Rancho Santiago Community College District

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Actuarial Valuation
Retiree Health Program
As of June 30, 2019

Adam O'Connor
Rancho Santiago Community College District
2323 N Broadway
Santa Ana, CA 92706

Re: OPEB Actuarial Valuation

Dear Ms. O'Connor:

We are presenting our report of the June 30, 2019 actuarial valuation conducted on behalf of Rancho Santiago Community College 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, ASA, MAAA
Consulting Actuary

Luis Murillo

Rancho Santiago Community College District
OPEB Actuarial Valuation
Retiree Health Program
As of June 30, 2019

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Background

The Rancho Santiago Community College 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 retiree medical benefits through the Alliance of Schools for Cooperative Insurance Programs (ASCIP). In general,to be eligible for retiree medical benefits an employee must retire from the District on or after age 55 with at least 15 years of District service.Retiree health benefits are payable until age 70. There are also grandfathered groups eligible for lifetime benefits. The District's contributionvaries by employee group and date of hire. Section IV of the report details the plan provisions that were included in the valuation and thecurrent premium costs for coverage.

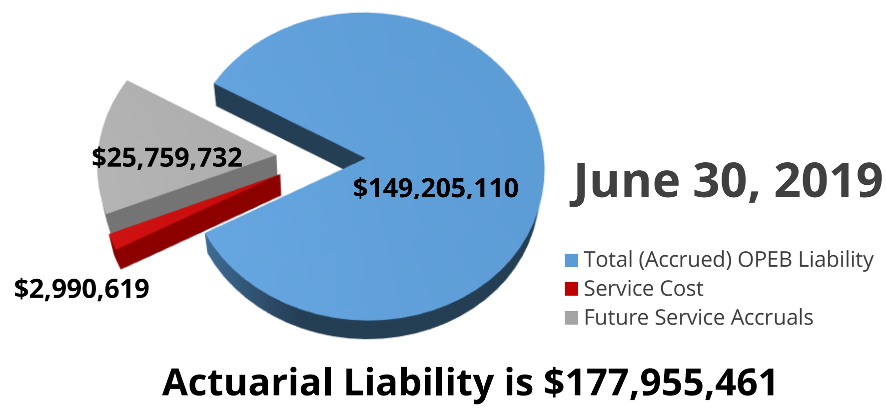
At June 30, 2019, the District had 463 retired employees receiving or eligible to receive a District contribution for retiree health benefits and 1,076 active employees earning service eligibility for retiree health benefits. Section V of the report provides data statistics on the eligible population.

The District participates in ASCIP 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 (ASOPs) 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.

Results of the Retiree Health Valuation

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 $177,955,461, (including $15,336,610 for the implicit rate subsidy). This amount is based on a discount rate of 6.50%. 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 6.50% 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 $149,205,110 (including $10,654,648 for the implicit rate subsidy), the current service component (normal cost or current year accrual) is $2,990,619 (including $482,392 for the implicit rate subsidy) and the future service component (not yet accrued liability) is $25,759,732 (including $4,199,570 for the implicit rate subsidy).



Changes from Prior Valuation

The valuation reflects updated census, plan, and rate information. In addition, there were a couple of assumption changes as noted in Section VI including increasing 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 @3.50%	**$167,278,155**
Increase due to passage of time	5,458,750
Net experience gain	3,930,059
Increase due to liability for new entrants	0
Net change due to updated assumptions	(27,461,854)
June 30, 2019 Valuation @6.50%	**$149,205,110**

Funding

The District's funding policy is to pre-fund at least the actuarially determined contribution (ADC) through the Public Agency Retirement Services Post-Employments Benefits Trust (PARS). The market value of assets in the Trust as of June 30, 2019 is $40,119,075. The actuarial value of assets is equal to the market value of assets. The Net (unfunded) OPEB Liability at June 30, 2019 is $109,086,035. The Plan's funded ratio (actuarial value of assets over Total OPEB Liability) is 27%.

The estimated pay-as-you-go cost for retiree health benefits for the 2019/2020 fiscal year is approximately $8,813,301 (including $630,914 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 25 years (on a level percent of pay basis) equal to $9,927,050 for the fiscal year ending June 30, 2020. This includes $8,754,795 for the District's explicit contribution and $1,172,255 for the implicit rate subsidy. The projected contribution for the fiscal year ending June 30, 2021 is $10,224,861.

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 16%. A 1% decrease in the healthcare trend rate for each future year would decrease the actuarially determined contribution by 14%.

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 6.50%. A 1% decrease in the discount rate would increase the actuarially determined contribution by 8%. A 1% increase in the discount rate would decrease the actuarially determined contribution by 7%.

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.

	Lifetime Benefits	Benefits to Age 70	Total
1. Actuarial Liability or Present Value of Benefits			
Actives	$10,928,606	$76,319,181	$87,247,787
Retirees	81,353,627	9,354,047	90,707,674
Total	$92,282,233	$85,673,228	$177,955,461
Attributable to Subsidy	*$1,541,896*	*$13,794,714*	*$15,336,610*
2. Total OPEB Liability (TOL)			
Actives	$10,514,682	$47,982,754	$58,497,436
Retirees	81,353,627	$9,354,047	90,707,674
Total	$91,868,309	$57,336,801	$149,205,110
Attributable to Subsidy	*$1,519,563*	*$9,135,085*	*$10,654,648*
3. Normal Cost	$120,882	$2,869,737	$2,990,619
Attributable to Subsidy	*$6,029*	*$476,363*	*$482,392*
No. of Active Employees			1076
Average Age			48.2
Average Past Service			11.1
Estimated Payroll			$ 102,907,215
No. of Retired Employees			463
Average Age			74
Average Retirement Age			63.7

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 6/30/2019
1. Beginning Market Value of Assets	$0
2. Contribution	40,000,000
3. Net Investment Income	119,075
4. Benefit Payments	0
5. Administrative Expenses	0
6. Ending Market Value of Assets	$40,119,075
7. Estimated Rate of Return	0.6%

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 $40,119,075.

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	$138,550,462	$10,654,648	$149,205,110
2. Actuarial Value of Assets	(40,119,075)	0	(40,119,075)
3. Net (Unfunded Accrued) OPEB Liability (NOL)	$98,431,387	$10,654,648	$109,086,035
4. Funded % Ratio	29%	0%	27%

E. Amortization of NOL

The amortization of the NOL component of the actuarially determined contribution (ADC) is being amortized over a period of 25 years on a level-percentage of pay basis. Under the level-percentage of pay method, the amortization payment is scheduled to remain the same during the amortization period.

	Explicit	Implicit	Total
1. NOL	$98,431,387	$10,654,648	$109,086,035
2. Amortization Factor	16.17997	16.17997	16.17997
3. Amortization of NOL	$6,083,533	$658,508	$6,742,041

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	$2,671,262	$513,747	$3,185,009
2. Amortization of NOL	6,083,533	658,508	6,742,041
3. Actuarially Determined Contribution (ADC)	$8,754,795	$1,172,255	$9,927,050
4. Estimated Payroll	$102,907,215	$102,907,215	$102,907,215
5. ADC as % of Payroll	8.5%	1.1%	9.6%

FY2020/2021	Explicit	Implicit	Total
1. Normal Cost at End of Fiscal Year	$2,751,400	$529,159	$3,280,559
2. Amortization of NOL	6,266,039	678,263	6,944,302
3. Actuarially Determined Contribution (ADC)	$9,017,439	$1,207,422	$10,224,861
4. Estimated Payroll	$105,994,431	$105,994,431	$105,994,431
5. ADC as % of Payroll	8.5%	1.1%	9.6%

G. Sensitivity Analysis:

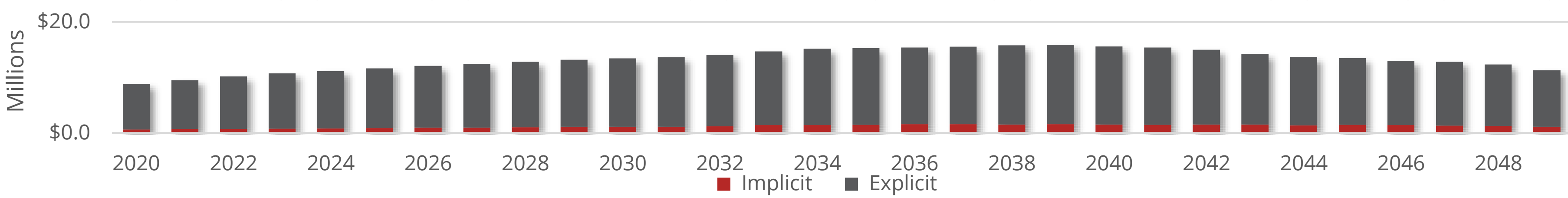
The impact of a 1% decrease and increase in the discount (interest) rate and the impact of a 1% increase and decrease in future healthcare trend rates on the District's actuarial liability, TOL, NOL and the ADC is provided below:

	Dollar ($) Increase/ (Decrease)	Percentage (%) Increase/ (Decrease)
1% Decrease in Discount Rate		
- Actuarial Liability	$23,330,376	13%
- TOL	$14,669,339	10%
- NOL	$14,669,339	13%
- ADC	$751,749	8%
1% Increase in Discount Rate		
- Actuarial Liability	($19,307,859)	-11%
- TOL	($12,756,177)	-9%
- NOL	($12,756,177)	-12%
- ADC	($667,440)	-7%
1% Increase in Future Healthcare Trend Rates		
- Actuarial Liability	$22,504,867	13%
- TOL	$16,196,715	11%
- NOL	$16,196,715	15%
- ADC	$1,619,709	16%
1% Decrease in Future Healthcare Trend Rates		
- Actuarial Liability	($18,963,255)	-11%
- TOL	($13,918,992)	-9%
- NOL	($13,918,992)	-13%
- ADC	($1,357,840)	-14%

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	$ 8,182,387	$ 630,914	$ 8,813,301	2033/34	$ 13,738,997	$ 1,441,364	$ 15,180,361	2055/56	$ 4,852,831	$ 404,414	$ 5,257,245
2020/21	$ 8,804,296	$ 704,054	$ 9,508,350	2034/35	$ 13,847,289	$ 1,469,781	$ 15,317,070	2060/61	$ 1,707,761	$ 39,783	$ 1,747,544
2021/22	$ 9,467,215	$ 739,367	$ 10,206,582	2035/36	$ 13,811,030	$ 1,577,946	$ 15,388,976	2065/66	$ 335,481	$ 0	$ 335,481
2022/23	$ 9,982,899	$ 775,621	$ 10,758,520	2036/37	$ 13,965,738	$ 1,586,099	$ 15,551,837	2070/71	$ 89,135	$ 0	$ 89,135
2023/24	$ 10,320,107	$ 814,283	$ 11,134,390	2037/38	$ 14,264,003	$ 1,519,848	$ 15,783,851	2075/76	$ 18,139	$ 0	$ 18,139
2024/25	$ 10,771,681	$ 891,987	$ 11,663,668	2038/39	$ 14,319,960	$ 1,580,230	$ 15,900,190	2080/81	$ 1,932	$ 0	$ 1,932
2025/26	$ 11,126,162	$ 946,732	$ 12,072,894	2039/40	$ 14,044,494	$ 1,532,986	$ 15,577,480	2085/86	$ 97	$ 0	$ 97
2026/27	$ 11,457,772	$ 986,581	$ 12,444,353	2040/41	$ 13,942,243	$ 1,468,306	$ 15,410,549	2090/91	$ 2	$ 0	$ 2
2027/28	$ 11,810,696	$ 1,028,221	$ 12,838,917	2041/42	$ 13,429,133	$ 1,543,860	$ 14,972,993	2095/96	$ 0	$ 0	$ 0
2028/29	$ 12,064,916	$ 1,101,870	$ 13,166,786	2042/43	$ 12,741,429	$ 1,498,714	$ 14,240,143	2100/101	$ 0	$ 0	$ 0
2029/30	$ 12,314,695	$ 1,118,696	$ 13,433,391	2043/44	$ 12,316,321	$ 1,386,718	$ 13,703,039	2105/106	$ 0	$ 0	$ 0
2030/31	$ 12,525,588	$ 1,134,707	$ 13,660,295	2044/45	$ 12,023,026	$ 1,451,843	$ 13,474,869	2110/111	$ 0	$ 0	$ 0
2031/32	$ 12,865,022	$ 1,219,831	$ 14,084,853	2045/46	$ 11,552,149	$ 1,429,512	$ 12,981,661	2115/116	$ 0	$ 0	$ 0
2032/33	$ 13,306,175	$ 1,406,435	$ 14,712,610	2050/51	$ 8,857,491	$ 930,967	$ 9,788,458	All Years	$ 431,974,424	$ 42,492,795	$ 474,467,219



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 Retired Participants & Beneficiaries

Age	Total
<55	0
55-59	14
60-64	54
65-69	106
70-74	83
75-79	102
80+	104
Total:	463
Average Age:	74.0

Age/Service Distribution of All Active Benefit Eligible Employees

	Service												
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-50	Total	To Age 70	Lifetime
20-24	5										5	5	0
25-29	52	1									53	53	0
30-34	86	7	3	1							97	97	0
35-39	83	26	18	3							130	130	0
40-44	68	22	33	21	1						145	145	0
45-49	43	19	36	42	15	4	1				160	160	0
50-54	47	17	35	37	26	3	3	2			170	165	5
55-59	29	8	33	21	28	11	8	5			143	135	8
60-64	12	10	25	20	17	8	7	1	4		104	97	7
65-69	5	3	10	9	9	4	4	2	1		47	40	7
70+	1	1	1	2	6	5	2	1	0	3	22	18	4
Total:	431	114	194	156	102	35	25	11	5	3	1076	1045	31

Average Age:	48.2
Average Service:	11.1
Average Hire Age:	37.1

This study analyzes the postretirement health benefit plan provided by the District. The District contributes to the retiree health coverage of eligible retirees and eligible surviving spouses. The District's financial obligation is as follows.

The District provides the ability to enroll in retiree health benefits (including medical and dental) to eligible retirees and their dependents. The District's financial obligation is to pay for retiree medical for the retiree and dependent subject to an annual maximum benefit allotment. Eligibility for retiree health benefits (medical, dental, & vision) requires retirement on or after age 50 with at least 15 consecutive years of District eligible service. Salaried employees fifty years of age retiring with less than fifteen years of District eligible service may participate in medical/dental benefits by paying their own premiums at the District rate. The current contribution maximum for each employee group is provided below.

Faculty Employees
Faculty employees hired prior to May 31, 1986 are eligible for lifetime benefits and subject to an annual maximum of $27,887. Faculty employees hired on or after May 31, 1986 are eligible for benefits to the attainment of age 70 and subject to an annual maximum of $27,887.

Classified Employees
Classified employees hired prior to May 31, 1986 are eligible for lifetime benefits. Classified employees hired on or after May 31, 1986, and hired prior to July 1, 1990, are eligible for benefits to the attainment of age 70. Classified employees hired on or after July 1, 1990 are eligible for benefits to the attainment of age 70 and subject to an annual maximum of $28,258.

Child Development Center (CDC) Employees
CDC employees hired prior to May 31, 1986 are eligible for lifetime benefits and subject to an annual maximum of $7,700. CDC employees hired on or after May 31, 1986 are eligible for benefits to the attainment of age 70 and subject to an annual maximum of $7,700.

Management Employees
Management employees hired prior to May 31, 1986 are eligible for lifetime benefits. Management employees hired on or after May 31, 1986 are eligible for benefits to the attainment of age 70.

Premium Rates

The District participates in the Alliance of Schools for Cooperative Insurance Programs (ASCIP), 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	Kaiser (Pre 65)	Kaiser (Post 65)	BC HMO	BC PPO
Retiree Only	$ 584.33	$ 263.37	$ 646.83	$ 927.02
Retiree Plus Spouse	$1,168.66	$ 526.74	$1,357.08	$1,946.83
Retiree Plus Family	$1,653.65	$1,026.95	$1,939.12	$2,781.28

2019	PPO Dental (Pre 65)	PPO Dental (Post 65)	DHMO Dental
Retiree Only	$ 66.04	$ 70.61	$ 18.48
Retiree Plus Spouse	$ 124.35	$ 132.96	$ 30.19
Retiree Plus Family	$ 178.86	$ 191.23	$ 44.38

2020	Kaiser (Pre 65)	Kaiser (Post 65)	BC HMO	BC PPO
Retiree Only	$ 576.85	$ 270.21	$ 675.94	$ 968.74
Retiree Plus Spouse	$1,153.70	$ 847.06	$1,418.15	$2,034.44
Retiree Plus Family	$1,632.48	$1,026.95	$2,026.38	$2,906.44

2020	PPO Dental (Pre 65)	PPO Dental (Post 65)	DHMO Dental
Retiree Only	$ 66.04	$ 70.61	$ 18.48
Retiree Plus Spouse	$ 124.35	$ 132.96	$ 30.19
Retiree Plus Family	$ 178.86	$ 191.23	$ 44.38

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:	Fund a recommended actuarially determined contribution (ADC) consisting of the normal cost and an amortization payment to the net (unfunded) OPEB liability.
Expected Rate of Return:	6.50% per annum.
Discount Rate:	6.50% per annum.
Inflation:	2.50% per annum
Payroll Increases:	3.0% per annum, in aggregate
Pre-retirement Turnover:	For CalPERS employees, according to the termination rates under the 2017 experience study for the CalPERS pension plan. For STRS employees, according to the termination rates under the most recent CalSTRS pension plan valuation.
Pre-retirement Mortality:	According to the pre-retirement mortality rates under the most recent experience study for the CalPERS pension plan.
Post-retirement Mortality:	According to the post-retirement mortality rates under the most recent experience study for the CalPERS pension plan valuation.
Retirement Age:	For CalPERS employees, according to the retirement rates under the 2017 experience study for the CalPERS pension plan. For STRS employees, according to the termination rates under the most recent CalSTRS pension plan valuation. According to the following retirement tables: Miscellaneous Tier 1: 2.0% @55 Miscellaneous Tier 2: 2.0% @62 STRS 2.0% @60 STRS 2.0% @62
Participation Rates:	100% of eligible active employees are assumed to elect medical coverage at retirement. Future retirees are assumed to elect similar coverage as current retirees. Actual plan coverage is used for current retirees.
Spouse Coverage:	80% of future retirees are assumed to elect coverage for their spouse. Male spouses are assumed to be 3 years older than female spouses. Actual spouse coverage and spouse ages are used for current retirees.

Dependent Coverage: Not explicitly valued.

Claim Cost Development: The valuation claim costs are based on the premiums paid for medical insurance coverage. The District participates in ASCIP, 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.

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

Year	Trend
2020	6.5%
2021	6.0%
2022	5.5%
2023	5.0%
2024+	4.5%

Medicare Participation: 100%

Maximum Contribution: The District maximum contribution is assumed to increase at the ultimate medical trend rate (5.0%).

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. The normal cost is calculated to remain level as a percentage of pay. The EAN actuarial accrued 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 employees eligible as of the valuation date, in accordance with the provisions of the Plan listed in the data provided by the District, were included in the valuation.

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

This report summarizes the actuarial valuation for the Rancho Santiago Community College 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, ASA, MAAA Consulting Actuary	Randy Gomez, FSA, MAAA Consulting Actuary	Date: January 21, 2020

GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, 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.

2. **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 Service Cost and a Total OPEB Liability.

3. **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.

4. **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. 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.

5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
   a. Differences between expected and actual experience of the OPEB plan
   b. Changes in assumptions
   c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)

6. **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.

7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.

8. **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.

9. **Implicit 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. If the plan was split between active employees and retirees, the retiree premiums would be significantly higher than the active employee premiums, and no implicit subsidy would exist.

10. **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.

11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.

12. **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.

13. **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.

14. **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.

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

16. **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 investment return 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 investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% are the select rates, and 7% is the ultimate rate.

17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that is attributed to a valuation year by the Actuarial Cost Method.

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

19. **Total OPEB 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).