

Town of Bay Harbor Islands
Employees Retirement System
(General Employees)

Actuarial Valuation
As of October 1, 2022

Determines the Contribution
For the 2023/24 Fiscal Year



	<u>Page</u>
Discussion	1
 <u>Funding Results</u>	
Table I-A Minimum Required Contribution	I-1
Table I-B Sensitivity Analysis	I-2
Table I-C Gain and Loss Analysis	I-3
Table I-D Present Value of Future Benefits	I-4
Table I-E Present Value of Accrued Benefits	I-5
Table I-F Present Value of Vested Benefits	I-6
Table I-G Entry Age Normal Accrued Liability	I-7
Table I-H Entry Age Normal Cost	I-8
Table I-I Unfunded Liability Bases	I-9
 <u>Accounting Results</u>	
GASB 67/68 Supplement as of September 30, 2022	
 <u>Assets</u>	
Table II-A Actuarial Value of Assets	II-1
Table II-B Market Value of Assets	II-2
Table II-C Investment Return	II-3
Table II-D Asset Reconciliation	II-4
Table II-E Historical Trust Fund Detail	II-5
Table II-F Other Reconciliations	II-6
 <u>Data</u>	
Table III-A Summary of Participant Data	III-1
Table III-B Data Reconciliation	III-2
Table III-C Active Participant Data	III-3
Table III-D Active Age-Service Distribution	III-4
Table III-E Active Age-Service-Salary Table	III-5
Table III-F Inactive Participant Data	III-6
Table III-G Projected Benefit Payments	III-7
 <u>Methods & Assumptions</u>	
Table IV-A Summary of Actuarial Methods and Assumptions	IV-1
Table IV-B Changes in Actuarial Methods and Assumptions	IV-3
 <u>Plan Provisions</u>	
Table V-A Summary of Plan Provisions	V-1
Table V-B Summary of Plan Amendments	V-6



April 10, 2023

Introduction

This report presents the results of the October 1, 2022 actuarial valuation of the portion of the Town of Bay Harbor Islands Employees Retirement System that covers general employees. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2022 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2023/24 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the contribution rate.

Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2023/24 plan year. The minimum required contribution is \$875,821, which equates to 22.79% of covered payroll. The minimum required contribution increased by \$608,614 (or 12.92% of payroll) from the prior valuation.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate increased by 7.41% of payroll due to investment losses, increased by 2.50% of payroll due to demographic experience, and increased by 3.01% due to the plan amendment that is described below. The market value of assets lost 12.91% during the 2021/22 plan year, whereas a 6.00% annual investment return was required to maintain a stable contribution rate.



Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the Town must contribute an amount equal to the annual normal cost of the plan plus an amortization payment towards the unfunded accrued liability and an adjustment as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date.

Amortization of the Unfunded Liability

This plan uses the entry age normal cost method to develop an unfunded liability each year. The unfunded liability is then amortized or “paid off” over a period of time. The period over which the unfunded liability is amortized is often referred to as the “funding period” of the plan. Under Chapter 112 the maximum allowable funding period is 30 years. However, the plan’s funding policy utilizes a 10-year funding period for the unfunded accrued liability.

Advance Employer Contribution

The Town has made contributions to the plan in excess of the minimum amount that was required to be contributed pursuant to Chapter 112. In this report, the excess contributions are referred to as an “advance employer contribution.” As of October 1, 2022, the advance employer contribution is \$185,330 as shown in Table II-F.

The Town may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2022/23 plan year or for any later plan year. The minimum required contribution for that plan year will be reduced dollar-for-dollar by the amount of the advance employer contribution that is applied in this manner.

Alternatively, at any time, the Town may apply all or any portion of the advance employer contribution as an extra contribution in excess of the minimum required contribution. In this case, the immediate application of the entire balance of the advance employer contribution as of October 1, 2022 would reduce the minimum required contribution for the 2023/24 plan year to \$848,312.

Identification and Assessment of Risk

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an estimate of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, there is always a risk that, should these assumptions not be realized, the liabilities of the plan, the contributions required to fund the plan, and the funded status of the plan may be significantly different than the amounts shown in this report.



Although a thorough analysis of the risk of not meeting the assumptions is beyond the scope of this report, this discussion is intended to identify the significant risks faced by the plan. In some cases, a more detailed review of the risks, including numerical analysis, may be appropriate to help the plan sponsor and other interested parties assess the specific impact of not realizing certain assumptions. For example, Table I-B illustrates the impact that alternative long-term investment returns would have on the contribution rate. Note that this report is not intended to provide advice on the management or reduction of the identified risks nor is this report intended to provide investment advice.

The most significant risk faced by most defined benefit pension plans is investment risk, i.e. the risk that long-term investment returns will be less than assumed. Other related risks include a risk that, if the investments of the plan decline dramatically over a short period of time (such as occurred with many pension plans in 2008), the plan's assets may not have sufficient time to recover before benefits become due. Even if the assets of the plan grow in accordance with the assumed investment return over time, if benefit payments are expected to be large in the short-term (for example, if the plan provides an actuarial equivalent lump sum payment option and a large number of participants are expected to become entitled to such a lump sum in the near future), the plan's assets may not be sufficient to support such a high level of benefit payments. We have provided a 10-year projection of the expected benefit payments in Table III-G to help the Trustees in formulating an investment policy that is expected to provide an investment return that meets both the short- and long-term cash flow needs of the pension plan.

Another source of risk is demographic experience. This is the risk that participants will receive salary increases that are different than the amount assumed, that participants will retire, become disabled, or terminate their employment at a rate that is different than assumed, and that participants will live longer than assumed, just to cite a few examples of the demographic risk faced by the plan. Although for most pension plans, the demographic risk is not as significant as the investment risk, particularly in light of the fact that the mortality assumption includes a component for future life expectancy increases, the demographic risk can nevertheless be a significant contributing factor to liabilities and contribution rates that become higher than anticipated.

A third source of risk is the risk that the plan sponsor (or other contributing entities) will not make, or will not have the ability to make, the contributions that are required to keep the plan funded at a sufficient level. Material changes in the number of covered employees, covered payroll, and, in some cases, hours worked by active participants can also significantly impact the plan's liabilities and the level of contributions received by the plan.

Finally, an actuarial funding method has been used to allocate the gap between projected liabilities and assets to each year in the future. The contribution rate under some funding methods is higher during the early years of the plan and then is lower during the later years of the plan. Other funding methods provide for lower contribution rates initially, with increasing contribution rates over time.

The Trustees have adopted the individual entry age normal funding method for this plan with level-dollar payments towards the unfunded accrued liability, which is expected to result in a contribution rate that decreases over time as a percentage of payroll. A brief description of the actuarial funding method is provided in Table IV-A.



Plan Amendment

Since the previous valuation was completed, the plan was amended to decrease the averaging period for average final compensation from five years to three years.

Contents of the Report

Tables I-D through I-I provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Specifically, Table II-A shows the development of the actuarial value of assets. Tables III-A through III-G provide statistical information concerning the plan's participant population. In particular, Table III-G gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of October 1, 2022, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

Certification

This actuarial valuation was prepared by me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate and, in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,

Charles T. Carr

Charles T. Carr
Consulting Actuary
Southern Actuarial Services Company, Inc.

Enrolled Actuary No. 23-04927

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



Minimum Required Contribution

Table I-A

For the 2023/24 Plan Year

Entry Age Normal Cost	\$753,001
Unfunded Liability Amortization Payment	\$278,584
Expense Allowance	\$27,719
Expected Employee Contribution	(\$242,968)
	\$816,336
Adjustment to Reflect Semi-Monthly Employer Contributions	\$25,035
Expected Employer Contribution for the 2022/23 Plan Year	(\$267,207)
Remaining Contribution Due/(Credit) for the 2022/23 Plan Year	\$574,164
	$\times 0.06$
One Year's Interest Charge/(Credit) on the Remaining Contribution	\$34,450

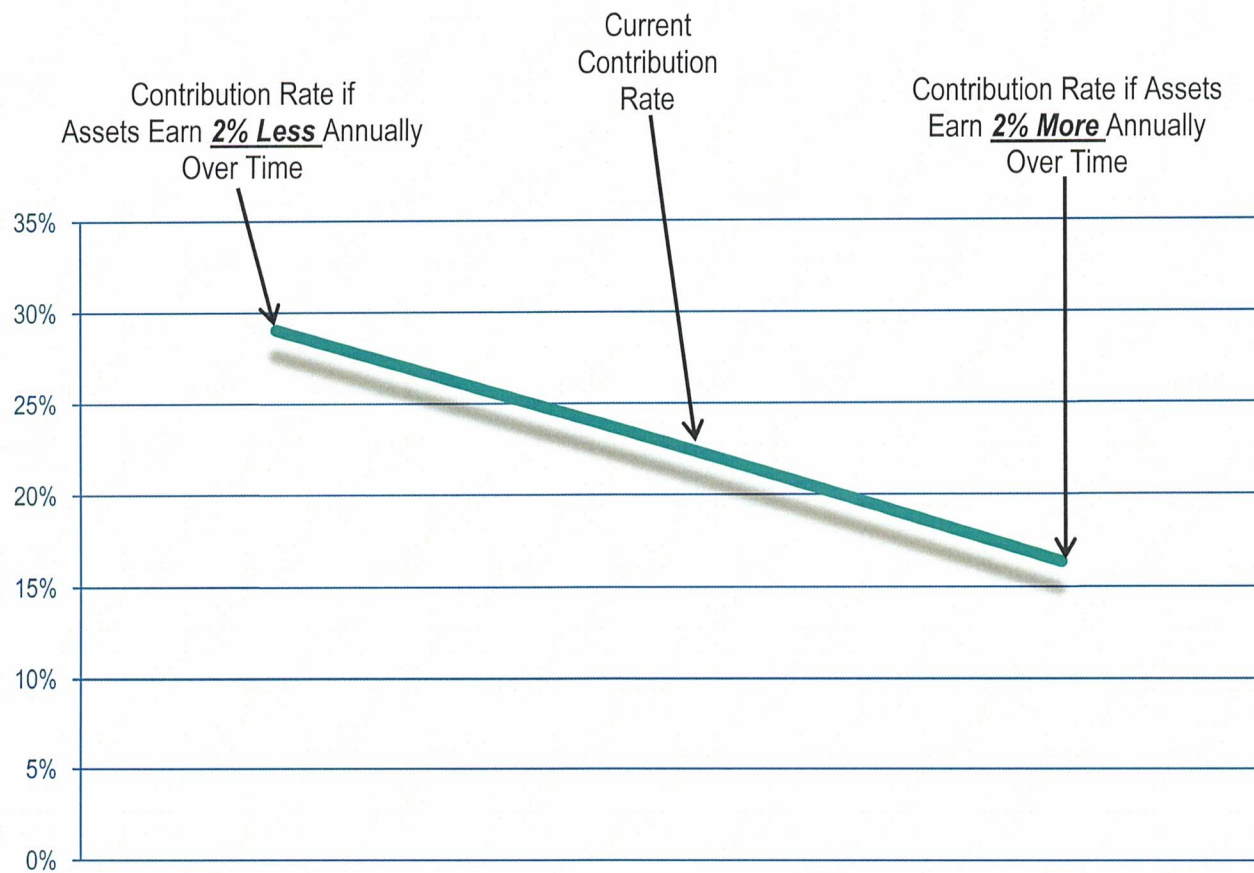
Minimum Required Contribution for the 2023/24 Plan Year **\$875,821**

Expected Payroll for the 2023/24 Plan Year	$\div$ \$3,843,756
Minimum Required Contribution as a % of Payroll	22.79%



Sensitivity Analysis

Table I-B



The line above illustrates the sensitivity of the contribution rate to changes in the long-term investment return.



Gain and Loss Analysis

Table I-C

Source of Change in the Contribution Rate

Previous contribution rate	9.87%
Increase (decrease) due to investment gains and losses	7.41%
Increase (decrease) due to demographic experience	2.50%
Increase (decrease) due to plan amendments	3.01%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current contribution rate	<u>22.79%</u>

Source of Change in the Unfunded Liability

Previous unfunded liability	(\$319,574)
Increase due to employer normal cost for the prior year	\$313,842
Increase due to interest on normal cost and unfunded liability	(\$344)
Decrease due to employer contributions	(\$515,283)
Decrease due to interest on employer contributions	(\$15,233)
Expected unfunded liability	<u>(\$536,592) *</u>
Increase (decrease) due to plan experience	\$2,187,929
Increase (decrease) due to plan amendments	\$399,066
Increase (decrease) due to actuarial assumption changes	\$0
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	<u>\$2,050,403</u>

* not less than zero



Present Value of Future Benefits

Table I-D

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$10,117,530	\$10,669,450	\$10,669,450
Termination benefits	\$1,211,286	\$1,281,069	\$1,281,069
Disability benefits	\$31,028	\$31,028	\$31,028
Death benefits	\$22,665	\$24,004	\$24,004
Refund of employee contributions	\$52,564	\$47,757	\$47,757
Sub-total	\$11,435,073	\$12,053,308	\$12,053,308
<u>Deferred Vested Participants</u>			
Retirement benefits	\$803,726	\$803,726	\$803,726
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$803,726	\$803,726	\$803,726
<u>Due a Refund of Contributions</u>	\$4,672	\$4,672	\$4,672
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$2,778,756	\$2,778,756	\$2,778,756
Disability retirements	\$26,376	\$26,376	\$26,376
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$2,805,132	\$2,805,132	\$2,805,132
<u>Grand Total</u>	<u>\$15,048,603</u>	<u>\$15,666,838</u>	<u>\$15,666,838</u>
Present Value of Future Payroll	\$19,128,165	\$19,128,165	\$19,128,165
Present Value of Future Employee Contribs.	\$1,257,476	\$1,257,476	\$1,257,476
Present Value of Future Employer Contribs.	\$4,600,651	\$5,218,886	\$5,218,886



Present Value of Accrued Benefits

Table I-E

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$5,437,044	\$5,669,523	\$5,669,523
Termination benefits	\$550,220	\$577,813	\$577,813
Disability benefits	\$13,319	\$13,319	\$13,319
Death benefits	\$7,719	\$8,134	\$8,134
Refund of employee contributions	\$21,781	\$21,743	\$21,743
Sub-total	\$6,030,083	\$6,290,532	\$6,290,532
<u>Deferred Vested Participants</u>			
Retirement benefits	\$803,726	\$803,726	\$803,726
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$803,726	\$803,726	\$803,726
<u>Due a Refund of Contributions</u>	\$4,672	\$4,672	\$4,672
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$2,778,756	\$2,778,756	\$2,778,756
Disability retirements	\$26,376	\$26,376	\$26,376
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$2,805,132	\$2,805,132	\$2,805,132
<u>Grand Total</u>	<u>\$9,643,613</u>	<u>\$9,904,062</u>	<u>\$9,904,062</u>



Present Value of Vested Benefits

Table I-F

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$5,233,424	\$5,465,022	\$5,465,022
Termination benefits	\$516,588	\$543,302	\$543,302
Disability benefits	\$13,319	\$13,319	\$13,319
Death benefits	\$7,719	\$8,134	\$8,134
Refund of employee contributions	\$33,961	\$33,923	\$33,923
Sub-total	\$5,805,011	\$6,063,700	\$6,063,700
<u>Deferred Vested Participants</u>			
Retirement benefits	\$803,726	\$803,726	\$803,726
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$803,726	\$803,726	\$803,726
<u>Due a Refund of Contributions</u>	\$4,672	\$4,672	\$4,672
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$2,778,756	\$2,778,756	\$2,778,756
Disability retirements	\$26,376	\$26,376	\$26,376
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$2,805,132	\$2,805,132	\$2,805,132
<u>Grand Total</u>	<u>\$9,418,541</u>	<u>\$9,677,230</u>	<u>\$9,677,230</u>



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$6,572,818	\$6,927,917	\$6,927,917
Termination benefits	\$749,948	\$793,923	\$793,923
Disability benefits	\$15,180	\$15,180	\$15,180
Death benefits	\$11,078	\$11,784	\$11,784
Refund of employee contributions	\$22,720	\$22,006	\$22,006
Sub-total	\$7,371,744	\$7,770,810	\$7,770,810
<u>Deferred Vested Participants</u>			
Retirement benefits	\$803,726	\$803,726	\$803,726
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$803,726	\$803,726	\$803,726
<u>Due a Refund of Contributions</u>	\$4,672	\$4,672	\$4,672
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$2,778,756	\$2,778,756	\$2,778,756
Disability retirements	\$26,376	\$26,376	\$26,376
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$2,805,132	\$2,805,132	\$2,805,132
<u>Grand Total</u>	<u>\$10,985,274</u>	<u>\$11,384,340</u>	<u>\$11,384,340</u>
less Actuarial Value of Assets	(\$9,333,937)	(\$9,333,937)	(\$9,333,937)
<u>Unfunded Accrued Liability</u>	<u>\$1,651,337</u>	<u>\$2,050,403</u>	<u>\$2,050,403</u>



Entry Age Normal Cost

Table I-H

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$610,529	\$660,386	\$660,386
Termination benefits	\$68,591	\$74,067	\$74,067
Disability benefits	\$3,378	\$3,378	\$3,378
Death benefits	\$1,918	\$2,070	\$2,070
Refund of employee contributions	\$13,890	\$13,100	\$13,100
Sub-total	\$698,306	\$753,001	\$753,001
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<u>Grand Total</u>	<u>\$698,306</u>	<u>\$753,001</u>	<u>\$753,001</u>



Unfunded Liability Bases

Table I-I

<u>Description</u>	<u>Original Amount</u>	<u>Outstanding Balance</u>	<u>Amortization Payment</u>	<u>Years Rem.</u>
	Total	\$2,050,403	\$278,584	
10/1/2022 Fresh Start UAAL	\$2,050,403	↓ \$2,050,403	↓ \$278,584	10



Actuarial Value of Assets

Table II-A

Market Value of Assets as of October 1, 2022	\$9,519,267
Minus advance employer contributions	(\$185,330)
Actuarial Value of Assets as of October 1, 2022	<u>\$9,333,937</u>

Historical Actuarial Value of Assets

October 1, 2013	\$7,284,068
October 1, 2014	\$7,492,912
October 1, 2015	\$7,246,525
October 1, 2016	\$7,796,853
October 1, 2017	\$8,324,815
October 1, 2018	\$8,608,584
October 1, 2019	\$9,097,903
October 1, 2020	\$9,355,357
October 1, 2021	\$10,566,592
October 1, 2022	\$9,333,937

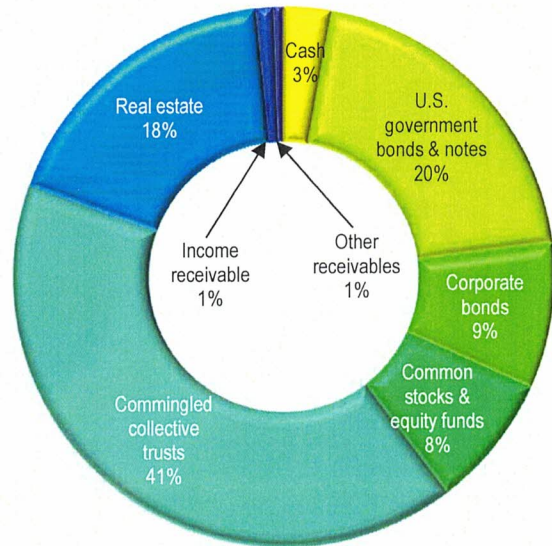


Market Value of Assets

Table II-B

As of October 1, 2022

Market Value of Assets	<u>\$9,519,267</u>
Cash	\$267,835
U.S. government bonds & notes	\$1,927,013
Corporate bonds	\$830,586
Common stocks & equity funds	\$761,702
Commingled collective trusts	\$3,895,554
Real estate	\$1,688,468
Prepaid items	\$2,232
Income receivable	\$100,866
Other receivables	\$51,801
Accounts payable	(\$6,790)

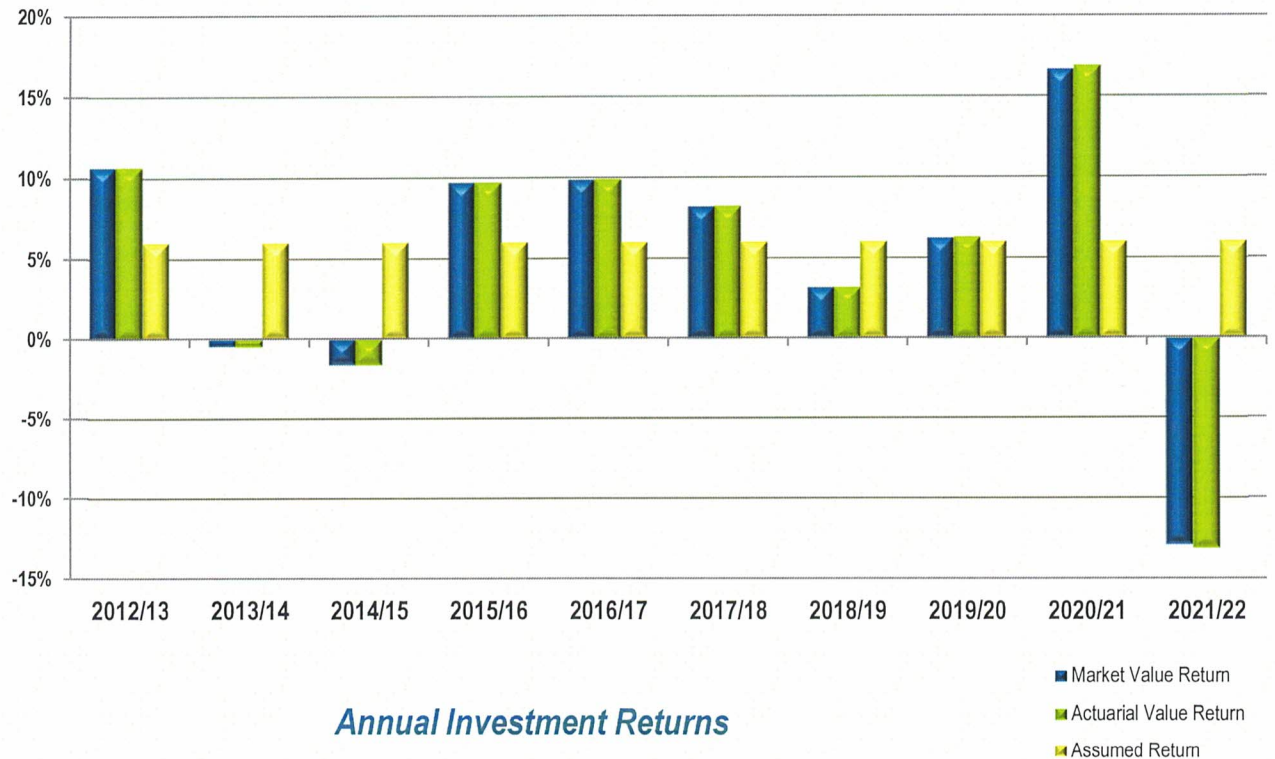
Historical Market Value of Assets

October 1, 2013	\$7,284,068
October 1, 2014	\$7,492,912
October 1, 2015	\$7,246,525
October 1, 2016	\$7,796,853
October 1, 2017	\$8,351,370
October 1, 2018	\$8,662,263
October 1, 2019	\$9,153,125
October 1, 2020	\$9,472,332
October 1, 2021	\$10,683,567
October 1, 2022	\$9,519,267



Investment Return

Table II-C

*Annual Investment Returns*

Plan	Market Value	Actuarial Value	Assumed
Year	Return	Return	Return
2012/13	10.64%	10.64%	6.00%
2013/14	-0.44%	-0.44%	6.00%
2014/15	-1.60%	-1.60%	6.00%
2015/16	9.70%	9.70%	6.00%
2016/17	9.88%	9.90%	6.00%
2017/18	8.21%	8.25%	6.00%
2018/19	3.19%	3.21%	6.00%
2019/20	6.27%	6.33%	6.00%
2020/21	16.66%	16.87%	6.00%
2021/22	-12.91%	-13.09%	6.00%
10yr. Avg.	4.65%	4.66%	6.00%

Note: Prior to October 1, 2008, the market value was not separately determined with respect to the general and police portions of the plan.



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2021	\$10,683,567	\$10,566,592
<i>Increases Due To:</i>		
Employer Contributions	\$583,638	\$583,638
Chapter 175/185 Contributions	\$0	\$0
Employee Contributions	\$254,800	\$254,800
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$838,438</u>	<u>\$838,438</u>
Interest and Dividends	\$88,688	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	(\$1,467,085)	
Total Investment Income	<u>(\$1,378,397)</u>	(\$1,394,153)
Other Income	\$0	
Total Income	<u>(\$539,959)</u>	<u>(\$555,715)</u>
<i>Decreases Due To:</i>		
Retirement Benefit Payments	(\$552,413)	(\$552,413)
Refund of Employee Contributions	(\$26,059)	(\$26,059)
Total Benefit Payments	<u>(\$578,472)</u>	<u>(\$578,472)</u>
Investment Expenses	(\$15,756)	
Administrative Expenses	(\$30,113)	(\$30,113)
Advance Employer Contribution		(\$68,355)
Total Expenses	<u>(\$624,341)</u>	<u>(\$676,940)</u>
As of October 1, 2022	<u>\$9,519,267</u>	<u>\$9,333,937</u>



Historical Trust Fund Detail

Table II-E

Income

<u>Plan</u> <u>Year</u>	<u>Employer</u> <u>Contribs.</u>	<u>Chapter</u> <u>Contribs.</u>	<u>Employee</u> <u>Contribs.</u>	<u>Service</u>		<u>Realized</u>	<u>Unrealized</u>	<u>Other</u> <u>Income</u>
				<u>Purchase</u> <u>Contribs.</u>	<u>Interest /</u> <u>Dividends</u>	<u>Gains /</u> <u>Losses</u>	<u>Gains /</u> <u>Losses</u>	
2012/13	\$465,471	\$0	\$159,966	\$0	\$206,392	\$0	\$517,524	\$0
2013/14	\$344,755	\$0	\$163,253	\$0	\$178,318	\$0	-\$185,159	\$0
2014/15	\$234,951	\$0	\$160,006	\$0	\$156,544	\$0	-\$249,888	\$0
2015/16	\$226,938	\$0	\$249,627	\$322,706	\$111,658	\$0	\$609,957	\$0
2016/17	\$380,280	\$0	\$188,955	\$0	\$91,027	\$0	\$693,215	\$0
2017/18	\$603,551	\$0	\$191,642	\$0	\$92,548	\$0	\$597,955	\$0
2018/19	\$542,711	\$0	\$204,552	\$0	\$122,828	\$0	\$178,534	\$0
2019/20	\$659,165	\$0	\$197,909	\$2,577	\$97,156	\$0	\$492,454	\$0
2020/21	\$556,400	\$0	\$205,711	\$0	\$96,953	\$0	\$1,478,217	\$0
2021/22	\$583,638	\$0	\$254,800	\$0	\$88,688	\$0	-\$1,467,085	\$0

Expenses

<u>Plan</u> <u>Year</u>	<u>Retirement</u>			
	<u>Benefit</u> <u>Payments</u>	<u>Contrib.</u> <u>Refunds</u>	<u>Admin.</u> <u>Expenses</u>	<u>Invest.</u> <u>Expenses</u>
2012/13	\$657,329	\$28,163	\$14,500	\$19,697
2013/14	\$241,194	\$8,484	\$17,044	\$25,601
2014/15	\$500,153	\$7,184	\$15,095	\$25,568
2015/16	\$924,135	\$3,577	\$17,256	\$25,590
2016/17	\$755,790	\$4,512	\$14,886	\$23,772
2017/18	\$1,138,480	\$632	\$16,191	\$19,500
2018/19	\$514,071	\$5,310	\$16,650	\$21,732
2019/20	\$1,088,960	\$0	\$17,919	\$23,175
2020/21	\$1,069,164	\$16,249	\$15,402	\$25,231
2021/22	\$552,413	\$26,059	\$30,113	\$15,756

Other Actuarial Adjustments

<u>Advance</u> <u>Employer</u> <u>Contribs.</u>
\$0
\$0
\$0
\$0
\$26,555
\$27,124
\$1,543
\$61,753
\$0
\$68,355

Note: For the period prior to October 1, 2008, retirement benefit payments include contribution refunds. For the period October 1, 2005 through September 30, 2008, interest and dividends includes administrative and investment expenses. For the period prior to October 1, 2005, unrealized gains and losses reflect net investment earnings and administrative and investment expenses, and, for all periods, unrealized gains and losses include realized gains and losses.



Other Reconciliations

Table II-F

Advance Employer Contribution

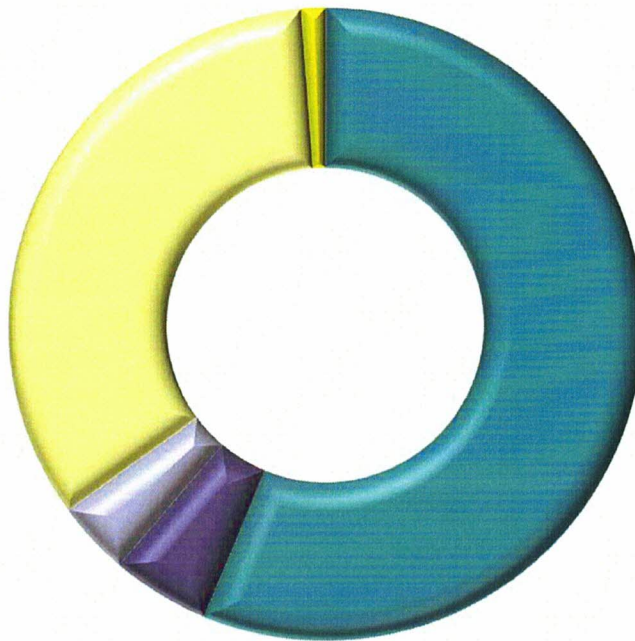
Advance Employer Contribution as of October 1, 2021	\$116,975
Additional Employer Contribution	\$583,638
Minimum Required Contribution	(\$515,283)
Net Increase in Advance Employer Contribution	\$68,355
Advance Employer Contribution as of October 1, 2022	<u>\$185,330</u>



Summary of Participant Data

Table III-A

As of October 1, 2022

Actively Employed Participants

Active Participants	45
DROP Participants	0

Inactive Participants

Deferred Vested Participants	4
Due a Refund of Contributions	3
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	27
Disability Retirements	1
Beneficiaries Receiving	0

Total Participants 80Number of Participants Included in Prior Valuations

	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
October 1, 2013	50	0	3	23	76
October 1, 2014	41	0	7	27	75
October 1, 2015	40	0	7	28	75
October 1, 2016	42	0	5	28	75
October 1, 2017	39	0	5	27	71
October 1, 2018	44	0	1	31	76
October 1, 2019	42	0	2	28	72
October 1, 2020	46	0	3	28	77
October 1, 2021	40	0	7	29	76
October 1, 2022	45	0	7	28	80



Data Reconciliation

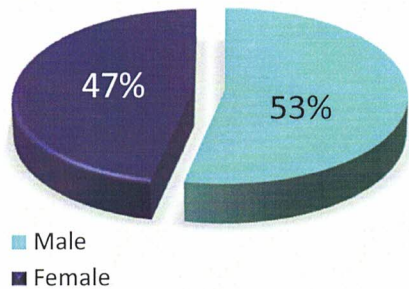
Table III-B

	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2021</u>	40	0	3	4	0	28	1	0	76
<u>Change in Status</u>									
Re-employed									
Terminated	(2)		1	1					
Retired	(2)					2			
<u>Participation Ended</u>									
Transferred Out									
Cashed Out				(2)		(1)			(3)
Died						(1)			(1)
<u>Participation Began</u>									
Newly Hired	9								9
Transferred In New Beneficiary									
Other Adjustment						(1)			(1)
<u>October 1, 2022</u>	45	0	4	3	0	27	1	0	80

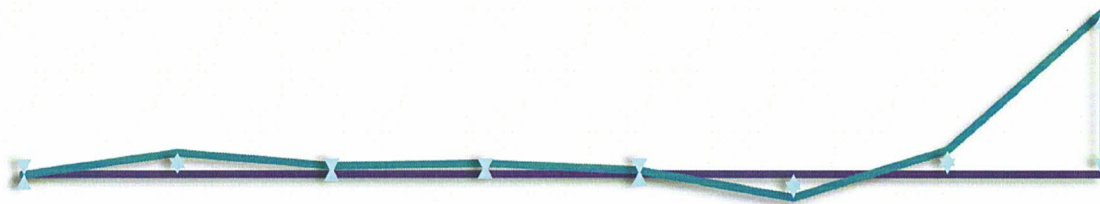


Active Participant Data

Table III-C

Gender Mix**As of October 1, 2022**

Average Age	47.7 years
Average Service	10.6 years
Total Annualized Compensation for the Prior Year	\$3,695,919
Total Expected Compensation for the Current Year	\$3,695,919
Average Increase in Compensation for the Prior Year	16.04%
Expected Increase in Compensation for the Current Year	4.00%
Accumulated Contributions for Active Employees	\$1,384,677

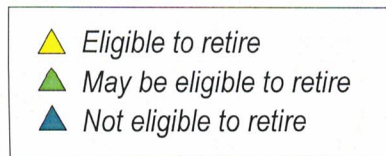
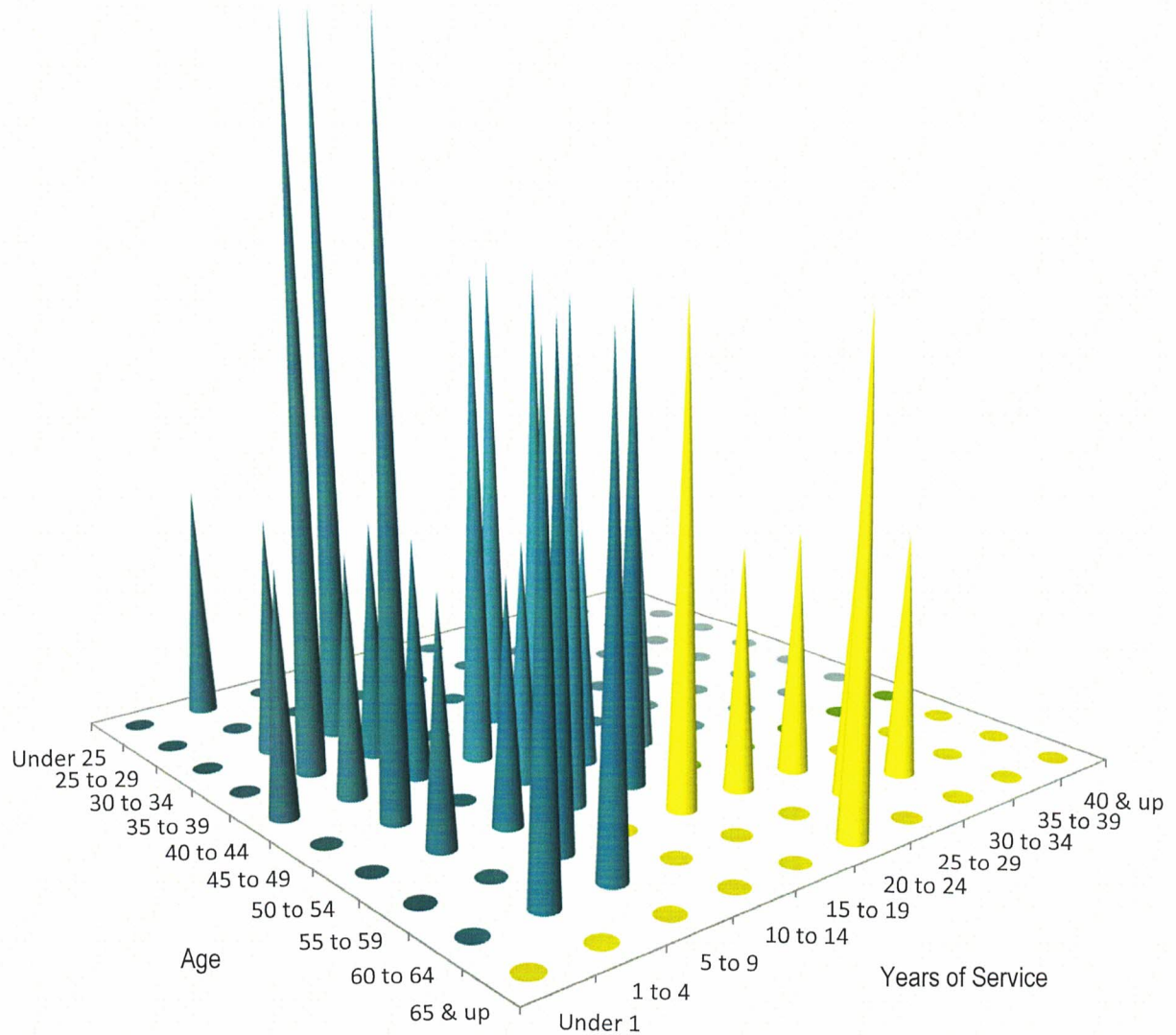
**Actual vs. Expected Salary Increases****Active Participant Statistics From Prior Valuations**

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2013	45.8	10.3	\$48,753	4.00%	4.82%
October 1, 2014	45.7	9.8	\$55,498	4.00%	6.96%
October 1, 2015	46.4	10.8	\$57,344	4.00%	3.94%
October 1, 2016	47.3	11.0	\$61,629	4.00%	5.63%
October 1, 2017	46.2	11.7	\$63,445	4.00%	4.63%
October 1, 2018	46.3	10.9	\$62,200	4.00%	4.82%
October 1, 2019	46.7	11.2	\$62,687	4.00%	4.28%
October 1, 2020	46.8	10.5	\$58,158	4.00%	2.22%
October 1, 2021	47.2	12.4	\$65,054	4.00%	5.80%
October 1, 2022	47.7	10.6	\$82,132	4.00%	16.04%



Active Age-Service Distribution

Table III-D



Active Age-Service-Salary Table

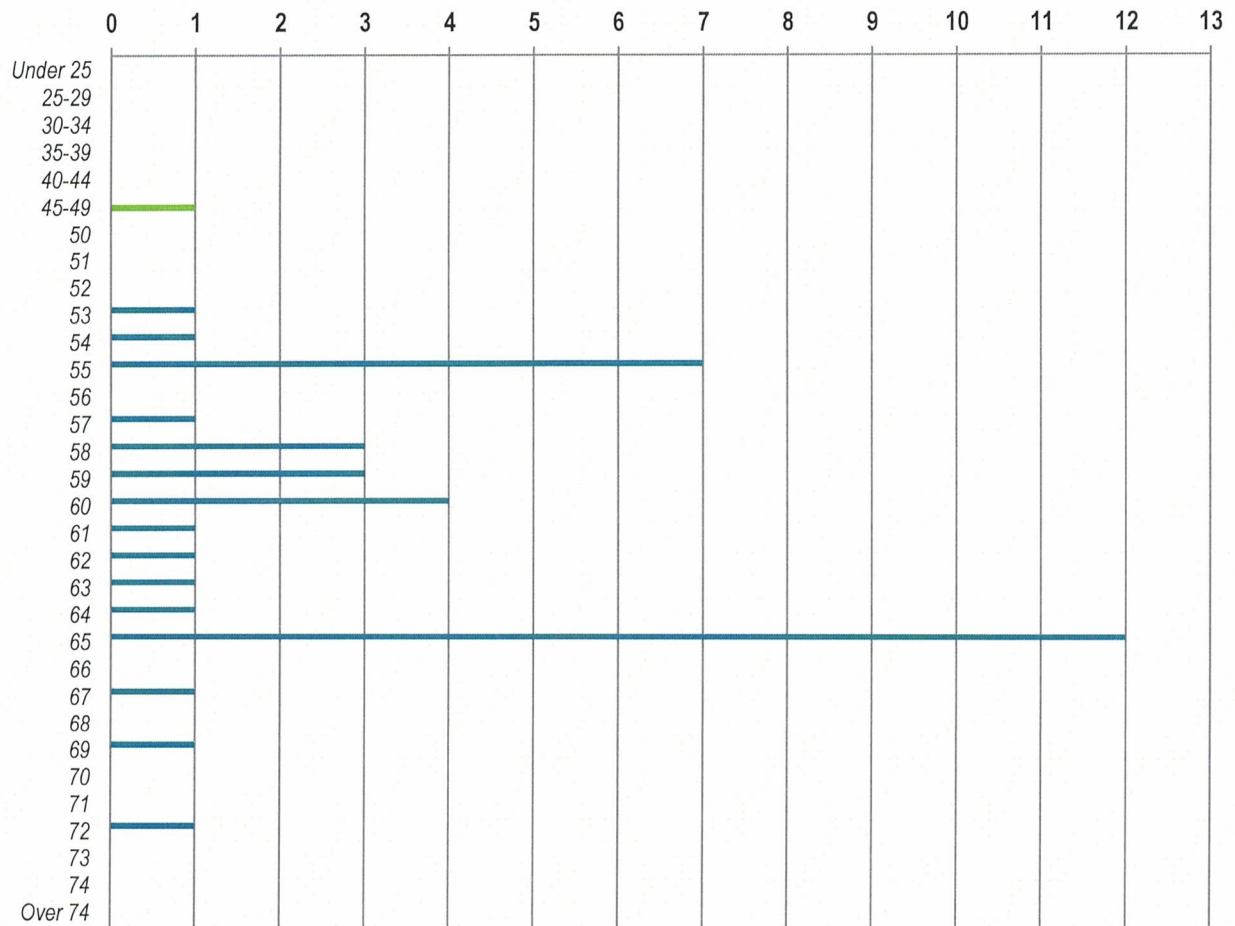
Table III-E

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	0	1	0	0	0	0	0	0	0	0	1
Avg.Pay	0	47,589	0	0	0	0	0	0	0	0	47,589
25 to 29	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	1	3	1	0	0	0	0	0	0	5
Avg.Pay	0	43,937	50,748	63,928	0	0	0	0	0	0	52,022
35 to 39	0	3	1	0	2	0	0	0	0	0	6
Avg.Pay	0	125,775	59,492	0	97,974	0	0	0	0	0	105,461
40 to 44	1	1	1	2	2	0	0	0	0	0	7
Avg.Pay	44,740	165,794	67,492	80,562	76,056	0	0	0	0	0	84,466
45 to 49	0	3	0	1	1	1	0	0	0	0	6
Avg.Pay	0	120,954	0	51,884	56,243	85,839	0	0	0	0	92,805
50 to 54	0	1	1	2	2	0	0	0	0	0	6
Avg.Pay	0	73,118	36,422	108,457	70,616	0	0	0	0	0	77,948
55 to 59	0	0	2	0	2	1	1	0	0	0	6
Avg.Pay	0	0	68,116	0	50,900	69,180	47,288	0	0	0	59,083
60 to 64	0	2	2	0	0	0	1	1	0	0	6
Avg.Pay	0	188,875	98,132	0	0	0	47,288	47,288	0	0	111,432
65 & up	0	0	0	0	0	2	0	0	0	0	2
Avg.Pay	0	0	0	0	0	58,297	0	0	0	0	58,297
Total	1	12	10	6	9	4	2	1	0	0	45
Avg.Pay	44,740	120,698	64,815	82,308	71,926	67,903	47,288	47,288	0	0	82,132



Inactive Participant Data

Table III-F

**Age at Retirement**

- Service Retirements
- Disability Retirements
- DROP Participants

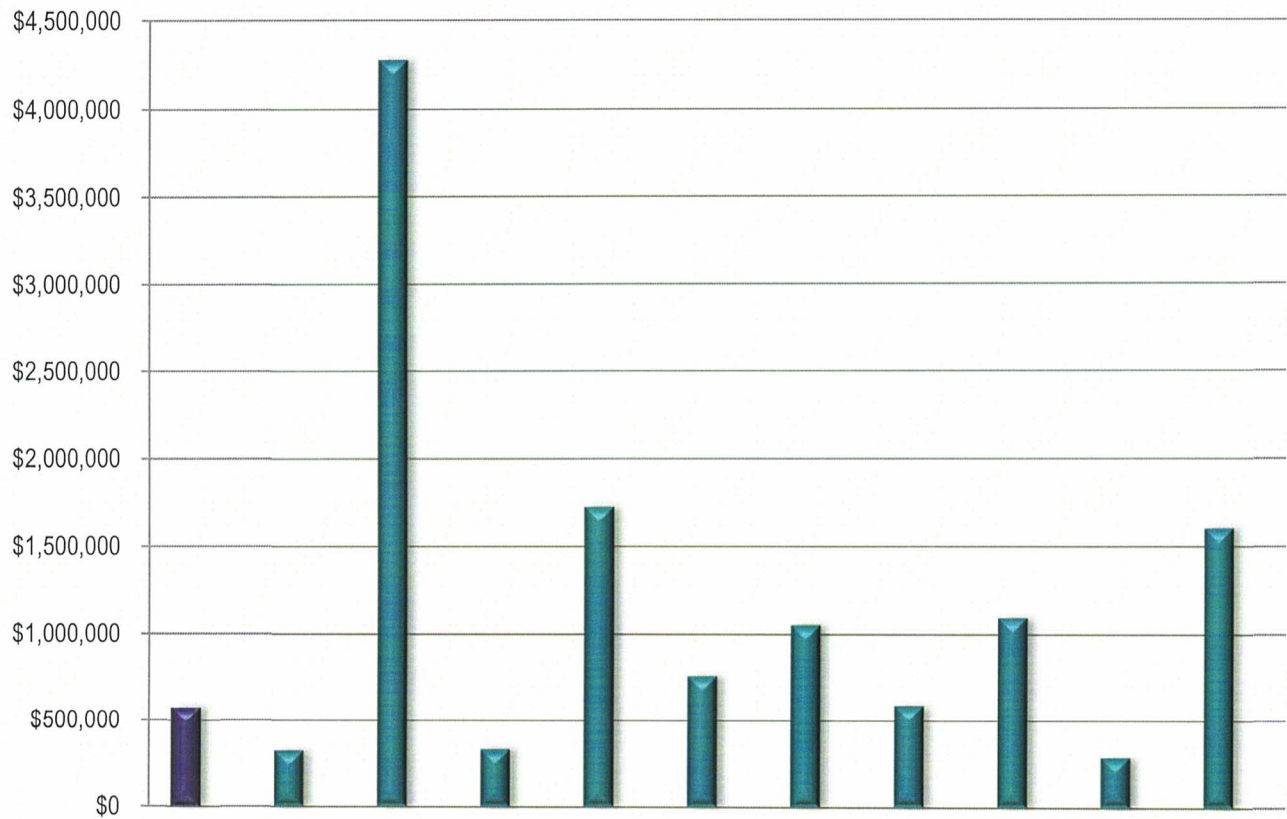
Average Monthly Benefit

Service Retirements	\$798.64
Disability Retirements	\$388.77
Beneficiaries Receiving	<i>Not applicable</i>
DROP Participants	<i>Not applicable</i>
Deferred Vested Participants	\$2,041.07
Deferred Beneficiaries	<i>Not applicable</i>



Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2021 through September 30, 2022

\$578,472

Projected

For the period October 1, 2022 through September 30, 2023

\$321,389

For the period October 1, 2023 through September 30, 2024

\$4,279,214

For the period October 1, 2024 through September 30, 2025

\$330,062

For the period October 1, 2025 through September 30, 2026

\$1,726,748

For the period October 1, 2026 through September 30, 2027

\$759,517

For the period October 1, 2027 through September 30, 2028

\$1,054,592

For the period October 1, 2028 through September 30, 2029

\$589,057

For the period October 1, 2029 through September 30, 2030

\$1,095,715

For the period October 1, 2030 through September 30, 2031

\$287,867

For the period October 1, 2031 through September 30, 2032

\$1,604,969



Summary of Actuarial Methods and Assumptions

Table IV-A

NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.

1. **Actuarial Cost Method**

Individual entry age normal cost method. Under this actuarial cost method, a level funding cost is developed with respect to each benefit for each participant. The level funding cost for each benefit applies to the period beginning when the participant's service commences and ends when the participant is assumed to cease active participation due to each respective decrement. The actuarial accrued liability is equal to the accumulated level funding cost to the valuation date for all participants. The normal cost is equal to the level funding cost for the year immediately following the valuation date for all active participants.

2. **Amortization Method**

The unfunded actuarial accrued liability is amortized as a level dollar amount over a period of up to 10 years.

3. **Asset Method**

The actuarial value of assets is equal to the market value of assets.

4. **Interest (or Discount) Rate**

6.00% per annum

5. **Salary Increases**

Plan compensation is assumed to increase at the rate of 4.00% per annum, unless actual plan compensation is known for a prior plan year.

6. **Decrement**

- Pre-retirement mortality: Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Below Median Employee Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2018 and with male ages set back one year



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

- Post-retirement mortality: Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Below Median Healthy Retiree Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2018 and with male ages set back one year
- Disability: Age-based rates of disability were assumed, ranging from 0.051% at age 20, 0.058% at age 30, 0.121% at age 40, 0.217% at age 45, 0.429% at age 50, and 0.891% at age 55; 25% of disabilities are assumed to be service-related.
- Termination: Age-based rates of employment termination were assumed, ranging from 21.700% at age 20, 20.475% at age 25, 18.375% at age 30, 14.525% at age 35, 9.975% at age 40, 6.125% at age 45, 2.625% at age 50, and 1.050% at age 55.
- Retirement: Retirement is assumed to occur at normal retirement age.

No decrements have been assumed during the first year following the valuation date.

7. Form of Payment

Future retirees have been assumed to select the single lump sum form of payment.

8. Expenses

Administrative expenses are assumed to be 0.75% of covered payroll. In addition, the interest rate set forth in item 4. above is assumed to be net of investment expenses and commissions.



Changes in Actuarial Methods and Assumptions

Table IV-B

No assumptions or methods were changed since the completion of the previous valuation.

The following additional assumption and method changes were made during the past 10 years:

- (1) Effective October 1, 2020, the mortality basis was changed from the RP-2000 Combined Mortality Table with generational improvements in mortality using Scale BB to selected PUB-2010 Mortality Tables with generational improvements in mortality using Scale MP-2018.*
- (2) Effective October 1, 2015, the mortality basis was changed from a 2007 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table as required by State law.*



Summary of Plan Provisions

Table V-A

1. **Monthly Accrued Benefit**

Benefit Accrual Rate multiplied by Average Final Compensation

2. **Benefit Accrual Rate**

For each year of Prior Service, the Benefit Accrual Rate is 1¼%. For each year of Membership Service, the Benefit Accrual Rate depends on the member's contribution rate in accordance with the following table:

Contribution Rate	Benefit Accrual Rate For Service Earned Prior to 9/30/2010	Benefit Accrual Rate For Service Earned 10/1/2010 to 9/30/2016	Benefit Accrual Rate For Service Earned After 9/30/2016
2%	1¼%	1½%	1¾%
3%	1⅜%	1⅝%	1⅞%
4%	1½%	1¾%	2%
5%	1⅝%	1⅞%	2⅛%
6%	1¾%	2%	2¼%
7%	1⅞%	2⅛%	2⅝%
8%	2%	2¼%	2½%
9%	2⅛%	2⅝%	2⅞%
10%	2¼%	2½%	2¾%

3. **Normal Retirement Age and Benefit**• **Age**

Age 52 with at least 20 years of Credited Service;
Age 55 with at least 10 years of Credited Service; or
Age 65

• **Amount**

Monthly Accrued Benefit

• **Form of Payment**

Life annuity (normal form of payment);
Actuarially reduced five-year certain and life annuity (optional);
Actuarially reduced 10-year certain and life annuity (optional);
Actuarially reduced 50% joint and contingent annuity (optional);
Actuarially reduced 66⅔% joint and contingent annuity (optional);
Actuarially reduced 75% joint and contingent annuity (optional);
Actuarially reduced 100% joint and contingent annuity (optional);
Actuarially adjusted social security level income annuity (optional); or
Actuarially equivalent lump sum payment (optional).

(Note: All forms of payment guarantee at least the return of the member's Accumulated Contributions.)



Summary of Plan Provisions

Table V-A

(continued)

4. Delayed Retirement Age and Benefit

- **Age**
After Normal Retirement Age
- **Amount**
Monthly Accrued Benefit
- **Form of Payment**
Same as for Normal Retirement

5. Service Incurred Disability Retirement Eligibility and Benefit

- **Eligibility**
All members of the Plan are eligible.
- **Condition**
The member must have suffered a condition or impairment of health which is the result of an act or acts occurring in the performance of service to the town as determined by the Board of Trustees in reliance on the findings and definitions of the town's group disability insurance carrier and must remain so disabled until his Normal Retirement Age. With respect to police employees who have successfully passed a physical examination upon entering the town's service, any condition or impairment of health caused by hypertension, heart disease or hardening of the arteries, or other conditions as required by state or federal law which results in total and permanent disability is presumed to be service-connected unless competent evidence shows otherwise.
- **Amount**
Monthly Accrued Benefit, payable upon the attainment of Normal Retirement Age and offset by any amounts payable under workmen's compensation or other long-term disability benefits provided by the town. For this purpose, the Monthly Accrued Benefit will be calculated to reflect Credited Service and Compensation for the period of disability equal to what the member would have earned based on his compensation and contribution rate in effect at the time he became disabled.
- **Form of Payment**
Same as for Normal Retirement



Summary of Plan Provisions

Table V-A

(continued)

6. Termination Benefit

- **Age**
Any age with at least five years of Credited Service
- **Amount**
Monthly Accrued Benefit, multiplied by the Member's Vested Interest and payable upon the attainment of Normal Retirement Age
- **Form of Payment**
Same as for Normal Retirement

7. Pre-Retirement Death Benefit

In the case of the death of a member prior to retirement, his beneficiary will receive a 10-year certain annuity based on the member's Monthly Accrued Benefit as of his date of death and determined as if the member had a 100% Vested Interest in his Monthly Accrued Benefit, survived to his Normal Retirement Age, and elected a 10-year certain and life annuity.

8. Vested Interest

A member earns a 100% Vested Interest in his Monthly Accrued Benefit upon the attainment of five years of Credited Service.

9. Average Final Compensation

Average monthly compensation for the highest three consecutive years out of the 10 full years immediately preceding the determination, where compensation includes basic compensation but excludes overtime and other special compensation such as sick leave, annual leave, and compensatory leave paid upon separation from service; for this purpose, basic compensation will also include amounts paid by the town as deferred compensation to an Internal Revenue Code (IRC) §457 plan.



Summary of Plan Provisions

Table V-A

(continued)

10. Credited Service

Credited Service is equal to Prior Service plus Membership Service. Prior Service is the period of completed years and months of regular, full-time employment prior to October 1, 1969. Membership Service is the period of completed years and months of regular, full-time employment on and after October 1, 1969 during which the employee makes all required contributions to the plan. In addition, a member may purchase up to four years of military or prior governmental service to be included in his Membership Service by paying into the plan the full actuarial cost thereof, provided that, in the case of military service, such service occurred after the member's initial employment with the town and the member did not receive a dishonorable discharge, and provided in either case that the member does not receive credit for such service under any other private or governmental retirement plan.

11. Membership Requirement

In order to become a member of the plan, a person must be employed by the Town of Bay Harbor Islands, Florida on a full-time basis as a police officer or general employee and must have earned one year of continuous employment. Members of the town council, elected officials, and independent contractors are not eligible for membership in the plan.

12. Accumulated Contributions

The member's contributions accumulated with interest at the rate set by the Board of Trustees from time to time.

13. Member Contributions

For general employees, the member contribution rate is based on the member's election from time to time and is any whole percentage from 2% to 10%, inclusive; member Contributions are deemed to be "picked-up" by the Town pursuant to Internal Revenue Code (IRC) §414(h)(2).

14. Plan Year

October 1st through September 30th

15. Plan Effective Date

The initial plan effective date is October 1, 1969.



Summary of Plan Provisions

Table V-A

(continued)

16. Actuarial Equivalence

- **Mortality**

1983 Group Annuity Mortality Table, blended 50%/50% for males and females and set forward five years for disabled members

- **Interest**

6.00% per annum

17. Retirement Subsidy

For general employees who retire or terminate their employment after September 30, 2015, an additional retirement subsidy is paid until age 65 equal to \$375.00 per month multiplied by the member's Vested Interest, provided that the subsidy is not paid to those individuals who terminate their employment if such individuals withdraw their Member Contributions from the plan.

18. Deferred Retirement Option Plan (DROP)

A DROP is available to those employees who attain their normal retirement age. Employees may participate in the DROP for a period of up to 60 months, subject to an extension at the sole discretion of the Town Manager.



Summary of Plan Amendments

Table V-B

Since the completion of the previous valuation, the plan was amended effective June 9 2022 to reduce the averaging period for average final compensation from five years to three years. (Ordinance No. 1074)

The following additional plan amendments were adopted during the past 10 years and were reflected in prior valuation reports:

- (1) Effective January 18, 2020, a DROP was added for general employees who attain their normal retirement age. (Ordinance No. 1046)*
- (2) General employees are allowed to purchase up to four years of military service (effective May 1, 2019) or previous governmental service (effective September 30, 2019). (Ordinance No. 1047)*
- (3) Effective during the 2015/16 plan year, the Town Manager is allowed to irrevocably opt into the plan within six calendar months after the later of the enactment of the ordinance or his appointment to that position by making a contribution to the plan equal to the actuarially equivalent value of any past service credit earned prior to his participation in the plan. (Ordinance No. 993)*
- (4) Effective during the 2015/16 plan year, the plan was amended to provide a 0.25% increase in the benefit formula multiplier for service earned after September 30, 2010, an additional 0.25% increase in the benefit formula multiplier for service earned after September 30, 2016, and a \$25.00 increase in the early retirement subsidy for general employees (which increases from \$350.00 to \$375.00 per month), and to allow general employees to choose an actuarially equivalent partial lump sum option with the remainder of the accrued benefit payable in one of the annuity forms of payment. (Ordinance No. 996)*

