

Tiburon Fire Protection District

**GASB 75 OPEB Valuation Report Measured as of June 30, 2020
for Disclosures for the Fiscal Year Ending June 30, 2020**

September 15, 2020



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September 15, 2020

Heidi Rosevear
Finance Officer
Tiburon Fire Protection District
1679 Tiburon Boulevard
Tiburon, California 94920

Re: Tiburon Fire Protection District GASB 75 OPEB Valuation Measured as of June 30, 2020

Dear Ms. Rosevear:

At your request, we completed an actuarial valuation of the retiree health and welfare benefits measured as of June 30, 2020, for the Tiburon Fire Protection District. This is a roll-forward of the valuation produced for the fiscal year ending June 30, 2019. Please use the information in this report for your financial statements for the fiscal year ending June 30, 2020. This valuation is based on input from the District and from CalPERS, as well as our understanding of GASB Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions" (GASB 75).

We greatly appreciate your business. If you have any questions, please feel free to call us at (415) 801-5987.

Best Regards,

A handwritten signature in blue ink that reads "Roger T. Burton".

Roger T. Burton, FSA, MAAA, FCA



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Purpose of the Report

Precision Actuarial prepared this report to meet employer financial accounting requirements under GASB Statement No. 75 “Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions” (GASB 75), issued in June 2015. This report includes information with respect to the obligation to provide future retiree health and welfare benefits for the fiscal year ending June 30, 2020.

Valuation Date: June 30, 2019

Measurement Date: June 30, 2020

Report Date: June 30, 2020

Application to Financials

This report provides assets, liabilities, and expenses for use in the District's 2020 financial reports.

The District should use the liabilities, assets, and expense measured as of June 30, 2020, for its financial statements for the year ending June 30, 2020.

Update procedures were used to roll the total OPEB liability forward to the measurement date.

The report also provides the actuarially determined contributions for funding purposes for reporting for the fiscal years ending June 30 for 2019, 2020, and 2021.

Changes Since the Prior Valuation

This valuation is a roll-forward of the valuation produced for the prior fiscal year. We updated:

- Discount rate from 7.59% to 7.67%
- Benefit payments
- Contributions
- Assets

Actuarial Certification

Our determinations reflect the provisions and methods prescribed by GASB 75. In preparing this report, we relied on assets, employee census, plan design, premium rates, and administrative fees provided directly or indirectly by the plan sponsor, and demographic assumptions provided by CalPERS. CalPERS' actuaries set the premium rates using community rating. We did not attempt to verify that the community-rated premium rates represent the true cost of claims and administrative fees.

Actuarial Certification *(continued)*

We based the results in this report on this information, along with the actuarial assumptions and methods used herein. In our opinion, the assumptions used represent reasonable expectations of anticipated plan experience. We reviewed the census information for reasonableness, but we did not audit it.

Actuarial computations under GASB 75 fulfill employer accounting and financial reporting requirements. The calculations are consistent with our understanding of GASB 75. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results in our report. Accordingly, additional determinations may be necessary for other purposes, such as judging benefit security at termination.

No third-party recipient of Precision Actuarial's work product should rely solely on Precision Actuarial's work product. Any third-party recipient should engage qualified professionals for advice appropriate to their own needs.

Tiburon Fire Protection District beyond the contractual services that we perform for the Tiburon Fire Protection District.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, the report is complete and accurate and that we prepared it in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable "Actuarial Standards of Practice" and "Actuarial Compliance Guidelines" as promulgated by the American Academy of Actuaries.

The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Roger T. Burton, FSA, MAAA, FCA

Chief Actuary

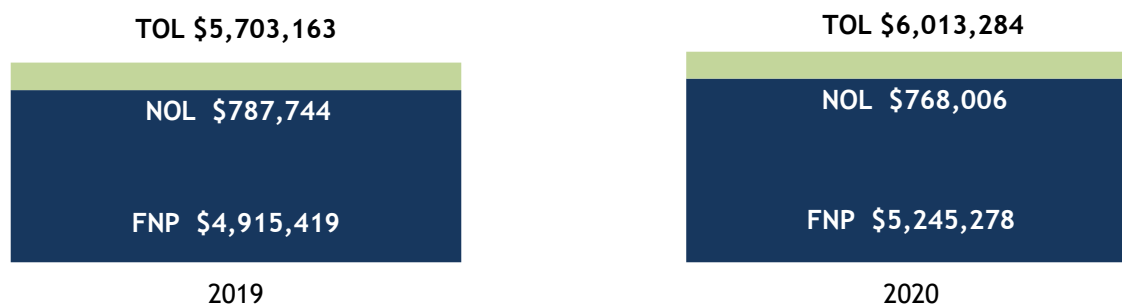
Executive Summary

Accounting Summary

A summary of the key valuation results follows.

| | Valuation Date: | June 30, 2019 | June 30, 2019 |
|---|---------------------|---------------------|---------------------|
| | Measurement Date: | June 30, 2019 | June 30, 2020 |
| | Report Date: | June 30, 2019 | June 30, 2020 |
| Present Value of Future Benefits | | | |
| Active Employees | \$ | 4,998,133 | \$ 5,289,501 |
| Retirees | + | 3,418,807 | 3,329,575 |
| Total Present Value of Future Benefits | = | 8,416,940 | 8,619,076 |
| Total Present Value of Future Normal Costs | - | 2,713,777 | 2,605,792 |
| Total OPEB Liability (TOL) | = | \$ 5,703,163 | \$ 6,013,284 |
| OPEB Liability | | | |
| Active Employees | \$ | 2,284,356 | \$ 2,683,709 |
| Retirees | + | 3,418,807 | 3,329,575 |
| Total OPEB Liability (TOL) | = | 5,703,163 | 6,013,284 |
| Fiduciary Net Position (FNP) | - | 4,915,419 | 5,245,278 |
| Net OPEB Liability (NOL) | = | \$ 787,744 | \$ 768,006 |
| Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability | | 86.19% | 87.23% |
| Covered-Employee Payroll | \$ | 2,598,338 | \$ 2,669,792 |
| Net OPEB Liability as a Percentage of Covered-Employee Payroll | | 30.32% | 28.77% |
| | Measurement Period: | 2018-2019 | 2019-2020 |
| | Reporting Period: | 2018-2019 | 2019-2020 |
| Expense | \$ | 209,513 | \$ 252,611 |
| Actuarially Determined Contribution (ADC)* | | 437,135 | 385,366 |

Net Position Chart



*The Actuarially Determined Contribution includes the implicit subsidy. It is not the amount that the District contributes directly to the fund. See page 13 for the District's direct contribution.

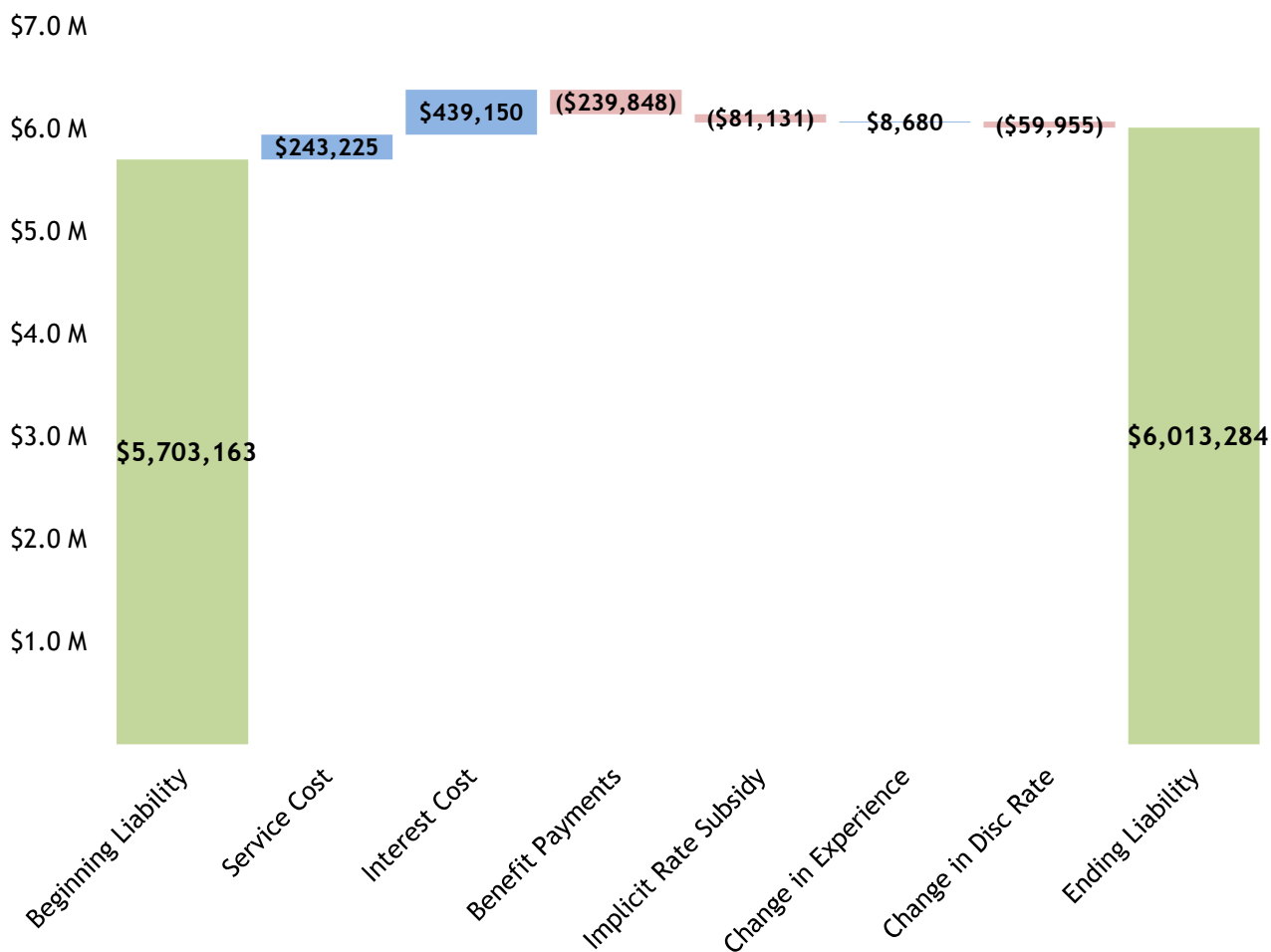
Executive Summary

Reconciliation of the Change in the Total OPEB Liability

A reconciliation of the changes to the Total OPEB Liability since the prior valuation report follow.

| | |
|--|---------------------|
| Total OPEB Liability as of Measurement Date June 30, 2019 / Report Date June 30, 2019 | \$ 5,703,163 |
| Service Cost | 243,225 |
| Interest Cost | 439,150 |
| Benefit Payments | (239,848) |
| Implicit Subsidy Credit | (81,131) |
| Change in Experience (Actual versus Expected) | 8,680 |
| Change in Discount Rate from 7.59% to 7.67% | (59,955) |
| Total OPEB Liability as of Measurement Date June 30, 2020 / Report Date June 30, 2020 | \$ 6,013,284 |

Reconciliation of the Change in the Total OPEB Liability



Accounting Information

Statement of Fiduciary Net Position

| | Measurement Date: | June 30, 2020 |
|--|-------------------|----------------------|
| | Report Date: | <u>June 30, 2020</u> |
| Assets | | |
| Cash and Deposits | \$ | - |
| Securities Lending Cash Collateral | | - |
| Total Cash | | - |
| Receivables: | | |
| Contributions | | - |
| Due from Broker for Investments Sold | | - |
| Investment Income (Interest on Investments) | | - |
| Other | | - |
| Total Receivables | | - |
| Investments: | | |
| Domestic Fixed Income Securities | | - |
| Domestic Equities | | - |
| Investment Funds | | 5,245,278 |
| International Equities | | - |
| Real Estate | | - |
| Total Investments | | <u>5,245,278</u> |
| Total Assets | \$ | <u>5,245,278</u> |
| Liabilities | | |
| Payables: | | |
| Investment Management Fees | \$ | - |
| Due to Broker for Investments Purchased | | - |
| Collateral Payable for Securities Lending | | - |
| Other | | - |
| Total Liabilities | \$ | - |
| Net Position Restricted for Postemployment Benefits Other than Pensions | \$ | 5,245,278 |

Accounting Information

Statement of Changes to the Fiduciary Net Position

| | Measurement Date: Report Date: | June 30, 2019 June 30, 2019 | June 30, 2020 June 30, 2020 |
|--|-----------------------------------|--------------------------------|--------------------------------|
| Additions | | | |
| Investment Income: | | | |
| Net Appreciation in the Fair Value of Investments | | \$ 255,655 | \$ 174,121 |
| Interest and Dividends | | - | - |
| Less Investment Expense, Other than from Securities Lending | | 1,376 | 1,800 |
| Net Income from Investing, Other than from Securities Lending | | 254,279 | 172,321 |
| Securities Lending Income | | - | - |
| Less Securities Lending Expense | | - | - |
| Net Income from Securities Lending | | - | - |
| Other Income/(Expense) | | - | - |
| Net Investment Income (a) | | 254,279 | 172,321 |
| Contributions: | | | |
| Employer – District’s Contribution | | 1,225,049 | 399,848 |
| Employer – Implicit Subsidy | | 90,445 | 81,131 |
| Total Contributions (b) | | 1,315,494 | 480,979 |
| Total Additions (c) = (a) + (b) | | 1,569,773 | 653,300 |
| Deductions | | | |
| Benefit Payments | | 243,049 | 239,848 |
| Implicit Subsidy Credit | | 90,445 | 81,131 |
| Administrative Expense | | 1,881 | 2,462 |
| Total Deductions (d) | | 335,375 | 323,441 |
| Net Increase in Net Position = (c) – (d) | | 1,234,398 | 329,859 |
| Net Position Restricted for Postemployment Benefits Other than Pensions | | | |
| Beginning of Year | | 3,681,021 | 4,915,419 |
| Net Increase in Net Position | | 1,234,398 | 329,859 |
| End of Year | | \$ 4,915,419 | \$ 5,245,278 |

Accounting Information

Changes in the Net OPEB Liability

The funded status of the Plan as of the fiscal year-end, as well as other required disclosure information, follows.

| | <i>Increase / (Decrease)</i> | | |
|---|--------------------------------|---------------------------------------|--|
| | Total OPEB Liability (a) | Plan Fiduciary Net Position (b) | Net OPEB Liability (c) = (a) – (b) |
| Balance as of Measurement Date June 30, 2019 / Report Date June 30, 2019 | <u>\$ 5,703,163</u> | <u>\$ 4,915,419</u> | <u>\$ 787,744</u> |
| Changes for the year: | | | |
| Service Cost | 243,225 | | 243,225 |
| Interest | 439,150 | | 439,150 |
| Changes of Benefit Terms | - | | - |
| Differences Between Expected and Actual Experience | 8,680 | | 8,680 |
| Changes of Assumptions | (59,955) | | (59,955) |
| Net Investment Income | | 172,321 | (172,321) |
| Contributions | | | |
| Employer – District's Contribution | | 399,848 | (399,848) |
| Employer – Implicit Subsidy | | 81,131 | (81,131) |
| Benefit Payments | (239,848) | (239,848) | - |
| Implicit Subsidy Credit | (81,131) | (81,131) | - |
| Administrative Expense | | (2,462) | 2,462 |
| Other Changes | - | - | - |
| Net Changes | <u>310,121</u> | <u>329,859</u> | <u>(19,738)</u> |
| Balance as of Measurement Date June 30, 2020 / Report Date June 30, 2020 | <u>\$ 6,013,284</u> | <u>\$ 5,245,278</u> | <u>\$ 768,006</u> |

Accounting Information

Development of Deferred Outflows and Inflows of Resources

Balances as of Measurement Date June 30, 2020 / Report Date June 30, 2020

Deferred Outflows and Inflows of Resources Arising from Differences Between Expected and Actual Experience

| Measurement Date – June 30: | Experience Losses (a) | Experience Gains (b) | Amounts Recognized in Expense Through Measurement Date June 30, 2020 (c) | Deferred Outflows of Resources (a) - (c) | Deferred Inflows of Resources (b) - (c) |
|-----------------------------|-----------------------|----------------------|--|--|---|
| 2017 | \$ - | \$ - | \$ - | \$ - | \$ - |
| 2018 | 6,968 | - | 2,826 | 4,142 | - |
| 2019 | - | (148,226) | (34,878) | - | (113,348) |
| 2020 | 8,680 | - | 1,022 | 7,658 | - |
| Total | | | | \$ 11,800 | \$ (113,348) |

Deferred Outflows and Inflows of Resources Arising from Changes in Assumptions

| Measurement Date – June 30: | Increase in Total Liability (a) | Decrease in Total Liability (b) | Amounts Recognized in Expense Through Measurement Date June 30, 2020 (c) | Deferred Outflows of Resources (a) - (c) | Deferred Inflows of Resources (b) - (c) |
|-----------------------------|---------------------------------|---------------------------------|--|--|---|
| 2017 | \$ - | \$ - | \$ - | \$ - | \$ - |
| 2018 | - | (158,458) | (64,242) | - | (94,216) |
| 2019 | - | (514,604) | (121,084) | - | (393,520) |
| 2020 | - | (59,955) | (7,054) | - | (52,901) |
| Total | | | | \$ - | \$ (540,637) |

Accounting Information

Development of Deferred Outflows and Inflows of Resources

Balances as of Measurement Date June 30, 2020 / Report Date June 30, 2020

Deferred Outflows and Inflows of Resources Arising from Differences Between Projected and Actual Earnings on Investments

| Measurement Date – June 30: | Investment Earnings Less Than Projected (a) | Investment Earnings Greater Than Projected (b) | Amounts Recognized in Expense Through Measurement Date June 30, 2020 (c) | Deferred Outflows of Resources (d) = (a) – (c) | Deferred Inflows of Resources (e) = (b) – (c) | Net (f) = (d) + (e) |
|-----------------------------|---|--|--|--|---|---------------------|
| 2017 | - | - | - | - | - | - |
| 2018 | - | (18,278) | (10,968) | - | (7,310) | |
| 2019 | 60,930 | - | 24,372 | 36,558 | - | |
| 2020 | 204,938 | - | 40,988 | 163,950 | - | |
| Total | | | | \$ 200,508 | \$ (7,310) | \$ 193,198 |

Accounting Information

Expense and Deferred Outflows and Inflows

| | Measurement Period: | 2018-2019 | 2019-2020 |
|---|---------------------|----------------|-------------------|
| | Reporting Period: | 2018-2019 | 2019-2020 |
| Expense | | | |
| Service Cost | \$ | 198,667 | \$ 243,225 |
| Interest on Total OPEB Liability | | 414,097 | 439,150 |
| Changes of Benefit Terms | | - | - |
| Recognized Differences Between Expected and Actual Experience | | (16,497) | (15,475) |
| Recognized Changes of Assumptions | | (81,956) | (89,010) |
| Projected Earnings on OPEB Plan Investments | | (315,209) | (377,259) |
| Recognized Differences Between Projected and Actual Earnings | | 8,530 | 49,518 |
| Administrative Expense | | 1,881 | 2,462 |
| Other Miscellaneous (Income)/Expense | | - | - |
| Total Expense | \$ | 209,513 | \$ 252,611 |

Deferred Outflows and Inflows of Resources

| | Report Year Ending June 30, 2020 | |
|--|----------------------------------|-------------------------------|
| | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences Between Expected and Actual Experience | \$ 11,800 | \$ (113,348) |
| Changes of Assumptions | - | (540,637) |
| Net Difference Between Projected and Actual Earnings on Plan Investments | 193,198 | - |
| Contributions Subsequent to the Measurement Date | - | - |
| Total | \$ 204,998 | \$ (653,985) |

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

| | Report Year Ending June 30: | Amount |
|--|-----------------------------|-------------|
| | 2021 | \$ (54,967) |
| | 2022 | (54,965) |
| | 2023 | (51,311) |
| | 2024 | (63,499) |
| | 2025 | (92,199) |
| | Remaining | (132,046) |

Accounting Information

Reconciliation of Expense

| | Total OPEB Liability | Plan Fiduciary Net Position | Net OPEB Liability | Deferred (Inflows) | Deferred Outflows | Net Investment (Inflows)/ Outflows | Net Deferrals | Net OPEB Liability plus Net Deferrals | Annual Expense |
|---|-------------------------|--------------------------------|-----------------------|-----------------------|----------------------|--|---------------|---|-------------------|
| Balance as of Measurement Date June 30, 2019 / Report Date June 30, 2019 | \$ (5,703,163) | \$ 4,915,419 | \$ (787,744) | \$ (700,479) | \$ 5,084 | \$ 37,778 | \$ (657,617) | \$ (1,445,361) | |
| Service Cost | (243,225) | | (243,225) | | | | | | \$ 243,225 |
| Interest on Total OPEB Liability | (439,150) | | (439,150) | | | | | | 439,150 |
| Effect of Changes of Benefit Terms | - | | - | | | | | | - |
| Effect of Liability Gains or Losses | (8,680) | | (8,680) | - | 8,680 | | 8,680 | | |
| Effect of Assumption Changes or Inputs | 59,955 | | 59,955 | (59,955) | - | | (59,955) | | |
| Expected Investment Income (Net of Investment Expenses) | | 377,259 | 377,259 | | | | | | (377,259) |
| Investment Gains or Losses on Expected Return | | (204,938) | (204,938) | | | 204,938 | 204,938 | | |
| Contributions | | | | | | | | | |
| Employer – District's Contribution | | 399,848 | 399,848 | | | | | 399,848 | |
| Employer – Implicit Subsidy | | 81,131 | 81,131 | | | | | 81,131 | |
| Benefit Payments | 239,848 | (239,848) | - | | | | | | |
| Implicit Subsidy Credit | 81,131 | (81,131) | - | | | | | | |
| Administrative Expenses | | (2,462) | (2,462) | | | | | | 2,462 |
| Other Income/(Expense) | | - | - | | | | | | - |
| Recognition of Liability Gains or Losses | | | | 17,439 | (1,964) | | 15,475 | | (15,475) |
| Recognition of Assumption Changes or Inputs | | | | 89,010 | - | | 89,010 | | (89,010) |
| Recognition of Investment Gains or Losses | | | | | | (49,518) | (49,518) | | 49,518 |
| Annual Expense | | | | | | | | (252,611) | \$ 252,611 |
| Balance as of Measurement Date June 30, 2020 / Report Date June 30, 2020 | \$ (6,013,284) | \$ 5,245,278 | \$ (768,006) | \$ (653,985) | \$ 11,800 | \$ 193,198 | \$ (448,987) | \$ (1,216,993) | |

Accounting Information

Amortization of Unfunded Actuarial Accrued Liability

A summary of the information used to establish the amortization amount for the current year, with respect to the Unfunded Actuarial Accrued Liability (UAAL), follows. We recalculate the amortization of the UAAL each fiscal year.

| | Measurement Period: | 2018-2019 | 2019-2020 | 2020-2021 |
|---|----------------------------|-------------------------|-------------------------|-------------------------|
| | Reporting Period: | <u>2018-2019</u> | <u>2019-2020</u> | <u>2020-2021</u> |
| Actuarial Accrued Liability (AAL) – Beginning of Fiscal Year* | | \$ 6,086,723 | \$ 6,066,235 | \$ 6,013,284 |
| Actuarial Value of Plan Assets, Beginning of Fiscal Year | - | <u>3,681,021</u> | <u>4,915,419</u> | <u>5,245,278</u> |
| Unfunded Actuarial Accrued Liability (UAAL), Beginning of Fiscal Year | = | <u>\$ 2,405,702</u> | <u>\$ 1,150,816</u> | <u>\$ 768,006</u> |
| | | | | |
| Interest Rate Used to Determine Amortization Payment | | 7.28% | 7.28% | 7.67% |
| Assumed Rate of Payroll Growth | | 2.750% | 2.750% | 2.750% |
| Amortization Period | | 15 years | 14 years | 13 years |
| Amount Recognized, Beginning of Year | | \$ 213,202 | \$107,182 | \$ 77,032 |

*2019-2020 values from prior report.

Accounting Information

Actuarially Determined Contribution (ADC)

The calculation of the Actuarially Determined Contribution (ADC) follows. The ADC is based on the District's funding policy. The ADC is calculated as of the middle of the year.

| | Measurement Period: | 2018-2019 | 2019-2020 | 2020-2021 |
|--|---------------------|-------------------|-------------------|-------------------|
| | Reporting Period: | 2018-2019 | 2019-2020 | 2020-2021 |
| Service Cost | | \$ 198,667 | \$ 243,225 | \$ 239,272 |
| Amortization of the Unfunded Actuarial Accrued Liability | | 213,202 | \$107,182 | 77,032 |
| Interest to the End of the Year | | 29,984 | 26,596 | 24,260 |
| ADC | | \$ 441,853 | \$ 377,003 | \$ 340,564 |
| ADC as a Percentage of Payroll | | 17.01% | 14.12% | 12.41% |
| Discount Rate for ADC Calculation | | 7.28% | 7.28% | 7.67% |

ADC Components

| | | | |
|--|-------------------|-------------------|-------------------|
| District's Contribution to the Trust Fund* | \$ 103,641 | \$ 64,387 | \$ 6,186 |
| Credit for Retiree Benefit Payments | 243,049 | 239,848 | 247,917 |
| Credit for Implicit Subsidy | 90,445 | 81,131 | 86,461 |
| Total Adjusted ADC* | \$ 437,135 | \$ 385,366 | \$ 340,564 |

District's Funding Policy

The District's funding policy is to contribute the full amount of the ADC each year.

The ADC is the sum of the service cost and the amortization of the unfunded liability. For payment of the ADC, however, it comprises three parts: the benefit payments paid directly by the District (not through the Trust Fund), the implicit subsidy, and the contribution to the Trust Fund. The contribution to the Trust Fund is the ADC, in total, less the benefit payments and the implicit subsidy.

The District is amortizing the UAAL on a closed basis. Remaining years of amortization as of the report date of June 30, 2020:

13

The discount rate assumed for ADC calculations is the expected long-term rate of return:

7.67%

The UAAL is amortized using a level percent of pay method.

Projections for fiscal year-end 2021 use an estimated expected rate of return, contributions, and benefit payments. We recommend that the District update these values for its 2021 financial statements.

*The ADC is adjusted to use the actual benefit payments (instead of the expected benefit payments) in the measurement periods 2018-2019 and 2019-2020. Contributions to the Trust Fund were calculated in the prior report based on expected benefit payments.

Accounting Information

Interest on Total OPEB Liability and Total Projected Earnings

| | Amount for Period (a) | Portion of Period (b) | Interest Rate (c) | Interest on the Total OPEB Liability (d) = (a) × (b) × (c) |
|---|-----------------------------|-----------------------------|----------------------|--|
| Interest on Total OPEB Liability | | | | |
| Beginning Total OPEB Liability | \$ 5,703,163 | 100% | 7.59% | \$ 432,870 |
| Service Cost | 243,225 | 100% | 7.59% | 18,461 |
| Benefit Payments | (239,848) | 50% | 7.59% | (9,102) |
| Implicit Subsidy | (81,131) | 50% | 7.59% | (3,079) |
| Total Interest on Total OPEB Liability | | | | <u>\$ 439,150</u> |

| | Amount for Period (a) | Portion of Period (b) | Projected Rate of Return (c) | Projected Earnings (d) = (a) × (b) × (c) |
|--|-----------------------------|-----------------------------|------------------------------------|---|
| Projected Earnings on Plan Investments | | | | |
| Beginning Plan Fiduciary Net Position excluding Receivables | \$ 4,915,419 | 100% | 7.59% | \$ 373,080 |
| Employer Contributions | 160,000 | 50% | 7.59% | 6,072 |
| Benefit Payments from Trust | - | 50% | 7.59% | - |
| Administrative Expense | (2,462) | 50% | 7.59% | (93) |
| Other Miscellaneous Income/ (Expense) | - | 100% | 7.59% | - |
| Total Projected Earnings | | | | 379,059 |
| (Investment Expense) | | | | (1,800) |
| Net Projected Earnings | | | | <u>\$ 377,259</u> |

Accounting Information

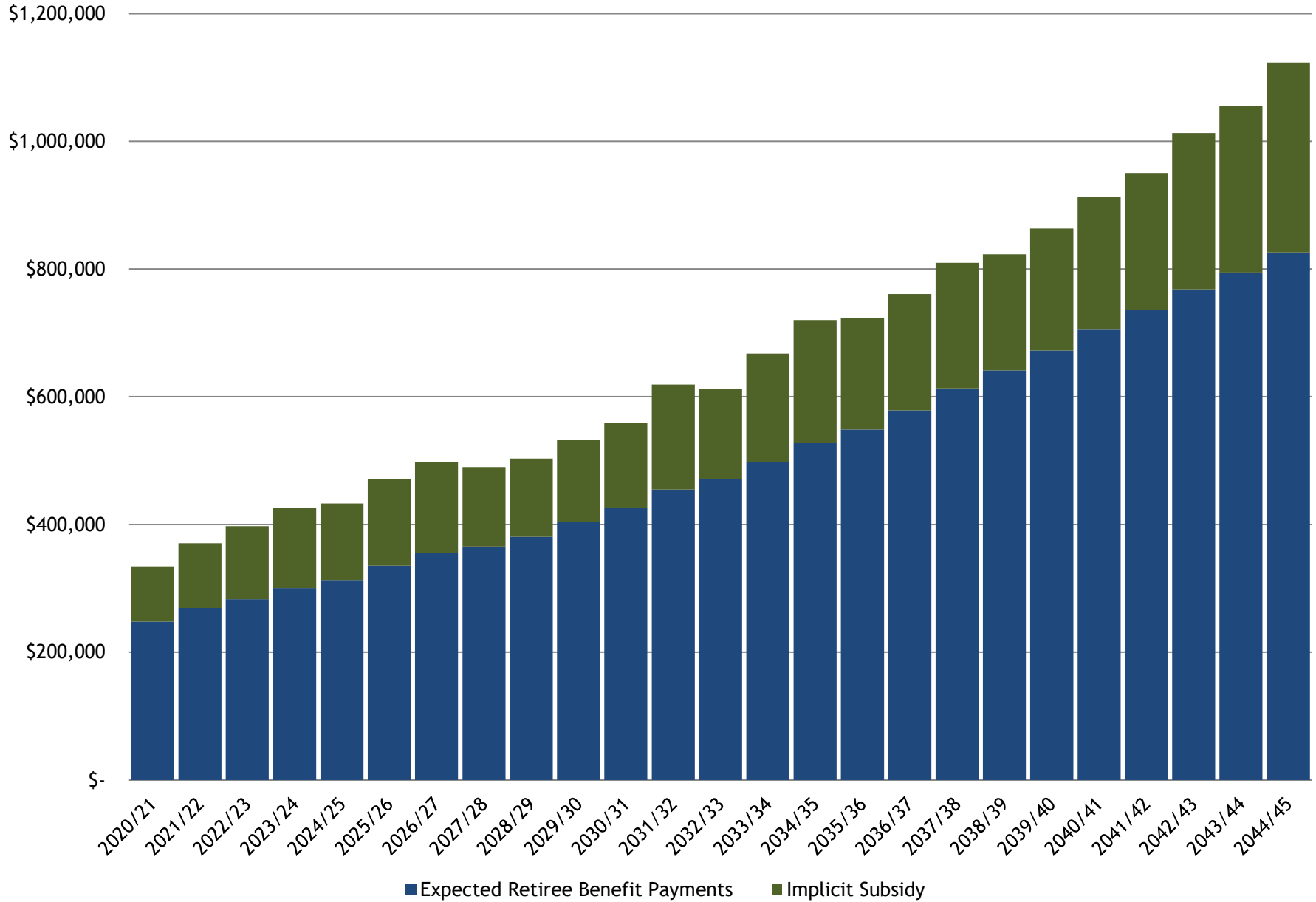
OPEB Cash-Flow Projections

OPEB cash-flow projections for current participants for the next twenty-five years follow.

| Measurement Period Ending June 30: | Expected Retiree | | Total Expected |
|--|------------------|------------------|------------------------------|
| | Benefit Payments | Implicit Subsidy | Credited Benefit Payments |
| 2021 | \$ 247,917 | \$ 86,461 | \$ 334,378 |
| 2022 | 269,323 | 101,199 | 370,522 |
| 2023 | 282,888 | 114,506 | 397,394 |
| 2024 | 300,464 | 126,067 | 426,531 |
| 2025 | 312,794 | 120,004 | 432,798 |
| 2026 | 335,286 | 135,915 | 471,201 |
| 2027 | 355,861 | 142,214 | 498,075 |
| 2028 | 365,435 | 124,488 | 489,923 |
| 2029 | 380,588 | 122,455 | 503,043 |
| 2030 | 403,947 | 128,735 | 532,682 |
| 2031 | 425,275 | 134,269 | 559,544 |
| 2032 | 454,593 | 164,479 | 619,072 |
| 2033 | 471,093 | 141,407 | 612,500 |
| 2034 | 497,676 | 169,958 | 667,634 |
| 2035 | 527,980 | 192,211 | 720,191 |
| 2036 | 548,823 | 174,778 | 723,601 |
| 2037 | 578,806 | 181,862 | 760,668 |
| 2038 | 612,938 | 196,745 | 809,683 |
| 2039 | 641,117 | 181,944 | 823,061 |
| 2040 | 672,351 | 190,869 | 863,220 |
| 2041 | 704,998 | 207,791 | 912,789 |
| 2042 | 735,585 | 214,649 | 950,234 |
| 2043 | 768,106 | 244,515 | 1,012,621 |
| 2044 | 794,527 | 261,142 | 1,055,669 |
| 2045 | 825,974 | 297,176 | 1,123,150 |

Accounting Information

OPEB Cash-Flow Projections for Current Participants



Accounting Information

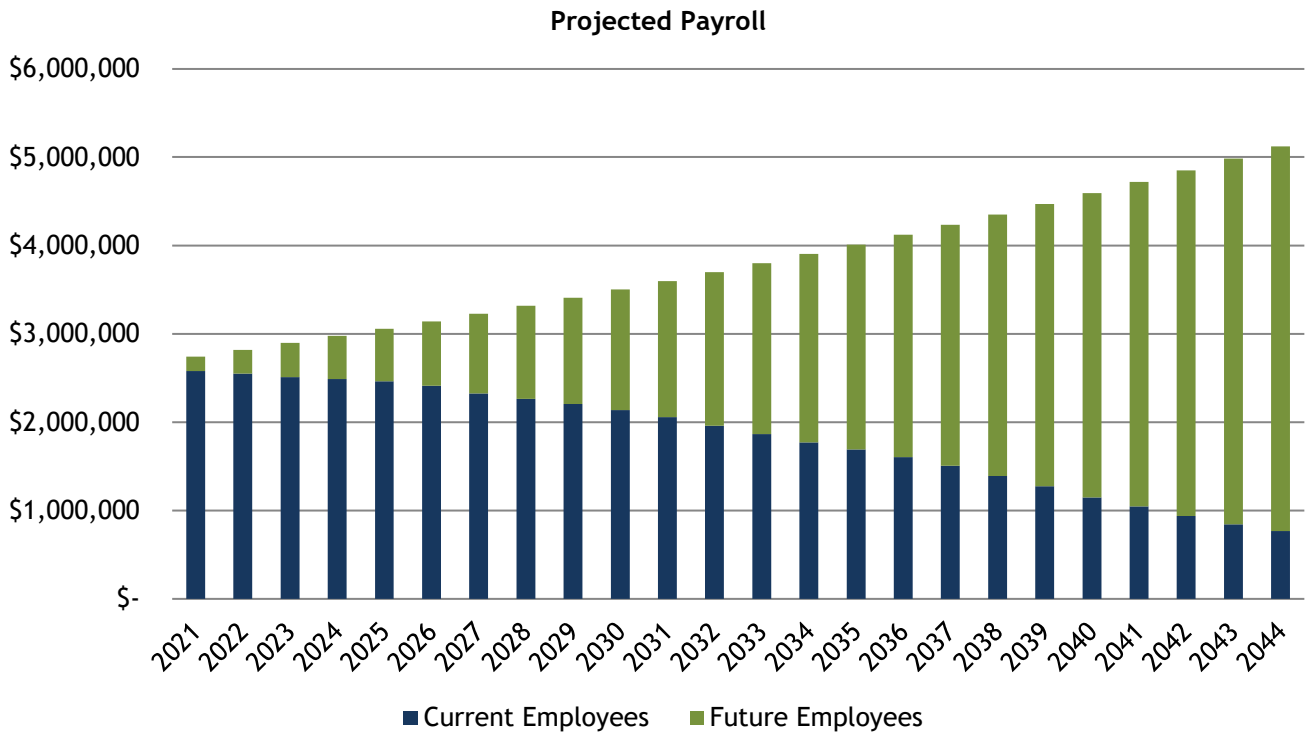
Projection of Contributions

| Measurement Period Ending June 30: | Payroll for Current Employees (a) | Payroll for Future Employees (b) | Total Employee Payroll (c) | Employer Contributions Related to Payroll of all Plan Members | | |
|--|---|--|----------------------------------|--|--|------------|
| | | | | Portion of Employer Contribution for Current Plan Members (d) = (f) - (e) | Employer Contributions Related to Payroll of Future Plan Members (e) = (b) x 9.39% | |
| 2021 | \$ 2,578,609 | \$ 164,602 | \$ 2,743,211 | \$ 325,106 | \$ 15,458 | \$ 340,564 |
| 2022 | 2,547,708 | 270,941 | 2,818,649 | 324,484 | 25,445 | 349,929 |
| 2023 | 2,510,368 | 385,794 | 2,896,162 | 323,322 | 36,231 | 359,553 |
| 2024 | 2,487,722 | 488,084 | 2,975,806 | 323,602 | 45,838 | 369,440 |
| 2025 | 2,462,759 | 594,882 | 3,057,641 | 323,733 | 55,867 | 379,600 |
| 2026 | 2,410,681 | 731,045 | 3,141,726 | 321,384 | 68,655 | 390,039 |
| 2027 | 2,324,296 | 903,827 | 3,228,123 | 315,884 | 84,881 | 400,765 |
| 2028 | 2,263,391 | 1,053,505 | 3,316,896 | 312,848 | 98,938 | 411,786 |
| 2029 | 2,207,180 | 1,200,931 | 3,408,111 | 310,327 | 112,783 | 423,110 |
| 2030 | 2,136,363 | 1,365,471 | 3,501,834 | 306,509 | 128,236 | 434,745 |
| 2031 | 2,056,833 | 1,541,301 | 3,598,134 | 301,952 | 144,749 | 446,701 |
| 2032 | 1,959,459 | 1,737,624 | 3,697,083 | 295,799 | 163,186 | 458,985 |
| 2033 | 1,864,713 | 1,934,040 | 3,798,753 | 289,975 | 181,632 | 471,607 |
| 2034 | 1,769,575 | 2,133,644 | 3,903,219 | 166,186 | 200,378 | 366,564 |
| 2035 | 1,689,785 | 2,320,773 | 4,010,558 | 158,694 | 217,951 | 376,645 |
| 2036 | 1,604,706 | 2,516,142 | 4,120,848 | 150,703 | 236,299 | 387,002 |
| 2037 | 1,505,708 | 2,728,463 | 4,234,171 | 141,406 | 256,239 | 397,645 |
| 2038 | 1,389,645 | 2,960,966 | 4,350,611 | 130,506 | 278,074 | 408,580 |
| 2039 | 1,275,996 | 3,194,257 | 4,470,253 | 119,833 | 299,983 | 419,816 |
| 2040 | 1,149,225 | 3,443,960 | 4,593,185 | 107,927 | 323,434 | 431,361 |
| 2041 | 1,045,969 | 3,673,529 | 4,719,498 | 98,231 | 344,993 | 443,224 |
| 2042 | 936,803 | 3,912,481 | 4,849,284 | 87,978 | 367,434 | 455,412 |
| 2043 | 843,459 | 4,139,180 | 4,982,639 | 79,212 | 388,724 | 467,936 |
| 2044 | 767,223 | 4,352,439 | 5,119,662 | 72,052 | 408,752 | 480,804 |
| 2045 | 703,453 | 4,557,000 | 5,260,453 | 66,064 | 427,963 | 494,027 |

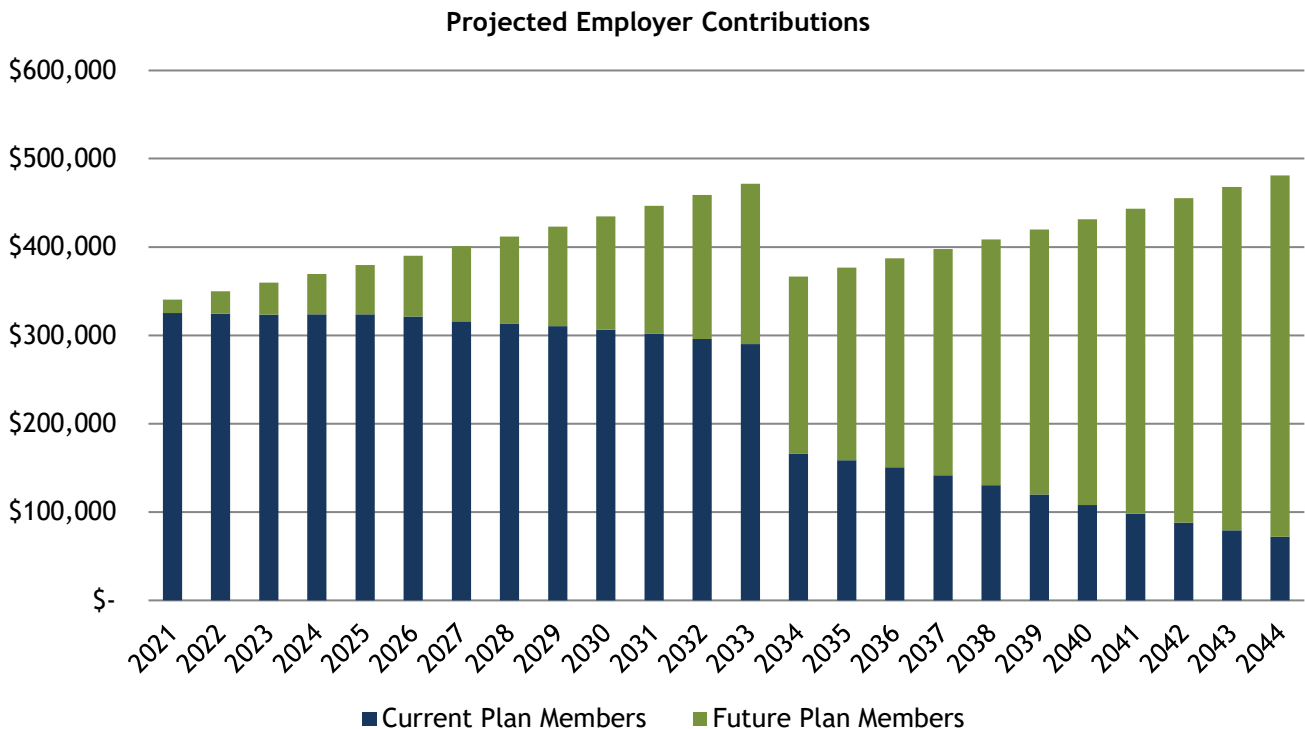
Accounting Information

Projection of Contributions Charts

Projected Payroll for Current and Future Employees



Projected Employer Contributions for Current and Future Plan Members



Accounting Information

Projection of Fiduciary Net Position

Current Participants Only

| Measurement Period Ending June 30: | Projected Beginning Fiduciary Net Position (a) | Projected Total Contributions (b) | Projected Benefit Payments (Including Implicit Subsidy) (c) | Projected Administrative Expense (d) | Projected Investment Earnings (e) | Projected Ending Fiduciary Net Position (f) = Σ [(a) : (e)] |
|--|---|---|--|---|---|---|
| 2021 | \$ 5,245,278 | \$ 325,106 | \$ (334,378) | \$ (2,524) | \$ 401,860 | \$ 5,635,342 |
| 2022 | 5,635,342 | 324,484 | (370,522) | (2,587) | 430,366 | 6,017,083 |
| 2023 | 6,017,083 | 323,322 | (397,394) | (2,652) | 458,568 | 6,398,927 |
| 2024 | 6,398,927 | 323,602 | (426,531) | (2,718) | 486,746 | 6,780,026 |
| 2025 | 6,780,026 | 323,733 | (432,798) | (2,786) | 515,739 | 7,183,914 |
| 2026 | 7,183,914 | 321,384 | (471,201) | (2,856) | 545,151 | 7,576,392 |
| 2027 | 7,576,392 | 315,884 | (498,075) | (2,927) | 574,010 | 7,965,284 |
| 2028 | 7,965,284 | 312,848 | (489,923) | (3,000) | 604,031 | 8,389,240 |
| 2029 | 8,389,240 | 310,327 | (503,043) | (3,075) | 635,946 | 8,829,395 |
| 2030 | 8,829,395 | 306,509 | (532,682) | (3,152) | 668,420 | 9,268,490 |
| 2031 | 9,268,490 | 301,952 | (559,544) | (3,231) | 700,891 | 9,708,558 |
| 2032 | 9,708,558 | 295,799 | (619,072) | (3,312) | 732,122 | 10,114,095 |
| 2033 | 10,114,095 | 289,975 | (612,500) | (3,395) | 763,252 | 10,551,427 |
| 2034 | 10,551,427 | 166,186 | (667,634) | (3,480) | 789,930 | 10,836,429 |
| 2035 | 10,836,429 | 158,694 | (720,191) | (3,567) | 809,484 | 11,080,849 |
| 2036 | 11,080,849 | 150,703 | (723,601) | (3,656) | 827,790 | 11,332,085 |
| 2037 | 11,332,085 | 141,406 | (760,668) | (3,747) | 845,279 | 11,554,355 |
| 2038 | 11,554,355 | 130,506 | (809,683) | (3,841) | 860,025 | 11,731,362 |
| 2039 | 11,731,362 | 119,833 | (823,061) | (3,937) | 872,676 | 11,896,873 |
| 2040 | 11,896,873 | 107,927 | (863,220) | (4,035) | 883,370 | 12,020,915 |
| 2041 | 12,020,915 | 98,231 | (912,789) | (4,136) | 890,607 | 12,092,828 |
| 2042 | 12,092,828 | 87,978 | (950,234) | (4,239) | 894,290 | 12,120,623 |
| 2043 | 12,120,623 | 79,212 | (1,012,621) | (4,345) | 893,689 | 12,076,558 |
| 2044 | 12,076,558 | 72,052 | (1,055,669) | (4,454) | 888,379 | 11,976,866 |
| 2045 | 11,976,866 | 66,064 | (1,123,150) | (4,565) | 877,911 | 11,793,126 |

Accounting Information

Schedule of Implicit Subsidy Liability

Actuarial standard of practice (ASOP) number 6, "Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions", requires the inclusion of the implicit subsidy in OPEB valuations.

The implicit subsidy arises when an employer allows a retiree and the retiree's dependents to continue on the plans for active employees, and pay the active-employee premiums. Retirees are not paying the true cost of their benefits because they have higher costs than active employees, and therefore are partially subsidized by the active employees. Once a retiree reaches Medicare eligibility, the rates are set for Medicare retirees separately, and are set to be sufficient to cover the true costs of the Medicare retirees. Thus, there is no implicit subsidy for Medicare retirees.

| Measurement Date (June 30): | 2017 | 2018 | 2019 | 2020 |
|--------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Report Date (June 30): | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> |
| Benefit Payments \$ | 4,754,906 | \$ 4,857,677 | \$ 4,569,915 | \$ 4,808,640 |
| Implicit Subsidy | <u>1,177,282</u> | <u>1,229,046</u> | <u>1,133,248</u> | <u>1,204,644</u> |
| Total OPEB Liability \$ | <u>5,932,188</u> | <u>6,086,723</u> | <u>5,703,163</u> | <u>6,013,284</u> |
| Discount Rate | 7.00% | 7.28% | 7.59% | 7.67% |

Accounting Information

Schedule of Deferred Outflows and Inflows of Resources

Schedule of Deferred Outflows and Inflows of Resources

| | Measurement Period | Base Amount | Amount Previously Recognized | Recognition Period | Remaining Period | Increase/(Decrease) in Expense: Measurement / Report Years Ending June 30: | | | | | | Remaining |
|--|--------------------|-------------|------------------------------|--------------------|------------------|--|----------|----------|----------|----------|----------|-----------|
| | | | | | | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | |
| Differences Between Expected and Actual Experience | 2016-2017 | \$ - | \$ - | 7.4 | 4.4 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | 2017-2018 | 6,968 | 1,884 | 7.4 | 5.4 | 942 | 942 | 942 | 942 | 942 | 374 | - |
| | 2018-2019 | (148,226) | (17,439) | 8.5 | 7.5 | (17,439) | (17,439) | (17,439) | (17,439) | (17,439) | (17,439) | (26,153) |
| | 2019-2020 | 8,680 | - | 8.5 | 8.5 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 2,548 |
| Changes of Assumptions | 2016-2017 | - | - | 7.4 | 4.4 | - | - | - | - | - | - | - |
| | 2017-2018 | (158,458) | (42,828) | 7.4 | 5.4 | (21,414) | (21,414) | (21,414) | (21,414) | (21,414) | (8,560) | - |
| | 2018-2019 | (514,604) | (60,542) | 8.5 | 7.5 | (60,542) | (60,542) | (60,542) | (60,542) | (60,542) | (60,542) | (90,810) |
| | 2019-2020 | (59,955) | - | 8.5 | 8.5 | (7,054) | (7,054) | (7,054) | (7,054) | (7,054) | (7,054) | (17,631) |
| Differences Between Projected and Actual Earnings | 2016-2017 | - | - | 5.0 | 2.0 | - | - | - | - | - | - | - |
| | 2017-2018 | (18,278) | (7,312) | 5.0 | 3.0 | (3,656) | (3,656) | (3,654) | - | - | - | - |
| | 2018-2019 | 60,930 | 12,186 | 5.0 | 4.0 | 12,186 | 12,186 | 12,186 | 12,186 | - | - | - |
| | 2019-2020 | 204,938 | - | 5.0 | 5.0 | 40,988 | 40,988 | 40,988 | 40,988 | 40,986 | - | - |

Summary of Deferred Outflows and Inflows of Resources

Measurement Period: July 1, 2019 - June 30, 2020

Fiscal Reporting Period: July 1, 2019 - June 30, 2020

| | Measurement/Report Years Ending June 30: | | | | | | Remaining |
|--|--|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | |
| Differences Between Expected and Actual Experience | \$ (15,475) | \$ (15,475) | \$ (15,475) | \$ (15,475) | \$ (15,475) | \$ (16,043) | \$ (23,605) |
| Changes of Assumptions | (89,010) | (89,010) | (89,010) | (89,010) | (89,010) | (76,156) | (108,441) |
| Differences Between Projected and Actual Earnings | 49,518 | 49,518 | 49,520 | 53,174 | 40,986 | - | - |
| Total | \$ (54,967) | \$ (54,967) | \$ (54,965) | \$ (51,311) | \$ (63,499) | \$ (92,199) | \$ (132,046) |

Accounting Information

Schedule of Changes in the Total OPEB Liability and Related Ratios

GASB 75 requires a disclosure of the changes in Net OPEB Liability for the last ten fiscal years, or for as many years as are available.

| Measurement Date (June 30): | 2017 | 2018 | 2019 | 2020 |
|---|----------------------------|----------------------------|----------------------------|----------------------------|
| Report Date (June 30): | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> |
| <u>Total OPEB Liability</u> | | | | |
| Service Cost | \$ 199,394 | \$ 205,376 | \$ 198,667 | \$ 243,225 |
| Interest | 390,385 | 411,764 | 414,097 | 439,150 |
| Changes of Benefit Terms | - | - | - | - |
| Differences Between Expected and Actual Experience | - | 6,968 | (148,226) | 8,680 |
| Changes of Assumptions | - | (158,458) | (514,604) | (59,955) |
| Benefit Payments | (198,454) | (234,954) | (243,049) | (239,848) |
| Implicit Subsidy Credit | (71,179) | (76,161) | (90,445) | (81,131) |
| Net Change in Total OPEB Liability | 320,146 | 154,535 | (383,560) | 310,121 |
| Total OPEB Liability – Beginning | <u>5,612,042</u> | <u>5,932,188</u> | <u>6,086,723</u> | <u>5,703,163</u> |
| Total OPEB Liability – Ending (a) | <u>\$ 5,932,188</u> | <u>\$ 6,086,723</u> | <u>\$ 5,703,163</u> | <u>\$ 6,013,284</u> |
| <u>Plan Fiduciary Net Position</u> | | | | |
| Net Investment Income | \$ 263,245 | \$ 252,767 | \$ 254,279 | \$ 172,321 |
| Employer – District's Contribution | 727,702 | 539,954 | 1,225,049 | 399,848 |
| Employer – Implicit Subsidy | 71,179 | 76,161 | 90,445 | 81,131 |
| Benefit Payments | (198,454) | (234,954) | (243,049) | (239,848) |
| Implicit Subsidy Credit | (71,179) | (76,161) | (90,445) | (81,131) |
| Administrative Expense | (1,276) | (1,684) | (1,881) | (2,462) |
| Other Miscellaneous Income/(Expense) | - | - | - | - |
| Net Change in Plan Fiduciary Net Position | 791,217 | 556,083 | 1,234,398 | 329,859 |
| Plan Fiduciary Net Position – Beginning | <u>2,333,721</u> | <u>3,124,938</u> | <u>3,681,021</u> | <u>4,915,419</u> |
| Plan Fiduciary Net Position – Ending (b) | <u>\$ 3,124,938</u> | <u>\$ 3,681,021</u> | <u>\$ 4,915,419</u> | <u>\$ 5,245,278</u> |
| <u>Net OPEB Liability</u> | | | | |
| District's Net OPEB Liability – Ending = (a) – (b) | \$ 2,807,250 | \$ 2,405,702 | \$ 787,744 | \$ 768,006 |
| Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability | 52.7% | 60.5% | 86.2% | 87.2% |
| Covered-Employee Payroll | \$ 2,599,322 | \$ 2,670,803 | \$ 2,598,338 | \$ 2,669,792 |
| District's Net OPEB Liability as a Percentage of Covered-Employee Payroll | 108.0% | 90.1% | 30.3% | 28.8% |

Notes to schedule: the District adopted GASB 75 for the fiscal year ending June 30, 2017.

Accounting Information

Schedule of Investment Returns

GASB 75 requires a schedule of investment returns for the last ten fiscal years, or for as many years as are available if less than ten years are available.

| Measurement Date (June 30): | 2017 | 2018 | 2019 | 2020 |
|---|-------------|-------------|-------------|-------------|
| Report Date (June 30): | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> |
| Annual Money-Weighted Rate of Return, Net of Investment Expense | 10.13% | 7.71% | 6.10% | 3.45% |

The annual money-weighted rate of return, net of investment expenses, is the net investment income for the year divided by the average net position for the year (less investment expenses).

Accounting Information

Schedule of Contributions

GASB 75 requires a schedule of contributions for the last ten fiscal years, or for as many years as are available if less than ten years are available.

| Measurement Period: | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 |
|---|--------------|--------------|--------------|--------------|
| Reporting Period: | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 |
| Report Date (June 30): | 2017 | 2018 | 2019 | 2020 |
| Actuarially Determined Contribution (ADC) | \$ 760,836 | \$ 465,770 | \$ 437,135 | \$ 385,366 |
| Less: Contributions Made in Relation to the ADC | - 798,881 | 616,115 | 1,315,494 | 480,979 |
| Contribution Deficiency (Excess) | (38,045) | (150,345) | (878,359) | (95,613) |
| Covered-Employee Payroll | \$ 2,599,322 | \$ 2,670,803 | \$ 2,598,338 | \$ 2,669,792 |
| Contributions as a Percentage of Covered-Employee Payroll | 30.73% | 23.07% | 50.63% | 18.02% |

Notes to Schedule:

Assumptions and Methods

| | |
|---------------------------|--|
| Actuarial Cost Method: | Entry-age normal, level percent of pay |
| Amortization Method: | Closed period, level percent of pay |
| Amortization Period: | 16 years |
| Inflation: | 2.50% |
| Assumed Payroll Growth: | 2.750% |
| Healthcare Trend Rates: | 6.50%, trending down to 3.84% |
| Rate of Return on Assets: | 7.67% |
| Mortality Rate: | CalPERS Rates. See appendix. |
| Retirement Rates: | CalPERS Rates. See appendix. |

Accounting Information

Draft Notes to the Financial Statements

A draft of the required notes to the District's financial statements, based on the requirements of GASB 75 and our understanding of the District's retiree health plan, follows.

Notes to the Financial Statements for the Year Ended June 30, 2020

Summary of Significant Accounting Policies

Other Postemployment Benefits Other Than Pensions (OPEB)

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense information about the fiduciary net position of the District Retiree Benefits Plan (the Plan) and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, the Plan recognizes benefit payments when due and payable in accordance with the benefit terms.

Note X – Other Post-employment Benefits (OPEB)

Plan Description

The District administers a single-employer defined-benefit post-employment healthcare plan. Benefits vary by hire date. Benefits continue to the surviving spouses.

Benefits Provided

Eligibility for retiree health benefits requires retirement from the District on or after age 50 with at least five years of CalPERS service. Eligible employees who were hired before March 1, 2005 receive 100% of medical premium. Spouse and dependent coverage is available. Eligible employees who were hired after March 1, 2005 receive a vested share of the medical premium. Vesting starts at 50% for 10 years of service and increase 5% per additional year of service to a maximum of 100% with 20 years of service. Retirees with 5-10 years of service receive the PEMHCA minimum.

Employees Covered by Benefit Terms

At June 30, 2019 (the census date), the benefit terms covered the following employees:

| <u>Category</u> | <u>Count</u> |
|---|--------------|
| Inactive employees, spouses, or beneficiaries currently receiving benefit payments: | 37 |
| Inactive employees entitled to but not yet receiving benefit payments: | 0 |
| Active employees: | 33 |
| Total | 70 |

Accounting Information

Draft Notes to the Financial Statements

Contributions

The District makes contributions based on an actuarially determined rate.

Contribution rate: 12.41% for 13 years,
9.39% thereafter.

Reporting period contributions: \$480,979 (Includes implicit subsidy credit.)

Financial Report

The District issues a stand-alone financial report that is available to the public. The report is available at <https://www.tiburonfire.org/finance/>

Net OPEB Liability

The District's total OPEB liability was valued as of June 30, 2019 and was used to calculate the net OPEB liability measured as of June 30, 2020.

Actuarial Assumptions

The total OPEB liability in the June 30, 2020 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

| Measurement Date: | June 30, 2019 | June 30, 2020 |
|-----------------------------|---------------|--|
| Discount Rate | 7.59% | 7.67% |
| Investment Rate of Return | 7.59% | 7.67% |
| Inflation | 2.50% | 2.50% |
| Healthcare Cost Trend Rates | n/a | 6.00% Trending down to 3.84% over 54 years. Applies to calendar years. |
| Salary Increases | 2.750% | 2.750% Additional merit-based increases based on CalPERS merit salary increase tables. |
| Mortality Rates | | Based on CalPERS tables. |

Discount Rate

The discount rate used to measure the total OPEB liability is 7.67%. This is the expected long-term rate of return on District assets using the Strategy 1 asset allocation provided by California Employers' Retiree Benefit Trust (CERBT). The projection of cash flows used to determine the discount rate assumed that the District contribution will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position is projected to cover all future OPEB payments. Therefore, the discount rate was set equal to the long-term expected rate of return.

Accounting Information

Draft Notes to the Financial Statements

Long-Term Expected Real Rate of Return

The long-term expected rate of return is determined using the long-term rates of return developed by the CalPERS Investment Office in their report dated August 18, 2014.

| Asset Class | Target Allocation | Compound Expected Return | Volatility | Arithmetic Expected Return | Long-Term Compound Return | Cash Yield |
|--|--------------------------|---------------------------------|-------------------|-----------------------------------|----------------------------------|-------------------|
| Global Equity | 57% | 7.75% | 17.40% | 9.15% | 8.71% | 2.73% |
| Fixed Income | 27% | 4.29% | 7.00% | 4.52% | 5.40% | 3.70% |
| TIPS | 5% | 3.50% | 6.50% | 3.70% | 5.25% | 2.00% |
| Commodities | 3% | 2.84% | 17.92% | 4.39% | 7.95% | 0.00% |
| REITs | 8% | 5.75% | 19.50% | 7.53% | 10.88% | 3.35% |
| Total/Average | <u>100%</u> | | | | | |
| Expected Compound Return (1-10 Years) | | | | | | 6.71% |
| Expected Volatility | | | | | | 11.74% |
| Expected Cash Yield | | | | | | 2.92% |
| Expected Blended Return Net of Fees (1-60 years) | | | | | | 7.28% |
| Uses an expected long-term inflation rate of 2.75% | | | | | | |

Accounting Information

Draft Notes to the Financial Statements

| Changes in the Net OPEB Liability | <i>Increase/(Decrease)</i> | | |
|--|----------------------------|--------------------------------|-----------------------|
| | Total OPEB Liability | Plan Fiduciary Net Position | Net OPEB Liability |
| | (a) | (b) | (c) = (a) - (b) |
| Balance as of Report Date June 30, 2019 | \$ 5,703,163 | \$ 4,915,419 | \$ 787,744 |
| Changes for the year: | | | |
| Service Cost | 243,225 | | 243,225 |
| Interest | 439,150 | | 439,150 |
| Changes of Benefit Terms | - | | - |
| Differences Between Expected and Actual Experience | 8,680 | | 8,680 |
| Changes of Assumptions | (59,955) | | (59,955) |
| Contributions | | | |
| Employer – District's Contribution | | 399,848 | (399,848) |
| Employer – Implicit Subsidy | | 81,131 | (81,131) |
| Net Investment Income | | 172,321 | (172,321) |
| Benefit Payments | (239,848) | (239,848) | - |
| Implicit Subsidy Credit | (81,131) | (81,131) | - |
| Administrative Expenses | | (2,462) | 2,462 |
| Other Miscellaneous Income/(Expense) | - | - | - |
| Net Changes | 310,121 | 329,859 | (19,738) |
| Balance as of Report Date June 30, 2020 | \$ 6,013,284 | \$ 5,245,278 | \$ 768,006 |

Sensitivity of the net OPEB liability to changes in the discount rate. The net OPEB liability of the District, as well as what the District's net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (6.67%) or one percentage point higher (8.67%) follows:

| | 1% Decrease | Discount Rate | 1% Increase |
|-----------------------------------|---------------------|-------------------|-------------------|
| | <u>6.67%</u> | <u>7.67%</u> | <u>8.67%</u> |
| Net OPEB Liability (Asset) | \$ 1,489,564 | \$ 768,006 | \$ 166,016 |

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates. The net OPEB liability of the District, as well as what the District's net OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (5.00%) or one percentage point higher (7.00%) than current healthcare cost trend rates follows:

| | 1% Decrease | Trend Rate | 1% Increase |
|-----------------------------------|------------------|-------------------|---------------------|
| | 5.00% | 6.00% | 7.00% |
| | Decreasing to | Decreasing to | Decreasing to |
| | <u>2.84%</u> | <u>3.84%</u> | <u>4.84%</u> |
| Net OPEB Liability (Asset) | \$ 45,405 | \$ 768,006 | \$ 1,652,569 |

Accounting Information

Draft Notes to the Financial Statements

OPEB Expense and Deferred Inflows and Outflows of Resources Related to OPEB

For the report year ended June 30, 2020, the District recognized an OPEB expense of \$252,611. The District reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

| | <u>Deferred Outflows of Resources</u> | <u>Deferred Inflows of Resources</u> |
|--|---|--|
| Differences Between Actual and Expected Experience | \$ 11,800 | \$ (113,348) |
| Changes of Assumptions | - | (540,637) |
| Net Difference Between Projected and Actual Earnings on OPEB Plan Investments | 193,198 | - |
| Contributions Subsequent to the Measurement Date | - | - |
| Total | \$ 204,998 | \$ (653,985) |

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

| <u>Report Year Ending June 30:</u> | <u>Amount</u> |
|------------------------------------|---------------|
| 2021 | \$ (54,967) |
| 2022 | (54,965) |
| 2023 | (51,311) |
| 2024 | (63,499) |
| 2025 | (92,199) |
| Remaining | (132,046) |

Basis of Valuation

Substantive Plan

A summary of the substantive plan used as the basis of the valuation follows.

| Retiree Benefits | | | | |
|----------------------------------|---|------------------------------------|--|------------------------------------|
| Retiree Medical Benefit | | | | |
| Eligibility* | Standard CalPERS (5 years of service and attained age 50). | | | |
| Duration of Coverage | Retiree's lifetime. | | | |
| Surviving Spouse Coverage | Yes, as required by CalPERS. | | | |
| Medical Plan Choices | Any eligible plan available via PEMHCA and administered by CalPERS. | | | |
| | District pays 100% healthcare premiums for retirees subject to a monthly maximum (max). The maximum depends on tier selection, hire date, and years of service (YOS) as shown in the table below. | | | |
| Benefit* | | Hire Period | | |
| | | Before 3/1/2005 Maximum (Fixed) | Between 3/1/2005 & 7/30/2017 Maximum* | After 7/30/2017 Maximum (Fixed) |
| | Tier | | | |
| | Employee | \$ 664 | \$ 664 | \$ 664 |
| Employee +1 | 1,329 | 1,329 | 1,329 | |
| Family | 1,729 | 1,729 | 1,729 | |

*This group is subject to additional vesting requirements. After ten years of service, the District shall pay 50% of the cap. For every year of service after ten years, the district shall pay an additional 5% per year toward the cap to a maximum of 100% of the cap after twenty years. For example, after ten years of service, the maximum payment would be \$332 for an employee-only plan. After fifteen years of service, the maximum payment would be \$498. After twenty years of service, maximum payment is \$664.

Basis of Valuation

Participant Summary

Census Date: June 30, 2019
Age and service determined as of the census date.

| Active Participants | | | | | | | | | | | | |
|---------------------|------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Age | Years of Service | | | | | | | | | | Total | |
| | < 1 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | | |
| < 25 | 1 | 1 | | | | | | | | | | 2 |
| 25-29 | 1 | 2 | | | | | | | | | | 3 |
| 30-34 | 4 | | 1 | | | | | | | | | 5 |
| 35-39 | 2 | 2 | 2 | 1 | | | | | | | | 7 |
| 40-44 | 1 | | | 1 | 1 | | | | | | | 3 |
| 45-49 | 1 | 2 | | 2 | 2 | | | | | | | 7 |
| 50-54 | | | 1 | | 1 | | 3 | | | | | 5 |
| 55-59 | | | | | | | 1 | | | | | 1 |
| 60-64 | | | | | | | | | | | | 0 |
| 65-69 | | | | | | | | | | | | 0 |
| 70+ | | | | | | | | | | | | 0 |
| Total | 10 | 7 | 4 | 4 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 33 |

Average Employee Age: 40.5

Average Years of Service: 8.8

| Inactive Participants | | | | | |
|-----------------------|-----------|------------------|-----------|------------------|-----------|
| Age | Retiree | Disabled Retiree | Spouse | Surviving Spouse | Total |
| < 50 | | | | | 0 |
| 50-54 | | | | | 0 |
| 55-59 | 4 | 1 | 5 | | 10 |
| 60-64 | 2 | 1 | 3 | | 6 |
| 65-69 | 2 | 3 | 4 | | 9 |
| 70-74 | 2 | | 1 | | 3 |
| 75-79 | 3 | | 3 | 1 | 7 |
| 80-84 | | | | 1 | 1 |
| 85-89 | | | | | 0 |
| 90+ | | | | 1 | 1 |
| Total | 13 | 5 | 16 | 3 | 37 |

Average Inactive Age: 66.4

Basis of Valuation

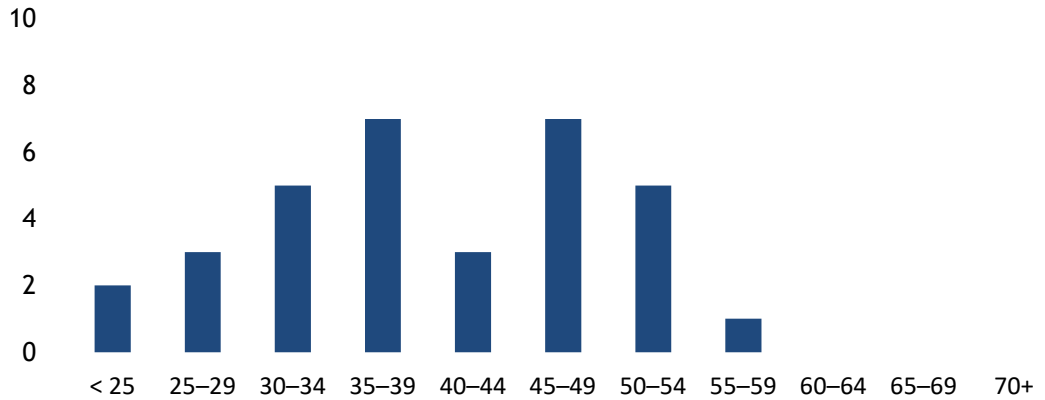
Participant Summary Charts

Census Date: June 30, 2019

Age and service determined as of the census date.

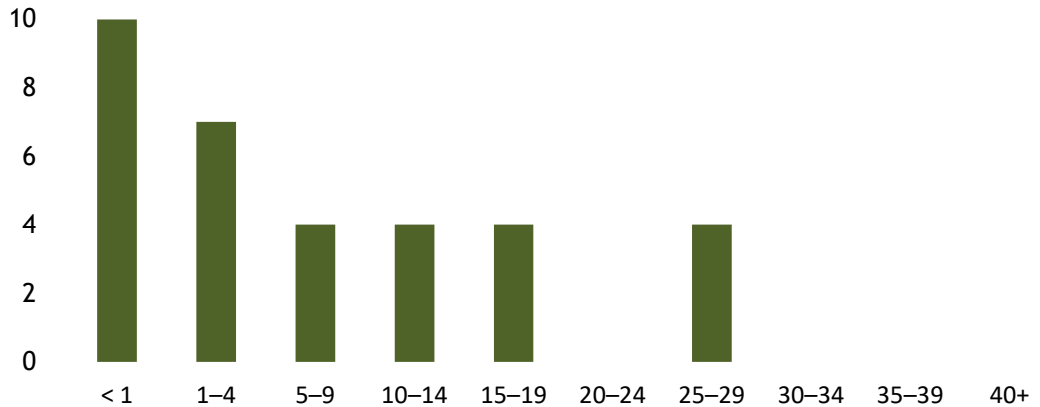
Count of Actives by Age Bracket

Average Employee Age: 40.5



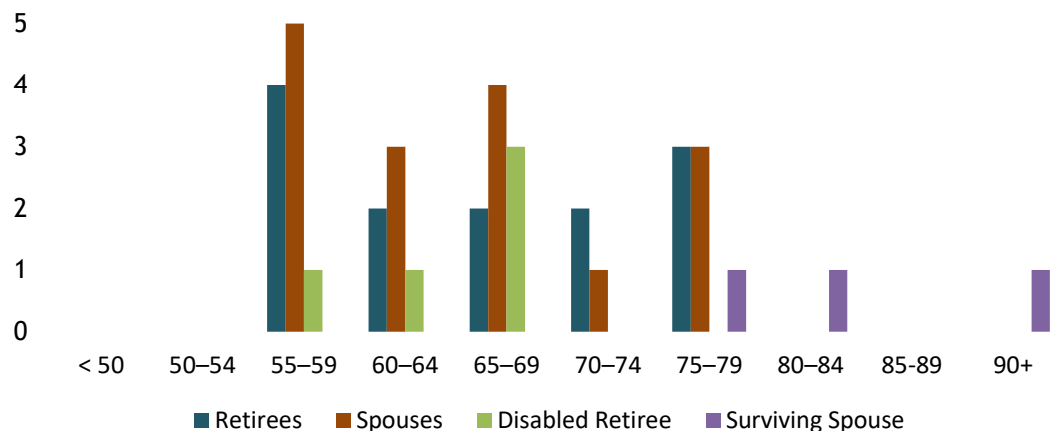
Count of Actives by Years of Service

Average Years of Service: 8.8



Count of Inactives by Age Bracket

Average Inactive Age: 66.4



Basis of Valuation

Actuarial Assumptions

A summary of the actuarial assumptions used for this valuation follows. We considered the reasonableness of each assumption independently based on its own merits, consistent with each other assumption, and the combined impact of all assumptions.

| Assumption | Rates | | | | | | | | | | | | |
|---|--|----------|-------|---------|----|-----------|----------|----|--------|--------|-------|--------|--------|
| Actuarial Cost Method | Entry-Age Normal, Level Percentage of Salary | | | | | | | | | | | | |
| Valuation Date | June 30, 2019 | | | | | | | | | | | | |
| Measurement Date | June 30, 2020 | | | | | | | | | | | | |
| Report Date | June 30, 2020 | | | | | | | | | | | | |
| Discount Rate | The discount rate selected is 7.67%. The discount rate is the long-term rate of return for the plan's assets, as our projections show that the assets will be sufficient to cover the projected benefit payments should the District continue to contribute to the plan with an amount of at least the ADC each year. Should the assets not be sufficient to cover the projected benefit payments at any time in the future, we would employ a discount rate reflecting the 20-year tax-exempt municipal bond yield or index rate to the period after which we project assets to run out. We would then use a single, blended discount rate equivalent to the long-term rate of return and the 20-year tax-exempt municipal bond yield. If there are no assets, we would use only the 20-year tax-exempt municipal bond yield for the valuation. | | | | | | | | | | | | |
| Mortality | Same as CalPERS. See appendix. | | | | | | | | | | | | |
| Termination Rates | Same as CalPERS. See appendix. Also known as "turnover". | | | | | | | | | | | | |
| Disability | Same as CalPERS. See appendix. | | | | | | | | | | | | |
| Retirement | Same as CalPERS. See appendix. | | | | | | | | | | | | |
| Annual Per Capita Claims Cost | Developed using CalPERS experience to calculate age-related risk scores, but using the District's actual premiums for all other purposes. Assumed annual per capita claims costs follow: | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Age</th> <th>Males</th> <th>Females</th> </tr> </thead> <tbody> <tr> <td>50</td> <td>\$ 12,291</td> <td>\$ 9,765</td> </tr> <tr> <td>55</td> <td>14,193</td> <td>13,559</td> </tr> <tr> <td>60-64</td> <td>17,490</td> <td>15,160</td> </tr> </tbody> </table> | Age | Males | Females | 50 | \$ 12,291 | \$ 9,765 | 55 | 14,193 | 13,559 | 60-64 | 17,490 | 15,160 |
| Age | Males | Females | | | | | | | | | | | |
| 50 | \$ 12,291 | \$ 9,765 | | | | | | | | | | | |
| 55 | 14,193 | 13,559 | | | | | | | | | | | |
| 60-64 | 17,490 | 15,160 | | | | | | | | | | | |
| Average Per Capita Cost for Implicit Subsidy Calculation | Developed based on premiums for the District's enrollment by plan, family demographics from CalPERS plans, and risk scores (both HMO and PPO) for the CalPERS population. | | | | | | | | | | | | |

Basis of Valuation

Actuarial Assumptions

| Assumption | Rates | | | | | | |
|---|---|-----------|---------------|---|-----|----------------------------------|-----|
| Aging or Morbidity Factors | Based on actual CalPERS HMO and PPO population data. | | | | | | |
| Participant Contributions | Based on service at retirement and employee group. | | | | | | |
| Salary Increases | 2.750% The salary increase is used to determine the growth in the aggregate payroll. Individual Salary Increases: 2018 CalPERS Merit Salary Increases. | | | | | | |
| Inflation Rate | 2.50% | | | | | | |
| Marital Status | Current Retirees: Spouse coverage provided by City. Future retirees: 80% assumed to be married. | | | | | | |
| Spouse Gender | Assumes spouse of opposite gender for current and future retirees. | | | | | | |
| Spouse Age Difference | Actual spouse age is used for current retirees. Assumes males are three years older than females for future retirees. | | | | | | |
| Participation | Current Retirees: Assume current elections continue until decrement. Future Retiree election assumptions summarized below: | | | | | | |
| | <table border="1"> <thead> <tr> <th>Condition</th> <th>Participation</th> </tr> </thead> <tbody> <tr> <td>Eligible for District Contribution above the PEMHCA Minimum</td> <td>95%</td> </tr> <tr> <td>Eligible for PEMHCA Minimum Only</td> <td>75%</td> </tr> </tbody> </table> | Condition | Participation | Eligible for District Contribution above the PEMHCA Minimum | 95% | Eligible for PEMHCA Minimum Only | 75% |
| Condition | Participation | | | | | | |
| Eligible for District Contribution above the PEMHCA Minimum | 95% | | | | | | |
| Eligible for PEMHCA Minimum Only | 75% | | | | | | |
| PEMHCA Administrative Fee | 0.27% of retiree premium. | | | | | | |
| Annual PEMHCA Amount | \$1,650 for the period June 30, 2019 through June 30, 2020 and trended at 3% annually. | | | | | | |

Basis of Valuation

Actuarial Assumptions

Assumption

Rates

Premiums

selected health plans were used to develop single average premiums pursuant to the development of age-related claims.

| Plan | Employee | Employee +1 |
|--------------|-----------|-------------|
| Pre-Medicare | \$ 829.55 | \$ 1,659.10 |
| Medicare | 363.09 | 899.94 |

Trend Rates

Medical long-term trends from Society of Actuaries "Long Term Healthcare Cost Trends Model v2018_c" using baseline assumptions. Applied to both claims and premiums.

| Calendar Year | Pre-Medicare Trend | Medicare Trend |
|---------------|-----------------------|-------------------|
| 2020 | 6.50% | 5.50% |
| 2021 | 6.00% | 5.50% |
| 2022 | 5.50% | 5.50% |
| 2023 | 5.45% | 5.45% |
| 2024 | 5.39% | 5.39% |
| 2025 | 5.34% | 5.34% |
| 2026 | 5.29% | 5.29% |
| 2027 | 5.24% | 5.24% |
| 2028-2074 | ... | ... |
| 2075+ | 3.84% | 3.84% |

This section includes a brief summary of GASB 75, as well as definitions of some of the key terminology used in this report.

About GASB 75

In General. In June 2015 the Governmental Accounting Standards Board released GASB 75, “Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions”. GASB 75 replaced GASB 45 for fiscal years beginning after June 15, 2017, for employers that sponsor OPEB plans. The provisions in GASB 75 are similar to the provisions of GASB 68 for pensions.

Accounting. GASB 75 requires a liability known as the Net OPEB Liability (NOL). The employer recognizes the NOL on its balance sheet. The employer also recognizes an OPEB expense in the income statement. GASB 45 recorded the Unfunded Accrued Actuarial Liability (UAAL) in the notes to the financial statement, whereas GASB 75 records the NOL, which is very similar to the UAAL with just a few technical differences, on the balance sheet.

Financial Statement Impact (Employers). One of the biggest changes to the financial statements of governmental employers that provide OPEB is the reporting of the OPEB liability on the face of the statements rather than in the footnotes. Governments that do not provide OPEB through a trust are required to recognize the entire OPEB liability in the financial statements. For governments that provide OPEB through an OPEB plan that is administered through a trust, the government’s OPEB liability is recognized net of the amount of the OPEB plan’s fiduciary net position.

Changes to the Measurement of the Total OPEB Liability. Measurement of the OPEB liability includes discounting future benefit payments for current and former employees and their beneficiaries to their present value and allocating the present value over past and future periods of the employee service (total OPEB liability), less the amount of the OPEB plan’s fiduciary net position. The calculation continues to include employee-related events, such as projected salary increases and projected years of service, if they affect the amount of OPEB payments employees will receive, as well as provisions for automatic cost-of-living adjustments (COLAs) and other automatic benefits. Additionally, ad hoc COLAs and other ad hoc benefit changes, which are made at the discretion of the government, are included in projections as well, if they routinely recur.

GASB 75 requires governments to discount projected OPEB payments to their present value. Under the new standard, governments discount the projected OPEB payments to be made in each year and the amount of plan assets (if a government administers the OPEB through a trust) available for providing those benefits to current active and inactive employees and their beneficiaries. Similar to the pension standards, the discount rate used is based on whether the plan assets are projected to be sufficient to make future payments. If the plan assets are sufficient, governments discount future payments using the long-term expected rate of return. If projected plan assets are insufficient to make all future payments to current and inactive employees and their beneficiaries, or if there are no plan assets held in trust, the discount rate is based on a high-quality 20-year tax-exempt general obligation municipal bond yield or index rate. “High-quality” is defined as being rated AA or higher (or an equivalent rating).

Cost Method. The Entry Age Normal Cost method must be used.

About GASB 75 (continued)

Factors that affect a government's OPEB liability, such as actual earnings on plan investments when the OPEB plan is administered as a trust, employee compensation changes, interest on the outstanding OPEB liability, contributions from employees and employers, and actual demographic and economic changes that are not in line with assumptions made in the actuarial calculations, are considered when determining the government's OPEB expense. A government's annual OPEB expense is calculated with consideration for factors affecting the OPEB liability within the reporting period. Several causes of changes in OPEB liability are immediately factored into the calculation of OPEB expense for the period, such as benefits earned each year, interest on the total OPEB liability, changes in benefit terms, and projected earnings on plan investments, if administered through a trust.

Governments are required to recognize deferred outflows of resources or deferred inflows of resources and then introduce into the expense calculation, systematically and rationally over the average remaining years of employment (active employees and inactive employees, including retirees), the effect on the total OPEB liability of differences between assumptions and actual experience.

Key Terminology

| | |
|--|---|
| Actuarially Determined Contribution | A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted. |
| Actuarial Present Value of Projected Benefit Payments | Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. |
| Agent Employer | An employer whose employees are provided with OPEB through an agent multiple-employer defined-benefit OPEB plan. |
| Closed Period | A specific number of years that is counted from one date, which declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth until no years remain. |
| Contributions | Additions to an OPEB plan's fiduciary net position for amounts from employers, non-employer contributing entities, or employees. |
| Dates and Periods | |
| • Census Date | The date of the census. It is usually the same as the Valuation Date . |
| • Measurement Date | The date on which assets are measured. The liabilities are rolled forward to this date from the Valuation Date , should it differ, using actuarial roll-forward techniques. |
| • Measurement Period | The year ending on the Measurement Date . |
| • Report Date | The date on which the amounts are reported in the financial statements. It is the same as the fiscal year-end. It may be up to one year ahead of the Measurement Date, with no roll-forward of liabilities or assets required. |
| • Reporting Period | The year ending on the Report Date . It is the same as the fiscal year. |
| • Valuation Date | The date on which the liabilities are valued. |
| Deferred Inflows and Outflows of Resources | The portion of the changes in the Net OPEB Liability that are not recognized in the current pension expense and are recognized in later periods. The changes deferred include differences between expected and actual experience, changes in assumptions, and differences between expected and actual earnings on OPEB plan investments. |

Key Terminology (continued)

| | |
|---|---|
| Defined-Benefit OPEB | OPEB for which the benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The OPEB may be stated as (a) a specified dollar amount (b) an amount that is calculated based on one or more factors such as age, years of service, and compensation, or (c) a type or level of coverage such as prescription drug coverage or a percentage of health insurance premiums. OPEB that does not have all of the terms of defined contribution OPEB is classified as defined-benefit OPEB. |
| Discount Rate | The single rate of return that reflects the following: a. The long-term expected rate of return on OPEB plan investments that are expected to be used to finance the payment of benefits, to the extent that (1) the OPEB plan's fiduciary net position is projected to be sufficient to make projected benefit payments, and (2) OPEB plan assets are expected to be invested using a strategy to achieve that return. b. A yield or index rate for 20-year, tax-exempt general-obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another scale), to the extent that the conditions in (a) are not met. |
| Fiduciary Net Position | The market value of assets as of the Measurement Date . |
| Implicit Subsidy | The implicit subsidy arises when an employer allows a retiree and the retiree's dependents to continue on the plans for active employees, and pay the active-employee premiums. Retirees are not paying the true cost of their benefits because they have higher costs than active employees, and therefore are partially subsidized by the active employees. Once a retiree reaches Medicare eligibility, the rates are set for Medicare retirees separately, and are set to be sufficient to cover the true costs of the Medicare retirees. Thus, there is no implicit subsidy for Medicare retirees. |
| Net OPEB Liability | The Total OPEB Liability minus the Fiduciary Net Position . |
| Normal Cost | See Service Cost . |
| Other Postemployment Benefits (OPEB) | Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payment for sick leave. |
| Projected Benefit Payments | All benefits estimated to be payable through OPEB plan to current active and inactive employees as a result of their past service and their expected future service. |

Key Terminology (continued)

| | |
|-----------------------------|--|
| Service Cost | The portions of the actuarial present value of projected benefit payments that are attributed to valuation years. Also called Normal Cost . |
| Substantive Plan | The plan terms as understood by the employer and the plan members at the time of the valuation, including only changes to plan terms that have been made and communicated to employees. |
| Total OPEB Liability | The liability of employers and non-employer contributing entities to employees for benefits provided through a defined-benefit OPEB plan that is administered through a trust that meets the criteria in paragraph 4 of GASB 75. |

Appendix

Decrement Tables

The valuation used the following decrement tables from the CalPERS OPEB Assumption Model, revised May 14, 2018:

| Mortality | Source Table |
|---------------------------------|---------------------------------|
| Miscellaneous Employees | Mort and Disb Rates_PA Misc |
| Safety Employees | Mort and Disb Rates_Fire |
| Disability Rates | |
| Miscellaneous Employees | Mort and Disb Rates_PA Misc |
| Safety Employees | Mort and Disb Rates_Fire |
| Terminated Vested Rates | |
| Miscellaneous Employees | Terminated Vested Rates_PA Misc |
| Safety Employees | Terminated Vested Rates_Fire |
| Salary Scale Rates | |
| Miscellaneous Employees | Salary Scale Rates_PA Misc |
| Safety Employees | Salary Scale Rates_PA_Fire |
| Service Retirement Rates | |
| Miscellaneous Employees | |
| • 2.0% at 62 | Rx PA Misc 2% @ 62 |
| • 2.7% at 55 | Rx PA Misc 2.7% @ 55 |
| Safety Employees | |
| • 2.0% at 50 | Rx Safety Fire 2% @ 50 |
| • 2.7% at 57 | Rx Safety Fire 2.7% @ 57 |
| • 3.0% at 55 | Rx Safety Fire 3% @ 55 |

Appendix

Sample Mortality and Disability Rates

| Attained Age | Pre-Retirement Mortality | | | | Post-Retirement Mortality | | | | | | Disability | | | |
|--------------|--------------------------|------------------|----------------------|------------------|---------------------------|---------------------------|-----------------------|--------------------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-----------------------|
| | Male Assumptions | | Female Assumptions | | Male Assumptions | | | Female Assumptions | | | Male Assumptions | | Female Assumptions | |
| | Non Industrial Death | Industrial Death | Non Industrial Death | Industrial Death | Healthy Recipients | Non Industrially Disabled | Industrially Disabled | Healthy Recipients | Non Industrially Disabled | Industrially Disabled | Non Industrial Disability | Industrial Disability | Non Industrial Disability | Industrial Disability |
| | | | | | | | | | | | | | | |
| 1 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 5 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 10 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 15 | 0.00016 | 0.00000 | 0.00003 | 0.00000 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00017 | 0.00000 | 0.00010 | 0.00000 |
| 20 | 0.00022 | 0.00000 | 0.00007 | 0.00000 | 0.00022 | 0.00022 | 0.00004 | 0.00007 | 0.00007 | 0.00007 | 0.00017 | 0.00000 | 0.00010 | 0.00000 |
| 25 | 0.00029 | 0.00000 | 0.00011 | 0.00000 | 0.00029 | 0.00029 | 0.00006 | 0.00011 | 0.00011 | 0.00006 | 0.00017 | 0.00000 | 0.00010 | 0.00000 |
| 30 | 0.00038 | 0.00000 | 0.00016 | 0.00000 | 0.00038 | 0.00038 | 0.00007 | 0.00016 | 0.00016 | 0.00007 | 0.00019 | 0.00000 | 0.00024 | 0.00000 |
| 35 | 0.00049 | 0.00000 | 0.00027 | 0.00000 | 0.00049 | 0.00049 | 0.00009 | 0.00027 | 0.00027 | 0.00009 | 0.00039 | 0.00000 | 0.00071 | 0.00000 |
| 40 | 0.00064 | 0.00000 | 0.00037 | 0.00000 | 0.00064 | 0.00064 | 0.00010 | 0.00037 | 0.00037 | 0.00010 | 0.00102 | 0.00000 | 0.00135 | 0.00000 |
| 45 | 0.00080 | 0.00000 | 0.00054 | 0.00000 | 0.00080 | 0.00080 | 0.00012 | 0.00054 | 0.00054 | 0.00012 | 0.00151 | 0.00000 | 0.00188 | 0.00000 |
| 50 | 0.00116 | 0.00000 | 0.00079 | 0.00000 | 0.00372 | 0.01183 | 0.00372 | 0.00346 | 0.01083 | 0.00346 | 0.00158 | 0.00000 | 0.00199 | 0.00000 |
| 55 | 0.00172 | 0.00000 | 0.00120 | 0.00000 | 0.00437 | 0.01613 | 0.00437 | 0.00410 | 0.01178 | 0.00410 | 0.00158 | 0.00000 | 0.00149 | 0.00000 |
| 60 | 0.00255 | 0.00000 | 0.00166 | 0.00000 | 0.00671 | 0.02166 | 0.00671 | 0.00476 | 0.01404 | 0.00476 | 0.00153 | 0.00000 | 0.00105 | 0.00000 |
| 65 | 0.00363 | 0.00000 | 0.00233 | 0.00000 | 0.00928 | 0.02733 | 0.01113 | 0.00637 | 0.01757 | 0.00765 | 0.00128 | 0.00000 | 0.00088 | 0.00000 |
| 70 | 0.00623 | 0.00000 | 0.00388 | 0.00000 | 0.01339 | 0.03358 | 0.01607 | 0.00926 | 0.02184 | 0.01112 | 0.00102 | 0.00000 | 0.00084 | 0.00000 |
| 75 | 0.01057 | 0.00000 | 0.00623 | 0.00000 | 0.02316 | 0.04277 | 0.02779 | 0.01635 | 0.02969 | 0.01962 | 0.00102 | 0.00000 | 0.00088 | 0.00000 |
| 80 | 0.01659 | 0.00000 | 0.00939 | 0.00000 | 0.03977 | 0.06272 | 0.04773 | 0.03007 | 0.04641 | 0.03609 | 0.00102 | 0.00000 | 0.00088 | 0.00000 |
| 85 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.07122 | 0.09793 | 0.08547 | 0.05418 | 0.07847 | 0.06501 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 90 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.13044 | 0.14616 | 0.14348 | 0.10089 | 0.13220 | 0.11098 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 95 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.21658 | 0.21658 | 0.21658 | 0.17698 | 0.21015 | 0.17698 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 100 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.32222 | 0.32222 | 0.32222 | 0.28151 | 0.32226 | 0.28151 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 105 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.46691 | 0.46691 | 0.46691 | 0.43491 | 0.43491 | 0.43491 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 110 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 115 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 120 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |

Notes:

- 1) Pre-Retirement and Post-Retirement mortality rates include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.
- 2) Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components: 99% will become the Non-Industrial Death rate and 1% will become the Industrial Death rate.
- 3) The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- 4) Normally, Industrial Disability rates are zero for miscellaneous plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50% will become the Non-Industrial Disability rate and 50% will become the Industrial Disability rate.

Appendix

Sample Mortality and Disability Rates

Public Agency Fire

| Attained Age | Pre-Retirement Mortality | | | | Post-Retirement Mortality | | | | | | Disability | | | |
|--------------|--------------------------|------------------|----------------------|------------------|---------------------------|---------------------------|-----------------------|--------------------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-----------------------|
| | Male Assumptions | | Female Assumptions | | Male Assumptions | | | Female Assumptions | | | Male Assumptions | | Female Assumptions | |
| | Non Industrial Death | Industrial Death | Non Industrial Death | Industrial Death | Healthy Recipients | Non Industrially Disabled | Industrially Disabled | Healthy Recipients | Non Industrially Disabled | Industrially Disabled | Non Industrial Disability | Industrial Disability | Non Industrial Disability | Industrial Disability |
| 1 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 5 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 10 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 15 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00016 | 0.00016 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00010 | 0.00002 | 0.00010 | 0.00002 |
| 20 | 0.00022 | 0.00004 | 0.00007 | 0.00004 | 0.00022 | 0.00022 | 0.00004 | 0.00007 | 0.00007 | 0.00007 | 0.00010 | 0.00005 | 0.00010 | 0.00005 |
| 25 | 0.00029 | 0.00006 | 0.00011 | 0.00006 | 0.00029 | 0.00029 | 0.00006 | 0.00011 | 0.00011 | 0.00006 | 0.00010 | 0.00019 | 0.00010 | 0.00019 |
| 30 | 0.00038 | 0.00007 | 0.00016 | 0.00007 | 0.00038 | 0.00038 | 0.00007 | 0.00016 | 0.00016 | 0.00007 | 0.00010 | 0.00056 | 0.00010 | 0.00056 |
| 35 | 0.00049 | 0.00009 | 0.00027 | 0.00009 | 0.00049 | 0.00049 | 0.00009 | 0.00027 | 0.00027 | 0.00009 | 0.00010 | 0.00119 | 0.00010 | 0.00119 |
| 40 | 0.00064 | 0.00010 | 0.00037 | 0.00010 | 0.00064 | 0.00064 | 0.00010 | 0.00037 | 0.00037 | 0.00010 | 0.00010 | 0.00225 | 0.00010 | 0.00225 |
| 45 | 0.00080 | 0.00012 | 0.00054 | 0.00012 | 0.00080 | 0.00080 | 0.00012 | 0.00054 | 0.00054 | 0.00012 | 0.00020 | 0.00398 | 0.00020 | 0.00398 |
| 50 | 0.00116 | 0.00013 | 0.00079 | 0.00013 | 0.00372 | 0.01183 | 0.00372 | 0.00346 | 0.01083 | 0.00346 | 0.00050 | 0.02079 | 0.00050 | 0.02079 |
| 55 | 0.00172 | 0.00015 | 0.00120 | 0.00015 | 0.00437 | 0.01613 | 0.00437 | 0.00410 | 0.01178 | 0.00410 | 0.00070 | 0.03066 | 0.00070 | 0.03066 |
| 60 | 0.00255 | 0.00016 | 0.00166 | 0.00016 | 0.00671 | 0.02166 | 0.00671 | 0.00476 | 0.01404 | 0.00476 | 0.00070 | 0.04375 | 0.00070 | 0.04375 |
| 65 | 0.00363 | 0.00018 | 0.00233 | 0.00018 | 0.00928 | 0.02733 | 0.01113 | 0.00637 | 0.01757 | 0.00765 | 0.00070 | 0.06069 | 0.00070 | 0.06069 |
| 70 | 0.00623 | 0.00019 | 0.00388 | 0.00019 | 0.01339 | 0.03358 | 0.01607 | 0.00926 | 0.02184 | 0.01112 | 0.00070 | 0.08221 | 0.00070 | 0.08221 |
| 75 | 0.01057 | 0.00021 | 0.00623 | 0.00021 | 0.02316 | 0.04277 | 0.02779 | 0.01635 | 0.02969 | 0.01962 | 0.00070 | 0.10910 | 0.00070 | 0.10910 |
| 80 | 0.01659 | 0.00022 | 0.00939 | 0.00022 | 0.03977 | 0.06272 | 0.04773 | 0.03007 | 0.04641 | 0.03609 | 0.00070 | 0.14219 | 0.00070 | 0.14219 |
| 85 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.07122 | 0.09793 | 0.08547 | 0.05418 | 0.07847 | 0.06501 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 90 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.13044 | 0.14616 | 0.14348 | 0.10089 | 0.13220 | 0.11098 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 95 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.21658 | 0.21658 | 0.21658 | 0.17698 | 0.21015 | 0.17698 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 100 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.32222 | 0.32222 | 0.32222 | 0.28151 | 0.32226 | 0.28151 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 105 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.46691 | 0.46691 | 0.46691 | 0.43491 | 0.43491 | 0.43491 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 110 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 115 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 120 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |

Notes:

- 1) Pre-Retirement and Post-Retirement mortality rates include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.
- 2) Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components: 99% will become the Non-Industrial Death rate and 1% will become the Industrial Death rate.
- 3) The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- 4) Normally, Industrial Disability rates are zero for miscellaneous plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50% will become the Non-Industrial Disability rate and 50% will become the Industrial Disability rate.

Appendix

Sample Termination Rates

| | | Sample Terminated Vested Rates | | | | | | | | | |
|------------|--|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | Public Agency Miscellaneous | | | | | | | | | |
| Entry Ages | | | | | | | | | | | |
| Service | | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 59 |
| 0 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 5 | | 0.04220 | 0.04220 | 0.04220 | 0.03930 | 0.03640 | 0.03440 | 0.03250 | 0.02710 | 0.02180 | 0.02180 |
| 10 | | 0.02780 | 0.02780 | 0.02780 | 0.02710 | 0.02630 | 0.02150 | 0.01670 | 0.01590 | 0.01500 | 0.01500 |
| 15 | | 0.01920 | 0.01920 | 0.01920 | 0.01740 | 0.01560 | 0.01200 | 0.00850 | 0.00430 | 0.00000 | 0.00000 |
| 20 | | 0.01390 | 0.01390 | 0.01390 | 0.01090 | 0.00790 | 0.00470 | 0.00140 | 0.00070 | 0.00000 | 0.00000 |
| 25 | | 0.00830 | 0.00830 | 0.00830 | 0.00480 | 0.00140 | 0.00070 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 30 | | 0.00150 | 0.00150 | 0.00150 | 0.00070 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 35 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 40 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 45 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 50 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |

| | | Sample Terminated Vested Rates | | | | | | | | | |
|------------|--|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | Public Agency Fire | | | | | | | | | |
| Entry Ages | | | | | | | | | | | |
| Service | | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 59 |
| 0 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 5 | | 0.00940 | 0.00940 | 0.00940 | 0.00940 | 0.00940 | 0.00940 | 0.00940 | 0.00940 | 0.00940 | 0.00940 |
| 10 | | 0.00640 | 0.00640 | 0.00640 | 0.00640 | 0.00640 | 0.00640 | 0.00640 | 0.00640 | 0.00640 | 0.00640 |
| 15 | | 0.00480 | 0.00480 | 0.00480 | 0.00480 | 0.00480 | 0.00480 | 0.00480 | 0.00480 | 0.00480 | 0.00480 |
| 20 | | 0.00380 | 0.00380 | 0.00380 | 0.00380 | 0.00380 | 0.00380 | 0.00380 | 0.00380 | 0.00380 | 0.00380 |
| 25 | | 0.00260 | 0.00260 | 0.00260 | 0.00260 | 0.00260 | 0.00260 | 0.00260 | 0.00260 | 0.00260 | 0.00260 |
| 30 | | 0.00140 | 0.00140 | 0.00140 | 0.00140 | 0.00140 | 0.00140 | 0.00140 | 0.00140 | 0.00000 | 0.00000 |
| 35 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 40 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 45 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 50 | | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |

When a member is eligible to retire, the termination with vested benefits probability is set to zero

Appendix

Sample Salary Scale Rates

| Service | Entry Ages | | | | | | | | | | Public Agency Miscellaneous | | | |
|---------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------------|--------|--------|--------|
| | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 79 |
| 0 | 0.0850 | 0.0850 | 0.0850 | 0.0775 | 0.0700 | 0.0650 | 0.0600 | 0.0600 | 0.0600 | 0.0600 | 0.0600 | 0.0600 | 0.0600 | 0.0600 |
| 5 | 0.0340 | 0.0340 | 0.0340 | 0.0295 | 0.0250 | 0.0215 | 0.0180 | 0.0180 | 0.0180 | 0.0180 | 0.0180 | 0.0180 | 0.0180 | 0.0180 |
| 10 | 0.0160 | 0.0160 | 0.0160 | 0.0135 | 0.0110 | 0.0090 | 0.0070 | 0.0070 | 0.0070 | 0.0070 | 0.0070 | 0.0070 | 0.0070 | 0.0070 |
| 15 | 0.0120 | 0.0120 | 0.0120 | 0.0100 | 0.0080 | 0.0060 | 0.0040 | 0.0040 | 0.0040 | 0.0040 | 0.0040 | 0.0040 | 0.0040 | 0.0040 |
| 20 | 0.0090 | 0.0090 | 0.0090 | 0.0075 | 0.0060 | 0.0045 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 |
| 25 | 0.0080 | 0.0080 | 0.0080 | 0.0065 | 0.0050 | 0.0040 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 |
| 30 | 0.0080 | 0.0080 | 0.0080 | 0.0065 | 0.0050 | 0.0040 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 |
| 35 | 0.0080 | 0.0080 | 0.0080 | 0.0065 | 0.0050 | 0.0040 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 |
| 40 | 0.0080 | 0.0080 | 0.0080 | 0.0065 | 0.0050 | 0.0040 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 |
| 45 | 0.0080 | 0.0080 | 0.0080 | 0.0065 | 0.0050 | 0.0040 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 |
| 50 | 0.0080 | 0.0080 | 0.0080 | 0.0065 | 0.0050 | 0.0040 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 | 0.0030 |

Appendix

Matrix of Sample Service Retirement Assumption Rates

| Service | Attained Ages | | | | Public Agency Miscellaneous 2.7% @ 55 | | | |
|---------|---------------|---------|---------|---------|---------------------------------------|---------|---------|--|
| | 50 | 55 | 60 | 65 | 70 | 75 | 79 | |
| 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | |
| 5 | 0.00300 | 0.03300 | 0.06000 | 0.14000 | 0.15000 | 1.00000 | 1.00000 | |
| 10 | 0.01000 | 0.05500 | 0.08600 | 0.17400 | 0.18100 | 1.00000 | 1.00000 | |
| 15 | 0.01600 | 0.07800 | 0.11200 | 0.20800 | 0.21200 | 1.00000 | 1.00000 | |
| 20 | 0.03400 | 0.11300 | 0.15000 | 0.25400 | 0.24300 | 1.00000 | 1.00000 | |
| 25 | 0.03300 | 0.15600 | 0.18200 | 0.30600 | 0.29100 | 1.00000 | 1.00000 | |
| 30 | 0.04500 | 0.23400 | 0.23800 | 0.38900 | 0.35000 | 1.00000 | 1.00000 | |
| 35 | 0.12000 | 0.36100 | 0.30200 | 0.42200 | 0.39000 | 1.00000 | 1.00000 | |
| 40 | 0.00000 | 0.42500 | 0.33000 | 0.42200 | 0.40000 | 1.00000 | 1.00000 | |
| 45 | 0.00000 | 0.00000 | 0.33000 | 0.42200 | 0.40000 | 1.00000 | 1.00000 | |
| 50 | 0.00000 | 0.00000 | 0.00000 | 0.42200 | 0.40000 | 1.00000 | 1.00000 | |

| Service | Attained Ages | | | | Public Agency Miscellaneous 2% @ 62 | | | |
|---------|---------------|---------|---------|---------|-------------------------------------|---------|---------|--|
| | 50 | 55 | 60 | 65 | 70 | 75 | 79 | |
| 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | |
| 5 | 0.00000 | 0.01000 | 0.03100 | 0.10800 | 0.12000 | 1.00000 | 1.00000 | |
| 10 | 0.00000 | 0.01900 | 0.05100 | 0.14100 | 0.15600 | 1.00000 | 1.00000 | |
| 15 | 0.00000 | 0.02800 | 0.07100 | 0.17300 | 0.19300 | 1.00000 | 1.00000 | |
| 20 | 0.00000 | 0.03600 | 0.09100 | 0.20600 | 0.22900 | 1.00000 | 1.00000 | |
| 25 | 0.00000 | 0.06100 | 0.11100 | 0.23900 | 0.26500 | 1.00000 | 1.00000 | |
| 30 | 0.00000 | 0.09600 | 0.13800 | 0.30000 | 0.33300 | 1.00000 | 1.00000 | |
| 35 | 0.00000 | 0.15200 | 0.18300 | 0.34800 | 0.38700 | 1.00000 | 1.00000 | |
| 40 | 0.00000 | 0.18000 | 0.20400 | 0.36000 | 0.40000 | 1.00000 | 1.00000 | |
| 45 | 0.00000 | 0.00000 | 0.20400 | 0.36000 | 0.40000 | 1.00000 | 1.00000 | |
| 50 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | |

Appendix

Matrix of Sample Service Retirement Assumption Rates

| Attained Ages | | Public Agency Safety 2% @ 50 | | | | | |
|---------------|---------|------------------------------|---------|---------|---------|---------|---------|
| Service | 50 | 55 | 60 | 65 | 70 | 75 | 79 |
| 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 5 | 0.00900 | 0.08900 | 0.10000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 10 | 0.00900 | 0.08900 | 0.10000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 15 | 0.00900 | 0.08900 | 0.10000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 20 | 0.00900 | 0.08900 | 0.10000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 25 | 0.01300 | 0.13600 | 0.15400 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 30 | 0.02000 | 0.20400 | 0.23000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 35 | 0.02200 | 0.23000 | 0.26000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 40 | 0.00000 | 0.23600 | 0.26700 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 45 | 0.00000 | 0.00000 | 0.26700 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 50 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |

| Attained Ages | | Public Agency Safety 2.7% @ 57 | | | | | |
|---------------|---------|--------------------------------|---------|---------|---------|---------|---------|
| Service | 50 | 55 | 60 | 65 | 70 | 75 | 79 |
| 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 5 | 0.00650 | 0.08246 | 0.11350 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 10 | 0.00650 | 0.08246 | 0.11350 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 15 | 0.00650 | 0.08246 | 0.11350 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 20 | 0.00650 | 0.08246 | 0.11350 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 25 | 0.01010 | 0.12692 | 0.17470 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 30 | 0.01510 | 0.19000 | 0.26150 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 35 | 0.01700 | 0.21432 | 0.29500 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 40 | 0.00000 | 0.22002 | 0.30290 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 45 | 0.00000 | 0.00000 | 0.30290 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| 50 | 0.00000 | 0.00000 | 0.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |

| Attained Ages | | Public Agency Safety 3% @ 55 | | | | | |
|---------------|--------|------------------------------|--------|--------|--------|--------|--------|
| Service | 50 | 55 | 60 | 65 | 70 | 75 | 79 |
| 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 5 | 0.0010 | 0.0730 | 0.1050 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 10 | 0.0010 | 0.0730 | 0.1050 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 15 | 0.0010 | 0.0730 | 0.1050 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 20 | 0.0060 | 0.1090 | 0.1550 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 25 | 0.0160 | 0.1790 | 0.2510 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 30 | 0.0690 | 0.2590 | 0.3440 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 35 | 0.0690 | 0.2590 | 0.3440 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 40 | 0.0000 | 0.2590 | 0.3440 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 45 | 0.0000 | 0.0000 | 0.3440 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 50 | 0.0000 | 0.0000 | 0.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |