Novato Fire Protection District

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Actuarial Valuation
Retiree Health Program
As of June 30, 2019

Mr. Joe Valenti
Novato Fire Protection District
95 Rowland Way
Novato, CA 94945

Re: OPEB Actuarial Valuation

Dear Mr. Valenti:

We are presenting our report of the June 30, 2019 actuarial valuation conducted on behalf of Novato Fire Protection District (the “District”) for its retiree health program.

The purpose of the valuation is to measure the District’s liability for other postemployment benefits (OPEB) and to determine an actuarially determined contribution (ADC). The ADC is a target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice. The valuation results will also serve as the basis for complying with GASB 75 for the fiscal year ending June 30, 2020. A separate GASB 75 accounting report will be provided.

The Nyhart Company is an employee owned actuarial benefits and compensation consulting firm specializing in group health and retiree health and qualified pension plan valuations. We have set forth the results of our study in this report.

We have enjoyed working on this assignment and are available to answer any questions.

Sincerely,
NYHART

Luis Murillo

Luis Murillo, ASA, MAAA
Consulting Actuary

Novato Fire Protection District
OPEB Actuarial Valuation
Retiree Health Program
As of June 30, 2019

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Background

The Novato Fire Protection District District (the "District") selected Nyhart to perform an updated actuarial valuation of its retiree health program. The purpose of the valuation is to measure the District's liability for OPEB benefits and to determine an actuarially determined contribution (ADC) for the fiscal periods ending June 30, 2020 and June 30, 2021. The ADC is a target or recommended contribution to a defined benefit OPEB plan for the applicable period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice. The valuation results will also serve as the basis for complying with GASB 75 applicable for the fiscal year ending June 30, 2020.

The District currently provides a contribution towards retiree medical benefits which are offered throught the CalPERS Health Program. Some retirees are also eligible for a District contribution towards dental and vision coverage which are available through separate plans. In general, to be eligible for retiree health benefits, an employee must retired from PERS on or after age 50 (age 55 for miscellaneous employees) with at least ten years of District service. The District's contribution varies by employee group, date of hire and daet of retirement. Section IV of the report details the plan provisoins that were included in the valuation and the current premium costs for coverage.

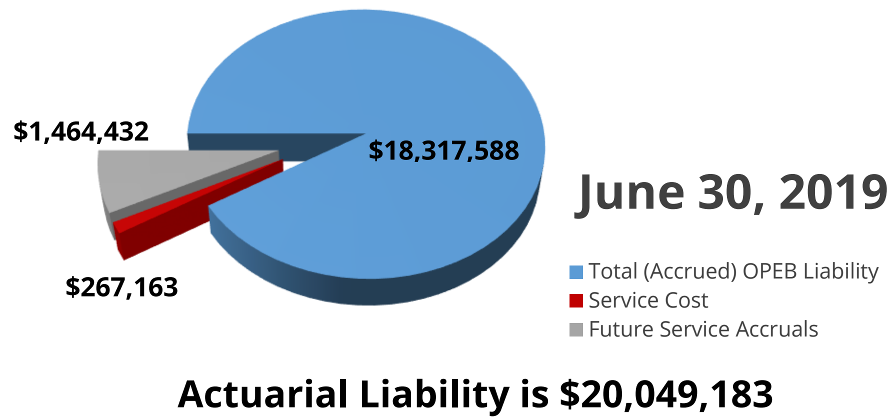
At June 30, 2019, the District had 92 retired employees receiving or eligible to receive a District contribution for retiree health benefits and 73 active employees earning service eligibility for retiree health benefits. Section IV of the report provides data statistics on the eligible population.

The District participates in the CalPERS Health Program for its retiree medical coverage. In general, the premium rates charged to participating employers are the same for each medical plan within each region (or "community") and are the same for both active and retired employees covered under the same medical plan. An implied rate subsidy can exist when the non-Medicare rates for retirees are the same as for active employees. Since non-Medicare eligible retirees are typically much older than active employees, their actual medical costs are typically higher than for active employees. Both GASB accounting standards and actuarial standards of practices (ASOP) require that implied rate subsidies be considered in the valuation of medical costs. This valuation includes an estimate of the liability for the implicit rate subsidy.

<u>Results of the Retiree Health Valuation</u>

We have determined that the amount of the present value of the projected District pay-as-you-go contributions (actuarial liability) for OPEB benefits, as of June 30, 2019, the valuation date, is $20,049,183, (including $3,120,119 for the implicit rate subsidy). This amount is based on a discount rate of 7.00%. The amount represents the present value of all benefits projected to be paid by the District for current and future retirees. If the District were to have this amount in a fund earning interest at the rate of 7.00% per year, and all other actuarial assumptions were met, the fund would have enough to pay the District's required contribution for retiree health benefits. This includes benefits for the current retirees as well as the current active employees expected to retire in the future. The valuation does not consider employees not yet hired as of the valuation date.

If the amount of the actuarial liability is apportioned into past service, current service, and future service components; the past service component (actuarial accrued liability now referred to as Total OPEB Liability) is $18,317,588 (including $2,705,834 for the implicit rate subsidy), the current service component (normal cost or current year accrual) is $267,163 (including $61,225 for the implicit rate subsidy) and the future service component (not yet accrued liability) is $1,464,432 (including $353,060 for the implicit rate subsidy).



<u>Changes from Prior Valuation</u>

The valuation reflects updated census, plan, and rate information. In addition, there were a couple of assumption changes as noted in Section VI including updates to the initial healthcare trend rates. A reconciliation of the approximate change in the total (accrued) OPEB liability from the prior valuation is provided below:

June 30, 2017 Valuation @7.00%	**$17,970,000**
Increase due to passage of time	1,158,000
Net experience gain	(1,105,000)
Increase due to liability for new entrants	2,000
Net change due to updated assumptions	293,000
June 30, 2019 Valuation @7.00%	**$18,318,000**

Funding

The District's funding policy is to pre-fund the actuarially determined contribution (ADC) through the California Employer's Benefit Trust (CERBT) under investment strategy 1. The market value of assets in the CERBT as of June 30, 2019 is $10,713,304. The actuarial value of assets is equal to the market value of assets. The Net (unfunded) OPEB Liability at June 30, 2019 is $7,604,284. The Plan's funded ratio (actuarial value of assets over Total OPEB Liability) is 58%.

The estimated pay-as-you-go cost for retiree health benefits for the 2019/2020 fiscal year is approximately $1,101,099 (including $160,187 for the implicit rate subsidy). This amount includes payments for employees expected to retire during the 2019/2020.

Actuarially Determined Contribution (ADC)

The actuarially determined contribution (ADC), assuming the District's funding strategy, is to fund the normal cost (current accrual for benefits being earned) plus an amortization of the unfunded accrued liability- or net OPEB liability-at June 30, 2019 over 11 years (on a level-percentage of pay basis) equal to $1,154,560 for the fiscal year ending June 30, 2020. This includes $779,941 for the District's explicit contribution and $374,619 for the implicit rate subsidy. The projected contribution for the fiscal year ending June 30, 2021 is $1,194,970.

Actuarial Basis

The actuarial valuation is based on the assumptions and methods outlined in Section VI of the report. To the extent that a single or a combination of assumptions is not met, the future liability may fluctuate significantly from its current measurement. As an example, the healthcare cost increase anticipates that the rate of increase in medical cost will be at moderate levels and decline over several years. Increases higher than assumed would bring larger liabilities and expensing requirements. A 1% increase in the healthcare trend rate for each future year would increase the actuarially determined contribution by 27%. A 1% decrease in the healthcare trend rate for each future year would decrease the actuarially determined contribution by 22%.

Another key assumption used in the valuation is the discount (interest) rate which is based on the expected rate of return of plan assets. The valuation is based on a discount rate of 7.00%. A 1% decrease in the discount rate would increase the actuarially determined contribution by 23%. A 1% increase in the discount rate would decrease the actuarially determined contribution by 19%.

Scheduled to take effect in 2022, the "Cadillac Tax" is a 40% non-deductible excise tax on employer-sponsored health coverage that provides high-cost benefits. For insured plans, the insurance company is responsible for payment of the excise tax. For self-funded plans, the employer is responsible for payment of the excise tax. The valuation does not include any additional liability for the Cadillac Tax.

The valuation is based on the census, plan and rate information provided by the District. To the extent that the data provided lacks clarity in interpretation or is missing relevant information, this can result in liabilities different than those presented in the report. Often missing or unclear information is not identified until future valuations.

A. Valuation Results

The table below presents the employer liabilities associated with the District's retiree health benefits. The actuarial liability is the present value of all District-paid benefits projected to be paid under the program. The total OPEB liability (TOL)-previously referred to as the actuarially accrued liability-reflects the amount attributable to the past service of current employees and retirees. The normal cost reflects the accrual attributable for the current period.

	Explicit	Implicit	Total
1. Actuarial Liability or Present Value of Benefits			
Actives	$6,099,269	$1,925,630	$8,024,899
Retirees	10,829,795	1,194,489	12,024,284
Total	$16,929,064	$3,120,119	$20,049,183
2. Total OPEB Liability (TOL)			
Actives	$4,781,959	$1,511,345	$6,293,304
Retirees	10,829,795	$1,194,489	12,024,284
Total	$15,611,754	$2,705,834	$18,317,588
3. Normal Cost	$205,938	$61,225	$267,163
No. of Active Employees			73
Average Age			44.6
Average Past Service			14.1
Estimated Payroll			$9,214,313
No. of Retired Employees			92
Average Age			68.9
Average Retirement Age			52.6

B. Reconciliation of Market Value of Plan Assets

The reconciliation of Plan Assets for the last two fiscal years is presented below:

	Fiscal Year Ending 6/30/2018	Fiscal Year Ending 6/30/2019
1. Beginning Market Value of Assets	$6,561,838	$8,578,388
2. Contribution	1,502,716	1,547,797
3. Net Investment Income	526,229	591,563
4. Benefit Payments	0	0
5. Administrative Expenses	(12,395)	(4,444)
6. Ending Market Value of Assets	$8,578,388	$10,713,304
7. Estimated Rate of Return	7.2%	6.3%

C. Development of Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets plus any contribution receivable or benefits payable. The actuarial value of assets at June 30, 2019 is $10,713,304.

D. Development of Net OPEB Liability (NOL)

The table below presents the development of the net OPEB liability previously referred to as the unfunded actuarial accrued liability. The net OPEB liability is the excess of the TOL over the actuarial value of plan assets.

	Explicit	Implicit	Total
1. Total (Accrued) OPEB Liability	$15,611,754	$2,705,834	$18,317,588
2. Actuarial Value of Assets	(10,713,304)	0	(10,713,304)
3. Net (Unfunded Accrued) OPEB Liability (NOL)	$4,898,450	$2,705,834	$7,604,284
4. Funded % Ratio	69%	0%	58%

E. Amortization of NOL

The amortization of the NOL component of the actuarially determined contribution (ADC) is being amortized over a period of 11 years on a level-percentage of pay basis. Under the level-dollar method, the amortization payment is scheduled to remain the same during the amortization period.

	Explicit	Implicit	Total
1. NOL	$4,898,450	$2,705,834	$7,604,284
2. Amortization Factor	8.75369	8.75369	8.75369
3. Amortization of NOL	$559,587	$309,108	$868,695

F. Actuarially Determined Contribution

The table below presents the development of the actuarially determined contribution (ADC) for the fiscal year ending June 30, 2020 and for the fiscal years ending June 30, 2021.

FY2019/2020	Explicit	Implicit	Total
1. Normal Cost at End of Fiscal Year	$220,354	$65,511	$285,865
2. Amortization of NOL	559,587	309,108	868,695
3. Actuarially Determined Contribution (ADC)	$779,941	$374,619	$1,154,560
4. Estimated Payroll	$9,214,313	$9,214,313	$9,214,313
5. ADC as % of Payroll	8.50%	4.10%	12.50%

FY2020/2021	Explicit	Implicit	Total
1. Normal Cost at End of Fiscal Year	$228,066	$67,804	$295,870
2. Amortization of NOL	579,173	319,927	899,100
3. Actuarially Determined Contribution (ADC)	$807,239	$387,731	$1,194,970
4. Estimated Payroll	$9,536,814	$9,536,814	$9,536,814
5. ADC as % of Payroll	8.50%	4.10%	12.5%

G. Sensitivity Analysis:

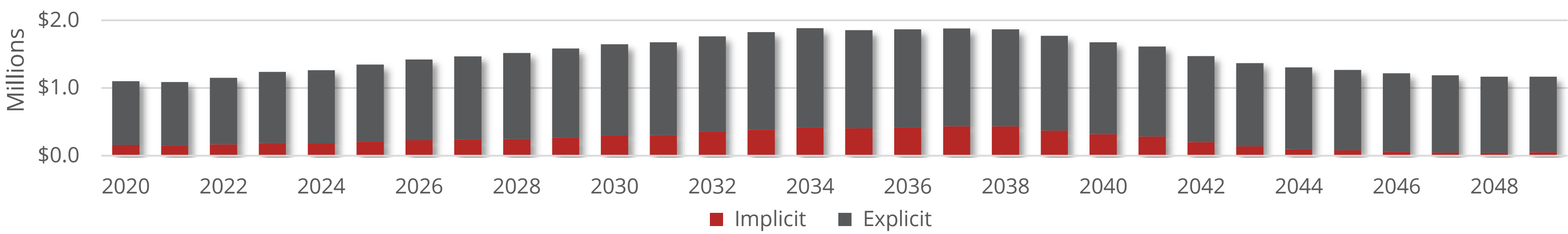
The impact of a 1% decrease and increase in the discount (interest) rate and the impact of a 1% increase and decrease in future healthcare trend rates on the District's actuarial liability, TOL, NOL and the ADC is provided below:

	Dollar ($) Increase/ (Decrease)	Percentage (%) Increase/ (Decrease)
1% Decrease in Discount Rate		
- Actuarial Liability	$2,716,774	14%
- TOL	$2,168,713	12%
- NOL	$2,168,713	29%
- ADC	$259,811	23%
1% Increase in Discount Rate		
- Actuarial Liability	($2,206,943)	-11%
- TOL	($1,805,629)	-10%
- NOL	($1,805,629)	-24%
- ADC	($225,036)	-19%
1% Increase in Future Healthcare Trend Rates		
- Actuarial Liability	$2,640,686	13%
- TOL	$2,320,235	13%
- NOL	$2,320,235	31%
- ADC	$311,901	27%
1% Decrease in Future Healthcare Trend Rates		
- Actuarial Liability	($2,181,530)	-11%
- TOL	($1,929,135)	-11%
- NOL	($1,929,135)	-25%
- ADC	($257,545)	-22%

The valuation process includes the projection of the expected benefits (including the explicit District contribution and the implicit rate subsidy) to be paid by the District under its retiree health benefits program. This expected cash flow takes into account the likelihood of each employee reaching age for eligibility to retire and receive health benefits. The projection is performed by applying the turnover assumption to each active employee for the period between the valuation date and the expected retirement date. Once the employees reach their retirement date, a certain percent are assumed to enter the retiree group each year. Employees already over the latest assumed retirement age as of the valuation date are assumed to retire immediately. The per capita cost as of the valuation date is projected to increase at the applicable healthcare trend rates both before and after the employee's assumed retirement. The projected per capita costs are multiplied by the number of expected future retirees in a given future year to arrive at the cash flow for that year. Also, a certain number of retirees will leave the group each year due to expected deaths or reaching a limit age and this group will cease to be included in the cash flow from that point forward. Because this is a closed-group valuation, the number of retirees dying each year will eventually exceed the number of new retirees, and the size of the cash flow will begin to decrease and eventually go to zero.

The expected employer cash flows for selected future years are provided in the following table:

FY	Explicit	Implicit	District Total	FY	Explicit	Implicit	District Total	FY	Explicit	Implicit	District Total
2019/20	$ 940,912	$ 160,187	$ 1,101,099	2033/34	$ 1,464,385	$ 418,817	$ 1,883,202	2055/56	$ 1,010,502	$ 15,521	$ 1,026,023
2020/21	$ 936,189	$ 152,241	$ 1,088,430	2034/35	$ 1,450,437	$ 404,828	$ 1,855,265	2060/61	$ 891,397	$ 0	$ 891,397
2021/22	$ 986,828	$ 165,315	$ 1,152,143	2035/36	$ 1,451,654	$ 417,359	$ 1,869,013	2065/66	$ 718,030	$ 0	$ 718,030
2022/23	$ 1,049,634	$ 187,156	$ 1,236,790	2036/37	$ 1,443,867	$ 435,426	$ 1,879,293	2070/71	$ 502,613	$ 0	$ 502,613
2023/24	$ 1,082,561	$ 182,283	$ 1,264,844	2037/38	$ 1,431,886	$ 434,402	$ 1,866,288	2075/76	$ 290,836	$ 0	$ 290,836
2024/25	$ 1,136,137	$ 208,241	$ 1,344,378	2038/39	$ 1,397,654	$ 372,916	$ 1,770,570	2080/81	$ 132,736	$ 0	$ 132,736
2025/26	$ 1,190,638	$ 229,174	$ 1,419,812	2039/40	$ 1,358,952	$ 316,213	$ 1,675,165	2085/86	$ 48,645	$ 0	$ 48,645
2026/27	$ 1,230,569	$ 237,955	$ 1,468,524	2040/41	$ 1,328,104	$ 284,885	$ 1,612,989	2090/91	$ 16,333	$ 0	$ 16,333
2027/28	$ 1,269,701	$ 247,097	$ 1,516,798	2041/42	$ 1,273,393	$ 198,664	$ 1,472,057	2095/96	$ 5,150	$ 0	$ 5,150
2028/29	$ 1,316,576	$ 267,808	$ 1,584,384	2042/43	$ 1,230,417	$ 138,272	$ 1,368,689	2100/101	$ 1,170	$ 0	$ 1,170
2029/30	$ 1,345,211	$ 301,500	$ 1,646,711	2043/44	$ 1,205,499	$ 98,077	$ 1,303,576	2105/106	$ 139	$ 0	$ 139
2030/31	$ 1,368,807	$ 305,151	$ 1,673,958	2044/45	$ 1,185,609	$ 81,324	$ 1,266,933	2110/111	$ 7	$ 0	$ 7
2031/32	$ 1,410,066	$ 354,774	$ 1,764,840	2045/46	$ 1,158,086	$ 58,188	$ 1,216,274	2115/116	$ 0	$ 0	$ 0
2032/33	$ 1,440,006	$ 384,648	$ 1,824,654	2050/51	$ 1,088,966	$ 38,069	$ 1,127,035	All Years	$ 59,896,442	$ 7,406,505	$ 67,302,947



The valuation was based on the census furnished to us by the District. The following tables display the age distribution for retirees and the age/service distribution for active employees as of the Valuation Date.

Age Distribution of Eligible and Participating Retirees & Beneficiaries

	< Age 65	65 & Older	Total
<50	0	0	0
50-54	7	0	7
55-59	8	0	8
60-64	10	0	10
65-69	0	20	20
70-74	0	20	20
75-79	0	24	24
80-84	0	3	3
85+	0	0	0
Total:	25	67	92
Average Age:	58.1	72.9	68.9
Average Retirement Age*:	50.1	53.6	52.6

*Based on those with reported retirement dates.

Age/Service Distribution of All Active Employees

	Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	Total
<25	0									0
25-29	3	1								4
30-34	5	1								6
35-39	3	0	1	1						5
40-44	0	2	3	13						18
45-49	1	0	2	16	3	1				23
50-54	1	0	1	4	5	1				12
55-59	1	0	0	2	0	0	1	0		4
60-64	0	0	0	0	1	0	0	0	0	1
65+	0	0	0	0	0	0	0	0	0	0
Total:	14	4	7	36	9	2	1	0	0	73

Average Age:	44.6
Average Service:	14.1
Average Hire Age:	30.5
Estimated Payroll:	$9,214,000

This study analyzes the retiree health benefits of the District. The retiree health benefits provided to retirees are basically a continuation of the medical plans for active employees.

Active employees are offered a choice of medical (including prescription drug coverage) plans through the CalPERS Health Program under the Public Employees' Medical and Hospital Care Act (PEMHCA). The District offers the same medical plans to eligible retirees except once a retiree is eligible for Medicare, the retiree must join a Medicare HMO or Supplement Plan with Medicare being the primary payer. Eligibility for continuation of coverage and a District contribution at retirement varies by employee group and date of hire and date of retirement.

Management and Administrative Support Staff

- Retirement and Disability Requirements

  Management and administrative support staff employees are categorized under the Miscellaneous CalPERS group. In order to be eligible for retirement benefits, these employees must attain age 55 with ten years of service. For eligibility to receive disability benefits, there is no minimum age requirement, but Miscellaneous employees must have worked at least five years for the District.

- Tier 1

  Eligibility for tier 1 retiree medical benefits requires an employee to have been hired prior to July 1, 2009 and to be enrolled in the healthcare plan upon retirement or disability. For employees retiring prior to April 1, 2015, the District will pay 100% of the premium for single coverage or 83.29% of the premium for two-person or family coverage.

  For employee retiring on or after April 1, 2015, the District will provide the Supplemental Retiree Benefit Allowance based on vesting service earned prior to June 1, 2015:

Years of Service prior to June 1, 2015	Base Percentage
0 – 5	55%
5 – 10	60%
10 – 15	65%
15 – 20	70%
20 – 25	75%
25 – 30	80%

  The employee will earn an additional 0.75% of benefit coverage for the number of total years of service. The sum of the base percentage from the table plus the additional piece will be the total percentage paid by the District for single/two-party/family coverage of the Kaiser HMO Premium. The maximum percentage paid by the District is 80% on January 1, 2011, 75% on April 1, 2023, and 70% on April 1, 2028.

- Tier 2

  Eligibility for tier 2 retiree medical benefits requires an employee to have been hired after January 1, 2015 and to be enrolled in the healthcare plan upon retirement or disability. The District will pay the PEMHCA minimum after the retiree buys medical insurance through the District.

- Dental and vision benefits

  All Management and Administrative Support Staff members must pay 100% of the premiums for dental and vision coverage.

Chief Officers Association

- Retirement and Disability Requirements

  Chief Officer Association employees are categorized under the Safety CalPERS group. These employees can become eligible for retirement benefits by attaining age 50 with ten years of service, with no age requirement by attaining twenty years of service, or by continuing to work for the District until or beyond age 70. There are no age or service requirements for Safety group employees to be eligible to receive disability benefits.

- Tier 1

  Eligibility for tier 1 retiree health benefits requires an employee to have retired prior to January 1, 2011 and to have been enrolled in the healthcare plan upon retirement or disability. The District will pay benefits as described in the following table:

	Medical Coverage	Dental Coverage	Vision Coverage
Fire Chief or Deputy Fire Chief (retired 1992 or later)	100% for retired member and dependents until the death of both parties	100% for retired member and spouse	100% for retired member and spouse
Fire Chief or Deputy Fire Chief (retired 1991 or earlier)	100% for retired member and dependents until the death of both parties	100% for retired member and spouse	0% of premium
Division Chief or Battalion Chief (retired 1992 or later)	100% of Kaiser-Family rate or 83.29% of higher premium	100% for retired member and spouse	100% for retired member and spouse
Division Chief or Battalion Chief (retired 1992 or later)	100% of Kaiser-Family rate or 83.29% of higher premium	100% for retired member and spouse	0% of premium

- Tier 2

  Eligibility for tier 2 retiree medical benefits requires an employee to have been hired prior to July 1, 2009, retire after December 31, 2010 and to be enrolled in the healthcare plan upon retirement or disability. Beginning on January 1, 2012, the Supplemental Retirement Benefit Allowance the District provides will decrease by 2% per year until reaching 82% on January 1, 2020:

Year Beginning	% Paid by District
January 1, 2010	100%
January 1, 2011	100%
January 1, 2012	98%
January 1, 2013	96%
January 1, 2014	94%
January 1, 2015	92%
January 1, 2016	90%
January 1, 2017	88%
January 1, 2018	86%
January 1, 2019	84%
January 1, 2020	82%

  The portion the District will pay for single/two-party/family coverage is determined by the fixed rate in effect the year the member retires. The retired member will be responsible for paying the difference between the premium and the District's portion.

- Tier 3

  Eligibility for tier 3 retiree health benefits requires an employee to have been hired after June 30, 2009 and to be enrolled in the healthcare plan upon retirement or disability. The District will pay the PEMHCA minimum after the retiree buys medical insurance through the District.

- Dental and vision benefits

  All members in tier 2 or tier 3 must pay 100% of the premiums for dental and vision coverage.

Firefighters

- Retirement and Disability Requirements

  Firefighter employees are categorized under the Safety CalPERS group. These employees can become eligible for retirement benefits by attaining age 50 with ten years of service, with no age requirement by attaining twenty years of service, or by continuing to work for the District until or beyond age 70. There are no age or service requirements for Safety group employees to be eligible to receive disability benefits.

- Tier 1

  Eligibility for tier 1 retiree medical benefits requires an employee to have retired on or prior to December 31, 2010 and to have been enrolled in the healthcare plan upon retirement or disability. The District will pay 100% of the premium for single coverage or 83.29% of the premium for two-person or family coverage.

- Tier 2

  Eligibility for tier 2 retiree medical benefits requires an employee to have been hired prior to July 1, 2009, retire after December 31, 2010, and to be enrolled in the healthcare plan upon retirement or disability. The District provides the Supplemental Retiree Benefit Allowance based on vesting service as of July 1, 2010:

Years of Service prior to July 1, 2010	Base Percentage
0 – 5	55%
5 – 10	60%
10 – 15	65%
15 – 20	70%
20 – 25	75%
25 – 30	80%

  The employee will earn an additional 0.75% of benefit coverage for the number of total years of service. The sum of the base percentage from the table plus the additional piece will be the total percentage paid by the District for single/two-party/family coverage of the Kaiser HMO Premium. The maximum percentage paid by the District is 80% on January 1, 2011, 75% on April 1, 2023, and 70% on April 1, 2028.

- Tier 3

  Eligibility for tier 3 retiree health benefits requires an employee to have been hired after June 30, 2009 and to be enrolled in the healthcare plan upon retirement or disability. The District will pay the PEMHCA minimum after the retiree buys medical insurance through the District.

- Dental and vision benefits

  All Firefighter members must pay 100% of the premiums for dental and vision coverage.

Surviving spouses or domestic partners

A surviving spouse or domestic partner will be eligible to receive the same percentage of the medical premiums paid for by the District as the retiree was receiving at the time of death.

A surviving spouse or domestic partner of an active employee will be eligible to receive medical coverage paid for by the District only if the active employee had attained ten years of service and age 55 (if a Miscellaneous employee) or age 50 (if a Safety employee). The amount surviving spouse or domestic partner may receive equals the percentage that the active employee could have received if he or she had retired at the time of death.

PEMHCA Minimum Contribution

All employees who were hired after June 30, 2009 are only entitled to the PEMHCA minimum upon retirement regardless of coverage elected. For the calendar year 2019, the PEMHCA minimum is $136 per month and for 2020 is $139 per month.

Premium Costs

The District participates in the CalPERS Health Program, a community-rated program for its medical coverage. The following tables summarize the 2019 and 2020 monthly premiums for the primary medical plans in which the retirees are enrolled.

2019 Bay Area	Kaiser	BS HMO	PERS Care	PERS Choice	PERS Select
Retiree Only	$ 768.25	$ 970.90	$1,131.68	$ 866.27	$ 543.19
Retiree Plus Spouse	$1,536.50	$1,941.80	$2,263.36	$1,732.54	$1,086.38
Retiree Plus Family	$1,997.45	$2,524.34	$2,942.37	$2,252.30	$1,412.29
Retiree Only- Medicare	$ 323.74	N/A	$ 394.83	$ 360.41	$ 360.41
Retiree Plus Spouse – Medicare	$ 647.48	N/A	$ 789.66	$ 720.82	$ 720.82

2019 Bay Area (Continued)	UHC HMO	Anthem HMO Select	Anthem HMO Traditional	Health Net Smart Care	Western Health Advantage
Retiree Only	N/A	$ 831.44	$1,111.13	$ 901.55	$ 767.01
Retiree Plus Spouse	N/A	$1,662.88	$2,222.26	$1,803.10	$1,534.02
Retiree Plus Family	N/A	$2,161.74	$2,888.94	$2,344.03	$1,994.23
Retiree Only- Medicare	$ 299.37	N/A	$ 357.44	N/A	N/A
Retiree Plus Spouse – Medicare	$ 598.74	N/A	$ 714.88	N/A	N/A

2020 Region 1	Kaiser	BS Access+	BS Trio	PERS Care	PERS Choice	PERS Select
Retiree Only	$ 768.49	$1,127.77	$ 833.00	$1,133.14	$ 861.18	$ 520.29
Retiree Plus Spouse	$1,536.98	$2,255.54	$1,666.00	$2,266.28	$1,722.36	$1,040.58
Retiree Plus Family	$1,998.07	$2,932.20	$2,165.80	$2,946.16	$2,239.07	$1,352.75
Retiree Only- Medicare	$ 339.43	N/A	N/A	$ 384.78	$ 351.39	$ 351.39
Retiree Plus Spouse – Medicare	$ 678.86	N/A	N/A	$ 769.56	$ 702.78	$ 702.78

2020 Region 1 (Continued)	UHC HMO	Anthem HMO Select	Anthem HMO Traditional	Health Net Smart Care	Western Health Advantage
Retiree Only	$ 899.94	$ 868.98	$1,184.84	$1,000.52	$ 731.96
Retiree Plus Spouse	$1,799.88	$1,737.96	$2,369.68	$2,001.04	$1,463.92
Retiree Plus Family	$2,339.84	$2,259.35	$3,080.58	$2,601.35	$1,903.10
Retiree Only- Medicare	$ 327.03	$ 388.15	$ 388.15	N/A	N/A
Retiree Plus Spouse - Medicare	$ 654.06	$ 766.30	$ 766.30	N/A	N/A

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

Fiscal Year: July 1st to June 30th

Valuation Date: June 30, 2019

Funding Policy: The District's funding policy is to fund the actuarially determined contribution (ADC) determined to be the normal cost (current accrual for benefits being earned) plus an amortization of the net (unfunded accrued) OPEB liability over a reasonable period.

Funding Periods Covered: FY2019/20 and FY2020/21

Asset Return: 7.00% per year; assumes the District invests in the CERBT asset allocation Strategy 1 with a margin for adverse deviation.

Discount Rate: 7.00% per annum. This discount rate assumes the District continues to fully fund for its retiree health benefits through the California Employers' Retiree Benefit Trust (CERBT) under its investment allocation strategy 1.

Sensitivity analysis showing a 1% increase or decrease in the discount rate is also provided.

Salary Increases: 3.5% per annum

Wage Inflation: 3.0% per annum, in aggregate, for purposes of cost allocation

Inflation: 3.0% per annum, in aggregate

Pre-retirement Turnover: Sample rates for Miscellaneous employees are as follows:

	Years of Service							
Age	0	1	2	3	4	5-9	10-14	15-19
20	15.0%	9.0%	7.0%	7.0%	7.0%	7.0%	5.3%	3.0%
25	15.0%	9.0%	7.0%	7.0%	7.0%	7.0%	5.3%	3.0%
30	15.0%	9.0%	7.0%	7.0%	7.0%	7.0%	5.3%	3.0%
35	15.0%	9.0%	7.0%	7.0%	7.0%	6.8%	4.5%	2.5%
40	15.0%	9.0%	7.0%	7.0%	7.0%	4.8%	3.2%	2.0%
45	15.0%	9.0%	7.0%	7.0%	7.0%	3.8%	2.5%	1.7%
50	15.0%	9.0%	7.0%	7.0%	7.0%	2.1%	0.0%	0.0%
55	15.0%	9.0%	7.0%	7.0%	7.0%	1.2%	0.0%	0.0%
60	15.0%	9.0%	7.0%	7.0%	7.0%	1.2%	0.0%	0.0%

Sample rates for Safety employees are as follows:

	Years of Service					
Age	**0**	**1**	**2**	**3**	**4**	**5-19**
20	8.0%	5.0%	4.0%	4.0%	4.0%	2.1%
30	8.0%	5.0%	4.0%	4.0%	4.0%	3.5%
40	8.0%	5.0%	4.0%	4.0%	4.0%	1.1%

Pre-retirement Mortality: The RPH-2014 Total Dataset Mortality Tables Projected Fully Generational using Scale MP-2018.

Post-retirement Mortality (Non-disabled Retirees): The RPH-2014 Total Dataset Mortality Tables Projected Fully Generational using Scale MP-2018.

Post-retirement Mortality: (Disabled Retirees) The RPH-2014 Disabled Retiree Mortality Tables Projected Fully Generational using Scale MP-2018.

Industrial Disability Rates: Sample disabilities per 1,000 employees are as follows:

	Miscellaneous		Safety	
Age	**Male**	**Female**	**Male**	**Female**
25	0.8	0.8	1.7	1.7
30	1.3	1.3	4.0	4.0
35	1.6	1.6	6.1	6.1
40	2.1	2.1	13.0	13.0
45	2.6	2.6	12.5	12.5
50	3.1	3.1	14.1	14.1
55	3.3	3.3	42.9	42.9

Non-Industrial Disability Rate: Sample disabilities per 1,000 employees are as follows:

	Miscellaneous		Safety	
Age	Male	Female	Male	Female
25	0.1	0.1	0.3	0.3
30	0.1	0.1	0.5	0.5
35	0.2	0.2	0.7	0.7
40	0.3	0.3	1.6	1.6
45	0.5	0.5	2.6	2.6
50	0.9	0.9	3.6	3.6
55	1.6	1.6	4.6	4.6

Retirement Rates: Sample retirement rates for Miscellaneous employees are as follows:

	Years of Service		
Age	<20	20-29	30+
50-54	4.0%	4.0%	4.0%
55	8.0%	10.0%	25.0%
56	4.0%	4.0%	25.0%
57	4.0%	6.0%	25.0%
58	4.0%	8.0%	25.0%
59	8.0%	10.0%	25.0%
60-61	8.0%	10.0%	35.0%
62-74	20.0%	20.0%	35.0%
75-79	25.0%	25.0%	35.0%
80+	100.0%	100.0%	100.0%

Sample retirement rates for Safety employees are as follows:

	3% at 50			3% at 55		
	Service at Retirement					
Age	<20	20-29	30+	<20	20-29	30+
40-49	0.0%	3.0%	3.0%	0.0%	1.0%	1.0%
50	25.0%	25.0%	50.0%	5.0%	5.0%	30.0%
51-53	10.0%	10.0%	20.0%	5.0%	5.0%	30.0%
54	10.0%	10.0%	20.0%	5.0%	15.0%	30.0%
55	25.0%	25.0%	50.0%	20.0%	40.0%	50.0%
56	25.0%	25.0%	50.0%	10.0%	30.0%	50.0%
57-59	25.0%	25.0%	50.0%	10.0%	20.0%	50.0%
60-64	50.0%	50.0%	50.0%	30.0%	30.0%	50.0%
65+	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

For new Safety employees subject to PEPRA, the retirement rates under the most recent CalPERS experience study. According to the retirement table:

Safety Fire Tier 3: 2.7% @57

Participation Rates: The probability of electing coverage at retirement is assumed to be the same as the percentage of premium provided by the District, with a 35% minimum participation rate for those only eligible for the PEMHCA minimum contribution.

Spouse Coverage: 65% of those electing coverage are assumed to elect coverage for themselves and their spouse. Female spouses are assumed to be three years younger than male spouses. Spouse coverage and spouse age for current retirees is based on actual coverage and actual spouse age.

Dependent Coverage: Not explicitly valued.

Plan Election: Of those who elect coverage, Tier 1 Administrators, Tier 1 and Tier 2 Chief Officers are assumed to elect coverage under the PERS Care plan. All other active members are assumed to elect the Blue Shield Access+ Plan. Retiree members are assumed to continue their current plan election.

Claim Cost Development: The valuation claim costs are based on the premiums paid for medical insurance coverage. The District participates in CalPERS, a community rated plan. An implicit rate subsidy can exist when the non-Medicare rates for retirees are the same as for active employees. Since non-Medicare eligible retirees are typically much older than active employees, their actual medical costs are typically higher than for active employees. The current valuation contains an estimate of the implicit rate subsidy.

Medical Trend Rates: Medical costs are adjusted in future years by the following trends:

Year	PPO	HMO	Dental	Vision	PEMHCA Minimum
2019	Actual	Actual	Actual	Actual	Actual
2020	Actual	Actual	Actual	Actual	Actual
2021	6.0%	5.5%	3.5%	3.5%	4.0%
2022	5.5%	5.0%	3.5%	3.5%	4.0%
2023+	5.0%	5.0%	3.5%	3.5%	4.0%

Actuarial Cost Method: The actuarial cost method used to determine the allocation of the retiree health actuarial liability to the past (accrued), current and future periods is the Entry Age Normal (EAN) cost method. The EAN cost method is a projected benefit cost method which means the “cost” is based on the projected benefit expected to be paid at retirement.

The EAN normal cost equals the level annual amount of contribution from the employee’s date of hire (entry date) to their retirement date that is sufficient to fund the projected benefit. While both are acceptable methods, typically for plans unrelated to pay the normal cost is calculated to remain level in dollars and for pay-related plans the normal cost is calculated to remain level as a percentage of pay. The District has elected to use level percentage of pay. The EAN actuarial accrued liability or total OPEB liability equals the present value of all future benefits for retired and current employees and their beneficiaries less the portion expected to be funded by future normal costs.

All eligible employees and participating retirees and spouses as of the valuation date listed in the data provided by the District were included in the valuation in accordance with the provisions of the Plan.

Actuarial Value of Assets: Any assets of the plan will be valued on a market value basis.

Amortization of NOL: The unfunded actuarial accrued or net OPEB liability (NOL) is being amortized over 11 years using a level percentage of pay amortization method on a closed basis.

This report summarizes the actuarial valuation for the Novato Fire Protection District (the "District") as of June 30, 2019. The purpose of the valuation is to measure the District's liability for OPEB benefits and to determine an actuarially determined contribution (ADC) for the fiscal periods ending June 30, 2020 and June 30, 2021. The ADC is a target or recommended contribution to a defined benefit OPEB plan for the applicable period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice. The valuation results will also serve as the basis for complying with GASB 75 applicable for the fiscal year ending June 30, 2020.

To the best of our knowledge, the report presents a fair position of the funded status of the plan. The valuation is based upon our understanding of the plan provisions as summarized within the report. The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information and asset information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate and other economic assumptions have been selected by the Plan Sponsor. Demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- Changes in plan provisions or applicable law.

While some sensitivity was provided in the report, we did not perform an analysis of the potential ranges of future measurements due to the limited scope of our engagement.

Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact me.

Certified by:

Luis Murillo

Luis Murillo, ASA, MAAA
Consulting Actuary

Randy Gomez

Randy Gomez, FSA, MAAA
Consulting Actuary

Date: September 23, 2019

The definitions of the terms used in the actuarial valuations are noted below.

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, turnover, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

Actuarial Cost Method – A procedure for determining the Actuarial Present Value of future benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost (also referred to as Service Cost) and an Actuarial Accrued Liability (also referred to as Total OPEB Liability).

Actuarial Present Value – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarially Determined Contribution - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.

Actuarial Present Value (also referred to as Actuarial Liability) – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Explicit Subsidy – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.

Funded Ratio – The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Healthcare Cost Trend Rate – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Implicit Rate Subsidy – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.

Normal Cost – The portion of the Actuarial Present Value of plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

OPEB – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.

Pay-as-you-go – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Per Capita Costs – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.

Present Value of Future Benefits – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.

Real Rate of Return – the rate of return on an investment after adjustment to eliminate inflation.

Select and Ultimate Rates – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the healthcare trend rate assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed healthcare trend rate of 6.5% for year 20W0, 6.0% for 20W1, 5.5% for 20W2, then 5.0% for 20W3 and thereafter, then 6.5%, 6% and 5.5% are select rates, and 5% is the ultimate rate.

Service Cost (also referred to as Normal Cost) – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.

Substantive Plan – The terms of an OPEB plan as understood by the employer(s) and plan participant.

Total OPEB Liability (also referred to as Actuarial Accrued Liability) – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).