Horizon
Actuarial Services, LLC

Industry & Local 338 Pension Plan Preliminary July 1, 2019 Actuarial Valuation & Projections

January 14, 2020

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Today's Discussion

- **Preliminary July 1, 2019 Actuarial Valuation**
  - Summary
  - Historical Information
  - Preliminary July 1, 2019 Valuation Results
  - Withdrawal Liability
- **Funding Projections**
- **Appendix**
  - Contribution Rate Summaries
  - Summary of Assumptions and Methods
  - Summary of Plan Provisions

Preliminary July 1, 2019 Actuarial Valuation: Summary & Historical Information

Information presented in this report for plan years prior to July 1, 2015 is based on the prior actuary's reports.

Summary of Results

Preliminary Valuation Results as of July 1, 2019

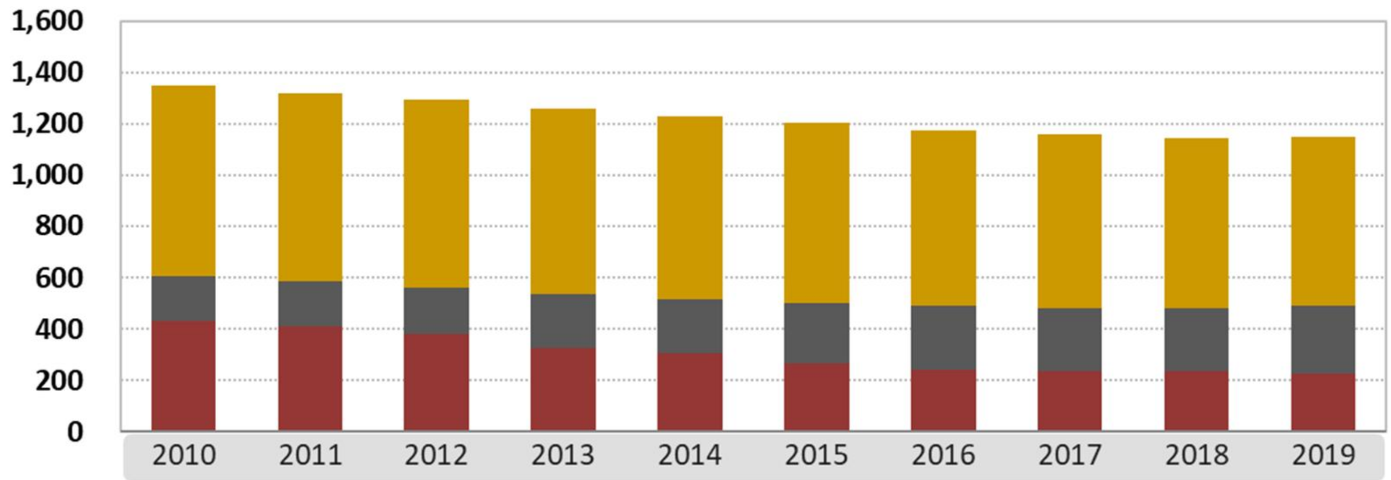
- **Pension Protection Act of 2006**
  - The Plan was certified in Green Zone for the July 1, 2019 Plan Year.
    - The Plan emerged from Critical Status after 2 years
- **Funded Percentage (Unit Credit Liability)**
  - As of July 1, 2019, the Plan is 87.5% funded using the Actuarial Value of Assets and 86.1% funded based on the Market Value of Assets.
  - As of July 1, 2018, the Plan was 90.5% funded using the Actuarial Value of Assets and 89.4% funded based on the Market Value of Assets.
  - The change in Funded Percentage is attributable to the change in interest rate assumption and unfavorable investment experience.
- **Minimum Funding Requirements**
  - Funding Standard Account balance is positive and is now projected to remain positive under a projection of the Plan's funded status using:
    - Valuation assumptions, including 7.25% return on investments in all future years
    - Current Plan provisions
    - Contribution rates included in current Collective Bargaining Agreements (CBAs)
    - Level future employment
- **Withdrawal Liability**
  - The Plan has unfunded vested benefits as of June 30, 2019 (based on Market Value of Assets).
  - All employer withdrawals should be reviewed to determine if withdrawal liability should be assessed.

Participation

Preliminary Valuation Results as of July 1, 2019

Industry & Local 338 Pension Plan

Participation as of the Valuation Date

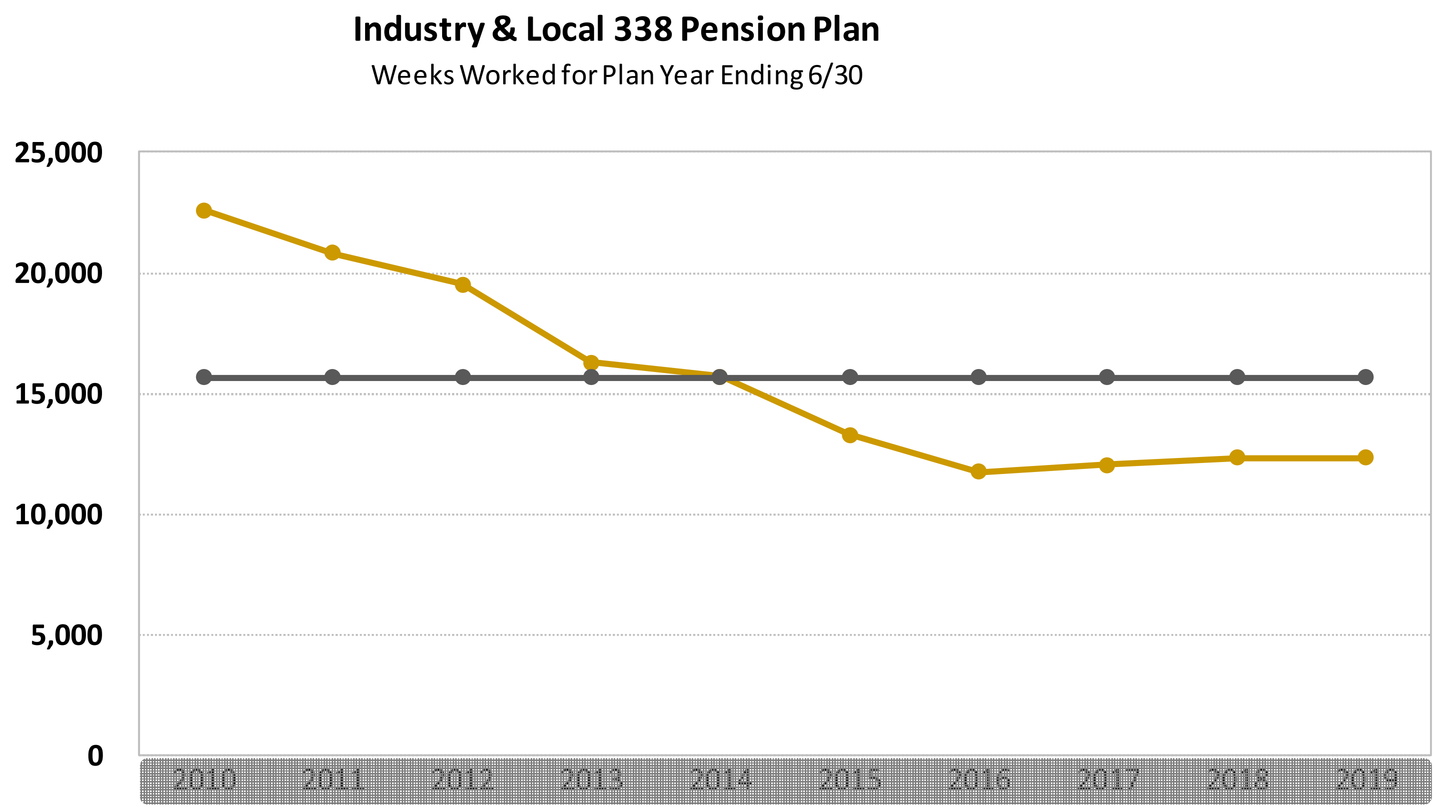


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Retirees & Beneficiaries	743	733	733	722	714	706	683	677	667	659
Inactive Vested Participants	176	174	181	209	210	234	247	244	242	265
Active Participants	431	412	382	326	306	265	243	238	238	226
Total Participants	1,350	1,319	1,296	1,257	1,230	1,205	1,173	1,159	1,147	1,150
Ratio of Inactives to Actives	2.13	2.20	2.39	2.86	3.02	3.55	3.83	3.87	3.82	4.09

Notes

1) All participants of Crowley Foods (Binghamton) were considered Inactive as of July 1, 2015.
2) All participants of Culinart are considered Inactive as of July 1, 2019
3) The College of New Rochelle is an active employer, and has 17 active participants as of July 1, 2019 (withdrawn August 9, 2019).
4) Retiree and Beneficiary counts above exclude Alternate Payees awarded plan benefits under a QDRO.

Weeks Worked



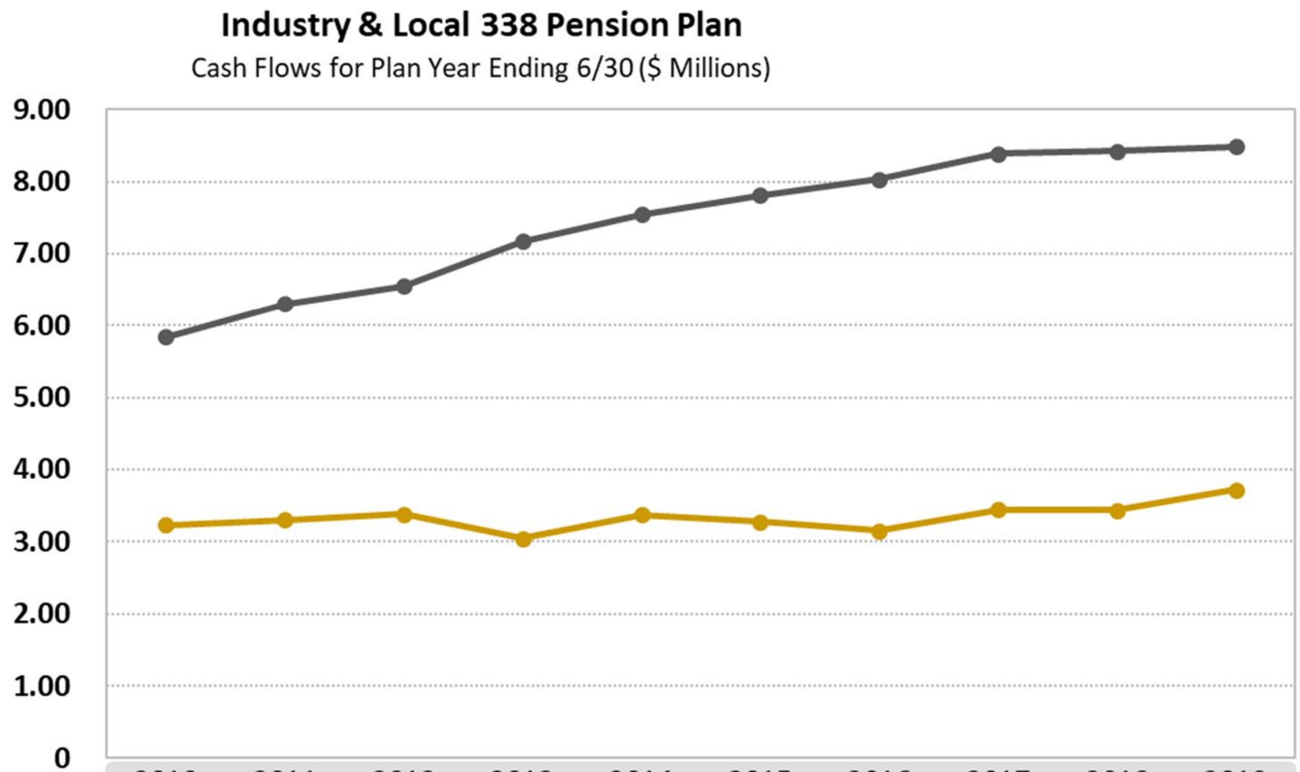
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Weeks Worked	22,602	20,842	19,537	16,274	15,708	13,316	11,775	12,039	12,351	12,366
10-Year Average	15,681	15,681	15,681	15,681	15,681	15,681	15,681	15,681	15,681	15,681

Notes

1) The 10-year Average shown for all years represents the annual average for the 10 plan years ending June 30, 2019.

Cash Flows

Preliminary Valuation Results as of July 1, 2019



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Contributions	3.24	3.31	3.39	3.04	3.37	3.28	3.15	3.45	3.44	3.72
Benefits + Expenses	5.84	6.31	6.55	7.17	7.55	7.82	8.04	8.39	8.43	8.49
Net Cash Flow (% of Assets)	-4.3%	-4.5%	-4.1%	-5.5%	-5.1%	-5.1%	-5.6%	-6.1%	-5.7%	-5.3%

Notes

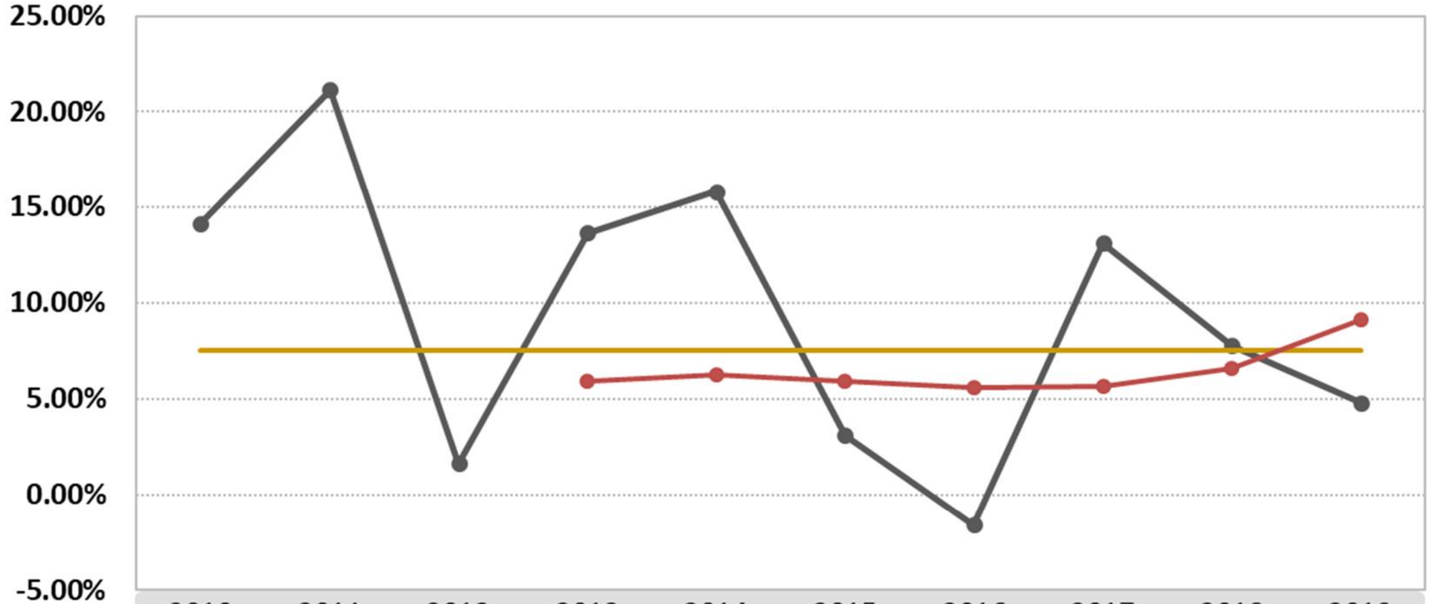
1) Contributions include withdrawal liability payments.

Investment Returns

Preliminary Valuation Results as of July 1, 2019

Industry & Local 338 Pension Plan

Market Value Investment Return for Plan Year Ending 6/30



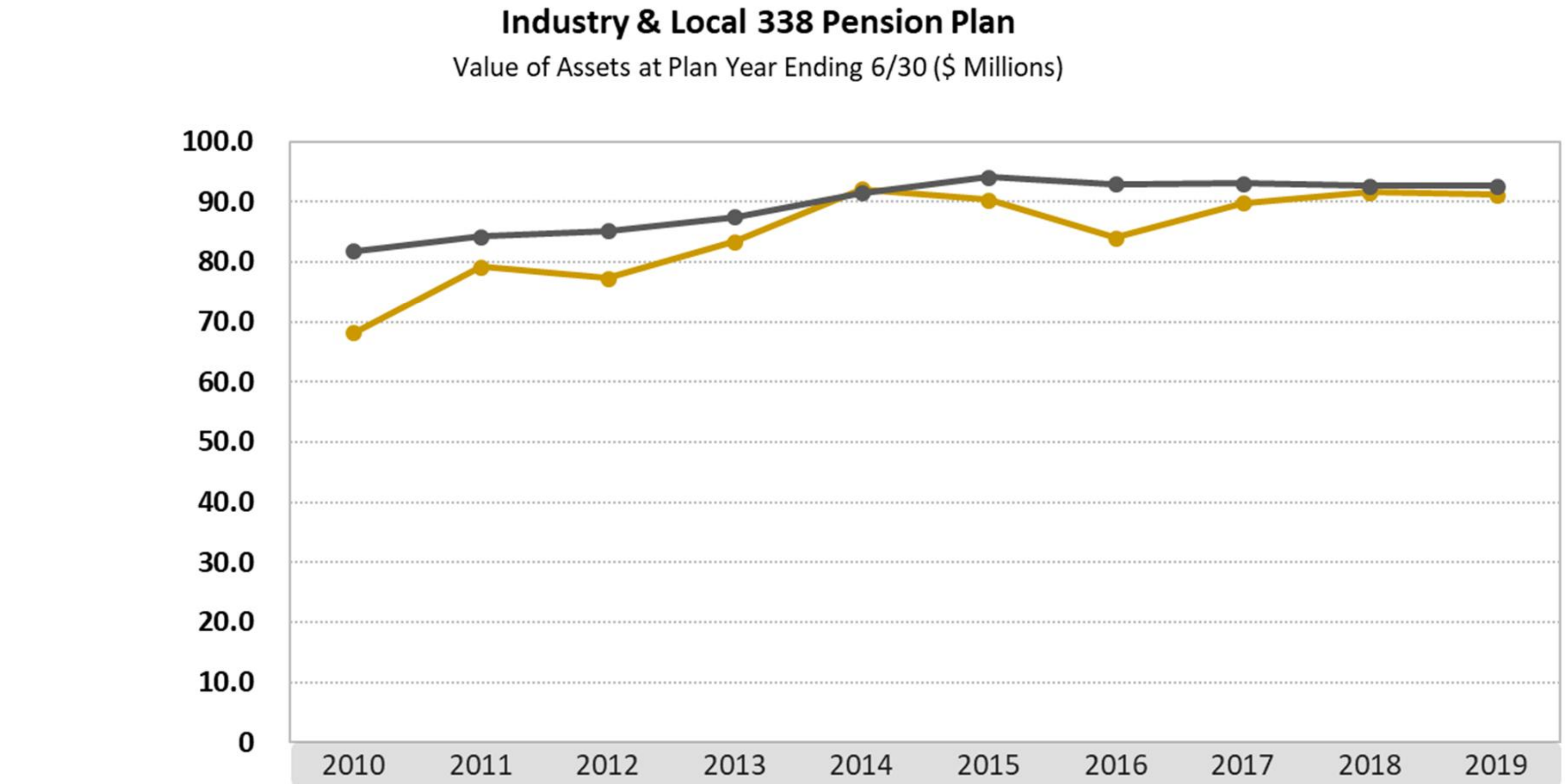
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Actual MVA Return	14.15%	21.15%	1.61%	13.64%	15.84%	3.10%	-1.58%	13.13%	7.77%	4.81%
Assumed Return	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
Rolling 10-year Average				5.93%	6.26%	5.92%	5.57%	5.63%	6.59%	9.14%

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.

Value of Assets

Preliminary Valuation Results as of July 1, 2019



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Market Value	68.2	79.2	77.3	83.4	92.1	90.3	84.1	89.8	91.6	91.2
Actuarial Value	81.8	84.3	85.2	87.5	91.5	94.2	93.0	93.1	92.7	92.7

Notes

1) Market values include receivable contributions.
2) Market values exclude receivable withdrawal liability payments.

July 1, 2019 Actuarial Valuation: Preliminary Results

Purpose of the Valuation

- **Determine**
  - Whether negotiated contributions adequately fund benefits
  - The minimum required and maximum deductible contributions for the plan year
  - The unfunded vested liability for computation of withdrawal liability
  - The contribution margin for the plan year
  - The benefit liabilities for the next status certification under PPA
  - The benefit liabilities and assets are the basis of any benefit or contribution study

- **Review & Establish**
  - Actuarial assumptions in view of recent experience
  - Basis for developing or updating a funding improvement plan or rehabilitation plan

Summary of Preliminary Valuation Results

- **Active Experience**
  - Number of actives decreased from 238 as of July 1, 2018 to 226 as of July 1, 2019.
  - Participants classified as active for the July 1, 2019 valuation worked 10,856 total weeks in the plan year ending June 30, 2019.

- **Market Value of Assets**
  - At $4.3 million, the net investment return for the plan year ending June 30, 2019 was 4.81% (2.69% less than the 7.50% assumed return).
  - This resulted in a market value loss from investments of approximately $2.4 million, relative to the 7.50% assumption.

- **Liability Loss**
  - Approximately $700,000 or about 0.67% of total plan liabilities.
    - This loss is within a reasonable range.
  - We will continue to monitor the assumptions to make sure they are reasonable both in the aggregate and on an individual basis.

Issues Impacting Current Valuation Results

- **Plan Changes**
  - None
- **Assumption Changes**
  - The discount rate used to value liabilities was changed from 7.50% to 7.25% to reflect changes in expectations for earnings on the investments of the Plan
    - The impact of this change was an increase in Actuarial Accrued Liability of approximately $2.5 Million and an increase in the cost of benefit accruals of approximately $40,000
- **Method Change**
  - None

Issues Impacting Current Valuation Results

- **Contribution Income**
  - Expected $3.21 million in contributions, financial statements show $3.72 million received (including withdrawal liability payments)
  - Total weeks worked equaled 12,366 during the plan year ending June 30, 2019 (compared to 11,700 assumed)
    - 10,856 weeks for participants classified as active for the July 1, 2019 valuation
    - 1,510 weeks for other participants
  - The average contribution rate for the Plan increased to roughly $286/week for the plan year ending June 30, 2019. The average contribution rate was roughly $268/week for the plan year ending June 30, 2018.

Participant Reconciliation

Preliminary Valuation Results as of July 1, 2019

Reconciliation of Participants by Status	Active	Inactive Vested	Non-Disabled Retirees	Disabled Retirees	Beneficiaries	Total
A. Count as of July 1, 2018	**238**	**242**	**530**	**24**	**113**	**1,147**
B. Status Changes During Plan Year						
1. Nonvested Terminations	(16)					(16)
2. Vested Terminations	(26)	26				0
3. Retirement	(4)	(2)	6			0
4. Disabled						0
5. Deceased	(1)	(1)	(21)		(4)	(27)
6. Certain Period Ended						0
7. Lump Sum						0
8. Rehires						0
9. New Entrants	35					35
10. New Beneficiaries					11	11
11. Net Adjustments						0
Net Increase (Decrease)	(12)	23	(15)	0	7	3
C. Count as of July 1, 2019	**226**	**265**	**515**	**24**	**120**	**1,150**

Notes

1) Counts exclude 9 Alternate Payees as July 1, 2019 and 9 Alternate Payees as of July 1, 2018.
2) July 1, 2019 active count includes 17 employed by The College of New Rochelle.

Age & Service Distribution

Preliminary Valuation Results as of July 1, 2019

Age & Service Distribution for Active Participants											
					Years of Service						
Age	Under 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	**Total**
Under 25	-	13	-	-	-	-	-	-	-	-	**13**
25 - 29	-	18	2	-	-	-	-	-	-	-	**20**
30 - 34	-	8	5	7	1	-	-	-	-	-	**21**
35 - 39	-	5	5	10	6	-	-	-	-	-	**26**
40 - 44	-	7	5	3	6	1	-	-	-	-	**22**
45 - 49	-	4	3	10	4	6	-	-	-	-	**27**
50 - 54	-	7	6	5	6	5	1	2	-	-	**32**
55 - 59	-	5	6	6	2	6	-	3	-	-	**28**
60 - 64	-	5	3	7	2	4	3	4	2	3	**33**
65 - 69	-	1	-	-	1	1	-	-	-	-	**3**
70 +	-	-	1	-	-	-	-	-	-	-	**1**
Total	**-**	**73**	**36**	**48**	**28**	**23**	**4**	**9**	**2**	**3**	**226**

Notes

1) Participants with less than one year of service are excluded for valuation purposes.
2) July 1, 2019 active count includes 17 employed by The College of New Rochelle.

Participant Demographic Summary

Preliminary Valuation Results as of July 1, 2019

Measurement Date		July 1, 2019		July 1, 2018
A. Active Participants				
1. Count		226		238
2. Average Age		45.7		46.3
3. Average Credited Service		11.4		12.0
4. Average Prior Year Weeks		48.0		47.7
5. Average Monthly Accrued Benefit	$	1,336	$	1,366
B. Inactive Vested Participants				
1. Count		265		242
2. Average Age		51.9		51.4
5. Average Monthly Accrued Benefit	$	1,065	$	1,008
C. Retired Participants and Beneficiaries				
1. Count		659		667
2. Average Age		74.4		73.9
3. Average Monthly Benefit	$	1,015	$	1,002

Notes

1) Retiree and Beneficiary counts above exclude Alternate Payees awarded plan benefits under a QDRO.
2) July 1, 2019 active count includes 17 employed by The College of New Rochelle.

Summary of Key Results

Preliminary Valuation Results as of July 1, 2019

Measurement Date	July 1, 2019	July 1, 2019	July 1, 2018
Interest Rate	7.25%	7.50%	7.50%
A. Normal Cost			
1. Cost of Benefit Accruals	$ 980,690	$ 940,272	$ 934,349
2. Assumed Operating Expenses	361,882	360,672	360,672
3. Total	$ 1,342,572	$ 1,300,944	$ 1,295,021
B. Actuarial Accrued Liability			
1. Active Participants	$ 14,602,529	$ 14,110,455	$ 14,874,320
2. Inactive Vested Participants	13,620,929	13,100,795	10,677,729
3. Retired Participants and Beneficiaries	77,636,345	76,154,679	76,840,869
4. Total	$ 105,859,803	$ 103,365,929	$ 102,392,918
C. Assets			
1. Market Value of Assets	$ 91,152,183	$ 91,152,183	$ 91,628,548
Prior Year Net Investment Return	4.8%	4.8%	7.8%
2. Actuarial Value of Assets	$ 92,690,250	$ 92,690,250	$ 92,666,162
Prior Year Net Investment Return	5.3%	5.3%	5.1%
D. Funded Percentages			
1. Market Value Funded Percentage (C.1. / B.4.)	86.1%	88.1%	89.4%
2. Actuarial Value Funded Percentage (C.2. / B.4.)	87.5%	89.6%	90.5%

Notes

1) Benefit changes made by the Rehabilitation Plan are reflected at July 1, 2018

Contribution Margin

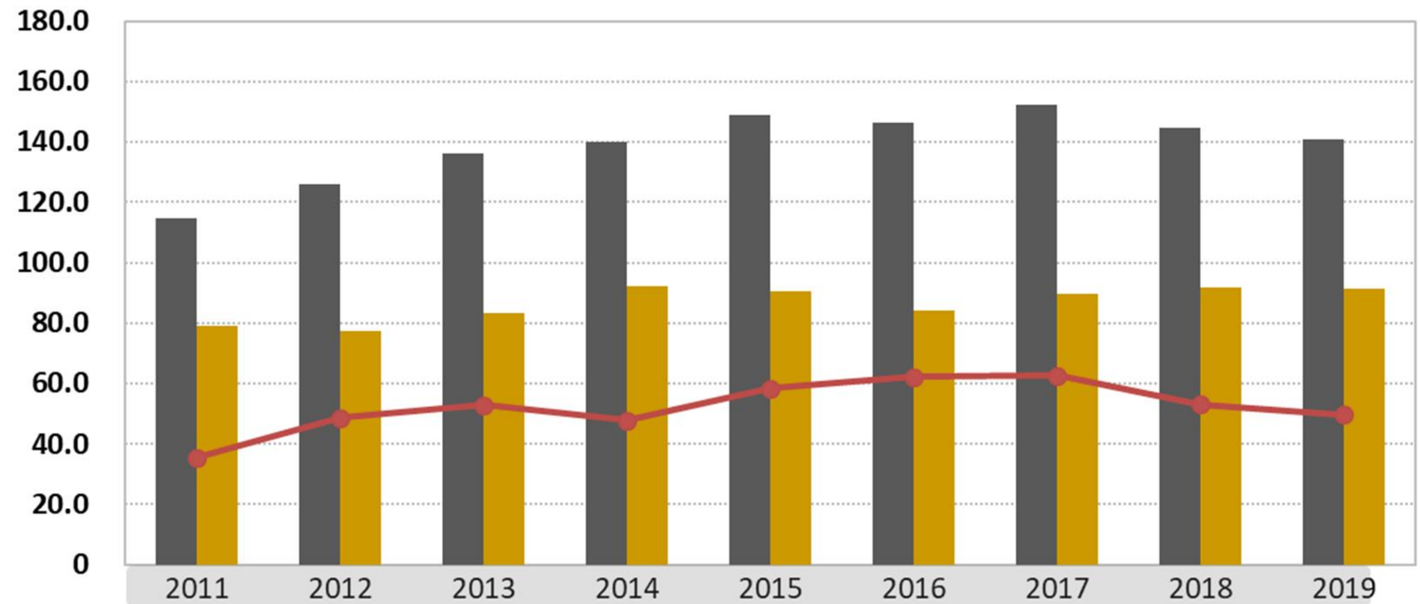
Preliminary Valuation Results as of July 1, 2019

Measurement Date	July 1, 2019		July 1, 2018		July 1, 2017	
Interest Rate	7.25%		7.50%		7.50%	
A. Unfunded Actuarial Accrued Liability						
1. Actuarial Accrued Liability	$ 105,859,803		$ 102,392,918		$ 113,387,634	
2. Actuarial Value of Assets	92,690,250		92,666,162		93,057,325	
3. Unfunded Liability	$ 13,169,553		$ 9,726,756		$ 20,330,309	
B. Actuarial Cost						
1. Normal Cost		Per Week		Per Week		Per Week
a. Cost of Benefit Accruals	$ 1,016,240	$ 91.55	$ 971,467	$ 83.03	$ 1,312,921	$ 112.22
b. Assumed Operating Expenses	375,000	33.78	375,000	32.05	375,000	32.05
c. Total	$ 1,391,240	125.34	$ 1,346,467	115.08	$ 1,687,921	144.27
2. Unfunded Liability Amortization Payment	1,832,665	165.10	1,370,554	117.14	2,864,653	244.84
3. Total Actuarial Cost for Plan Year	$ 3,223,905	290.44	$ 2,717,020	232.22	$ 4,552,574	389.11
Amortization Period	10		10		10	
C. Expected Employer Contributions						
1. Expected Weeks	11,100		11,700		11,700	
2. Average Contribution Rate per Week	$ 302.62		$ 274.36		$ 261.13	
3. Expected Contributions	$ 3,359,082		$ 3,210,012		$ 3,055,221	
Unfunded Amortization Contribution		$ 1,967,842		$ 1,863,545		$ 1,367,300
Unfunded Amortization Period (years)		8.70		6.26		Perpetuity
D. Contribution Margin						
1. Contribution Margin for Plan Year	$ 135,177		$ 492,992		$ (1,497,353)	
2. Contribution Margin per Week	$ 12.18		$ 42.14		$ (127.98)	

1) The actuarial costs in B. above include an include interest adjustments to reflect payments throughout the year.
2) The July 1, 2019 information reflects the new interest rate assumption of 7.25% whereas prior information is based on the old 7.50% assumption.

Withdrawal Liability

Preliminary Valuation Results as of July 1, 2019



	2011	2012	2013	2014	2015	2016	2017	2018	2019
Vested Benefits	114.7	126.0	136.4	139.8	148.7	146.2	152.5	144.7	140.8
Market Value of Assets	79.2	77.3	83.4	92.1	90.3	84.1	89.8	91.6	91.2
Unfunded Vested Benefits	35.5	48.7	53.0	47.7	58.4	62.1	62.6	53.0	49.7

Notes

1) The value of vested benefits is determined using a blend of the valuation interest rate and PBGC termination rates
2) Vested Benefits as of 6/30/2018 reflects reductions in adjustable benefits required by the Rehabilitation Plan that must be disregarded for withdrawal liability purposes. The value of adjustable benefits is $12.6 million as of 6/30/2019

Funding 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 Preliminary July 1, 2019 actuarial valuation.**
  - No future expected gains or losses other than those attributable to investment returns, as applicable.
- **Withdrawn Employer**
  - Active participants employed by the College of New Rochelle are assumed to terminate employment August 9, 2019 when the employer withdrew from the Plan
- **Investment Earnings**
  - 4.81% return on assets for the plan year ending June 30, 2019
  - 7.25% per year, net of investment-related expenses, thereafter unless otherwise noted
- **Operating Expenses**
  - $375,000 for the plan year beginning July 1, 2019, increasing 3.0% per year

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.)

- **Work Levels**
  - Plan year beginning July 1, 2019 – 10,300 total weeks
  - Each plan year beginning July 1, 2020 - 10,200 total weeks

- **Contribution Rates**
  - All contributions rate increases are benefit-bearing
  - Contracts adopted on or after October 15, 2019 must comply with the Plan's Funding Policy, requiring contribution rate increases as follows:

First 10 Years of Contribution Rate Increases

Year 1	$	8.76 per week	Year 6	$	10.16 per week
Year 2	$	9.02 per week	Year 7	$	10.46 per week
Year 3	$	9.29 per week	Year 8	$	10.77 per week
Year 4	$	9.57 per week	Year 9	$	11.10 per week
Year 5	$	9.86 per week	Year 10	$	11.43 per week

Contribution rate requirements for Year 11 and beyond will be provided by the Trustees.

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**
  - 54% of hours worked under contracts beginning that are expected to renew in PYB 2020
    - HP Hood / Crowley, Montefiore New Rochelle, Paraco
  - 31% of hours worked under contracts that are expected to renew in PYB 2021
    - FrieslandCampina
  - 15% of hours worked under contracts beginning that are expected to renew in PYB 2022
    - LP Transport (renewed in 2019-2020 plan year)

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.

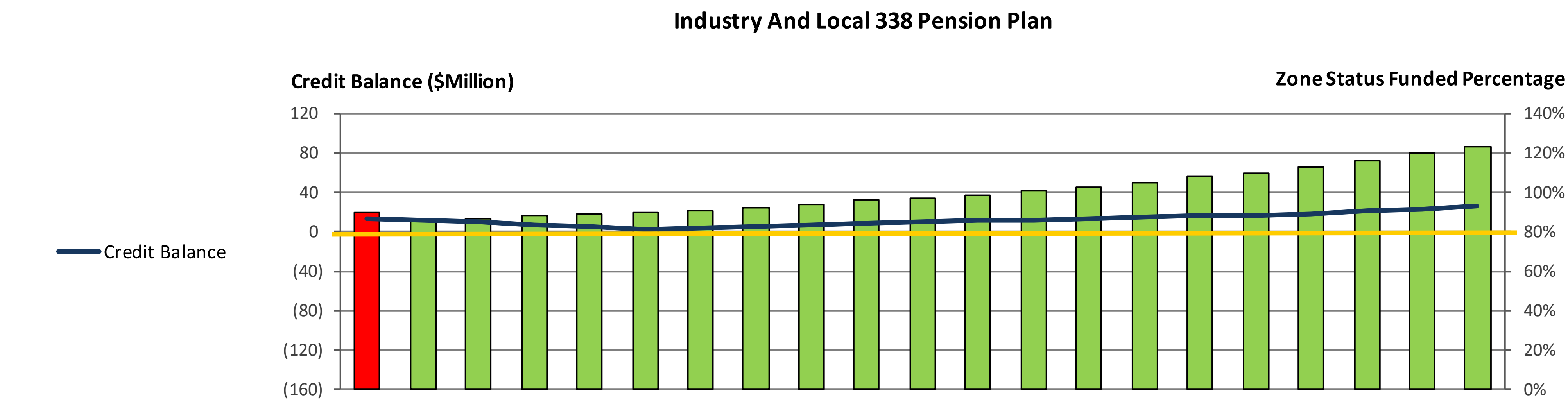
Projection Roadmap

Scenario	Investment Return PYE 2019 / PYE 2020+	Weeks Worked PYE 2019 / PYE 2020+	Zone Status 2038-2039	FSA Balance 6/30/2039	% Funded 7/1/2038	Weekly Contrib Rate 7/1/2038
Certification Basis: Contribution Rates Included in Current Collective Bargaining Agreements						
1 Baseline July 1, 2019 Valuation	7.25% / 7.25%	10,300 / 10,200	Green	$26M	123%	$319
1A Low ROA PYE 2019+	0.00% / 7.25%	10,300 / 10,200	Green	$2M	99%	$319
1B Low ROA 2019-2029	6.00% / 6.00% 7.25% 2029+	10,300 / 10,200	Red	($1M)	93%	$319
Funding Policy: All Collective Bargaining Agreements Contribution Rate Increases Required by the Funding Policy Adopted October, 2019						
2 Baseline July 1, 2019 Valuation Funding Policy	7.25% / 7.25%	10,300 / 10,200	Green	$46M	138%	$526
2A Low ROA 2019-2029 Funding Policy	0.00% / 7.25%	10,300 / 10,200	Green	$22M	116%	$526
2B Low ROA 2019-2029 Funding Policy	6.00% / 6.00% 7.25% 2029+	10,300 / 10,200	Green	$18M	110%	$526

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.

Scenario 1: Baseline – Certification Basis

7.25% Return PYB 2019+ | 10.2 Thousand Weeks Worked beginning PYB 2020 |



Plan Year Beginning 7/1	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
(1) Investment Return (%)	4.81	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)	11.9	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
(3) Weekly Contribution Rate ($)	274	303	314	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319
(4) Contributions+EWL Payments ($M)	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
(5) Actuarial Value of Assets ($M)	93	93	92	94	94	94	95	96	97	98	99	100	102	103	104	106	108	109	111	114	116
(6) Zone Status Liability ($M)	102	106	106	105	105	105	104	104	103	102	102	101	100	100	99	98	97	96	95	94	93
(7) Credit Balance ($M)	14	12	10	7	5	2	4	6	7	9	10	11	12	13	15	16	17	19	21	22	26
(8) Zone Status Funded Percentage	90%	87%	87%	88%	89%	90%	91%	92%	94%	96%	97%	99%	101%	103%	105%	108%	110%	113%	116%	120%	123%

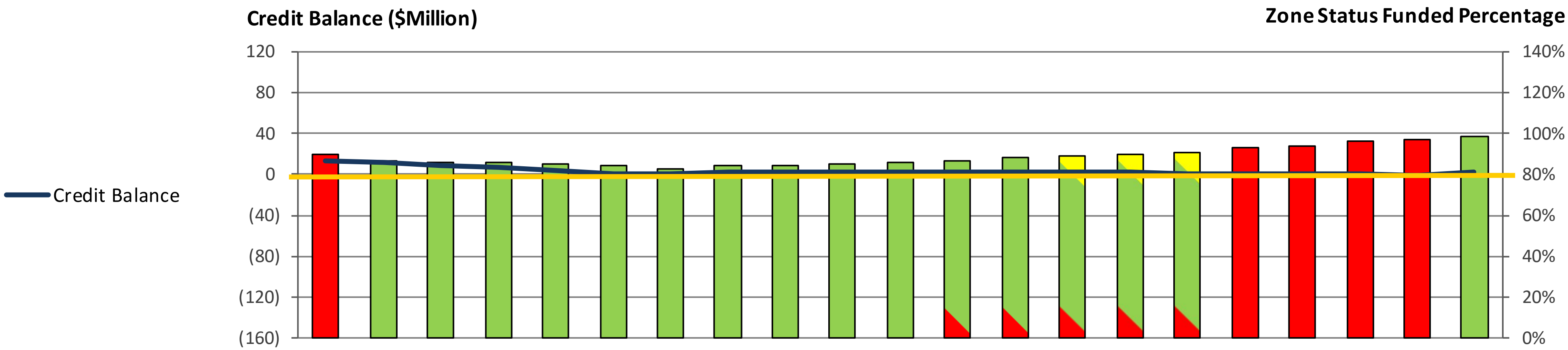
Notes

1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing. See graph for detail regarding assumed rate increases.
2) Benefit changes made by the RP are reflected beginning in the July 1, 2018 plan year.

Scenario 1A: Low 2019 ROA – Certification Basis

0.00% Return PYB 2019; 7.25% Return PYB 2020+ | 10.2 Thousand Weeks Worked beginning PYB 2020

Industry And Local 338 Pension Plan



Plan Year Beginning 7/1	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
(1) Investment Return (%)	4.81	$\boxed{0.00}$	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)	11.9	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
(3) Weekly Contribution Rate ($)	274	303	314	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319
(4) Contributions+EWL Payments($M)	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
(5) Actuarial Value of Assets ($M)	93	93	91	91	89	88	87	87	87	88	88	88	89	89	90	90	91	91	92	93	93
(6) Zone Status Liability ($M)	102	106	106	105	105	105	104	104	103	102	102	101	100	100	99	98	97	96	95	94	93
(7) Credit Balance ($M)	14	12	9	7	4	0	1	2	2	3	3	3	2	2	2	1	0	0	0	(0)	2
(8) Zone Status Funded Percentage	90%	87%	86%	86%	85%	84%	83%	84%	84%	85%	86%	87%	88%	89%	90%	91%	93%	94%	96%	97%	99%

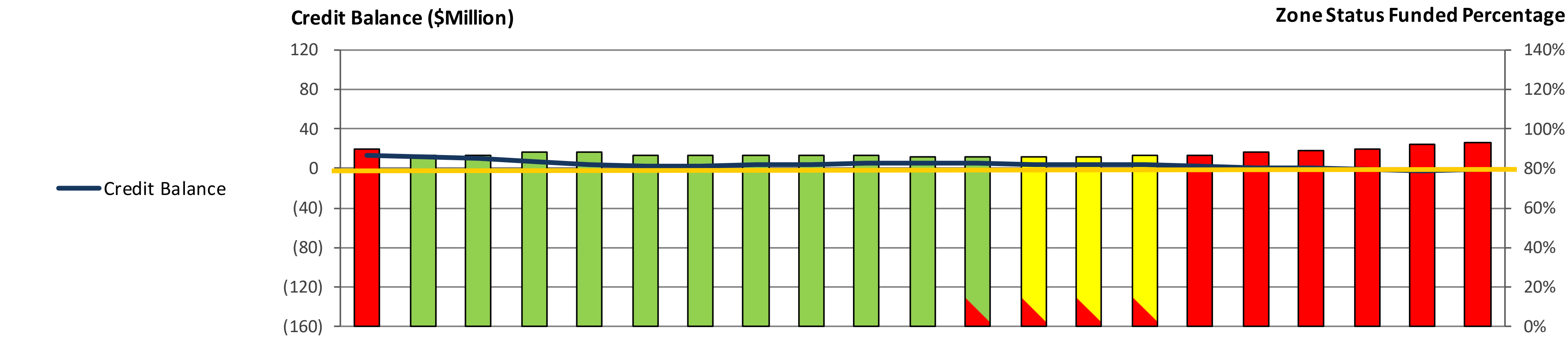
Notes

1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing. See graph for detail regarding assumed rate increases.
2) Benefit changes made by the RP are reflected beginning in the July 1, 2018 plan year.

Scenario 1B: Low ROA 2019-2029 – Certification Basis

6.00% Return 7/2019 – 6/2029; 7.25% Return PYB 2029+ | 10.2 Thousand Weeks Worked beginning PYB 2020

Industry And Local 338 Pension Plan



Plan Year Beginning 7/1	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
(1) Investment Return (%)	4.81	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
(2) Weeks Worked(Thousands)	11.9	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
(3) Weekly Contribution Rate ($)	274	303	314	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319
(4) Contributions+EWL Payments($M)	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
(5) Actuarial Value of Assets ($M)	93	93	92	93	93	92	91	91	90	89	88	87	87	86	86	86	86	86	87	87	87
(6) Zone Status Liability ($M)	102	106	106	105	105	105	104	104	103	102	102	101	100	100	99	98	97	96	95	94	93
(7) Credit Balance ($M)	14	12	10	7	5	2	3	4	5	5	6	5	4	4	3	2	1	0	(1)	(2)	(1)
(8) Zone Status Funded Percentage	90%	87%	87%	88%	88%	87%	87%	87%	87%	87%	86%	86%	86%	86%	87%	87%	88%	89%	90%	92%	93%

Notes

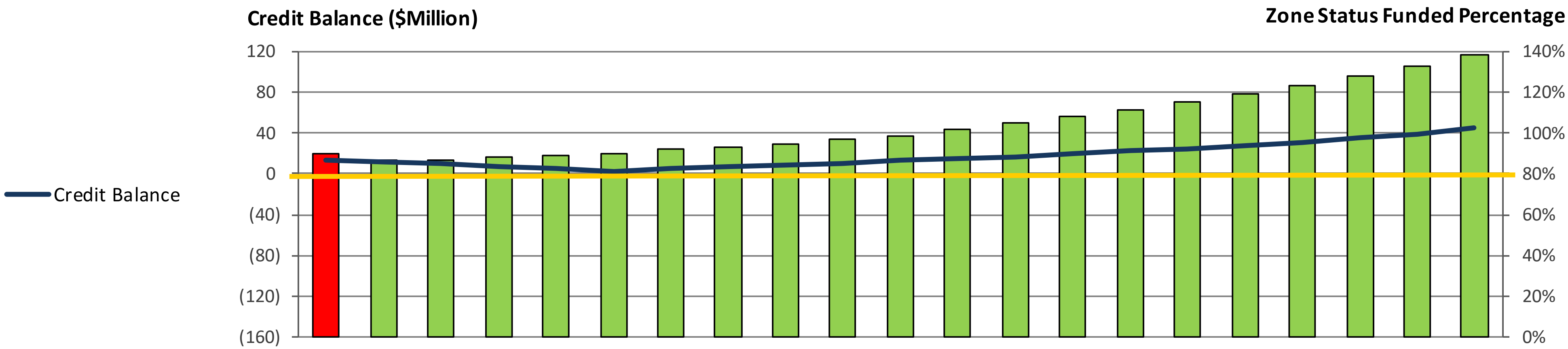
1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing. See graph for detail regarding assumed rate increases.
2) Benefit changes made by the RP are reflected beginning in the July 1, 2018 plan year.

Horizon

Scenario 2: Baseline – Funding Policy

7.25% Return PYB 2019+ | 10.2 Thousand Weeks Worked beginning PYB 2020 | Funding Policy Contribution Increases

Industry And Local 338 Pension Plan



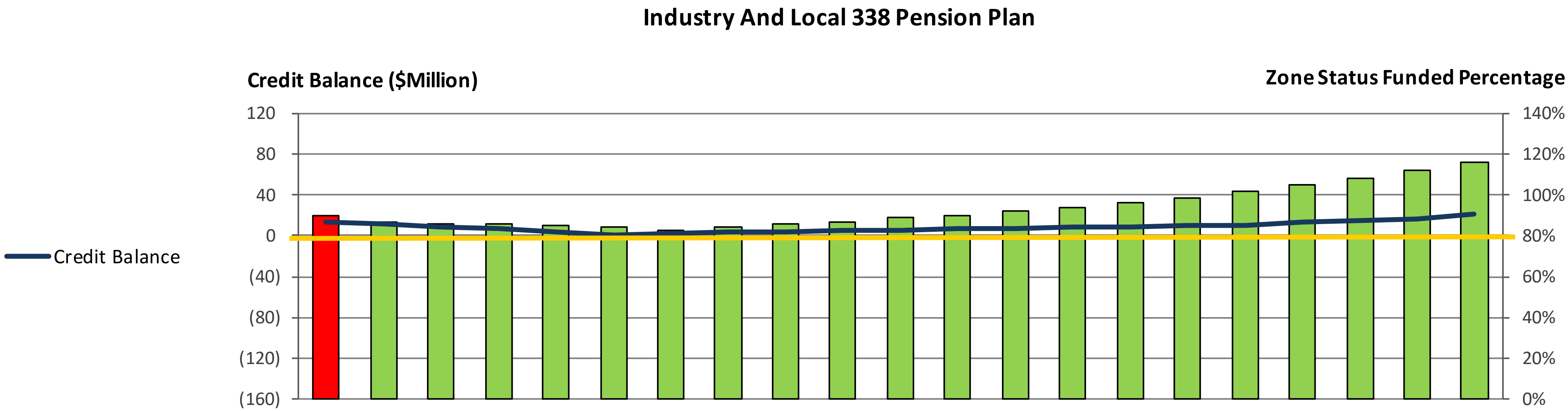
Plan Year Beginning 7/1	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
(1) Investment Return (%)	4.81	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
(2) Weeks Worked(Thousands)	11.9	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
(3) Weekly Contribution Rate ($)	274	303	317	328	337	346	356	366	376	387	397	409	420	432	444	457	470	483	497	511	526
(4) Contributions+EWL Payments($M)	3.4	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.4	4.5	4.6	4.7	4.8	5.0	5.1	5.3	5.4	5.6
(5) Actuarial Value of Assets ($M)	93	93	92	94	94	95	96	97	99	101	103	105	107	110	113	117	121	125	130	135	141
(6) Zone Status Liability ($M)	102	106	106	105	105	105	104	104	103	103	103	102	102	102	102	101	101	101	101	101	102
(7) Credit Balance ($M)	14	12	10	7	5	3	5	7	9	11	13	15	17	19	23	25	28	32	35	40	46
(8) Zone Status Funded Percentage	90%	87%	87%	88%	89%	90%	92%	93%	95%	97%	99%	102%	105%	108%	111%	115%	119%	123%	128%	133%	138%

Notes

1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing. See graph for detail regarding assumed rate increases.
2) Benefit changes made by the RP are reflected beginning in the July 1, 2018 plan year.

Scenario 2A: Low 2019 ROA – Funding Policy

0.00% Return PYB 2019; 7.25% Return PYB 2020+ | 10.2 Thousand Weeks Worked beginning PYB 2020 | Funding Policy Contribution Increases



Plan Year Beginning 7/1	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
(1) Investment Return (%)	4.81	$\boxed{0.00}$	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)	11.9	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
(3) Weekly Contribution Rate ($)	274	303	317	328	337	346	356	366	376	387	397	409	420	432	444	457	470	483	497	511	526
(4) Contributions+EWL Payments($M)	3.4	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.4	4.5	4.6	4.7	4.8	5.0	5.1	5.3	5.4	5.6
(5) Actuarial Value of Assets ($M)	93	93	91	91	89	88	88	88	89	90	91	93	94	96	98	101	104	107	110	114	119
(6) Zone Status Liability ($M)	102	106	106	105	105	105	104	104	103	103	103	102	102	102	102	101	101	101	101	101	102
(7) Credit Balance ($M)	14	12	9	7	4	1	2	3	4	5	6	7	7	8	9	10	11	13	15	17	22
(8) Zone Status Funded Percentage	90%	87%	86%	86%	85%	84%	83%	84%	86%	87%	89%	90%	92%	94%	96%	99%	102%	105%	108%	112%	116%

Notes

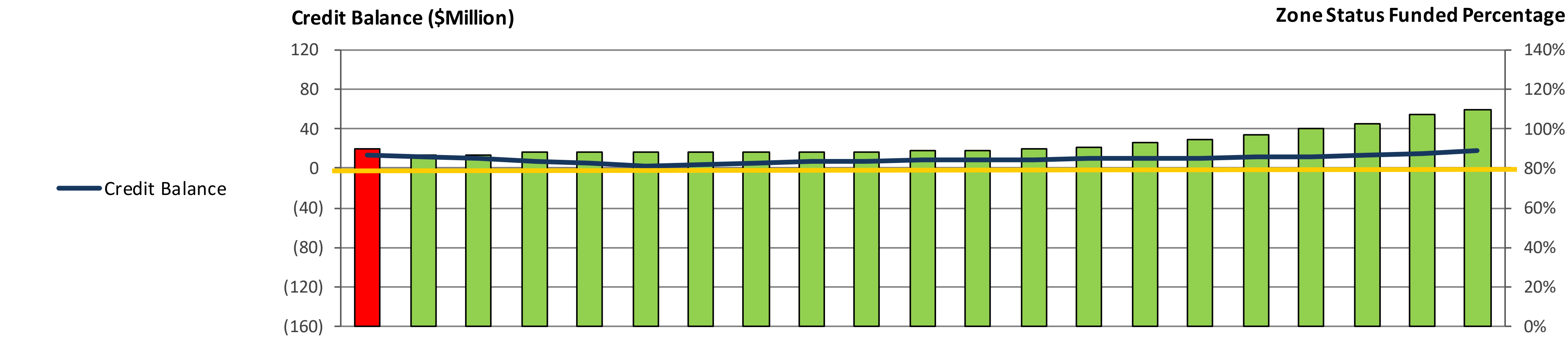
1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing. See graph for detail regarding assumed rate increases.
2) Benefit changes made by the RP are reflected beginning in the July 1, 2018 plan year.

Horizon

Scenario 2B: Low ROA 2019-2029 – Funding Policy

6.00% Return 7/2019 – 6/2029; 7.25% Return PYB 2029+ | 10.2 Thousand Weeks Worked beginning PYB 2020 | Funding Policy Contribution Increases

Industry And Local 338 Pension Plan



Plan Year Beginning 7/1	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
(1) Investment Return (%)	4.81	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
(2) Weeks Worked (Thousands)	11.9	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
(3) Weekly Contribution Rate ($)	274	303	317	328	337	346	356	366	376	387	397	409	420	432	444	457	470	483	497	511	526
(4) Contributions+EWL Payments ($M)	3.4	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.4	4.5	4.6	4.7	4.8	5.0	5.1	5.3	5.4	5.6
(5) Actuarial Value of Assets ($M)	93	93	92	93	93	92	92	92	92	91	92	92	92	93	95	97	99	102	105	108	112
(6) Zone Status Liability ($M)	102	106	106	105	105	105	104	104	103	103	103	102	102	102	102	101	101	101	101	101	102
(7) Credit Balance ($M)	14	12	10	7	5	2	4	5	6	8	9	9	9	10	11	11	11	12	14	15	18
(8) Zone Status Funded Percentage	90%	87%	87%	88%	88%	88%	88%	88%	88%	88%	89%	89%	90%	91%	93%	95%	97%	100%	103%	107%	110%

Notes

1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing. See graph for detail regarding assumed rate increases.
2) Benefit changes made by the RP are reflected beginning in the July 1, 2018 plan year.

Forecast Observations

- **The Plan remains sensitive to both investment return and contribution levels**
  - Long term funding improvement is compromised if investment returns are less than assumed or contribution levels fall
- **The recently adopted Funding Policy helps mitigate some of the risk due to investment return**
  - In scenarios 2A and 2B the Funding Policy keeps the plan green given a 1 time shock or prolonged underperformance

Appendix

Contribution Rate Summary

		As of 7/1/2017		As of 7/1/2018		As of 7/1/2019	
Employer	Contract Expiration Date	Active Count (Valn Data)	Total Wkly Contrib Rate	Active Count (Valn Data)	Total Wkly Contrib Rate	Active Count (Valn Data)	Total Wkly Contrib Rate
College of New Rochelle	8/31/2013	20	$ 174.00	17	$ 208.95	17	$ 269.04
Crowley LaFargeville	10/31/2020	96	286.43	92	303.98	91	322.98
Culinart	12/31/2016	21	226.91	20	267.15	0	267.15
Freisland Campina	12/31/2018	56	215.09	59	247.60	65	242.64
LP Transport	8/15/2019	25	290.80	29	322.75	32	322.75
Montefiore New Rochelle	11/5/2020	12	234.06	12	251.61	13	270.30
Paraco Gas	1/31/2021	7	227.60	8	245.15	7	263.84
Westchester L860	9/30/2013	1	205.21	1	243.28	1	243.28
Total		238		238		226	

Notes

1) All contributions are benefit-bearing, effective beginning July 1, 2016.
2) Contribution rates shown above are as reported by Plan Administrator.
3) Contribution rates as of 7/1/2018 include surcharges for College of New Rochelle, Culinart, Friesland Campina, Westchester L 860

Historical Contribution Rates by Contract

Employer	Base Rate	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
		As of Plan Year Ending									
College of New Rochelle	$ 110.44	$ 130.40	$ 143.60	$ 158.00	$ 174.00	$ 174.00	$ 174.00	$ 174.00	$ 174.00	$ 208.95	$ 269.04
Crowley LaFargeville	130.00	154.00	169.00	186.34	204.97	225.47	248.00	272.79	286.43	303.98	322.67
Culinart	108.44	128.08	141.08	154.98	170.48	187.53	206.28	226.91	226.91	267.15	267.15
Friesland Campina	100.12	121.13	133.25	146.57	161.23	177.35	195.09	205.09	215.09	247.60	242.64
LP Transport	160.00	160.00	176.00	192.00	208.00	228.80	251.60	276.80	290.80	322.75	322.75
Montefiore New Rochelle	120.12	145.33	159.86	175.85	193.44	212.78	234.06	234.06	234.06	251.61	270.30
Paraco Gas	124.00	140.00	148.00	156.00	172.00	188.00	206.80	227.60	227.60	245.15	263.84
Westchester L860	130.15	154.17	169.59	186.55	205.21	205.21	205.21	205.21	205.21	243.28	243.28

Notes

1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing.
2) Contribution rates for 2018 include surcharges for College of New Rochelle, Culinart, Friesland Campina, Westchester L 860

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method
Interest Rate	7.25% per annum effective July 1, 2019 7.50% per annum used for prior year
Plan Year	The twelve-month period beginning July 1 and ending June 30.
Mortality	Non-Disabled: Non-annuitant: 125% of the sex-distinct RP-2014 Blue Collar Employee Mortality Table Annuitant: 125% of the sex-distinct RP-2014 Blue Collar Annuitant Mortality Table Disabled: 125% of the sex-distinct RP-2014 Disabled Mortality Tables All mortality tables are adjusted to future years using generational projection under Scale MP-2014 to anticipate future mortality improvement.
Active Participant	Active participants are defined as those with at least two months of employment in the most recent plan year and who have accumulated at least one pension credit, excluding those who have retired as of the valuation date and those who work for an employer that has withdrawn from the Plan on or before the valuation date.
Exclusion of Inactive Vested Participants	Inactive participants over age 70 are excluded from the valuation.
Operating Expenses	Operating expenses were assumed to be $375,000 for the plan year beginning July 1, 2019 (equivalent to $360,672 payable at the beginning of the year).

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method	
Retirement Rates	**Age (if eligible for retirement)**	**Retirement Rate**
	55-59	10%
	60-61	20%
	62	75%
	63-65	50%
	66-69	25%
	70	100%
Inactive Vested Commencement	Retirement is assumed to occur at age 65 for participants with fewer than 15 pension credits, and at the later of current age or age 55 for participants with at least 15 pension credits.	

	Age	Disability Rate (%)	Withdrawal Rate (%) (until earliest eligibility for a pension)
Sample Rates (before Retirement)	20	0.05	6.58
	25	0.05	5.27
	30	0.05	4.83
	35	0.06	4.47
	40	0.09	3.84
	45	0.18	3.21
	50	0.40	1.52
	55	0.85	0.33
	60	1.74	0.00

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method
Weeks (Hours) Worked	Average of weeks worked in the preceding plan year. For the plan year beginning July 1, 2019, each active participant is assumed to work 49 weeks (1,960 hours) per year. For the plan year beginning July 1, 2018 the assumption was 49 weeks (1,960 hours) per active participant per year.
Future Benefit Accruals	One pension credit per plan year.
Contribution Income	For the purpose of projecting future contribution income, it is assumed contributions are earned based on the total number of hours worked for participants during the plan year preceding the valuation date. Participants are assumed to continue to work for the employer reported in the data and at the rate required by that employer's contract.
Asset Method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the projected market return, and is recognized over a five-year period (10-year period for the plan year investment loss in the year ended June 30, 2009). The actuarial value is further adjusted, if necessary, to be within 20% of the market value.
Actuarial Cost Method	Unit Credit Cost Method.

Summary of Assumptions and Methods

Assumption or Method	Description of Assumption or Method
Form of payment	Unmarried participants are assumed to elect a Life Annuity. Married participants are assumed to elect a reduced 75% Joint and Survivor Annuity.
Marriage	75% of participants are assumed married.
Spouse Age	Wives are assumed to be three years younger than their husbands, if actual age is unknown.
Missing or Incomplete Participant Data	Assumed to be the same as those exhibited by participants with similar known characteristics. For those with unknown gender, gender was assumed to be male.
Unfunded Vested Benefits for Employer Withdrawals	Interest: • For liabilities up to the market value of assets, liabilities are valued using interest rates used by PBGC for plan terminations. For the July 1, 2019 valuation these are 3.07% and 3.05% (for 20 years and thereafter, respectively). Operating expenses as prescribed by PBGC formula (29CFR Part 4044, Appendix C) are included for liabilities determined using PBGC termination interest rates. • For liabilities in excess of the market value of assets, valued using 7.50% for all years prior to July 1, 2019 and 7.25% for all years afterwards. All other assumptions are the same as those used for the funding valuation.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Plan Year	The twelve-month period beginning July 1 and ending June 30.
Participants	An Employee becomes a participant in the Plan on January 1 or July 1 after completing four months of covered employment in any consecutive 12-month period.
Normal Form of Payment	For unmarried participants, a Life Annuity. For married participants, actuarially reduced 75% Joint and Survivor Annuity.
Cost of Living Increases	None.
Benefit Service	¼ Pension Credit for each two months of covered employment, with a maximum of one pension credit after eight months. The maximum total pension credits for benefit purposes is 35.
Vesting Service	One year of vesting service for four months of covered employment.
Break-in-Service	A break in service occurs in any plan year in which the participant fails to complete at least two months of work. In determining whether a break in service has been incurred, work in non-covered employment that is credited as vesting service will be considered covered employment.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Regular Pension	Eligibility: An Employee is eligible for a Regular Pension if the Employee has attained age 65 and has earned 15 pension credits. Amount of Benefit: Upon retirement on his Regular Retirement Date, a Participant will be entitled to receive a monthly benefit equal to: • For work after on or after July 1, 2016, monthly benefit accruals are equal to 0.9% of total contributions made for the participant's work. • For pension credit earned on or after July 1, 2010 and before July 1, 2016, $37.00 for each $1.00 of hourly (benefit-bearing) employer contribution rate. • For pension credits earned on or after July 1, 1997 and before July 1, 2010, the accrual rate is $49.00 for each $1.00 of hourly employer contribution rate. • For pension credits prior to July 1, 1997, the accrued benefit based on prior plan formula increased by 20.75%.
Vested Benefit	Eligibility: Five or more years of service. Amount of Benefit: Regular Pension Payable at Normal Retirement Age.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Contribution Rates	For the period beginning September 28, 2006 and ending June 30, 2016, in the event a contributing employer is obligated to make a special Supplemental Contribution to the Fund solely for the purpose of improving the funding status of the Plan, such Supplemental Contributions shall not be included in the calculation of a Participant's pension benefit. Effective July 1, 2016, all contributions are benefit-bearing under the newly adopted benefit formula (0.9% x Total Contributions). For the plan year ended June 30, 2019, total contribution rates range from $242.64 to $322.75 per week.
Service Pension	<u>Eligibility:</u> 20, 25, 30 or 35 pension credits <u>Amount of Benefit:</u> At the Service Pension Commencement Date, a Participant will be entitled to receive a monthly benefit equal to his Normal Retirement Benefit actuarially reduced for early commencement. If the participant retired before January 1, 2018, the Service Pension is determined under the Plan rules in effect at that time.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Early Pension	<u>Eligibility:</u> An Employee is eligible for an Early Pension if the Employee has attained age 55 and has earned 15 pension credits. <u>Amount of Benefit:</u> Upon the Early Retirement Date, At the Service Pension Commencement Date, a Participant will be entitled to receive a monthly benefit equal to his Normal Retirement Benefit actuarially reduced for early commencement. If the participant retired before January 1, 2018, the Early Pension is determined under the Plan rules in effect at that time.
Disability Pension	<u>Eligibility:</u> Effective July 1, 2018 there is no disability benefit available to participants who were not already receiving benefits under disability. <u>Amount of Benefit:</u> If the participant retires on a Disability Pension on or after July 1, 1997, the Disability Pension is the greater of (a) $400, or (b) the actuarial equivalent of the accrued benefit earned as of the last date worked. If the participant retired on a Disability Pension before July 1, 1997, the Disability Pension is determined under the Plan rules in effect at that time.

Summary of Plan Provisions

Plan Provision	Description of Plan Provision
Death Benefits	Married: If a participant is married and dies after earning the right to a Statutory Pension (5 years of service), the spouse will be entitled to a survivor benefit, as long as they were married for at least one year at the time of death. The spouse's monthly benefit is 75% of the benefit earned as of the day before death, subject to any reduction that would have applied for form of payment and payments before age 65. If the participant had not yet reached age 55, the benefit will be calculated as if they had reached age 55 and applied for an Early Retirement Pension immediately before death, with adjustment for form of payment and payments before age 65. Unmarried: For participant deaths after December 31, 2017, no death benefit is payable. If the participant died before January 1, 2018, death benefits are determined under the Plan rules in effect at that time
Special Death Benefit	For participant deaths after December 31, 2017, no death benefit is payable. If the participant died before January 1, 2018, death benefits are determined under the Plan rules in effect at that time

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 contained in this report may involve actuarial calculations. Actuarial calculations require that we make assumptions about future events. We have used assumptions that we believe are reasonable and appropriate for the purpose for which they have been used. Other assumptions may also be reasonable and could result in substantially different results. 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.

We have not performed a detailed analysis of the potential effects of risk on the Plan's future financial condition, but have included a discussion of some risks that may significantly affect the Plan. A more detailed assessment of the risks could provide the Trustees with a better understanding of the risks inherent in the Plan and may include additional scenario testing, sensitivity testing, stress testing and stochastic modeling.

Future events and actual experience will vary from any 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.

In our opinion, any 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
Consulting Actuary

Stanley I. Goldfarb, FSA, EA, MAAA
Actuary and Managing Consultant

Dylan Nitta
Actuarial Analyst