ACTUARIAL ANALYSIS OF RETIREE MEDICAL BENEFITS CITY OF NOVATO AS OF JANUARY 1, 2008

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City of Novato
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Enclosed is my actuarial valuation of the retiree health program for City employees as of January 1, 2008. The report is based on assumptions stated in the appendix, and on data provided by the City'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 City 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 GASB Statement No. 45 and the applicable standards of practice of the Actuarial Standards Board. 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,

Steven T. Itelson

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APPENDICES

SUMMARY OF ACTUARIAL ANALYSIS OF RETIREE HEALTH PROGRAM

The City of Novato provides medical insurance benefits to all retirees. Retirees must have 5 years of service in the California Public Employees' Retirement System (PERS) to receive a pension; this requirement is waived for industrial disability retirements. Novato provides health benefits to any City retiree with a PERS pension, paying only the PERS Minimum Employer Contribution of $97 in 2008. Appendix E gives a summary of the plan provisions.

The Governmental Accounting Standards Board published Statements 43 and 45 in 2004. Statement No. 43 requires disclosures by the Retiree Health Plan; Statement No. 45 sets rules for computing expenses for retiree health and welfare benefits. Expenses will be determined as closely as possible to the way they are for pensions. If the City funds the plan, significant reserves will develop; interest on these assets will pay part of the costs. The expense on this basis is $127,000 for this year for Miscellaneous employees, which is 1.09% of payroll of $11,622,000. The expense for the Police unit is $64,000 for this year; this is 1.19% of the covered payroll of $5,398,000.

The expense is set as a level percentage of payroll, which has been assumed to rise 3.5% per year. The effective date for these requirements will probably be fiscal year 2008-09.[1] The Actuarial Accrued Liabilities are 0% funded because there are no reserves. The Unfunded Actuarial Accrued Liability (UAAL) is $1,168,000 for Miscellaneous (10.05% of payroll); for Police, the UAAL $635,000 which is 11.76% of covered payroll. If the GASB rate of contribution starts in year 2008-09, reserves are projected to exceed $5 million at the end of 20 years.

The assumptions used in this actuarial valuation are shown in Appendix B.

[1] Effective dates should be verified with City auditors.

INTRODUCTION

The funding of retiree health and welfare benefits has been a major issue for many employers in both the private and public sectors. Very few programs have done any advance funding; instead, pay-as-you-go financing has primarily been used.

There had been no legal or accounting requirement to fund a retiree health benefit plan using traditional pension methods. In 2004, however, the Governmental Accounting Standards Board (GASB) issued Statements Numbers 43 and 45 for such rules in public agencies. Statement Number 43 requires actuarial reporting by the retiree health benefit plan. Statement Number 45 requires 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 (see page 3) and in the glossary.

This report summarizes the valuation of the City's retiree medical program to comply with Statement 45. The actuarial calculations are summarized in the Valuation Results section (see page 4). The demographic projection section shows what the assumptions forecast for the ways the current employees will leave the workforce (see page 7).

Appendix A (page 8) is a glossary of actuarial terms used in this report. The actuarial assumptions and methods are shown in detail in Appendix B (page 10). They include rates of retiree mortality and rates at which the employees leave the work force for retirement, death, and other turnover. These assumptions are the ones used in your pension valuations for PERS, except that police turnover is assumed to be 200% of the PERS rates based on data the City provided. The Projected Unit Credit actuarial method has been used. Appendices C (page 14) and D (page 17) give distributions of the eligible employees and retirees, respectively. Appendix E (page 18) is a summary of benefit provisions. Only the retiree health benefits paid by the City 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). Statement Number 43 on plan reporting was released in April 2004; Statement Number 45 on employer expense was published in June 2004.

The accounting rules require that expense be computed using one of six actuarial cost methods; Projected Unit Credit method was used. 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 will be Normal Cost plus amortization of Unfunded AAL (the AAL less assets) over 30 years. The amortization is done as a level percentage of increasing payroll. This contribution will be expressed in dollars and as a percentage of payroll. See Appendix A for an explanation of terms.

Public employers with less than 200 participants (employed plus retired) will be required to have actuarial studies to determine this expense every three years; the requirement is biennial with 200 or more. 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. For public agencies with annual revenue of $10 million to $100 million, the effective date will be fiscal years starting after December 15, 2007, for the employer expense rules of Statement Number 45. Effective dates and these rules should be discussed with the City's auditors.

VALUATION RESULTS

For Statement Number 45 purposes, the expense for the first year is the Annual Required Contribution (or ARC); see the Accounting Standards section (page 4) for discussion. The expense shown includes the normal cost, which is the actuarial value of benefits earned during the year, plus amortization of past service costs (Unfunded Actuarial Accrued Liability, or UAAL) over 30 years. The ARC is shown as the amount payable at the beginning of the year and should be adjusted for later payment. You will compute fiscal year 2008-09 expense by applying the percentages of 2007-08 budgeted payroll shown below to the 2008-09 budgeted payroll.

Scenario 1 Police Only

The ARC is $64,000 as of January 1, 2008. This is 1.19% of covered payroll. As of January 1, 2008 the UAAL was $635,000 which is 11.76% of payroll. The AAL is 0% funded. These results are items for disclosure under GASB Statement 45. The expense and actuarial liabilities are as follows as of January 1, 2008:

1)	Actuarial Accrued Liability		
	a) Current Retirees	$352,000	
	b) Current Employees	283,000	
	c) Total		$635,000
2)	Actuarial Value of Assets		0
3)	Unfunded Actuarial Accrued Liability		635,000
4)	Payment to Amortize UAAL as of 1/01/08		26,000
5)	Actuarial Normal Cost as of 1/01/08		38,000
6)	Total expense = 4) + 5)		64,000
7)	Expense as Percentage of Payroll		1.19%

Scenario 1 Miscellaneous Only

The ARC is $127,000 as of January 1, 2008. This is 1.09% of covered payroll. As of January 1, 2008 the UAAL was $1,168,000 which is 10.05% of payroll. The AAL is 0% funded. These results are items for disclosure under GASB Statement 45.

The expense and actuarial liabilities as of January 1, 2008 are on the next page:

1) Actuarial Accrued Liability		
a) Current Retirees	$546,000	
b) Current Employees	622,000	
c) Total		$1,168,000
2) Actuarial Value of Assets		0
3) Unfunded Actuarial Accrued Liability		1,168,000
4) Payment to Amortize UAAL as of 1/01/08		48,000
5) Actuarial Normal Cost as of 1/01/08		79,000
6) Total expense = 4) + 5)		127,000
7) Expense as Percentage of Payroll		1.09%

Table 1 is my 20-year projection of number of retirees, benefit payments, assuming the City makes contributions at the GASB expense level. This table shows Police and Miscellaneous members combined. I have assumed contributions are paid on January 1 of the year when crediting investment income. There were 39 retirees in the valuation census; Table 1 shows 42 including those expected to retire this year. The number of retirees increases over the projection, reaching 82 at the end. The projection excludes future employees; there will be some retirements in the next 20 years from people not yet hired.

Annual benefits are projected to be $201,000 in 2027, compared to $48,000 this year. The ARC is about four times the expected benefits for the first year; this ratio declines to about 1.8 times the expected benefits in the last year shown. Reserves are projected to exceed $5 million by the end of 20 years, rising because contributions exceed benefits paid and the accumulation of interest. Although the projection is shown for 20 years, the ARC will be revised based on future actuarial valuations. These will be at least biennial per GASB requirements.[2]

This valuation using 5% interest may be appropriate if the City will not fund the ARC and will continue on a pay-as-you go basis. It is also a reasonable investment yield assumption for some Trust Funds if investments will be almost exclusively fixed income.

[2] If you have under 200 participants, including retirees, the requirement is triennial. It may be that employees who waive coverage do not count as participants for this purpose. Verify with auditor.

TABLE 1

City of Novato
Retiree Medical Program Scenario 1
Interest Assumption 5%
City Contributes ARC Beginning of Year

Calendar Year	Number Retired	Expected Benefits	Employer Contribution	Assets End of Year
2008	42	48,000	191,000	151,000
2009	44	53,000	198,000	312,000
2010	46	58,000	205,000	483,000
2011	49	64,000	212,000	664,000
2012	52	71,000	219,000	854,000
2013	55	78,000	227,000	1,055,000
2014	59	86,000	235,000	1,266,000
2015	62	95,000	243,000	1,487,000
2016	64	103,000	252,000	1,720,000
2017	67	112,000	261,000	1,965,000
2018	70	120,000	270,000	2,224,000
2019	72	129,000	279,000	2,496,000
2020	74	138,000	289,000	2,783,000
2021	76	148,000	299,000	3,084,000
2022	78	157,000	309,000	3,402,000
2023	79	166,000	320,000	3,738,000
2024	80	175,000	331,000	4,093,000
2025	81	184,000	343,000	4,469,000
2026	82	193,000	355,000	4,867,000
2027	82	201,000	367,000	5,290,000

PARTICIPANT DATA

Active Employees

A census of 221 active employees as of January 1, 2008 was provided by the City. However, since many opt not to participate in the active employee medical benefit program, the census of 143 current participants was used. The average age was 45.8 and average service was 8.2 years for the 103 Miscellaneous participants. For the 40 Police participants, the average age was 38.1 with average service 8.2 years. Distributions of these employees by age and service are in Appendix C. The application of the decrement rates in Appendices B projects the following for these current employees over the next 50 years:

	Miscellaneous	Police	Total
Service retire	76	20	96
Disability retire	4	11	15
Death before retire	2	1	3
Other termination	21	8	29
Total	103	40	143

It has been assumed that 25% of future retirees will decline the City's Minimum Employer Contribution benefit. The total number of retirees receiving benefits year-by-year is given in Table 1 in the Valuation Results section, including current retirees.

Retirees

There were 39 retirees as of January 1, 2008. The average ages were 60.1 for the 14 Police and 65.0 for the 25 Miscellaneous retirees. Every retiree receives $97 monthly. A distribution of retirees by age and classification is in Appendix D.

Appendix A
ACTUARIAL TERMINOLOGY

The terminology utilized in calculating the contributions is described below.

PRESENT VALUE OF FUTURE BENEFITS: This is the discounted value of the year-by-year expected benefits pay by the employer under the plan. The discount rate is the same as the rate of return assumed. The expected benefits are determined using the probabilities of mortality, retirement, etc., shown in Appendix B.

NORMAL COST: This 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 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 fully funded, and (2) interest was earned at the assumed rate on the Actuarial Accrued Liability.

ACTUARIAL ACCRUED LIABILITY (AAL): This term 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. It is the portion of the present value prorated for service. For example, for an employee with 30 years of service at retirement and has already worked 15 years, it is 15/30 of the present

value of expected post-retirement benefits. The Unfunded Actuarial Accrued Liability (UAAL) is the Actuarial Accrued Liability minus the reserves.

AMORTIZATION PAYMENT: The Unfunded Actuarial Accrued Liability must be paid off for future contributions to be in balance with future benefits if financing permanent benefits for all employees. The cost has been illustrated using a 30-year period to amortize the UAAL. Payments are set to rise 3.5% annually, so that they are expected to remain a constant percentage of covered payroll.

PAY-AS-YOU-GO: This way of financing benefits is not a funding method because no assets are accumulated. The cost allocated to each year is the actual benefits paid. The annual payment might be claims costs, total premiums or the total of stipends paid by the employer which represent part of the premiums.

Appendix B

Actuarial Method and Assumptions

Method: Projected Unit Credit

Investment return: 5% per year

General inflation: 3.25% per year

Covered payroll increases: 3.5% per year

Rates of death and disability for active employees:
California PERS rates from 2004 Experience Study.
Sample annual rates:

	Miscellaneous Male		Miscellaneous Female	
Age	Death	Disability	Death	Disability
25	0.03%	0.02%	0.01%	0.02%
30	0.04	0.02	0.02	0.04
35	0.05	0.08	0.03	0.10
40	0.08	0.15	0.05	0.16
45	0.14	0.24	0.07	0.23
50	0.16	0.37	0.1	0.35
55	0.22	0.49	0.15	0.41
60	0.31	0.55	0.23	0.39
65	0.45	0.54	0.34	0.33
70	0.63	0.54	0.5	0.33

	Police Male		Police Female	
Age	Death	Disability	Death	Disability
25	0.03%	0.29%	0.02%	0.29%
30	0.05	0.58	0.03	0.58
35	0.07	0.87	0.04	0.87
40	0.09	1.16	0.06	1.16
45	0.13	1.45	0.09	1.45
50	0.18	1.75	0.12	1.75
55	0.25	5.94	0.18	5.94

Rates of Retirement:
California PERS rates for Public Agencies with 2% at 55 Pension,
2004 Experience Study – Miscellaneous Males and Females

	YEARS OF SERVICE						
AGE	5	10	15	20	25	30	35+
50	1.45%	1.84%	2.24%	2.69%	3.07%	3.66%	4.11%
51	1.06	1.35	1.64	1.98	2.26	2.69	3.02
52	1.14	1.45	1.76	2.12	2.41	2.87	3.23
53	1.50	1.90	2.31	2.78	3.18	3.78	4.25
54	1.99	2.52	3.07	3.69	4.21	5.02	5.64
55	4.75	6.04	7.34	8.83	10.08	12.00	13.49
56	3.95	5.02	6.11	7.35	8.38	9.98	11.23
57	4.27	5.42	6.59	7.93	9.05	10.78	12.12
58	4.73	6.01	7.30	8.79	10.03	11.94	13.43
59	5.10	6.48	7.88	9.48	10.82	12.87	14.48
60	7.15	9.08	11.04	13.28	15.16	18.04	20.30
61	7.15	9.08	11.04	13.28	15.16	18.05	20.30
62	12.75	16.20	19.69	23.69	27.04	32.19	36.21
63	12.87	16.36	19.88	23.92	27.31	32.50	36.56
64	9.31	11.82	14.38	17.29	19.74	23.50	26.43
65	17.38	22.09	26.86	32.31	36.88	43.90	49.38
70	12.24	15.55	18.90	22.74	25.96	30.90	34.76
75	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rates of Withdrawal:
California PERS rates for Public Agencies, 2004 Experience Study
Miscellaneous Males and Females

	YEARS OF SERVICE							
AGE	0	5	10	15	20	25	30	35+
20	17.60%							
25	16.91	2.83%						
30	16.22	2.57	1.84%					
35	15.53	2.32	1.61	1.20%				
40	14.83	2.06	1.39	1.02	0.73%			
45	14.14	1.81	1.17	0.83	0.57	0.34%		
50	13.45	1.55	0.95	0.64	0.41	0.22	0.10%	
55	12.75	1.29	0.73	0.46	0.25	0.09	0.02	0.02%
60	12.06	1.04	0.51	0.27	0.09	0.02	0.02	0.02
65	11.37	0.78	0.28	0.08	0.02	0.02	0.02	0.02
70	10.68	0.52	0.06	0.03	0.02	0.02	0.02	0.02

Rates of Retirement:
California PERS rates for Public Agencies with 3% at 55 Pension,
2004 Experience Study – Police Males and Females

	YEARS OF SERVICE						
AGE	5	10	15	20	25	30	35+
50	1.93%	1.93%	1.93%	1.93%	3.97%	6.00%	6.00%
51	1.57	1.57	1.57	1.57	3.24	4.91	4.91
52	1.63	1.63	1.63	1.63	3.37	5.10	5.10
53	5.87	5.87	5.87	5.87	12.08	18.29	18.29
54	6.91	6.91	6.91	6.91	14.22	21.54	21.54
55	11.64	11.64	11.64	11.64	23.97	36.30	36.30
56	7.56	7.56	7.56	7.56	15.56	23.57	23.57
57	5.81	5.81	5.81	5.81	11.96	18.12	18.12
58	5.08	5.08	5.08	5.08	10.45	15.83	15.83
59	6.00	6.00	6.00	6.00	12.87	19.49	19.49
60	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rates of Withdrawal:
California PERS rates for Public Agency Police, 2004 Experience Study, times 2.0

	YEARS OF SERVICE							
AGE	0	5	10	15	20	25	30	35+
20	25.98%							
25	25.98	2.20%						
30	25.98	2.20	1.36%					
35	25.98	2.20	1.36	0.70%				
40	25.98	2.20	1.36	0.70	0.44%			
45	25.98	2.20	1.36	0.70	0.44	0.30%		
50	25.98	2.20	1.36	0.70	0.44	0.30	0.24%	
55	25.98	2.20	1.36	0.70	0.44	0.30	0.24	0.24%
60	25.98							

PERS Monthly premiums for 2008:

	TWO-PARTY			ONE-PARTY	
Number Pre-Medicare	Two	One	None	One	None
Blue Shield	$1065.86	$874.37	$682.88	$532.93	$341.44
Kaiser	941.34	744.03	546.72	470.67	273.36
PERS Choice	964.96	831.59	698.22	482.48	349.11
PERSCare	1499.66	1154.43	809.20	749.83	404.60

Retiree Mortality Rates: California PERS 2004 Experience Study. Examples:

MALE RETIREES

Age	Life Expectancy (Years)			Rate of Mortality (%)		
	Service Retiree	Industrial Disability Retiree	Spouse	Service Retiree	Industrial Disability Retiree	Spouse
55	26.4	23.3	30.0	0.43	0.62	0.25
60	22.0	19.1	25.5	0.72	1.02	0.44
65	17.9	15.2	21.1	1.30	1.85	0.80
70	14.2	11.9	17.1	2.14	3.37	1.28
75	10.9	9.1	13.3	3.72	5.77	2.16
80	8.0	6.9	9.9	6.26	8.67	3.88

FEMALE RETIREES

Age	Life Expectancy (Years)			Rate of Mortality (%)		
	Service Retiree	Ordinary Disability Retiree	Spouse	Service Retiree	Ordinary Disability Retiree	Spouse
55	30.0	22.9	26.4	0 .25	1.48	0.43
60	25.5	19.7	22.0	0.44	1.88	0.72
65	21.1	16.6	17.9	0.80	2.36	1.30
70	17.1	13.5	14.2	1.28	3.02	2.14
75	13.3	10.6	10.9	2.16	4.30	3.72
80	9.9	8.1	8.0	3.88	6.51	6.26

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 who are currently age 70 will live for an *average* of 17.1 more years. The **rates of mortality** are the percentages of the retirees at the specific age who die before reaching the next age.

City payment (PERS Minimum Employer Contribution): $97 monthly for 2008, $101 in 2009, assumed to increase 4% per annum thereafter.

Family Composition: 50% of survivors for pre-retirement or post-retirement death will continue the PRES Minimum benefit, with wives 3 years younger than husbands.

Percentage Declining Benefit: 25% of those currently insured

Employees Included: Only those currently insured.

APPENDIX C-1

Distribution of All Employees
By Age and Years of Service
as of January 1, 2008

	Years of Service						
Age	Under 5	5 - 9	10 - 14	15 - 19	20 - 24	25 & Over	Total
Under 25	4						4
25 - 29	14	1					15
30 - 34	9	10	1				20
35 - 39	9	3					12
40 - 44	9	6	2	2			19
45 - 49	8	7	5	1	3	4	28
50 - 54	6	6			5	3	20
55 - 59	4	6	1	2	3	3	19
60 - 64		1		1	1	2	5
65 - 69					1		1
70 & Over							0
Total	63	40	9	6	13	12	143

There are 53 females and 90 males in this census. The average age is 43.6 and the average service is 8.2 years.

APPENDIX C-2

Distribution of Police Employees
By Age and Years of Service
as of January 1, 2008

	Years of Service						
Age	Under 5	5 - 9	10 - 14	15 - 19	20 - 24	25 & Over	Total
Under 25	1						1
25 - 29	7	1					8
30 - 34	5	4					9
35 - 39	2	3					5
40 - 44	2	1	1	2			6
45 - 49			3		1	3	7
50 - 54	1	1			1		3
55 & Over						1	1
Total	18	10	4	2	2	4	40

There are 6 females and 34 males in this census. The average age is 38.1, and the average service is 8.2 years.

APPENDIX C-3

Distribution of Miscellaneous Employees
By Age and Years of Service
as of January 1, 2008

	Years of Service						
Age	Under 5	5 - 9	10 - 14	15 - 19	20 - 24	25 & Over	Total
Under 25	3						3
25 - 29	7						7
30 - 34	4	6	1				11
35 - 39	7						7
40 - 44	7	5	1				13
45 - 49	8	7	2	1	2	1	21
50 - 54	5	5			4	3	17
55 - 59	4	6	1	2	3	2	18
60 - 64		1		1	1	2	5
65 - 69					1		1
70 & Over							0
Total	45	30	5	4	11	8	103

There are 47 females and 56 males in this census. The average age is 45.8, and the average service is 8.2 years.

APPENDIX D

Distribution of Current Retirees
By Rounded Age and Classification
As of January 1, 2008

Age	Police	Miscellaneous	Total
Under 55	2	1	3
55 – 59	5	5	10
60 – 64	2	10	12
65 – 69	5	4	9
70 – 74		2	2
75 – 79		1	1
80 – 84		1	1
85 & Over		1	1
Total	14	25	39

The average ages for these retirees are 60.1 for Police and 65.0 for Miscellaneous. There are five disability retirees, four of which are industrial.

APPENDIX E

Summary of Principal Provisions of Retiree Medical Program City of Novato

Service Retirement Benefit	
Eligibility Age Service Required	50 5 Years in PERS, with retirement from Novato
Benefit Amount	PERS minimum of $97 monthly in 2008, $101 in 2009, increasing with the medical component of the Consumer Price Index
Benefit Duration	Paid for life
Industrial Disability Benefit	Same as service retirement benefit shown above if retire from Novato with industrial disability at any age
Non-Industrial Disability Benefit	
Eligibility Age Service Required	Any 5 Years in PERS, with retirement from Novato
Benefit Amount	Same as for Service Retirement
Benefit Duration	Paid for life.
Post-Retirement Death Benefit	Benefit continued for life of spouse if retiree had elected spousal pension continuance.
Pre-Retirement Death Benefit	Same as for post-retirement death