



# Town of Narragansett Chapter 1666 Police Pension Plan

July 1, 2020  
Actuarial Valuation Report

	Page
<b>Actuarial Certification</b> -----	1
<b>Executive Summary</b> -----	3
Summary Results	
Changes Since Prior Valuation and Key Notes	
Five Year Valuation Summary	
Identification of Key Risk	
Plan Maturity Measures	
<b>Assets and Liabilities</b> -----	8
Present Value of Future Benefits	
Funding Liability	
Asset Information	
Reconciliation of Gain/Loss	
<b>Contribution Requirements</b> -----	12
Development of Actuarially Determined Contribution for Plan Year Ending June 30, 2022	
<b>Demographic Information</b> -----	13
<b>Participant Reconciliation</b> -----	15
<b>Plan Provisions</b> -----	16
<b>Actuarial Assumptions</b> -----	17
<b>Other Measurements</b> -----	19
Schedule of Amortizations	

At the request of the plan sponsor, this report summarizes the Town of Narragansett Chapter 1666 Police Pension Plan as of July 1, 2020. The purpose of this report is to communicate the following results of the valuation:

- Funded Status; and
- Actuarially Determined Contribution as of July 1, 2020 for plan year ending June 30, 2022

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the Town. Asset information has been provided to us by the Board. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Town. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- 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 (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

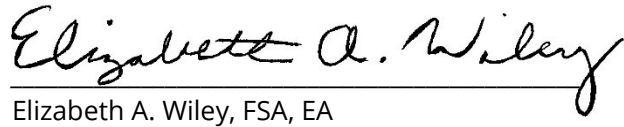
We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report.

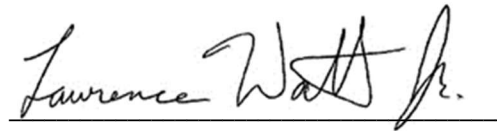
To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart



Elizabeth A. Wiley, FSA, EA



Lawrence Watts, Jr., FSA, CFA, EA, MAAA

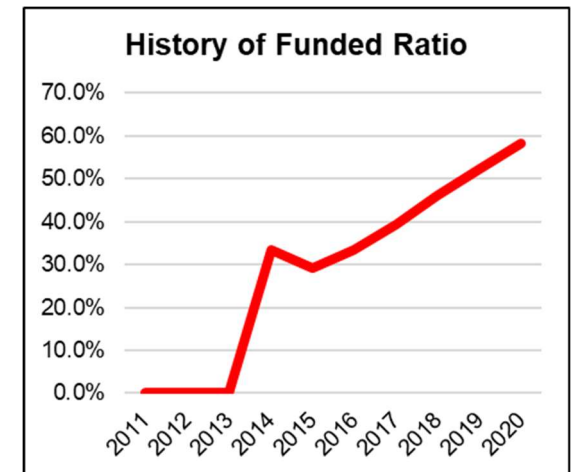
December 4, 2020

Date

**Summary Results**

The actuarial valuation’s primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age normal method.

<b>Valuation Date For Plan Year Ending</b>	<b>July 1, 2019 June 30, 2021</b>	<b>July 1, 2020 June 30, 2022</b>
<b>Funded Status Measures</b>		
Entry Age Accrued Liability	\$2,176,083	\$2,186,850
Actuarial Value of Assets	1,141,073	1,274,929
Unfunded Accrued Liability	\$1,035,010	\$911,921
Funded Percentage (AVA)	52.4%	58.3%
Funded percentage (MVA)	52.4%	58.3%
<b>Cost Measures</b>		
Actuarially Determined Contribution	\$187,298	\$183,577
Actuarially Determined Contribution (as a percentage of payroll)	N/A	N/A
<b>Asset Performance</b>		
Market Value of Assets (MVA)	\$1,141,073	\$1,274,929
Actuarial Value of Assets (AVA)	\$1,141,073	\$1,274,929
Actuarial Value/Market Value	100.0%	100.0%
<b>Participant Information</b>		
Active Participants	0	0
Terminated Vested Participants	0	0
Retirees, Beneficiaries, and Disabled Participants	13	12
<b>Total</b>	<b>13</b>	<b>12</b>



### **Changes since Prior Valuation and Key Notes**

There have been no changes to the plan provisions since the last valuation.

The mortality for healthy participants has been updated from the RP-2014 Mortality Table with generational improvements from 2006 based on assumptions from the 2018 SSA Trustee's Report to the PubS-2010 Public Safety mortality table with generational improvements based on MP-19. This change caused an increase in the funding liability.

The mortality for disabled participants has been updated from the RP-2014 Disabled Mortality Table with generational improvements from 2006 based on assumptions from the 2018 SSA Trustee's Report to the PubS-2010 Disabled Public Safety mortality table with generational improvements based on MP-2019. This change caused an increase in the funding liability.

The mortality for survivors has been updated from the RP-2014 Mortality Table with generational improvements from 2006 based on assumptions from the 2018 SSA Trustee's Report to the Pub-2010 Continuing Survivor Mortality Table with generational improvements based on MP-2019. This change caused an increase in the funding liability.

The interest rate has been updated from 7.20% to 7.00%. This change caused an increase in the funding liability.

**Town of Narragansett Chapter 1666 Police Pension Plan**  
**Actuarial Valuation as of July 1, 2020**  
**Executive Summary**

**Five Year Valuation Summary**

	<b>07/01/2016</b>	<b>07/01/2017</b>	<b>07/01/2018</b>	<b>07/01/2019</b>	<b>07/01/2020</b>
<b>Funding</b>					
Accrued Liability	\$2,450,507	\$2,373,613	\$2,256,065	\$2,176,083	\$2,186,850
Actuarial Value of Assets	\$820,641	\$934,315	\$1,038,723	\$1,141,073	\$1,274,929
Unfunded Actuarial Accrued Liability	\$1,629,866	\$1,439,298	\$1,217,342	\$1,035,010	\$911,921
Funded Percentage	33.5%	39.4%	46.0%	52.4%	58.3%
Normal Cost (NC)	\$0	\$0	\$0	\$0	\$0
Actual Contribution	\$267,000	\$267,000	\$267,000	TBD	TBD
Recommended Contribution	\$226,427	\$215,294	\$198,887	\$187,298	\$183,577
Interest Rate	7.2%	7.2%	7.2%	7.2%	7.0%
<b>Rate of Return</b>					
Market Value of Assets	-0.47%	11.8%	8.9%	7.5%	9.2%
<b>Demographic Information</b>					
Active Participants	0	0	0	0	0
Terminated Vested Participants	0	0	0	0	0
Retired Participants	8	8	8	8	6
Beneficiaries	7	6	4	3	4
Disabled Participants	2	2	2	2	2
Total Participants	17	16	14	13	12
Covered Payroll	N/A	N/A	N/A	N/A	N/A

**Identification of Risks**

The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented in this report. Therefore, it is critical to understand the risks facing this pension plan. The following table shows the risks we believe are most relevant to the Town of Narragansett Chapter 1666 Police Pension Plan. The risks are generally ordered with those we believe to have the most significance at the top. Also shown are possible methods by which a more detailed assessment of the risk can be performed.

<b>Type of Risk</b>	<b>Method to Assess Risk</b>
Investment Return	Scenario Testing; Asset Liability Study
Contribution Risk	Scenario Testing
Participant Longevity	Projections and Contribution Strategy



## **Plan Maturity Measures - July 1, 2020**

Each pension plan has a distinct life-cycle. New plans promise future benefits to active employees and then accumulate assets to pre-fund those benefits. As the plan matures, benefits are paid and the pre-funded assets begin to decumulate until ultimately, the plan pays out all benefits. A plan's maturity has a dramatic influence on how risks should be viewed. The following maturity measures illustrate where the Town of Narragansett Chapter 1666 Police Pension Plan falls in its life-cycle.

### **Duration of Liabilities: 6.9**

Duration is the most common measure of plan maturity. It is defined as the sensitivity of the liabilities to a change in the interest rate assumption. The metric also approximates the weighted average length of time, in years, until benefits are expected to be paid. A plan with high duration is, by definition, more sensitive to changes in interest rates. A plan with low duration is more susceptible to risk if asset performance deviates from expectations as there would be less time to make up for market losses in adverse market environments while more favorable environments could result in trapped surplus from gains. Conversely, high duration plans can often take on more risk when investing, and low duration plans are less sensitive to interest rate fluctuations.

### **Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 0%**

A plan with a high ratio is more sensitive to fluctuations in salary (if a salary-based plan) and statutory changes. A plan with a low ratio is at higher risk from demographic experience. Such a plan should pay close attention to valuation assumptions as there will be less opportunity to realize future offsetting gains or losses when current experience deviates from assumptions. Plans with a low ratio also have limited opportunities to make alterations to plan design to affect future funded status.

### **Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: N/A**

Younger plans typically have a large payroll base from which to draw in order to fund the plan while mature plans often have a large pool of assets dedicated to providing benefits to a population primarily consisting of members no longer on payroll. Plans with low asset leverage will find it more difficult to address underfunding, as the contributions needed to make up the deficit will represent a higher percentage of payroll than for a plan with high asset leverage.

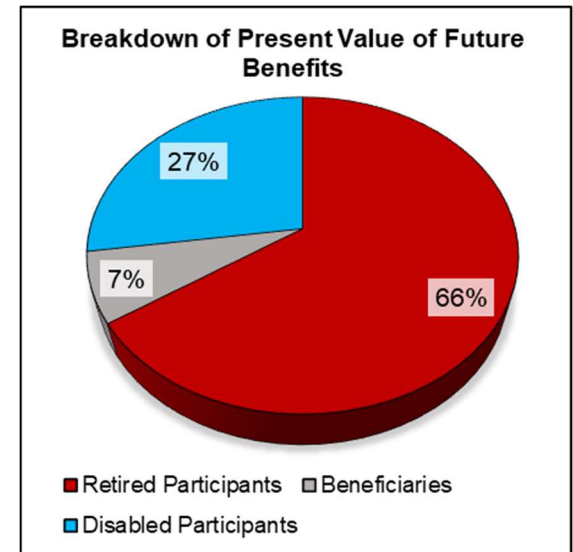
### **Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 18.8%**

As a plan enters its decumulation phase, a larger percentage of the pre-funded assets are paid out each year to retirees. A high percentage is not cause for alarm as long as the plan is nearly fully funded. However, such a plan is more sensitive to negative asset performance, especially if cash contributions are not an option to make up for losses.

**Present Value of Future Benefits**

The Present Value of Future Benefits represents the future benefits payable to the existing participants.

	<b>July 1, 2020</b>
<hr/>	
<b>Present Value of Future Benefits</b>	
Active participants	
Retirement	\$0
Disability	0
Death	0
Termination	0
Refund of contributions	0
Total active	\$0
Inactive participants	
Retired participants	\$1,433,705
Beneficiaries	156,158
Disabled participants	596,987
Terminated vested participants	0
Total inactive	\$2,186,850
<b>Total</b>	<b>\$2,186,850</b>
 Present value of future payrolls	 N/A



**Funding Liability**

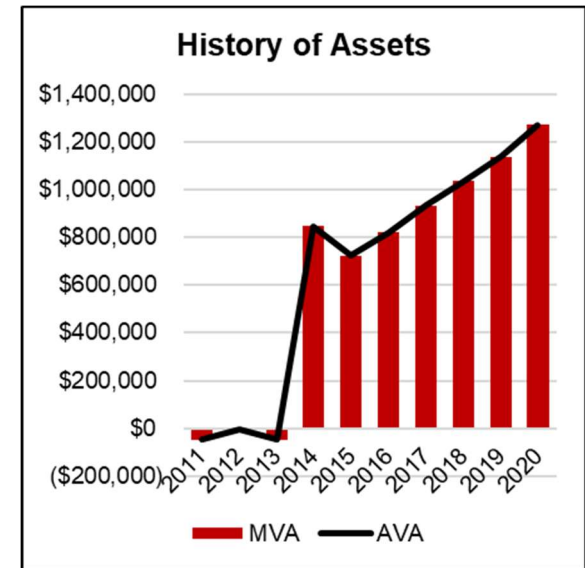
The Funding Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions.

	<b>July 1, 2020</b>
<b>Entry Age Normal Liabilities</b>	
Active participants	
Retirement	\$0
Disability	0
Death	0
Termination	0
Refund of contributions	0
Total Active	\$0
Inactive participants	
Retired participants	\$1,433,705
Beneficiaries	156,158
Disabled participants	596,987
Terminated vested participants	0
Total Inactive	\$2,186,850
Total	\$2,186,850
Normal Cost	\$0

**Asset Information**

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

	<b>July 1, 2020</b>
<b>Market Value Reconciliation</b>	
Market value of assets, beginning of prior year	\$1,141,073
Employer Contributions	\$267,000
Investment income	\$106,373
Benefit payments	(\$239,517)
Market value of assets, beginning of current year	\$1,274,929
Return on Market Value	9.23%
Market value of assets available for pension benefits	\$1,274,929
<b>Actuarial value of assets</b>	
Value at beginning of current year	\$1,274,929



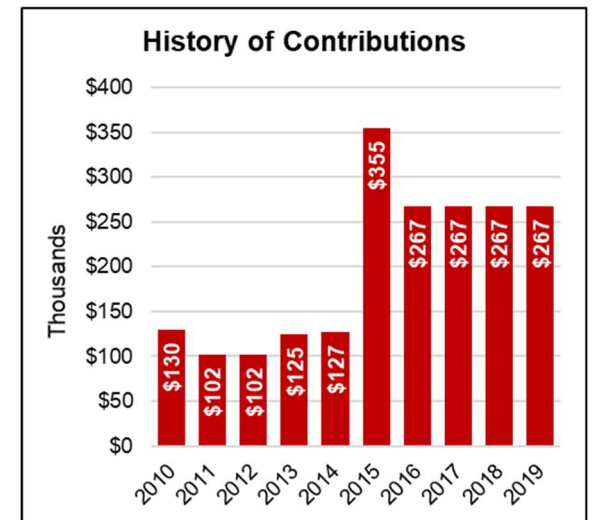
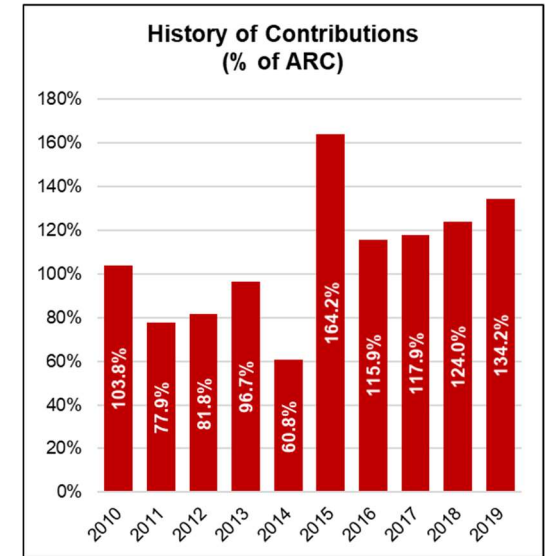
**Reconciliation of Gain/Loss**

	July 1, 2020
<b>Liability (gain)/loss</b>	
Actuarial liability, July 1, 2019	\$2,176,083
Normal cost	0
Benefit payments	(239,517)
Expected Interest	148,205
Change in actuarial assumptions	132,882
	\$2,217,653
Expected actuarial liability, beginning of current year	\$2,186,850
Actual actuarial liability	(\$30,803)
Liability (gain)/loss	
<b>Asset (gain)/loss</b>	
Actuarial value of assets, July 1, 2019	\$1,141,073
Contributions	267,000
Benefit payments	(239,517)
Expected investment return	83,129
	\$1,251,685
Expected actuarial value of assets, beginning of current year	\$1,274,929
Actual actuarial value of assets, beginning of current year	(\$23,244)
Asset (gain)/loss	(\$54,047)
<b>Total (gain)/loss</b>	

**Development of Actuarially Determined Contribution**

The actuarially determined contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

Valuation Date For Plan Year Ending	July 1, 2020 June 30, 2022
<b>Funded Position</b>	
1. Entry age accrued liability	\$2,186,850
2. Actuarial value of assets	\$1,274,929
3. Unfunded actuarial accrued liability (UAAL)	\$911,921
<b>Employer Contributions</b>	
1. Normal Cost	\$0
2. Amortization of UAAL	165,860
3. Applicable interest	17,717
4. Actuarially determined contribution	\$183,577



**Demographic Information**

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

	<b>July 1, 2019</b>	<b>July 1, 2020</b>
<b>Participant Counts</b>		
Active Participants	0	0
Retired Participants	8	6
Beneficiaries	3	4
Disabled Participants	2	2
Terminated Vested Participants	0	0
Total Participants	13	12
<b>Active Participant Demographics</b>		
Average Age	N/A	N/A
Average Service	N/A	N/A
Average Compensation	N/A	N/A
Covered Payroll	N/A	N/A
Total Payroll	N/A	N/A

	July 1, 2019	July 1, 2020
<b>Retiree Statistics</b>		
Average Age	76.9	75.6
Average Monthly Benefit	\$1,925	\$2,223
<b>Beneficiary Statistics</b>		
Average Age	92.5	89.0
Average Monthly Benefit	\$350	\$542
<b>Disabled Participants Statistics</b>		
Average Age	68.8	69.8
Average Monthly Benefit	\$1,843	\$1,883
<b>Terminated Participants Statistics</b>		
Average Age	N/A	N/A
Average Monthly Benefit	N/A	N/A



**Participant Reconciliation**

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
<b>Prior Year</b>	0	0	2	8	3	13
<b>Survivor</b>						
To Death	0	0	0	(2)	0	(2)
<b>Additions</b>	0	0	0	0	1	1
<b>Departures</b>	0	0	0	0	0	0
<b>Current Year</b>	0	0	2	6	4	12

<b>Name of Plan</b>	Town of Narragansett Chapter 1666 Police Pension Plan
<b>Participation</b>	All members of the permanent Police Force who were hired prior to July 1, 1978 and refused the September 1984 offer to join the Chapter 16 Pension Plan
<b>Benefits</b>	
<b>Normal Retirement</b>	
Eligibility	The attainment of age 65 or the completion of 20 years of service
Benefit	50% of Final Earnings
<b>Disability Retirement</b>	
Eligibility	A member becomes unable to perform Active Police Duty by reason of clearly proved physical or mental infirmities
Benefit	50% of Final Earnings in the Year of Disability
<b>Preretirement Death</b>	
Eligibility	An active member dies after 25 Years of Service
Benefit	The member's widow shall receive 67.5% of the member's Accrued Benefit continuing until their death or remarriage
<b>Optional Forms of Payment</b>	Married participants are entitled to a 67.5% Joint and Survivor Annuity. If not married, participants are entitled to a Life Annuity.

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the actuary. Prescribed assumptions are based on the requirements of the relevant law, the Internal Revenue Code, and applicable regulation. The actuary was not able to evaluate the prescribed assumptions for reasonableness for the purpose of the measurement.

<b>Valuation Date</b>	July 1, 2020
<b>Participant and Asset Information Collected as of</b>	July 1, 2020
<b>Cost Method (CO)</b>	Entry Age Normal Cost Method
<b>Amortization Method (CO)</b>	Unfunded Actuarial Accrued Liability is amortized over the average expected future lifetime of the plan participants
<b>Asset Valuation Method</b>	The actuarial value of assets is equal to the market value of assets
<b>Interest Rates (CO)</b>	7.0%
	This assumption has been set by the plan sponsor in conjunction with their asset advisor. Detailed evaluation of this assumption was outside the scope of our engagement.
<b>Expense and/or Contingency Loading (FE)</b>	None
<b>Mortality Rates (FE)</b>	
Healthy	PubS-2010 Public Safety mortality table with generational improvements based on MP-2019
Healthy – Survivors	Pub-2010 Continuing Survivor mortality table with generational improvements from 2010 based on MP-2019

**Mortality Rates (FE) - Continued**

Disabled PubS-2010 Disabled Public Safety mortality table with generational improvements from 2010 based on the SOA Scale MP-2019

As the plan is not large enough to have credible experience, mortality assumptions are set to reflect general population trends.

**Cost of Living Adjustment**

3.00% for eligible employees, 0.00% otherwise

FE indicates an assumption representing an estimate of future experience

MD indicates an assumption representing observations of estimates inherent in market data

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data

The actuarial report also shows the necessary items required for plan reporting and any state requirements.

- ✓ Schedule of Amortizations

**Schedule of Amortizations**

**July 1, 2020**

<u>Date Established</u>	<u>Original Amount</u>	<u>Remaining Years</u>	<u>Balance</u>	<u>Payment</u>
7/1/2014	\$1,694,385	7	\$1,112,855	\$192,985
7/1/2015	\$131,154	7	\$89,318	\$15,489
7/1/2016	(\$37,869)	8	(\$28,552)	(\$4,469)
7/1/2017	(\$88,113)	8	(\$70,319)	(\$11,006)
7/1/2018	(\$117,648)	9	(\$102,365)	(\$14,684)
7/1/2019	(\$77,890)	9	(\$72,305)	(\$10,372)
7/1/2020	(\$16,711)	11	<u>(\$16,711)</u>	<u>(\$2,083)</u>
Total			\$911,921	\$165,860