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# Western States Office & Professional Employees Plan

## Actuarial Valuation

As of January 1, 2022

December 2022

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# Actuarial Certification

December 2, 2022

Board of Trustees
Western States Office & Professional Employees Plan

Dear Trustees:

Rael & Letson has prepared this report exclusively for the use of the Board of Trustees of the Western States Office & Professional Employees Plan ("Plan"). All supporting information pertaining to the findings presented in this report is described or contained within this report and the findings should not be relied upon for any other purpose than as stated herein. This report may only be provided to other parties in its entirety.

This report has been prepared as of January 1, 2022 to report on the health of the Plan, including reporting the:

1. Plan's funded status
2. Plan's funding requirements under the Employee Retirement Income Security Act of 1974 (ERISA)
3. Plan experience for the 2021 Plan Year
4. Unfunded vested benefits for withdrawal liability purposes
5. FASB ASC 960 required information for auditors
6. Information required for governmental agencies
7. Plan's risk assessment

We have relied on information supplied by the auditor with respect to contributions and assets and by the Plan Administrator with respect to participant data. We have not verified and customarily would not verify such information, but we have no reason to doubt its substantial accuracy. We have also relied on third party actuarial valuation software to generate the liabilities in this report. We have reviewed sample life calculations and have no reason to doubt the underlying valuation model or the results being generated by that model.

These results are applicable for the Plan Year ending December 31, 2022. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (for instance, the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. Due to the limited scope of the assignment, we did not perform analysis of the potential range of such future measurements.

## Actuarial Certification *(Continued)*

We are not aware of any events, subsequent to January 1, 2022, that would have a material effect on the actuarial findings presented in this report.

In preparation of this report and the actuarial findings contained herein, we certify that:

1. We have completed this actuarial valuation of the Plan as of January 1, 2022 in accordance with generally accepted actuarial principles and practices, including Actuarial Standards of Practice (ASOP) Nos. 4, 23, 27, 35, 41, 44, 51 and 56.

2. There has been no conflict of interest between any relevant parties; no findings for which we, the actuaries, do not assume responsibility; and no deviation from ASOP Nos. 4, 23, 27, 35, 41, 44, 51 and 56.

3. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate and, in our opinion, the individual assumptions used: (a) are reasonably related to the experience of the Plan and to reasonable expectations; and (b) represent our best estimate of anticipated experience under the Plan.

We, Paul Graf and Brian Harper, are actuaries for Rael & Letson. We are members of the American Academy of Actuaries and each meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

**Certified by:** Paul M Graf ASA, EA, MAAA
Paul Graf
Enrolled Actuary No. 20-05627

**Reviewed by:** B A. Harper EA, MAAA
Brian Harper
Enrolled Actuary No. 20-06435

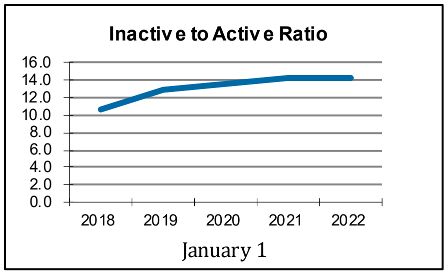
**Prepared by:** Jon L ASA, MAAA
Jon Lesnau

cc: Kim Gould
Joe Reinhart, Esq.
Alex Miller

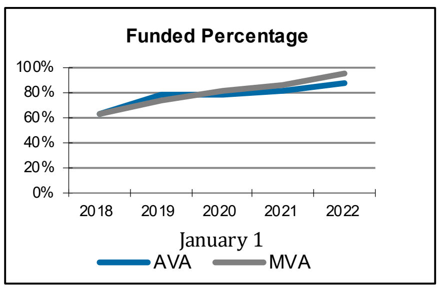
# Valuation Highlights

A summary of the key valuation highlights for the Western States Office & Professional Employees Plan follows:

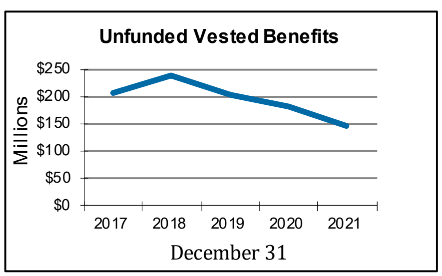
### Participant Data




### Financial Information



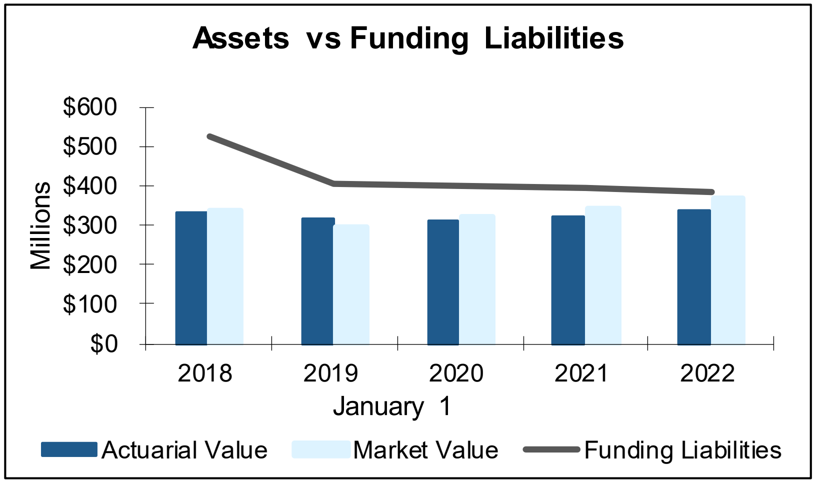

### Unfunded Vested Benefits

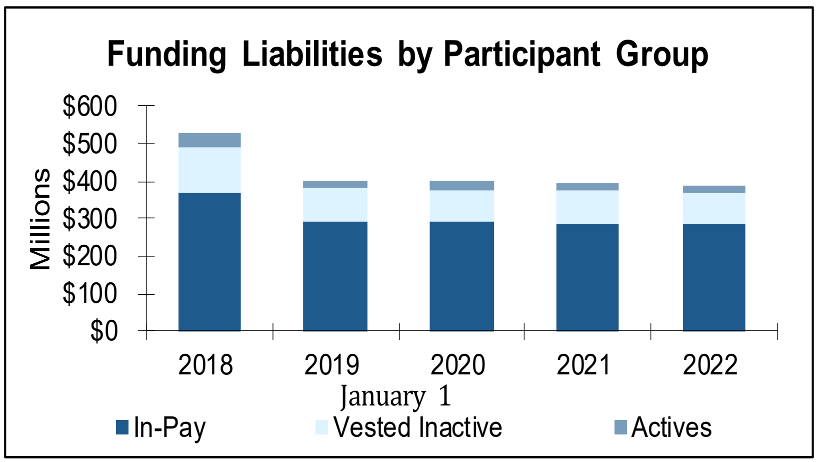



| | January 1, 2021 | January 1, 2022 | Change |
|---|---|---|---|
| Actives | 465 | 462 | (3) |
| Non-Vested Inactives[1] | 224 | 195 | (29) |
| Vested Inactives | 2,558 | 2,444 | (114) |
| In Pay Status[2] | 4,112 | 4,152 | 40 |
| Total Participants | 7,359 | 7,253 | (106) |
| Market Value of Assets (MVA) | $ 340,204,649 | $ 368,165,003 | $ 27,960,354 |
| Return on MVA (Prior Year) | 12.62 % | 13.30 % | 0.68 % |
| Actuarial Value of Assets (AVA)[3] | $ 319,474,447 | $ 337,375,911 | $ 17,901,464 |
| Return on AVA (Prior Year) | 9.29 % | 10.95 % | 1.66 % |
| Actuarial Accrued Liability[4] | $ 392,875,253 | $ 386,063,031 | $ (6,812,222) |
| Unfunded Accrued Liability (MVA) | 52,670,604 | 17,898,028 | (34,772,576) |
| Unfunded Accrued Liability (AVA) | 73,400,806 | 48,687,120 | (24,713,686) |
| MVA Funded Percentage | 86.6 % | 95.4 % | 8.8 % |
| AVA Funded Percentage | 81.3 % | 87.4 % | 6.1 % |
| Contributions (Prior Year) | $ 13,138,624 | $ 18,054,587 | $ 4,915,963 |
| Benefit Payments (Prior Year) | 33,368,397 | 33,019,640 | (348,757) |
| Expenses (Prior Year) | 1,414,873 | 1,233,798 | (181,075) |
| Vested Benefit Liability | $ 520,942,237 | $ 512,305,722 | $ (8,636,515) |
| Unfunded Vested Benefits[5] | 180,737,588 | 144,140,719 | (36,596,869) |
| Zone Certification Status | Critical | Critical | |
| PPA Funded Percentage[6] | 81.3 % | 87.4 % | 6.1 % |
| Credit Balance | $ (11,163,516) | $ (10,325,121) | $ 838,395 |

1 These are non-vested inactive participants who have not incurred a permanent break-in-service.
2 Includes 22 Alternate Payees as of January 1, 2021 and 23 Alternate Payees as of January 1, 2022.
3 2021 Plan Year experience includes an asset gain of $11.9 million and a liability gain of $1.8 million as of January 1, 2022.
4 The Actuarial Accrued Liability reflects the MPRA benefit reduction as of January 1, 2019.
5 Unfunded Vested Benefits are based on the Market Value of Assets, and include the applicable PBGC 10-3 base and MPRA Suspension base.
6 PPA is the Pension Protection Act of 2006 – it requires the use of the AVA and liabilities calculated using the Unit Credit Cost Method.

# Section I – Assets and Liabilities




| ASSETS | | |
|---|---|---|
| A. Cash and Cash Equivalents | $ | 9,104,022 |
| B. Marketable Securities | | 358,883,071 |
| C. Net Receivables, Payables and Prepaid Expenses | | 177,910 |
| **D. Market Value of Assets (A + B + C)** | **$** | **368,165,003** |
| E. Actuarial Adjustment (Appendix E) | | (30,789,092) |
| **F. Total Assets at Actuarial Value (D + E)** | **$** | **337,375,911** |
| **LIABILITIES** | | |
| **Funding** | | |
| G. Actives | $ | 19,413,919 |
| H. Vested Inactives | | 83,322,012 |
| I. In Pay Status | | 283,327,100 |
| J. Actuarial Accrued Liability (G + H + I) | $ | 386,063,031 |
| **K. Unfunded Accrued Liability (J - F)** | **$** | **48,687,120** |
| **PPA (Statutory)** | | |
| L. Actives | $ | 19,413,919 |
| M. Vested Inactives | | 83,322,012 |
| N. In Pay Status | | 283,327,100 |
| O. Actuarial Accrued Liability (L + M + N) | $ | 386,063,031 |
| **P. PPA Funded Percentage (F / O)** | | **87.4 %** |

# Section I – Assets and Liabilities *(Continued)*

The financial status of the Plan provides us with the means of measuring the actuarial position of the Plan as of January 1, 2022.

## ASSETS

The total Market Value of Assets as of January 1, 2022 is $368,165,003. Information regarding assets was taken from the draft audit report provided by Eide Bailly LLP. Results are not expected to change with the final audit.

We have utilized an asset valuation method that recognizes net investment income on Trust assets that is more or less than a 7.25% market return per year over a five-year period. The value of Trust assets based on this method is $337,375,911, which represents 91.6% of the Market Value of Assets. This method is intended to dampen the volatility associated with year-to-year changes in the market value of Trust assets, while at the same time systematically recognizing overall investment performance over the long term. The derivation of the Actuarial Value of Assets is shown in Appendix E.

Contributions receivable from Employers for hours worked in the 2021 Plan Year but received after December 31, 2021 are included with net receivables.

## LIABILITIES

The liabilities of the Plan are calculated for each individual participant based on data provided by the Plan Administrator and assumptions that are outlined in Appendix A. The $283,327,100 liability for those in pay status represents the estimated amount required as of the valuation date to pay their benefits as they come due in the future. The remaining liability is split between participants who are inactive and those who are continuing to earn benefits under the Plan. The Actuarial Accrued Liability is the sum of the liability amounts for each group and is equal to $386,063,031.

## UNFUNDED ACCRUED LIABILITIES

The liabilities of the Plan exceed the Actuarial Value of Assets by $48,687,120. This amount is known as the Unfunded Accrued Liability, which is amortized by the excess of contributions received over the cost of each future year's accumulation of benefits and operating expenses. If the Market Value of Assets is used, the Unfunded Accrued Liability is equal to $17,898,028.

## Section I – Assets and Liabilities *(Continued)*

As shown in Section III, the current excess of contributions over benefit accruals and operating expenses is about $7.1 million as of the beginning of year and is sufficient to pay down the Unfunded Accrued Liability assuming payment of all outstanding withdrawal liability on both an Actuarial Value of Assets basis (9 years) and a Market Value of Assets basis (3 years) assuming all future actuarial assumptions are realized.

The Fund submitted an application to the United States Department of the Treasury to implement benefit suspensions as permitted under the Multiemployer Pension Reform Act (MPRA). Following approval from the Treasury and a participant vote, benefit reductions of 30% on all accrued benefits earned through September 30, 2018, subject to the MPRA restrictions on benefit suspensions for older participants, disabled participants, and those with small benefits were implemented effective October 1, 2018.

The reduction in plan liabilities associated with the MPRA benefit suspensions was first reflected in the January 1, 2019 actuarial valuation and will be reflected going forward.

# Section II – Actuarial Experience

## ACTUARIAL VALUATION

An actuarial valuation is a snapshot of asset and liability measures of the pension fund. It is used to estimate the amount of funds needed to help assure the future payment of retirement, termination, disability and death benefits to Plan participants based on Plan benefits in effect on the valuation date. The liability is based on the actual service rendered by these participants prior to the valuation date and on a set of actuarial assumptions and methods. These assumptions have been selected by the Actuary while the methods have been adopted by the Trustees upon the recommendation of the Actuary. Both are described in Appendix A.

## GAIN/(LOSS)

To the extent that actual experience during the plan year is different from what was expected based on the set of actuarial assumptions outlined in Appendix A, gains or losses are realized.

An asset gain or loss results if the Actuarial Value of Assets returns more or less than the assumed rate of return. Actual operating expenses that are more or less than that assumed are also included as gains or losses in the asset gain or loss amount.

Liability gains or losses occur when actual demographic experience is different from that assumed by the demographic assumptions. The total liability gain or loss consists of gains or losses attributable to mortality, termination, retirement and disability assumptions. In addition, the effects of unforeseen data changes that may occur from year to year are part of the miscellaneous component.

# Section II – Actuarial Experience *(Continued)*

## Development of Gain/(Loss)

The net actuarial gain or loss includes all actuarial experience from assets and liabilities, but excludes changes in asset method, assumptions or Plan provisions effective on January 1, 2022. The following exhibit develops the net actuarial gain or loss for the 2021 Plan Year:

| NET ACTUARIAL GAIN/(LOSS) | | |
|---|---|---|
| A. Unfunded Accrued Liability on January 1, 2021 | $ | 73,400,806 |
| B. Normal Cost (Including Operating Expenses) | | 2,179,894 |
| C. Contributions for 2021 | | (18,054,587) |
| D. Interest on A, B and C | | 4,825,121 |
| E. Expected Unfunded Accrued Liability on January 1, 2022 (A + B + C + D) | $ | 62,351,234 |
| F. Actual Unfunded Accrued Liability on January 1, 2022 | | 48,687,120 |
| G. Net Actuarial Gain/(Loss) (E - F) | $ | 13,664,114 |

## Summary of Gain/(Loss) by Source

The total net actuarial gain or loss for the 2021 Plan Year is allocated among asset and liability components as shown below:

| | | Gain/(Loss) |
|---|---|---|
| **Asset Experience** | | |
| Investment | $ | 11,525,626 |
| Operating Expenses | | 327,664 |
| Total Asset Gain | $ | 11,853,290 |
| **Liability Experience** | | |
| Mortality | | 1,156,197 |
| Termination | | (697,949) |
| Retirement | | 1,568,353 |
| Disability | | (1,138) |
| Miscellaneous | | (214,639) |
| Total Liability Gain | $ | 1,810,824 |
| **Net Actuarial Experience Gain** | **$** | **13,664,114** |

# Section II – Actuarial Experience *(Continued)*

## ASSET EXPERIENCE

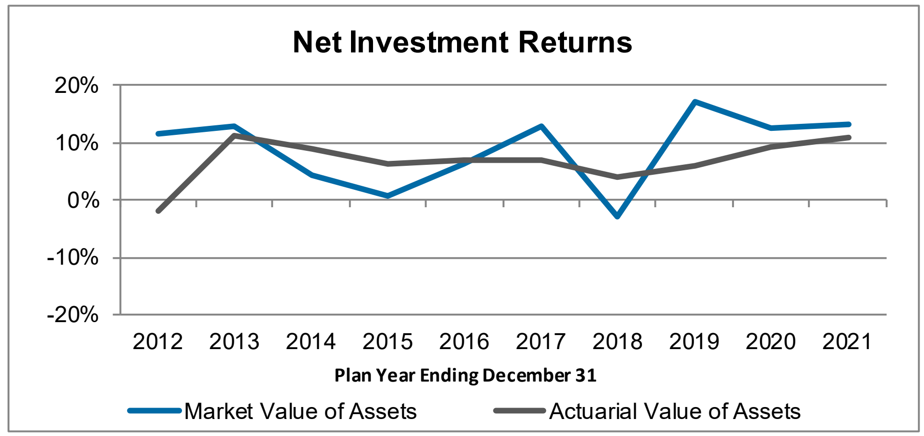
### Net Investment Return

The assumed rate of return on investments is 7.25% compounded annually, net of investment expenses. The net investment return on the Actuarial Value of Assets (AVA) during the 2021 Plan Year was 10.95% and resulted in an asset gain of $11,525,626. Appendix E shows the details of the actual net investment income calculation.

| | Dollar Amount | Return on AVA |
|---|---|---|
| A. Gross Investment Income | $ 35,351,003 | 11.35 % |
| B. Investment Expenses | (1,250,688) | (0.40)% |
| C Net Investment Income (A + B) | $ 34,100,315 | 10.95 % |
| D. Expected Net Investment Income | 22,574,689 | 7.25 % |
| **E. Investment Gain (C - D)** | **$ 11,525,626** | **3.70 %** |

| Plan Year Ending December 31 | Net Investment Return | |
|---|---|---|
| | Actuarial Value | Market Value |
| 2017 | 7.02 % | 13.04 % |
| 2018 | 4.14 % | (2.98)% |
| 2019 | 5.96 % | 17.10 % |
| 2020 | 9.29 % | 12.62 % |
| 2021 | 10.95 % | 13.30 % |
| 5-Year Average[1] | 7.45 % | 10.38 % |
| 10-Year Average[1] | 6.81 % | 8.73 % |

1 Geometric average return.



# Section II – Actuarial Experience *(Continued)*

## Operating Expenses

The assumed operating expenses are $1,630,000, payable mid-year. The assumed operating expenses for the 2021 Plan Year were $1,550,000, payable mid-year. This amount includes $1,300,000 in expected ongoing expenses and $250,000 related to one-time expenses due to implementation of the provisions of the American Rescue Plan Act of 2021. The actual operating expenses for the year were $1,233,798, resulting in a gain on expenses of $327,664, with interest to the end of the 2021 Plan Year.

| Plan Year | Gain/(Loss) | Assumption |
|---|---|---|
| 2017 | $ (463,821) | $ 1,352,681 |
| 2018 | (247,721) | 1,352,681 |
| 2019 | (515,236) | 966,200 |
| 2020 | (429,913) | 1,000,000 |
| 2021 | 327,664 | 1,550,000 |
| **5-Year Total** | **$ (1,329,027)** | |

## Liability Experience

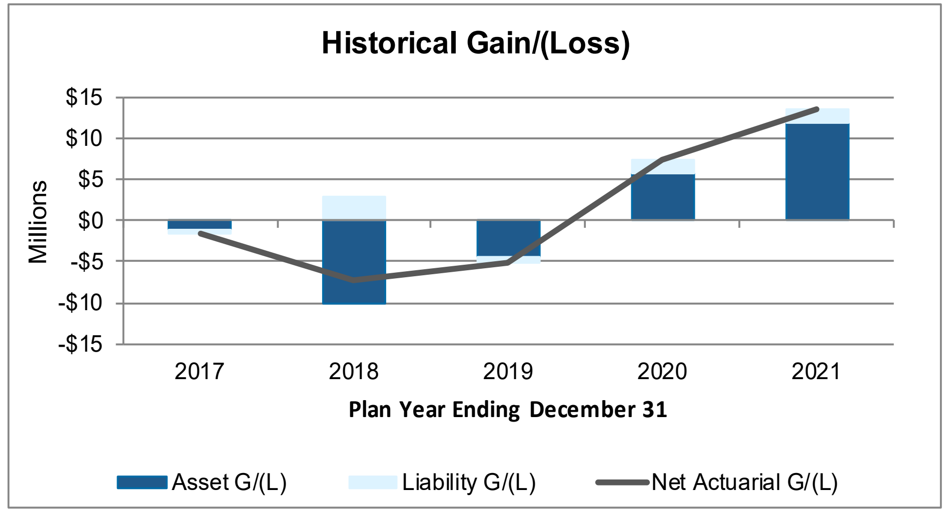
The key demographic assumptions in the valuation are mortality for active and inactive participants and termination, retirement and disability for active participants. Liability gains and losses that are allocated to mortality, termination, retirement and disability components usually reflect more than one related demographic assumption, such as the form of benefit elected and the spouse age difference. These items as well as further details and historical information on the Plan's liability experience are included in Appendix D.

# Section II – Actuarial Experience *(Continued)*

## Historical Gain/(Loss)

Fluctuations in experience for all assumptions are to be expected from year to year. It is the net result over a period of time that must be viewed to determine the validity of the assumptions used. A summary of the asset, liability and net actuarial gain/loss amounts over the last five years is shown below.

| Plan Year | Asset Gain/(Loss) | Liability Gain/(Loss) | Net Actuarial Gain/(Loss) |
|---|---|---|---|
| 2017 | $ (1,204,111) | $ (408,749) | $ (1,612,860) |
| 2018 | (10,172,116) | 2,786,127 | (7,385,989) |
| 2019 | (4,482,923) | (722,618) | (5,205,541) |
| 2020 | 5,741,928 | 1,556,328 | 7,298,256 |
| 2021 | 11,853,290 | 1,810,824 | 13,664,114 |
| 5-Year Total | $ 1,736,068 | $ 5,021,912 | $ 6,757,980 |



# Section III – Employer Contributions and Costs

## PROJECTION FOR 2022 PLAN YEAR

Employer contributions and costs for the 2022 Plan Year are based on expected contributions, including base, surcharge, and supplemental contributions as well as expected withdrawal liability payments, and hours assumed to be worked in 2022. Projected Employer contributions for the 2022 Plan Year will meet minimum funding requirements of ERISA and will be fully deductible by Employers.

The difference between the Employer contributions and the cost of benefits is the excess (if any) that can be used to pay down the Unfunded Accrued Liability.

| | | Dollars per Covered Hour |
|---|---|---|
| A. Employer Contributions | $ 4,276,000 | $ 5.32 |
| B. Withdrawal Liability Payments | 5,396,000 | N/A |
| C. Estimated Cost of Benefits | 679,000 | 0.84 |
| D. Estimated Operating Expenses[1] | 1,380,000 | N/A |
| E. Available for Funding[2] (A + B - C - D) | $ 7,363,000 | N/A |

1 Excludes expected one-time fees of $250,000 related to the ARPA application.

2 Mid-year.

The projected Employer contributions exceed the estimated cost of benefits to be earned, plus operating expenses, during 2022 by about $7.1 million as of the beginning of year. Based on asset and liability measures on the valuation date, this excess is sufficient to pay down the Unfunded Accrued Liability assuming payment of all outstanding withdrawal liability on both an Actuarial Value of Assets basis (9 years) and a Market Value of Assets basis (3 years) assuming all future actuarial assumptions are realized.

| | Actuarial Value Basis | Market Value Basis |
|---|---|---|
| Unfunded Accrued Liability | $ 48,687,120 | $ 17,898,028 |
| Amount Available for Funding[1] | 7,114,134 | 7,114,134 |
| Period to Pay off UAL | 9 Years | 3 Years |

1 Beginning of year.

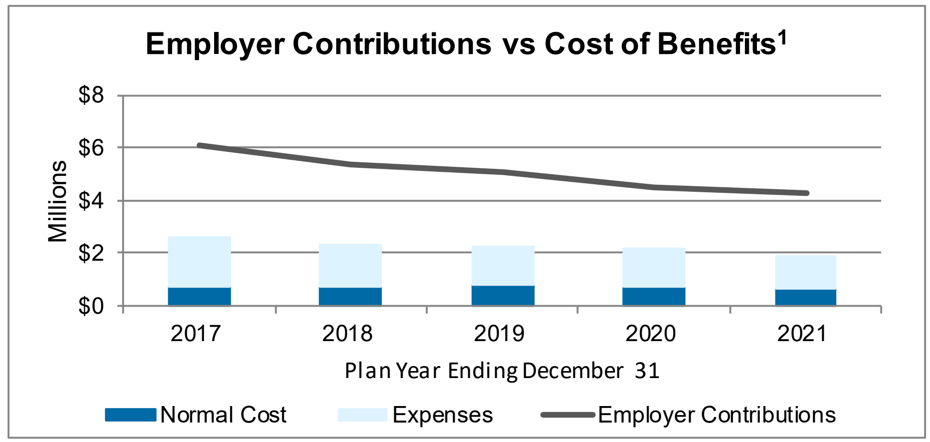
# Section III – Employer Contributions and Costs *(Continued)*

The Trustees originally adopted a Rehabilitation Plan on October 16, 2009, which was updated in 2012 to include reasonable measures to forestall possible insolvency. The Plan was first certified in critical and declining status for the 2016 Plan Year.

In order to avoid plan insolvency, the Fund submitted an application to the United States Department of the Treasury to implement benefit suspensions as permitted under the Multiemployer Pension Reform Act. On August 3, 2018 the Treasury approved the Fund's application for suspension of benefits. Participant voting to approve the benefit suspensions ended on September 7, 2018 and benefit reductions of 30% on benefits earned through September 30, 2018 took effect on October 1, 2018. As of January 1, 2022, the PPA Certification indicated that the Plan was no longer projected to become insolvent and the Plan is certified in critical status for the 2022 Plan Year.

## HISTORICAL CONTRIBUTIONS AND COSTS

Over time, Employer contributions have exceeded the cost of benefits and operating expenses, but have not been sufficient to reduce the Unfunded Accrued Liability.




[1] Contributions do not include withdrawal liability payments.

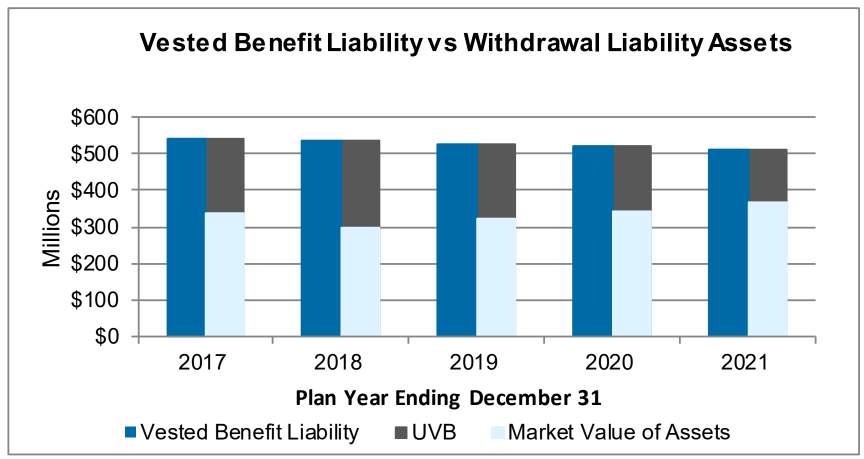
# Section IV – Withdrawal Liability

Withdrawal liability assessments, if any, are based on the amount of "Unfunded Vested Benefits" (UVB) and an Employer's contribution history. For this purpose, benefits in which a participant is not immediately vested are excluded from the determination of vested benefits (disability and death benefits other than the Qualified Pre-retirement Survivor Annuity (QPSA) are not included). The present value of vested benefits (Vested Benefit Liability) for withdrawal liability determination uses an interest rate of 7.25% along with all other valuation assumptions. Based on Board of Trustee input, the Plan uses a market based approach to determine the Plan's Unfunded Vested Benefits. This approach is described in Appendix B. Assets are based on the Market Value of Assets for withdrawal liability purposes.

The simplified method (under PBGC Technical Update 10-3) was adopted to comply with the Pension Protection Act's requirement for Red Zone plans to disregard any reduction in adjustable benefits when determining the UVB for withdrawal liability - this includes early retirement subsidies, including those for the Rule of 80, and the 60-month guarantee in life annuity.. The Static Method as outlined in the final PBGC regulations issued in January 2021 is used to disregard the benefit suspensions under MPRA, which includes benefit suspensions of 30% on benefits earned through September 30, 2018. Please refer to Appendix K for a list of PBGC 10-3 bases that have been established under this Plan. The resulting UVB as of December 31, 2021 is as follows:

| | December 31, 2021 |
|---|---|
| A. Vested Benefit Liability | $ 512,305,722 |
| B. Market Value of Assets | 368,165,003 |
| C. Unfunded Vested Benefits (A - B, not less than $0) | $ 144,140,719 |

A positive Unfunded Vested Benefits value means that Employers who withdraw in the 2022 Plan Year may be subject to a withdrawal liability assessment.



# Section V – Risk Assessment

The Plan's future financial condition will be based on actual experience that arises in each future year. The actuarial assumptions, both economic and demographic as outlined in Appendix A, are selected to anticipate the experience for the Plan. There is a range of potential acceptable assumptions that could be used. We have not analyzed the range of acceptable assumptions but have selected the assumptions that we feel best represent the expected experience of the Plan for the purpose at hand. The risk to the Plan is that there is uncertainty of future results due to actual experience deviating from expected experience. These deviations can cause asset/liability mismatch risk, or the potential that changes in asset values are not matched by changes in the value of liabilities. This mismatch can create funding risk for employers and participants. Funding risk is primarily comprised of the following key risk factors:

- **Investment return risk**
- **Longevity and other demographic risks**
- **Contribution risk**

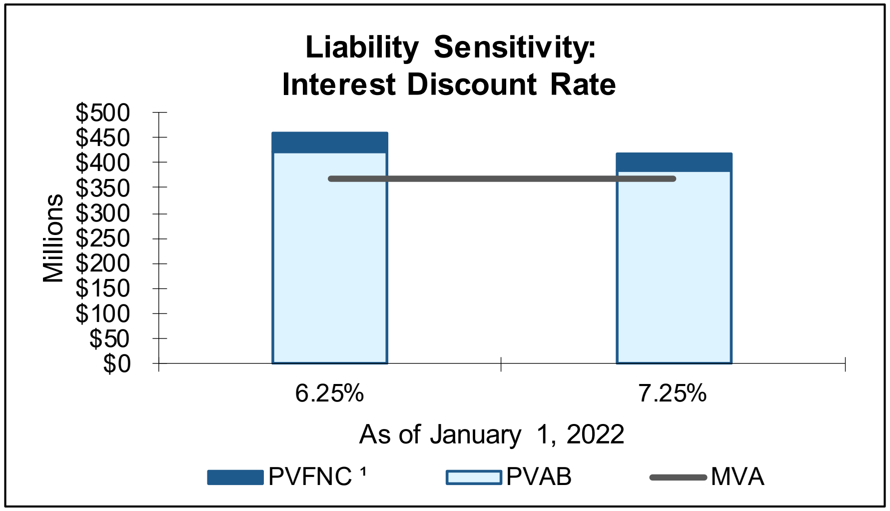
All plans will face longevity and other demographic risks to some extent. These risks can be analyzed by looking at the historical gains or losses due to the corresponding assumptions in the context of the business cycles that were present. Refer to Section II and Appendix D for additional details. As the traditional multiemployer defined benefit plan matures (more inactive participants and fewer actives), there is higher investment and contribution risk to the plan. In this traditional multiemployer plan design, planning for these risks is vital in managing funding risks for stakeholders. The primary risks above can be analyzed by looking at a sensitivity analysis and statistics related to the Plan's level of maturity. Historical information related to the Plan's risks is shown in Appendix F. In addition, projections or risk studies can provide a further look at the Plan's risk analysis.

# Section V – Risk Assessment *(Continued)*

## INVESTMENT RETURN RISK

Investment return risk is the potential that investment returns will be different from expected. The Plan faces investment risk when the assets return less than the assumed rate of return. Note that investment returns will vary year by year, but they are currently expected to average 7.25% over the long term. The interest discount rate for liabilities of the Plan has been set according to our long-term outlook on what the Plan might receive based on the current investment policy. Generally, the more mature a plan is, the more reliant it is on investment returns and thus may be more vulnerable to investment return risk.

To illustrate the impact of a change in the investment return, we look at the impact on the Plan's liabilities. The following graph illustrates how sensitive the Plan's liabilities are to a 1.00% decrease in the interest discount rate currently used to value liabilities. The graph shows liabilities valued at the corresponding interest discount rates (6.25% and 7.25%) in comparison to the current Market Value of Assets. The liabilities shown are the present value of future benefits broken down into the present value of accrued benefits (PVAB) and the present value of future normal costs and operating expenses (PVFNC), which is the present value of benefits expected to be earned in the future plus operating expenses.




[1] Includes operating expenses of $1,574,907 as of the beginning of year, plus 1.50% inflation in each future plan year (based on the $1,380,000 ongoing expense assumption which excludes the $250,000 one-time expected fees related to ARPA implementation).

If the current hours and contribution levels remain the same going forward and the assumed rate of return and interest discount rate are 6.25%, it would take about 7 more years to pay off the Unfunded Accrued Liability (UAL) on a Market Value basis if all other actuarial assumptions are realized in the future.

## Section V – Risk Assessment *(Continued)*

If the current hours level remains the same going forward and the assumed rate of return and interest discount rate are 6.25%, an hourly rate increase of $4.53 would be needed to pay for the one-time increase in liabilities if amortized over the next 15 years and all other actuarial assumptions are realized. In addition, an hourly rate increase of $0.15 would be needed each year to pay for the associated annual increase in normal cost. Even with these hourly rate increases, the Plan may be projected to have a lower funded percentage in 15 years due to a lower expected return on Plan assets (6.25% vs. 7.25%). The impact of variable investment returns (especially through projections) is outside the scope of this report.

### LONGEVITY AND OTHER DEMOGRAPHIC RISKS

Longevity and other demographic risks are the potential that mortality and other demographic experience will be different from expected experience based on the assumptions outlined in Appendix A. Gains and losses over a period of time can be analyzed to see how well actual experience follows expected experience. Section II and Appendix D can be reviewed for current and historical demographic experience to help guide future expectations.

Of utmost importance demographically is longevity risk. If participants live longer than what is expected through the mortality assumption, the liabilities will be understated and the future funding levels of the Plan will be lower than expected. Retirement risk can sometimes be significant as well. For example, if demographic experience results in a 3% increase in the Plan's liability due to such issues as increased early retirements and fewer deaths than expected, an hourly rate increase of $1.55 would be needed to cover the added cost if amortized over the next 15 years assuming no change in expected hours and all other actuarial assumptions are realized.

# Section V – Risk Assessment *(Continued)*

## CONTRIBUTION RISK

Contribution risk is the potential that contributions received are different from contributions expected to be received, including contributions required under collective bargaining agreements, Funding Improvement/ Rehabilitation Plans and withdrawal liability assessments. The Plan could also face contribution risk if the current contribution level does not cover the cost of benefits being earned or would result in a current or projected credit balance deficiency. Contributions can also be impacted by unexpected changes in hours or the number of active participants for whom contributions are due to the Plan. The hours and number of active participants over the last 18 years can be reviewed under Appendix F to help understand the role of contribution risk historically and to help evaluate this risk prospectively.

The chart below illustrates how the Plan's hours level can impact the number of years required to pay down the Unfunded Accrued Liability on a Market Value basis (UAL (MVA)) assuming the same level of hours are worked in each future year, the average hourly contribution rate remains the same and all other actuarial assumptions are realized:

| Years to Fully Fund on a Market Value Basis Based on Hours Worked | | | |
|---|---|---|---|
| | 20% Drop in Hours | Current Hours Assumption | 20% Increase in Hours |
| Expected Hours | 643,200 | 804,000 | 964,800 |
| Expected Contributions[1] | $ 3,421,000 | $ 4,276,000 | $ 5,132,000 |
| Expected Withdrawal Liability Payments[2] | $ 5,396,000 | $ 5,396,000 | $ 5,396,000 |
| Estimated Normal Cost | 2,173,000 | 2,309,000 | 2,445,000 |
| Expected Available for Funding as of Mid-year | $ 6,644,000 | $ 7,363,000 | $ 8,083,000 |
| UAL (MVA) | $ 17,898,028 | $ 17,898,028 | $ 17,898,028 |
| Years to Fully Fund | 3 Years | 3 Years | 3 Years |

1 Expected contributions are based on an hourly contribution rate of $5.32.

2 Withdrawal liability payments are subject to a 20 year payment limit, which can potentially extend the time period to pay off the unfunded liability.

# Section V – Risk Assessment *(Continued)*

## PLAN MATURITY AND RISK MEASUREMENTS

There are several statistics that can help in assessing a plan's ability to recover from financial challenges and its long-term sustainability. The information that follows shows some of these key measurements for the Plan along with their definitions and concluding remarks about the Plan's ability to address risk.

| PLAN MATURITY AND RISK MEASUREMENTS | January 1, 2021 | January 1, 2022 | Change |
|---|---|---|---|
| Inactive to Active Ratio[1] | 14.30 | 14.23 | (0.07) |
| In Pay Status Actuarial Accrued Liability to Total Actuarial Accrued Liability Ratio | 0.73 | 0.73 | 0.00 |
| Net Cash Flow as a % of Average MVA | (6.5)% | (4.6)% | 1.9 % |
| Contribution Increase to Fund 1% Market Return Shortfall Over One Year[2] | $ 3.4 million ($4.12 / hour) | $ 3.7 million ($4.58 / hour) | 11.2 % |
| Contribution Increase to Fund 10% Market Return Shortfall Over 15 Years[3] | $4.29 / hour | $4.76 / hour | 11.0 % |
| MVA Funded Percentage | 86.6 % | 95.4 % | 8.8 % |
| Current Liability Funded Percentage | 52.2 % | 56.6 % | 4.4 % |

1 Excludes Non-Vested Inactives and Alternate Payees.

2 Assumes 825,000 future hours in 2021 and 804,000 future hours in 2022. Figure shown is a "temporary" one-time increase to fund a one-time shortfall.

3 Assumes 825,000 future hours in 2021 and 804,000 future hours in 2022.

- Inactive to Active Ratio is the number of retirees, beneficiaries and vested inactive participants each active participant "supports." The higher the ratio, the more mature the plan.

- In Pay Status Actuarial Accrued Liability to Total Actuarial Accrued Liability Ratio is the ratio of the liability associated with retirees and beneficiaries currently receiving a benefit to the Plan's total liability. The higher the ratio, the more mature the plan.

- Net Cash Flow as a % of Average MVA is the Plan's cash inflows in the form of contributions less the Plan's cash outflows in the form of benefit payments and operating expenses as a percent of the average Market Value of Assets. The percentage represents the "opposite" investment return needed to maintain level assets (i.e., negative cash flow, positive return needed). The lower the percentage, the more mature the plan.

- Contribution Increase to Fund 1% Market Return Shortfall over One Year is the additional contribution that would be required to offset a 1% shortfall in the Plan's investment return for the year. Also shown is the corresponding immediate increase in the average hourly contribution rate needed to fund the 1% shortfall based on the hours expected to be worked that year. Note, future benefit reductions could also be used to address a shortfall.

# Section V – Risk Assessment *(Continued)*

- Contribution Increase to Fund 10% Market Return Shortfall over 15 Years is the immediate increase in the average hourly contribution rate that would be required to fund a 10% shortfall in the Plan's investment return for the year if amortized over a 15-year period. This assumes the hours expected to be worked in that year are also worked in each of the subsequent 14 years, the contribution rate remains the same and all other future actuarial assumptions are realized. Again, future benefit reductions could also be used to address a shortfall.

- MVA Funded Percentage is the Market Value of Assets divided by the Plan's liabilities, determined using valuation assumptions. In general, plans should have a long-term goal to achieve at least 100% funding and remain fully funded.

- Current Liability Funded Percentage is the Market Value of Assets divided by the Plan's liabilities, determined using a risk-free interest rate and mandated mortality assumption. This information is reported on the Form 5500 Schedule MB and may be used as a rough estimate of the Plan's funding on a liquidation basis.

Based on the Plan Maturity and Risk Measurements shown above, the Plan is considered to be very mature. The Plan has cash outflows that significantly exceed cash inflows and the inactive participants significantly outnumber the active participants indicating the Plan is considerably more reliant on investment income to pay pension benefits than on contributions for active hours worked. Thus, if investment returns fall short of the 7.25% assumed return, even significant contribution increases and/or cuts to future accruals may not be enough to recover without future investment gains. The Plan is heavily dependent on its investment returns for future solvency.

# Section VI – Other Plan Information

## CHANGES IN PLAN PROVISIONS, VALUATION METHODOLOGY, AND ASSUMPTIONS

The current liability interest and mortality assumptions were updated as prescribed by IRS regulations. Refer to Appendix A for a description of these changes.

The expense assumption was increased from $1,550,000 to $1,630,000 to reflect the recent and anticipated level of operating expenses, including an estimated $250,000 related to one-time expenses due to implementation of the provisions of the American Rescue Plan Act of 2021.

No other changes to Plan provisions, valuation methodology, and assumptions have been made since the prior valuation as of January 1, 2021.

# Section VII – Appendices

| | |
|---|---|
| **Appendix A** | **Actuarial Methods and Assumptions** |
| **Appendix B** | **Summary of Principal Plan Provisions** |
| **Appendix C** | **Participant Information** |
| **Appendix D** | **Liability Experience** |
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| **Appendix J** | **Auditor Information (FASB ASC 960)** |
| **Appendix K** | **Withdrawal Liability Information** |
| **Appendix L** | **Funding Standard Account (No Amortization Extension)** |

# Appendix A – Actuarial Methods and Assumptions

| METHODOLOGY: | |
|---|---|
| Actuarial Value of Assets | Assets are valued according to a method which recognizes 20% of each year's excess (or deficiency) of actual investment return on the Market Value of Assets over the expected return on the Market Value of Assets in the year the excess (or deficiency) occurs. An additional 20% of the excess (or deficiency) is recognized in each of the succeeding four years until it is totally recognized. In no event will the Actuarial Value of Assets be less than 80% or more than 120% of the Market Value of Assets. |
| Actuarial Cost Method | **Unit Credit Cost Method**<br><br>Under this method, we determine the present value of all benefits earned through the valuation date. An individual's normal cost is the present value of the benefit expected to be earned in the valuation year. The total accrued liability is the sum of the individual present values for all participants. The Unfunded Accrued Liability is the difference between the accrued liability and the assets of the Trust. If the assets exceed the accrued liability, the Plan is in a surplus position. This method requires that each year's contributions be applied first to the normal cost, and the balance of the contributions applied to amortize the Unfunded Accrued Liability. The normal cost is adjusted at the close of the plan year to reflect the actual level of contributions received during that plan year. |
| Withdrawal Liability Basis | The present value of accrued vested benefits for withdrawal liability determination uses an interest rate of 7.25% along with all other valuation assumptions. The simplified method issued by the Pension Benefit Guaranty Corporation is used to account for the protected benefits that were reduced in accordance with the Plan's critical status and subsequent Rehabilitation Plan and the Plan's benefit suspensions under MPRA. Assets for this purpose are based on the Market Value of Assets. |

# Appendix A – Actuarial Methods and Assumptions *(Continued)*

| ASSUMPTIONS: | |
|---|---|
| Interest Discount Rate | 7.25% for funding, FASB ASC 960 and withdrawal liability and 2.22% for current liability. |
| Assumed Rate of Return on Investments | 7.25% compounded annually, net of investment expenses. |
| Derivation of Net Investment Return and Discount Rate for FASB ASC 960 Accounting | The expected return assumptions are established based on a long-term outlook and are based on past experience, future expectations and professional judgment. We have modeled the assumptions based on average long-term future expected returns and their respective capital market assumptions as provided by several investment professionals. Based on the inputs of the Plan's specific target asset allocation, we have established the reasonability of the Plan's assumption. |
| Operating Expenses | A total annual amount of $1,630,000 paid in monthly installments ($1,574,907 at beginning of year), and are assumed to increase by 1.50% per year.<br>This amount includes $1,380,000 in ongoing expenses and $250,000 in one-time ARPA-related fees. |
| Investment Expenses | Assumed covered by investment earnings. |
| Justification for Demographic Assumptions | The mortality, termination, retirement and disability assumptions are reviewed with each valuation to ensure they are reasonable and represent the actuary's best estimate of the long-term expectations for the Plan. Past experience and anticipated future experience based on industry-specific knowledge and professional judgment are used to verify the reasonability of each of these assumptions. |
| Mortality | Healthy Lives: RP-2014 Blue Collar Mortality Table for males and females, adjusted backward to 2006 using MP-2014, then projected forward from 2006 with Fully Generational Mortality Improvement under MP-2016.<br>Disabled Lives: RP-2014 Disabled Retiree Mortality Table for males and females, adjusted backward to 2006 using MP-2014, then projected forward from 2006 with Fully Generational Mortality Improvement under MP-2016.<br>Current Liability: 2022 static mortality tables provided in IRC Regulations Section 1.431(c)(6)-1, as prescribed by IRS Notice 2020-85. |
| Mortality Improvement | The mortality assumption has been updated to reflect fully generational mortality improvements using the MP-2016 scaling factors.<br>The current mortality assumption, with generational improvement, is assumed to be reasonable at this time. |
| Termination Rates | Table T-7 (Less 51 GAT) of The Actuary's Pension Handbook. Non-Vested Participants are assumed to earn one year of vesting credit annually until vested. |

# Appendix A – Actuarial Methods and Assumptions *(Continued)*

| ASSUMPTIONS: | |
|---|---|
| Retirement Rates | Active participants are assumed to retire based on the following rate table: |

| Age | Rate of Retirement |
|---|---|
| 55 | 20% |
| 56 | 15% |
| 57-59 | 12% |
| 60 | 15% |
| 61 | 20% |
| 62 | 40% |
| 63-70 | 35% |
| 71+ | 100% |

Vested inactive participants are assumed to retire based on the following rate table:

| Age | Rate of Retirement |
|---|---|
| 55 | 15% |
| 56-61 | 5% |
| 62 | 18% |
| 63-64 | 3% |
| 65+ | 100% |

| | |
|---|---|
| Disability Rates | 1952 Society of Actuaries Table, Period 2, Benefit 5. |
| Form of Benefit | For those not yet in pay status, 55% of participants are assumed to elect a Life Annuity and 45% of participants are assumed to elect a 50% Joint and Survivor Annuity. |
| Marital Status | 80% of non-retired male participants and 75% of non-retired female participants are assumed to be married. Beneficiaries are assumed to be one year younger than participants. |
| Active Participant | Worked at least 200 hours in covered employment. |
| Future Employment | Each active participant is assumed to work the same amount of hours worked in the prior plan year. |

# Appendix A – Actuarial Methods and Assumptions *(Continued)*

| **ASSUMPTIONS:** | |
|---|---|
| Missing Data | If not specified, participants are assumed to be female and the same age as the average of participants with the same status code. |

| **CHANGES SINCE PRIOR VALUATION** | The current liability interest rate was changed from 2.43% to 2.22% due to a change in the allowable interest rate range, and the current liability mortality table was updated as required.<br><br>The expense assumption was increased from $1,550,000 to $1,630,000 to reflect the recent and anticipated level of operating expenses, including an estimated $250,000 related to one-time expenses due to implementation of the provisions of the American Rescue Plan Act of 2021. |
|---|---|

# Appendix B – Summary of Principal Plan Provisions

The Western States Office & Professional Employees Plan became effective 1959 as a result of collective bargaining between the contributing Employers and the Union. The Plan was last restated as of January 1, 2017 and last amended effective October 1, 2018. The principal provisions of the Plan as of January 1, 2022 are summarized below.

| | |
|---|---|
| **NORMAL RETIREMENT** | |
| Eligibility | Age 65 and vested. Special eligibility if age 65 with 2 years of Vesting Credit (one immediately prior to retirement) and at least a $10.00 Total Service Benefit. |
| Monthly Benefit | Service after 2009: 0.75% of Benefit Accruing Employer Contributions.<br>2004 - 2009: 1.8% of Employer Contributions.<br>2003 Service: 2.2% of Employer Contributions up to $6,240, plus 1.8% of excess.<br>2001 - 2002 Service: 3.2% of Employer Contributions up to $6,240 each year; plus 1.8% of excess.<br>1997 - 2000 Service: 3.65% of Employer Contributions up to $6,240 each year, plus 1.8% of excess.<br>Prior to 1997: 3.65% of Employer Contributions.<br>Past Service: $8.20 per year of past service (maximum 15 years). |
| **EARLY RETIREMENT** | |
| Eligibility | Age 55 and vested. |
| Monthly Benefit | Normal Retirement Benefit actuarially reduced from age 62 for benefits earned before January 1, 2010 and from age 65 for benefits earned on or after January 1, 2010. |
| **POSTPONED RETIREMENT** | |
| Eligibility | After Normal Retirement Age. |
| Monthly Benefit | Normal Retirement Benefit increased 6% per year (½% per month) past age 62 for benefits earned before January 1, 2010 and past age 65 for benefits earned on or after January 1, 2010.<br>Effective for annuity starting dates on or after September 1, 2015, participants who continue working for a contributing employer will receive the greater of (a) or (b) below:<br>(a) Normal Retirement Benefit increased ½ of 1% for each full month retirement is postponed.<br>(b) Accrued benefit as of the participant's postponed retirement date. |

# Appendix B – Summary of Principal Plan Provisions *(Continued)*

| | |
|---|---|
| **DISABILITY RETIREMENT (Effective January 1, 2010)** | |
| Eligibility | Vested with at least 200 hours in year prior to onset of Total and Permanent Disability. |
| Monthly Benefit | 50% of Normal Retirement Benefit payable until age 55. |
| **PRE-RETIREMENT DEATH BENEFIT (Effective January 1, 2010)** | |
| Eligibility | Vested at time of death. |
| Monthly Benefit | Married: 50% Spousal Joint and Survivor Annuity (reduced for Early Retirement and for joint lives).<br>All Others: Lump sum payment of $500 per year of service (maximum of $5,000 total). |
| **FORMS OF ANNUITY PAYMENTS** | |
| Normal Form | For Married Participants: An actuarially reduced benefit payable as a 50% Spousal Joint and Survivor Annuity.<br>For Unmarried Participants: A life annuity. |
| Optional Forms | Straight Life Annuity<br>50%, 66-2/3% or 100% Spousal Joint and Survivor Annuity<br>50%, 66-2/3% or 100% Spousal Joint and Survivor Annuity with Pop-up<br>50%, 66-2/3% or 100% Non-Spousal Joint and Survivor Annuity<br>Lump Sum if present value of accrued benefit ≤ $5,000 |
| **OTHER** | |
| Vesting Service | A Participant will receive one year of Vesting Credit if 200 or more hours are worked in a plan year. |
| Break in Service Rules | A one-year break in service is incurred if a Participant works less than 200 hours in a plan year. |

| | |
|---|---|
| **CHANGES SINCE PRIOR VALUATION** | None. |

# Appendix C – Participant Information

| PARTICIPANT STATISTICS | January 1, 2021 | January 1, 2022 | Change | Percent Change |
|---|---|---|---|---|
| **Actives:** | | | | |
| Number | 465 | 462 | (3) | (0.6)% |
| Averages: | | | | |
| Age[1] | 48.5 | 47.9 | (0.6) | (1.2)% |
| Years of Credited Service | 11.4 | 10.8 | (0.6) | (5.3)% |
| Hours | 1,749 | 1,691 | (58) | (3.3)% |
| **Non-Vested Inactives** | | | | |
| Number | 224 | 195 | (29) | (12.9)% |
| Averages: | | | | |
| Age[1] | 41.5 | 42.4 | 0.9 | 2.2 % |
| Years of Credited Service | 2.0 | 1.9 | (0.1) | (5.0)% |
| Accrued Benefit[2] | $ 53 | $ 45 | $ (8) | (15.1)% |
| **Vested Inactives:** | | | | |
| Number | 2,558 | 2,444 | (114) | (4.5)% |
| Averages: | | | | |
| Age | 53.9 | 54.4 | 0.5 | 0.9 % |
| Years of Credited Service | 11.8 | 11.7 | (0.1) | (0.8)% |
| Vested Accrued Benefit[2] | $ 427 | $ 422 | $ (5) | (1.2)% |
| **In Pay Status:** | | | | |
| Number: | | | | |
| Healthy Retirees | 3,749 | 3,766 | 17 | 0.5 % |
| Disabled Retirees | 92 | 88 | (4) | (4.3)% |
| Beneficiaries[3] | 271 | 298 | 27 | 10.0 % |
| Total | 4,112 | 4,152 | 40 | 1.0 % |
| Averages: | | | | |
| Age | 73.3 | 73.7 | 0.4 | 0.5 % |
| Monthly Benefit[2] | $ 672 | $ 664 | $ (8) | (1.2)% |

1 For participants with known birthdates.

2 MPRA benefit reduction has been reflected in the monthly benefit.

2 Includes 22 Alternate Payees as of January 1, 2021 and 23 Alternate Payees as of January 1, 2022.

# Appendix C – Participant Information *(Continued)*

| PARTICIPANT RECONCILIATION | Actives | Non-Vested Inactives | Vested Inactives | In Pay Status | Total |
|---|---|---|---|---|---|
| **Total as of January 1, 2021** | **465** | **224** | **2,558** | **4,112** | **7,359** |
| New Entrants | 71 | 0 | 0 | 0 | 71 |
| Vested Terminations | (20) | 0 | 20 | 0 | 0 |
| Non-Vested Terminations | (40) | 47 | 0 | 0 | 7 |
| Returned to Work | 2 | 0 | (2) | 0 | 0 |
| Healthy Retirements | (15) | 0 | (128) | 143 | 0 |
| Disabled Retirements | 0 | 0 | 0 | 0 | 0 |
| Deaths in Year | (1) | 0 | 0 | (138) | (139) |
| Benefit Period Expired | 0 | 0 | 0 | 0 | 0 |
| New Beneficiaries | 0 | 0 | 0 | 35 | 35 |
| New Alternate Payees | 0 | 0 | 0 | 1 | 1 |
| Lump Sum | 0 | 0 | 0 | 0 | 0 |
| Permanent Break in Service | 0 | (76) | (3) | 0 | (79) |
| Add Custom or Hide | 0 | 0 | 0 | 0 | 0 |
| Add Custom or Hide | 0 | 0 | 0 | 0 | 0 |
| Data Corrections | 0 | 0 | (1) | (1) | (2) |
| Net Change | (3) | (29) | (114) | 40 | (106) |
| **Total as of January 1, 2022** | **462** | **195** | **2,444** | **4,152** | **7,253** |

# Appendix C – Participant Information *(Continued)*

| DISTRIBUTION OF NON-RETIRED PARTICIPANTS | | | | | | |
|---|---|---|---|---|---|---|
| | Actives | | | Inactives | | |
| Age Group | Non-Vested | Vested | Total Actives | Non-Vested | Vested | Total Inactives |
| Under 25 | 8 | 0 | 8 | 2 | 0 | 2 |
| 25 - 29 | 32 | 4 | 36 | 22 | 1 | 23 |
| 30 - 34 | 26 | 14 | 40 | 33 | 18 | 51 |
| 35 - 39 | 20 | 21 | 41 | 33 | 96 | 129 |
| 40 - 44 | 18 | 36 | 54 | 30 | 184 | 214 |
| 45 - 49 | 21 | 30 | 51 | 21 | 313 | 334 |
| 50 - 54 | 16 | 38 | 54 | 15 | 539 | 554 |
| 55 - 59 | 18 | 48 | 66 | 18 | 593 | 611 |
| 60 - 64 | 9 | 47 | 56 | 10 | 502 | 512 |
| 65 - 69 | 1 | 29 | 30 | 7 | 152 | 159 |
| 70 and Over | 0 | 10 | 10 | 2 | 46 | 48 |
| Unknown | 16 | 0 | 16 | 2 | 0 | 2 |
| **Total** | 185 | 277 | 462 | 195 | 2,444 | 2,639 |
| Average Age[1] | 40.5 | 52.4 | 47.9 | 42.4 | 54.4 | 53.6 |
| Average Accrued Benefit[2] | $ 78 | $ 798 | $ 510 | $ 45 | $ 422 | $ 394 |

[1] For participants with known birthdates.

[2] MPRA benefit reduction has been reflected in the average accrued benefit.

# Appendix C – Participant Information *(Continued)*

**DISTRIBUTION OF IN PAY STATUS**

| Age Group | Continuing Healthy Retirees | New Healthy Retirees | Continuing Disabled Retirees | New Disabled Retirees | Continuing Beneficiaries[1] | New Beneficiaries[1] | Grand Total |
|---|---|---|---|---|---|---|---|
| Under 50 | 0 | 0 | 3 | 0 | 14 | 5 | 22 |
| 50 - 54 | 0 | 0 | 2 | 0 | 4 | 1 | 7 |
| 55 - 59 | 43 | 21 | 7 | 0 | 11 | 1 | 83 |
| 60 - 64 | 296 | 64 | 12 | 0 | 23 | 2 | 397 |
| 65 - 69 | 736 | 53 | 28 | 0 | 34 | 6 | 857 |
| 70 - 74 | 949 | 4 | 20 | 0 | 35 | 4 | 1,012 |
| 75 - 79 | 767 | 1 | 9 | 0 | 49 | 6 | 832 |
| 80 - 84 | 446 | 0 | 2 | 0 | 45 | 4 | 497 |
| 85 and Over | 386 | 0 | 5 | 0 | 47 | 7 | 445 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | 3,623 | 143 | 88 | 0 | 262 | 36 | 4,152 |
| Average Age | 74.2 | 63.3 | 68.5 | N/A | 73.8 | 69.7 | 73.7 |
| Average Monthly Benefit | $ 677 | $ 620 | $ 1,019 | $ N/A | $ 427 | $ 416 | $ 664 |

[1] Includes 22 continuing Alternate Payees and 1 new Alternate Payees.

# Appendix D – Liability Experience

Liability gains or losses are realized when actual demographic experience is different from what is assumed by the demographic assumptions outlined in Appendix A. The most important demographic assumptions are retirement, termination, disability, and mortality. These are the assumptions used to estimate when an active participant is going to leave active status, and how long a participant will remain in the Plan and receive a benefit. The retirement, termination and disability components also include a range of other assumptions, such as form of benefit election and spouse age difference. The miscellaneous gain or loss amounts include the effects of unforeseen data changes that might occur each year, like date of birth corrections, adjustment for past service or other adjustments to participant data that were not expected. It also includes the effects of new entrants and changes in hours and/or contribution rates that impact the amount of benefits active participants earn during the year.

| Plan Year | Retirement Gain/(Loss) | Termination Gain/(Loss) | Disability Gain/(Loss) | Mortality Gain/(Loss) | Miscellaneous Gain/(Loss) |
|---|---|---|---|---|---|
| 2017 [1] | $ 682,402 | $ (997,214) | $ (64,923) | $ 306,647 | $ (335,661) |
| 2018 | 1,878,099 | (22,276) | (47,065) | 1,032,363 | (54,994) |
| 2019 | 380,147 | (19,309) | 800 | (1,041,722) | (42,534) |
| 2020 | 751,127 | (24,463) | 556 | 1,113,993 | (284,885) |
| 2021 | 1,568,353 | (697,949) | (1,138) | 1,156,197 | (214,639) |
| **5-Year Total** | **$ 5,260,128** | **$ (1,761,211)** | **$ (111,770)** | **$ 2,567,478** | **$ (932,713)** |

[1] Mortality and Retirement assumptions were updated in 2017 to better reflect future anticipated experience.

# Appendix E – Asset Information

| SUMMARY OF MARKET VALUE OF ASSETS | | |
|---|---|---|
| **Assets as of December 31, 2021** | **Market Value** | **Percent of Total** |
| Cash (Interest bearing and non-interest bearing) | $ 9,104,022 | 2.5% |
| Partnership/joint venture interests | 64,804,120 | 17.6% |
| Value of interest in common/collective trusts | 248,010,618 | 67.4% |
| Value of interest in registered investment companies (e.g., mutual funds) | 46,068,333 | 12.5% |
| Net Receivables, Payables and Prepaid Expenses | 177,910 | 0.0% |
| Total Assets | $ 368,165,003 | 100.0% |

# Appendix E – Asset Information *(Continued)*

| SUMMARY OF RECEIPTS AND DISBURSEMENTS | Market Value 2020 | Market Value 2021 | Actuarial Value 2020 | Actuarial Value 2021 |
|---|---|---|---|---|
| **Assets (Beginning of Year)** | $ 322,508,567 | $ 340,204,649 | $ 313,036,709 | $ 319,474,447 |
| **Receipts During Year** | | | | |
| Contributions[1] | $ 13,138,624 | $ 18,054,587 | $ 13,138,624 | $ 18,054,587 |
| Investment Income (Net of Investment Expenses) | 39,340,728 | 44,159,205 | 28,082,384 | 34,100,315 |
| Subtotal Receipts | $ 52,479,352 | $ 62,213,792 | $ 41,221,008 | $ 52,154,902 |
| **Disbursements During Year** | | | | |
| Benefit Payments | $ (33,368,397) | $ (33,019,640) | $ (33,368,397) | $ (33,019,640) |
| Operating Expenses | (1,414,873) | (1,233,798) | (1,414,873) | (1,233,798) |
| Subtotal Disbursements | $ (34,783,270) | $ (34,253,438) | $ (34,783,270) | $ (34,253,438) |
| **Assets (End of Year)** | $ 340,204,649 | $ 368,165,003 | $ 319,474,447 | $ 337,375,911 |
| **Return on Assets** | 12.62 % | 13.30 % | 9.29 % | 10.95 % |

1 2020 contributions include $2,481,386 of benefit accruing contributions, $2,009,122 of supplemental contributions, and $8,648,116 of withdrawal liability payments, and 2021 contributions include $2,430,672 of benefit accruing contributions, $1,846,706 of supplemental contributions, and $13,777,209 of withdrawal liability payments.

# Appendix E – Asset Information *(Continued)*

| DETERMINATION OF NET INVESTMENT INCOME | | |
|---|---|---|
| 1. Expected Net Investment Income | | |
| A. Market Value of Assets | $ | 340,204,649 |
| B. Contributions | | 18,054,587 |
| C. Benefit Payments | | (33,019,640) |
| D. Operating Expenses | | (1,233,798) |
| E. Expected Net Investment Income (A + 1/2 B + 1/2 C + 1/2 D) x 7.25% | $ | 24,077,629 |
| 2. Market Value Earnings | | |
| A. Interest and Dividends | $ | 915,964 |
| B. Realized and Unrealized Gains/(Losses) | | 44,248,509 |
| C. Investment Expenses | | (1,250,688) |
| D. Other Income | | 245,420 |
| E. Total Market Value Earnings (A + B + C + D) | $ | 44,159,205 |
| 3. Excess/(Deficit) of Market Value Earnings Over Expected Net Investment Income (2E - 1E) | | 20,081,576 |
| 4. Current Year Recognition of Excess/(Deficit) Earnings (Calculated on Next Page) | | 10,022,686 |
| 5. Net Investment Income (1E + 4) | | 34,100,315 |
| 6. Recognition of Assets in Excess of the Corridor | | 0 |
| 7. Total Net Investment Income (5 + 6) | $ | 34,100,315 |

# Appendix E – Asset Information *(Continued)*

**DETERMINATION OF ACTUARIAL VALUE OF ASSETS**

| Plan Year Ended December 31 | Excess / (Deficit) Earnings | Amount of Excess/(Deficit) Earnings Recognized or to be Recognized | | |
|---|---|---|---|---|
| | | Prior Years | Current Year | Future Years |
| 2021 | $ 20,081,576 | $ 0 | $ 4,016,315 | $ 16,065,261 |
| 2020 | 16,743,475 | 3,348,695 | 3,348,695 | 10,046,085 |
| 2019 | 28,097,487 | 11,238,994 | 5,619,497 | 11,238,996 |
| 2018 | (32,806,254) | (19,683,753) | (6,561,251) | (6,561,250) |
| 2017 | 17,997,154 | 14,397,724 | 3,599,430 | 0 |
| Total | $ 50,113,438 | $ 9,301,660 | $ 10,022,686 | $ 30,789,092 |

| | |
|---|---|
| A. Market Value of Assets as of January 1, 2022 | $ 368,165,003 |
| B. Amount of Excess/(Deficit) Earnings to be Recognized in Future Years | 30,789,092 |
| C. Preliminary Actuarial Value of Assets as of January 1, 2022 (A - B) | $ 337,375,911 |
| D. Recognition of Assets in Excess of the 20% Corridor | 0 |
| E. Actuarial Value of Assets as of January 1, 2022 (C + D) | $ 337,375,911 |

# Appendix F – Historical Information

| HISTORICAL PARTICIPANT POPULATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| As of January 1 | (A) Actives | (B) Non-Vested Inactives | (C) Vested Inactives | (D) Retirees | (E) Disableds | (F) Beneficiaries | (G) Alternate Payees | (C+D+E+F) / (A) Inactive to Active Ratio[1] |
| 2003 [2] | 2,189 | 0 | 2,733 | 2,461 | 0 | 101 | 0 | 2.42 |
| 2004 | 2,075 | 0 | 2,617 | 2,561 | 65 | 105 | 0 | 2.58 |
| 2005 | 1,612 | 0 | 2,802 | 2,691 | 78 | 112 | 0 | 3.53 |
| 2006 | 2,458 | 0 | 2,745 | 2,770 | 83 | 129 | 0 | 2.33 |
| 2007 | 2,408 | 0 | 2,684 | 2,849 | 91 | 136 | 0 | 2.39 |
| 2008 | 2,278 | 0 | 2,635 | 2,909 | 102 | 133 | 0 | 2.54 |
| 2009 [3] | 2,277 | 0 | 2,571 | 2,953 | 80 | 140 | 0 | 2.52 |
| 2010 | 2,050 | 0 | 2,589 | 3,199 | 79 | 158 | 14 | 2.94 |
| 2011 | 1,936 | 0 | 2,598 | 3,244 | 48 | 143 | 15 | 3.12 |
| 2012 | 1,887 | 0 | 2,577 | 3,245 | 46 | 154 | 15 | 3.19 |
| 2013 [4] | 1,806 | 0 | 2,555 | 3,277 | 42 | 171 | 16 | 3.35 |
| 2014 | 1,718 | 340 | 2,546 | 3,374 | 39 | 174 | 16 | 3.57 |
| 2015 | 1,000 | 406 | 2,957 | 3,470 | 35 | 183 | 16 | 6.65 |
| 2016 | 868 | 376 | 2,939 | 3,502 | 31 | 194 | 17 | 7.68 |
| 2017 | 809 | 359 | 2,827 | 3,512 | 107 | 208 | 18 | 8.22 |
| 2018 | 626 | 376 | 2,798 | 3,622 | 101 | 227 | 20 | 10.78 |
| 2019 | 524 | 262 | 2,762 | 3,652 | 96 | 230 | 20 | 12.86 |
| 2020 | 491 | 233 | 2,636 | 3,743 | 93 | 236 | 21 | 13.66 |
| 2021 | 465 | 224 | 2,558 | 3,749 | 92 | 249 | 22 | 14.30 |
| 2022 | 462 | 195 | 2,444 | 3,766 | 88 | 275 | 23 | 14.23 |

1 Ratio excludes Non-Vested Inactives and Alternate Payees.
2 Disabled pensioners included with retirees prior to January 1, 2004.
3 Alternate Payees included with beneficiaries prior to January 1, 2010.
4 Non-Vested Inactives were not valued prior to January 1, 2014.

# Appendix F – Historical Information *(Continued)*

| HISTORICAL EMPLOYMENT INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| As of January 1 | Total Hours (Prior Year) | | Total Active Hours (Prior Year) | | Active Participants | | Average Active Hours (Prior Year) | |
| | Number | % Change | Number | % Change | Number | % Change | Number | % Change |
| 2005 | 3,733,578 | N/A | 3,704,963 | N/A | 1,612 | (22.3)% | 2,298 | N/A |
| 2006 | 4,592,134 | 23.0 % | 4,545,605 | 22.7 % | 2,458 | 52.5 % | 1,849 | (19.5)% |
| 2007 | 4,527,976 | (1.4)% | 4,476,696 | (1.5)% | 2,408 | (2.0)% | 1,859 | 0.5 % |
| 2008 | 4,282,490 | (5.4)% | 4,219,030 | (5.8)% | 2,278 | (5.4)% | 1,852 | (0.4)% |
| 2009 | 4,203,802 | (1.8)% | 4,167,497 | (1.2)% | 2,277 | (0.0)% | 1,830 | (1.2)% |
| 2010 | 4,063,879 | (3.3)% | 3,854,000 | (7.5)% | 2,050 | (10.0)% | 1,880 | 2.7 % |
| 2011 | 3,671,591 | (9.7)% | 3,647,424 | (5.4)% | 1,936 | (5.6)% | 1,884 | 0.2 % |
| 2012 | 3,555,598 | (3.2)% | 3,513,594 | (3.7)% | 1,887 | (2.5)% | 1,862 | (1.2)% |
| 2013 | 3,358,483 | (5.5)% | 3,304,980 | (5.9)% | 1,806 | (4.3)% | 1,830 | (1.7)% |
| 2014 | 3,231,057 | (3.8)% | 3,176,582 | (3.9)% | 1,718 | (4.9)% | 1,849 | 1.0 % |
| 2015 | 1,776,431 | (45.0)% | 1,736,000 | (45.4)% | 1,000 | (41.8)% | 1,736 | (6.1)% |
| 2016 | 1,575,730 | (11.3)% | 1,545,908 | (11.0)% | 868 | (13.2)% | 1,781 | 2.6 % |
| 2017 | 1,358,925 | (13.8)% | 1,317,052 | (14.8)% | 809 | (6.8)% | 1,628 | (8.6)% |
| 2018 | 1,087,061 | (20.0)% | 1,032,369 | (21.6)% | 626 | (22.6)% | 1,649 | 1.3 % |
| 2019 | 894,247 | (17.7)% | 868,660 | (15.9)% | 524 | (16.3)% | 1,658 | 0.5 % |
| 2020 | 898,450 | 0.5 % | 872,643 | 0.5 % | 491 | (6.3)% | 1,777 | 7.2 % |
| 2021 | 841,498 | (6.3)% | 813,073 | (6.8)% | 465 | (5.3)% | 1,749 | (1.6)% |
| 2022 | 804,434 | (4.4)% | 781,019 | (3.9)% | 462 | (0.6)% | 1,691 | (3.3)% |

# Appendix F – Historical Information *(Continued)*

| HISTORICAL EMPLOYER CONTRIBUTIONS AND COSTS | | | | | |
|---|---|---|---|---|---|
| As of January 1 | Accruing Contributions (Prior Year) | Non-Accruing Contributions (Prior Year)[1] | Total Contributions (Prior Year) | Actual Normal Cost (Prior Year)[2] | Expenses Included in Normal Cost (Prior Year) |
| 2003 | $ 9,277,458 | $ 0 | $ 9,277,458 | $ 7,977,857 | $ 0 |
| 2004 | 7,854,003 | 0 | 7,854,003 | 6,981,686 | 0 |
| 2005 | 6,935,726 | 0 | 6,935,726 | 5,294,028 | 0 |
| 2006 | 7,357,903 | 0 | 7,357,903 | 5,616,275 | 0 |
| 2007 | 7,399,605 | 0 | 7,399,605 | 5,719,601 | 0 |
| 2008 | 7,678,247 | 0 | 7,678,247 | 6,083,355 | 0 |
| 2009 | 8,277,807 | 0 | 8,277,807 | 7,843,659 | 0 |
| 2010 | 7,842,903 | 161,882 | 8,004,785 | 7,397,015 | 0 |
| 2011 | 7,676,687 | 812,322 | 8,489,009 | 2,023,454 | 0 |
| 2012 | 7,297,989 | 1,324,397 | 8,622,386 | 1,949,714 | 0 |
| 2013 | 6,980,563 | 2,816,485 | 9,797,048 | 1,879,940 | 0 |
| 2014 | 6,485,023 | 4,559,318 | 11,044,341 | 1,942,949 | 0 |
| 2015 | 5,064,945 | 5,346,493 | 10,411,438 | 1,693,396 | 0 |
| 2016 | 4,883,040 | 6,928,912 | 11,811,952 | 1,337,905 | 0 |
| 2017 | 4,318,217 | 6,932,693 | 11,250,910 | 1,228,069 | 0 |
| 2018 | 3,383,971 | 6,204,518 | 9,588,489 | 2,108,688 | 1,352,681 |
| 2019 | 2,949,919 | 9,276,926 | 12,226,845 | 2,052,689 | 1,352,681 |
| 2020 | 2,823,105 | 8,902,822 | 11,725,927 | 1,736,463 | 966,200 |
| 2021 | 2,481,386 | 10,657,238 | 13,138,624 | 1,706,588 | 966,200 |
| 2022 | 2,430,672 | 15,623,915 | 18,054,587 | 2,179,894 | 1,497,611 |

[1] Non-Accruing contributions include Critical Status surcharge contributions, Rehabilitation Plan supplemental contributions, and Withdrawal Liability payments.

[2] Expenses are included with the normal cost effective January 1, 2017 (the investment return assumption is net of investment expenses only). Prior to 2017, expenses were assumed to be covered by investment income (the investment return assumption was net of investment and operating expenses).

# Appendix F – Historical Information *(Continued)*

**HISTORICAL EMPLOYER CONTRIBUTION DETAIL**

| As of January 1 | Accruing Contributions (Prior Year) | Supplemental Contributions (Prior Year) | Surcharge Contributions (Prior Year) | Withdrawal Liability Payments (Prior Year) | Total Contributions (Prior Year)[1] |
|---|---|---|---|---|---|
| 2003 | $ 9,277,458 | $ 0 | $ 0 | $ 0 | $ 9,277,458 |
| 2004 | 7,854,003 | 0 | 0 | 0 | 7,854,003 |
| 2005 | 6,935,726 | 0 | 0 | 0 | 6,935,726 |
| 2006 | 7,357,903 | 0 | 0 | 0 | 7,357,903 |
| 2007 | 7,399,605 | 0 | 0 | 0 | 7,399,605 |
| 2008 | 7,678,247 | 0 | 0 | 0 | 7,678,247 |
| 2009 | 8,277,807 | 0 | 0 | 0 | 8,277,807 |
| 2010 | 7,842,903 | 0 | 161,882 | 0 | 8,004,785 |
| 2011 | 7,676,687 | 0 | 812,322 | 0 | 8,489,009 |
| 2012 | 7,297,989 | 884,461 | 433,924 | 6,012 | 8,622,386 |
| 2013 | 6,980,563 | 1,513,165 | 365,908 | 937,412 | 9,797,048 |
| 2014 | 6,485,023 | 2,656,274 | 228,709 | 1,674,335 | 11,044,341 |
| 2015 | 5,064,945 | 3,673,084 | 103,387 | 1,570,022 | 10,411,438 |
| 2016 | 4,883,040 | 3,509,909 | 81,811 | 3,337,192 | 11,811,952 |
| 2017 | 4,318,217 | 3,016,465 | 43,983 | 3,872,245 | 11,250,910 |
| 2018 | 3,383,971 | 2,706,688 | 8,598 | 3,489,232 | 9,588,489 |
| 2019 | 2,949,919 | 2,400,383 | 0 | 6,876,543 | 12,226,845 |
| 2020 | 2,823,105 | 2,266,228 | 0 | 6,636,594 | 11,725,927 |
| 2021 | 2,481,386 | 2,009,122 | 0 | 8,648,116 | 13,138,624 |
| 2022 | 2,430,672 | 1,846,706 | 0 | 13,777,209 | 18,054,587 |

1 Includes withdrawal liability payments.

# Appendix F – Historical Information *(Continued)*

| HISTORICAL ASSETS | | | | | |
|---|---|---|---|---|---|
| As of January 1 | Market Value of Assets (MVA) | | Actuarial Value of Assets (AVA) | | Ratio of AVA to MVA |
| | Value | Return | Value | Return | |
| 2003 | $ 396,536,797 | (6.60)% | $ 475,844,156 | 3.00 % | 120.0 % |
| 2004 | 445,004,175 | 16.55 % | 471,284,566 | 2.41 % | 105.9 % |
| 2005 | 467,709,398 | 9.66 % | 468,827,191 | 3.70 % | 100.2 % |
| 2006 | 482,601,045 | 7.82 % | 471,631,523 | 5.16 % | 97.7 % |
| 2007 | 514,062,081 | 11.44 % | 485,209,973 | 7.83 % | 94.4 % |
| 2008 | 511,627,264 | 4.62 % | 507,372,247 | 10.04 % | 99.2 % |
| 2009 | 326,573,213 | (32.15)% | 391,887,856 | (18.37)% | 120.0 % |
| 2010 | 350,729,611 | 15.95 % | 420,875,533 | 14.48 % | 120.0 % |
| 2011 | 366,575,098 | 13.23 % | 415,436,594 | 5.71 % | 113.3 % |
| 2012 | 343,278,474 | 1.50 % | 375,837,641 | (2.74)% | 109.5 % |
| 2013 | 353,805,803 | 11.53 % | 341,155,304 | (1.99)% | 96.4 % |
| 2014 | 371,333,873 | 12.97 % | 351,347,913 | 11.24 % | 94.6 % |
| 2015 | 359,268,671 | 4.47 % | 353,925,354 | 9.07 % | 98.5 % |
| 2016 | 334,210,200 | 0.63 % | 347,859,875 | 6.22 % | 104.1 % |
| 2017 | 326,919,954 | 6.44 % | 342,812,133 | 6.84 % | 104.9 % |
| 2018 | 335,048,313 | 13.04 % | 333,355,231 | 7.02 % | 99.5 % |
| 2019 | 297,066,081 | (2.98)% | 318,132,109 | 4.14 % | 107.1 % |
| 2020 | 322,508,567 | 17.10 % | 313,036,709 | 5.96 % | 97.1 % |
| 2021 | 340,204,649 | 12.62 % | 319,474,447 | 9.29 % | 93.9 % |
| 2022 | 368,165,003 | 13.30 % | 337,375,911 | 10.95 % | 91.6 % |

# Appendix F – Historical Information *(Continued)*

| HISTORICAL CASH FLOW[1] | | | | | |
|---|---|---|---|---|---|
| | (A) | (B) | (C) | (D) | (A - B - C)/(D) |
| As of January 1 | Contributions (Prior Year) | Benefit Payments (Prior Year) | Expenses (Prior Year) | Average Market Value of Assets (MVA) | Cash Flow as a % of Average MVA |
| 2003 | $ 9,277,458 | $ 20,835,583 | $ N/A | $ 416,229,796 | (2.8)% |
| 2004 | 7,854,003 | 24,206,237 | N/A | 420,770,486 | (3.9)% |
| 2005 | 6,935,726 | 26,487,895 | N/A | 456,356,787 | (4.3)% |
| 2006 | 7,357,903 | 28,371,211 | N/A | 475,155,222 | (4.4)% |
| 2007 | 7,399,605 | 29,919,215 | N/A | 498,331,563 | (4.5)% |
| 2008 | 7,678,247 | 32,970,957 | N/A | 512,844,673 | (4.9)% |
| 2009 | 8,277,807 | 32,853,989 | N/A | 419,100,239 | (5.9)% |
| 2010 | 8,004,785 | 34,155,460 | N/A | 338,651,412 | (7.7)% |
| 2011 | 8,489,009 | 37,136,630 | N/A | 358,652,355 | (8.0)% |
| 2012 | 8,622,386 | 37,224,104 | N/A | 354,926,786 | (8.1)% |
| 2013 | 9,797,048 | 37,280,366 | N/A | 348,542,139 | (7.9)% |
| 2014 | 11,044,341 | 37,690,222 | N/A | 362,569,838 | (7.3)% |
| 2015 | 10,411,438 | 38,445,844 | N/A | 365,301,272 | (7.7)% |
| 2016 | 11,811,952 | 39,045,991 | N/A | 346,739,436 | (7.9)% |
| 2017 | 11,250,910 | 39,153,722 | N/A | 330,565,077 | (8.4)% |
| 2018 | 9,588,489 | 40,137,025 | 1,847,596 | 330,984,134 | (9.8)% |
| 2019 | 12,226,845 | 39,023,959 | 1,639,055 | 316,057,197 | (9.0)% |
| 2020 | 11,725,927 | 33,574,714 | 1,497,212 | 309,787,324 | (7.5)% |
| 2021 | 13,138,624 | 33,368,397 | 1,414,873 | 331,356,608 | (6.5)% |
| 2022 | 18,054,587 | 33,019,640 | 1,233,798 | 354,184,826 | (4.6)% |

1 Effective January 1, 2017, the investment return assumption is net of investment expenses only. Prior to 2017, expenses were assumed to be covered by investment income (the investment return assumption was net of investment and operating expenses).

# Appendix F – Historical Information *(Continued)*

**HISTORICAL FUNDED STATUS**

| As of January 1 | (A) Funding Actuarial Accrued Liability[1] | (B) Market Value of Assets (MVA) | (A) - (B) MVA Unfunded Accrued Liability/ (Actuarial Surplus) | (B) / (A) MVA Funded Percentage | (C) Actuarial Value of Assets (AVA) | (A) - (C) AVA Unfunded Accrued Liability/ (Actuarial Surplus) | (C) / (A) AVA Funded Percentage |
|---|---|---|---|---|---|---|---|
| 2003 | $ 492,279,140 | $ 396,536,797 | $ 95,742,343 | 80.6 % | $ 475,844,156 | $ 16,434,984 | 96.7 % |
| 2004 | 509,372,505 | 445,004,175 | 64,368,330 | 87.4 % | 471,284,566 | 38,087,939 | 92.5 % |
| 2005 | 522,638,089 | 467,709,398 | 54,928,691 | 89.5 % | 468,827,191 | 53,810,898 | 89.7 % |
| 2006 | 535,687,366 | 482,601,045 | 53,086,321 | 90.1 % | 471,631,523 | 64,055,843 | 88.0 % |
| 2007 | 551,165,594 | 514,062,081 | 37,103,513 | 93.3 % | 485,209,973 | 65,955,621 | 88.0 % |
| 2008 | 561,884,044 | 511,627,264 | 50,256,780 | 91.1 % | 507,372,247 | 54,511,797 | 90.3 % |
| 2009 | 552,544,039 | 326,573,213 | 225,970,826 | 59.1 % | 391,887,856 | 160,656,183 | 70.9 % |
| 2010 | 533,426,348 | 350,729,611 | 182,696,737 | 65.8 % | 420,875,533 | 112,550,815 | 78.9 % |
| 2011 | 535,120,828 | 366,575,098 | 168,545,730 | 68.5 % | 415,436,594 | 119,684,234 | 77.6 % |
| 2012 | 536,525,258 | 343,278,474 | 193,246,784 | 64.0 % | 375,837,641 | 160,687,617 | 70.1 % |
| 2013 | 538,389,644 | 353,805,803 | 184,583,841 | 65.7 % | 341,155,304 | 197,234,340 | 63.4 % |
| 2014 | 538,956,405 | 371,333,873 | 167,622,532 | 68.9 % | 351,347,913 | 187,608,492 | 65.2 % |
| 2015 | 537,887,774 | 359,268,671 | 178,619,103 | 66.8 % | 353,925,354 | 183,962,420 | 65.8 % |
| 2016 | 534,860,955 | 334,210,200 | 200,650,755 | 62.5 % | 347,859,875 | 187,001,080 | 65.0 % |
| 2017 | 527,455,968 | 326,919,954 | 200,536,014 | 62.0 % | 342,812,133 | 184,643,835 | 65.0 % |
| 2018 | 525,324,100 | 335,048,313 | 190,275,787 | 63.8 % | 333,355,231 | 191,968,869 | 63.5 % |
| 2019 [2] | 403,274,236 | 297,066,081 | 106,208,155 | 73.7 % | 318,132,109 | 85,142,127 | 78.9 % |
| 2020 | 399,268,546 | 322,508,567 | 76,759,979 | 80.8 % | 313,036,709 | 86,231,837 | 78.4 % |
| 2021 | 392,875,253 | 340,204,649 | 52,670,604 | 86.6 % | 319,474,447 | 73,400,806 | 81.3 % |
| 2022 | 386,063,031 | 368,165,003 | 17,898,028 | 95.4 % | 337,375,911 | 48,687,120 | 87.4 % |

1 Prior to 2009, the Funding Actuarial Accrued Liability was determined based on the Entry Age Normal Cost Method. Beginning in 2009, the Unit Credit Cost Method is used.

2 Effective October 1, 2018, benefit reductions of 30% on benefits earned through September 30, 2018 for all participants except those who retired under disability and who are over age 80. There is a prorated reduction for participants aged 75 – 80.

# Appendix F – Historical Information *(Continued)*

| HISTORICAL ZONE CERTIFICATION[1] | | | | |
|---|---|---|---|---|
| As of January 1 | (A) PPA Actuarial Accrued Liability | (B) Actuarial Value of Assets | (B) / (A) PPA Funded Percentage | Zone Status |
| 2009 | 552,544,039 | 391,887,856 | 70.9 % | Critical |
| 2010 | 533,426,348 | 420,875,533 | 78.9 % | Critical |
| 2011 | 535,120,828 | 415,436,594 | 77.6 % | Critical |
| 2012 | 536,525,258 | 375,837,641 | 70.1 % | Critical |
| 2013 | 538,389,644 | 341,155,304 | 63.4 % | Critical |
| 2014 | 538,956,405 | 351,347,913 | 65.2 % | Critical |
| 2015 | 537,887,774 | 353,925,354 | 65.8 % | Critical |
| 2016 | 534,860,955 | 347,859,875 | 65.0 % | Critical and Declining |
| 2017 | 527,455,968 | 342,812,133 | 65.0 % | Critical and Declining |
| 2018 | 525,324,100 | 333,355,231 | 63.5 % | Critical and Declining |
| 2019 | 403,274,236 | 318,132,109 | 78.9 % | Critical |
| 2020 | 399,268,546 | 313,036,709 | 78.4 % | Critical |
| 2021 | 392,875,253 | 319,474,447 | 81.3 % | Critical |
| 2022 | 386,063,031 | 337,375,911 | 87.4 % | Critical |

1 The PPA Actuarial Accrued Liability, Actuarial Value of Assets and PPA Funded Percentage are based on the final valuation results for the corresponding plan year.

# Appendix G – Funding Standard Account (for Schedule MB)

| FUNDING STANDARD ACCOUNT | | | | |
|---|---|---|---|---|
| | | 2021 | | 2022 (Estimated)[1] |
| 1. Charges | | | | |
| A. Funding Deficiency on January 1 | $ | 11,163,516 | $ | 10,325,121 |
| B. Normal Cost (Beginning of Year)[2] | | 2,179,894 | | 2,231,000 |
| C. Amortization Charges[3] | | 35,960,728 | | 35,714,057 |
| D. Interest on A, B and C | | 3,574,550 | | 3,499,588 |
| E. Subtotal Charges (A + B + C + D) | $ | 52,878,688 | $ | 51,769,766 |
| 2. Credits | | | | |
| A. Credit Balance on January 1 | $ | 0 | $ | 0 |
| B. Employer Contributions for Year[4] | | 18,054,587 | | 9,672,000 |
| C. Amortization Credits | | 22,232,635 | | 23,653,635 |
| D. Interest on A, B and C | | 2,266,345 | | 2,065,499 |
| E. Subtotal Credits (A + B + C + D) | $ | 42,553,567 | $ | 35,391,134 |
| **3. Funding Deficiency on December 31 (2E - 1E)** | **$** | **(10,325,121)** | **$** | **(16,378,632)** |
| 4. Minimum Required Contribution (Before Credit Balance) | $ | 29,034,187 | $ | 26,401,242 |
| 5. Minimum Required Contribution (After Credit Balance) | | 29,034,187 | | 26,401,242 |
| 6. ERISA FFL (Accrued Liability FFL) | $ | 81,060,301 | $ | 54,609,584 |
| 7. "RPA '94" Override (90% Current Liability FFL) | | 265,406,659 | | 244,090,339 |

1 Assumes 804,000 contributory benefit hours are worked during the 2022 Plan Year.

2 Normal cost includes assumed operating expenses of $1,497,611 as of January 1, 2021 and $1,630,000 as of January 1, 2022.

3 Incorporates a 5-year amortization extension of the applicable charge bases effective January 1, 2009.

4 2022 estimated contributions reflect expected withdrawal liability payments from previously withdrawn employers.

## Appendix G – Funding Standard Account (for Schedule MB) *(Continued)*

| FULL FUNDING LIMITS | | | | |
|---|---|---|---|---|
| | | 2021 | | 2022 (Estimated) |
| 1. ERISA FFL | | | | |
| A. Interest Rate | | 7.25 % | | 7.25 % |
| B. Liability | $ | 392,875,253 | $ | 386,063,031 |
| C. Normal Cost (without expenses) | | 682,283 | | 656,000 |
| D. Expected Benefit Payments | | (34,398,142) | | (34,463,353) |
| E. Interest on B, C and D | | 27,285,989 | | 26,787,833 |
| **F. Expected Liability (B + C + D + E)** | $ | **386,445,383** | $ | **379,043,511** |
| G. Min of AVA and MVA | | 319,474,447 | | 337,375,911 |
| H. Credit Balance | | 0 | | 0 |
| I. Adjusted Assets | | 319,474,447 | | 337,375,911 |
| J. Expected Benefit Payments | | (34,398,142) | | (34,463,353) |
| K. Expected Operating Expenses | | (1,497,611) | | (1,574,907) |
| L. Interest on I, J, and K | | 21,806,388 | | 23,096,276 |
| **M. Expected Assets (I + J + K + L)** | $ | **305,385,082** | $ | **324,433,927** |
| **N. ERISA FFL (F - M, not less than $0)** | $ | **81,060,301** | $ | **54,609,584** |
| 2. RPA '94 FFL | | | | |
| A. Interest Rate | | 2.43 % | | 2.22 % |
| B. Liability | $ | 651,458,800 | $ | 650,317,459 |
| C. Normal Cost (without expenses) | | 1,692,110 | | 1,740,000 |
| D. Expected Benefit Payments | | (34,445,883) | | (34,508,906) |
| E. Interest on B, C and D | | 15,453,050 | | 14,092,627 |
| F. Expected Liability (B + C + D + E) | $ | 634,158,077 | $ | 631,641,180 |
| G. Funding Limit Factor | | 90 % | | 90 % |
| **H. Funding Limit Liability (F * G)** | $ | **570,742,269** | $ | **568,477,062** |
| I. AVA | $ | 319,474,447 | $ | 337,375,911 |
| J. Expected Benefit Payments | | (34,445,883) | | (34,508,906) |
| K. Expected Operating Expenses | | (1,497,611) | | (1,574,907) |
| L. Interest on I, J, and K | | 21,804,657 | | 23,094,625 |
| **M. Expected Assets (I + J + K + L)** | $ | **305,335,610** | $ | **324,386,723** |
| **N. RPA '94 FFL (H - M, not less than $0)** | $ | **265,406,659** | $ | **244,090,339** |

# Appendix G – Funding Standard Account (for Schedule MB) *(Continued)*

| FUNDING STANDARD ACCOUNT AMORTIZATION BASES (As of January 1, 2022) | | | | | | |
|---|---|---|---|---|---|---|
| | Amortization Period | | | Balances | | |
| Charges | Date Established | Initial Period | Remaining Period | Initial | Remaining | Beginning-of-Year Payment |
| Plan Amendment | 1/1/1980 | 45.00 | 3.00 | $ 395,897 | $ 63,385 | $ 22,619 |
| Plan Amendment | 1/1/1981 | 45.00 | 4.00 | 3,609,259 | 764,237 | 211,562 |
| Plan Amendment | 1/1/1988 | 35.00 | 1.00 | 7,521,437 | 433,329 | 433,329 |
| Plan Amendment | 1/1/1989 | 35.00 | 2.00 | 6,238,198 | 719,137 | 372,143 |
| Plan Amendment | 1/1/1990 | 35.00 | 3.00 | 1,991,358 | 342,572 | 122,268 |
| Plan Amendment+Act Assump | 1/1/1991 | 35.00 | 4.00 | 3,867,632 | 879,052 | 243,346 |
| Plan Amendment | 1/1/1992 | 35.00 | 5.00 | 2,315,769 | 649,935 | 148,790 |
| Plan Amendment | 1/1/1993 | 35.00 | 6.00 | 8,009,694 | 2,658,392 | 524,040 |
| Plan Amendment+Act Assump | 1/1/1994 | 35.00 | 7.00 | 5,816,782 | 2,215,359 | 386,626 |
| Plan Amendment | 1/1/1995 | 35.00 | 8.00 | 3,954,934 | 1,690,589 | 266,543 |
| Actuarial Assumption | 1/1/1996 | 35.00 | 9.00 | 2,334,000 | 1,100,945 | 159,236 |
| Plan Amendment | 1/1/1996 | 35.00 | 9.00 | 19,722,004 | 9,302,793 | 1,345,523 |
| Plan Amendment | 1/1/1997 | 35.00 | 10.00 | 12,051,000 | 6,189,114 | 831,144 |
| Plan Amendment | 1/1/1998 | 35.00 | 11.00 | 12,834,000 | 7,099,158 | 893,747 |
| Actuarial Assumption | 1/1/1998 | 35.00 | 11.00 | 5,651,596 | 3,126,185 | 393,572 |
| Actuarial Assumption | 1/1/1999 | 35.00 | 12.00 | 500,000 | 295,254 | 35,122 |
| Plan Amendment | 1/1/1999 | 35.00 | 12.00 | 21,615,699 | 12,763,743 | 1,518,376 |
| Plan Amendment | 1/1/2000 | 35.00 | 13.00 | 7,937,933 | 4,966,396 | 561,942 |
| Actuarial Assumption | 1/1/2000 | 35.00 | 13.00 | 4,389,753 | 2,746,462 | 310,759 |
| Plan Amendment | 1/1/2001 | 35.00 | 14.00 | 12,746,807 | 8,396,918 | 908,708 |
| Plan Amendment | 1/1/2002 | 35.00 | 15.00 | 2,268,072 | 1,564,642 | 162,714 |
| Plan Amendment | 1/1/2003 | 35.00 | 16.00 | 2,964,980 | 2,132,012 | 213,933 |
| Experience Loss | 1/1/2003 | 20.00 | 1.00 | 12,151,612 | 945,530 | 945,530 |
| Experience Loss | 1/1/2004 | 20.00 | 2.00 | 23,109,456 | 3,596,364 | 1,861,090 |
| Experience Loss | 1/1/2005 | 20.00 | 3.00 | 12,406,469 | 2,881,187 | 1,028,346 |

# Appendix G – Funding Standard Account (for Schedule MB) *(Continued)*

| FUNDING STANDARD ACCOUNT AMORTIZATION BASES (As of January 1, 2022) (CONTINUED) | | | | | | |
|---|---|---|---|---|---|---|
| | Amortization Period | | | Balances | | |
| Charges | Date Established | Initial Period | Remaining Period | Initial | Remaining | Beginning-of-Year Payment |
| Plan Amendment | 1/1/2005 | 35.00 | 18.00 | $ 1,000,895 | $ 772,884 | $ 72,938 |
| Actuarial Assumption | 1/1/2005 | 35.00 | 18.00 | 1,063,519 | 821,231 | 77,502 |
| Experience Loss | 1/1/2006 | 20.00 | 4.00 | 6,485,444 | 1,989,925 | 550,865 |
| Plan Amendment | 1/1/2006 | 35.00 | 19.00 | 1,459,383 | 1,162,093 | 106,809 |
| Plan Amendment | 1/1/2007 | 35.00 | 20.00 | 1,475,698 | 1,208,400 | 108,429 |
| Plan Amendment | 1/1/2008 | 20.00 | 6.00 | 1,383,243 | 619,760 | 122,173 |
| Experience Loss | 1/1/2009 | 20.00 | 7.00 | 123,105,349 | 63,294,303 | 11,046,176 |
| Experience Loss | 1/1/2011 | 15.00 | 4.00 | 5,600,066 | 2,103,770 | 582,379 |
| Experience Loss | 1/1/2012 | 15.00 | 5.00 | 39,179,040 | 17,797,824 | 4,074,425 |
| Experience Loss | 1/1/2013 | 15.00 | 6.00 | 33,032,826 | 17,426,669 | 3,435,249 |
| Experience Loss | 1/1/2016 | 15.00 | 9.00 | 506,616 | 364,256 | 52,686 |
| Experience Loss | 1/1/2017 | 15.00 | 10.00 | 1,021,519 | 791,062 | 106,233 |
| Experience Loss | 1/1/2018 | 15.00 | 11.00 | 1,612,860 | 1,332,298 | 167,729 |
| Experience Loss | 1/1/2019 | 15.00 | 12.00 | 7,385,989 | 6,456,838 | 768,106 |
| Experience Loss | 1/1/2020 | 15.00 | 13.00 | 5,205,541 | 4,784,417 | 541,350 |
| **Total Charges** | | | | | **$ 198,448,420** | **$ 35,714,057** |

# Appendix G – Funding Standard Account (for Schedule MB) *(Continued)*

| FUNDING STANDARD ACCOUNT AMORTIZATION BASES (As of January 1, 2022) (CONTINUED) | | | | | | |
|---|---|---|---|---|---|---|
| | Amortization Period | | | Balances | | |
| Credits | Date Established | Initial Period | Remaining Period | Initial | Remaining | Beginning-of-Year Payment |
| Experience Gain | 1/1/2010 | 15.00 | 3.00 | $ (27,345,881) | $ (7,967,783) | $ (2,843,835) |
| Plan Amendment | 1/1/2010 | 15.00 | 3.00 | (32,045,400) | (9,337,076) | (3,332,562) |
| Experience Gain | 1/1/2014 | 15.00 | 7.00 | (14,564,452) | (8,678,798) | (1,514,630) |
| Experience Gain | 1/1/2015 | 15.00 | 8.00 | (8,275,002) | (5,458,209) | (860,559) |
| Assumption Change | 1/1/2017 | 15.00 | 10.00 | (6,594,691) | (5,106,924) | (685,815) |
| Plan Amendment | 1/1/2019 | 15.00 | 12.00 | (117,661,915) | (102,860,146) | (12,236,252) |
| Experience Gain | 1/1/2021 | 15.00 | 14.00 | (7,298,256) | (7,013,371) | (758,982) |
| Experience Gain | 1/1/2022 | 15.00 | 15.00 | (13,664,114) | (13,664,114) | (1,421,000) |
| **Total Credits** | | | | | **$ (160,086,421)** | **$ (23,653,635)** |

# Appendix H – Additional Schedule MB Information

| CURRENT LIABILITY (FOR 2022 SCHEDULE MB) | Counts | January 1, 2022 |
|---|---|---|
| A. Retirees and Beneficiaries | 4,152 | $ 422,514,182 |
| B. Vested Inactive Participants | 2,444 | 187,351,258 |
| C. Active Participants | | |
| 1. Non-Vested[1] | 185 | $ 1,459,961 |
| 2. Vested | 277 | 38,992,058 |
| 3. Sub-total (1 + 2) | 462 | $ 40,452,019 |
| D. Total Current Liability (Line 1d(2)(a) ) (A + B + C3) | | $ 650,317,459 |
| E. Market Value of Assets | | 368,165,003 |
| F. Funded Percentage Using Market Value of Assets (E / D) | | 56.61 % |
| G. Expected Increase in Current Liability (Line 1d(2)(b))[2] | | $ 1,740,000 |
| H. Expected Release from Current Liability (Line 1d(2)(c)) | | 34,134,176 |
| I. Expected Plan Disbursements (Line 1d(3)) | | 36,093,353 |
| J. Current Liability Interest Rate | | 2.22 % |

1 The participant count excludes 195 Non-Vested Inactives whose liabilities are included in the Non-Vested Active liability.

2 The amount reported on Line 1d(2)(b) will be adjusted on the 2022 Schedule MB to reflect actual vs expected accruals for the year.

# Appendix H – Additional Schedule MB Information *(Continued)*

| SCHEDULE MB, LINE 8b(1) - SCHEDULE OF PROJECTION OF EXPECTED BENEFIT PAYMENTS (FOR 2022 SCHEDULE MB) | |
|---|---|
| **Plan Year** | **Expected Annual Benefit Payments** |
| 2022 | $ 34,463,353 |
| 2023 | 34,567,764 |
| 2024 | 34,554,033 |
| 2025 | 34,394,146 |
| 2026 | 34,237,660 |
| 2027 | 34,033,741 |
| 2028 | 33,650,245 |
| 2029 | 33,236,222 |
| 2030 | 32,704,441 |
| 2031 | 32,173,479 |

# Appendix H – Additional Schedule MB Information *(Continued)*

**SCHEDULE MB, LINE 8b(2) - SCHEDULE OF ACTIVE PARTICIPANT DATA (FOR 2022 SCHEDULE MB)**

| | Years Of Credited Service | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Age Group | < 1 | 1 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40 + | Total |
| Under 25 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 25 - 29 | 0 | 32 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 30 - 34 | 0 | 26 | 11 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 40 |
| 35 - 39 | 0 | 20 | 8 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 41 |
| 40 - 44 | 0 | 18 | 18 | 8 | 6 | 4 | 0 | 0 | 0 | 0 | 54 |
| 45 - 49 | 0 | 21 | 10 | 9 | 3 | 7 | 1 | 0 | 0 | 0 | 51 |
| 50 - 54 | 0 | 16 | 7 | 4 | 9 | 13 | 3 | 2 | 0 | 0 | 54 |
| 55 - 59 | 0 | 18 | 11 | 5 | 10 | 7 | 5 | 7 | 3 | 0 | 66 |
| 60 - 64 | 0 | 9 | 6 | 9 | 4 | 7 | 7 | 9 | 4 | 1 | 56 |
| 65 - 69 | 0 | 1 | 5 | 8 | 2 | 5 | 2 | 4 | 2 | 1 | 30 |
| 70 and Over | 0 | 0 | 1 | 2 | 4 | 0 | 2 | 1 | 0 | 0 | 10 |
| Unknown | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| **Total** | 0 | 185 | 81 | 56 | 43 | 43 | 20 | 23 | 9 | 2 | 462 |

# Appendix I – Maximum Deductible Contribution

| MAXIMUM DEDUCTIBLE CONTRIBUTION | Plan Year Ending December 31, 2022 |
|---|---|
| A. Normal Cost | $ 2,231,000 |
| B. 10-Year Amortization of Unfunded Accrued Liability | 6,538,251 |
| C. Interest to End of Plan Year | 635,771 |
| D. Preliminary Max (A + B + C) | $ 9,405,022 |
| E. Full Funding Limitation | |
| 1. ERISA | $ 54,609,584 |
| 2. RPA Full Funding Limit Override | 244,090,339 |
| 3. Greater of E1 or E2 | 244,090,339 |
| F. Regular Maximum Deductible Contribution (lesser of D and E3) | 9,405,022 |
| G. Minimum Required Contribution, End of Year | 26,401,242 |
| H. 140% of Current Liability Basis | |
| 1. Current Liability, Projected to End of Year | $ 631,641,180 |
| 2. Actuarial Value of Assets Projected to End of Year | 324,386,723 |
| 3. Excess of 140% of Current Liability over Actuarial Value of Assets at End of Year (140% x H1 - H2, not less than $0) | $ 559,910,929 |
| **I. Maximum Deductible Contribution (greater of F, G and H3)** | **$ 559,910,929** |

# Appendix I – Maximum Deductible Contribution *(Continued)*

| FULL FUNDING LIMITS | | |
|---|---|---|
| | | Plan Year Ending December 31, 2022 |
| 1. ERISA FFL | | |
| A. Interest Rate | | 7.25 % |
| B. Liability | $ | 386,063,031 |
| C. Normal Cost (without expenses) | | 656,000 |
| D. Expected Benefit Payments | | (34,463,353) |
| E. Interest on B, C and D | | 26,787,833 |
| **F. Expected Liability (B + C + D + E)** | $ | **379,043,511** |
| G. Min of AVA and MVA | | 337,375,911 |
| H. Credit Balance | | N/A |
| I. Adjusted Assets | | 337,375,911 |
| J. Expected Benefit Payments | | (34,463,353) |
| K. Expected Operating Expenses | | (1,574,907) |
| L. Interest on I, J, and K | | 23,096,276 |
| **M. Expected Assets (I + J + K + L)** | $ | **324,433,927** |
| **N. ERISA FFL (F - M, not less than $0)** | $ | **54,609,584** |
| 2. RPA '94 FFL | | |
| A. Interest Rate | | 2.22 % |
| B. Liability | $ | 650,317,459 |
| C. Normal Cost (without expenses) | | 1,740,000 |
| D. Expected Benefit Payments | | (34,508,906) |
| E. Interest on B, C and D | | 14,092,627 |
| F. Expected Liability (B + C + D + E) | $ | 631,641,180 |
| G. Funding Limit Factor | | 90 % |
| **H. Funding Limit Liability (F * G)** | $ | **568,477,062** |
| I. AVA | $ | 337,375,911 |
| J. Expected Benefit Payments | | (34,508,906) |
| K. Expected Operating Expenses | | (1,574,907) |
| L. Interest on I, J, and K | | 23,094,625 |
| **M. Expected Assets (I + J + K + L)** | $ | **324,386,723** |
| **N. RPA '94 FFL (H - M, not less than $0)** | $ | **244,090,339** |

# Appendix J – Auditor Information (FASB ASC 960)

| RECONCILIATION OF ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS | 2020 | 2021 |
|---|---|---|
| Actuarial Present Value of Accumulated Plan Benefits at Beginning of Year (January 1) | $ 412,595,449 | $ 406,202,156 |
| Increase/(Decrease) during the Year Attributable to: | | |
| Benefits Accumulated and Actuarial Experience | $ (262,300) | $ (407,143) |
| Plan Amendments | 0 | 0 |
| Actuarial Assumption Changes | 0 | 8,366,760 |
| Increase for Interest | 28,652,277 | 28,814,559 |
| Benefits and Expenses Paid | (34,783,270) | (34,253,438) |
| Net Increase/(Decrease) | $ (6,393,293) | $ 2,520,738 |
| Actuarial Present Value of Accumulated Plan Benefits at End of Year (December 31) | $ 406,202,156 | $ 408,722,894 |

| ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS | 2020 | 2021 |
|---|---|---|
| Actuarial Present Value of Accrued Benefits | | |
| Vested Benefits | | |
| Participants Currently Receiving Benefits | $ 295,422,901 | $ 299,956,906 |
| Other Participants | 109,816,282 | 107,892,047 |
| Total Vested Benefits | $ 405,239,183 | $ 407,848,953 |
| Non-Vested Benefits | 962,973 | 873,941 |
| Actuarial Present Value of Accumulated Plan Benefits at End of Year (December 31) | $ 406,202,156 | $ 408,722,894 |

1 In compliance with ASC 960, the Actuarial Present Value of Accumulated Plan Benefits include the present value of assumed operating expenses as of each valuation date and has been proportionately allocated to each participant liability group: $13,326,903 ($1,000,000 paid in monthly installments, or $966,200 as of the beginning of the year) as of December 31, 2020 and $22,659,863 ($1,550,000 paid in monthly installments, or $1,497,611 as of the beginning of the year $250,000 is due to ARPA related expenses, or $241,550 as of the beginning of the year) as of December 31, 2021. The change in the expense assumption is reflected in the Actuarial Assumption Changes line for 2021. The change in the current year expense assumption will be reflected in the Actuarial Present Value of Accumulated Plan Benefits as of December 31, 2022.

# Appendix K – Withdrawal Liability Information

| DETERMINATION OF VESTED BENEFIT LIABILITIES FOR WITHDRAWAL LIABILITY PURPOSES | | |
|---|---|---|
| | **December 31, 2020** | **December 31, 2021** |
| 1. Vested Benefit Liabilities Earned to Date | $ 391,943,874 | $ 385,237,542 |
| 2. PBGC 10-3 Base[1] | 11,155,487 | 9,225,304 |
| 3. MPRA Suspension Base | 117,842,876 | 117,842,876 |
| 4. Vested Benefit Liabilities (1 + 2 + 3) | $ 520,942,237 | $ 512,305,722 |

[1] PBGC Technical Update 10-3 describes the simplified method for plans in the Red Zone to disregard certain adjustable benefits in determining withdrawal liability. This involves the establishment of a base equal to the reduction in these adjustable benefits, which is then amortized over 15 years. The PBGC 10-3 base is the outstanding balance as of the applicable date.

# Appendix K – Withdrawal Liability Information *(Continued)*

**PBGC 10-3 BASES**

| Base Established as of | Outstanding Balance as of December 31, 2020 | Outstanding Balance as of December 31, 2021 |
|---|---|---|
| MPRA Suspension Base[1] | 117,842,876 | 117,842,876 |
| PBGC 10-3 Base[2] | 11,155,487 | 9,225,304 |
| Total | $ 128,998,363 | $ 127,068,180 |

1 Outstanding balance of the benefit reductions of 30% on all accrued benefits earned through September 30, 2018, subject to the MPRA restrictions on benefit suspensions for older participants, disabled participants, and those with small benefits that were implemented effective October 1, 2018.

2 PBGC Technical Update 10-3 describes the simplified method for plans in the Red Zone to disregard certain adjustable benefits in determining withdrawal liability. This involves the establishment of a base equal to the reduction in these adjustable benefits, which is then amortized over 15 years. The PBGC 10-3 base is the outstanding balance as of the applicable date.

# Appendix L – Funding Standard Account (No Amortization Extension)

| FUNDING STANDARD ACCOUNT (No Amortization Extension) | 2021 | 2022 (Estimated)[1] |
|---|---|---|
| 1. Charges | | |
| A. Funding Deficiency on January 1 | $ 82,983,947 | $ 83,852,734 |
| B. Normal Cost (Beginning of Year)[2] | 2,179,894 | 2,231,000 |
| C. Amortization Charges | 32,697,512 | 32,519,123 |
| D. Interest on A, B and C | 8,544,948 | 8,598,707 |
| E. Subtotal Charges (A + B + C +D) | 126,406,301 | 127,201,564 |
| 2. Credits | | |
| A. Credit Balance on January 1 | $ 0 | $ 0 |
| B. Employer Contributions for Year[3] | 18,054,587 | 9,672,000 |
| C. Amortization Credits | 22,232,635 | 23,653,635 |
| D. Interest on A, B and C | 2,266,345 | 2,065,499 |
| E. Subtotal Credits (A + B + C + D) | $ 42,553,567 | $ 35,391,134 |
| **3. Funding Deficiency on December 31 (2E - 1E)** | **$ (83,852,734)** | **$ (91,810,430)** |
| 4. Minimum Required Contribution (Before Credit Balance) | $ 102,561,800 | $ 101,833,040 |
| 5. Minimum Required Contribution (After Credit Balance) | 102,561,800 | 101,833,040 |
| 6. ERISA FFL (Accrued Liability FFL) | $ 81,060,301 | $ 54,609,584 |
| 7. "RPA '94" Override (90% Current Liability FFL) | 265,406,659 | 244,090,339 |

1 This is the Funding Standard Account used to determine if the Plan falls into the Red Zone.

2 Normal cost includes assumed operating expenses of $1,497,600 as of the beginning of the 2021 Plan Year ($1,550,000 paid in monthly installments) and operating expenses of $1,497,600 as of the beginning of the 2022 Plan Year ($1,550,000 paid in monthly installments).

3 2022 estimated contributions reflect withdrawal liability payments for previously withdrawn employers.

# Appendix L – Funding Standard Account (No Amortization Extension) *(Continued)*

| FULL FUNDING LIMITS (No Amortization Extension) | 2021 | 2022 (Estimated) |
|---|---|---|
| 1. ERISA FFL | | |
| A. Interest Rate | 7.25 % | 7.25 % |
| B. Liability | $ 392,875,253 | $ 386,063,031 |
| C. Normal Cost (without expenses) | 682,283 | 656,000 |
| D. Expected Benefit Payments | (34,398,142) | (34,463,353) |
| E. Interest on B, C and D | 27,285,989 | 26,787,833 |
| **F. Expected Liability (B + C + D + E)** | **$ 386,445,383** | **$ 379,043,511** |
| G. Min of AVA and MVA | 319,474,447 | 337,375,911 |
| H. Credit Balance | 0 | 0 |
| I. Adjusted Assets | 319,474,447 | 337,375,911 |
| J. Expected Benefit Payments | (34,398,142) | (34,463,353) |
| K. Expected Operating Expenses | (1,497,611) | (1,574,907) |
| L. Interest on I, J, and K | 21,806,388 | 23,096,276 |
| **M. Expected Assets (I + J + K + L))** | **$ 305,385,082** | **$ 324,433,927** |
| **N. ERISA FFL (F - M, not less than $0)** | **$ 81,060,301** | **$ 54,609,584** |
| 2. RPA '94 FFL | | |
| A. Interest Rate | 2.43 % | 2.22 % |
| B. Liability | $ 651,458,800 | $ 650,317,459 |
| C. Normal Cost (without expenses) | 1,692,110 | 1,740,000 |
| D. Expected Benefit Payments | (34,445,883) | (34,508,906) |
| E. Interest on B, C and D | 15,453,050 | 14,092,627 |
| F. Expected Liability (B + C + D + E) | $ 634,158,077 | $ 631,641,180 |
| G. Funding Limit Factor | 90 % | 90 % |
| **H. Funding Limit Liability (F * G)** | **$ 570,742,269** | **$ 568,477,062** |
| I. AVA | $ 319,474,447 | $ 337,375,911 |
| J. Expected Benefit Payments | (34,445,883) | (34,508,906) |
| K. Expected Operating Expenses | (1,497,611) | (1,574,907) |
| L. Interest on I, J, and K | 21,804,657 | 23,094,625 |
| **M. Expected Assets (I + J + K + L))** | **$ 305,335,610** | **$ 324,386,723** |
| **N. RPA '94 FFL (H - M, not less than $0)** | **$ 265,406,659** | **$ 244,090,339** |

# Appendix L – Funding Standard Account (No Amortization Extension) *(Continued)*

| FUNDING STANDARD ACCOUNT AMORTIZATION BASES (No Amortization Extension) (As of January 1, 2022) | | | | | | |
|---|---|---|---|---|---|---|
| | Amortization Period | | | Balances | | |
| Charges | Date Established | Initial Period | Remaining Period | Initial | Remaining | Beginning-of-Year Payment |
| Plan Amendment | 1/1/1993 | 30.00 | 1.00 | $ 8,009,694 | $ 617,017 | $ 617,017 |
| Plan Amendment+Act Assump | 1/1/1994 | 30.00 | 2.00 | 5,816,782 | 865,903 | 448,093 |
| Plan Amendment | 1/1/1995 | 30.00 | 3.00 | 3,954,934 | 853,608 | 304,667 |
| Actuarial Assumption | 1/1/1996 | 30.00 | 4.00 | 2,334,000 | 649,503 | 179,799 |
| Plan Amendment | 1/1/1996 | 30.00 | 4.00 | 19,722,004 | 5,488,192 | 1,519,277 |
| Plan Amendment | 1/1/1997 | 30.00 | 5.00 | 12,051,000 | 4,055,180 | 928,344 |
| Plan Amendment | 1/1/1998 | 30.00 | 6.00 | 12,834,000 | 5,015,394 | 988,662 |
| Actuarial Assumption | 1/1/1998 | 30.00 | 6.00 | 5,651,596 | 2,208,571 | 435,369 |
| Actuarial Assumption | 1/1/1999 | 30.00 | 7.00 | 500,000 | 220,710 | 38,517 |
| Plan Amendment | 1/1/1999 | 30.00 | 7.00 | 21,615,699 | 9,541,297 | 1,665,157 |
| Plan Amendment | 1/1/2000 | 30.00 | 8.00 | 7,937,933 | 3,878,502 | 611,495 |
| Actuarial Assumption | 1/1/2000 | 30.00 | 8.00 | 4,389,753 | 2,144,847 | 338,162 |
| Plan Amendment | 1/1/2001 | 30.00 | 9.00 | 12,746,807 | 6,789,060 | 981,945 |
| Plan Amendment | 1/1/2002 | 30.00 | 10.00 | 2,268,072 | 1,301,059 | 174,720 |
| Plan Amendment | 1/1/2003 | 30.00 | 11.00 | 2,964,980 | 1,814,256 | 228,407 |
| Plan Amendment | 1/1/2005 | 30.00 | 13.00 | 1,000,895 | 681,427 | 77,104 |
| Actuarial Assumption | 1/1/2005 | 30.00 | 13.00 | 1,063,519 | 724,061 | 81,928 |
| Plan Amendment | 1/1/2006 | 30.00 | 14.00 | 1,459,383 | 1,038,840 | 112,423 |
| Plan Amendment | 1/1/2007 | 30.00 | 15.00 | 1,475,698 | 1,093,118 | 113,680 |
| Plan Amendment | 1/1/2008 | 15.00 | 1.00 | 1,383,243 | 143,858 | 143,858 |
| Experience Loss | 1/1/2009 | 15.00 | 2.00 | 123,105,349 | 24,739,266 | 12,802,342 |
| Experience Loss | 1/1/2011 | 15.00 | 4.00 | 5,600,066 | 2,103,769 | 582,379 |
| Experience Loss | 1/1/2012 | 15.00 | 5.00 | 39,179,040 | 17,797,831 | 4,074,425 |
| Experience Loss | 1/1/2013 | 15.00 | 6.00 | 33,032,826 | 17,426,667 | 3,435,249 |
| Experience Loss | 1/1/2016 | 15.00 | 9.00 | 506,616 | 364,256 | 52,686 |

# Appendix L – Funding Standard Account (No Amortization Extension) *(Continued)*

| FUNDING STANDARD ACCOUNT AMORTIZATION BASES (No Amortization Extension) (As of January 1, 2022) (CONTINUED) | | | | | | |
|---|---|---|---|---|---|---|
| | Amortization Period | | | Balances | | |
| Charges | Date Established | Initial Period | Remaining Period | Initial | Remaining | Beginning-of-Year Payment |
| Experience Loss | 1/1/2017 | 15.00 | 10.00 | $ 1,021,519 | $ 791,062 | $ 106,233 |
| Experience Loss | 1/1/2018 | 15.00 | 11.00 | 1,612,860 | 1,332,298 | 167,729 |
| Experience Loss | 1/1/2019 | 15.00 | 12.00 | 7,385,989 | 6,456,838 | 768,106 |
| Experience Loss | 1/1/2020 | 15.00 | 13.00 | 5,205,541 | 4,784,417 | 541,350 |
| **Total Charges** | | | | | **$ 124,920,807** | **$ 32,519,123** |

# Appendix L – Funding Standard Account (No Amortization Extension) *(Continued)*

| FUNDING STANDARD ACCOUNT AMORTIZATION BASES (No Amortization Extension) (As of January 1, 2022) (CONTINUED) | | | | | | |
|---|---|---|---|---|---|---|
| | Amortization Period | | | Balances | | |
| Credits | Date Established | Initial Period | Remaining Period | Initial | Remaining | Beginning-of-Year Payment |
| Experience Gain | 1/1/2010 | 15.00 | 3.00 | $ (27,345,881) | $ (7,967,783) | $ (2,843,835) |
| Plan Amendment | 1/1/2010 | 15.00 | 3.00 | (32,045,400) | (9,337,076) | (3,332,562) |
| Experience Gain | 1/1/2014 | 15.00 | 7.00 | (14,564,452) | (8,678,798) | (1,514,630) |
| Experience Gain | 1/1/2015 | 15.00 | 8.00 | (8,275,002) | (5,458,209) | (860,559) |
| Assumption Change | 1/1/2017 | 15.00 | 10.00 | (6,594,691) | (5,106,924) | (685,815) |
| Plan Amendment | 1/1/2019 | 15.00 | 12.00 | (117,661,915) | (102,860,146) | (12,236,252) |
| Experience Gain | 1/1/2021 | 15.00 | 14.00 | (7,298,256) | (7,013,371) | (758,982) |
| Experience Gain | 1/1/2022 | 15.00 | 15.00 | (13,664,114) | (13,664,114) | (1,421,000) |
| **Total Credits** | | | | | **$ (160,086,421)** | **$ (23,653,635)** |

Rael & Letson