City of Carlsbad

GASB 45 Actuarial Valuation of
Post Employment Benefits Other than Pensions
As of June 30, 2008

Prepared by:

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March 5, 2009

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March 5, 2009

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City of Carlsbad –
GASB 45 Actuarial Valuation of Post Employment Benefits as of June 30, 2008

At the request of the City of Carlsbad, we have completed an actuarial valuation of post employment benefits as of June 30, 2008.

The purpose of this report is to determine the Annual Required Contribution and required financial disclosures under the Governmental Accounting Standards Board Statement No. 45 – *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions* (GASB 45). Our determinations reflect the procedures and methods prescribed in GASB 45.

In preparing our report, we relied on financial information and employee data furnished to us by the City of Carlsbad. While Milliman has not audited the financial and census data, they have been reviewed for reasonableness and are, in our opinion, sufficient and reliable for the purposes of our calculations. If any of this information as summarized in this report is inaccurate or incomplete, the results shown could be materially affected and this report may need to be revised.

The actuarial cost method and assumptions used as well as the supporting data and principal plan provisions upon which the valuation is based are set forth in the following report. The assumptions and cost method were selected to satisfy CalPERS' required assumptions and methods for funding agency OPEB liabilities through CalPERS' California Employers' Retiree Benefit Trust (CERBT) Fund. In our opinion, all assumptions and methods used in this valuation are reasonable for this purpose and fall within a best estimate range of assumptions. The values provided in this report are estimates only. They represent results if actual experience exactly matches the assumptions used. Actual experience will likely differ and continued monitoring of experience should be performed and adjustments made to the assumptions as necessary. The 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 GASB 45. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein. Reliance on information contained in this report by anyone for anything other than the intended purpose puts the relying entity at risk of being misled.

The results of this valuation are applicable only for the current year and are intended to be used only by the City for the specific purposes described herein. Accordingly, this report may not be distributed to any third

party without Milliman's prior written consent, in which case the report must be distributed in its entirety. This report is a complex, technical analysis that assumes a high level of knowledge concerning the City's operations, and uses the City's data, which Milliman has not audited. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, the report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable Actuarial Standards of Practice of the American Academy of Actuaries. The undersigned are members of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

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

Sincerely,

Rebekah D. Bayram, FSA, MAAA
Consulting Actuary

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SECTION I. MANAGEMENT SUMMARY

Introduction

Milliman, Inc. ("Milliman") has been retained by the City of Carlsbad ("City") to provide a GASB 45 actuarial valuation of its post employment benefit (OPEB) plans. In our valuation we:

- Project expected City benefit payments
- Calculate the present value of future benefits
- Calculate the actuarial accrued liability (present value of benefits attributable to past service)
- Determine the Annual Required Contribution (ARC) and annual OPEB expense under GASB Statement No. 45
- Prepare the financial statement disclosures relating to the funded status of the plan

Background

Employees who retire directly from the City are eligible for retiree health benefits if they are at least age 50 with a minimum of 5 years of City service at the time of retirement. The retiree health benefits are described in the Summary of Benefits for current employees and retirees in Appendix A.

Assumptions

With any valuation of future benefits, assumptions of anticipated future events are required. If actual events differ from the assumptions made, the actual cost of the plan will vary as well. The following assumptions should be reviewed for appropriateness.

Discount Rate. GASB 45 requires that the interest rate used to discount future benefit payments back to the present be based on the expected rate of return on any investments set aside to pay for these benefits. The City participates in the California Employers' Retiree Benefit Trust (CERBT) Fund to fund its OPEB liabilities. Therefore, we have shown valuation results using a 7.75% discount rate based on the expected return on the CERBT as prescribed in CalPERS OPEB assumption model for a fully funded plan.

Health Cost Trend. We have assumed health costs for Water District will increase 10% in the first year (from 2008 to the 2009 premium year), and grading down 0.5% per year, to 5% per year thereafter.

For the minimum employer contribution specified by CalPERS ($97.00 per month for 2008, and $101.00 per month for 2009), California Government Code Section 22892 specifies that the minimum monthly employer contributions will increase annually in accordance with medical CPI. We assumed this index will increase by 4.5% per year for 2009 and beyond.

Demographic Rates. We are using the same rates as the California Public Employees Retirement System (CalPERS) in their actuarial valuations of retirement benefits for the City as outlined in the OPEB model published by CalPERS.

A complete summary of the actuarial assumptions is presented in Appendix B.

SECTION I. MANAGEMENT SUMMARY

Results of Study

The valuation results are summarized in the following exhibit and use the following terms:

The **Present Value of Benefits** is the present value of projected benefits (portion of monthly premiums paid by the City) discounted at the valuation interest rate (7.75%).

The **Actuarial Accrued Liability (AAL)** is the present value of benefits that are attributed to past service only. The portion attributed to future employee service is excluded. For retirees, this is equal to the present value of benefits. For active employees, the actuarial present value of the projected benefits of each individual 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 (until maximum retirement age). The portion attributed to service between entry age and the valuation date is the actuarial accrued liability.

The **Normal Cost** is that portion of the City provided benefit attributable to employee service in the current year.

The **Annual Required Contribution (ARC)** is the amount the City would be required to report as an expense for the 2008-2009 fiscal year under GASB 45. The ARC is equal to the Normal Cost plus an amount to amortize the unfunded AAL over 30 years.

	June 30, 2008
Active Employees	712
Retirees	137
Total Participants	849
Budgeted Total City Payroll	$ 55,499,065
Actuarial Accrued Liability	$ 7,783,190
Assets	7,825,955
Unfunded Actuarial Accrued Liability/(Surplus)	$ (42,765)
Normal Cost *	$ 332,796
Budgeted Payroll	$ 50,609,186
Annual Required Contribution (ARC)	$ 329,086
ARC as a % of Budgeted Payroll	0.65%
Annual benefit payments	$ 265,307

* *Plus interest to the end of 2008/2009 fiscal year.*

SECTION II. EXHIBITS

Exhibit 1. Projected Benefit Payments

The table below illustrates the projected pay-as-you-go City costs of providing retiree health benefits. The projections only consider the closed group of existing employees and retirees based on the current labor agreements.

Year	*Fiscal Year Ends*	*Future Retirees*	*Current Retirees*	*Total*
1	2009	$16,071	$249,236	$265,307
2	2010	39,175	261,505	300,680
3	2011	67,268	272,405	339,673
4	2012	97,541	282,872	380,413
5	2013	133,197	289,579	422,776
6	2014	170,905	297,430	468,335
7	2015	212,901	302,799	515,700
8	2016	257,299	311,684	568,983
9	2017	306,328	318,071	624,399
10	2018	353,173	323,724	676,897
11	2019	406,022	328,813	734,835
12	2020	462,467	333,136	795,603
13	2021	514,284	337,442	851,726
14	2022	572,475	340,258	912,733
15	2023	628,243	343,110	971,353
16	2024	683,411	344,853	1,028,264
17	2025	733,080	345,058	1,078,138
18	2026	783,320	344,609	1,127,929
19	2027	834,340	342,114	1,176,454
20	2028	883,824	338,694	1,222,518

Exhibit 2. Liabilities and Normal Cost

The **Present Value of Benefits** is the actuarial present value of benefits expected to be paid for all retirees and covered employees.

The **Actuarial Accrued Liability (AAL)** is the present value of benefits that are attributed to past service only. The portion attributed to future employee service is excluded. For retirees, this is equal to the present value of benefits. For active employees, the actuarial present value of the projected benefits of each individual 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 (until maximum retirement age). The portion attributed to service between entry age and the valuation date is the actuarial accrued liability.

The **Normal Cost** is the actuarial present value of benefits attributed to one year of service. The Entry Age Normal cost method as described in Appendix A was used to determine the normal cost in this valuation. Since retirees are not accruing any more service, their normal cost is zero.

	June 30, 2008
Present Value of Benefits	
Actives	$ 6,515,819
Retirees	3,772,170
Total	$ 10,287,989
Actuarial Accrued Liability	
Actives	$ 4,011,020
Retirees	3,772,170
Total	$ 7,783,190
Normal Cost	$ 308,859

Exhibit 3. Unfunded Actuarial Accrued Liability

The Unfunded Actuarial Accrued Liability (UAAL) is the actuarial liability offset by any assets set aside to provide retiree health benefits. This is equal to the value of the retiree health benefits accrued to date that has not been funded. The UAAL must be amortized over a period not exceeding 30 years and included in the ARC amount (shown in Exhibit 4) each year. The amortization of UAAL shown in the exhibit below is based on a level dollar amortization over 30 years.

	June 30, 2008
Unfunded Actuarial Liability (UAAL)	
Actuarial Accrued Liability	$ 7,783,190
Assets	7,825,955
Unfunded Actuarial Accrued Liability	$ (42,765)
Funded percentage	100.5%
Amortization of UAAL for ARC	
UAAL	$ (42,765)
Amortization Period	30 years
Level Dollar Amortization Factor	12.4221
Amortization Amount – June 30, 2008	$ (3,443)
Interest to end of fiscal year	$ (267)
Amortization Amount – June 30, 2009	$ (3,710)

Exhibit 4. Required Financial Statement Disclosures

The following table shows the calculation of the Annual Required Contribution and Net OPEB Obligation.

	For the Fiscal Year Ending 06/30/2009
Determination of Annual Required Contribution	
Normal Cost plus interest to fiscal year end	$ 332,796
Amortization of UAAL	(3,710)
Annual Required Contribution (ARC)	$ 329,086
Determination of Net OPEB Obligation	
Annual Required Contribution	$ 329,086
Interest on prior year Net OPEB Obligation	0
Adjustment to ARC	0
Annual OPEB Cost	329,086
City Contributions made [1]	TBD
Increase in Net OPEB Obligation	TBD
Net OPEB Obligation / (Asset) – beginning of year [2]	$ 0
Net OPEB Obligation / (Asset) – end of year	TBD

[1] *The actual contribution amount will not be known until the end of the fiscal year.*

[2] *The Net OPEB Obligation of $0 as of the beginning of the fiscal year was the amount reported by the City on its CAFR as of June 30, 2008.*

Funded Status and Funding Progress. As of June 30, 2008, the most recent actuarial valuation date, the plan was 100.5% funded. The actuarial accrued liability for benefits was $7.8 million, and the actuarial value of assets was $7.8 million, resulting in an unfunded accrued liability of $(0.0) million.

SECTION II. EXHIBITS

Exhibit 5. Required Supplementary Information

The following table shows a schedule of Funding Progress required under GASB 45.

Actuarial Valuation Date	*Actuarial Value of Assets*	*AAL Entry Age*	*UAAL*	*Funded Ratio*	*Covered Payroll*	*UAAL as a % of Covered Payroll*
06/30/2006	$0	$7,953,179	$7,953,179	0.0%	$40,544,474	19.6%
06/30/2008	$7,825,955	$7,783,190	$ (42,765)	100.5%	$50,609,186	-0.1%

Exhibit 6. Breakdown of Valuation Results by City and Water District

The following table shows a breakdown of valuation results by the City and Water District.

	City	*Water District*	*Total*
Unfunded Actuarial Liability (UAAL)			
Actuarial Accrued Liability	$ 5,427,245	$ 2,355,945	$ 7,783,190
Assets	5,317,868	2,508,087	7,825,955
Unfunded Actuarial Accrued Liability	$ 109,377	$ (152,142)	$ (42,765)
Normal Cost – June 30, 2009	$ 297,460	$ 35,336	$ 332,796
Amortization of UAAL – June 30, 2009	$ 9,487	$ (13,197)	$ (3,710)
Annual Required Contribution (ARC)	$ 306,947	$ 22,139	$ 329,086

Appendix A. Summary of Benefits

The following description of retiree health benefits is intended to be only a brief summary. For details, reference should be made to Summary Plan Descriptions, Plan Documents, labor agreements, and employee booklets.

Eligibility

Employees are eligible for retiree health benefits if they retire from the City on or after age 50 with at least 5 years of service, and are eligible for a PERS pension.

Health Benefits

The City pays City retirees and their surviving spouses a subsidy equal to the statutory amount prescribed by California Government Code section 22892 (PEMHCA's minimum contribution for an active employee). This amount is $101 per month for 2009, and will increase each year in accordance with medical care CPI referenced in the Code.

The City pays the full retiree and dependent health premiums for Water District retirees.

Health Insurance Premium Rates

The following table shows monthly retiree health insurance premiums for the 2008 calendar year for Water District retirees covered under health plans sponsored by the Association of California Water Agencies (ACWA).

	Monthly Premium Rates – 2008			
	Single		*2-Party*	
Plans	*Basic*	*Medicare*	*Basic*	*Medicare*
Blue Cross	$ 440.21	$ 338.37	$ 1,037.21	$ 799.76
California Care	415.25		822.88	
Kaiser Permanente	392.30		777.00	

Appendix B. Actuarial Cost Method and Assumptions

The actuarial cost method described below is one of several acceptable costs methods described in GASB 45 and is the method prescribed by CalPERS for entities who participate in the CERBT. The assumptions described below (some of which are prescribed by the CalPERS CERBT) fall, in our opinion, within a best estimate range of anticipated future experience based on information provided to us. Note, that the ultimate responsibility of selecting/approving the actuarial cost method and assumptions lies with the City and its auditor.

Actuarial Cost Method

The actuarial cost method used for determining the benefit obligations is the 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). In determining the Annual Required Contribution, the UAAL is amortized as a level dollar amount over 30 years.

Valuation Date	June 30, 2008
Fiscal Year Ending	June 30, 2008
Economic Assumptions	
Discount Rate	7.75%
Health Cost Trends	
ACWA Premiums	10% increase from 2008 to 2009, 9.5% from 2009 to 2010, with increases grading down by 0.5% per year until 5% per year after 10 years.
CalPERS Minimum Contribution	California Government Code Section 22892 specifies that annual increases to the minimum City contribution are based on medical care component of the CPI. We assumed this index will increase by 4.5% per year for 2009 and beyond.

Appendix B. Actuarial Cost Method and Assumptions (cont'd)

Demographic Assumptions

Demographic assumptions regarding retirement, disability, and turnover are based on statistics taken from pension valuations for California PERS under a 3% @ 60 formula for Miscellaneous employees, a 3% @ 50 formula for Police, and Fire employees. Below is a summary of the assumed rates for retirement, disability, and turnover.

Disability

	Misc. 3% @ 60		*Males / Females*	
Age	*Males*	*Females*	*Police*	*Fire*
30	0.02%	0.04%	0.58%	0.22%
35	0.08%	0.10%	0.87%	0.32%
40	0.15%	0.16%	1.16%	0.42%
45	0.24%	0.23%	1.45%	0.53%
50	0.37%	0.35%	1.75%	0.67%

Retirement

	Misc. 3% @ 60		*Males / Females*	
Age	*Males*	*Females*	*Police* [1]	*Fire* [1]
50	5.00%	7.00%	12.08%	6.79%
51	2.00%	5.00%	10.71%	9.22%
52	3.00%	5.00%	17.05%	13.77%
53	3.00%	5.00%	19.16%	16.61%
54	4.00%	5.00%	19.74%	20.38%
55	8.00%	9.00%	24.97%	25.16%
56	7.00%	8.00%	19.10%	24.07%
57	8.00%	7.00%	22.32%	20.10%
58	9.00%	11.00%	21.98%	23.54%
59	11.00%	10.00%	22.79%	19.93%
60	19.00%	15.00%	100.00%	100.00%
61	17.00%	12.00%	100.00%	100.00%
62	31.00%	25.00%	100.00%	100.00%
63	26.00%	22.00%	100.00%	100.00%
64	18.00%	16.00%	100.00%	100.00%
65	30.00%	30.00%	100.00%	100.00%
70+	100.00%	100.00%	100.00%	100.00%

[1] *Sample probabilities for a Police or Fire employee with 25 years of service.*

Appendix B. Actuarial Cost Method and Assumptions (continued)

Withdrawal

Sample probabilities of miscellaneous employees terminating within one year for an employee *with five years of service* are shown below for selected ages:

	Miscellaneous	
Age	*Males*	*Females*
30	5.5%	7.5%
35	3.9%	5.5%
40	2.9%	4.1%
45	2.2%	3.1%
50	0.6%	0.9%
55	0.4%	0.6%

Sample probabilities of Safety employees terminating within one year for an employee with a given number of years of service are shown below:

	Males / Females	
Service	*Police*	*Fire*
1	8.2%	7.4%
3	3.3%	3.2%
5	3.0%	2.6%
10	2.1%	0.9%
15	1.3%	0.8%
20	1.0%	0.7%
25	0.8%	0.6%

Mortality

Rates used by CalPERS in its actuarial valuation of retirement benefits.

Enrollment Assumption

100% of Water District eligible employees are assumed to elect medical coverage with Blue Cross upon retirement.

80% of City eligible employees who retire before age 65 are assumed to elect medical coverage with PEMHCA upon retirement. 80% of retirees who retired prior to age 65 are assumed to continue coverage after age 65.

64% of City eligible employees who retire after age 65 are assumed to elect medical coverage with PEMHCA.

Appendix B. Actuarial Cost Method and Assumptions (continued)

Spouse Coverage	70% of retirees will elect spouse coverage upon retirement (no dependent children are assumed). For current retirees, actual data was used to value spouse coverage.
Spouse Age	Female spouses are assumed to be three years younger than male spouses, on average. For current retirees, actual data was used to compute spouses' ages.

Implicit Rate Subsidy

Since the CalPERS Health Plans and Association of California Water Agencies Health Plans are community rated health plans, we have not included in our valuation the value of any implicit rate subsidy for retirees whose premium rates are the same as active employees.

Appendix C. Summary of Participant Data

The following census of participants was used in the actuarial valuation and provided by the City. The data was collected as of June 2008.

Covered Active Employees by Units

Age	*City*	*Water District*	*Total*
Under 25	15	0	15
25 – 29	60	0	60
30 – 34	76	0	76
35 – 39	97	0	97
40 – 44	100	1	101
45 – 49	136	2	138
50 – 54	106	2	108
55 – 59	77	2	79
60 – 64	29	1	30
65 & Over	8	0	8
Total	704	8	712

Average Age at Valuation Date: 43.93
Average Service at Valuation Date: 9.24

Current Retirees

Age	*City*	*Water District*	*Total*
Under 55	12	0	12
55 – 59	32	0	32
60 – 64	47	1	48
65 – 69	23	6	29
70 – 74	5	3	8
75 – 79	1	2	3
80 – 84	3	0	3
85 & Over	2	0	2
Total	125	12	137

Average Age at Valuation Date: 62.45