Attachment A

ACTUARIAL ANALYSIS OF RETIREE HEALTH BENEFITS SACRAMENTO PUBLIC LIBRARY AS OF JANUARY 1, 2012

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Enclosed is my actuarial valuation of the retiree health program for Sacramento Public Library Authority employees as of January 1, 2012. The report is based on assumptions stated in the appendix, and on data provided by the Library's staff, which I have limited ability to verify. Summaries of the data are included in appendices.

The valuation results are also based on my understanding of the existing benefit design, which is summarized in Appendix E. Only the benefits paid by the Library are included in the valuation.

On the basis of the foregoing, I certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted principles and practices which are consistent with the applicable standards of practice of the Actuarial Standards Board and with GASB Statement No. 45. I am fully qualified to do this valuation based on standards of the Governmental Accounting Standards Board and the American Academy of Actuaries.

To the extent that future actuarial experience varies from the assumptions used in this report, the actual costs in future years will vary from those presented herein.

Sincerely,

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Encl.

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SUMMARY OF ACTUARIAL ANALYSIS OF RETIREE HEALTH PROGRAM

Sacramento Public Library provides medical insurance benefits to retirees and their eligible dependents with a stipend of $225 monthly for retirees with 20 or more years of service. Partial benefits are paid for those with 10 to 19 years of service. Eligibility rules include retirement from the Library at age 50 or later, or with 30 years of employment with the Library. The benefits are summarized in Appendix E.

The Governmental Accounting Standards Board (GASB) published Statement Number 45 in 2004. Statement Number 45 sets rules for computing employer expenses for retiree health and welfare benefits. Expenses will be determined as closely as possible to the way they are for pensions. The expense on the GASB basis is the Annual OPEB Cost (AOC). Amounts are shown in relation to covered payroll of $18,365,000.

The Authority has not paid the AOC for fiscal years beginning with 2008-09 when GASB 45 first applied. As a result, there is a Net OPEB Obligation (NOO) of $848,800 as of June 30, 2011. The AOC from this valuation is $431,400, which is 9.3% higher than determined in the 2010 valuation. The AOC includes the Annual Required Contribution (ARC) of $427,900 (2.33% of covered payroll) plus adjustments to the ARC of $3,500 because of the NOO. The Unfunded Actuarial Accrued Liability (UAAL) is $5,065,600 as of January 1, 2012. This is 27.58% of covered payroll.

There were 75 retirees receiving medical benefits as of January 1, 2012. The projection shows an increase to 199 by year 2025. Library payments are expected to be $189,000 in 2012 but rise to over $430,000 in year 2025.

This actuarial valuation used the rates of mortality, disability and other withdrawals used by PERS in the valuations of Sacramento Public Library's pension plan. Other assumptions used include investment return, growth in covered payroll and family composition. The Projected Unit Credit actuarial cost method was used. See Appendix B for a summary of assumptions.

INTRODUCTION

This report gives the results of an actuarial valuation of the Library's Post-Employment Benefits Other than Pensions (OPEB).

No legal or accounting requirement to accrue expenses for a retiree health benefit plan using traditional pension methods existed until 2004, when the GASB issued Statements 43 and 45 for such rules in public agencies. GASB 43 requires actuarial reporting by the retiree health benefit trust fund, if there is one. GASB 45 requires that an employer's expense be determined using actuarial methods so that costs accrue over the employees' working lifetimes. More discussion of these accounting considerations is given in the next section (page 3) and Appendix A (page 9).

This report summarizes the valuation of the Library's retiree health program to comply with GASB 45. The actuarial calculations are summarized in the Valuation Results section (page 4). The participant data section summarizes information on employees and retirees (page 8).

Appendix A (page 9) is a glossary of actuarial terms used in this report. The actuarial assumptions and methods are shown in detail in Appendix B (page 11). They include rates of retiree mortality and rates at which the employees leave the work-force for retirement, death, and other turnover. The "standard" PERS probabilities of termination have been used.

Appendices C (page 14) and D (page 15) are distributions of the eligible employees and retirees. Appendix E (page 16) is a summary of benefit provisions. Only the retiree health benefits paid by the Authority are included in the actuarial projections and the summary.

ACCOUNTING STANDARDS

Accounting rules for public employers are promulgated by the Governmental Accounting Standards Board (GASB). GASB Statement No. 45 on employer expense for post-employment benefits other than pensions (OPEB) was published in June 2004. GASB 45 sets the Annual OPEB Cost (AOC) as the expense.

The accounting rules require the AOC to be computed using one of six actuarial cost methods; the Projected Unit Credit method was used in this valuation. Actuarial methods allocate costs to time periods, with the Normal Cost being the portion of present value allocated to the current year and Actuarial Accrued Liability (AAL) the portion allocated to the past. The Annual Required Contribution (ARC) is the Normal Cost plus amortization of Unfunded AAL (UAAL, or the AAL less assets) over 30 years. The amortization is done as a level percentage of increasing payroll. This expense will be expressed in dollars and as a percentage of covered payroll. See Appendix A (page 9) for a glossary.

If an agency does not contribute the full ARC to a trust fund the first year, the excess of ARC over contributions (including benefits paid) is to be shown in financial statements as a Net OPEB Obligation (NOO). After the first year, the Annual OPEB Cost consists of the ARC plus adjustments for interest and amortization of the NOO.

Public employers with more than 200 participants (employed plus retired) are required to have actuarial studies every two years to determine this expense. In the non-valuation years, the same percentage of wages as the prior valuation will be used for the ARC. All post-employment benefits other than pensions, such as retiree dental, vision and life insurance plans, are included. These rules should be discussed with the Library Authority's auditors.

VALUATION RESULTS

The Governmental Accounting Standards Board (GASB) Statement 45 requires a minimum expense of the actuarial normal cost plus amortization of the UAAL over 30 years as a level percentage of increasing payroll. This total is called the Annual Required Contribution (ARC). Since the ARC has not been contributed to a trust fund, there is a Net OPEB Obligation (NOO) of $848,800 as of June 30, 2011 shown in the Authority's financial statements. The expense includes the ARC plus interest on the NOO minus amortization of the NOO.[1] There were no retiree medical assets as of June 30, 2011. For all sets of results shown, the Actuarial Accrued Liability (AAL) and the Unfunded Actuarial Accrued Liability (UAAL) are equal.

Certain results are shown both in dollars and in relation to covered payroll. For this purpose covered payroll is wages and salaries paid in FYE 2011 which is $18,365,000. It was $18,709,000 for the 2010 valuation.

The ARC is $427,900 as of January 1, 2012. This is 2.33% of covered payroll. Including the adjustments to the ARC, the expense for 2011-12 is $431,400. This is the ARC plus interest of $38,200 on the NOO less $34,700 for amortization of the NOO. As of January 1, 2012 the UAAL is $5,065,600 which is 27.58% of payroll. These amounts are items for disclosure under GASB Statement 45. The results are:

Present Value Future Benefits		
Current Employees	6,932,900	
Current Retirees	2,158,600	
Total		9,091,500
Actuarial Accrued Liability		
Current Employees	2,907,000	
Current Retirees	2,158,600	
Total		5,065,600
Actuarial Value of Assets		0
Unfunded AAL		5,065,600
Amortization of Unfunded AAL		200,500
Normal Cost for Year		227,400
Total ARC		427,900
ARC as percentage of payroll		2.33%

[1] The NOO is the part of the UAAL that has been recognized on the balance sheet. Since amortization of the full UAAL is part of the expense, amortization of NOO is subtracted here to avoid charging for it twice.

This scenario should be used if the Authority does not expect to fund the ARC; instead you will continue to operate on a pay-as-you-go basis. The 4.5% interest assumption is the rate of return the Authority is expected to earn over the long term on surplus assets. The NOO will continue to increase; by the end of the initial 30 year period, the full AAL will have been transferred to the Authority's balance sheet as NOO.

Table 1 is the 15-year projection of number of retirees, benefit payments, Employer expense, and year end NOO. There were 75 retirees in the valuation census; the Table shows 90 including those expected to retire this year. The prior valuation showed 20 retirees plus 27 employees known to be retiring in 2010. Over the 15-year projection, the number of retirees increases to 199 with benefits exceeding $400,000. The projection excludes future employees; there will be some retirements in the next 15 years from people not yet hired.

The expense for this year of $431,400 is more than twice the expected benefits of $189,000. In calendar year 2025, annual benefits are projected to be $436,000 with expense less than 1.5 times the benefits. The AOC stabilizes around $635,000 because so much of the UAAL is on the balance sheet already there is less remaining to be amortized. Once the UAAL is fully amortized, expense will drop to normal cost only which will be less than benefits paid. Although the projection is shown for 15 years, the expense will be revised based on future actuarial valuations.

Assumed benefit levels have been changed for this valuation, recognizing that some retirees take dental and/or vision benefits and do not currently use all of the benefit allotted. This change was recognized for current retirees and it is assumed that 20% of future retirees will have Authority-paid benefits of two-party dental plus two-party vision coverage, currently totaling $102.58 monthly. Dental premiums are assumed to increase 5% per year and vision premiums 4% per year, with no increase in the vision rates until 2016. The result of these changes was a reduction in the ARC of $25,300 and in the UAAL of $300,200.

The expense from the 2010 valuation was $394,800 which was 2.15% of covered payroll. The UAAL and expense were expected to rise because contributions were limited to benefits paid instead of the full actuarial requirement.

For an agency over 200 participants, GASB requires biennial actuarial valuation. In the years of no valuation, the ARC is computed as the same percentage of payroll as was determined in the prior valuation. Since payroll is assumed to rise 3.75% annually, the ARC is projected to rise at that rate in Table 1. You will use your actual covered payroll for 2012 – not the assumed 3.75% increase. Projections like Table 1 will be re-done with each valuation.

TABLE 1

Sacramento Public Library Authority
Retiree Health Plan
Continue Pay-As-You-Go Financing
NOO is Net OPEB Obligation

Fiscal Year Begin	Number Retirees	Annual Benefits	Annual OPEB Cost	NOO Year End
2011	90	189,000	431,400	1,091,000
2012	103	217,000	467,000	1,341,000
2013	116	243,000	485,000	1,583,000
2014	126	265,000	501,000	1,819,000
2015	136	288,000	517,000	2,048,000
2016	146	310,000	534,000	2,272,000
2017	156	330,000	549,000	2,491,000
2018	164	348,000	564,000	2,707,000
2019	171	364,000	579,000	2,922,000
2020	178	378,000	593,000	3,137,000
2021	184	393,000	605,000	3,349,000
2022	189	406,000	615,000	3,558,000
2023	193	417,000	624,000	3,765,000
2024	196	426,000	631,000	3,970,000
2025	199	436,000	635,000	4,169,000

PARTICIPANT DATA

Active Employees

A census of 291 active eligible employees as of January 1, 2012, was provided by the Library. Their average age was 49.5 and average service was 10.5 years. Two years ago the average age and service were 49.0 and 9.7, respectively. A distribution of these employees by age and service is in Appendix C. The application of the decrement rates in Appendix B projects the following for these current employees:

Reason Leaving Employment	Number of Employees
Service Retire	246
Disability Retire	8
Death before retirement	7
Other termination	30
Total	291

It will be more than 50 years before all of these employees have left the work force. Some of the retirees will not be eligible for benefits or will decline them. The average age expected for service retirement is 62.2, including those employees now over age 70. The total number of retirees receiving benefits year by year is given in Table 1 in the Valuation Results section.

Retirees

There were 75 retirees in the census as of January 1, 2012, compared to 27 in 2010. However, there were 20 employees known to be retiring in 2010 that were included in the 2010 valuation as retired with partial benefits for the year. The average age of the current retirees is 66.4; the average in 2010 was 65.1. The average benefit is $174 monthly. Of these retirees, 54 are female and 21 are male. See Appendix D for a distribution of retirees by age and benefit amount.

Appendix A

ACTUARIAL TERMINOLOGY

NORMAL COST represents the cost of the portion of an employee's benefit deemed to be earned in the current year. In pension plans such as the Library's, a benefit is earned during each year of service. It is, therefore, relatively easy to visualize the Normal Cost as being the cost for each participant of the benefit earned in the current year. In a program such as a post-retirement health insurance plan, this cost cannot be easily related to a benefit formula. The Projected Unit Credit actuarial cost method has been used here. The Normal Cost is calculated so that the total value of a participant's benefit would be accrued in equal units over his/her total service to the expected retirement date. Thus, if an employee's total projected service to retirement was 30 years, 1/30th of the present value of the expected post-retirement benefits would be the Normal Cost. This would be the total annual cost over the long term if (1) the Normal Costs attributable to the past had been funded fully, and (2) experience matched what was assumed in all areas including investment return, premium increase, retirement, turnover, etc.

ACTUARIAL ACCRUED LIABILITY for employees can be defined retrospectively or prospectively. It is the accumulation of past Normal Costs from date of hire to the valuation date for all current employees. Alternatively, it is the present value of all future benefits less the present value of future Normal Cost payments. For example, for an employee who would have 30 years of service at retirement and has worked 15 years already, it is 15/30 of the present value of expected post-retirement benefits. For retirees, the AAL equals the present value of future benefits. There is no future Normal Cost after retirement.

UNFUNDED ACTUARIAL ACCRUED LIABILITY is the Actuarial Accrued Liability minus the actuarial value of plan assets. The UAAL is the present value of benefits attributed to the past that have not yet been funded. Amortization of the UAAL is a component of the Library's expense.

AMORTIZATION PAYMENT The Unfunded Actuarial Accrued Liability is amortized over 30 years beginning with fiscal year 2008-09. Payments are set to rise 3.75% annually, which makes them level in relation to expected covered payroll. There are 27 years remaining on the amortization schedule as of June 30, 2011.

ANNUAL REQUIRED CONTRIBUTION (ARC) This consists of the Normal Cost plus the amortization of UAAL. It is the expense assigned to the current year, if the ARC has been paid each year since implementation of GASB 45. In years when an actuarial valuation is not done, the ARC is set to be the same percentage of that year's covered payroll as computed in the prior valuation. The ARC includes the benefits paid to current retirees.

NET OPEB OBLIGATION (NOO) occurs when an agency does not contribute the full ARC to a trust fund. It represents the contribution shortfall – how much less than the expense has been contributed since GASB 45 implementation. It is a liability to disclose on the Library Authority's financial statements. As of June 30, 2011, the NOO is $848,800 for the Library Authority.

ANNUAL OPEB COST is the expense, for accounting purposes, to show on financial statements. It equals the ARC plus interest on the NOO minus the amortization of that NOO. The amortization is the same for the NOO as for the UAAL as described above.

PAY-AS-YOU-GO is a way of financing benefits but it is <u>not</u> a funding method because no assets are accumulated. The contribution attributed to each year is the actual benefits paid. The expense charged is still the AOC.

Appendix B

Actuarial Method and Assumptions

Actuarial Cost Method: Projected Unit Credit

Investment return (discount rate): 4.5% per year

General inflation: 3% per year

Growth in covered payroll: 3.75% per year

Rates of death and disability for active employees
California PERS rates for Public Agencies from 2010 Experience Study.

	Miscellaneous Male		Miscellaneous Female	
Age	Death	Disability	Death	Disability
25	.05%	01%	.03%	.01%
30	.05	.02	.04	.02
35	.07	.06	.05	.09
40	.09	.14	.06	.16
45	.12	.25	.09	.24
50	.18	.33	.13	.31
55	.26	.37	.18	.31
60	.40	.38	.27	.25
65	.61	.32	.42	.20
70	.91	.28	.65	.18

Rates of Withdrawal (Percentages)
Males and Females
California PERS rates for Public Agencies from 2010 Experience Study

	Service							
Age	0	5	10	15	20	25	30	35+
20	17.42							
25	16.74	2.12						
30	16.06	1.93	1.38					
35	15.37	1.74	1.21	0.60				
40	14.68	1.55	1.04	0.51	0.37			
45	14.00	1.36	0.88	0.42	0.29	0.17		
50	13.32	1.16	0.71	0.32	0.21	0.11	0.05	
55	12.62	0.97	0.55	0.23	0.13	0.05	0.01	0.01
60	12.08	0.78	0.38	0.14	0.05	0.01	0.01	0.01
65	12.08	0.62	0.21	0.04	0.01	0.01	0.01	0.01
70	12.08	0.62	0.08	0.02	0.01	0.01	0.01	0.01

Rates of Retirement (Percentages) - PERS 2% at 55 formula
Males and Females:
California PERS rates for Public Agencies from 2010 Experience Study

	Years of Service						
Age	5	10	15	20	25	30	35+
50	1.50	2.00	2.40	2.90	3.30	3.90	
51	1.30	1.60	2.00	2.40	2.70	3.30	3.70
52	1.40	1.80	2.20	2.70	3.00	3.60	4.00
53	1.70	2.20	2.70	3.20	3.70	4.30	4.90
54	2.70	3.40	4.10	4.90	5.60	6.70	7.60
55	5.00	6.40	7.80	9.40	10.70	12.70	14.30
56	4.50	5.70	6.90	8.30	9.50	11.30	12.70
57	4.80	6.10	7.40	9.00	10.20	12.20	13.70
58	5.20	6.60	8.00	9.70	11.00	13.10	14.80
59	6.00	7.60	9.20	11.10	12.70	15.10	16.90
60	7.20	9.20	11.20	13.40	15.30	18.20	20.50
61	8.90	11.30	13.70	16.50	18.80	22.40	25.20
62	12.80	16.20	19.70	23.70	27.00	32.20	36.20
63	12.90	16.40	19.90	23.90	27.30	32.50	36.60
64	11.60	14.80	18.00	21.60	24.70	29.40	33.00
65	17.40	22.10	26.90	32.30	36.90	43.90	49.40
70	13.80	17.60	21.40	25.70	29.30	34.90	39.30
75	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Assumed Increases in benefits: None

Percentage of future retirees electing coverage: 95%

Benefit level: 80% of retirees with coverage will use the full benefit based on their years of service; 20% will decline medical and elect 2-party dental plus two-party vision coverage.

Family composition: 50% of future retirees will select single coverage and 50% will select two-party coverage at retirement with wives three years younger than husbands.

Retiree Mortality Rates: California PERS 2010 Experience Study
Sample annual rates and life expectancies:

FEMALE RETIREES

Age	Life Expectancy (Years)			Rate of Mortality (%)		
	Service Retiree	Industrial Disability Retiree	Spouse	Service Retiree	Industrial Disability Retiree	Spouse
55	30.3	27.9	27.3	0 .24	0.55	0.47
60	25.7	23.8	23.0	0.43	0.80	0.72
65	21.3	19.8	18.9	0.78	1.18	1.07
70	17.3	16.0	15.0	1.24	1.72	1.68
75	13.5	12.5	11.5	2.07	2.66	3.08
80	10.0	9.3	8.4	3.75	4.53	5.27
85	7.1	6.6	5.9	7.05	8.02	9.78

MALE RETIREES

Age	Life Expectancy (Years)			Rate of Mortality (%)		
	Service Retiree	Industrial Disability Retiree	Spouse	Service Retiree	Industrial Disability Retiree	Spouse
55	27.3	25.8	30.3	0.47	0.56	0 .24
60	23.0	21.5	25.7	0.72	0.78	0.43
65	18.9	17.5	21.3	1.07	1.39	0.78
70	15.0	13.9	17.3	1.68	2.24	1.24
75	11.5	10.5	13.5	3.08	3.58	2.07
80	8.4	7.6	10.0	5.27	6.93	3.75
85	5.9	5.6	7.1	9.78	11.80	7.05

Note: **Life expectancy** is the average number of future years of life for those who have attained the specified age. For example, female service retirees age 65 will live for an *average* of 21.3 more years. The **rates of mortality** are the percentages of the retirees at the specific age who die before reaching the next age. For example, 0.78% of female service retirees age 65 are assumed to die before reaching age 66.

APPENDIX C

Distribution of All Employees
By Age and Years of Service
as of January 1, 2012

	Years of Service						
Age	Under 5	5 - 9	10 - 14	15 - 19	20 - 24	25 & Over	Total
Under 25	3	3					6
25 - 29	11	4					15
30 - 34	17	9	2				28
35 - 39	14	6	3				23
40 - 44	12	10	7	1			30
45 - 49	4	9	14	3	2	1	33
50 - 54	7	11	6	2	2	6	34
55 - 59	5	14	13	7	5	10	54
60 - 64	5	6	18	6	8	7	50
65 - 69	2	3	4	2		1	12
70 & Over		1	3			2	6
Total	80	76	70	21	17	27	291

There are 221 females and 70 males in this census. The average age is 49.5 and the average length of service is 10.5 years.

APPENDIX D

Distribution of Current Retirees
By Age and Benefits
As of January 1, 2012

Age	50% Benefit $112.50	75% Benefit $168.75	100% Benefit $225	Total
Under 55			1	1
55 – 59			2	2
60 – 64	4	5	25	34
65 – 69	3	1	15	19
70 – 74	5	2	6	13
75 – 79	2		2	4
80 & Over	1	1		2
Total	15	9	51	75

The average age of all retirees is 66.4. There are 54 females and 21 males in this census. Of these retirees, 16 have dental or dental and vision coverage only and do not make use of 100% of the earned benefit. The average benefit for these 16 is $97; the average for the other 59 retirees is $195.

APPENDIX E

Summary of Principal Provisions of Retiree Health Program
Sacramento Public Library

Full Retirement Benefit	
Eligibility Age	50
Service Required	20 years; or any age with 30 years
Benefit Amount	Pay $225 monthly of medical, dental, or vision premiums
Benefits End	Paid for life
Partial Retirement Benefit	
Eligibility Age	50
Service Required	10 to 19 years
Benefit Amount	Pay 50% of full benefit for 10 to 14 years of service and 75% for 15 to 19 years
Benefits End	Paid for life
Industrial Disability Retirement Benefit	
Eligibility Age	Any
Service Required	None
Benefit Amount	Full Retirement Benefit
Benefits End	Paid for life
Ordinary Disability Retirement Benefit	Same as full and partial retirement benefits
Post-Retirement Death Benefit	Eligible surviving spouse/dependent receives same benefit as retiree for life of beneficiary
Pre-Retirement Death Benefits	Same as full and partial retirement benefits for ordinary death; same for industrial death as for industrial disability