INFORMATION SHEET 8/18/2020 TRUSTEES' MEETING

ATTACHMENT: 7.2

TO: Jim Bridges, Superintendent

FOR: Board of Trustees

FROM: Dena Whittington, CBO

ISSUE: Actuarial Study of Other Post-Employment Benefits

Attached for Board review is the actuarial study of the other post-employment benefits offered in the form of retiree health coverage. The attached report is using data as of June 30, 2019 and meets all reporting requirements of GASB 74/75. The data held in the report will be reflected as a liability on the June 30, 2020 Audit Report.

Jefferson School District

Actuarial Study of
Retiree Health Liabilities Under GASB 74/75
Valuation Date: June 30, 2019
Measurement Date: June 30, 2019

Prepared by:
Total Compensation Systems, Inc.

Date: July 22, 2020

Table of Contents

PART I: EXECUTIVE SUMMARY **1**

A. INTRODUCTION 1
B. GENERAL FINDINGS 2
C. DESCRIPTION OF RETIREE BENEFITS 3
D. RECOMMENDATIONS 3
E. CERTIFICATION 4

PART II: BACKGROUND **6**

A. SUMMARY 6
B. ACTUARIAL ACCRUAL 6

PART III: LIABILITIES AND COSTS FOR RETIREE BENEFITS **8**

A. INTRODUCTION. 8
B. LIABILITY FOR RETIREE BENEFITS. 8
C. COST TO PREFUND RETIREE BENEFITS 9
1. Service Cost *9*
2. Total OPEB Liability (TOL) and Net OPEB Liability (NOL) *9*
3. OPEB Expense *10*
4. Adjustments *11*

PART IV: "PAY AS YOU GO" FUNDING OF RETIREE BENEFITS **13**

PART V: RECOMMENDATIONS FOR FUTURE VALUATIONS **14**

PART VI: APPENDICES **15**

APPENDIX A: MATERIALS USED FOR THIS STUDY 15
APPENDIX B: EFFECT OF ASSUMPTIONS USED IN CALCULATIONS 16
APPENDIX C: ACTUARIAL ASSUMPTIONS AND METHODS 17
APPENDIX D: DISTRIBUTION OF ELIGIBLE PARTICIPANTS BY AGE 20
APPENDIX E: GASB 74/75 ACCOUNTING ENTRIES AND DISCLOSURES 21
APPENDIX F: DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES 25
APPENDIX G: GLOSSARY OF RETIREE HEALTH VALUATION TERMS 28

Jefferson School District
Actuarial Study of Retiree Health Liabilities

PART I: EXECUTIVE SUMMARY

A. Introduction

Jefferson School District engaged Total Compensation Systems, Inc. (TCS) to analyze liabilities associated with its current retiree health program as of June 30, 2019 (the measurement date). The numbers in this report are based on the assumption that they will first be used to determine accounting entries for the fiscal year ending June 30, 2020. If the report will first be used for a different fiscal year, the numbers may need to be adjusted accordingly.

This report does not reflect any cash benefits paid unless the retiree is required to provide proof that the cash benefits are used to reimburse the retiree's cost of health benefits. Costs and liabilities attributable to cash benefits paid to retirees are reportable under applicable Governmental Accounting Standards Board (GASB) Standards.

This actuarial study is intended to serve the following purposes:

- To provide information to enable Jefferson SD to manage the costs and liabilities associated with its retiree health benefits.
- To provide information to enable Jefferson SD to communicate the financial implications of retiree health benefits to internal financial staff, the Board, employee groups and other affected parties.
- To provide information needed to comply with Governmental Accounting Standards Board Accounting Standards 74 and 75 related to "other postemployment benefits" (OPEB's).

Because this report was prepared in compliance with GASB 74 and 75, Jefferson SD should not use this report for any other purpose without discussion with TCS. This means that any discussions with employee groups, governing Boards, etc. should be restricted to the implications of GASB 74 and 75 compliance.

This actuarial report includes several estimates for Jefferson SD's retiree health program. In addition to the tables included in this report, we also performed cash flow adequacy tests as required under Actuarial Standard of Practice 6 (ASOP 6). Our cash flow adequacy testing covers a twenty-year period. We would be happy to make this cash flow adequacy test available to Jefferson SD in spreadsheet format upon request.

We calculated the following estimates separately for active employees and retirees. As requested, we also separated results by the following employee classifications: Certificated and Management. We estimated the following:

- the total liability created. (The actuarial present value of projected benefit payments or APVPBP)
- ten years of projected benefit payments.
- the "total OPEB liability (TOL)." (The TOL is the portion of the APVPBP attributable to employees' service prior to the measurement date.)
- the "net OPEB liability" (NOL). For plans funded through a trust, this represents the unfunded portion of the liability.

- the service cost (SC). This is the value of OPEB benefits earned for one year of service.
- deferred inflows and outflows of resources attributable to the OPEB plan.
- "OPEB expense." This is the amount recognized in accrual basis financial statements as the current period expense in addition to contributions. The OPEB expense includes service cost, interest and certain changes in the OPEB liability, adjusted to reflect deferred inflows and outflows.
- Amounts to support financial statement Note Disclosures and Required Supplementary Information (RSI) schedules.

We summarized the data used to perform this study in Appendix A. No effort was made to verify this information beyond brief tests for reasonableness and consistency.

All cost and liability figures contained in this study are estimates of future results. Future results can vary dramatically and the accuracy of estimates contained in this report depends on the actuarial assumptions used. Service costs and liabilities could easily vary by 10 - 20% or more from estimates contained in this report.

B. General Findings

We estimate the "pay-as-you-go" cost of providing retiree health benefits in the year beginning July 1, 2019 to be $114,286 (see Section IV.A.). The "pay-as-you-go" cost is the cost of benefits for current retirees.

For current employees, the value of benefits "accrued" in the year beginning July 1, 2019 (the service cost) is $5,590. This service cost would increase each year based on covered payroll. Had Jefferson SD begun accruing retiree health benefits when each current employee and retiree was hired, a liability would have accumulated. We estimate the amount that would have accumulated to be $875,291. This amount is called the "Total OPEB Liability" (TOL). Jefferson SD has set aside funds to cover retiree health liabilities in a GASB 75 qualifying trust. The Fiduciary Net Position of this trust at June 30, 2019 was $174,980. This leaves a Net OPEB Liability (NOL) of $700,311.

Based on the information we were provided, the OPEB Expense for the fiscal year ending June 30, 2020 is $193,978.

We noted that the amounts reported in the June 30, 2019 audited financial statements did not match what was included in the valuation report with a June 30, 2018 measurement date. Section III.4 details the discrepancies. Appropriate adjustments should be made to align the June 30, 2020 audited financial statements with the numbers in this report.

We based all of the above estimates on participants as of April, 2020. Over time, liabilities and cash flow will vary based on the number and demographic characteristics of employees and retirees.

C. Description of Retiree Benefits

Following is a description of the current retiree benefit plan:

	Certificated	Management
Benefit types provided	Medical, dental and vision	Medical, dental and vision
Duration of Benefits	To age 70; plus one month for each 3 days of accumulated sick leave beyond 50	To age 70; plus one month for each 3 days of accumulated sick leave beyond 50
Required Service	25 years	25 years
Minimum Age	58	58
Dependent Coverage	Yes	Yes
District Contribution %	100% to cap	100% to cap
District Cap	Currently $10,000	Currently $10,000

D. Recommendations

It is outside the scope of this report to make specific recommendations of actions Jefferson SD should take to manage the liability created by the current retiree health program. Total Compensation Systems, Inc. can assist in identifying and evaluating options once this report has been studied. The following recommendations are intended only to allow the District to get more information from this and future studies. Because we have not conducted a comprehensive administrative audit of Jefferson SD's practices, it is possible that Jefferson SD is already complying with some or all of our recommendations.

- We recommend that Jefferson SD maintain an inventory of all benefits and services provided to retirees – whether contractually or not and whether retiree-paid or not. For each, Jefferson SD should determine whether the benefit is material and subject to GASB 74 and/or 75.

- Under GASB 75, it is important to isolate the cost of retiree health benefits. Jefferson SD should have all premiums, claims and expenses for retirees separated from active employee premiums, claims, expenses, etc. To the extent any retiree benefits are made available to retirees over the age of 65 – ***even on a retiree-pay-all basis*** – all premiums, claims and expenses for post-65 retiree coverage should be segregated from those for pre-65 coverage. Furthermore, Jefferson SD should arrange for the rates or prices of all retiree benefits to be set on what is expected to be a self-sustaining basis.

- Jefferson SD should establish a way of designating employees as eligible or ineligible for future OPEB benefits. Ineligible employees can include those in ineligible job classes; those hired after a designated date restricting eligibility; those who, due to their age at hire cannot qualify for District-paid OPEB benefits; employees who exceed the termination age for OPEB benefits, etc.

- Several assumptions were made in estimating costs and liabilities under Jefferson SD's retiree health program. Further studies may be desired to validate any assumptions where there is any doubt that the assumption is appropriate. (See Appendices B and C for a list of assumptions and concerns.) For example, Jefferson SD should maintain a retiree database that includes – in addition to date of birth, gender and employee classification – retirement date and (if applicable) dependent date of birth, relationship and gender. It will also be

helpful for Jefferson SD to maintain employment termination information – namely, the number of OPEB-eligible employees in each employee class that terminate employment each year for reasons other than death, disability or retirement.

E. Certification

The actuarial information in this report is intended solely to assist Jefferson SD in complying with Governmental Accounting Standards Board Accounting Statements 74 and 75 and, unless otherwise stated, fully and fairly discloses actuarial information required for compliance. Nothing in this report should be construed as an accounting opinion, accounting advice or legal advice. TCS recommends that third parties retain their own actuary or other qualified professionals when reviewing this report. TCS's work is prepared solely for the use and benefit of Jefferson SD. Release of this report may be subject to provisions of the Agreement between Jefferson SD and TCS. No third party recipient of this report product should rely on the report for any purpose other than accounting compliance. Any other use of this report is unauthorized without first consulting with TCS.

This report is for fiscal year July 1, 2019 to June 30, 2020, using a measurement date of June 30, 2019. The calculations in this report have been made based on our understanding of plan provisions and actual practice at the time we were provided the required information. We relied on information provided by Jefferson SD. Much or all of this information was unaudited at the time of our evaluation. We reviewed the information provided for reasonableness, but this review should not be viewed as fulfilling any audit requirements. Information we relied on is listed in Appendix A.

All costs, liabilities, and other estimates are based on actuarial assumptions and methods that comply with all applicable Actuarial Standards of Practice (ASOPs). Each assumption is deemed to be reasonable by itself, taking into account plan experience and reasonable future expectations.

This report contains estimates of the Plan's financial condition only as of a single date. It cannot predict the Plan's future condition nor guarantee its future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. Determining results using alternative assumptions (except for the alternate discount and trend rates shown in this report) is outside the scope of our engagement.

Future actuarial measurements may differ significantly from those presented in this report due to factors such as, but not limited to, 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 measurement methodology (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. We were not asked to perform analyses to estimate the potential range of such future measurements.

The signing actuary is independent of Jefferson SD and any plan sponsor. TCS does not intend to benefit from and assumes no duty or liability to other parties who receive this report. TCS is not aware of any relationship that would impair the objectivity of the opinion.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and has been prepared in accordance with generally accepted actuarial principles and practices and all applicable Actuarial Standards of Practice. I meet the Qualifications Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

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PART II: BACKGROUND

A. Summary

Accounting principles provide that the cost of retiree benefits should be "accrued" over employees' working lifetime. For this reason, the Governmental Accounting Standards Board (GASB) issued in June of 2015 Accounting Standards 74 and 75 for retiree health benefits. These standards apply to all public employers that pay any part of the cost of retiree health benefits for current or future retirees (including early retirees), whether they pay directly or indirectly (via an "implicit rate subsidy").

B. Actuarial Accrual

To actuarially accrue retiree health benefits requires determining the amount to expense each year so that the liability accumulated at retirement is, on average, sufficient (with interest) to cover all retiree health expenditures without the need for additional expenses. There are many different ways to determine the annual accrual amount. The calculation method used is called an "actuarial cost method."

The actuarial cost method mandated by GASB 75 is the "entry age actuarial cost method". Under this method, there are two components of actuarial cost – a "service cost" (SC) and the "Total OPEB Liability" (TOL). GASB 75 allows certain changes in the TOL to be deferred (i.e. deferred inflows and outflows of resources).

The service cost can be thought of as the value of the benefit earned each year if benefits are accrued during the working lifetime of employees. Under the entry age actuarial cost method, the actuary determines the annual amount needing to be expensed from hire until retirement to fully accrue the cost of retiree health benefits. This amount is the service cost. Under GASB 75, the service cost is calculated to be a level percentage of each employee's projected pay.

The service cost is determined using several key assumptions:

- The current ***cost of retiree health benefits*** (often varying by age, Medicare status and/or dependent coverage). The higher the current cost of retiree benefits, the higher the service cost.

- The ***"trend" rate*** at which retiree health benefits are expected to increase over time. A higher trend rate increases the service cost. A "cap" on District contributions can reduce trend to zero once the cap is reached thereby dramatically reducing service costs.

- ***Mortality rates*** varying by age and sex. (Unisex mortality rates are not often used as individual OPEB benefits do not depend on the mortality table used.) If employees die prior to retirement, past contributions are available to fund benefits for employees who live to retirement. After retirement, death results in benefit termination or reduction. Although higher mortality rates reduce service costs, the mortality assumption is not likely to vary from employer to employer.

- ***Employment termination rates*** have the same effect as mortality inasmuch as higher termination rates reduce service costs. Employment termination can vary considerably between public agencies.

- The ***service requirement*** reflects years of service required to earn full or partial retiree benefits. While a longer service requirement reduces costs, cost reductions are not usually substantial unless the service period exceeds 20 years of service.

- ***Retirement rates*** determine what proportion of employees retire at each age (assuming employees reach the requisite length of service). Retirement rates often vary by employee classification and implicitly reflect the minimum retirement age required for eligibility. Retirement rates also depend on the amount of pension benefits available. Higher retirement rates increase service costs but, except for differences in minimum retirement age, retirement rates tend to be consistent between public agencies for each employee type.

- ***Participation rates*** indicate what proportion of retirees are expected to elect retiree health benefits if a significant retiree contribution is required. Higher participation rates increase costs.

- The ***discount rate*** estimates investment earnings for assets earmarked to cover retiree health benefit liabilities. The discount rate depends on the nature of underlying assets for funded plans. The rate used for a funded plan is the real rate of return expected for plan assets plus the long term inflation assumption. For an unfunded plan, the discount rate is based on an index of 20 year General Obligation municipal bonds. For partially funded plans, the discount rate is a blend of the funded and unfunded rates.

The assumptions listed above are not exhaustive, but are the most common assumptions used in actuarial cost calculations. If all actuarial assumptions are exactly met and an employer expensed the service cost every year for all past and current employees and retirees, a sizeable liability would have accumulated (after adding interest and subtracting retiree benefit costs). The liability that would have accumulated is called the Total OPEB Liability (TOL). The excess of TOL over the value of plan assets is called the Net OPEB Liability (NOL). Under GASB 74 and 75, in order for assets to count toward offsetting the TOL, the assets have to be held in an irrevocable trust that is safe from creditors and can only be used to provide OPEB benefits to eligible participants.

The total OPEB liability (TOL) can arise in several ways - e.g., as a result of plan changes or changes in actuarial assumptions. TOL can also arise from actuarial gains and losses. Actuarial gains and losses result from differences between actuarial assumptions and actual plan experience.

Under GASB 74 and 75, a portion of actuarial gains and losses can be deferred as follows:

- Investment gains and losses can be deferred five years

- Experience gains and losses can be deferred over the expected average remaining service lives (EARSL) of plan participants. In calculating the EARSL, terminated employees (primarily retirees) are considered to have a working lifetime of zero. This often makes the EARSL quite short.

- Liability changes resulting from changes in economic and demographic assumptions are also deferred based on the EARSL.

- Liability changes resulting from plan changes, for example, cannot be deferred.

PART III: LIABILITIES AND COSTS FOR RETIREE BENEFITS

A. Introduction.

We calculated the actuarial present value of projected benefit payments (APVPBP) separately for each participant. We determined eligibility for retiree benefits based on information supplied by Jefferson SD. We then selected assumptions for the factors discussed in the above Section that, based on plan provisions and our training and experience, represent our best prediction of future plan experience. For each participant, we applied the appropriate factors based on the participant's age, sex, length of service, and employee classification.

We summarized actuarial assumptions used for this study in Appendix C.

B. Liability for Retiree Benefits.

For each participant, we projected future premium costs using an assumed trend rate (see Appendix C). We multiplied each year's benefit payments by the probability that benefits will be paid; i.e. based on the probability that the participant is living, has not terminated employment, has retired and remains eligible. The probability that benefit will be paid is zero if the participant is not eligible. The participant is not eligible if s/he has not met minimum service, minimum age or, if applicable, maximum age requirements.

The product of each year's benefit payments and the probability the benefit will be paid equals the expected cost for that year. We discounted the expected cost for each year to the measurement date June 30, 2019 at 3.5% interest. Finally, we multiplied the above discounted expected cost figures by the probability that the retiree would elect coverage. A retiree may not elect to be covered if retiree health coverage is available less expensively from another source (e.g. Medicare risk contract) or the retiree is covered under a spouse's plan.

For any ***current retirees***, the approach used was similar. The major difference is that the probability of payment for current retirees depends only on mortality and age restrictions (i.e. for retired employees the probability of being retired and of not being terminated are always both 1.0000).

We added the actuarial present value of projected benefit payments (APVPBP) for each participant to get the total APVPBP for all participants. The APVPBP is the estimated present value of all future retiree health benefits for all **current** participants. The APVPBP is the amount on June 30, 2019 that, if all actuarial assumptions are exactly right, would be sufficient to expense all promised benefits until the last participant dies or reaches the maximum eligibility age.

Actuarial Present Value of Projected Benefit Payments at June 30, 2019

	Total	*Certificated*	*Management*
Active: Pre-65	$154,174	$154,174	$0
Post-65	$113,279	$113,279	$0
Subtotal	$267,453	$267,453	$0
Retiree: Pre-65	$162,723	$58,516	$104,207
Post-65	$458,939	$282,185	$176,754
Subtotal	$621,662	$340,701	$280,961
Grand Total	$889,115	$608,154	$280,961
Subtotal Pre-65	$316,897	$212,690	$104,207
Subtotal Post-65	$572,218	$395,464	$176,754

The APVPBP should be accrued over the working lifetime of employees. At any time much of it has not been “earned” by employees. The APVPBP is used to develop expense and liability figures. To do so, the APVPBP is divided into two parts: the portions attributable to service rendered prior to the measurement date (the past service liability or Total OPEB Liability (TOL) under GASB 74 and 75) and to service after the measurement date but prior to retirement (the future service liability).

The past service and future service liabilities are each accrued in a different way. We will start with the future service liability which is funded by the service cost.

C. Cost to Prefund Retiree Benefits

1. Service Cost

The average hire age for eligible employees is 26. To accrue the liability by retirement, the District would accrue the retiree liability over a period of about 34 years (assuming an average retirement age of 60). We applied an "entry age" actuarial cost method to determine funding rates for active employees. The table below summarizes the calculated service cost.

Service Cost Year Beginning July 1, 2019

	Total	*Certificated*	*Management*
# of Employees	2	2	0
Per Capita Service Cost			
Pre-65 Benefit	N/A	$2,264	$0
Post-65 Benefit	N/A	$531	$0
First Year Service Cost			
Pre-65 Benefit	$4,528	$4,528	$0
Post-65 Benefit	$1,062	$1,062	$0
Total	$5,590	$5,590	$0

Accruing retiree health benefit costs using service costs levels out the cost of retiree health benefits over time and more fairly reflects the value of benefits "earned" each year by employees. This service cost would increase each year based on covered payroll.

2. Total OPEB Liability (TOL) and Net OPEB Liability (NOL)

If actuarial assumptions are borne out by experience, the District will fully accrue retiree benefits by expensing an amount each year that equals the service cost. If no accruals had taken place in the past, there would be a shortfall of many years' accruals, accumulated interest and forfeitures for terminated or deceased employees. This shortfall is called the Total OPEB Liability. We calculated the Total OPEB Liability (TOL) as the APVPBP minus the present value of future service costs. To the extent that benefits are funded through a GASB 74 qualifying trust, the trust's Fiduciary Net Position (FNP) is subtracted to get the NOL. The FNP is the value of assets adjusted for any applicable payables and receivables.

Total OPEB Liability (TOL) and Net OPEB Liability (NOL) as of June 30, 2019

	Total	*Certificated*	*Management*
Active: Pre-65	$142,976	$142,976	$0
Active: Post-65	$110,653	$110,653	$0
Subtotal	$253,629	$253,629	$0
Retiree: Pre-65	$162,723	$58,516	$104,207
Retiree: Post-65	$458,939	$282,185	$176,754
Subtotal	$621,662	$340,701	$280,961
Subtotal: Pre-65	$305,699	$201,492	$104,207
Subtotal: Post-65	$569,592	$392,838	$176,754
Total OPEB Liability (TOL)	$875,291	$594,330	$280,961
Fiduciary Net Position as of June 30, 2019	$174,980		
Net OPEB Liability (NOL)	$700,311		

The following table shows the reconciliation of the June 30, 2018 Net OPEB Liability (NOL) in the prior valuation to the June 30, 2019 NOL.

	TOL	*FNP*	*NOL*
Balance at June 30, 2018	**$770,809**	**$222,130**	**$548,679**
Service Cost	$2,595	$0	$2,595
Interest on Total OPEB Liability	$25,347	$0	$25,347
Expected Investment Income	$0	$6,903	($6,903)
Administrative Expenses	$0	$0	$0
Employee Contributions	$0	$0	$0
Employer Contributions to Trust	$0	$44,686	($44,686)
Employer Contributions as Benefit Payments	$0	$0	$0
Actual Benefit Payments from Trust	($94,472)	($94,472)	$0
Actual Benefit Payments from Employer	$0	$0	$0
Expected Minus Actual Benefit Payments*	($1,363)	$0	($1,363)
Expected Balance at June 30, 2019	**$702,916**	**$179,247**	**$523,669**
Experience (Gains)/Losses	$172,375	$0	$172,375
Changes in Assumptions	$0	$0	$0
Changes in Benefit Terms	$0	$0	$0
Investment Gains/(Losses)	$0	($4,267)	$4,267
Other	$0	$0	$0
Net Change during 2018-19	$104,482	($47,150)	$151,632
Actual Balance at June 30, 2019**	**$875,291**	**$174,980**	**$700,311**

***** Deferrable as an Experience Gain or Loss.
****** May include a slight rounding error.

3. OPEB Expense

Changes in the NOL arising from certain sources are recognized on a deferred basis. The deferral history for Jefferson SD is shown in Appendix F. The following table summarizes the beginning and ending balances for each deferral item. The current year expense reflects the change in deferral balances for the measurement year.

Deferred Inflow/Outflow Balances Fiscal Year Ending June 30, 2020

	Beginning Balance	*Newly Created*	*Recognition*	*Ending Balance*
Experience (Gains)/Losses	$0	$171,012	($171,012)	$0
Assumption Changes	$0	$0	$0	$0
Investment (Gains)/Losses	$4,291	$4,267	($1,927)	$6,631
Deferred Balances	$4,291	$175,279	($172,939)	$6,631

The following table shows the reconciliation between the change in the NOL and the OPEB expense.

Preliminary OPEB Expense Fiscal Year Ending June 30, 2020

	Beginning Net Position	*Ending Net Position*	*Change*
Net OPEB Liability (NOL)	$548,679	$700,311	$151,632
Deferred Balances	$4,291	$6,631	$2,340
Change in Net Position	$544,388	$693,680	$149,292
Employer Contributions			$44,686
Other			$0
OPEB Expense			$193,978

Under GASB 74 and 75, OPEB expense includes service cost, interest cost, and change in TOL due to plan changes; all adjusted for deferred inflows and outflows.

OPEB Expense Fiscal Year Ending June 30, 2020

	Total
Service Cost	$2,595
Interest on Total OPEB Liability (TOL)	$25,347
Employee Contributions	$0
Recognized Experience (Gains)/Losses	$171,012
Recognized Assumption Changes	$0
Expected Investment Income	($6,903)
Recognized Investment (Gains)/Losses	$1,927
Contributions After Measurement Date (Prior Year)	$0
Contributions After Measurement Date (Current Year)	$0
Changes in Benefit Terms	$0
Administrative Expense	$0
OPEB Expense*	$193,978

***** May include a slight rounding error.

The above OPEB expense does not include $44,686 in employer contributions.

4. Adjustments

The above OPEB expense includes all deferred inflows and outflows except any contributions after the measurement date. Contributions from July 1, 2019 to June 30, 2020 minus prior contributions after the measurement date of $44,683 should also be reflected in OPEB expense. June 30, 2020 deferred outflows should include contributions from July 1, 2019 to June 30, 2020.

The amounts reflected in Jefferson SD's June 30, 2019 audited financial statements do not match what was included in the valuation report with a June 30, 2018 measurement date. Consequently, the above OPEB expenses, TOL Change and/or FNP change cannot be reflected directly in Jefferson SD's journal entries. The following table details discrepancies between the June 30, 2018 numbers contained in the valuation report and what was reported in the June 30, 2019 audit report.

Deferred Inflow/Outflow Balances as of Fiscal Year Ending June 30, 2019

	Valuation Beginning Balance	*Audit Report Beginning Balance*	*Difference*
Experience Gains/Losses	-8,582	4,291	-4,291
Assumption Changes	0	0	0
Investment Gains/Losses	4,291	0	4,291
Deferral Balance Total	-4,291	4,291	-8,582

PART IV: "PAY AS YOU GO" FUNDING OF RETIREE BENEFITS

We used the actuarial assumptions shown in Appendix C to project the District's ten year retiree benefit outlay, including any implicit rate subsidy. Because these cost estimates reflect average assumptions applied to a relatively small number of participants, estimates for individual years are **certain** to be ***in***accurate. However, these estimates show the size of cash outflow.

The following table shows a projection of annual amounts needed to pay the District's share of retiree health costs, including any implicit rate subsidy.

Year Beginning July 1	*Total*	*Certificated*	*Management*
2019	$114,286	$71,104	$43,182
2020	$118,658	$74,500	$44,158
2021	$122,774	$77,644	$45,130
2022	$109,938	$63,843	$46,095
2023	$109,104	$70,150	$38,954
2024	$91,513	$75,357	$16,156
2025	$63,907	$47,475	$16,432
2026	$65,788	$49,115	$16,673
2027	$58,220	$41,353	$16,867
2028	$45,077	$28,073	$17,004

PART V: RECOMMENDATIONS FOR FUTURE VALUATIONS

To effectively manage benefit costs, an employer must periodically examine the existing liability for retiree benefits as well as future annual expected premium costs. GASB 74/75 require annual valuations. Every other year, the valuation requirement can be met by doing a "roll-forward" valuation. However, a full valuation may be required or preferred under certain circumstances.

Following are examples of actions that could trigger a new valuation.

- An employer should perform a valuation whenever the employer considers or puts in place an early retirement incentive program.
- An employer should perform a valuation whenever the employer adopts a retiree benefit plan for some or all employees.
- An employer should perform a valuation whenever the employer considers or implements changes to retiree benefit provisions or eligibility requirements.
- An employer should perform a valuation whenever the employer introduces or changes retiree contributions.
- An employer should perform a valuation whenever the employer forms a qualifying trust or changes its investment policy.
- An employer should perform a valuation whenever the employer adds or terminates a group of participants that constitutes a significant part of the covered group.

We recommend Jefferson SD take the following actions to ease future valuations.

- We have used our training, experience and information available to us to establish the actuarial assumptions used in this valuation. We have no information to indicate that any of the assumptions do not reasonably reflect future plan experience. However, the District should review the actuarial assumptions in Appendix C carefully. If the District has any reason to believe that any of these assumptions do not reasonably represent the expected future experience of the retiree health plan, the District should engage in discussions or perform analyses to determine the best estimate of the assumption in question.

PART VI: APPENDICES

APPENDIX A: MATERIALS USED FOR THIS STUDY

We relied on the following materials to complete this study.

- We used paper reports and digital files containing participant demographic data from the District personnel records.
- We used relevant sections of collective bargaining agreements provided by the District.

APPENDIX B: EFFECT OF ASSUMPTIONS USED IN CALCULATIONS

While we believe the estimates in this study are reasonable overall, it was necessary for us to use assumptions which inevitably introduce errors. We believe that the errors caused by our assumptions will not materially affect study results. If the District wants more refined estimates for decision-making, we recommend additional investigation.

APPENDIX C: ACTUARIAL ASSUMPTIONS AND METHODS

Following is a summary of actuarial assumptions and methods used in this study. The District should carefully review these assumptions and methods to make sure they reflect the District's assessment of its underlying experience. It is important for Jefferson SD to understand that the appropriateness of all selected actuarial assumptions and methods are Jefferson SD's responsibility. Unless otherwise disclosed in this report, TCS believes that all methods and assumptions are within a reasonable range based on the provisions of GASB 74 and 75, applicable actuarial standards of practice, Jefferson SD's actual historical experience, and TCS's judgment based on experience and training.

ACTUARIAL METHODS AND ASSUMPTIONS:

ACTUARIAL COST METHOD: GASB 74 and 75 require use of the entry age actuarial cost method.

Entry age is based on the age at hire for eligible employees. The attribution period is determined as the difference between the expected retirement age and the age at hire. The APVPBP and present value of future service costs are determined on a participant by participant basis and then aggregated.

To the extent that different benefit formulas apply to different employees of the same class, the service cost is based on the benefit plan applicable to the most recently hired employees (including future hires if a new benefit formula has been agreed to and communicated to employees). This greatly simplifies administration and accounting; as well as resulting in the correct service cost for new hires.

SUBSTANTIVE PLAN: As required under GASB 74 and75, we based the valuation on the substantive plan. The formulation of the substantive plan was based on a review of written plan documents as well as historical information provided by Jefferson SD regarding practices with respect to employer and employee contributions and other relevant factors.

ECONOMIC ASSUMPTIONS:

Economic assumptions are set under the guidance of Actuarial Standard of Practice 27 (ASOP 27). Among other things, ASOP 27 provides that economic assumptions should reflect a consistent underlying rate of general inflation. For that reason, we show our assumed long-term inflation rate below.

INFLATION: We assumed 2.75% per year used for pension purposes. Actuarial standards require using the same rate for OPEB that is used for pension.

INVESTMENT RETURN / DISCOUNT RATE: We assumed 3.5% per year net of expenses. This is based on assumed long-term return on employer assets. We used the "Building Block Method". (See Appendix E, Paragraph 53 for more information). Our assessment of long-term returns for employer assets is based on long-term historical returns for surplus funds invested pursuant to California Government Code Sections 53601 et seq.

TREND: We assumed 4% per year. Our long-term trend assumption is based on the conclusion that, while medical trend will continue to be cyclical, the average increase over time cannot continue to outstrip general inflation by a wide margin. Trend increases in excess of general inflation result in dramatic increases in unemployment, the number of uninsured and the number of underinsured. These effects are nearing a tipping point which will inevitably result in fundamental changes in health care finance and/or delivery which will bring increases in health care costs more closely in line with general inflation. We do not believe it is reasonable to project historical trend vs. inflation differences several decades into the future.

PAYROLL INCREASE: We assumed 2.75% per year. Since benefits do not depend on salary (as they do for pensions), using an aggregate payroll assumption for the purpose of calculating the service cost results in a negligible error.

FIDUCIARY NET POSITION (FNP): The following table shows the beginning and ending FNP numbers that were provided by Jefferson SD.

Fiduciary Net Position as of June 30, 2019

	06/30/2018	*06/30/2019*
Cash and Equivalents	$0	$0
Contributions Receivable	$0	$0
Total Investments	$222,130	$174,980
Capital Assets	$0	$0
Total Assets	$222,130	$174,980
Benefits Payable	$0	$0
Fiduciary Net Position	$222,130	$174,980

NON-ECONOMIC ASSUMPTIONS:

Economic assumptions are set under the guidance of Actuarial Standard of Practice 35 (ASOP 35). See Appendix E, Paragraph 52 for more information.

MORTALITY

Participant Type	*Mortality Tables*
Certificated	2014 CalSTRS Retiree Mortality for Miscellaneous Employees
Classified	2014 CalPERS Retiree Mortality for Miscellaneous Employees

RETIREMENT RATES

Employee Type	*Retirement Rate Tables*
Certificated	2009 CalSTRS Retirement Rates

SERVICE REQUIREMENT

Employee Type	*Service Requirement Tables*
Certificated	100% at 25 Years of Service

COSTS FOR RETIREE COVERAGE

Retiree liabilities are based on actual retiree premium plus an implicit rate subsidy of 53.3% of non-Medicare medical premium. Liabilities for active participants are based on the first year costs shown below, which include the implicit rate subsidy. Subsequent years' costs are based on first year costs adjusted for trend and limited by any District contribution caps.

Participant Type	*Future Retirees Pre-65*	*Future Retirees Post-65*
Certificated	Implied Rate Subsidy: $10,727 Nominal Benefit: $10,000	$10,000

PARTICIPATION RATES

Employee Type	*<65 Non-Medicare Participation %*	*65+ Medicare Participation %*
Certificated	100%	100%

TURNOVER

Employee Type	*Turnover Rate Tables*
Certificated	2009 CalSTRS Termination Rates

SPOUSE PREVALENCE

To the extent not provided and when needed to calculate benefit liabilities, 80% of retirees assumed to be married at retirement. After retirement, the percentage married is adjusted to reflect mortality.

SPOUSE AGES

To the extent spouse dates of birth are not provided and when needed to calculate benefit liabilities, female spouse assumed to be three years younger than male.

AGING FACTORS

We used aging factors from "Health Care Costs - From Birth to Death" prepared by Dale Yamamoto and published in 2013 by the Society of Actuaries as part of the Health Care Cost Institute's Independent Report Series - Report 2013-1.

APPENDIX D: DISTRIBUTION OF ELIGIBLE PARTICIPANTS BY AGE

ELIGIBLE ACTIVE EMPLOYEES

Age	*Total*	*Certificated*	*Management*
Under 25	0	0	0
25-29	0	0	0
30-34	0	0	0
35-39	0	0	0
40-44	0	0	0
45-49	0	0	0
50-54	0	0	0
55-59	2	2	0
60-64	0	0	0
65 and older	0	0	0
Total	2	2	0

ELIGIBLE RETIREES

Age	*Total*	*Certificated*	*Management*
Under 50	0	0	0
50-54	0	0	0
55-59	0	0	0
60-64	2	1	1
65-69	6	4	2
70-74	1	1	0
75-79	0	0	0
80-84	0	0	0
85-89	0	0	0
90 and older	0	0	0
Total	9	6	3

APPENDIX E: GASB 74/75 ACCOUNTING ENTRIES AND DISCLOSURES

This report does not necessarily include the entire accounting values. As mentioned earlier, there are certain deferred items that are employer-specific. The District should consult with its auditor if there are any questions about what, if any, adjustments may be appropriate.

GASB 74/75 include a large number of items that should be included in the Note Disclosures and Required Supplementary Information (RSI) Schedules. Many of these items are outside the scope of the actuarial valuation. However, following is information to assist the District in complying with GASB 74/75 disclosure requirements:

Paragraph 50: **Information about the OPEB Plan**

Most of the information about the OPEB plan should be supplied by Jefferson SD. Following is information to help fulfill Paragraph 50 reporting requirements.

50.c: Following is a table of plan participants

	Number of Participants
Inactive Employees Currently Receiving Benefit Payments	9
Inactive Employees Entitled to But Not Yet Receiving Benefit Payments*	0
Participating Active Employees	2
Total Number of participants	11

*We were not provided with information about any terminated, vested employees

Paragraph 51: **Significant Assumptions and Other Inputs**

Shown in Appendix C.

Paragraph 52: **Information Related to Assumptions and Other Inputs**

The following information is intended to assist Jefferson SD in complying with the requirements of Paragraph 52.

52.b: Mortality Assumptions Following are the tables the mortality assumptions are based upon. Inasmuch as these tables are based on appropriate populations, and that these tables are used for pension purposes, we believe these tables to be the most appropriate for the valuation.

Mortality Table	2009 CalSTRS Mortality
Disclosure	The mortality assumptions are based on the 2009 CalSTRS Mortality table created by CalSTRS. CalSTRS periodically studies mortality for participating agencies and establishes mortality tables that are modified versions of commonly used tables. This table incorporates mortality projection as deemed appropriate based on CalSTRS analysis.

Mortality Table	2014 CalPERS Retiree Mortality for Miscellaneous Employees
Disclosure	The mortality assumptions are based on the 2014 CalPERS Retiree Mortality for Miscellaneous Employees table created by CalPERS. CalPERS periodically studies mortality for participating agencies and establishes mortality tables that are modified versions of commonly used tables. This table incorporates mortality projection as deemed appropriate based on CalPERS analysis.

52.c: Experience Studies Following are the tables the retirement and turnover assumptions are based upon. Inasmuch as these tables are based on appropriate populations, and that these tables are used for pension purposes, we believe these tables to be the most appropriate for the valuation.

Retirement Tables

Retirement Table	2009 CalSTRS Retirement Rates
Disclosure	The retirement assumptions are based on the 2009 CalSTRS Retirement Rates table created by CalSTRS. CalSTRS periodically studies the experience for participating agencies and establishes tables that are appropriate for each pool.

Turnover Tables

Turnover Table	2009 CalSTRS Termination Rates
Disclosure	The turnover assumptions are based on the 2009 CalSTRS Termination Rates table created by CalSTRS. CalSTRS periodically studies the experience for participating agencies and establishes tables that are appropriate for each pool.

For other assumptions, we use actual plan provisions and plan data.

52.d: The alternative measurement method was not used in this valuation.

52.e: NOL using alternative trend assumptions The following table shows the Net OPEB Liability with a healthcare cost trend rate 1% higher and 1% lower than assumed in the valuation.

	Trend 1% Lower	Valuation Trend	Trend 1% Higher
Net OPEB Liability	$690,500	$700,311	$709,681

Paragraph 53: **Discount Rate**

The following information is intended to assist Jefferson SD to comply with Paragraph 53 requirements.

53.a: A discount rate of 3.5% was used in the valuation.

53.b: We assumed that all contributions are from the employer.

53.c: We used historic 6 year real rates of return for each asset class along with our assumed long-term inflation assumption to set the discount rate. We did not offset the discount rate by investment expenses.

53.d: The interest assumption reflects a municipal bond rate. We used the Bond Buyer 20 Index at June 30, 2019 and rounded the rate resulting in a rate of 3.50%.

53.e: We used the municipal bond rate beyond 3 years to result in an equivalent valuation rate of 3.50%.

53.f: Following is the assumed asset allocation and assumed rate of return for each.

Asset Class	**Percentage of Portfolio**	**Assumed Gross Return**
Short term Fixed Income	100%	3.5%

We looked at rolling periods of time for all asset classes in combination to appropriately reflect correlation between asset classes. That means that the average returns for any asset class don't necessarily reflect the averages over time individually, but reflect the return for the asset class for the portfolio average. We used geometric means.

53.g: The following table shows the Net OPEB liability with a discount rate 1% higher and 1% lower than assumed in the valuation.

	Discount Rate 1% Lower	Valuation Discount Rate	Discount Rate 1% Higher
Net OPEB Liability	$736,192	$700,311	$666,903

Paragraph 55: **Changes in the Net OPEB Liability**

Please see reconciliation on page 10.

Paragraph 56: **Additional Net OPEB Liability Information**

The following information is intended to assist Jefferson SD to comply with Paragraph 56 requirements.

56.a: The valuation date is June 30, 2019.
The measurement date is June 30, 2019.
56 b: We are not aware of a special funding arrangement.
56 c: There were no assumption changes since the prior measurement date.
56.d: There were no changes in benefit terms since the prior measurement date.
56.e: Not applicable
56.f: To be determined by the employer
56.g: To be determined by the employer
56.h: Other than contributions after the measurement, all deferred inflow and outflow balances are shown in Appendix F
56.i: Future recognition of deferred inflows and outflows is shown in Appendix F

Paragraph 57: **Required Supplementary Information**

57.a: Please see reconciliation on page 10. Please see the notes for Paragraph 244 below for more information.
57.b: These items are provided on page 10 for the current valuation, except for covered payroll, which should be determined based on appropriate methods.
57.c: We have not been asked to calculate an actuarially determined contribution amount. We assume the District contributes on an ad hoc basis, but in an amount sufficient to fully fund the obligation over a period not to exceed 6 years.
57.d: We are not aware that there are any statutorily or contractually established contribution requirements.

Paragraph 58: **Actuarially Determined Contributions**

We have not been asked to calculate an actuarially determined contribution amount. We assume the District contributes on an ad hoc basis, but in an amount sufficient to fully fund the obligation over a period not to exceed 6 years.

Paragraph 244: **Transition Option**

Prior periods were not restated due to the fact that prior valuations were not rerun in accordance with GASB 75. It was determined that the time and expense necessary to rerun prior valuations and to restate prior financial statements was not justified.

APPENDIX F: DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

EXPERIENCE GAINS AND LOSSES

			Increase (Decrease) in OPEB Expense Arising from the Recognition of Effects of Experience Gains and Losses (Measurement Periods)								
Measurement Period	Experience (Gain)/Loss	Original Recognition Period (Years)	Amounts Recognized in OPEB Expense through 2018	2019	Amounts to be Recognized in OPEB Expense after 2019	2020	2021	2022	2023	2024	Thereafter
2018-19	$171,012	1	$0	$171,012	$0						
Net Increase (Decrease) in OPEB Expense			**$0**	**$171,012**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

CHANGES OF ASSUMPTIONS

			Increase (Decrease) in OPEB Expense Arising from the Recognition of Effects of Changes of Assumptions (Measurement Periods)								
Measurement Period	Changes of Assumptions	Original Recognition Period (Years)	Amounts Recognized in OPEB Expense through 2018	2019	Amounts to be Recognized in OPEB Expense after 2019	2020	2021	2022	2023	2024	Thereafter
2018-19	$0	0	$0	$0	$0						
Net Increase (Decrease) in OPEB Expense			**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

INVESTMENT GAINS AND LOSSES

			Increase (Decrease) in OPEB Expense Arising from the Recognition of Effects of Investment Gains and Losses (Measurement Periods)								
Measurement Period	Investment (Gain)/Loss	Original Recognition Period (Years)	Amounts Recognized in OPEB Expense through 2018	2019	Amounts to be Recognized in OPEB Expense after 2019	2020	2021	2022	2023	2024	Thereafter
2017-18	$5,364	5	$1,073	$1,073	$3,218	$1,073	$1,073	$1,072			
2018-19	$4,267	5	$0	$854	$3,413	$854	$854	$854	$851		
Net Increase (Decrease) in OPEB Expense			**$1,073**	**$1,927**	**$6,631**	**$1,927**	**$1,927**	**$1,926**	**$851**	**$0**	**$0**

APPENDIX G: GLOSSARY OF RETIREE HEALTH VALUATION TERMS

Note: The following definitions are intended to help a *non*-actuary understand concepts related to retiree health valuations. Therefore, the definitions may not be actuarially accurate.

Actuarial Cost Method: A mathematical model for allocating OPEB costs by year of service. The only actuarial cost method allowed under GASB 74/75 is the entry age actuarial cost method.

Actuarial Present Value of Projected Benefit Payments: The projected amount of all OPEB benefits to be paid to current and future retirees discounted back to the valuation or measurement date.

Deferred Inflows/Outflows of Resources: A portion of certain items that can be deferred to future periods or that weren't reflected in the valuation. The former includes investment gains/losses, actuarial gains/losses, and gains/losses due to changes in actuarial assumptions or methods. The latter includes contributions made to a trust subsequent to the measurement date but before the statement date.

Discount Rate: Assumed investment return net of all investment expenses. Generally, a higher assumed interest rate leads to lower service costs and total OPEB liability.

Fiduciary Net Position: Net assets (liability) of a qualifying OPEB "plan" (i.e. qualifying irrevocable trust or equivalent arrangement).

Implicit Rate Subsidy: The estimated amount by which retiree rates are understated in situations where, for rating purposes, retirees are combined with active employees and the employer is expected, in the long run, to pay the underlying cost of retiree benefits.

Measurement Date: The date at which assets and liabilities are determined in order to estimate TOL and NOL.

Mortality Rate: Assumed proportion of people who die each year. Mortality rates always vary by age and often by sex. A mortality table should always be selected that is based on a similar "population" to the one being studied.

Net OPEB Liability (NOL): The Total OPEB Liability minus the Fiduciary Net Position.

OPEB Benefits: Other Post Employment Benefits. Generally, medical, dental, prescription drug, life, long-term care or other postemployment benefits that are not pension benefits.

OPEB Expense: This is the amount employers must recognize as an expense each year. The annual OPEB expense is equal to the Service Cost plus interest on the Total OPEB Liability (TOL) plus change in TOL due to plan changes minus projected investment income; all adjusted to reflect deferred inflows and outflows of resources.

Participation Rate: The proportion of retirees who elect to receive retiree benefits. A lower

participation rate results in lower service cost and a TOL. The participation rate often is related to retiree contributions.

Retirement Rate: The proportion of active employees who retire each year. Retirement rates are usually based on age and/or length of service. (Retirement rates can be used in conjunction with the service requirement to reflect both age and length of service). The more likely employees are to retire early, the higher service costs and actuarial accrued liability will be.

Service Cost: The annual dollar value of the "earned" portion of retiree health benefits if retiree health benefits are to be fully accrued at retirement.

Service Requirement: The proportion of retiree benefits payable under the OPEB plan, based on length of service and, sometimes, age. A shorter service requirement increases service costs and TOL.

Total OPEB Liability (TOL): The amount of the actuarial present value of projected benefit payments attributable to participants' past service based on the actuarial cost method used.

Trend Rate: The rate at which the employer's share of the cost of retiree benefits is expected to increase over time. The trend rate usually varies by type of benefit (e.g. medical, dental, vision, etc.) and may vary over time. A higher trend rate results in higher service costs and TOL.

Turnover Rate: The rate at which employees cease employment due to reasons other than death, disability or retirement. Turnover rates usually vary based on length of service and may vary by other factors. Higher turnover rates reduce service costs and TOL.

Valuation Date: The date as of which the OPEB obligation is determined by means of an actuarial valuation. Under GASB 74 and 75, the valuation date does not have to coincide with the statement date, but can't be more than 30 months prior.