

RETIREMENT PLAN FOR THE GENERAL MANAGEMENT
EMPLOYEES OF THE CITY OF NORTH MIAMI BEACH

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019

DETERMINES THE CONTRIBUTION
FOR THE 2020/21 FISCAL YEAR



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March 2, 2020

Introduction

This report presents the results of the October 1, 2019 actuarial valuation for the Retirement Plan for the General Management Employees of the City of North Miami Beach. 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, 2019 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2020/21 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 2020/21 plan year. The minimum required contribution is \$204,221 (or 24.16% of covered payroll), which represents a decrease of \$160,420 (or a decrease of 8.79% of payroll) from the prior valuation.

Table I-C provides a breakdown of the sources of change in the minimum required contribution rate. Significantly, the rate increased by 4.25% of payroll due to investment shortfalls and decreased by 13.04% of payroll due to demographic experience. The market value of assets only earned 5.42% during the 2018/19 plan year, whereas a 7.50% 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 City must contribute an amount equal to the annual normal cost of the plan plus assumed administrative expenses, where both amounts are adjusted as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2020/21 minimum required contribution is equal to \$204,221.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$22,813,969 excluding future administrative expenses beyond the 2020/21 plan year. As illustrated in Table I-A, current assets are sufficient to cover \$20,297,407 of this amount, the employer's 2019/20 contribution will cover \$364,641 of this amount, the employer's 2020/21 contribution will cover \$204,221 of this amount and future employee contributions are expected to cover \$759,642 of this amount, leaving \$1,188,058 to be covered by future employer funding beyond the 2020/21 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

Advance Employer Contribution

The City 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, 2019, the advance employer contribution is \$93,775, which is equal to the prior year advance contribution of \$97,911 minus \$4,136 to cover the shortfall between actual employer contributions and the minimum required contribution for the 2018/19 plan year as shown in Table II-F.

The City may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2019/20 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 City 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, 2019 would reduce the minimum required contribution for the 2020/21 plan year to \$195,591.

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 aggregate funding method for this plan, which is expected to result in a contribution rate that is level as a percentage of payroll over the working life of the plan's active participants. A brief description of the actuarial funding method is provided in Table IV-A.



Contents of the Report

Tables I-D through I-G 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. 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, 2019, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

Refund of Participant Contributions

It is our understanding that there are six participants who are due a refund of their contributions. We have estimated the accumulated amount of their refunds to be \$87,902 as of October 1, 2019. The average amount owed to these individuals is \$14,650. If possible, we recommend that the accumulated contributions be distributed to these individuals in order to simplify the administration of the plan and to reduce future administrative costs.

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/48

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

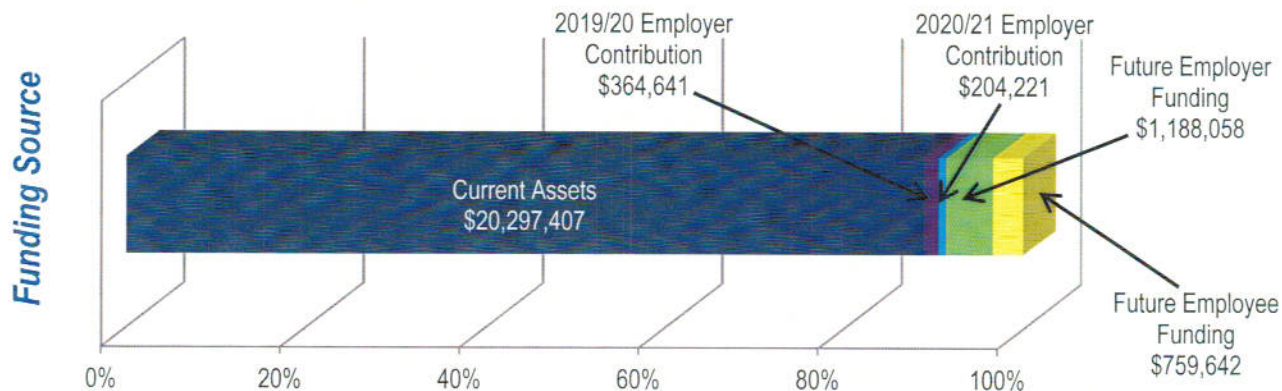
Enrolled Actuary No. 17-04927

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



* Note: Future administrative expenses are not included in the chart shown above.

For the 2020/21 Plan Year

Normal Cost for the 2019/20 Plan Year	\$150,413
Unfunded Liability Amortization Payment for the 2019/20 Plan Year	\$0
Expense Allowance for the 2019/20 Plan Year	\$65,000
	\$215,413
Adjustment to Reflect Beginning-of-Year Employer Contribution	\$0
Adjustment for the One-Year Delay in Payment of the MRC	(\$11,192)

Minimum Required Contribution for the 2020/21 Plan Year **\$204,221**

Expected Payroll for the 2020/21 Plan Year	÷ \$845,445
Minimum Required Contribution as a % of Payroll	24.16%

Additional Disclosures

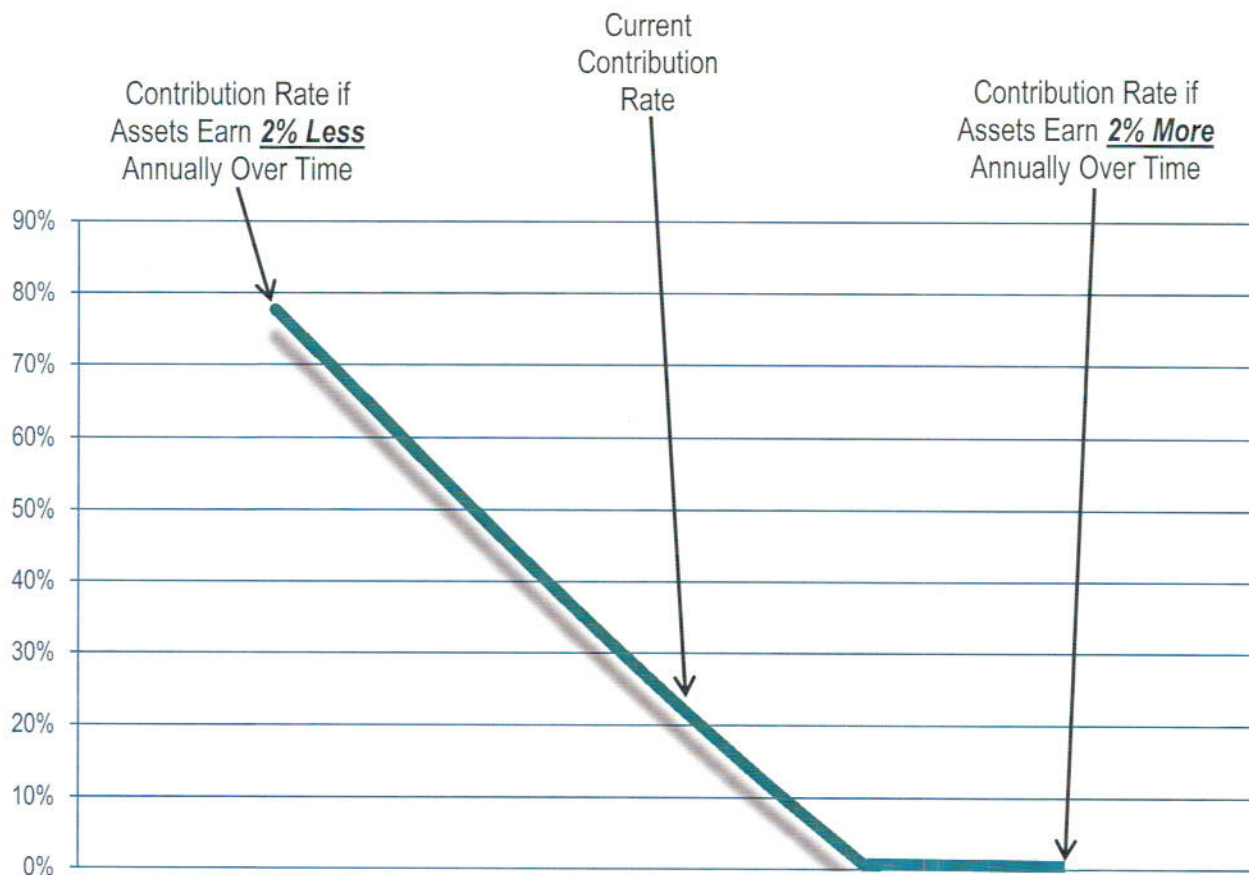
Present Value of Future Compensation	\$9,495,534
Present Value of Future Employer Contributions*	\$1,392,279
Present Value of Future Employee Contributions	\$759,642

* Note: Does not include future administrative expenses.



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 minimum required contribution rate	32.95%
Increase (decrease) due to investment gains and losses	4.25%
Increase (decrease) due to demographic experience	-13.04%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	<u>24.16%</u>



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	\$2,208,613	\$2,208,613	\$2,208,613
Termination benefits	\$948	\$948	\$948
Disability benefits	\$7,749	\$7,749	\$7,749
Death benefits	\$45,078	\$45,078	\$45,078
Refund of employee contributions	\$24,918	\$24,918	\$24,918
Sub-total	\$2,287,306	\$2,287,306	\$2,287,306
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,756,896	\$2,756,896	\$2,756,896
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,756,896	\$2,756,896	\$2,756,896
<u>Due a Refund of Contributions</u>	\$87,902	\$87,902	\$87,902
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$17,109,788	\$17,109,788	\$17,109,788
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$572,077	\$572,077	\$572,077
DROP participants	\$0	\$0	\$0
Sub-total	\$17,681,865	\$17,681,865	\$17,681,865
<u>Grand Total</u>	<u>\$22,813,969</u>	<u>\$22,813,969</u>	<u>\$22,813,969</u>
Present Value of Future Payroll	\$9,495,534	\$9,495,534	\$9,495,534
Present Value of Future Employee Contribs.	\$759,642	\$759,642	\$759,642
Present Value of Future Employer Contribs.*	\$1,756,920	\$1,756,920	\$1,756,920

* Note: Does not include future administrative expenses.



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	\$1,395,960	\$1,395,960	\$1,395,960
Termination benefits	\$278	\$278	\$278
Disability benefits	\$2,558	\$2,558	\$2,558
Death benefits	\$21,440	\$21,440	\$21,440
Refund of employee contributions	\$20,880	\$20,880	\$20,880
Sub-total	\$1,441,116	\$1,441,116	\$1,441,116
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,756,896	\$2,756,896	\$2,756,896
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,756,896	\$2,756,896	\$2,756,896
<u>Due a Refund of Contributions</u>	\$87,902	\$87,902	\$87,902
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$17,109,788	\$17,109,788	\$17,109,788
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$572,077	\$572,077	\$572,077
DROP participants	\$0	\$0	\$0
Sub-total	\$17,681,865	\$17,681,865	\$17,681,865
<u>Grand Total</u>	<u>\$21,967,779</u>	<u>\$21,967,779</u>	<u>\$21,967,779</u>
<u>Funded Status</u>	92.82%	92.82%	92.82%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)



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>
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$1,313,807	\$1,313,807	\$1,313,807
Termination benefits	\$0	\$0	\$0
Disability benefits	\$2,558	\$2,558	\$2,558
Death benefits	\$16,035	\$16,035	\$16,035
Refund of employee contributions	\$25,133	\$25,133	\$25,133
Sub-total	\$1,357,533	\$1,357,533	\$1,357,533
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$2,756,896	\$2,756,896	\$2,756,896
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,756,896	\$2,756,896	\$2,756,896
<i><u>Due a Refund of Contributions</u></i>	\$87,902	\$87,902	\$87,902
<i><u>Deferred Beneficiaries</u></i>	\$0	\$0	\$0
<i><u>Retired Participants</u></i>			
Service retirements	\$17,109,788	\$17,109,788	\$17,109,788
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$572,077	\$572,077	\$572,077
DROP participants	\$0	\$0	\$0
Sub-total	\$17,681,865	\$17,681,865	\$17,681,865
<i><u>Grand Total</u></i>	<u>\$21,884,196</u>	<u>\$21,884,196</u>	<u>\$21,884,196</u>



Entry Age Normal Accrued Liability

Table I-G

	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	\$1,601,140	\$1,601,140	\$1,601,140
Termination benefits	\$396	\$396	\$396
Disability benefits	\$3,465	\$3,465	\$3,465
Death benefits	\$27,220	\$27,220	\$27,220
Refund of employee contributions	\$21,282	\$21,282	\$21,282
Sub-total	\$1,653,503	\$1,653,503	\$1,653,503
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,756,896	\$2,756,896	\$2,756,896
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,756,896	\$2,756,896	\$2,756,896
<u>Due a Refund of Contributions</u>	\$87,902	\$87,902	\$87,902
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$17,109,788	\$17,109,788	\$17,109,788
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$572,077	\$572,077	\$572,077
DROP participants	\$0	\$0	\$0
Sub-total	\$17,681,865	\$17,681,865	\$17,681,865
<u>Grand Total</u>	<u>\$22,180,166</u>	<u>\$22,180,166</u>	<u>\$22,180,166</u>



Development of the Normal Cost

Table I-H

<u>As of October 1, 2019</u>	
Present Value of Future Benefits	\$22,813,969
Actuarial Value of Assets	(\$20,297,407)
Present Value of Future Employee Contributions	(\$759,642)
Present Value of Future Normal Cost	\$1,756,920
Present Value of Future Compensation	÷ \$9,495,534
Normal Cost Accrual Rate	18.502593%
Expected Payroll for the Current Year	x \$812,928
Normal Cost	\$150,413



Actuarial Value of Assets

Table II-A

Market Value of Assets as of October 1, 2019 \$20,391,182

Minus advance employer contribution (\$93,775)

Actuarial Value of Assets as of October 1, 2019 \$20,297,407

Historical Actuarial Value of Assets

October 1, 2010	\$11,532,009
October 1, 2011	\$12,275,228
October 1, 2012	\$14,615,897
October 1, 2013	\$15,781,755
October 1, 2014	\$16,569,904
October 1, 2015	\$15,980,411
October 1, 2016	\$16,778,564
October 1, 2017	\$18,825,680
October 1, 2018	\$20,106,173
October 1, 2019	\$20,297,407

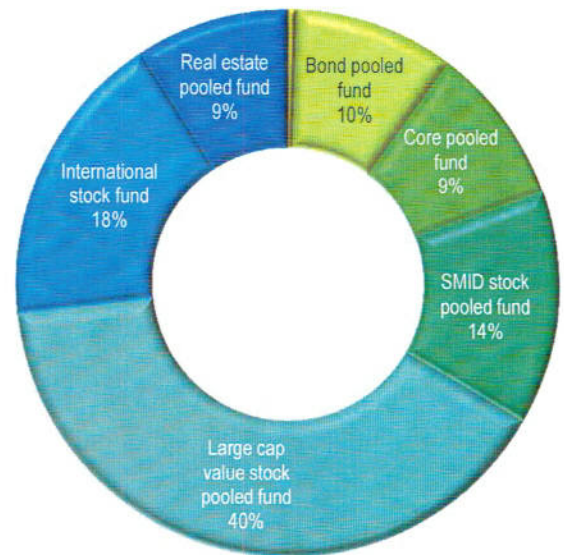


Market Value of Assets

Table II-B

As of October 1, 2019

Market Value of Assets	<u>\$20,391,182</u>
Cash	\$101,941
Bond pooled fund	\$1,957,259
Core pooled fund	\$1,916,483
SMID stock pooled fund	\$2,813,560
Large cap value stock pooled fund	\$8,134,859
International stock fund	\$3,608,697
Real estate pooled fund	\$1,855,319
Employee contribution receivable	\$3,064

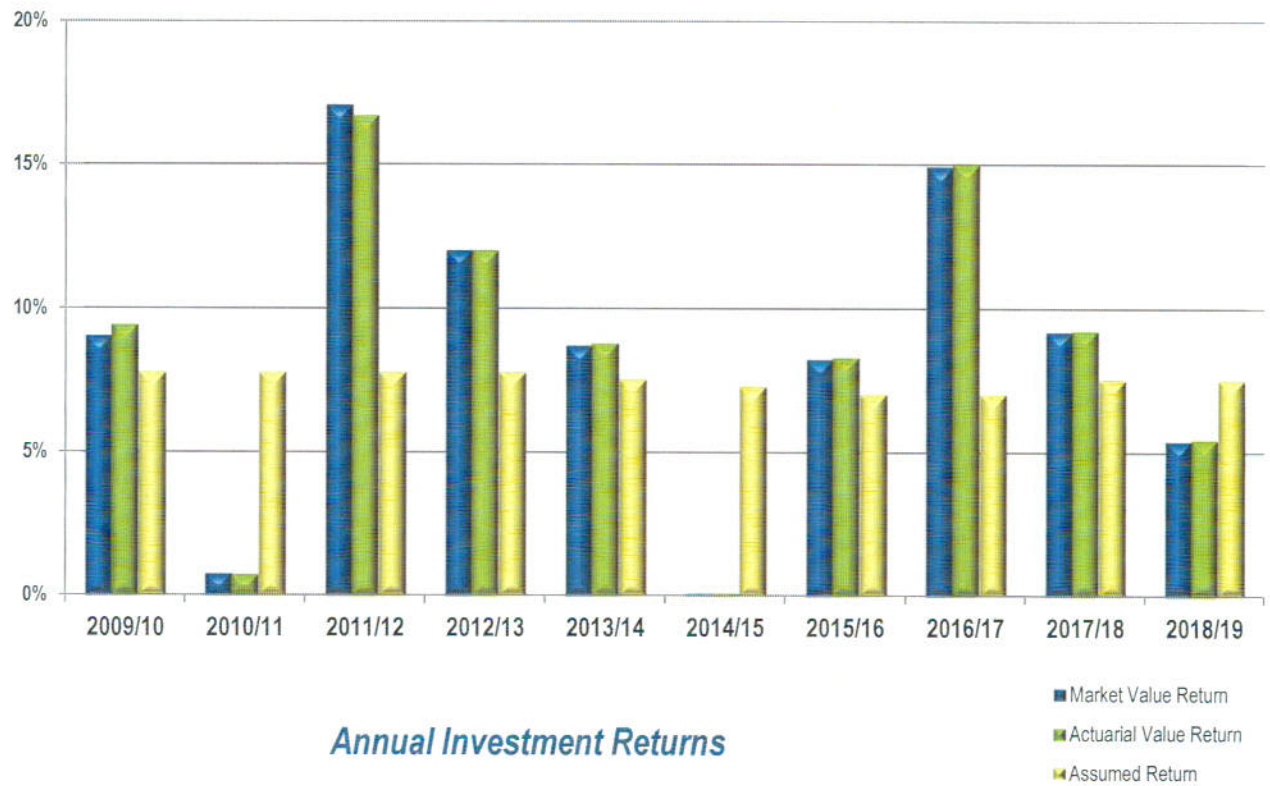
**Historical Market Value of Assets**

October 1, 2010	\$10,921,004
October 1, 2011	\$11,896,631
October 1, 2012	\$14,448,290
October 1, 2013	\$15,927,449
October 1, 2014	\$16,711,216
October 1, 2015	\$16,121,723
October 1, 2016	\$16,894,185
October 1, 2017	\$18,923,591
October 1, 2018	\$20,204,084
October 1, 2019	\$20,391,182



Investment Return

Table II-C



Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2009/10	9.04%	9.44%	7.75%
2010/11	0.78%	0.75%	7.75%
2011/12	17.04%	16.67%	7.75%
2012/13	12.05%	12.04%	7.75%
2013/14	8.70%	8.78%	7.50%
2014/15	0.09%	0.09%	7.25%
2015/16	8.22%	8.29%	7.00%
2016/17	14.92%	15.01%	7.00%
2017/18	9.19%	9.24%	7.50%
2018/19	5.42%	5.45%	7.50%
10yr. Avg.	8.42%	8.45%	7.47%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2018	\$20,204,084	\$20,106,173
<i>Increases Due To:</i>		
Employer Contributions	\$495,292	\$495,292
Employee Contributions	\$85,503	\$85,503
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$580,795</u>	<u>\$580,795</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	\$1,071,912	
Total Investment Income	<u>\$1,071,912</u>	\$1,071,912
Other Income	\$0	
Total Income	<u>\$1,652,707</u>	<u>\$1,652,707</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$1,389,306)	(\$1,389,306)
Refund of Employee Contributions	(\$14,310)	(\$14,310)
Total Benefit Payments	<u>(\$1,403,616)</u>	<u>(\$1,403,616)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$61,993)	(\$61,993)
Advance Employer Contribution		\$4,136
Total Expenses	<u>(\$1,465,609)</u>	<u>(\$1,461,473)</u>
As of October 1, 2019	<u><u>\$20,391,182</u></u>	<u><u>\$20,297,407</u></u>



Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Employee	Service		Realized	Unrealized	
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Purchase</u>	<u>Interest /</u>	<u>Gains /</u>	<u>Gains /</u>	<u>Other</u>
			<u>Contribs.</u>	<u>Dividends</u>	<u>Losses</u>	<u>Losses</u>	<u>Income</u>
2009/10	\$787,088	\$242,181	\$0	\$0	\$0	\$902,737	\$0
2010/11	\$1,700,324	\$226,880	\$0	\$0	\$0	\$88,402	\$0
2011/12	\$1,443,325	\$188,890	\$0	\$0	\$0	\$2,068,850	\$0
2012/13	\$739,595	\$176,690	\$0	\$0	\$0	\$1,726,462	\$0
2013/14	\$594,082	\$211,135	\$0	\$0	\$0	\$1,360,034	\$0
2014/15	\$598,464	\$234,924	\$0	\$0	\$0	\$14,143	\$0
2015/16	\$668,241	\$255,493	\$0	\$0	\$0	\$1,303,799	\$0
2016/17	\$1,077,364	\$266,060	\$0	\$0	\$0	\$2,485,771	\$0
2017/18	\$946,609	\$93,351	\$0	\$0	\$0	\$1,719,676	\$0
2018/19	\$495,292	\$85,503	\$0	\$0	\$0	\$1,071,912	\$0

Expenses

Plan	Monthly			
<u>Year</u>	<u>Benefit</u>	<u>Contrib.</u>	<u>Admin.</u>	<u>Invest.</u>
	<u>Payments</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>
2009/10	\$911,871	\$18,113	\$29,860	\$0
2010/11	\$944,431	\$65,943	\$29,605	\$0
2011/12	\$1,006,313	\$102,611	\$40,482	\$0
2012/13	\$1,056,604	\$47,171	\$59,813	\$0
2013/14	\$1,181,228	\$136,144	\$64,112	\$0
2014/15	\$1,287,690	\$91,654	\$57,680	\$0
2015/16	\$1,314,946	\$84,231	\$55,894	\$0
2016/17	\$1,352,747	\$385,791	\$61,251	\$0
2017/18	\$1,403,809	\$11,954	\$63,380	\$0
2018/19	\$1,389,306	\$14,310	\$61,993	\$0

Other Actuarial Adjustments

Advance
Employer
Contribs.

-\$998,777
\$232,408
\$210,990
\$313,301
-\$4,382
\$0
-\$25,691
-\$17,710
\$0
-\$4,136

Note: Information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source.



Other Reconciliations

Table II-F

Advance Employer Contribution

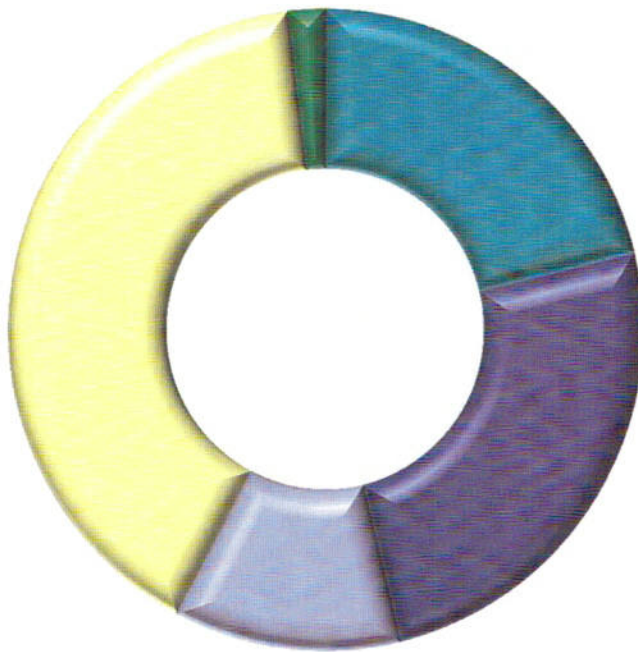
Advance Employer Contribution as of October 1, 2018	\$97,911
Additional Employer Contribution	\$495,292
Minimum Required Contribution	(\$499,428)
Net Increase in Advance Employer Contribution	(\$4,136)
Advance Employer Contribution as of October 1, 2019	<u>\$93,775</u>



Summary of Participant Data

Table III-A

As of October 1, 2019

Actively Employed Participants

Active Participants	11
DROP Participants	0

Inactive Participants

Deferred Vested Participants	13
Due a Refund of Contributions	6
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	21
Disability Retirements	0
Beneficiaries Receiving	1

Total Participants 52Number of Participants Included in Prior Valuations

	Active	DROP	Inactive	Retired	Total
October 1, 2010	31	0	9	16	56
October 1, 2011	28	0	12	18	58
October 1, 2012	24	0	11	18	53
October 1, 2013	29	0	12	20	61
October 1, 2014	28	0	15	22	65
October 1, 2015	34	0	12	23	69
October 1, 2016	39	0	16	22	77
October 1, 2017	14	0	19	24	57
October 1, 2018	14	0	17	23	54
October 1, 2019	11	0	19	22	52



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, 2018</u>	14	0	11	6	0	23	0	0	54
<u>Change in Status</u>									
Re-employed									
Terminated	(3)		2	1					
Retired									
<u>Participation Ended</u>									
Transferred Out									
Cashed Out				(1)					(1)
Died						(2)			(2)
<u>Participation Began</u>									
Newly Hired									
Transferred In									
New Beneficiary								1	1
<u>Other Adjustment</u>									
<u>October 1, 2019</u>	11	0	13	6	0	21	0	1	52

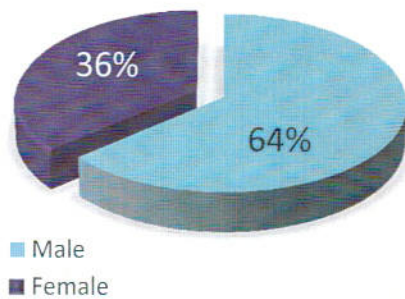


Active Participant Data

Table III-C

As of October 1, 2019

Gender Mix



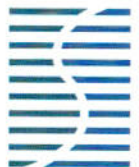
Average Age	55.2 years
Average Service	5.8 years
Total Annualized Compensation for the Prior Year	\$968,668
Total Expected Compensation for the Current Year	\$812,928
Average Increase in Compensation for the Prior Year	6.65%
Expected Increase in Compensation for the Current Year	4.00%
Accumulated Contributions for Active Employees	\$548,554

Actual vs. Expected Salary Increases



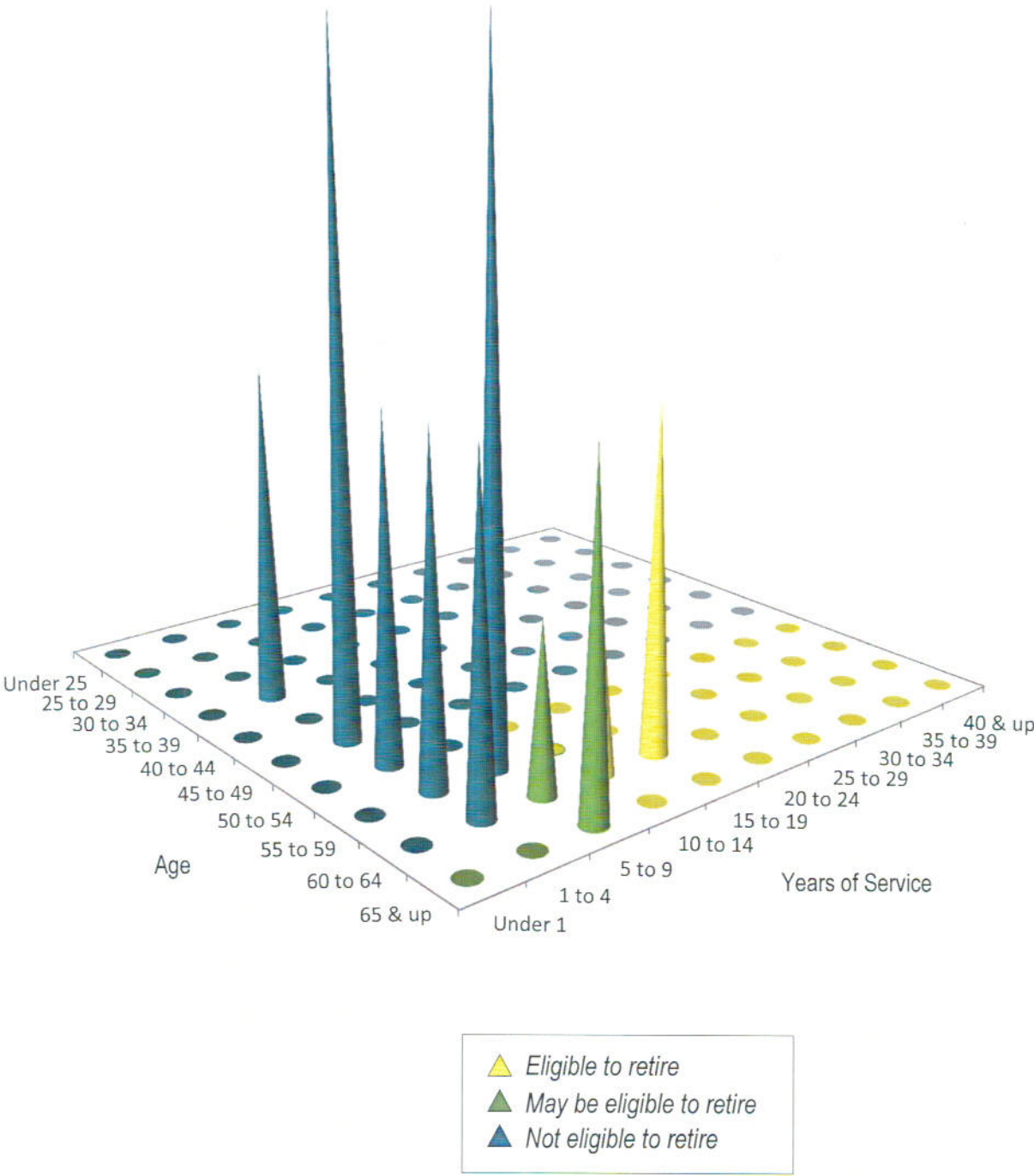
Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2010	50.9	6.5	\$86,846	5.75%	-4.19%
October 1, 2011	50.4	5.7	\$88,903	5.75%	1.69%
October 1, 2012	51.2	6.8	\$85,663	5.75%	-0.29%
October 1, 2013	50.7	5.3	\$87,932	5.75%	1.41%
October 1, 2014	49.8	4.3	\$87,652	4.00%	1.20%
October 1, 2015	48.0	3.9	\$81,270	4.00%	2.17%
October 1, 2016	48.3	2.4	\$88,671	4.00%	6.35%
October 1, 2017	50.9	3.9	\$78,587	4.00%	5.28%
October 1, 2018	51.9	4.9	\$83,349	4.00%	5.73%
October 1, 2019	55.2	5.8	\$88,061	4.00%	6.65%



Active Age-Service Distribution

Table III-D



Active Age-Service-Salary Table

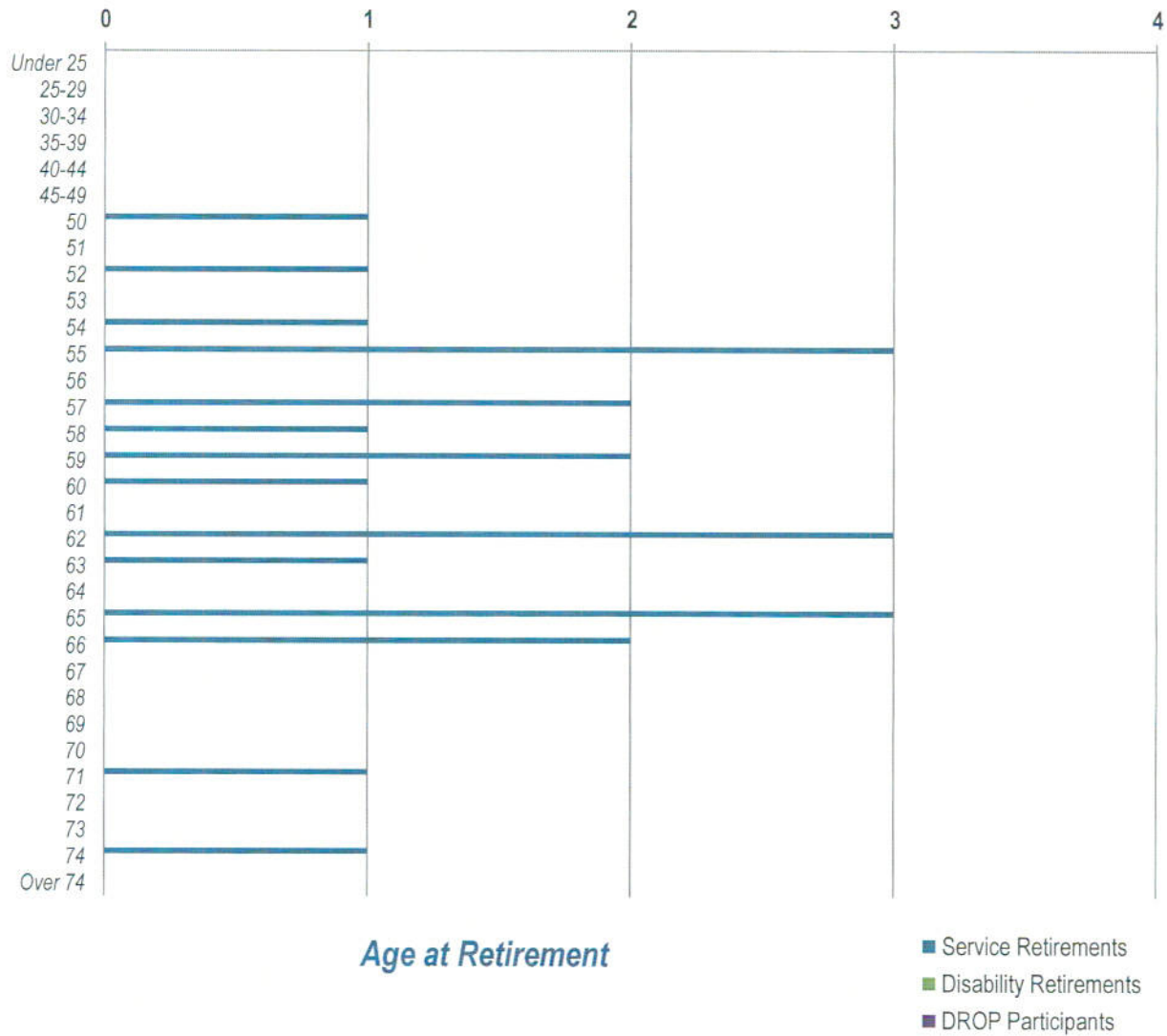
Table III-E

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	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	1	0	0	0	0	0	0	0	0	1
Avg. Pay	0	74,941	0	0	0	0	0	0	0	0	74,941
40 to 44	0	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
45 to 49	0	2	0	0	0	0	0	0	0	0	2
Avg. Pay	0	79,862	0	0	0	0	0	0	0	0	79,862
50 to 54	0	1	0	0	0	0	0	0	0	0	1
Avg. Pay	0	70,000	0	0	0	0	0	0	0	0	70,000
55 to 59	0	1	2	0	0	0	0	0	0	0	3
Avg. Pay	0	76,484	95,496	0	0	0	0	0	0	0	89,159
60 to 64	0	1	1	1	1	0	0	0	0	0	3
Avg. Pay	0	79,958	168,918	168,918	71,167	0	0	0	0	0	106,681
65 & up	0	0	1	0	0	0	0	0	0	0	1
Avg. Pay	0	0	76,484	0	0	0	0	0	0	0	76,484
Total	0	6	4	1	1	0	0	0	0	0	11
Avg. Pay	0	76,851	100,553	168,918	71,167	0	0	0	0	0	88,061



Inactive Participant Data

Table III-F

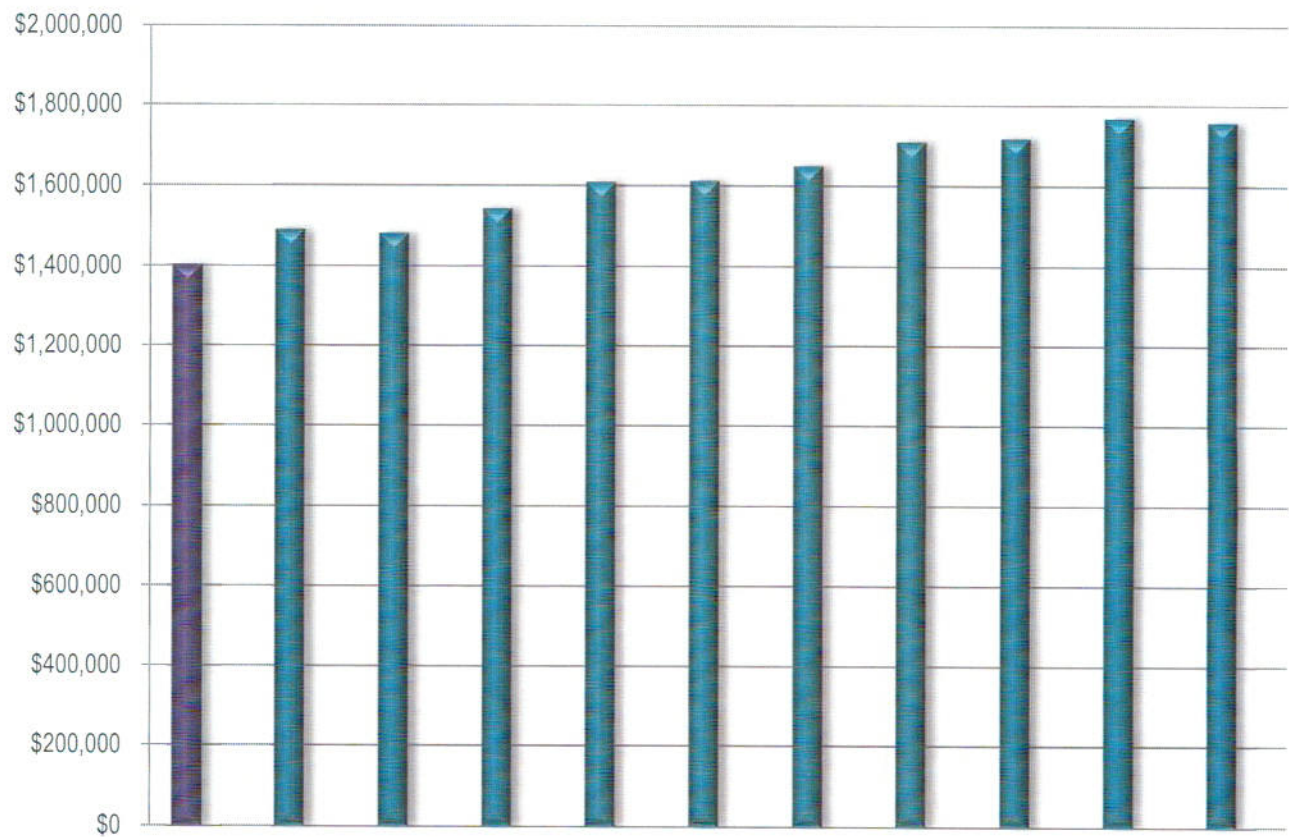
Average Monthly Benefit

Service Retirements	\$5,266.21
Disability Retirements	Not applicable
Beneficiaries Receiving	\$4,391.84
DROP Participants	Not applicable
Deferred Vested Participants	\$1,809.93
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2018 through September 30, 2019

\$1,403,616

Projected

For the period October 1, 2019 through September 30, 2020

\$1,492,798

For the period October 1, 2020 through September 30, 2021

\$1,483,061

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

\$1,545,643

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

\$1,610,524

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

\$1,613,622

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

\$1,650,423

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

\$1,709,317

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

\$1,719,397

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

\$1,768,804

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

\$1,759,149



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

Aggregate cost method. Under this actuarial cost method, a funding cost is developed for the plan as a level percentage of payroll. The level funding percentage is calculated as the excess of the total future benefit liability over accumulated assets and future employee contributions, with this excess spread over the expected future payroll for current active participants. The normal cost is equal to the level funding percentage multiplied by the expected payroll for the year immediately following the valuation date. The actuarial accrued liability is equal to the accumulated assets. Therefore, under the aggregate cost method, no unfunded accrued liability is developed.

2. Asset Method

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

3. Interest (or Discount) Rate

7.50% per annum

4. 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.

5. Decrements

- Pre-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table with full generational projections using Scale BB
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table with full generational projections using Scale BB
- Disability: Age-based rates of disability were assumed, ranging from 0.09% at age 25, 0.15% at age 35, 0.36% at age 45, and 0.61% at age 50.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

- Termination: With respect to participants with less than four years of service, the termination rates are both gender- and service-based, ranging from 25.00% for males and 27.00% for females with less than one year of service to 12.00% for males and 14.00% for females with between three and four years of service; with respect to participants with at least four years of service, the termination rates are both gender- and age-based, ranging from 1.49% for males and 6.83% for females at age 25 to 0.90% for males and 0.27% for females at age 50.
- Retirement: For those participants who have met the age and service requirements to retire, retirement is assumed to occur at the rate of 2.50% per year at each of ages 50 through 54, 5.00% per year at each of ages 55 through 61, and 100% at age 62; an additional 10% retirement is assumed upon the attainment of age 55 with at least 75 points (age plus service).

6. Form of Payment

Future retirees have been assumed to select the 10-year certain and life annuity, except that 50% of individuals who terminate their employment prior to retirement are assumed to elect a refund of their accumulated contributions in lieu of a monthly annuity.

7. Expenses

Administrative expenses are assumed to be \$65,000 per year. In addition, the interest rate set forth in item 3. 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, 2018, the assumed administrative expenses were increased from \$50,000 per year to \$65,000 per year.
- (2) Effective October 1, 2017, the assumed interest (or discount) rate was increased from 7.00% per annum to 7.50% per annum.
- (3) Effective October 1, 2015, the mortality basis was changed from a 2015 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.
- (4) Effective October 1, 2015, the assumed interest (or discount) rate was decreased from 7.25% per annum to 7.00% per annum.
- (5) Effective October 1, 2014, the assumed interest (or discount) rate was decreased from 7.50% per annum to 7.25% per annum.
- (6) Effective October 1, 2014, the assumed administrative expenses were increased from \$40,000 per year to \$50,000 per year.
- (7) Effective October 1, 2013, the actuarial cost method was changed from the frozen initial liability cost method to the aggregate cost method.
- (8) Effective October 1, 2013, the assumed interest (or discount) rate was decreased from 7.75% per annum to 7.50% per annum.
- (9) Effective October 1, 2013, the assumed increase in future salaries was decreased from 5.75% per year to 4.00% per year.
- (10) Effective October 1, 2013, the mortality basis was changed from the RP-2000 Mortality Table for annuitants, projected to 2007 by Scale AA, to the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, both as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.



Changes in Actuarial Methods and Assumptions

Table IV-B

(continued)

- (11) *Effective October 1, 2012, the assumed administrative expenses were increased from \$25,000 per year to \$40,000 per year.*
- (12) *Effective October 1, 2009, the expected increase in total payroll for purposes of amortizing the unfunded liability was eliminated.*
- (13) *Effective October 1, 2009, the valuation interest rate was decreased from 8.00% per annum to 7.75% per annum.*
- (14) *Effective October 1, 2009, the assumed increase in future plan compensation was increased from 4.00% per annum with respect to employees under age 50 or 4.50% per annum with respect to employees over age 50 to 5.75% per annum.*
- (15) *Effective October 1, 2009, the pre-retirement mortality basis was changed from the 1983 Group Annuity Mortality Table, set back five years for females, to the RP-2000 Mortality Table for non-annuitants.*
- (16) *Effective October 1, 2009, the post-retirement mortality basis was changed from the 1983 Group Annuity Mortality Table, set back five years for healthy females or set forward five or 10 years for disabled females and males, respectively, to the RP-2000 Mortality Table for annuitants.*
- (17) *Effective October 1, 2009, anticipated administrative expenses were increased from \$15,000 per year to \$25,000 per year.*



Summary of Plan Provisions

Table V-A

1. Benefit Formula

3.00% of Average Monthly Earnings multiplied by Credited Service earned prior to February 1, 2013 plus 2.00% of Average Monthly Earnings multiplied by Credited Service earned on and after February 1, 2013

2. Service Retirement

Normal retirement (solely with respect to benefits earned prior to February 1, 2013):

*Age 62 with at least four years of credited service; or
Age 55 with age plus service at least equal to 75 ("Rule of 75")*

Normal retirement (solely with respect to benefits earned on and after February 1, 2013):

*Social security retirement age with at least four years of credited service (for participants born after 1937)
Age 62 with at least four years of credited service or age 55 with "Rule of 75"
(for participants born prior to 1937)*

(Social security retirement age is age 66 with respect to participants born during the years 1938 through 1954 and is age 67 with respect to participants born after 1954.)

Early retirement (solely with respect to benefits earned prior to February 1, 2013):

Age 50 with at least 10 years of credited service

Early retirement (solely with respect to benefits earned on and after February 1, 2013):

Age 55 with at least 10 years of credited service

(Note: In the case of early retirement, with respect to benefits earned prior to February 1, 2013, the participant's benefit is reduced by 5% for each year by which the participant's early retirement age precedes his normal retirement age. In the case of early retirement, with respect to benefits earned on and after February 1, 2013, the participant's benefit is reduced actuarially to reflect payments made prior to normal retirement age.)



Summary of Plan Provisions

Table V-A

(continued)

3. Disability Retirement

The disability benefit is a monthly 10-year certain and life annuity equal to the larger of the monthly accrued benefit or 25% of average monthly earnings, but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other City-financed disability or salary continuation benefit (excluding social security benefits) from exceeding his average monthly earnings. The participant may convert his disability benefit into any of the optional forms of payment that are otherwise available under the plan.

(A participant is disabled if he is found to have a mental or physical condition resulting from bodily injury, disease, or a mental disorder that renders him incapable of employment.)

4. Deferred Vested Retirement

A vested participant who terminates employment before becoming eligible for retirement receives a deferred vested retirement benefit payable at the participant's early or normal retirement age. If the benefit is payable prior to normal retirement age, then the benefit is reduced as for early retirement.

A non-vested participant who terminates employment receives his accumulated contributions.

5. Vesting

An employee becomes 50% vested upon the attainment of four years of credited service and becomes 100% vested upon the attainment of six years of credited service.

6. Pre-Retirement Death Benefit

If a vested participant dies prior to retirement, the participant's beneficiary receives a 10-year certain annuity commencing at the participant's normal or early retirement age and reduced for payment prior to the participant's normal retirement age as for early retirement. The beneficiary is guaranteed to receive at least the value of the participant's accumulated contributions.

If a non-vested participant dies prior to retirement, the participant's beneficiary receives the participant's accumulated contributions.



Summary of Plan Provisions

Table V-A

(continued)

7. Form of Payment

Actuarially increased single life annuity (*optional*);

10-year certain and life annuity (*normal form of payment*);

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*);

Any other actuarially equivalent form of payment approved by the Board of Trustees (*optional*); or

Actuarially equivalent single lump sum distribution (*automatic if the single sum value of the participant's benefit is less than or equal to \$5,000 or if the monthly benefit is less than \$100*)

(Note: All forms of payment guarantee at least the return of the participant's accumulated contributions. Furthermore, a participant may change his joint annuitant up to two times after retirement subject to an actuarially equivalent adjustment.)

8. Automatic Cost-of-Living Adjustment

Participants receive an automatic annual 2.25% cost-of-living adjustment (COLA) with respect to benefits earned prior to February 1, 2013. An ad hoc COLA may be adopted from time to time by the City Council with respect to benefits earned on and after February 1, 2013.

9. Average Monthly Earnings

Average monthly earnings during the highest five years of compensation. Earnings include total cash remuneration prior to February 1, 2013, but exclude lump sum payments for accrued annual or sick leave, and include only base salary on and after February 1, 2013. Earnings cannot exceed the maximum amount allowed under Internal Revenue Code (IRC) section 401(a)(17).



Summary of Plan Provisions

Table V-A

(continued)

10. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death. Prior to February 1, 2013, participants may optionally purchase up to four additional years of credited service or a higher benefit formula multiplier by paying into the plan the full actuarial cost thereof.

11. Employee Contribution

Employees must contribute 8.00% of plan compensation. Employee contributions are accumulated with interest at the rate of 3.00% per annum.

12. City Contribution

The City is required to make periodic contributions at least on a quarterly basis as determined under Chapter 112, Florida Statutes.

13. Participant Requirement

All general management employees hired prior to July 18, 2017 other than Charter Officers of the City of North Miami Beach automatically become participants in the plan on their date of hire except for those individuals who are participating in another defined benefit pension plan that is sponsored by the City; actively employed participants as of July 18, 2017 were allowed to opt out of participation in the plan.

14. Actuarial Equivalence

Based on 7.00% interest per annum and the unisex mortality table promulgated by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 417(e)(3).

15. Plan Effective Date

The plan was originally effective on January 24, 2003.



Summary of Plan Amendments

Table V-B

No plan amendments were adopted since the completion of the previous valuation.

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

- (1) *Effective July 18, 2017, employees hired on or after that are not allowed to participate in the plan and employees as of that date were provided a one-time opportunity to opt out of the plan in exchange for receiving a 10% of pay employer contribution under another defined contribution plan. Those employees who opted out of the plan received a refund of their accumulated employee contributions. (Ordinance 2017-8)*
- (2) *During the 2013/14 fiscal year, Charter Officers hired after the effective date of the ordinance were excluded from participation in the plan. (Ordinance 2014-2)*
- (3) *The benefit formula multiplier that applies to service earned on and after February 1, 2013 was reduced from 3.00% to 2.00%. (Ordinance 2012-33)*
- (4) *The normal retirement age with respect to benefits earned on and after February 1, 2013 was delayed until the participant's social security retirement age (age 66 with respect to participants born during the years 1938 through 1954 or age 67 with respect to participants born after 1954) for participants born after 1937. (Ordinance 2012-33)*
- (5) *The early retirement age with respect to benefits earned on and after February 1, 2013 was delayed until age 55 with at least 10 years of service. (Ordinance 2012-33)*
- (6) *The early retirement reduction with respect to benefits earned on and after February 1, 2013 was changed from 5% per year prior to normal retirement age to an actuarially determined reduction. (Ordinance 2012-33)*
- (7) *Effective February 1, 2013, the vesting schedule was changed from full vesting after six years of service to 50% vesting after four years of service and full vesting after six years of service. (Ordinance 2012-33)*
- (8) *Plan compensation on and after February 1, 2013 includes only base salary. (Ordinance 2012-33)*
- (9) *Effective February 1, 2013, participants may no longer purchase prior service or a higher benefit formula multiplier. (Ordinance 2012-33)*
- (10) *Effective February 1, 2013, the Deferred Retirement Option Plan (DROP) was eliminated. (Ordinance 2012-33)*



Summary of Plan Amendments

Table V-B

(continued)

- (11) *The automatic annual cost-of-living adjustment (COLA) was eliminated with respect to benefits earned on and after February 1, 2013. Instead, with respect to benefits earned on and after February 1, 2013, the City Council may adopt an ad hoc COLA from time to time. (Ordinance 2012-33)*
- (12) *Effective during the 2009/10 plan year, the definition of actuarial equivalence was changed from an 8.00% interest rate and the 1994 Group Annuity Reserving Table, projected to 2002 by Scale AA, to a 7.75% interest rate and the unisex mortality table promulgated by the IRS for purposes of IRC section 417(e)(3).*

