# Industry & Local 338 Pension Plan

Actuarial Update

April 19, 2024

**Mary Ann Dunleavy, ASA**

# Today's Discussion

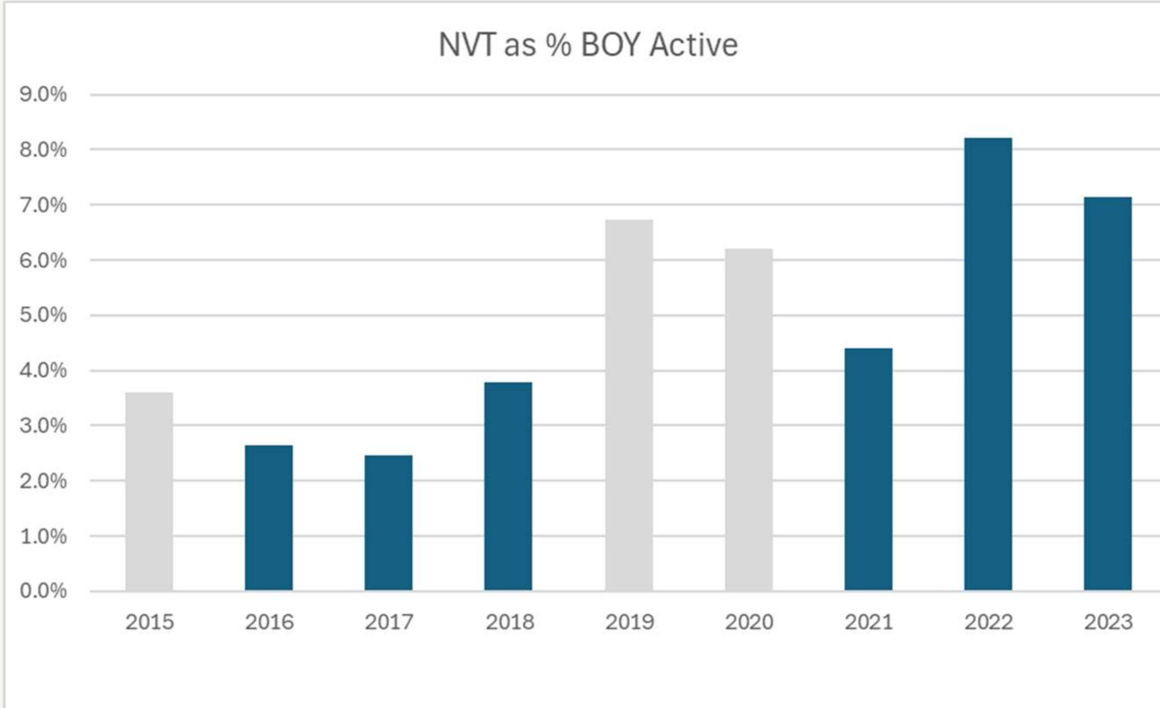
- **Participant Turnover**
- **Study of Form 5500 Data**
- **Funding Projections**
- **Appendix**
  - Contribution Rate Summaries
  - Data, Assumptions, Methods and Plan Provisions
  - Actuarial Certification

# Participant Turnover

# Participant Turnover

- **At the January 2024 Board Meeting, the Trustees discussed the possibility that the frequency of participant turnover prior to retirement is increasing.**
- **We reviewed turnover shown in the participant reconciliation prepared in each year's actuarial valuation for the 9 plan years July 1, 2014 – June 30, 2023.**
  - The turnover does not include individuals who were never included in the census data collected at a valuation date.
    - For example, an individual who started working August 5, 2022 and left employment May 30, 2023 would not be included in the valuation data collected for either the July 1, 2022 or July 1, 2023 valuation date.
  - We have summarized the pre-retirement turnover separately for non-vested participants and vested participants.
  - We have not adjusted for extraordinary events, such as plant closings or withdrawal by an employer, although they are noted in our summaries.
- **Our findings are summarized on the following pages.**

# Participant Turnover: Non-Vested Terminations (NVT)



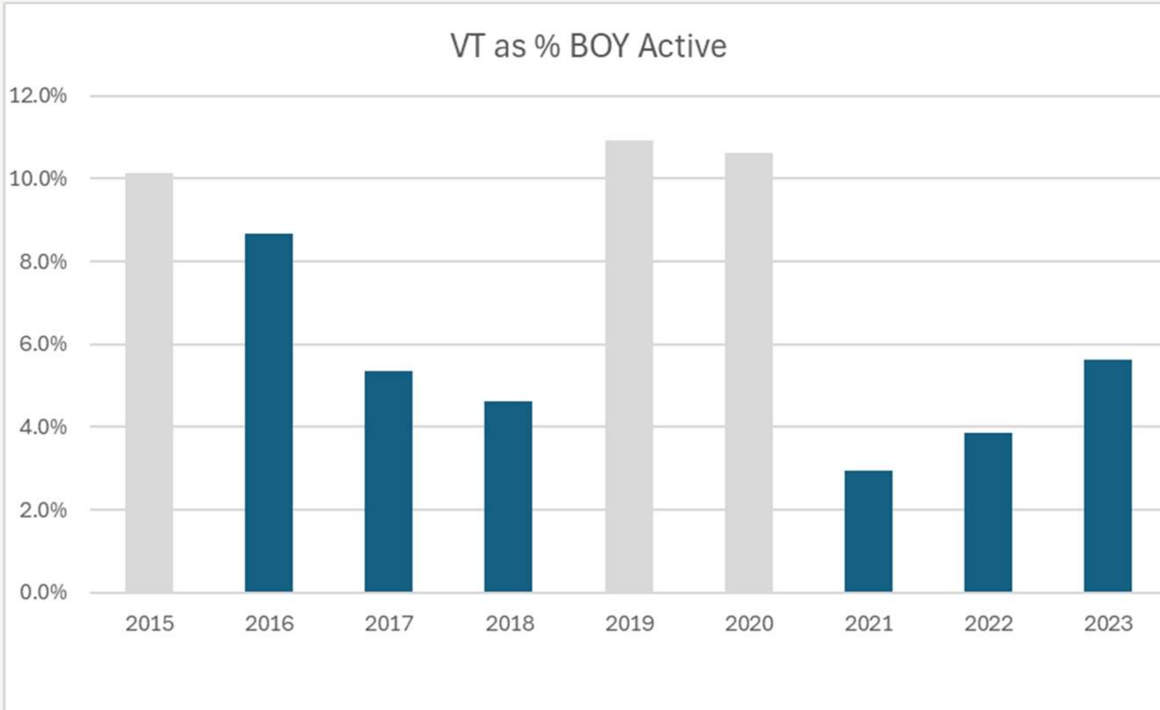

**Plan Year Ending 6/30**

| From Active Status | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| Non-Vested Term (NVT) | 11 | 7 | 6 | 9 | 16 | 14 | 9 | 17 | 14 |
| BOY Actives | 306 | 265 | 243 | 238 | 238 | 226 | 204 | 207 | 196 |
| NVT as % BOY Active | 3.6% | 2.6% | 2.5% | 3.8% | 6.7% | 6.2% | 4.4% | 8.2% | 7.1% |

2015: Hood Binghamton closed

2019-2020: Culinart and College of New Rochelle withdrew

# Participant Turnover: Vested Terminations (VT)



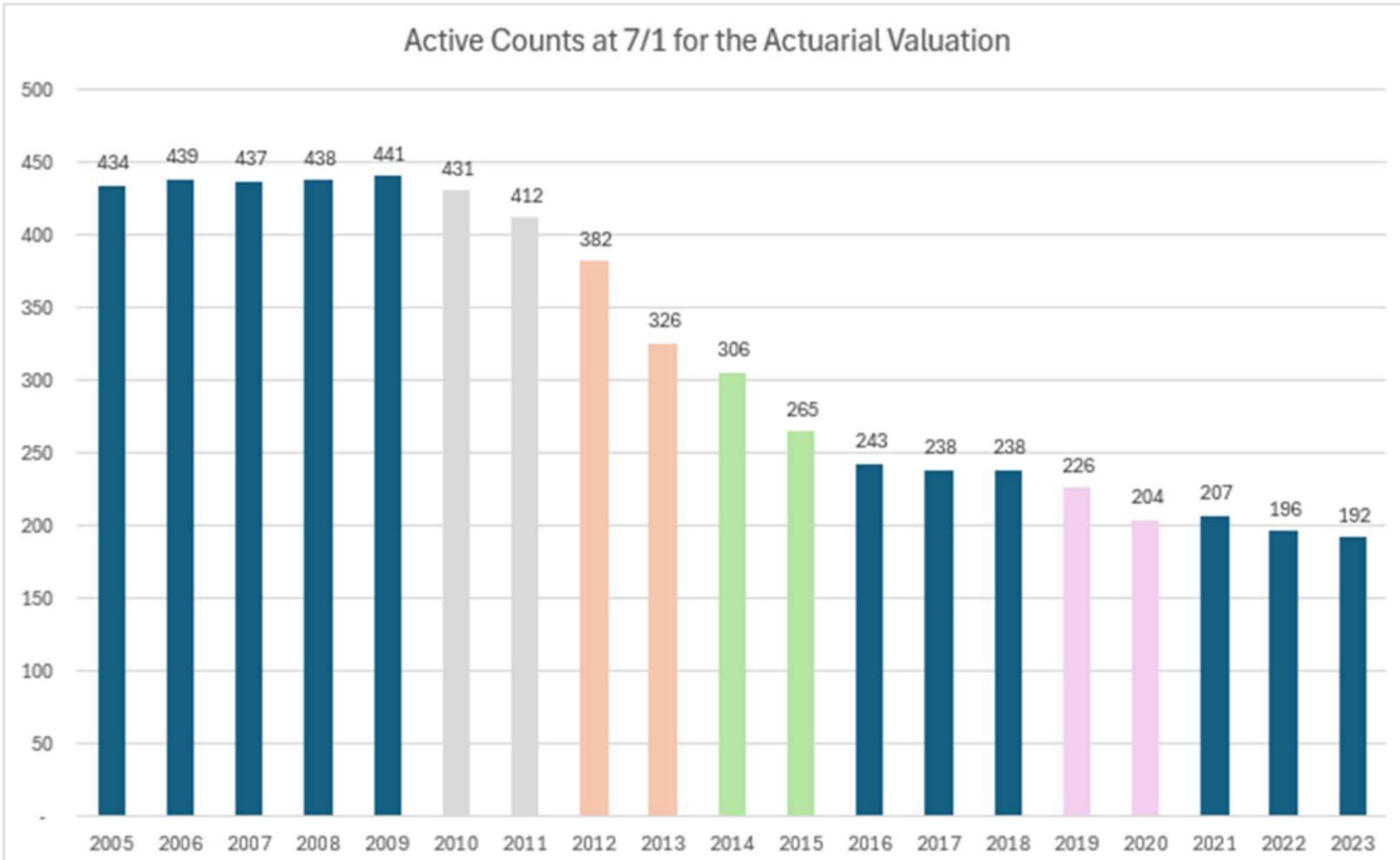

**Plan Year Ending 6/30**

| From Active Status | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| Vested Termination | 31 | 23 | 13 | 11 | 26 | 24 | 6 | 8 | 11 |
| BOY Actives | 306 | 265 | 243 | 238 | 238 | 226 | 204 | 207 | 196 |
| VT as % BOY Active | 10.1% | 8.7% | 5.3% | 4.6% | 10.9% | 10.6% | 2.9% | 3.9% | 5.6% |

2015: Hood Binghamton closed

2019-2020: Culinart and College of New Rochelle withdrew

# Participant Turnover: Active Counts




2010-2011 Hood Newburg closed

2012-2013: Sodexo, Suburban Propane, L338 Welfare, Sound Shore withdrew

2014-2015: Hood Binghamton closed

2019-2020: Culinart and College of New Rochelle withdrew

# Survey of Multiemployer Pension Plans 2007-2021

# Survey Overview

- **Genesis:**
  - Originally a partnership with the Mechanical Contractors Association of America to study Form 5500 data for multiemployer pension plans in the construction industry (2012 onwards).

    *"Inventory of Construction Industry Pension Plans"*

  - Expanded partnership with the International Foundation of Employee Benefit Plans to study multiemployer pension plans in all industries (2013 onwards).

    *"The Multiemployer Retirement Plan Landscape"*

    Now covers both defined benefit and defined contribution Multiemployer plans.

- **Purpose of 2023 survey:**
  - Summarize and analyze key trends for multiemployer defined benefit pension plans.
  - Analyze how multiemployer plans have evolved over the last fifteen years (2007 to 2021). Better understand where the plans may be headed in the future.
  - Also investigate differences in trends from industry to industry.

# What’s Included in the Survey

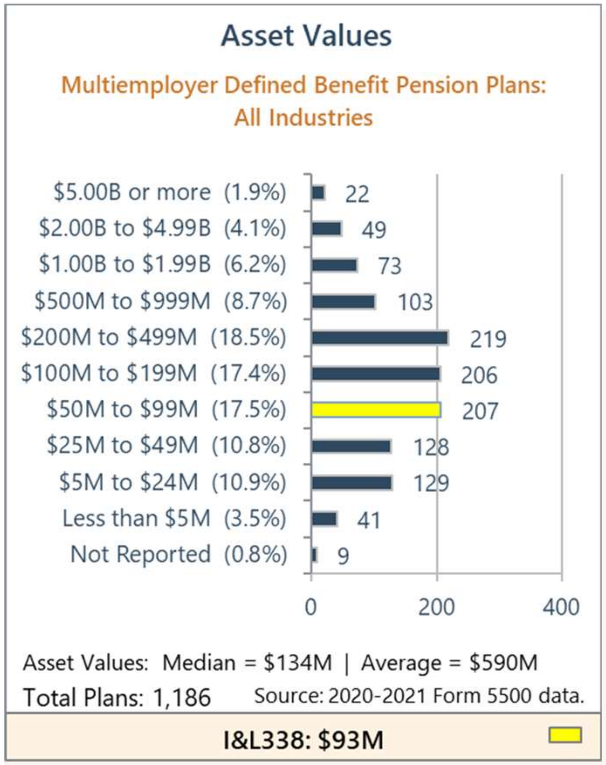
| Form/Schedule | Data Available |
|---|---|
| **Form 5500**<br>Basic Information | Plan name, address, and identification<br>NAICS (Industry) code<br>Participant and beneficiary counts<br>Employer count |
| **Schedule H**<br>Financial Information | Asset values<br>Contributions<br>Benefit payments and operating expenses |
| **Schedule B / MB**<br>Actuarial Information<br>(Defined Benefit Plans Only) | Zone certification status (2009 and later)<br>Actuarial liabilities<br>Normal cost<br>Investment return assumption |
| **Schedule R**<br>Retirement Plan Information | Asset allocations |

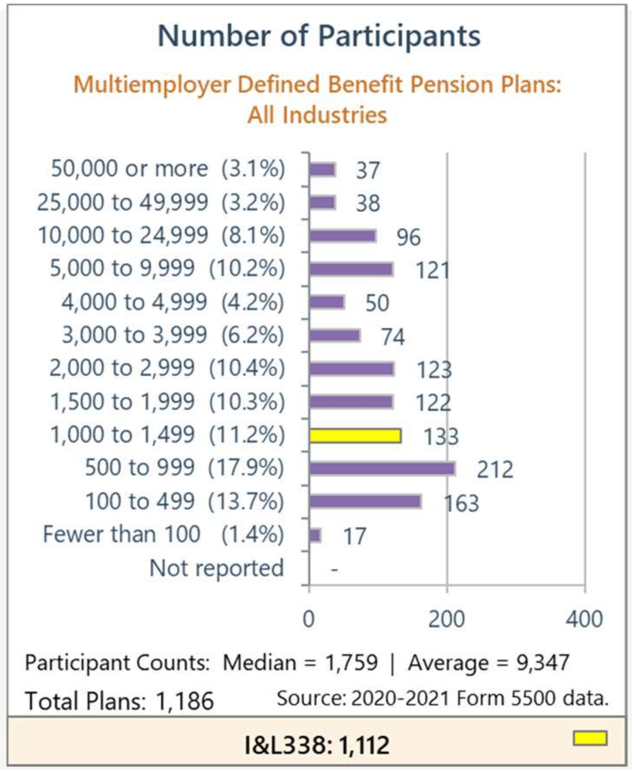
- **Survey uses publicly-available Form 5500 data from DOL website.**
- **Where possible, adjustments were made for missing or questionable data.**
- **See the most recent IFEBP *Multiemployer Retirement Plan Landscape (2004 to 2018)* report for more information on what’s included in the survey.**

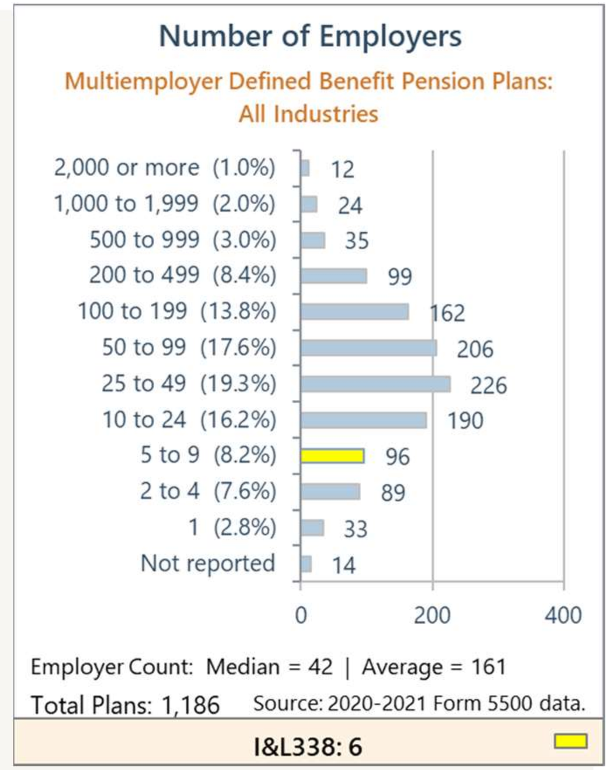
# Individual Plan Results

- **Individual Plan**
  - Results are shown for the Industry and Local 338 Pension Fund (the "Plan").
  - Plan year begins July 1.
  - Referred to as "Local 338" in the following exhibits.
- **Comparison Against Other Plans**
  - Compare against results for all plans in the construction industry. Most recent Form 5500 data is for plan years ending on or about 12/31/2021.
  - Plan years beginning September through December are set forward one year
    - For example, 8/1/2021 = 2021 plan year; 9/1/2020 = 2021 plan year
- **Results are for illustration only**
  - Form 5500 data is not perfect.
  - Adjustments were made for missing or questionable data.
  - Results from Form 5500 data may differ from plan's actual results.

# Overview: Plans in the Survey



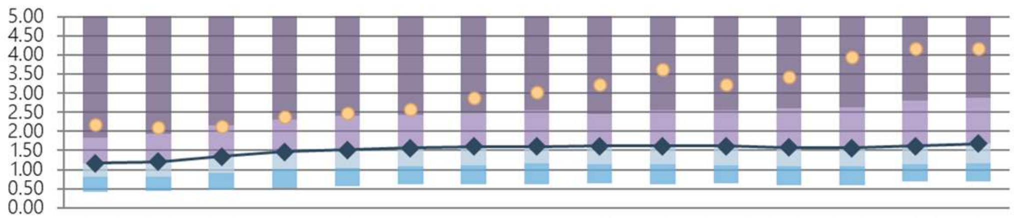




- **Plans distributed by asset value, number of participants, and number of employers.**
- **Results are based on plan years ending on or about 12/31/2021.**
- **1,177 multiemployer defined benefit pension plans have asset values greater than zero.**

# Demographics: Participant Ratios

**Participant Ratios: Inactive to Active (End of Plan Year)**

Multiemployer Defined Benefit Pension Plans: All Industries

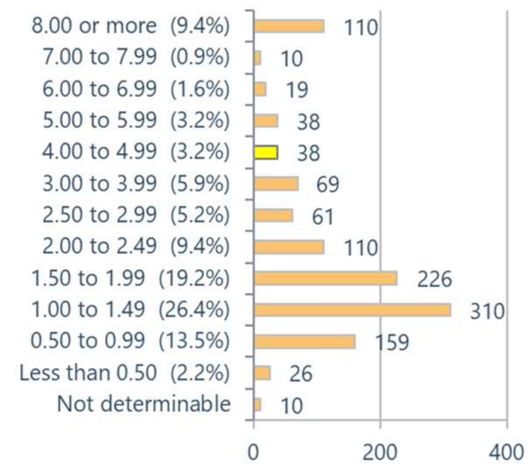



| Plan Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Plans | 1,344 | 1,326 | 1,292 | 1,295 | 1,274 | 1,283 | 1,275 | 1,263 | 1,245 | 1,227 | 1,220 | 1,214 | 1,201 | 1,187 | 1,176 |
| 95th Percentile | 5.76 | 7.00 | 6.94 | 7.37 | 8.90 | 9.73 | 9.81 | 10.85 | 11.70 | 10.95 | 11.07 | 12.43 | 12.72 | 14.70 | 15.67 |
| 75th Percentile | 1.84 | 1.93 | 2.16 | 2.30 | 2.41 | 2.43 | 2.48 | 2.55 | 2.45 | 2.54 | 2.56 | 2.60 | 2.64 | 2.80 | 2.88 |
| 50th Percentile | 1.18 | 1.21 | 1.35 | 1.47 | 1.51 | 1.57 | 1.61 | 1.60 | 1.62 | 1.62 | 1.62 | 1.58 | 1.57 | 1.62 | 1.68 |
| 25th Percentile | 0.82 | 0.82 | 0.92 | 1.00 | 1.04 | 1.09 | 1.12 | 1.16 | 1.15 | 1.14 | 1.12 | 1.09 | 1.08 | 1.14 | 1.17 |
| 5th Percentile | 0.42 | 0.45 | 0.47 | 0.53 | 0.58 | 0.61 | 0.62 | 0.62 | 0.64 | 0.63 | 0.63 | 0.60 | 0.60 | 0.68 | 0.68 |
| I&L338 | 2.18 | 2.12 | 2.13 | 2.38 | 2.48 | 2.58 | 2.89 | 3.02 | 3.23 | 3.62 | 3.23 | 3.42 | 3.94 | 4.17 | 4.17 |

Source: Form 5500 Data

**Participant Ratios: Inactives to Actives**

Multiemployer Defined Benefit Pension Plans: All Industries




Median Participant Ratio: 1.68

Total Plans: 1,186 Source: 2020-2021 Form 5500 data.

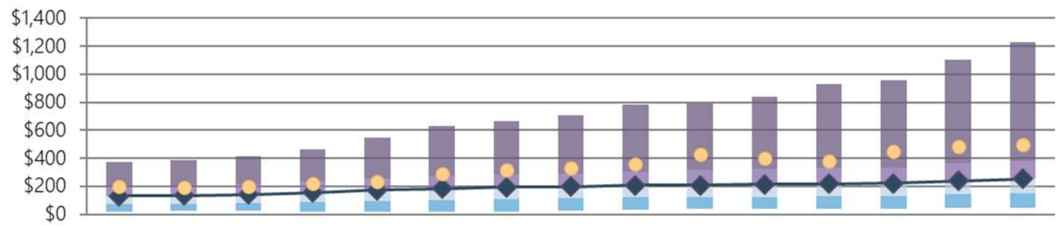
**I&L338: 4.17**

- Participant ratio = number of inactive participants / number of active participants.
- Inactive participants include inactive participants with deferred benefits, retirees, and beneficiaries.
- More difficult for plans with high inactive/active participant ratios to improve plan funding via changes to employer contributions or future benefit accruals.

# Liabilities: Accrued Liability per Active Participant

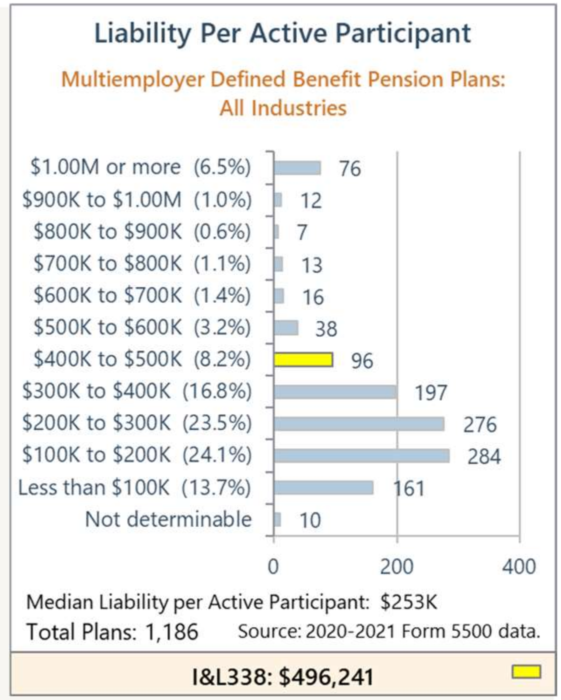
Liability per Active Participant ($Thousands)

Multiemployer Defined Benefit Pension Plans: All Industries




| Plan Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Plans | 1,336 | 1,188 | 1,228 | 1,278 | 1,272 | 1,284 | 1,275 | 1,263 | 1,244 | 1,230 | 1,220 | 1,213 | 1,202 | 1,186 | 1,176 |
| 95th Percentile | $371 | $386 | $413 | $465 | $545 | $629 | $667 | $706 | $785 | $791 | $838 | $931 | $958 | $1,107 | $1,227 |
| 75th Percentile | $197 | $201 | $212 | $236 | $258 | $276 | $285 | $291 | $303 | $316 | $326 | $335 | $335 | $368 | $378 |
| ◆ 50th Percentile | $131 | $136 | $142 | $156 | $173 | $184 | $195 | $199 | $208 | $209 | $215 | $221 | $222 | $239 | $253 |
| 25th Percentile | $72 | $76 | $81 | $88 | $95 | $103 | $109 | $114 | $121 | $123 | $124 | $127 | $129 | $144 | $149 |
| 5th Percentile | $22 | $23 | $25 | $22 | $20 | $21 | $20 | $26 | $35 | $37 | $38 | $39 | $42 | $49 | $51 |
| I&L338 | $203 | $192 | $203 | $218 | $233 | $289 | $315 | $329 | $360 | $432 | $401 | $382 | $448 | $482 | $496 |

Source: Form 5500 Data

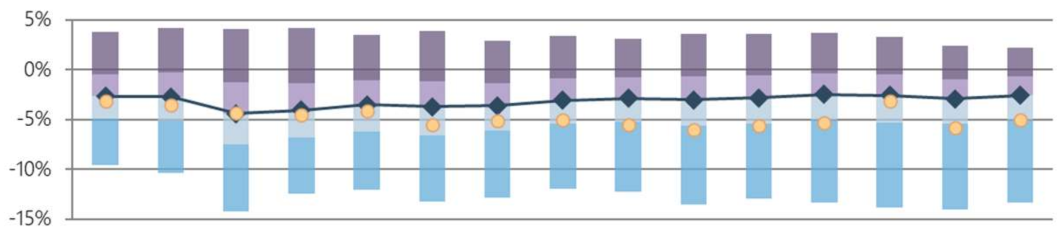



- Liability Per Active = Accrued Liability / number of active participants.
- Example: A plan has an accrued liability of $200,000,000 and 2,000 actives. The liability per active is $100,000.
- More difficult for plans with higher liability per active participant to improve plan funding via changes to employer contributions or future benefit accruals.

# Assets: Net Cash Flows

Net Cash Flow as a Percentage of Assets

Multiemployer Defined Benefit Pension Plans: All Industries

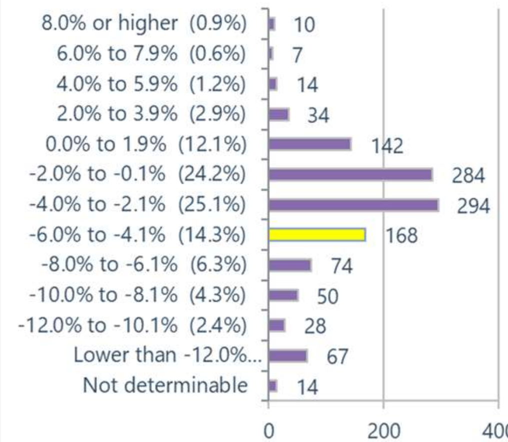



| Plan Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Plans | 1,354 | 1,333 | 1,214 | 1,283 | 1,280 | 1,291 | 1,277 | 1,270 | 1,248 | 1,237 | 1,229 | 1,224 | 1,210 | 1,189 | 1,172 |
| 95th Percentile | 3.8% | 4.2% | 4.1% | 4.2% | 3.5% | 3.9% | 2.9% | 3.5% | 3.1% | 3.6% | 3.6% | 3.7% | 3.3% | 2.5% | 2.2% |
| 75th Percentile | -0.5% | -0.3% | -1.3% | -1.3% | -1.0% | -1.1% | -1.3% | -0.9% | -0.7% | -0.7% | -0.6% | -0.4% | -0.4% | -0.9% | -0.7% |
| ◆ 50th Percentile | -2.7% | -2.7% | -4.4% | -4.0% | -3.5% | -3.7% | -3.6% | -3.1% | -2.9% | -3.0% | -2.8% | -2.5% | -2.6% | -2.9% | -2.6% |
| 25th Percentile | -4.9% | -5.1% | -7.5% | -6.8% | -6.2% | -6.6% | -6.1% | -5.4% | -5.2% | -5.7% | -5.4% | -5.1% | -5.3% | -5.4% | -5.0% |
| 5th Percentile | -9.6% | -10.4% | -14.2% | -12.5% | -12.1% | -13.3% | -12.8% | -12.0% | -12.2% | -13.6% | -12.9% | -13.4% | -13.9% | -14.0% | -13.3% |
| ● I&L338 | -3.2% | -3.5% | -4.3% | -4.5% | -4.1% | -5.5% | -5.1% | -5.0% | -5.5% | -6.0% | -5.7% | -5.3% | -3.2% | -5.8% | -5.0% |

Source: Form 5500 Data

Net Cash Flow (% of Assets)

Multiemployer Defined Benefit Pension Plans: All Industries



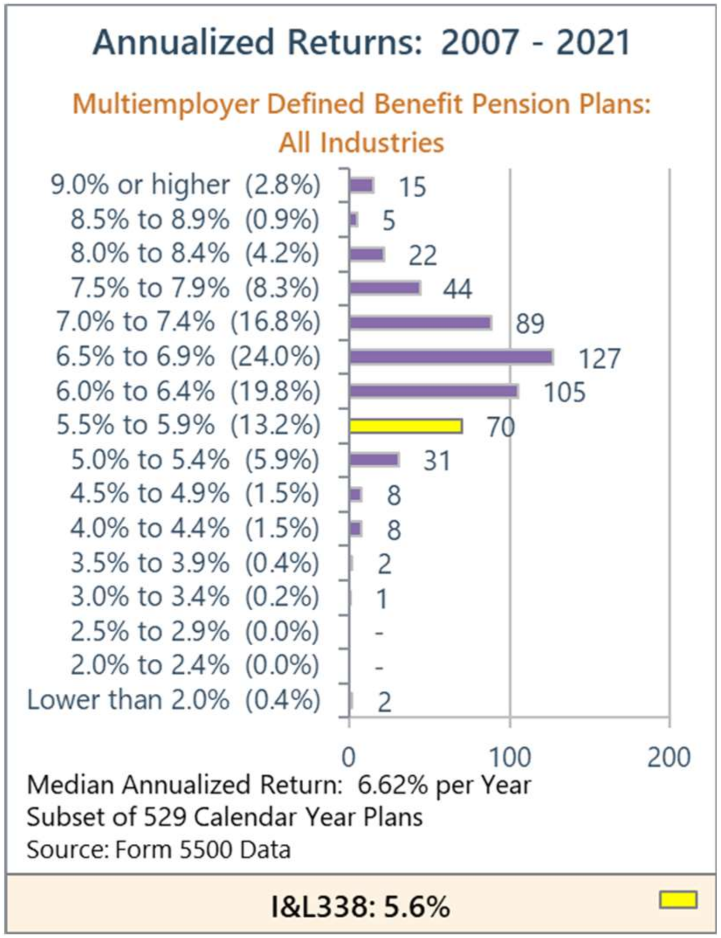

Median Net Cash Flow: -2.6% of Assets

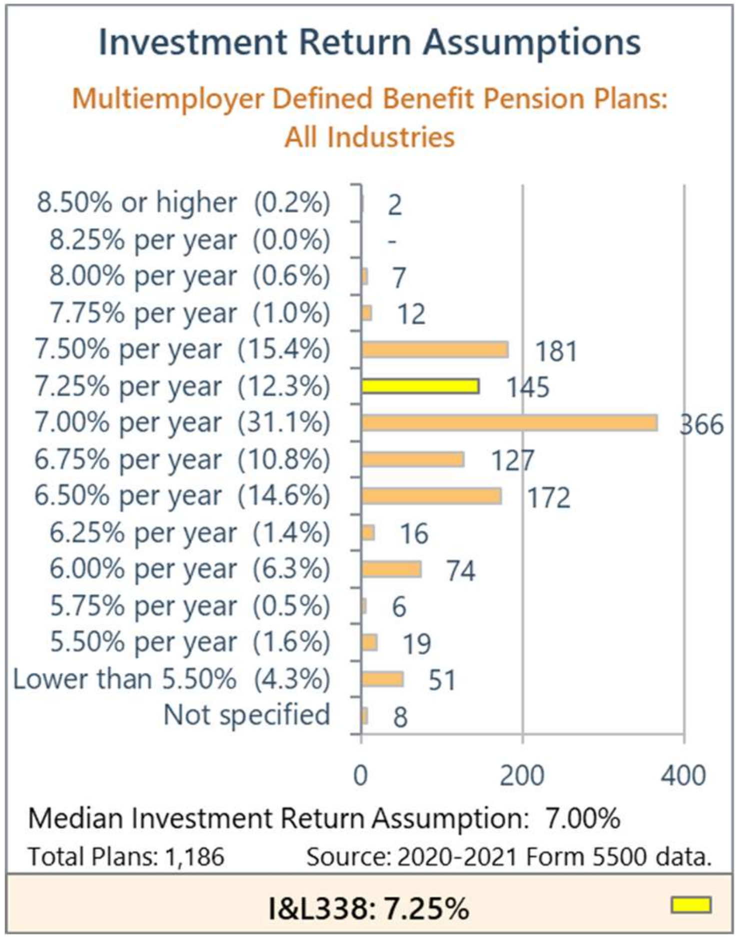
Total Plans: 1,186 Source: 2020-2021 Form 5500 data.

**I&L338: -5.0% of Assets**

- **Net cash flow = cash in versus cash out, as a % of average asset value.**
  - Cash in = employer contributions
  - Cash out = benefit payments and operating expenses
- **<u>Example:</u> if a plan's net cash flow is -4.0% of assets, the plan's investment return must be at least +4.0% to avoid a decline in the asset value from one year to the next.**

# Annualized Investment Return: Actual vs. Expected




**Results may not be comparable for non-calendar plan years.**

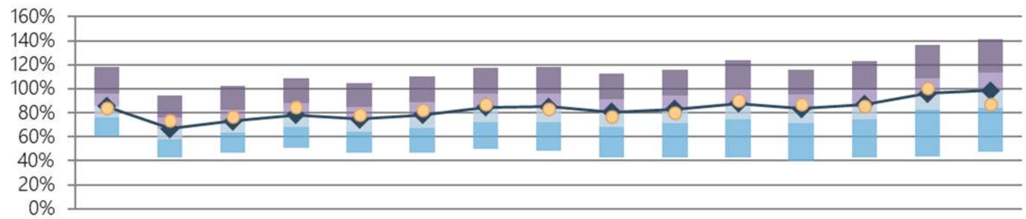
**Actual return results include only those calendar year plans with complete Form 5500 data for the 15-year period from 1/1/2007 to 12/31/2021.**

**Note: 15 years is too short of a time horizon to draw conclusions about long-term investment policies.**

# Plan Funding: Funded Percentages

**Market Value Funded Percentages (End of Year)**

Multiemployer Defined Benefit Pension Plans: All Industries

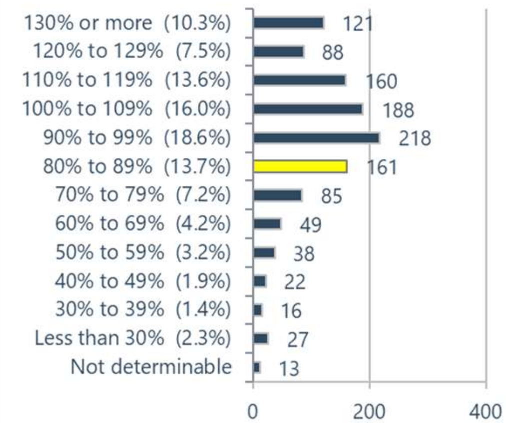



| Plan Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Plans | 1,249 | 1,179 | 1,146 | 1,240 | 1,239 | 1,253 | 1,257 | 1,268 | 1,249 | 1,238 | 1,232 | 1,223 | 1,211 | 1,192 | 1,173 |
| 95th Percentile | 118% | 95% | 102% | 109% | 105% | 110% | 117% | 118% | 112% | 115% | 124% | 116% | 123% | 136% | 141% |
| 75th Percentile | 96% | 76% | 83% | 88% | 85% | 89% | 96% | 96% | 91% | 94% | 100% | 95% | 99% | 109% | 114% |
| ◆ 50th Percentile | 85% | 67% | 73% | 78% | 75% | 78% | 85% | 85% | 81% | 83% | 88% | 83% | 87% | 96% | 99% |
| 25th Percentile | 76% | 58% | 63% | 68% | 64% | 67% | 72% | 72% | 68% | 71% | 74% | 71% | 75% | 82% | 84% |
| 5th Percentile | 60% | 43% | 47% | 50% | 46% | 47% | 50% | 48% | 42% | 43% | 42% | 40% | 42% | 44% | 48% |
| I&L338 | 84% | 74% | 77% | 85% | 78% | 82% | 87% | 83% | 77% | 80% | 90% | 87% | 86% | 101% | 87% |

Source: Form 5500 Data

**Market Value Funded Percentages**

Multiemployer Defined Benefit Pension Plans: All Industries




Median Market Value Funded Percentage: 98.7%

Total Plans: 1,186 Source: 2020-2021 Form 5500 data.

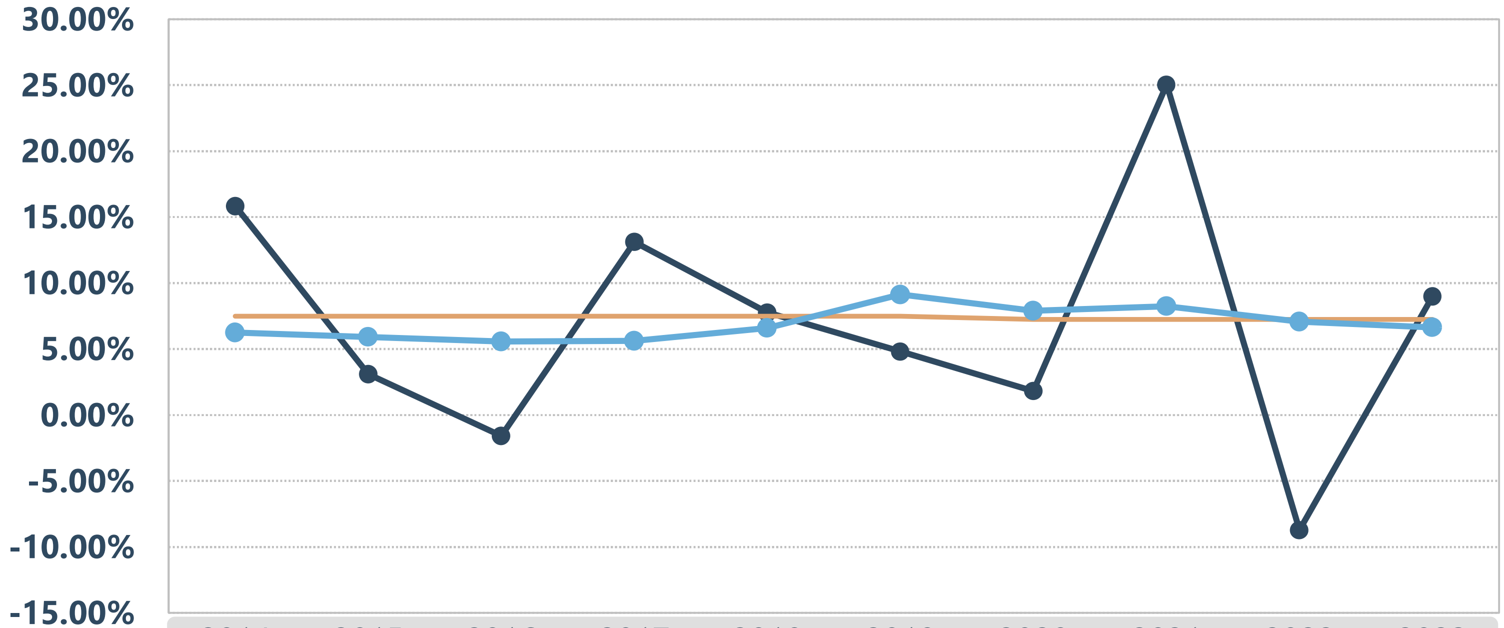
I&L338: 87.5%

- Results include all plan year ending dates. Most plans use calendar plan years. Note that funded percentages for plans with different plan years may vary substantially due to market conditions
- Funded percentages are measured as of the end of the plan year and are based on the market value of assets.
- Note: funded percentages reported in the Schedule MB are measured based on the actuarial value of assets.

# Assets: Investment Returns

Industry & Local 338 Pension Plan

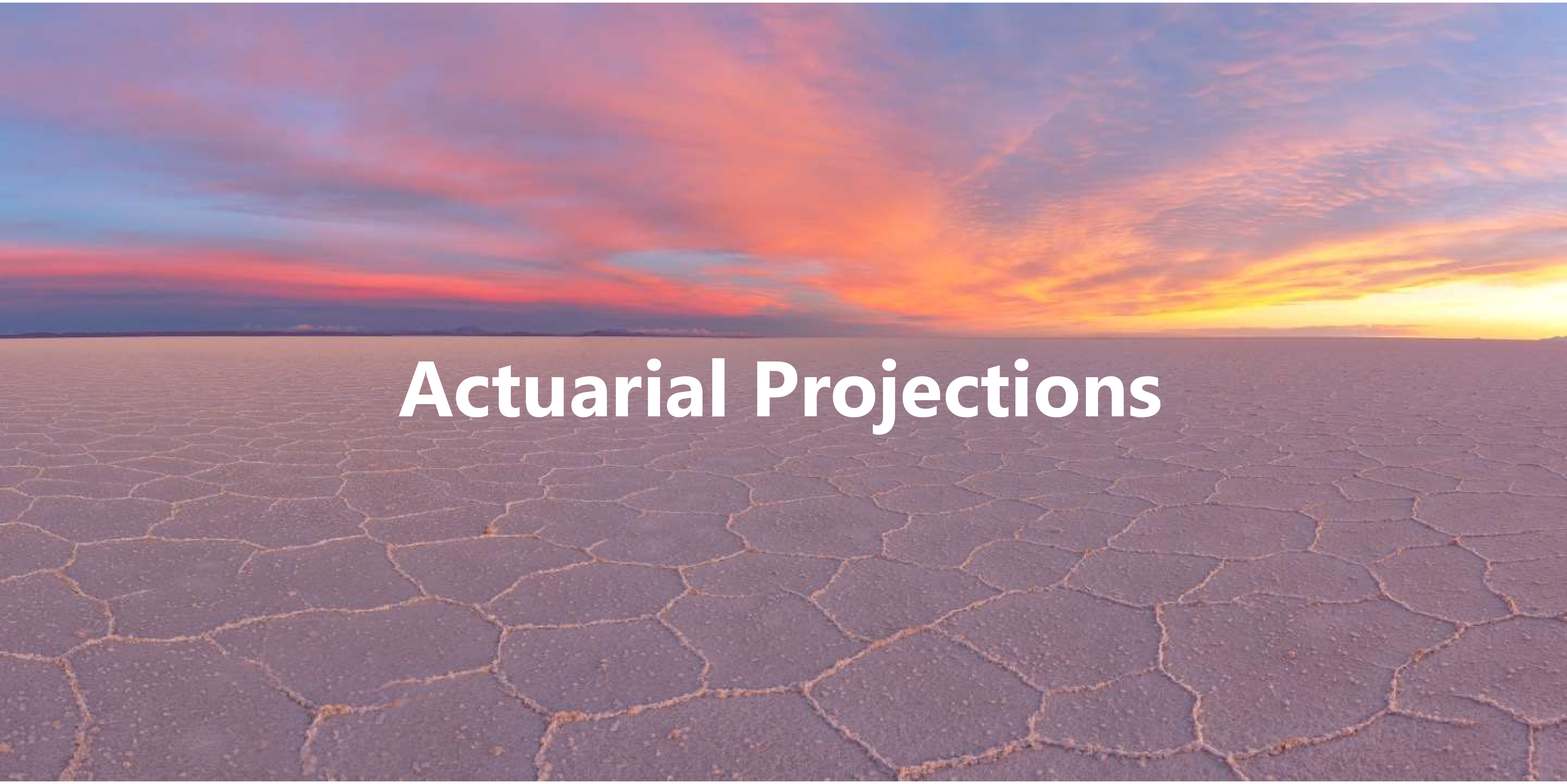
Market Value Investment Return for Plan Year Ending 6/30




| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|
| Actual MVA Return | 15.84% | 3.10% | -1.58% | 13.13% | 7.77% | 4.81% | 1.82% | 25.04% | -8.72% | 9.00% |
| Assumed Return | 7.50% | 7.50% | 7.50% | 7.50% | 7.50% | 7.50% | 7.25% | 7.25% | 7.25% | 7.25% |
| Rolling 10-year Average | 6.26% | 5.92% | 5.57% | 5.63% | 6.59% | 9.14% | 7.90% | 8.24% | 7.09% | 6.64% |

**Notes**

1) The Rolling 10-year Average shown represents the annual average geometric return for the 10 plan years ending on each respective valuation date.



# Actuarial Projections

# Projection Assumptions and Methods

- **Unless otherwise stated, the projection assumptions, methods, data and plan provisions used are the same as those used for the July 1, 2023 actuarial valuation.**
  - No future expected gains or losses other than those attributable to investment returns, as applicable.
- **Investment Earnings**
  - 7.25% per year, net of investment-related expenses, thereafter unless otherwise noted
- **Operating Expenses**
  - $375,000 for the plan year beginning July 1, 2023, increasing 3.0% per year
- **Work Levels**
  - Plan year beginning July 1, 2023 and later: 9,600 total weeks, unless otherwise noted
- **Contribution Rates**
  - Included in Collective Bargaining Agreements as bargained
- **Withdrawal Liability Income**
  - Reflects expected payments from employers withdrawn before July 1, 2023
  - Approximately $183,000 per year for 10 years

Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

# Projection Assumptions and Methods (cont.)

- **Contracts**
  - 85% of hours worked under contracts beginning that are expected to renew in PYB 2023
    - HP Hood, expiration September 30, 2023
    - FrieslandCampina, expiration December 31, 2023
    - Montefiore New Rochelle, expiration November 5, 2023
    - Paraco, expiration January 31, 2024
  - 15% of hours worked under contracts beginning that are expected to renew in PYB 2025
    - LP Transport, expires August 15, 2025
    - Westchester Local 860, expires September 30, 2025

Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

# Projection Roadmap

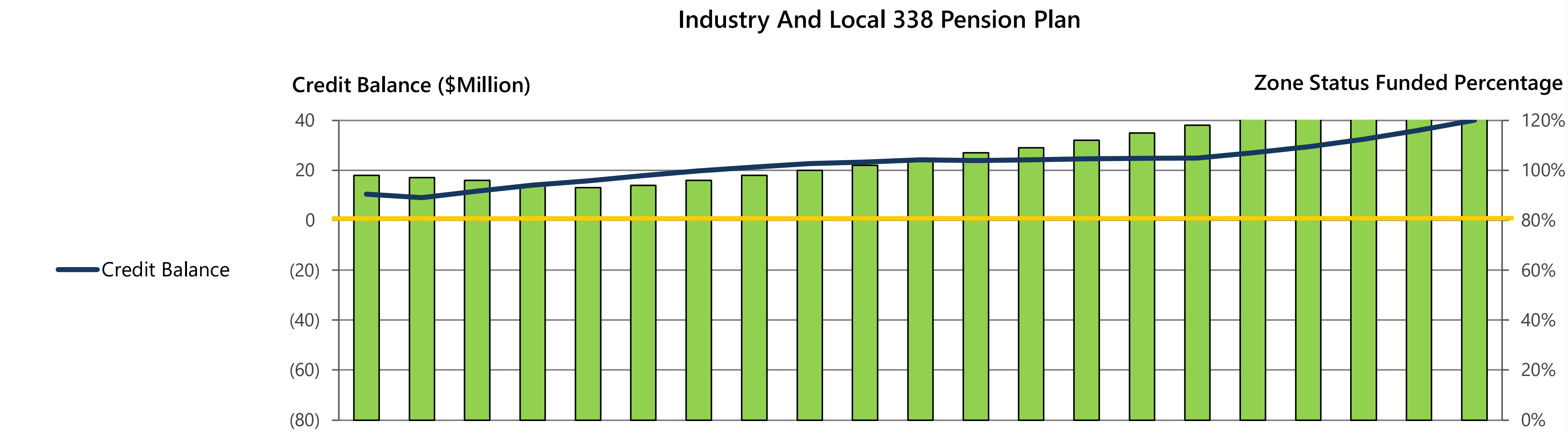
| Scenario | Investment Return<br>PYB 2022 / PYB 2023/ PYB 2024+ | Weeks Worked<br>PYB 2023+ | Funded % / Credit Bal ($M) PYB 2024 | Future Zone Status Changes | 100% Funded PYB | % Funded 7/1/2042 | Credit Balance ($M) 6/30/2042 |
|---|---|---|---|---|---|---|---|
| **1**<br>July 1, 2023 Valuation | 9.00% 2022 / 7.25% thereafter | 9,600 | 96% / $12 | **Green** | 2030 | 138% | $40 |
| **2**<br>Lower Hours | 9.00% 2022 / 7.25% thereafter | 9,150 (5% lower) | 96% / $12 | **Green** | 2031 | 134% | $35 |
| **3**<br>ROA PYB 2023 That Results in Non-Green 2024 | 9.00% 2022 / -13.00% 2023 / 7.25% thereafter | 9,600 | 87% / $11 | **Yellow 2026**<br>**Red 2030** | N/A | 63% | ($31) |
| **4**<br>3.75% Per Year Contribution Increases | 9.00% 2022 / -13.00% 2023 / 7.25% thereafter | 9,600 | 87% / $11 | **Yellow 2027**<br>**Red 2033** | N/A | 95% | $1 |

Notes:

- Scenario 4 Contribution Increases begin 7/1/2024

# Scenario 1: July 1, 2023 Valuation

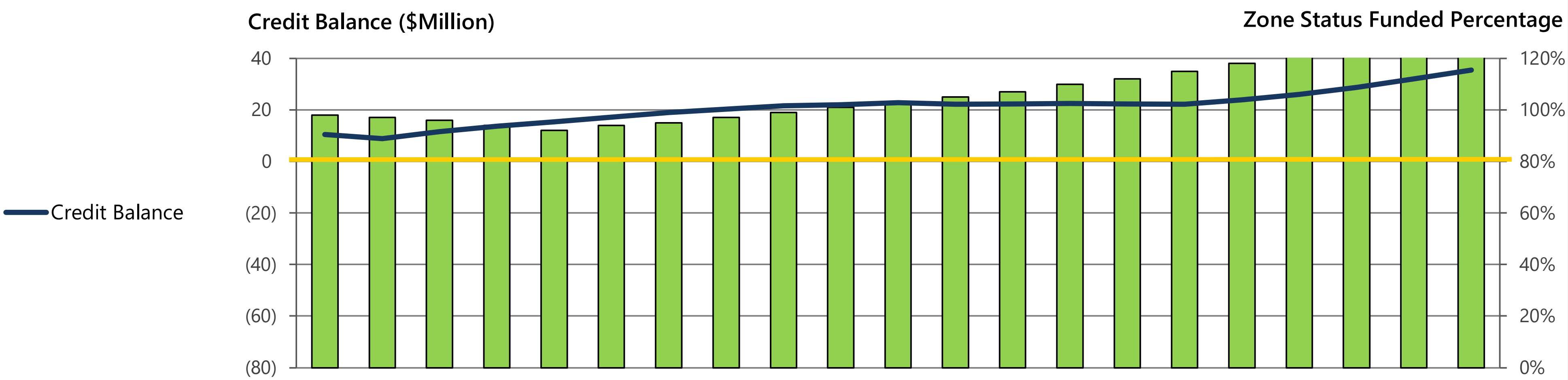
## 9.00% Return PYB 2022; 7.25% Return PYB 2023+ | 9.6 Thousand Weeks Worked beginning PYB 2023+




| Plan Year Beginning 7/1 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) Investment Return (%) | $\boxed{9.00}$ | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 |
| (2) Weeks Worked(Thousands) | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 |
| (3) Weekly Contribution Rate ($) | 331 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 |
| (4) Contributions+EWL Payments($M) | 3.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| (5) Actuarial Value of Assets ($M) | 106 | 104 | 102 | 100 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 108 | 109 | 111 | 113 | 115 | 117 | 119 | 122 |
| (6) Zone Status Liability ($M) | 107 | 106 | 106 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 90 | 89 | 88 |
| (7) Credit Balance ($M) | 10 | 9 | 12 | 14 | 16 | 18 | 20 | 21 | 23 | 23 | 24 | 24 | 24 | 25 | 25 | 25 | 27 | 29 | 33 | 36 | 40 |
| (8) Zone Status Funded Percentage | 98% | 97% | 96% | 94% | 93% | 94% | 96% | 98% | 100% | 102% | 104% | 107% | 109% | 112% | 115% | 118% | 121% | 125% | 129% | 133% | 138% |

# Scenario 2: Low Weeks Worked

## 9.00% Return PYB 2022; 7.25% Return PYB 2023+ | 9.15 Thousand Weeks Worked beginning PYB 2023

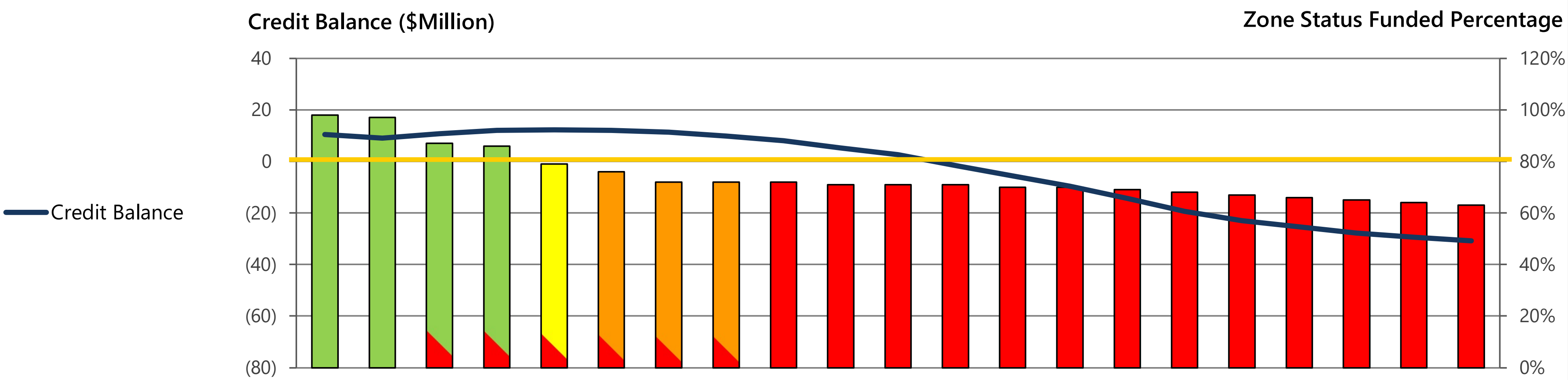



| Plan Year Beginning 7/1 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) Investment Return (%) | 9.00 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 |
| (2) Weeks Worked(Thousands) | 9.6 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 |
| (3) Weekly Contribution Rate ($) | 331 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 |
| (4) Contributions+EWL Payments($M) | 3.5 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| (5) Actuarial Value of Assets ($M) | 106 | 104 | 102 | 100 | 97 | 98 | 99 | 100 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 109 | 110 | 112 | 114 | 116 |
| (6) Zone Status Liability ($M) | 107 | 106 | 106 | 105 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 96 | 95 | 94 | 93 | 92 | 90 | 89 | 88 | 87 |
| (7) Credit Balance ($M) | 10 | 9 | 12 | 14 | 15 | 17 | 19 | 20 | 22 | 22 | 23 | 22 | 22 | 22 | 22 | 22 | 24 | 26 | 29 | 32 | 35 |
| (8) Zone Status Funded Percentage | 98% | 97% | 96% | 94% | 92% | 94% | 95% | 97% | 99% | 101% | 103% | 105% | 107% | 110% | 112% | 115% | 118% | 122% | 125% | 129% | 134% |

# Scenario 3: Low 2023 ROA That Results in Non-Green 2024

## -13.00% Return in PYB 2023; 7.25% Return PYB 2024+ | 9.6 Thousand Weeks Worked beginning PYB 2023

**Industry And Local 338 Pension Plan**



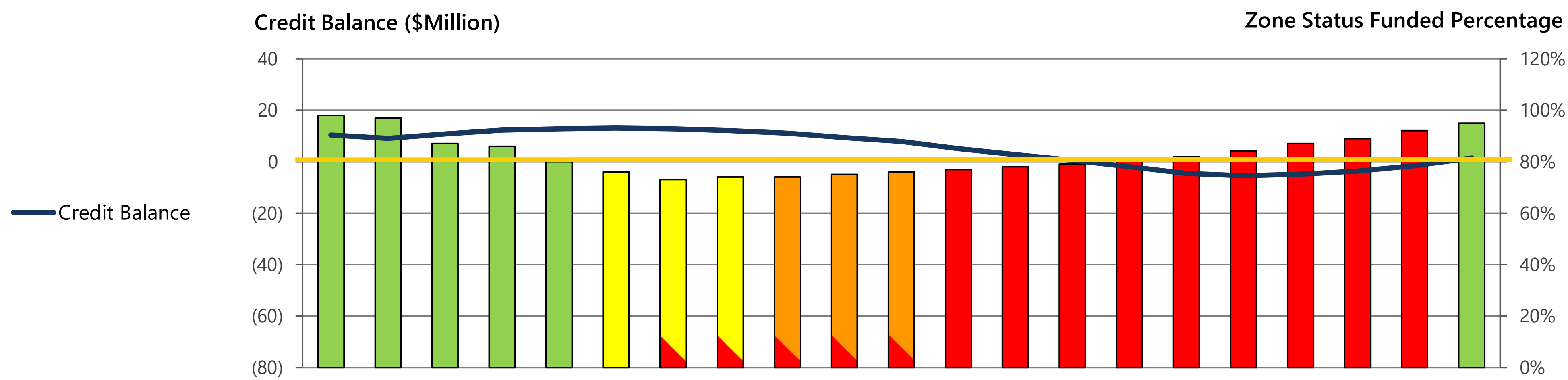

| Plan Year Beginning 7/1 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) Investment Return (%) | 9.00 | $\boxed{(13.00)}$ | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 |
| (2) Weeks Worked(Thousands) | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 |
| (3) Weekly Contribution Rate ($) | 331 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 |
| (4) Contributions+EWL Payments($M) | 3.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| (5) Actuarial Value of Assets ($M) | 106 | 104 | 93 | 91 | 84 | 79 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 67 | 66 | 64 | 63 | 61 | 60 | 58 | 56 |
| (6) Zone Status Liability ($M) | 107 | 106 | 106 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 90 | 89 | 88 |
| (7) Credit Balance ($M) | 10 | 9 | 11 | 12 | 12 | 12 | 11 | 10 | 8 | 5 | 3 | (2) | (6) | (10) | (14) | (19) | (23) | (25) | (28) | (29) | (31) |
| (8) Zone Status Funded Percentage | 98% | 97% | 87% | 86% | 79% | 76% | 72% | 72% | 72% | 71% | 71% | 71% | 70% | 70% | 69% | 68% | 67% | 66% | 65% | 64% | 63% |

# Scenario 4: 3.75% Per Year Contribution Increases

## -13.00% Return in PYB 2023; 7.25% Return PYB 2023+ | 9.6 Thousand Weeks Worked beginning PYB 2023

## 3.75% per year increase in Contribution Rate beginning 7/1/2024

**Industry And Local 338 Pension Plan**




| Plan Year Beginning 7/1 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) Investment Return (%) | 9.00 | (13.00) | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 | 7.25 |
| (2) Weeks Worked(Thousands) | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 |
| (3) Weekly Contribution Rate ($) | 331 | 335 | 348 | 361 | 374 | 388 | 403 | 418 | 434 | 450 | 467 | 484 | 502 | 521 | 541 | 561 | 582 | 604 | 626 | 650 | 674 |
| (4) Contributions+EWL Payments($M) | 3.5 | 3.4 | 3.5 | 3.6 | 3.8 | 3.9 | 4.0 | 4.2 | 4.3 | 4.5 | 4.7 | 4.6 | 4.8 | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 | 6.2 | 6.5 |
| (5) Actuarial Value of Assets ($M) | 106 | 104 | 93 | 91 | 84 | 80 | 76 | 76 | 76 | 76 | 77 | 78 | 78 | 79 | 80 | 82 | 84 | 86 | 89 | 92 | 96 |
| (6) Zone Status Liability ($M) | 107 | 106 | 106 | 106 | 105 | 104 | 104 | 103 | 102 | 102 | 101 | 100 | 100 | 100 | 99 | 99 | 99 | 99 | 99 | 100 | 100 |
| (7) Credit Balance ($M) | 10 | 9 | 11 | 12 | 13 | 13 | 13 | 12 | 11 | 9 | 8 | 5 | 3 | 1 | (2) | (5) | (5) | (5) | (4) | (2) | 1 |
| (8) Zone Status Funded Percentage | 98% | 97% | 87% | 86% | 80% | 76% | 73% | 74% | 74% | 75% | 76% | 77% | 78% | 79% | 81% | 82% | 84% | 87% | 89% | 92% | 95% |

# Observations

- **The Plan remains sensitive to both investment return and contributions**
  - A further decrease in hours as demonstrated in Scenario 2 will remove some of the Plan's ability to handle investment volatility
  - Scenario 3 demonstrates how the Plan may encounter zone status issues in the future
    - Absent investment returns above those assumed, an increase in contributions of 3.75% annually would be required to recover from such a one-time investment loss, as demonstrated in Scenario 4
- **Long term funding improvement is compromised if investment returns are less than assumed or if contributions levels fall**
  - Investment returns for the current plan year are below the assumed rate of return
  - We continue to monitor movements in the outlook for future investment returns reported by investment professionals

# Observations

- **Risk management considerations**
  - Continue to build funding cushion
  - Pension Risk Transfer
    - Annuity purchase would price liabilities at perhaps 4.50% at this time
    - The funded percentage of the plan measured at 4.50% is 50% - 60%
  - Merger

# Appendix

# Contribution Rate Summary

| Employer | Contract Expiration Date | As of 7/1/2021 Active Count (Valn Data) | As of 7/1/2021 Total Wkly Contrib Rate | As of 7/1/2022 Active Count (Valn Data) | As of 7/1/2022 Total Wkly Contrib Rate | As of 7/1/2023 Active Count (Valn Data) | As of 7/1/2023 Total Wkly Contrib Rate |
|---|---|---|---|---|---|---|---|
| HP Hood / Crowley | 9/30/2023 | 94 | 342.58 | 89 | 345.38 | 91 | 346.80 |
| Freisland Campina | 12/31/2023 | 65 | 281.24 | 58 | 290.00 | 51 | 299.02 |
| LP Transport | 8/15/2025 | 27 | 340.53 | 28 | 349.82 | 30 | 349.82 |
| Montefiore New Rochelle | 11/5/2023 | 13 | 311.41 | 14 | 333.99 | 13 | 358.52 |
| Paraco Gas | 1/31/2024 | 7 | 292.51 | 6 | 301.53 | 5 | 310.82 |
| Westchester L860 | 9/30/2025 | 1 | 243.28 | 1 | 305.14 | 2 | 329.19 |
| Total | | 207 | | 196 | | 192 | |

**Notes**

1) All contributions are benefit-bearing, effective beginning July 1, 2016.
2) Contribution rates shown above are as reported by Plan Administrator.

# Data, Assumptions, Methods & Plan Provisions

- **Please see our presentation from the February 5, 2024 Board Meeting**

# Actuarial Certification

We have prepared this actuarial report for use by the Industry & Local 338 Pension Plan (the "Plan"). This report has been prepared solely for the benefit of the Plan, and it is not complete without the accompanying discussion with a representative of Horizon Actuarial Services, LLC. This report should not be distributed to others not affiliated with the Plan or relied upon by any other person without prior written consent from Horizon Actuarial Services, LLC.

In preparing this report, we have relied on all the information and data provided by the Plan, including plan provisions and asset information, as being complete and accurate. We have not independently verified the accuracy or completeness of the data or information provided, but we have reviewed the data for reasonableness to the extent that we believe appropriate based on the purpose for which it has been used.

The analysis summarized in this report involves actuarial calculations that require assumptions about future events. These calculations are performed using actuarial models, the intended purpose of which is the estimation and projection of the Plan's liabilities, assets, zone status, and other related information summarized herein. We believe that the assumptions and methods used in this report are reasonable individually and in the aggregate, and are appropriate for the purposes for which they have been used. However, other assumptions and methods could also be reasonable and could generate materially different results. We have relied on the input of experts in developing certain assumptions, such as mortality and the valuation interest rate.

Because it is not possible or practical to model all aspects of a situation, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are immaterial in our judgment. Future events and actual experience will vary from the assumptions we have used, and calculations prepared with actual data will vary from estimates or summaries used for modeling purposes. Actual future results will differ from our projections. As these differences arise, contributions and/or benefits may need to be adjusted to take these changes into account.

We have not performed a detailed analysis of the potential range of future results in this report, but various reports provided throughout the year include information regarding the significant risks inherent in the Plan. A more detailed assessment of the risks – including additional scenario tests, sensitivity tests, stress tests, and stochastic modeling – would allow the Trustees to better understand how deviations from the assumptions may affect the Plan.

In our opinion, all methods, assumptions, and calculations are in accordance with the applicable provisions of the Internal Revenue Code and ERISA, and the procedures followed and presentation of results conform with generally accepted actuarial principles and practices. The undersigned consultants of Horizon Actuarial Services, LLC with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. There is no relationship between the Plan and Horizon Actuarial Services, LLC that affects our objectivity.

Mary Ann Dunleavy

Mary Ann Dunleavy, ASA, EA, MAAA
Actuary and Managing Consultant

Peter Bernstein

Peter Bernstein, FSA, EA, MAAA
Consulting Actuary