASSOCIATES

T. Louis Filliger, FSA, EA, MAAA
Partner & Actuary

Benefit Plan Provisions

Active Employee Coverage

The County sponsors healthcare coverage under the California Public Employees Medical and Hospital Care Act ("PEMHCA"), commonly referred to as PERS Health. PEMHCA provides health insurance through a variety of Health Maintenance Organization (HMO) and Preferred Provider Organization (PPO) options. Participation in PEMHCA is financed in part by the County through a contribution to PEMHCA of $122.00 per employee per month. The $122.00 per month increased by law to $125.00 on January 1, 2016, and will be indexed with medical inflation (CPI) for years 2017 and thereafter. Delta Dental (Premier and DPO), vision and life insurance are also available.

Post-Retirement Coverage

The County also offers medical, dental and vision coverage (but not life insurance) to its retirees. The County makes the required statutory PEMHCA contribution as described above, subject to the "Unequal Contribution Method" under which the County's contribution for retirees increases each year to 5% of its contribution for active employees multiplied by years the County has participated in PEMHCA until the two amounts are equal, except that Elected, Appointed, and Assistant Department Heads are covered under the Equal Contribution Method. Furthermore, the County will make additional contributions towards certain eligible retirees' premiums until age 65 according to the County's agreements with its various employee groups, as described below (subject to benefit and eligibility changes that took effect in 2010 - please see page 11 for details.)

Retirees who have completed at least 10 continuous years of service with the County, have accrued sick leave in excess of 240 hours, and elect retiree health insurance rather than the sick leave payout option, are eligible to receive reimbursements from the County for the cost of medical, dental and vision insurance (offset by the County's statutory contribution to PEMHCA.)

For BCEA, BCMEA, BCEA-SSW, BCPPOA, BCCOA (General and Management), Supervisor's Administrative Services Assistants, Confidential, and Miscellaneous and Assistant Probation Officer positions within the "Assistant Department Heads and Non-Represented" group, the retiree may make an irrevocable election at the time of retirement to receive one of the following benefit options in addition to 12 months of County-paid health insurance:

(1) One month of retiree-only premiums for each day of accrued sick leave at retirement;

(2) One month of 2-party premiums (employee and spouse) for each 2 1/2 days in excess of 30 days accrued sick leave to cover both employee and spouse until age 65; or

(3) One month of retiree-only premiums for each day of accrued sick leave until the sick leave credit is exhausted or the retiree reaches age 65, and one month of premiums for spousal coverage for each day of accrued sick leave in excess of thirty days until the sick leave credit is exhausted or the spouse reaches age 65.

Benefit Plan Provisions (Continued)

For DSA General, DSA Management, Under Sheriffs, and BCPEA, the retiree will receive 12 months of County-paid retiree-only health coverage. In addition, each one day of accrued sick leave is converted to one month of retiree-only health insurance premiums and credited to an account for the retiree. Premiums for the retiree and dependents, if applicable, are deducted from the account until it is depleted, or until the retiree reaches age 65, if earlier.

Elected and appointed department heads or officials retiring in good standing before age 65 under the provisions of the County's contract with PERS may continue to cover themselves and eligible dependents under the health plans. The County pays the full premium until age 65.

In all cases, once the additional County contributions (as described above) end, the County pays the applicable PEMHCA statutory contribution for the remainder of the retiree's lifetime.

For 2015, the monthly County contributions are $122.00 and $122.00 for both Unequal and Equal Contribution Methods. For 2016, those amounts both increased to $125.00, and will remain in lock-step for all future years.

Employees other than non-represented groups hired after June 30, 2010 will not be eligible for sick-leave buyout nor will they receive one year of County-paid health benefits after retirement. Retirees other than non-represented groups who retired on or after January 1, 2010 will be subject to a limit on County reimbursements equal to the sum of the Blue Shield HMO premium, Delta DPO and vision premiums. Non-represented employees hired after June 30, 2010 will not receive one year of County-paid health benefits after retirement.

Healthcare Premiums

The following table shows January 1, 2015 monthly PERS Health (PEMHCA) premiums for retirees within the Other Northern California region. Dental and vision rates in effect for 2015-16 are also included.

	Blue Shield HMO	Kaiser HMO	PERS Care PPO	PERS Choice PPO	Delta Premier Dental	Delta Dental DPO	Vision
Basic Plan							
Retiree	$804.34	$716.98	$725.54	$656.08	$34.58	$31.82	$14.15
Retiree + 1	1,608.68	1,433.96	1,451.08	1,312.16	74.71	69.37	14.15
Family	2,091.28	1,864.15	1,886.04	1,705.81	118.26	108.94	14.15
Medicare Supplement							
Retiree	$352.63	$295.51	$368.76	$339.47	N/A	N/A	N/A
Retiree + 1	705.26	591.02	737.52	678.94	N/A	N/A	N/A
Family	1,057.89	886.53	1,106.28	1,018.41	N/A	N/A	N/A

Valuation Data

Active and Retiree Census

Age distribution of retirees included in the valuation

Age	Statutory Minimum Only	County Stipend	Total
Under 50	4	2	6
50-54	5	8	13
55-59	16	42	58
60-64	39	97	136
65-69	133	14	147
70-74	73	2	75
75-79	48	0	48
80-84	29	0	29
85-89	14	0	14
90+	4	0	4
All Ages	365	165	530
Average Age	70.12	60.98	67.28

Age/Years of service distribution of active employees included in the valuation

Years→	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
Age									
<25	23								23
25-29	185	17							202
30-34	140	59	19						218
35-39	132	71	88	20					311
40-44	119	49	81	65	10	2			326
45-49	81	55	56	56	38	9			295
50-54	62	44	69	56	30	21	4		286
55-59	48	48	58	53	31	22	4	1	265
60-64	22	32	45	47	19	9	4	2	180
65+	11	6	19	8	5	6	2	3	60
All Ages	823	381	435	305	133	69	14	6	2,166

Average Age: 44.87
Average Service: 9.21

Actuarial Assumptions

The liabilities set forth in this report are based on the actuarial assumptions described in this section.

Valuation Date:	July 1, 2015
Actuarial Cost Method:	Projected Unit Credit
Amortization Method:	30-year level dollar, open period
Discount Rate:	4.5% per annum
Return on Assets:	4.5% per annum
Pre-retirement Turnover:	According to Crocker-Sarason Table T-5 less mortality, increased by 40% at all ages. Sample rates are as follows:

Age	Turnover (%)
25	10.8%
30	10.1
35	8.8
40	7.2
45	5.6
50	3.6
55	1.3

Pre-retirement Mortality: RP-2014 Employee Mortality, without projection. Sample deaths per 1,000 employees are as follows:

Age	Males	Females
25	0.48	0.17
30	0.45	0.22
35	0.52	0.29
40	0.63	0.40
45	0.97	0.66
50	1.69	1.10
55	2.79	1.67
60	4.69	2.44

Post-retirement Mortality: RP-2014 Healthy Annuitant Mortality, without projection. Sample deaths per 1,000 retirees are as follows:

Age	Males	Females
55	5.74	3.62
60	7.78	5.19
65	11.01	8.05
70	16.77	12.87
75	26.83	20.94
80	44.72	34.84
85	77.50	60.50
90	135.91	107.13

Actuarial Assumptions (Continued)

Claim Cost per Retiree or Spouse:

Age	Medical/Rx	Dental/Vision
50	$9,724	$568
55	11,272	568
60	13,068	568
64	14,708	568
65+	4,141	568

Retirement Rates:

Age	Percent Retiring*
50	2.0%
51	3.0
52	4.0
53	5.0
54	6.0
55	7.0
56	8.0
57	10.0
58	11.0
59	12.0
60	13.0
61	15.0
62	20.0
63	22.0
64	25.0
65	100.0

* Of those having met eligibility to receive PERS retirement benefits. The percentage refers to the probability that an active employee who has reached the stated age will retire within the following year.

Trend Rate: Healthcare costs were assumed to increase according to the following schedule:

FYB	Medical/Rx	Dental/Vision	Medical CPI
2015	8.0%	4.0%	3.5%
2016	7.0	4.0	3.5
2017	6.0	4.0	3.5
2018+	5.0	4.0	3.5

Percent Waiving Coverage: 30% (applies to future retirees only)

Future Sick Leave Accrual: Under age 30: 59 hours per year of employment
Age 30+: 34 hours per year of employment

Percent of Retirees with Spouses: Future Retirees: 60% of future retirees were assumed to have spouses. Female spouses assumed three years younger than male spouses. Current Retirees: Based on actual spousal data.

Actuarial Certification

The results set forth in this report are based on our actuarial valuation of the health and welfare benefit plans of the County of Butte ("County") as of July 1, 2015.

The valuation was performed in accordance with generally accepted actuarial principles and practices. We relied on census data for active employees and retirees provided to us by the County in December, 2015. We also made use of claims, premium, expense, and enrollment data, and copies of relevant sections of healthcare documents provided to us by the County, and trust statements prepared by CalPERS and provided to us by the County.

The assumptions used in performing the valuation, as summarized in this report, and the results based thereupon, represent our best estimate of the actuarial costs of the program under GASB 43 and GASB 45, and the existing and proposed Actuarial Standards of Practice for measuring post-retirement healthcare benefits. We have assumed no post-valuation mortality improvements, consistent with our belief that there will be no further significant, sustained increases in life expectancy in the United States over the projection period covered by the valuation.

Throughout the report, we have used unrounded numbers, because rounding and the reconciliation of the rounded results would add an additional, and in our opinion unnecessary, layer of complexity to the valuation process. By our publishing of unrounded results, no implication is made as to the degree of precision inherent in those results. Clients and their auditors should use their own judgment as to the desirability of rounding when transferring the results of this valuation report to the clients' financial statements.

The undersigned actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Certified by:

T. Louis Filliger

T. Louis Filliger, FSA, EA, MAAA   Date: 1/22/16
Partner & Actuary

County of Butte

7/1/15 GASB 45 valuation results **Exhibit I**

Broken down by Employee & Retiree group

Employee/Retiree Group	Active Employees PVB	AL	Less: Assets	UAL	30-Year Amortization of UAL	SC	ARC Actives	Retirees PVB=AL	Assets	UAL	30-Year Amortization of AL	ARC Retirees	Total ARC Ret+Actives
BCEA	$24,443,814	$11,629,120	($53,662)	$11,575,458	$710,635	$1,251,294	**$1,961,929**	$6,620,656	($30,551)	$6,590,105	$404,577	**$404,577**	**$2,366,506**
BCMEA	19,943,526	11,058,892	(51,031)	11,007,861	675,790	871,924	**1,547,714**	8,794,860	(40,584)	8,754,276	537,438	**537,438**	**2,085,152**
Social Service Workers	13,215,098	5,449,993	(25,149)	5,424,844	333,040	650,515	**983,555**	2,545,199	(11,745)	2,533,454	155,533	**155,533**	**1,139,088**
DSA - General	4,792,369	2,366,408	(10,920)	2,355,488	144,607	178,974	**323,581**	1,956,325	(9,027)	1,947,298	119,548	**119,548**	**443,129**
DSA - Management	652,446	478,584	(2,208)	476,376	29,245	23,309	**52,554**	296,666	(1,369)	295,297	18,129	**18,129**	**70,683**
BCPPOA - General	4,303,390	1,975,651	(9,117)	1,966,534	120,729	165,473	**286,202**	961,148	(4,435)	956,713	58,734	**58,734**	**344,936**
BCPPOA - Mgmt.	253,789	155,466	(717)	154,749	9,500	7,845	**17,345**	-	-	-	-	**-**	**17,345**
BCCOA - General	3,498,630	1,505,228	(6,946)	1,498,282	91,982	144,895	**236,877**	161,669	(746)	160,923	9,879	**9,879**	**246,756**
BCCOA - Mgmt.	184,981	111,825	(516)	111,309	6,833	6,637	**13,470**	366,259	(1,690)	364,569	22,381	**22,381**	**35,851**
BCPEA	2,487,160	1,219,198	(5,626)	1,213,572	74,503	135,623	**210,126**	687,540	(3,173)	684,367	42,014	**42,014**	**252,140**
Appointed Department Heads	2,791,276	1,600,071	(7,384)	1,592,687	97,778	205,144	**302,922**	739,564	(3,413)	736,151	45,193	**45,193**	**348,115**
Board's Administrative Assistants	142,139	78,092	(360)	77,732	4,772	9,183	**13,955**	28,549	(132)	28,417	1,745	**1,745**	**15,700**
Non-Represented	1,739,424	973,864	(4,494)	969,370	59,511	82,583	**142,094**	1,213,996	(5,602)	1,208,394	74,185	**74,185**	**216,279**
Elected Dept. Heads & Board	186,470	146,499	(676)	145,823	8,952	5,550	**14,502**	289,103	(1,334)	287,769	17,667	**17,667**	**32,169**
Confidential	1,055,463	447,676	(2,066)	445,610	27,357	54,314	**81,671**	122,984	(568)	122,416	7,515	**7,515**	**89,186**
Superior Court Retirees	-	-	-	-	-	-	-	127,201	(586)	126,615	7,773	**7,773**	**7,773**
Totals	**$79,689,975**	**$39,196,567**	**($180,872)**	**$39,015,695**	**$2,395,234**	**$3,793,263**	**$6,188,497**	**$24,911,719**	**($114,955)**	**$24,796,764**	**$1,522,311**	**$1,522,311**	**$7,710,808**

	Amount
Net OPEB Obligation 6/30/2009	**6,015,223**
ARC for 2009-10	4,673,770
Interest on Net OPEB Obligation	300,761
Amortization adjustment to ARC	(391,299)
Annual OPEB Cost 2009-10	**4,583,232**
Employer Contribution	(1,398,316)
Change in Net OPEB Obligation 2009-10	3,184,916
Net OPEB Obligation 6/30/2009	6,015,223
Net OPEB Obligation 6/30/2010	**9,200,139**
ARC for 2010-11	4,673,770
Interest on Net OPEB Obligation	460,007
Amortization adjustment to ARC	(598,482)
Annual OPEB Cost 2010-11	**4,535,295**
Employer Contribution	(1,670,400)
Change in Net OPEB Obligation 2010-11	2,864,895
Net OPEB Obligation 6/30/2010	9,200,139
Net OPEB Obligation 6/30/2011	**12,065,034**
ARC for 2011-12	4,937,590
Interest on Net OPEB Obligation	603,252
Amortization adjustment to ARC	(784,848)
Annual OPEB Cost 2011-12	**4,755,994**
Employer Contribution	(1,835,731)
Change in Net OPEB Obligation 2011-12	2,920,263
Net OPEB Obligation 6/30/2011	12,065,034
Net OPEB Obligation 6/30/2012	**14,985,297**
ARC for 2012-13	4,937,590
Interest on Net OPEB Obligation	749,265
Amortization adjustment to ARC	(974,815)
Annual OPEB Cost 2012-13	**4,712,040**
Employer Contribution	(1,877,208)
Change in Net OPEB Obligation 2012-13	2,834,832
Net OPEB Obligation 6/30/2012	14,985,297
Net OPEB Obligation 6/30/2013	**17,820,129**
ARC for 2013-14	5,446,007
Interest on Net OPEB Obligation	712,805
Amortization adjustment to ARC	(1,030,539)
Annual OPEB Cost 2013-14	**5,128,273**
Employer Contribution	(2,059,669)
Change in Net OPEB Obligation 2013-14	3,068,604
Net OPEB Obligation 6/30/2013	17,820,129
Net OPEB Obligation 6/30/2014	**20,888,733**
ARC for 2014-15	5,446,007
Interest on Net OPEB Obligation	835,549
Amortization adjustment to ARC	(1,207,997)
Annual OPEB Cost 2014-15	**5,073,559**
Employer Contribution	(2,403,577)
Change in Net OPEB Obligation 2014-15	2,669,982
Net OPEB Obligation 6/30/2014	20,888,733
Net OPEB Obligation 6/30/2015	**23,558,715**
ARC for 2015-16	7,710,808
Interest on Net OPEB Obligation	1,060,142
Amortization adjustment to ARC	(1,446,306)
Annual OPEB Cost 2015-16	**7,324,644**

County of Butte

Exhibit III

Effect of Possible Changes in Discount Rate
By Investing in CERBT, an Irrevocable Trust
Using July 1, 2015 Valuation Results for Comparison

	7/1/15 Valuation Actual - 4.5%	CERBT Strategy 3 6.12% discount rate	CERBT Strategy 2 6.73% discount rate	CERBT Strategy 1 7.28% discount rate
Present Value of Benefits				
Active (Future Retirees)	$79,689,975	$60,521,142	$54,969,815	$50,561,392
Current Retirees	24,911,719	22,100,737	21,211,390	20,474,462
Total PVFB	**$104,601,694**	**$82,621,879**	**$76,181,205**	**$71,035,854**
Accrued Liability (AL)				
Active (Future Retirees)	$39,196,567	$31,097,671	$28,675,695	$26,722,863
Current Retirees	24,911,719	22,100,737	21,211,390	20,474,462
Total Accrued Liability (AL):	**$64,108,286**	**$53,198,408**	**$49,887,085**	**$47,197,325**
Less: Assets	(295,827)	(295,827)	(295,827)	(295,827)
Equals: Unfunded Accrued Liability (UAL)	**$63,812,459**	**$52,902,581**	**$49,591,258**	**$46,901,498**
GASB 45 ARC ("Annual Required Contributions")				
Service Cost at Year-end	$3,793,263	$2,956,160	$2,710,204	$2,513,523
30-year amortization of UAL	3,917,545	3,892,793	3,888,542	3,886,486
Total ARC (County's Annual Expense)	**$7,710,808**	**$6,848,953**	**$6,598,746**	**$6,400,009**
Change in PVB		($21,979,815)	($28,420,489)	($33,565,840)
Change in PVB as a Percentage		-21.01%	-27.17%	-32.09%
Change in AL		($10,909,878)	($14,221,201)	($16,910,961)
Change in AL as a Percentage		-17.10%	-22.29%	-26.50%
Change in ARC		($861,855)	($1,112,062)	($1,310,799)
Change in ARC as a Percentage		-11.18%	-14.42%	-17.00%

Note: Rates shown are target rates without a MAD (margin for adverse deviations). We recommend that the County consider the use of such a margin, which would result in somewhat higher present values under all 3 strategies. Actual liabilities would depend on the County's funding policy, choice of strategy, and choice of MAD.
The three CERBT columns assume that the County adopts a policy of pre-funding most or all of the ARC. Lower levels of pre-funding would result in lower discount rates.