



State of Alaska

Teachers' Retirement System Defined Contribution Retirement Plan

For Occupational Death and Disability
and Retiree Medical Benefits

Actuarial Valuation Report
As of June 30, 2020

May 2021



May 20, 2021

State of Alaska
The Alaska Retirement Management Board
The Department of Revenue, Treasury Division
The Department of Administration, Division of Retirement and Benefits
P.O. Box 110203
Juneau, AK 99811-0203

Certification of Actuarial Valuation

Dear Members of The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration:

This report summarizes the annual actuarial valuation results of the State of Alaska Teachers' Retirement System Defined Contribution Retirement (TRS DCR) Plan as of June 30, 2020 performed by Buck Global, LLC (Buck). This report is an update to the draft report dated January 7, 2021, reflecting minor wording changes.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2020. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under TRS DCR were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of TRS DCR as of June 30, 2020.

TRS DCR is funded by Employer Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for TRS DCR is to pay required contributions that remain level as a percent of TRS DCR compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of TRS DCR compensation over closed layered 25-year periods. This objective is currently being met and is projected to continue to be met as required by the Alaska State statutes. Absent future gains/losses, actuarially determined contributions are expected to remain level as a percent of pay and the overall funded status is expected to remain at or above 100%.

The Board and staff of the State of Alaska may use this report for the review of the operations of TRS DCR. Use of this report, for any other purpose or by anyone other than the Board or staff of the State of Alaska may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, you should ask Buck to

review any statement you wish to make on the results contained in this report. Buck will not accept any liability for any such statement made without the review by Buck.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, changes expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. In particular, retiree group benefits models necessarily rely on the use of approximations and estimates and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. An analysis of the potential range of such future differences is beyond the scope of this valuation.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the plan. The actuary performs an analysis of plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2013 to June 30, 2017. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2018 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the per capita claims cost rates effective June 30, 2020 to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation is shown in Sections 4.2 and 4.3. We certify that the assumptions and methods described in Sections 4.2 and 4.3 of this report meet the requirements of all applicable Actuarial Standards of Practice.

Governmental Accounting Standards Board (GASB) Statement No. 74 (GASB 74) was effective for TRS DCR beginning with fiscal year ending June 30, 2017, and GASB 75 was effective beginning with fiscal year ending June 30, 2018. Separate GASB 74 and GASB 75 reports have been prepared.

Assessment of Risks

Actuarial Standard of Practice No. 51 (ASOP 51) applies to actuaries performing funding calculations related to a pension plan. ASOP 51 does not apply to actuaries performing services in connection with other post-employment benefits, such as medical benefits. Accordingly, ASOP 51 does not apply to the retiree medical portion of TRS DCR. We also believe ASOP 51 does not apply to the occupational death and disability portion of TRS DCR. Therefore, information related to ASOP 51 is not included in this report. However, it may be beneficial to review the ASOP 51 information provided in the TRS valuation report for information on risks that may also relate to the occupational death and disability benefits provided by this plan.

Use of Models

Actuarial Standard of Practice No. 56 (ASOP 56) provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Buck uses third-party software in the performance of annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable funding methods and policies to the derived liabilities and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report. Buck has an extensive review process in which the results of the liability calculations are checked using detailed sample life output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other

funding outputs and the internal model are similarly reviewed in detail and at a higher level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. This review is performed by experts within Buck who are familiar with applicable funding methods, as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within Buck who are familiar with the details of the required changes.

Buck used manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the DCR retiree medical plan, and to reflect the different Medicare coordination methods between the two plans. The manual rate models are intended to provide benchmark data and pricing capabilities, calculate per capita costs, and calculate actuarial values of different commercial health plans. Buck relied on the models, which were developed using industry data by actuaries and consultants at OptumInsight.

COVID-19

The potential impact of the ongoing COVID-19 pandemic on costs and liabilities was considered and an adjustment was made in setting the medical per capita claims cost assumption. FY20 medical claims were adjusted for a COVID-19 related decline in claims during the last four months (March – June) of FY20. A more detailed explanation on these adjustments is shown in Sections 4.2 and 4.3 and in the valuation report for the DB plan.

This report was prepared under my supervision and in accordance with all applicable Actuarial Standards of Practice. I am a Fellow of the Society of Actuaries, an Enrolled Actuary, a Fellow of the Conference of Consulting Actuaries, and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

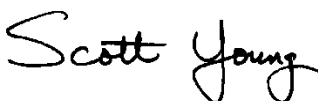
I am available to discuss this report with you at your convenience. I can be reached at 602-803-6174.

Respectfully submitted,



David J. Kershner, FSA, EA, MAAA, FCA
Principal
Buck

The undersigned actuary is responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates, and hereby affirms his qualification to render opinions in such matters in accordance with the Qualification Standards of the American Academy of Actuaries.



Scott Young, FSA, EA, MAAA, FCA
Director
Buck

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Executive Summary

Overview

The State of Alaska Teachers' Retirement System Defined Contribution Retirement (TRS DCR) Plan provides occupational death & disability and retiree medical benefits to teachers and other eligible members hired after June 30, 2006 or who have elected participation in this plan. The Commissioner of the Department of Administration is responsible for administering the plan. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the plan. This report presents the results of the actuarial valuation of TRS DCR as of the valuation date of June 30, 2020.

Purpose

An actuarial valuation is performed on the plan annually as of the end of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine the Employer contribution necessary to meet the Board's funding policy for the plan;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To review the current funded status of the plan and assess the funded status as an appropriate measure for determining actuarially determined contributions;
4. To compare actual and expected experience under the plan during the last fiscal year; and
5. To report trends in contributions, assets, liabilities, and funded status over the last several years.

The actuarial valuation provides a "snapshot" of the funded position of TRS DCR based on the plan provisions, membership data, assets, and actuarial methods and assumptions as of the valuation date.

Funded Status

Where presented, references to "funded ratio" and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

| Funded Status as of June 30 (\$'s in 000's) | 2019 | 2020 |
|--|--------------|--------------|
| Occupational Death & Disability | | |
| a. Actuarial Accrued Liability | \$ 240 | \$ 223 |
| b. Valuation Assets | <u>4,359</u> | <u>4,933</u> |
| c. Unfunded Actuarial Accrued Liability, (a) - (b) | \$ (4,119) | \$ (4,710) |
| d. Funded Ratio based on Valuation Assets, (b) ÷ (a) | 1,816.3% | 2,212.1% |
| e. Fair Value of Assets | \$ 4,328 | \$ 4,823 |
| f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a) | 1,803.3% | 2,162.8% |

| Funded Status as of June 30 (\$'s in 000's) | 2019 | 2020 |
|--|-------------|-------------|
| Retiree Medical | | |
| a. Actuarial Accrued Liability | \$ 32,981 | \$ 40,634 |
| b. Valuation Assets | 42,307 | 49,554 |
| c. Unfunded Actuarial Accrued Liability, (a) - (b) | \$ (9,326) | \$ (8,920) |
| d. Funded Ratio based on Valuation Assets, (b) ÷ (a) | 128.3% | 122.0% |
| e. Fair Value of Assets | \$ 42,067 | \$ 48,413 |
| f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a) | 127.5% | 119.1% |
| Total | | |
| a. Actuarial Accrued Liability | \$ 33,221 | \$ 40,857 |
| b. Valuation Assets | 46,666 | 54,487 |
| c. Unfunded Actuarial Accrued Liability, (a) - (b) | \$ (13,445) | \$ (13,630) |
| d. Funded Ratio based on Valuation Assets, (b) ÷ (a) | 140.5% | 133.4% |
| e. Fair Value of Assets | \$ 46,395 | \$ 53,236 |
| f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a) | 139.7% | 130.3% |

The key reasons for the change in the funded status are explained below. The funded status for healthcare benefits is not necessarily an appropriate measure to confirm that assets are sufficient to settle health plan obligations as there are no available financial instruments for purchase. Future experience is likely to vary from assumptions, so there is potential for actuarial gains or losses.

1. Investment Experience

The approximate FY20 investment return based on fair value of assets was 4.3% compared to the expected investment return of 7.38% (net of investment expenses of approximately 0.30%). This resulted in a loss of approximately \$1,507,000 to the plan from investment experience. The asset valuation method recognizes 20 percent of this loss (\$301,000) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY16 investment loss, 20 percent of the FY17 investment gain, 20 percent of the FY18 investment loss, and 20 percent of the FY19 investment loss were recognized this year. The approximate FY20 asset return based on actuarial value of assets was 6.3% compared to the expected asset return of 7.38% (net of investment expenses).

2. Salary Increases

Salary increases for continuing active members during FY20 were slightly more than anticipated based on the valuation assumptions, resulting in a very small liability loss (less than \$1,000).

3. Demographic Experience

The number of active members increased 6.7% from 4,998 at June 30, 2019 to 5,332 at June 30, 2020. The average age of active members increased from 41.06 to 41.63 and average credited service increased from 5.67 to 6.03 years.

The demographic experience gains/losses are shown on page 4.

4. Retiree Medical Claims Experience

Please refer to the State of Alaska Teachers' Retirement System (TRS) Defined Benefit Plan Actuarial Valuation Report as of June 30, 2020 for a full description of the assumptions and costs of the retiree medical plan. Adjustments to these costs and assumptions are described in this report.

The recent claims experience described in Section 4.2 of this report (Section 5.2 of the TRS report) created an actuarial gain of approximately \$2,162,000. This gain included an update to the medical and prescription drug relative value factors (described in Section 4.1) this year. In addition, the 0.2% annual trend rate adjustment factor between the DB and DCR plans was removed, which resulted in an actuarial loss of approximately \$2,153,000.

5. Changes in Methods Since the Prior Valuation

There were no changes in actuarial methods since the prior valuation.

6. Changes in Assumptions Since the Prior Valuation

Healthcare claim costs are updated annually as described in Section 4.2. The medical and prescription drug relative value factors were updated this year. In addition, the 0.2% annual trend rate adjustment factor between the DB and DCR plans was removed. The amount included in Normal Cost for administrative expenses for retiree medical was updated based on the last two years of actual administrative expenses paid from plan assets. There were no other changes in actuarial assumptions since the prior valuation.

7. Changes in Benefit Provisions Since the Prior Valuation

There have been no changes in benefit provisions valued since the prior valuation.

Comparative Summary of Contribution Rates

| Occupational Death & Disability | FY 2022 | FY 2023 |
|---|----------------|----------------|
| a. Employer Normal Cost Rate | 0.08% | 0.08% |
| b. Past Service Cost Rate | <u>(0.09)%</u> | <u>(0.10)%</u> |
| c. Total Employer Contribution Rate, (a) + (b), not less than (a) | 0.08% | 0.08% |

| Retiree Medical | FY 2022 | FY 2023 |
|---|----------------|----------------|
| a. Employer Normal Cost Rate | 0.83% | 0.87% |
| b. Past Service Cost Rate | <u>(0.15)%</u> | <u>(0.14)%</u> |
| c. Total Employer Contribution Rate, (a) + (b), not less than (a) | 0.83% | 0.87% |

| Total | FY 2022 | FY 2023 |
|---|----------------|----------------|
| a. Employer Normal Cost Rate | 0.91% | 0.95% |
| b. Past Service Cost Rate | <u>(0.24)%</u> | <u>(0.24)%</u> |
| c. Total Employer Contribution Rate, (a) + (b), not less than (a) | 0.91% | 0.95% |

The exhibit below shows the historical Board-adopted employer contribution rates for TRS DCR.

| Total Employer Contribution Rate | | | | |
|----------------------------------|-------------|---------------------------------|-----------------|-------|
| Valuation Date | Fiscal Year | Occupational Death & Disability | Retiree Medical | Total |
| June 30, 2008 | FY11 | 0.28% | 0.68% | 0.96% |
| June 30, 2009 | FY12 | 0.00% | 0.58% | 0.58% |
| June 30, 2010 | FY13 | 0.00% | 0.49% | 0.49% |
| June 30, 2011 | FY14 | 0.00% | 0.47% | 0.47% |
| June 30, 2012 | FY15 | 0.00% | 2.04% | 2.04% |
| June 30, 2013 | FY16 | 0.00% | 2.04% | 2.04% |
| June 30, 2014 | FY17 | 0.00% | 1.05% | 1.05% |
| June 30, 2015 | FY18 | 0.00% | 0.91% | 0.91% |
| June 30, 2016 | FY19 | 0.08% | 0.79% | 0.87% |
| June 30, 2017 | FY20 | 0.08% | 1.09% | 1.17% |
| June 30, 2018 | FY21 | 0.08% | 0.93% | 1.01% |
| June 30, 2019 | FY22 | 0.08% | 0.83% | 0.91% |
| June 30, 2020 | FY23 | TBD | TBD | TBD |

Summary of Actuarial Accrued Liability Gain/(Loss)

The following table shows the FY20 gain/(loss) on actuarial accrued liability as of June 30, 2020 (\$'s in 000's):

| | Occupational Death & Disability | Retiree Medical | Total |
|--|---------------------------------|-----------------|--------------|
| Retirement Experience | \$ 0 | \$ 240 | \$ 240 |
| Termination Experience | (4) | 744 | 740 |
| Disability Experience | 199 | (21) | 178 |
| Active Mortality Experience | 111 | (43) | 68 |
| Inactive Mortality Experience | (1) | (7) | (8) |
| Salary Increases | 0 | N/A | 0 |
| New Entrants | 0 | (495) | (495) |
| Rehires | 1 | (2,314) | (2,313) |
| Per Capita Claims Costs ¹ | N/A | 2,162 | 2,162 |
| Elimination of 0.2% Annual Trend Rate Adjustment | N/A | (2,153) | (2,153) |
| Miscellaneous ² | <u>9</u> | <u>(151)</u> | <u>(142)</u> |
| Total | \$ 315 | \$ (2,038) | \$ (1,723) |

¹ Includes the estimated impact of COVID-19 on claims experience during FY20.

² Includes the effects of various data changes that are typical when new census data is received for the annual valuation, the effects of the differences between expected and actual benefit payments, and other items that do not fit neatly into any of the other categories.

Section 1: Actuarial Funding Results

Section 1.1: Actuarial Liabilities and Normal Cost (\$'s in 000's)

| As of June 30, 2020 | Present Value of Projected Benefits | Actuarial Accrued (Past Service) Liability |
|---|--|--|
| Active Members | | |
| Occupational Death Benefits | \$ 789 | \$ 85 |
| Occupational Disability Benefits | 1,312 | (58) |
| Medical and Prescription Drug Benefits | 77,331 | 49,213 |
| Medicare Part D Subsidy | <u>(14,935)</u> | <u>(9,504)</u> |
| Subtotal | \$ 64,497 | \$ 39,736 |
| Benefit Recipients | | |
| Survivor Benefits | \$ 0 | \$ 0 |
| Disability Benefits | 196 | 196 |
| Medical and Prescription Drug Benefits | 1,145 | 1,145 |
| Medicare Part D Subsidy | <u>(220)</u> | <u>(220)</u> |
| Subtotal | \$ 1,121 | \$ 1,121 |
| Total | \$ 65,618 | \$ 40,857 |
| Total Occupational Death & Disability | \$ 2,297 | \$ 223 |
| Total Retiree Medical, Net of Part D Subsidy | \$ 63,321 | \$ 40,634 |
| Total Retiree Medical, Gross of Part D Subsidy | \$ 78,476 | \$ 50,358 |

| As of June 30, 2020 | Normal Cost |
|---|-----------------|
| Active Members | |
| Occupational Death Benefits | \$ 111 |
| Occupational Disability Benefits | 201 |
| Medical and Prescription Drug Benefits | 4,199 |
| Medicare Part D Subsidy | <u>(811)</u> |
| Subtotal | \$ 3,700 |
| Administrative Expense Load | |
| Occupational Death & Disability | \$ 0 |
| Retiree Medical | <u>8</u> |
| Subtotal | \$ 8 |
| Total | \$ 3,708 |
| Total Occupational Death & Disability | \$ 312 |
| Total Retiree Medical, Net of Part D Subsidy | \$ 3,396 |
| Total Retiree Medical, Gross of Part D Subsidy | \$ 4,207 |

Section 1.2: Actuarial Contributions as of June 30, 2020 for FY23 (\$'s in 000's)

| Normal Cost Rate | Occupational Death & Disability | Retiree Medical | Total |
|---|---------------------------------------|--------------------|--------------|
| 1. Total Normal Cost | \$ 312 | \$ 3,396 | \$ 3,708 |
| 2. DCR Plan Rate Payroll Projected for FY21 | 391,854 | 391,854 | 391,854 |
| 3. Employer Normal Cost Rate, (1) ÷ (2) | 0.08% | 0.87% | 0.95% |
| Past Service Cost Rate | | | |
| 1. Actuarial Accrued Liability | \$ 223 | \$ 40,634 | \$ 40,857 |
| 2. Valuation Assets | 4,933 | 49,554 | 54,487 |
| 3. Unfunded Actuarial Accrued Liability, (1) - (2) | \$ (4,710) | \$ (8,920) | \$ (13,630) |
| 4. Funded Ratio based on Valuation Assets | 2,212.1% | 122.0% | 133.4% |
| 5. Past Service Cost Amortization Payment | (376) | (533) | (909) |
| 6. DCR Plan Rate Payroll Projected for FY21 | 391,854 | 391,854 | 391,854 |
| 7. Past Service Cost Rate, (5) ÷ (6) | (0.10%) | (0.14%) | (0.24%) |
| Total Employer Contribution Rate, not less than Normal Cost Rate | 0.08% | 0.87% | 0.95% |

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

| Total Employer Contribution Rate as Percent of Total Payroll | Occupational Death & Disability | Retiree Medical | Total |
|---|---------------------------------------|--------------------|--------------|
| 1. Total Normal Cost | \$ 312 | \$ 3,396 | \$ 3,708 |
| 2. Total DB and DCR Plan Rate Payroll Projected for FY21 | 741,091 | 741,091 | 741,091 |
| 3. Employer Normal Cost Rate, (1) ÷ (2) | 0.04% | 0.46% | 0.50% |
| 4. Past Service Cost Amortization Payment | (376) | (533) | (909) |
| 5. Past Service Cost Rate, (4) ÷ (2) | (0.05%) | (0.07%) | (0.12%) |
| Total Employer Contribution Rate, not less than Normal Cost Rate | 0.04% | 0.46% | 0.50% |

Schedule of Past Service Cost Amortizations - Occupational Death & Disability (\$'s in 000's)

| Layer | Amortization Period | | Balances | | Beginning-of-Year Payment |
|------------------------------------|---------------------|-----------------|----------|-------------------|---------------------------|
| | Date Created | Years Remaining | Initial | Outstanding | |
| Initial Unfunded Liability | 06/30/2007 | 12 | \$ 16 | \$ 15 | \$ 2 |
| FY08 Gain | 06/30/2008 | 13 | (392) | (380) | (38) |
| Change in Assumptions | 06/30/2009 | 14 | (82) | (81) | (8) |
| FY09 Gain | 06/30/2009 | 14 | (594) | (592) | (55) |
| Change in Assumptions | 06/30/2010 | 15 | (7) | (8) | (1) |
| FY10 Gain | 06/30/2010 | 15 | (479) | (483) | (43) |
| FY11 Gain | 06/30/2011 | 16 | (560) | (570) | (49) |
| FY12 Gain | 06/30/2012 | 17 | (129) | (133) | (11) |
| FY13 Gain | 06/30/2013 | 18 | (149) | (152) | (12) |
| Change in Assumptions | 06/30/2014 | 19 | (50) | (53) | (4) |
| PRPA Modification | 06/30/2014 | 19 | (25) | (25) | (2) |
| FY14 Gain | 06/30/2014 | 19 | (255) | (262) | (20) |
| FY15 Gain | 06/30/2015 | 20 | (275) | (282) | (21) |
| FY16 Gain | 06/30/2016 | 21 | (209) | (215) | (15) |
| FY17 Gain | 06/30/2017 | 22 | (251) | (254) | (18) |
| Change in Assumptions ¹ | 06/30/2018 | 23 | 0 | 0 | 0 |
| FY18 Gain | 06/30/2018 | 23 | (257) | (259) | (18) |
| FY19 Gain | 06/30/2019 | 24 | (338) | (339) | (22) |
| FY20 Gain | 06/30/2020 | 25 | (637) | (637) | (41) |
| Total | | | | \$ (4,710) | \$ (376) |

¹ The net effect of changing assumptions was less than \$1,000.

Schedule of Past Service Cost Amortizations - Retiree Medical (\$'s in 000's)

| Layer | Amortization Period | | Balances | | Beginning-of-Year Payment |
|------------------------------------|---------------------|-----------------|----------|-------------------|---------------------------|
| | Date Created | Years Remaining | Initial | Outstanding | |
| Initial Unfunded Liability | 06/30/2007 | 12 | \$ (239) | \$ (230) | \$ (24) |
| Change in Assumptions | 06/30/2008 | 13 | 84 | 86 | 9 |
| FY08 Gain | 06/30/2008 | 13 | (393) | (380) | (38) |
| Change in Assumptions | 06/30/2009 | 14 | (69) | (67) | (6) |
| FY09 Gain | 06/30/2009 | 14 | (281) | (281) | (26) |
| Change in Assumptions ¹ | 06/30/2010 | 15 | 0 | 0 | 0 |
| FY10 Gain | 06/30/2010 | 15 | (545) | (549) | (49) |
| FY11 Gain | 06/30/2011 | 16 | (94) | (94) | (8) |
| Change in Assumptions | 06/30/2012 | 17 | 11,518 | 11,819 | 966 |
| FY12 Gain | 06/30/2012 | 17 | (60) | (58) | (5) |
| FY13 Loss | 06/30/2013 | 18 | 3,439 | 3,544 | 279 |
| Change in Assumptions | 06/30/2014 | 19 | (9,736) | (10,029) | (762) |
| FY14 Loss | 06/30/2014 | 19 | 1,616 | 1,663 | 126 |
| FY15 Gain | 06/30/2015 | 20 | (3,485) | (3,581) | (264) |
| EGWP Impact | 06/30/2016 | 21 | (6,400) | (6,547) | (468) |
| FY16 Loss | 06/30/2016 | 21 | 958 | 983 | 70 |
| Change in Assumptions | 06/30/2017 | 22 | 7,645 | 7,768 | 540 |
| FY17 Gain | 06/30/2017 | 22 | (1,451) | (1,474) | (102) |
| Change in Assumptions/Methods | 06/30/2018 | 23 | (9,505) | (9,574) | (648) |
| FY18 Loss | 06/30/2018 | 23 | 2,491 | 2,509 | 170 |
| FY19 Gain | 06/30/2019 | 24 | (4,904) | (4,926) | (325) |
| Change in Assumptions | 06/30/2020 | 25 | 2,153 | 2,153 | 139 |
| FY20 Gain | 06/30/2020 | 25 | (1,655) | (1,655) | (107) |
| Total | | | | \$ (8,920) | \$ (533) |

¹ The net effect of changing assumptions was less than \$1,000. The demographic assumption changes decreased liability by \$133,000 and the economic assumptions changes increased the liability by \$133,000. Therefore, the net effect of all assumptions changes is \$0 for amortization purposes.

Schedule of Past Service Cost Amortizations - Total (\$'s in 000's)

| Layer | Amortization Period | | Balances | | Beginning-of-Year Payment |
|-------------------------------|---------------------|-----------------|----------|--------------------|---------------------------|
| | Date Created | Years Remaining | Initial | Outstanding | |
| Initial Unfunded Liability | 06/30/2007 | 12 | \$ (223) | \$ (215) | \$ (22) |
| Change in Assumptions | 06/30/2008 | 13 | 84 | 86 | 9 |
| FY08 Gain | 06/30/2008 | 13 | (785) | (760) | (76) |
| Change in Assumptions | 06/30/2009 | 14 | (151) | (148) | (14) |
| FY09 Gain | 06/30/2009 | 14 | (875) | (873) | (81) |
| Change in Assumptions | 06/30/2010 | 15 | (7) | (8) | (1) |
| FY10 Gain | 06/30/2010 | 15 | (1,024) | (1,032) | (92) |
| FY11 Gain | 06/30/2011 | 16 | (654) | (664) | (57) |
| Change in Assumptions | 06/30/2012 | 17 | 11,518 | 11,819 | 966 |
| FY12 Gain | 06/30/2012 | 17 | (189) | (191) | (16) |
| FY13 Loss | 06/30/2013 | 18 | 3,290 | 3,392 | 267 |
| Change in Assumptions | 06/30/2014 | 19 | (9,786) | (10,082) | (766) |
| PRPA Modification | 06/30/2014 | 19 | (25) | (25) | (2) |
| FY14 Loss | 06/30/2014 | 19 | 1,361 | 1,401 | 106 |
| FY15 Gain | 06/30/2015 | 20 | (3,760) | (3,863) | (285) |
| EGWP Impact | 06/30/2016 | 21 | (6,400) | (6,547) | (468) |
| FY16 Loss | 06/30/2016 | 21 | 749 | 768 | 55 |
| Change in Assumptions | 06/30/2017 | 22 | 7,645 | 7,768 | 540 |
| FY17 Gain | 06/30/2017 | 22 | (1,702) | (1,728) | (120) |
| Change in Assumptions/Methods | 06/30/2018 | 23 | (9,505) | (9,574) | (648) |
| FY18 Loss | 06/30/2018 | 23 | 2,234 | 2,250 | 152 |
| FY19 Gain | 06/30/2019 | 24 | (5,242) | (5,265) | (347) |
| Change in Assumptions | 06/30/2020 | 25 | 2,153 | 2,153 | 139 |
| FY20 Gain | 06/30/2020 | 25 | (2,292) | (2,292) | (148) |
| Total | | | | \$ (13,630) | \$ (909) |

Section 1.3: Actuarial Gain/(Loss) for FY20 (\$'s in 000's)

| | Occupational Death & Disability | Retiree Medical | Total |
|--|---------------------------------------|--------------------|-----------------|
| 1. Expected Actuarial Accrued Liability | | | |
| a. Actuarial Accrued Liability as of June 30, 2019 | \$ 240 | \$ 32,981 | \$ 33,221 |
| b. Normal Cost | 284 | 2,967 | 3,251 |
| c. Interest on (a) and (b) at 7.38% | 39 | 2,653 | 2,692 |
| d. Employer Group Waiver Plan | 0 | 1 | 1 |
| e. Benefit Payments | (24) | (6) | (30) |
| f. Interest on (d) and (e) at 7.38%, adjusted for timing | (1) | 0 | (1) |
| g. Assumption/Method Changes | 0 | 2,153 | 2,153 |
| h. Expected Actuarial Accrued Liability as of June 30, 2020 (a) + (b) + (c) + (d) + (e) + (f) + (g) | \$ 538 | \$ 40,749 | \$ 41,287 |
| 2. Actual Actuarial Accrued Liability as of June 30, 2020 | 223 | 40,634 | 40,857 |
| 3. Liability Gain/(Loss), (1)(h) - (2) | \$ 315 | \$ 115 | \$ 430 |
| 4. Expected Actuarial Asset Value | | | |
| a. Actuarial Asset Value as of June 30, 2019 | \$ 4,359 | \$ 42,307 | \$ 46,666 |
| b. Interest on (a) at 7.38% | 322 | 3,122 | 3,444 |
| c. Employer Contributions | 329 | 4,461 | 4,790 |
| d. Employer Group Waiver Plan | 0 | 1 | 1 |
| e. Interest on (c) and (d) at 7.38%, adjusted for timing | 12 | 162 | 174 |
| f. Benefit Payments | (24) | (6) | (30) |
| g. Administrative Expenses | 0 | (9) | (9) |
| h. Interest on (f) and (g) at 7.38%, adjusted for timing | (1) | (1) | (2) |
| i. Expected Actuarial Asset Value as of June 30, 2020 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h) | \$ 4,997 | \$ 50,037 | \$ 55,034 |
| 5. Actuarial Asset Value as of June 30, 2020 | 4,933 | 49,554 | 54,487 |
| 6. Actuarial Asset Gain/(Loss), (5) - (4)(i) | \$ (64) | \$ (483) | \$ (547) |
| 7. Total Actuarial Gain/(Loss), (3) + (6) | \$ 251 | \$ (368) | \$ (117) |
| 8. Contribution Gain/(Loss) | \$ 386 | \$ 2,027 | \$ 2,413 |
| 9. Administrative Expense Gain/(Loss) | \$ 0 | \$ (4) | \$ (4) |
| 10. FY20 Gain/(Loss), (7) + (8) + (9) | \$ 637 | \$ 1,655 | \$ 2,292 |

Section 1.4: History of Unfunded Liability and Funded Ratio (\$'s in 000's)

| Valuation Date | Total Actuarial Accrued Liability | Valuation Assets | Assets as a Percent of Actuarial Accrued Liability | Unfunded Actuarial Accrued Liability (UAAL) |
|-----------------------|--|-------------------------|---|--|
| June 30, 2007 | \$ 374 | \$ 597 | 159.7% | \$ (223) |
| June 30, 2008 | 801 | 1,728 | 215.7% | (927) |
| June 30, 2009 | 1,460 | 3,424 | 234.5% | (1,964) |
| June 30, 2010 | 2,448 | 5,472 | 223.5% | (3,024) |
| June 30, 2011 | 3,858 | 7,566 | 196.1% | (3,708) |
| June 30, 2012 | 16,874 | 9,285 | 55.0% | 7,589 |
| June 30, 2013 | 22,138 | 11,146 | 50.3% | 10,992 |
| June 30, 2014 | 16,296 | 13,611 | 83.5% | 2,685 |
| June 30, 2015 | 19,797 | 20,847 | 105.3% | (1,050) |
| June 30, 2016 | 22,007 | 28,733 | 130.6% | (6,726) |
| June 30, 2017 | 33,707 | 34,586 | 102.6% | (879) |
| June 30, 2018 | 32,459 | 40,621 | 125.1% | (8,162) |
| June 30, 2019 | 33,221 | 46,666 | 140.5% | (13,445) |
| June 30, 2020 | 40,857 | 54,487 | 133.4% | (13,630) |

Section 2: Plan Assets

Section 2.1: Summary of Fair Value of Assets (\$'s in 000's)

| As of June 30, 2020 | Occupational Death & Disability | Retiree Medical | Total | Allocation Percent |
|--------------------------------------|---------------------------------------|--------------------|-----------|-----------------------|
| Cash and Short-Term Investments | | | | |
| - Cash and Cash Equivalents | \$ 50 | \$ 506 | \$ 556 | 1.1% |
| - Subtotal | \$ 50 | \$ 506 | \$ 556 | 1.1% |
| Fixed Income Investments | | | | |
| - Domestic Fixed Income Pool | \$ 1,037 | \$ 10,385 | \$ 11,422 | 21.6% |
| - International Fixed Income Pool | 0 | 0 | 0 | 0.0% |
| - Tactical Fixed Income Pool | 0 | 0 | 0 | 0.0% |
| - High Yield Pool | 0 | 0 | 0 | 0.0% |
| - Treasury Inflation Protection Pool | 0 | 0 | 0 | 0.0% |
| - Emerging Debt Pool | 0 | 0 | 0 | 0.0% |
| - Subtotal | \$ 1,037 | \$ 10,385 | \$ 11,422 | 21.6% |
| Equity Investments | | | | |
| - Domestic Equity Pool | \$ 1,307 | \$ 13,085 | \$ 14,392 | 27.3% |
| - International Equity Pool | 746 | 7,466 | 8,212 | 15.5% |
| - Private Equity Pool | 591 | 5,921 | 6,512 | 12.3% |
| - Emerging Markets Equity Pool | 156 | 1,561 | 1,717 | 3.3% |
| - Alternative Equity Strategies | 260 | 2,605 | 2,865 | 5.4% |
| - Subtotal | \$ 3,060 | \$ 30,638 | \$ 33,698 | 63.8% |
| Other Investments | | | | |
| - Real Estate Pool | \$ 295 | \$ 2,954 | \$ 3,249 | 6.2% |
| - Other Investments Pool | 353 | 3,528 | 3,881 | 7.3% |
| - Absolute Return Pool | 0 | 0 | 0 | 0.0% |
| - Other Assets | 0 | 0 | 0 | 0.0% |
| - Subtotal | \$ 648 | \$ 6,482 | \$ 7,130 | 13.5% |
| Total Cash and Investments | \$ 4,795 | \$ 48,011 | \$ 52,806 | 100.0% |
| Net Accrued Receivables | 28 | 402 | 430 | |
| Net Assets | \$ 4,823 | \$ 48,413 | \$ 53,236 | |

Section 2.2: Changes in Fair Value of Assets During FY20 (\$'s in 000's)

| Fiscal Year 2020 | Occupational Death & Disability | Retiree Medical | Total |
|--|---------------------------------------|--------------------|-----------|
| 1. Fair Value of Assets as of June 30, 2019 | \$ 4,328 | \$ 42,067 | \$ 46,395 |
| 2. Additions: | | | |
| a. Member Contributions | \$ 0 | \$ 0 | \$ 0 |
| b. Employer Contributions | 329 | 4,461 | 4,790 |
| c. Interest and Dividend Income | 68 | 674 | 742 |
| d. Net Appreciation/(Depreciation) in Fair Value of Investments | 135 | 1,350 | 1,485 |
| e. Employer Group Waiver Plan | 0 | 1 | 1 |
| f. Other | 0 | 0 | 0 |
| g. Total Additions | \$ 532 | \$ 6,486 | \$ 7,018 |
| 3. Deductions: | | | |
| a. Medical Benefits | \$ 0 | \$ 6 | \$ 6 |
| b. Death & Disability Benefits | 24 | 0 | 24 |
| c. Investment Expenses | 13 | 125 | 138 |
| d. Administrative Expenses | 0 | 9 | 9 |
| e. Total Deductions | \$ 37 | \$ 140 | \$ 177 |
| 4. Fair Value of Assets as of June 30, 2020 | \$ 4,823 | \$ 48,413 | \$ 53,236 |
| 5. Approximate Fair Value Investment Return Rate during FY20 Net of Investment Expenses | 4.2% | 4.3% | 4.3% |

Section 2.3: Development of Actuarial Value of Assets (\$'s in 000's)

The actuarial value of assets and the fair value were \$0 at June 30, 2006. Investment gains and losses are recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of fair value as of the current valuation date.

| | Occupational Death & Disability | Retiree Medical | Total |
|---|--|----------------------------|---------------|
| 1. Investment Gain/(Loss) for FY20 | | | |
| a. Fair Value as of June 30, 2019 | \$ 4,328 | \$ 42,067 | \$ 46,395 |
| b. Contributions | 329 | 4,461 | 4,790 |
| c. Employer Group Waiver Plan | 0 | 1 | 1 |
| d. Benefit Payments | 24 | 6 | 30 |
| e. Administrative Expenses | 0 | 9 | 9 |
| f. Actual Investment Return (net of investment expenses) | 190 | 1,899 | 2,089 |
| g. Expected Return Rate (net of investment expenses) | 7.38% | 7.38% | 7.38% |
| h. Expected Return | 330 | 3,266 | 3,596 |
| i. Investment Gain/(Loss) for the Year (f) - (h) | (140) | (1,367) | (1,507) |
| 2. Actuarial Value as of June 30, 2020 | | | |
| a. Fair Value as of June 30, 2020 | \$ 4,823 | \$ 48,413 | \$ 53,236 |
| b. Deferred Investment Gain/(Loss) | (110) | (1,141) | (1,251) |
| c. Preliminary Actuarial Value as of June 30, 2020, (a) - (b) | 4,933 | 49,554 | 54,487 |
| d. Upper Limit: 120% of Fair Value as of June 30, 2020 | 5,787 | 58,095 | 63,882 |
| e. Lower Limit: 80% of Fair Value as of June 30, 2020 | 3,859 | 38,731 | 42,590 |
| f. Actuarial Value at June 30, 2020, (c) limited by (d) and (e) | 4,933 | 49,554 | 54,487 |
| 3. Ratio of Actuarial Value of Assets to Fair Value of Assets | 102.3% | 102.4% | 102.3% |
| 4. Approximate Actuarial Value Investment Return Rate during FY20 Net of Investment Expenses | 6.0% | 6.3% | 6.3% |

The tables below show the development of the gains/(losses) to be recognized in the current year (\$'s in 000's):

| Occupational Death & Disability | | | | |
|--|----------------------------|--|---|---|
| Fiscal Year Ending | Asset Gain / (Loss) | Gain / (Loss) Recognized in Prior Years | Gain / (Loss) Recognized This Year | Gain / (Loss) Deferred to Future Years |
| June 30, 2016 | \$ (269) | \$ (216) | \$ (53) | \$ 0 |
| June 30, 2017 | 143 | 87 | 28 | 28 |
| June 30, 2018 | 8 | 4 | 2 | 2 |
| June 30, 2019 | (48) | (10) | (10) | (28) |
| June 30, 2020 | <u>(140)</u> | <u>0</u> | <u>(28)</u> | <u>(112)</u> |
| Total | \$ (306) | \$ (135) | \$ (61) | \$ (110) |

| Retiree Medical | | | | |
|---------------------------|----------------------------|--|---|---|
| Fiscal Year Ending | Asset Gain / (Loss) | Gain / (Loss) Recognized in Prior Years | Gain / (Loss) Recognized This Year | Gain / (Loss) Deferred to Future Years |
| June 30, 2016 | \$ (1,674) | \$ (1,340) | \$ (334) | \$ 0 |
| June 30, 2017 | 1,184 | 711 | 237 | 236 |
| June 30, 2018 | (19) | (8) | (4) | (7) |
| June 30, 2019 | (460) | (92) | (92) | (276) |
| June 30, 2020 | <u>(1,367)</u> | <u>0</u> | <u>(273)</u> | <u>(1,094)</u> |
| Total | \$ (2,336) | \$ (729) | \$ (466) | \$ (1,141) |

| Total | | | | |
|---------------------------|----------------------------|--|---|---|
| Fiscal Year Ending | Asset Gain / (Loss) | Gain / (Loss) Recognized in Prior Years | Gain / (Loss) Recognized This Year | Gain / (Loss) Deferred to Future Years |
| June 30, 2016 | \$ (1,943) | \$ (1,556) | \$ (387) | \$ 0 |
| June 30, 2017 | 1,327 | 798 | 265 | 264 |
| June 30, 2018 | (11) | (4) | (2) | (5) |
| June 30, 2019 | (508) | (102) | (102) | (304) |
| June 30, 2020 | <u>(1,507)</u> | <u>0</u> | <u>(301)</u> | <u>(1,206)</u> |
| Total | \$ (2,642) | \$ (864) | \$ (527) | \$ (1,251) |

Section 2.4: Historical Asset Rates of Return

| Year Ending | Actuarial Value | | Fair Value | |
|---------------|-----------------|-------------|------------|-------------|
| | Annual | Cumulative* | Annual | Cumulative* |
| June 30, 2008 | 6.4% | 6.4% | (0.3%) | (0.3%) |
| June 30, 2009 | 3.2% | 4.8% | (12.0%) | (6.3%) |
| June 30, 2010 | 4.2% | 4.6% | 6.4% | (2.3%) |
| June 30, 2011 | 7.4% | 5.3% | 18.9% | 2.6% |
| June 30, 2012 | 6.9% | 5.6% | 1.6% | 2.4% |
| June 30, 2013 | 7.7% | 6.0% | 11.9% | 3.9% |
| June 30, 2014 | 10.9% | 6.6% | 18.0% | 5.8% |
| June 30, 2015 | 9.5% | 7.0% | 3.1% | 5.5% |
| June 30, 2016 | 6.5% | 6.9% | (0.1%) | 4.9% |
| June 30, 2017 | 7.6% | 7.0% | 12.6% | 5.6% |
| June 30, 2018 | 7.8% | 7.1% | 8.0% | 5.8% |
| June 30, 2019 | 6.4% | 7.0% | 6.2% | 5.9% |
| June 30, 2020 | 6.3% | 7.0% | 4.3% | 5.7% |

* Cumulative since fiscal year ending June 30, 2008

Section 3: Member Data

Section 3.1: Summary of Members Included

| As of June 30 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|--------------|--------------|--------------|--------------|--------------------|
| Active Members | | | | | |
| 1. Number | 4,383 | 4,694 | 4,915 | 4,998 | 5,332 ¹ |
| 2. Average Age | 39.57 | 40.21 | 40.64 | 41.06 | 41.63 |
| 3. Average Credited Service | 4.50 | 4.88 | 5.30 | 5.67 | 6.03 |
| 4. Average Entry Age | 35.07 | 35.33 | 35.34 | 35.39 | 35.60 |
| 5. Average Annual Earnings | \$ 65,219 | \$ 66,542 | \$ 68,119 | \$ 69,619 | \$ 71,118 |
| Disabilitants and Beneficiaries (Occupational Death & Disability) | | | | | |
| 1. Number | 0 | 0 | 0 | 1 | 1 |
| 2. Average Age | N/A | N/A | N/A | 53.45 | 54.45 |
| 3. Average Monthly Death & Disability Benefit | N/A | N/A | N/A | \$ 2,024 | \$ 2,024 |
| Retirees, Surviving Spouses, and Dependent Spouses (Retiree Medical) | | | | | |
| 1. Number | 0 | 4 | 9 | 12 | 17 |
| 2. Average Age | N/A | 69.72 | 68.59 | 68.54 | 68.79 |
| Total Number of Members | 4,383 | 4,698 | 4,924 | 5,011 | 5,350 |

Average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

¹ Includes 1,376 male active members and 3,956 female active members.

Section 3.2: Age and Service Distribution of Active Members

Annual Earnings by Age

| Age | Number | Total Annual Earnings | Average Annual Earnings |
|---------|--------|-----------------------|-------------------------|
| 0 - 19 | 0 | \$ 0 | \$ 0 |
| 20 - 24 | 100 | 5,264,970 | 52,650 |
| 25 - 29 | 613 | 36,111,642 | 58,910 |
| 30 - 34 | 934 | 61,660,845 | 66,018 |
| 35 - 39 | 1,068 | 76,404,382 | 71,540 |
| 40 - 44 | 815 | 59,917,766 | 73,519 |
| 45 - 49 | 575 | 43,754,516 | 76,095 |
| 50 - 54 | 477 | 36,408,923 | 76,329 |
| 55 - 59 | 403 | 31,603,348 | 78,420 |
| 60 - 64 | 239 | 19,252,737 | 80,555 |
| 65 - 69 | 84 | 6,907,610 | 82,233 |
| 70 - 74 | 20 | 1,531,296 | 76,565 |
| 75+ | 4 | 382,756 | 95,689 |

Total 5,332 \$ 379,200,791 \$ 71,118

Annual Earnings by Credited Service

| Years of Service | Number | Total Annual Earnings | Average Annual Earnings |
|------------------|--------------|-----------------------|-------------------------|
| 0 | 134 | \$ 7,253,235 | \$ 54,129 |
| 1 | 646 | 39,337,478 | 60,894 |
| 2 | 574 | 37,066,265 | 64,575 |
| 3 | 494 | 32,421,369 | 65,630 |
| 4 | 478 | 32,777,831 | 68,573 |
| 0 - 4 | 2,326 | \$ 148,856,178 | \$ 63,997 |
| 5 - 9 | 1,841 | 134,954,143 | 73,305 |
| 10 - 14 | 1,162 | 95,121,574 | 81,860 |
| 15 - 19 | 2 | 174,019 | 87,010 |
| 20 - 24 | 1 | 94,877 | 94,877 |
| 25 - 29 | 0 | 0 | 0 |
| 30 - 34 | 0 | 0 | 0 |
| 35 - 39 | 0 | 0 | 0 |
| 40+ | 0 | 0 | 0 |

Total 5,332 \$ 379,200,791 \$ 71,118

Years of Credited Service by Age

| Age | Years of Service | | | | | | | | | | Total |
|--------------|------------------|--------------|--------------|----------|----------|----------|----------|----------|----------|----------|--------------|
| | 0 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40+ | | |
| 0 - 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 - 24 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| 25 - 29 | 505 | 108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 613 |
| 30 - 34 | 441 | 440 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 934 |
| 35 - 39 | 325 | 380 | 363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,068 |
| 40 - 44 | 297 | 289 | 228 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 815 |
| 45 - 49 | 213 | 199 | 163 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 575 |
| 50 - 54 | 169 | 172 | 135 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 477 |
| 55 - 59 | 146 | 136 | 121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 403 |
| 60 - 64 | 83 | 84 | 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 239 |
| 65 - 69 | 32 | 27 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 |
| 70 - 74 | 14 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 75+ | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Total | 2,326 | 1,841 | 1,162 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 5,332 |

Total and average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

Section 3.3: Member Data Reconciliation

| | Actives | Retirees and Surviving Spouses | Dependent Spouses | OD&D Disabilitants | OD&D Beneficiaries | Total |
|---|--------------|---|----------------------|-----------------------|-----------------------|--------------|
| As of June 30, 2019 ¹ | 4,998 | 10 | 2 | 1 | 0 | 5,011 |
| New Entrants | 664 | 0 | 0 | 0 | 0 | 664 |
| Rehires | 306 | 0 | 0 | 0 | 0 | 306 |
| Vested Terminations | (230) | 0 | 0 | 0 | 0 | (230) |
| Non-Vested Terminations | (358) | 0 | 0 | 0 | 0 | (358) |
| Refund of Contributions | (42) | 0 | 0 | 0 | 0 | (42) |
| Disability Retirements | 0 | 0 | 0 | 0 | 0 | 0 |
| Age Retirements | (4) | 4 | 1 | 0 | 0 | 1 |
| Deaths With Beneficiary | 0 | 0 | 0 | 0 | 0 | 0 |
| Deaths Without Beneficiary | (2) | 0 | 0 | 0 | 0 | (2) |
| Data Corrections | 0 | 0 | 0 | 0 | 0 | 0 |
| Net Change | 334 | 4 | 1 | 0 | 0 | 339 |
| As of June 30, 2020 ² | 5,332 | 14 | 3 | 1 | 0 | 5,350 |

¹ 117 participants are expected to receive retiree medical benefits in a different plan and are included for OD&D benefits only.

² 125 participants are expected to receive retiree medical benefits in a different plan and are included for OD&D benefits only.

Section 3.4: Schedule of Active Member Data

| Valuation Date | Number | Annual Earnings (000's) | Annual Average Earnings | Percent Increase in Average Earnings | Number of Participating Employers |
|----------------|--------|-------------------------|-------------------------|--------------------------------------|-----------------------------------|
| June 30, 2020 | 5,332 | \$ 379,201 | \$ 71,118 | 2.2% | 57 |
| June 30, 2019 | 4,998 | 347,957 | 69,619 | 2.2% | 57 |
| June 30, 2018 | 4,915 | 334,803 | 68,119 | 2.4% | 57 |
| June 30, 2017 | 4,694 | 312,347 | 66,542 | 2.0% | 57 |
| June 30, 2016 | 4,383 | 285,854 | 65,219 | 2.5% | 58 |
| June 30, 2015 | 4,095 | 260,584 | 63,635 | 2.7% | 58 |
| June 30, 2014 | 3,547 | 219,701 | 61,940 | 2.4% | 58 |
| June 30, 2013 | 3,272 | 197,944 | 60,496 | 3.5% | 58 |
| June 30, 2012 | 3,057 | 178,761 | 58,476 | 4.7% | 58 |
| June 30, 2011 | 2,708 | 151,269 | 55,860 | 5.6% | 58 |

Total and average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

Section 3.5: Active Member Payroll Reconciliation

| Payroll Field | Payroll Data (000's) |
|--|-----------------------------|
| a) DRB actual reported salaries FY20 in employer list | \$ 411,891 |
| b) DRB actual reported salaries FY20 in valuation data | 371,022 |
| c) Annualized valuation data | 379,201 |
| d) Valuation payroll as of June 30, 2020 | 396,606 |
| e) Rate payroll for FY21 | 391,854 |

-
- a) Actual reported salaries from DRB employer listing showing all payroll paid during FY20, including those who were not active as of June 30, 2020
 - b) Payroll from valuation data for people who are in active status as of June 30, 2020
 - c) Payroll from (b) annualized for both new entrants and part-timers
 - d) Payroll from (c) with one year of salary scale applied to estimate salaries payable for the upcoming year
 - e) Payroll from (d) with the part-timer annualization removed

Section 4: Basis of the Actuarial Valuation

Section 4.1: Summary of Plan Provisions

Effective Date

July 1, 2006, with amendments through June 30, 2020.

Administration of Plan

The Commissioner of Administration or the Commissioner's designee is the administrator of the Plan. The Attorney General of the state is the legal counsel for the Plan and shall advise the administrator and represent the Plan in legal proceedings.

The Alaska Retirement Management Board prescribes policies, adopts regulations, invests the funds, and performs other activities necessary to carry out the provisions of the Plan.

Employers Included

Currently there are 57 employers participating in TRS DCR, including the State of Alaska, 53 school districts, and three other eligible organizations.

Membership

An employee of a participating employer who first enters service on or after July 1, 2006, or a member of the defined benefit plan who works for an employer who began participation on or after July 1, 2006, and meets the following criteria is a member in the Plan:

- Permanent full-time or part-time elementary or secondary teachers, school nurses, or a person in a position requiring a teaching certificate as a condition of hire in a public school of the State of Alaska, the Department of Education and Early Development, or in the Department of Labor and Workforce Development.
- Full-time or part-time teachers at the University of Alaska or persons occupying full-time administrative positions requiring academic standing who are not in the University's Optional Retirement Plan.

Members can convert to TRS DCR if they are an eligible non-vested member of the TRS defined benefit plan whose employer consents to transfers to the defined contribution plan and they elect to transfer his or her account balance to TRS DCR.

Member Contributions

Other than the member-paid premiums discussed later in this section, there are no member contributions for the occupational death & disability and retiree medical benefits.

Retiree Medical Benefits

- Member must retire directly from the plan to be eligible for retiree medical coverage. Normal retirement eligibility is the earlier of a) 30 years of service or b) Medicare eligible and 10 years of service.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's and any covered dependent's premium is 100% until the member is Medicare eligible. Upon the member's Medicare-eligibility, the required contribution will follow the service-based schedule shown below.
- Coverage cannot be denied except for failure to pay premium.
- Members who are receiving disability benefits or survivors who are receiving monthly survivor benefits are not eligible until the member meets, or would have met if he/she had lived, the normal retirement eligibility requirements.
- The following is a summary of the medical benefit design adopted in July 2016. The plan description below is used for valuation purposes and indicates participant cost-sharing. Please refer to the benefit handbook for more details.

| Plan Design Feature | In-Network ¹ | Out-of-Network ^{1 2} |
|---|--|-------------------------------|
| Deductible (single / family) | \$300 / \$600 | |
| Medical services (participant share) | 20% | 40% |
| Emergency Room Copay (non-emergent use) | \$100 | \$100 |
| Medical Out-of-Pocket Maximum (single / family, including deductible) | \$1,500 / \$3,000 | \$3,000 / \$6,000 |
| Medicare Coordination | Exclusion | Exclusion |
| Pharmacy | No Deductible | No Deductible |
| Retail Generic (per 30-day fill) | 20% \$10 min / \$50 max | |
| Retail Non-Formulary Brand (per 30-day fill) | 25% \$25 min / \$75 max | 40% |
| Retail Formulary Brand (per 30-day fill) | 35% \$80 min / \$150 max | |
| Mail-Order Generic | \$20 copay | |
| Mail-Order Non-Formulary Brand | \$50 copay | 40% |
| Mail-Order Formulary Brand | \$100 copay | |
| Pharmacy Out-of-Pocket Max (single / family) | \$1,000 / \$2,000 | |
| Medicare Pharmacy Arrangement | Retiree Drug Subsidy / Employer Group Waiver Plan effective 1/1/2019 | |
| Wellness / Preventative | 100% covered, not subject to deductible | 20%, after deductible |

¹ Section 1.1 of the AlaskaCare Defined Contribution Retiree Benefit Plan states that this health plan shall be updated from time to time to reflect changes in benefits, including annual adjustments to the premium, deductible, coinsurance, medical out-of-pocket limit, and prescription drug out-of-pocket limit.

² OON applies only to non-Medicare eligible participants.

- Buck used manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the DCR retiree medical plan outlined above. We applied the ratio of the DCR retiree medical plan value to the DB retiree medical plan value to the per capita costs determined for each of pre/post-Medicare medical and pharmacy benefits to estimate corresponding values for the DCR retiree medical plan design. These factors are noted in Section 4.3. We further adjusted the Medicare medical manual rate to reflect the Medicare coordination method adopted. The estimated 2021 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates). We reflect estimated discounts and pharmacy rebates in the defined benefit medical cost so no further adjustment was needed for the DCR retiree medical plan. The medical network differential is reflected in the relative plan value adjustments.
- The retiree medical plan’s coverage is supplemental to Medicare. Medicare coordination is described in the 2020 DCR Plan Handbook, referred to in the industry as exclusion coordination: Medicare payment is deducted from the Medicare allowable expense and plan parameters are applied to the remaining amount. Starting in 2019, the prescription drug coverage is through a Medicare Part D EGWP arrangement.
- The premium for Medicare-eligible retirees will be based on the member’s years of service. The percentage of premium paid by the member is as follows:

| Years of Service | Percent of Premium Paid by Member |
|------------------|-----------------------------------|
| < 15 | 30% |
| 15 – 19 | 25% |
| 20 – 24 | 20% |
| 25 – 29 | 15% |
| 30+ | 10% |

- The premium for dependents who are not eligible for Medicare aligns with the member’s subsidy. While a member is not Medicare-eligible, premiums are 100% of the estimated cost.
- Members have a separate defined contribution Health Reimbursement Arrangement account, which is not reflected in this valuation, that can be used to pay for premiums or other medical expenses.
- For valuation purposes, retiree premiums were assumed to equal the percentages outlined in the table above times the age-related plan costs. Future premiums calculated and charged to DCR participants will need to be determined reflecting any appropriate adjustments to the defined benefit (DB) plan data because current DB premiums were determined using information based upon enrollment with members who have double coverage.
- Coverage will continue for surviving spouses of covered retired members.

Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- Disability Benefit Adjustment: The disability benefit is increased by 75% of the cost of living increase in the preceding calendar year or 9%, whichever is less.
- Member earns service while on occupational disability.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% of the estimated cost until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

Occupational Death Benefits

- Benefit is 40% of salary.
- Survivor's Pension Adjustment: A survivor's pension is increased by 50% of the cost of living increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60 on July 1, or under age 60 if the recipient has been receiving TRS benefits for at least 8 years as of July 1.
- Benefits cease when the member would have become eligible for normal retirement.
- The period during which the survivor is receiving benefits is counted as service credit toward retiree medical benefits.
- No subsidized retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% of the estimated cost until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

Changes Since the Prior Valuation

There have been no changes in TRS DCR benefit provisions valued since the prior valuation.

Section 4.2: Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006, and was modified as part of the experience study for the period July 1, 2013 to June 30, 2017. The asset smoothing method used to determine valuation assets was implemented effective June 30, 2006.

Benefits valued are those delineated in Alaska State statutes as of the valuation date. Changes in State statutes effective after the valuation date are not taken into consideration in setting the assumptions and methods.

Actuarial Cost Method

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method, level percent of pay. Each year's difference between actual and expected unfunded actuarial accrued liability is amortized over 25 years as a level percentage of expected payroll.

Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for death and disability benefits and retiree medical benefits, from the assumed entry age to the last age with a future benefit were applied to the projected benefits to determine the normal cost (the portion of the total cost of the plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members and determining an average normal cost rate which is then related to the total DCR Plan payroll of active members. The actuarial accrued liability for active members (the portion of the total cost of the plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for beneficiaries and disabled members currently receiving benefits (if any) was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date.

Under this method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

Valuation of Assets

Effective June 30, 2006, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method was phased in over five years. Fair Value of Assets was \$0 as of June 30, 2006. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

Changes in Methods Since the Prior Valuation

There were no changes in the asset or valuation methods since the prior valuation.

Valuation of Retiree Medical and Prescription Drug Benefits

The methodology used for the valuation of the retiree medical benefits is described in Section 5.2 of the State of Alaska Teachers' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2020.

Due to the lack of experience for the DCR retiree medical plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2020 for the Defined Benefit (DB) retiree medical plan covering TRS and PERS. The DB rates were used with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels, different Medicare coordination for medical benefits, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles and out-of-pocket limits, projected FY21 claims costs were reduced 3.1% for medical claims, and 8.9% for prescription drugs. In addition, to account for the difference in Medicare coordination, projected FY21 medical claims costs for Medicare eligible retirees were further reduced 29.5%.

FY19 and FY20 experience were compared to assess the impact of COVID-19 and whether an adjustment to FY20 claims was indicated for use in the June 30, 2020 valuation. A material decrease in medical claims during March 2020 to June 2020 was experienced due to COVID-19. Therefore, an adjustment was made for those months to adjust for the decrease that is not expected to continue in future years. There was an observed spike in prescription drug claims in March 2020; however, the FY20 prescription drug experience appears reasonable to use without adjustment for COVID-19. To adjust for the decrease in medical claims due to COVID-19 during the last 4 months of FY20, the per capita cost during the first 8 months was used as the basis for estimating claims that would have occurred in the absence of COVID-19.

No implicit subsidies are assumed. Employees projected to retire with 30 years of service prior to Medicare are valued with commencement deferred to Medicare eligibility, because those members will be required to pay the full plan premium prior to Medicare. Explicit subsidies for disabled and normal retirement are determined using the plan-defined percentages of age-related total projected plan costs, again with no implicit subsidy assumed.

The State transitioned to an Employer Group Waiver Program (EGWP) for DCR participants effective January 1, 2019. The estimated 2021 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates).

Healthcare Reform

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to these provisions.

Because the State plan is retiree-only, not all provisions are required. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. The adopted DCR plan does not place lifetime limits on benefits, but does restrict dependent child coverage.

The Further Consolidated Appropriations Act, 2020 passed in December 2019 repealed several healthcare-related taxes, including the Cadillac Tax.

The Tax Cuts and Jobs Act passed in December 2017 included the elimination of the individual mandate penalty and changed the inflation measure for purposes of determining the limits for the High Cost Excise Tax to use chained CPI. It is our understanding the law does not directly impact other provisions of the ACA. While the nullification of the ACA's individual mandate penalty does not directly impact employer group health plans, it could contribute to the destabilization of the individual market and increase the number of uninsured. Such destabilization could translate to increased costs for employers. We have considered this when setting our healthcare cost trend assumptions and will continue to monitor this issue.

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. We will continue to monitor legislative activity.

Section 4.3: Summary of Actuarial Assumptions

The demographic and economic assumptions used in the June 30, 2020 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in January 2019 based on the experience study for the period July 1, 2013 to June 30, 2017.

Investment Return

7.38% per year, net of investment expenses.

Salary Scale

Salary scale rates based upon the 2013-2017 actual experience (see Table 1).

Inflation – 2.50% per year.

Productivity – 0.25% per year.

Payroll Growth

2.75% per year (inflation + productivity).

Total Inflation

Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 2.50% annually.

Mortality (Pre-Commencement)

Mortality rates based upon the 2013-2017 actual experience.

RP-2014 white-collar employee table, benefit-weighted, rolled back to 2006, and projected with MP-2017 generational improvement.

Deaths are assumed to result from occupational causes 15% of the time.

Mortality (Post-Commencement)

Mortality rates based upon the 2013-2017 actual experience.

93% of male and 90% of female rates of RP-2014 white-collar healthy annuitant table, benefit-weighted, rolled back to 2006, and projected with MP-2017 generational improvement.

Turnover

Select and ultimate rates based upon the 2013-2017 actual experience (see Table 2).

Disability

Incidence rates based upon the 2013-2017 actual experience (see Table 3).

Disabilities are assumed to be occupational 15% of the time.

Post-disability mortality in accordance with the RP-2014 disabled table, benefit-weighted, rolled back to 2006, and projected with MP-2017 generational improvement.

Retirement

Retirement rates based upon the 2013-2017 actual experience (see Table 4).

Spouse Age Difference

Males are assumed to be three years older than their wives. Females are assumed to be two years younger than husbands.

Percent Married for Occupational Death & Disability

85% of male members and 75% of female members are assumed to be married at termination from active service.

Dependent Spouse Medical Coverage Election

Applies to members who do not have double medical coverage. 65% of male members and 60% of female members are assumed to be married and cover a dependent spouse.

Part-Time Status

Part-time employees are assumed to earn 0.75 years of service per year.

Per Capita Claims Cost

Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY21 medical and prescription drugs are shown below:

| | Medical | Prescription Drugs |
|------------------------|-----------|--------------------|
| Pre-Medicare | \$ 15,360 | \$ 3,393 |
| Medicare Parts A & B | \$ 1,618 | \$ 3,340 |
| Medicare Part D – EGWP | N/A | \$ 1,003 |

Members are assumed to attain Medicare eligibility at age 65. All costs are for the 2021 fiscal year (July 1, 2020 – June 30, 2021).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the plan's Actuarial Accrued Liability), those changes will be evaluated and quantified when they occur.

Third Party Administrator Fees

\$449 per person per year; assumed to increase at 4.5% per year.

Base Claims Cost Adjustments

Due to higher initial copays, deductibles, out-of-pocket limits and member cost sharing compared to the DB medical plan, the following cost adjustments are applied to the per capita claims cost rates above:

- 0.969 for the pre-Medicare plan.
- 0.674 for both the Medicare medical plan and Medicare coordination method (3.1% reduction for the medical plan and 29.5% reduction for the coordination method).
- 0.911 for the prescription drug plan.

Administrative Expenses

Beginning with the June 30, 2018 valuation, the Normal Cost is increased for administrative expenses expected to be paid from plan assets during the year. The amounts included in the June 30, 2020 Normal Cost, which are based on the average of actual administrative expenses during the last two fiscal years, are \$0 for occupational death & disability and \$8,000 for retiree medical.

Healthcare Cost Trend

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 6.5% is applied to the FY21 pre-Medicare medical claims costs to get the FY22 medical claims costs.

| | Medical Pre-65 | Medical Post-65 | Prescription Drugs / EGWP |
|-----------|-------------------|--------------------|------------------------------|
| FY21 | 6.5% | 5.4% | 7.5% |
| FY22 | 6.3% | 5.4% | 7.1% |
| FY23 | 6.1% | 5.4% | 6.8% |
| FY24 | 5.9% | 5.4% | 6.4% |
| FY25 | 5.8% | 5.4% | 6.1% |
| FY26 | 5.6% | 5.4% | 5.7% |
| FY27-FY40 | 5.4% | 5.4% | 5.4% |
| FY41 | 5.3% | 5.3% | 5.3% |
| FY42 | 5.2% | 5.2% | 5.2% |
| FY43 | 5.1% | 5.1% | 5.1% |
| FY44 | 5.1% | 5.1% | 5.1% |
| FY45 | 5.0% | 5.0% | 5.0% |
| FY46 | 4.9% | 4.9% | 4.9% |
| FY47 | 4.8% | 4.8% | 4.8% |
| FY48 | 4.7% | 4.7% | 4.7% |
| FY49 | 4.6% | 4.6% | 4.6% |
| FY50+ | 4.5% | 4.5% | 4.5% |

For the June 30, 2014 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska.

Aging Factors

| Age | Medical | Prescription Drugs |
|---------|---------|--------------------|
| 0 – 44 | 2.0% | 4.5% |
| 45 – 54 | 2.5% | 3.5% |
| 55 – 64 | 2.5% | 1.5% |
| 65 – 74 | 3.0% | 2.0% |
| 75 – 84 | 2.0% | -0.5% |
| 85 – 94 | 0.3% | -2.5% |
| 95+ | 0.0% | 0.0% |

Retiree Medical Participation

| Decrement Due to Disability | | Decrement Due to Retirement | |
|-----------------------------|-----------------------|-----------------------------|-------------------------|
| Age | Percent Participation | Age | Percent Participation* |
| < 56 | 75.0% | 55 | 50.0% |
| 56 | 77.5% | 56 | 55.0% |
| 57 | 80.0% | 57 | 60.0% |
| 58 | 82.5% | 58 | 65.0% |
| 59 | 85.0% | 59 | 70.0% |
| 60 | 87.5% | 60 | 75.0% |
| 61 | 90.0% | 61 | 80.0% |
| 62 | 92.5% | 62 | 85.0% |
| 63 | 95.0% | 63 | 90.0% |
| 64 | 97.5% | 64 | 95.0% |
| 65+ | 100.0% | 65+ | Years of Service |
| | | < 15 | 75.0% |
| | | 15 – 19 | 80.0% |
| | | 20 – 24 | 85.0% |
| | | 25 – 29 | 90.0% |
| | | 30+ | 95.0% |

* Participation assumption is a combination of (i) the service-based rates for retirement from employment at age 65+ and (ii) the age-based rates for retirement from employment before age 65. These rates reflect the expected plan election rate that varies by reason for decrement, duration that a member may pay full cost prior to Medicare eligibility, and availability of alternative and/or lower cost options, particularly in the Medicare market. This assumption is based on observed trends in participation from a range of other plans.

Imputed Data

Data changes from the prior year which are deemed to have immaterial impact on liabilities and contribution rates are assumed to be correct in the current year's client data. Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.

Changes in Assumptions Since the Prior Valuation

The amount included in the Normal Cost for administrative expenses was changed from \$4,700 to \$8,000 for retiree medical, while occupational death & disability remained at \$0 (based on the most recent two years of actual administrative expenses paid from plan assets). The per capita claims cost assumption is updated annually. The medical and prescription drug relative value factors were updated and the 0.2% annual trend rate adjustment factor between the DB and DCR plans was removed.

Table 1: Salary Scale

| Years of Service | Percent Increase |
|-------------------------|-------------------------|
| 0 | 6.75% |
| 1 | 6.25% |
| 2 | 5.75% |
| 3 | 5.25% |
| 4 | 4.75% |
| 5 | 4.25% |
| 6 | 3.75% |
| 7 | 3.65% |
| 8 | 3.55% |
| 9 | 3.45% |
| 10 | 3.35% |
| 11 | 3.25% |
| 12 | 3.15% |
| 13 | 3.05% |
| 14 | 2.95% |
| 15 | 2.85% |
| 16+ | 2.75% |

Table 2: Turnover Rates

Select Rates during the First 6 Years of Employment

| Years of Service | Male | Female |
|------------------|--------|--------|
| 0 | 20.70% | 21.80% |
| 1 | 19.55% | 18.70% |
| 2 | 16.10% | 15.40% |
| 3 | 13.80% | 13.20% |
| 4 | 11.50% | 11.00% |
| 5 | 7.32% | 8.05% |

Ultimate Rates after the First 6 Years of Employment

| Age | Male | Female | Age | Male | Female |
|------|-------|--------|-----|-------|--------|
| < 26 | 9.41% | 8.31% | 45 | 9.05% | 8.09% |
| 26 | 9.41% | 8.32% | 46 | 8.99% | 8.07% |
| 27 | 9.40% | 8.33% | 47 | 8.94% | 8.04% |
| 28 | 9.39% | 8.32% | 48 | 8.86% | 8.00% |
| 29 | 9.39% | 8.32% | 49 | 8.78% | 7.95% |
| 30 | 9.38% | 8.31% | 50 | 8.70% | 7.91% |
| 31 | 9.37% | 8.31% | 51 | 8.62% | 7.86% |
| 32 | 9.36% | 8.30% | 52 | 8.54% | 7.82% |
| 33 | 9.35% | 8.29% | 53 | 8.37% | 7.73% |
| 34 | 9.35% | 8.28% | 54 | 8.20% | 7.64% |
| 35 | 9.34% | 8.27% | 55 | 8.03% | 7.55% |
| 36 | 9.34% | 8.26% | 56 | 7.86% | 7.46% |
| 37 | 9.33% | 8.25% | 57 | 7.69% | 7.36% |
| 38 | 9.31% | 8.24% | 58 | 7.76% | 7.50% |
| 39 | 9.29% | 8.22% | 59 | 7.82% | 7.64% |
| 40 | 9.26% | 8.21% | 60 | 7.89% | 7.78% |
| 41 | 9.24% | 8.19% | 61 | 7.95% | 7.92% |
| 42 | 9.22% | 8.17% | 62 | 8.02% | 8.05% |
| 43 | 9.16% | 8.15% | 63 | 8.59% | 8.29% |
| 44 | 9.11% | 8.12% | 64 | 9.17% | 8.52% |
| | | | 65+ | 9.75% | 8.75% |

Table 3: Disability Rates

| Age | Male | Female |
|------------|-------------|---------------|
| < 31 | 0.0337% | 0.0612% |
| 31 | 0.0337% | 0.0613% |
| 32 | 0.0337% | 0.0613% |
| 33 | 0.0342% | 0.0622% |
| 34 | 0.0347% | 0.0631% |
| 35 | 0.0353% | 0.0641% |
| 36 | 0.0357% | 0.0650% |
| 37 | 0.0362% | 0.0659% |
| 38 | 0.0371% | 0.0674% |
| 39 | 0.0379% | 0.0689% |
| 40 | 0.0387% | 0.0703% |
| 41 | 0.0395% | 0.0718% |
| 42 | 0.0403% | 0.0733% |
| 43 | 0.0423% | 0.0770% |
| 44 | 0.0443% | 0.0806% |
| 45 | 0.0464% | 0.0843% |
| 46 | 0.0483% | 0.0879% |
| 47 | 0.0504% | 0.0916% |
| 48 | 0.0536% | 0.0975% |
| 49 | 0.0569% | 0.1034% |
| 50 | 0.0601% | 0.1093% |
| 51 | 0.0634% | 0.1152% |
| 52 | 0.0666% | 0.1211% |
| 53 | 0.0746% | 0.1356% |
| 54 | 0.0826% | 0.1501% |

Table 4: Retirement Rates

| Age | Rate |
|------------|-------------|
| < 55 | 2.0% |
| 55 | 3.0% |
| 56 | 3.0% |
| 57 | 3.0% |
| 58 | 3.0% |
| 59 | 3.0% |
| 60 | 5.0% |
| 61 | 5.0% |
| 62 | 10.0% |
| 63 | 5.0% |
| 64 | 5.0% |
| 65 | 25.0% |
| 66 | 25.0% |
| 67 | 25.0% |
| 68 | 20.0% |
| 69 | 20.0% |
| 70+ | 100.0% |

Glossary of Terms

Actuarial Accrued Liability

Total accumulated cost to fund pension or postemployment benefits arising from service in all prior years.

Actuarial Cost Method

Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension or postemployment plan for a group of plan members to the years of service that give rise to that cost.

Actuarial Present Value of Projected Benefits

Amount which, together with future interest, is expected to be sufficient to pay all future benefits.

Actuarial Valuation

Study of probable amounts of future pension or postemployment benefits and the necessary amount of contributions to fund those benefits.

Actuary

Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.

GASB 74 and 75

Governmental Accounting Standards Board Statement Number 74 amends Number 43 effective for the fiscal year beginning after June 15, 2016 and defines new financial reporting requirements for public postemployment benefit plans. Governmental Accounting Standards Board Statement Number 75 amends Number 45 effective for fiscal years beginning after June 15, 2017 and defines new accounting and financial reporting requirements for employers sponsoring public postemployment benefit plans.

Normal Cost

That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.

Rate Payroll

Members' earnings used to determine contribution rates.

Unfunded Actuarial Accrued Liability (UAAL)

The portion of the actuarial accrued liability not offset by plan assets.

Valuation Payroll

Members' earnings used to determine Normal Cost and Actuarial Accrued Liability.

Vested Benefits

Benefits which are unconditionally guaranteed regardless of employment.