Retirement Plan for the Employees of the Town of Davie

Actuarial Valuation
As of October 1, 2019

Determines the Contribution
For the 2020/21 Fiscal Year

Southern Actuarial Services

November 16, 2019

Introduction

This report presents the results of the October 1, 2019 actuarial valuation for the Retirement Plan for the Employees of the Town of Davie. 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 rate is 17.65% of covered payroll, which represents a decrease of 1.42% of payroll from the prior valuation.

The normal cost rate as of October 1, 2019 is 18.57%, as compared to a rate of 20.13% determined in the prior valuation. Table I-C provides a breakdown of the sources of change in the normal cost rate. Significantly, the rate increased by 0.35% of payroll due to investment losses and decreased by 1.91% of payroll due to demographic experience. Although the market value of assets only earned 5.75% during the 2018/19 plan year, the actuarial value of assets is based on a five-year phase-in of the market value investment return. On this basis, the actuarial value of assets earned 6.65% 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 Town must contribute an amount equal to the annual normal cost of the plan, adjusted as necessary for administrative expenses and to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the Town's 2020/21 minimum required contribution will be equal to 17.65% multiplied by the total pensionable earnings for the 2020/21 fiscal year for the active employees who are covered by the plan.

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 $98,583,784. As illustrated in Table I-A, current assets are sufficient to cover $69,060,694 of this amount, the employer's 2019/20 expected contribution will cover $3,607,345 of this amount, the employer's 2020/21 expected contribution will cover $3,505,010 of this amount, and future employee contributions will cover $3,832,651 of this amount, leaving $18,578,083 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.

Employer Contribution Shortfall

For the 2018/19 plan year, the minimum required contribution was $3,944,403 plus the employer contribution receivable as of October 1, 2018, which was equal to $265,012. When the actual Town contribution of $4,007,396 is subtracted from these amounts, there is a $202,019 employer contribution receivable as of September 30, 2019. Therefore, the first $202,019 of employer contributions made for the 2019/20 plan year will be applied to the 2018/19 plan year.

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 liablities 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, including a development of the actuarial value of assets which is based on a five-year smoothing of the investment gains and losses. 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.

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,

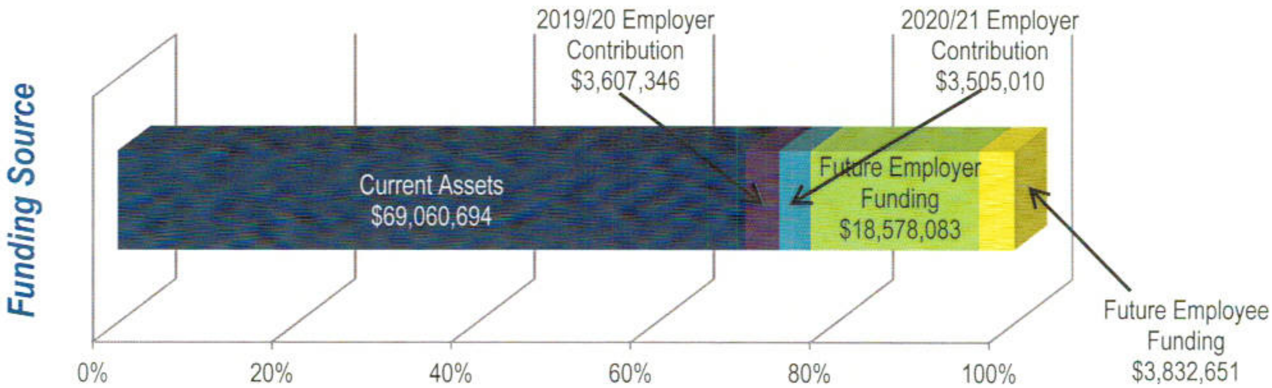
Charles T. Carr
Consulting Actuary
Southern Actuarial Services Company, Inc.

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

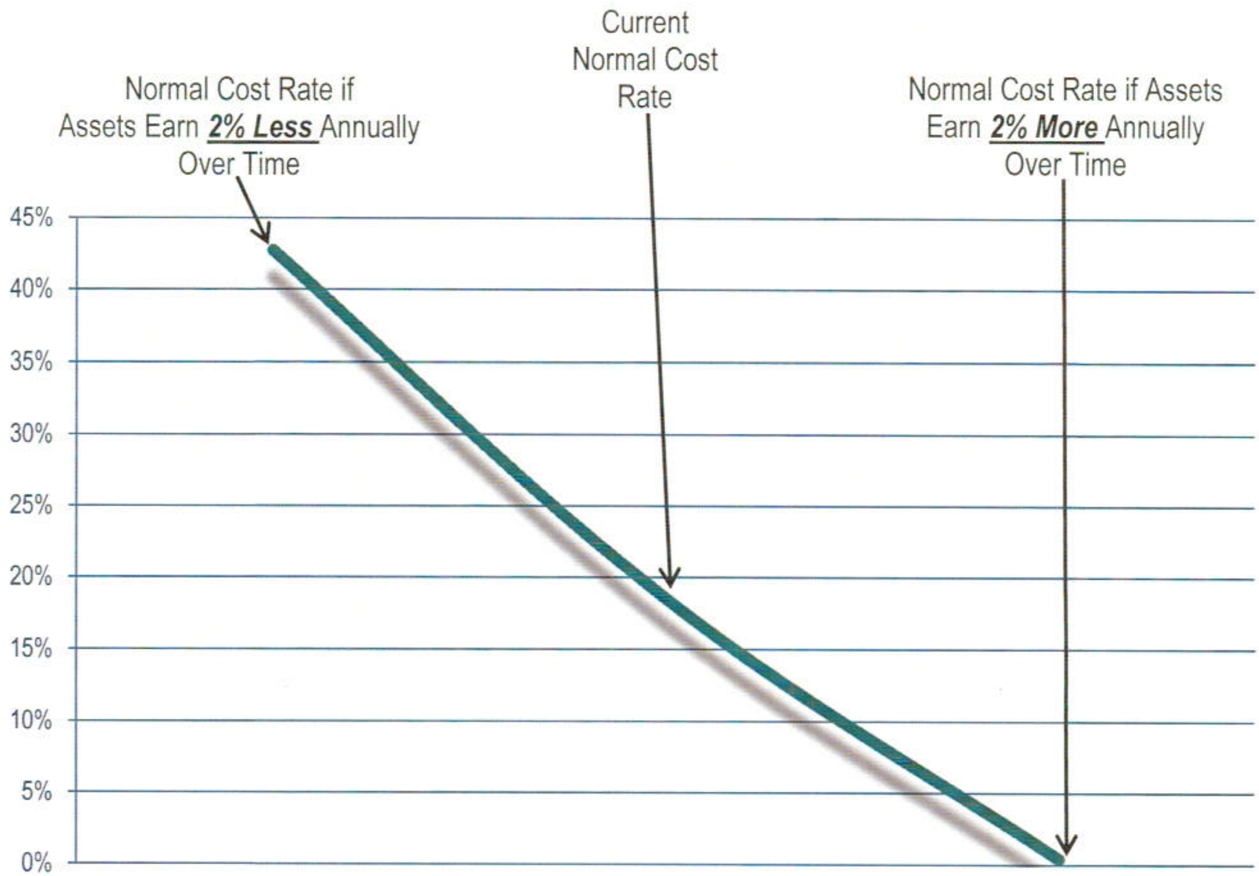


	For the 2020/21 Plan Year
Present Value of Future Benefits	$97,366,700
Present Value of Future Administrative Expenses	$1,217,084
Actuarial Value of Assets	($69,060,694)
Present Value of Future Employee Contributions	($3,832,651)
Present Value of Future Normal Costs	$25,690,439
Present Value of Future Payroll	*÷ $138,367,988*
Normal Cost Rate	*= 18.5668%*
Expected Payroll	*x $18,916,341*
Normal Cost	$3,512,150
Interest Adjustment Assuming a Beginning-of-Year Employer Contribution	$0
Expected Employer Contribution for the 2019/20 Plan Year	($3,607,346)
Remaining Contribution Due/(Credit) for the 2019/20 Plan Year	($95,196)
	x 0.075
One Year's Interest Charge/(Credit) on the Remaining Contribution	($7,140)
Preliminary Employer Contribution for the 2020/21 Plan Year	$3,505,010
Expected Payroll for the 2020/21 Plan Year	*÷ $19,862,158*
Minimum Required Contribution Rate	**17.65%**

(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)

Sensitivity Analysis

Table I-B



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

Gain and Loss Analysis

Table I-C

Previous normal cost rate	20.13%
Increase (decrease) due to investment gains and losses	0.35%
Increase (decrease) due to demographic experience	-1.91%
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 normal cost rate	18.57%

Present Value of Future Benefits (PVB)

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	$55,586,259	$55,586,259	$55,586,259
Termination benefits	$1,848,496	$1,848,496	$1,848,496
Disability benefits	$1,818,653	$1,818,653	$1,818,653
Death benefits	$1,355,271	$1,355,271	$1,355,271
Refund of employee contributions	$427,945	$427,945	$427,945
Sub-total	**$61,036,624**	**$61,036,624**	**$61,036,624**
Deferred Vested Participants			
Retirement benefits	$4,612,353	$4,612,353	$4,612,353
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$4,612,353**	**$4,612,353**	**$4,612,353**
Due a Refund of Contributions	**$67,248**	**$67,248**	**$67,248**
Deferred Beneficiaries	**$231,794**	**$231,794**	**$231,794**
Retired Participants			
Service retirements	$25,310,201	$25,310,201	$25,310,201
Disability retirements	$333,030	$333,030	$333,030
Beneficiaries receiving	$3,261,325	$3,261,325	$3,261,325
DROP participants	$2,514,125	$2,514,125	$2,514,125
Sub-total	**$31,418,681**	**$31,418,681**	**$31,418,681**
Grand Total	**$97,366,700**	**$97,366,700**	**$97,366,700**
Present Value of Future Payroll	$138,367,988	$138,367,988	$138,367,988
Present Value of Future Employee Contribs.	$3,832,651	$3,832,651	$3,832,651
Present Value of Future Employer Contribs.	$25,690,439	$25,690,439	$25,690,439

Present Value of Accrued Benefits (PVAB)

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	$25,119,374	$25,119,374	$25,119,374
Termination benefits	$995,240	$995,240	$995,240
Disability benefits	$822,194	$822,194	$822,194
Death benefits	$580,786	$580,786	$580,786
Refund of employee contributions	$194,252	$194,252	$194,252
Sub-total	**$27,711,846**	**$27,711,846**	**$27,711,846**
Deferred Vested Participants			
Retirement benefits	$4,612,353	$4,612,353	$4,612,353
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$4,612,353**	**$4,612,353**	**$4,612,353**
Due a Refund of Contributions	**$67,248**	**$67,248**	**$67,248**
Deferred Beneficiaries	**$231,794**	**$231,794**	**$231,794**
Retired Participants			
Service retirements	$25,310,201	$25,310,201	$25,310,201
Disability retirements	$333,030	$333,030	$333,030
Beneficiaries receiving	$3,261,325	$3,261,325	$3,261,325
DROP participants	$2,514,125	$2,514,125	$2,514,125
Sub-total	**$31,418,681**	**$31,418,681**	**$31,418,681**
Grand Total	**$64,041,922**	**$64,041,922**	**$64,041,922**
Funded Percentage	124.02%	124.02%	124.02%

(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 (PVVB)

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	$25,119,374	$25,119,374	$25,119,374
Termination benefits	$943,781	$943,781	$943,781
Disability benefits	$822,194	$822,194	$822,194
Death benefits	$535,546	$535,546	$535,546
Refund of employee contributions	$263,833	$263,833	$263,833
Sub-total	**$27,684,728**	**$27,684,728**	**$27,684,728**
Deferred Vested Participants			
Retirement benefits	$4,612,353	$4,612,353	$4,612,353
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$4,612,353**	**$4,612,353**	**$4,612,353**
Due a Refund of Contributions	**$67,248**	**$67,248**	**$67,248**
Deferred Beneficiaries	**$231,794**	**$231,794**	**$231,794**
Retired Participants			
Service retirements	$25,310,201	$25,310,201	$25,310,201
Disability retirements	$333,030	$333,030	$333,030
Beneficiaries receiving	$3,261,325	$3,261,325	$3,261,325
DROP participants	$2,514,125	$2,514,125	$2,514,125
Sub-total	**$31,418,681**	**$31,418,681**	**$31,418,681**
Grand Total	**$64,014,804**	**$64,014,804**	**$64,014,804**

Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	$36,784,914	$36,784,914	$36,784,914
Termination benefits	$1,305,751	$1,305,751	$1,305,751
Disability benefits	$1,163,270	$1,163,270	$1,163,270
Death benefits	$814,449	$814,449	$814,449
Refund of employee contributions	$163,250	$163,250	$163,250
Sub-total	**$40,231,634**	**$40,231,634**	**$40,231,634**
Deferred Vested Participants			
Retirement benefits	$4,612,353	$4,612,353	$4,612,353
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$4,612,353**	**$4,612,353**	**$4,612,353**
Due a Refund of Contributions	**$67,248**	**$67,248**	**$67,248**
Deferred Beneficiaries	**$231,794**	**$231,794**	**$231,794**
Retired Participants			
Service retirements	$25,310,201	$25,310,201	$25,310,201
Disability retirements	$333,030	$333,030	$333,030
Beneficiaries receiving	$3,261,325	$3,261,325	$3,261,325
DROP participants	$2,514,125	$2,514,125	$2,514,125
Sub-total	**$31,418,681**	**$31,418,681**	**$31,418,681**
Grand Total	**$76,561,710**	**$76,561,710**	**$76,561,710**

Actuarial Value of Assets

Table II-A

	Net Investment Gain (Loss)		*Unrecognized Gain (Loss)*
For the 2015/16 plan year	*$4,102,297*	*x 20%*	*$820,459*
For the 2016/17 plan year	*$7,747,395*	*x 40%*	*$3,098,958*
For the 2017/18 plan year	*$5,065,294*	*x 60%*	*$3,039,176*
For the 2018/19 plan year	*$4,259,241*	*x 80%*	*$3,407,393*
			$10,365,986

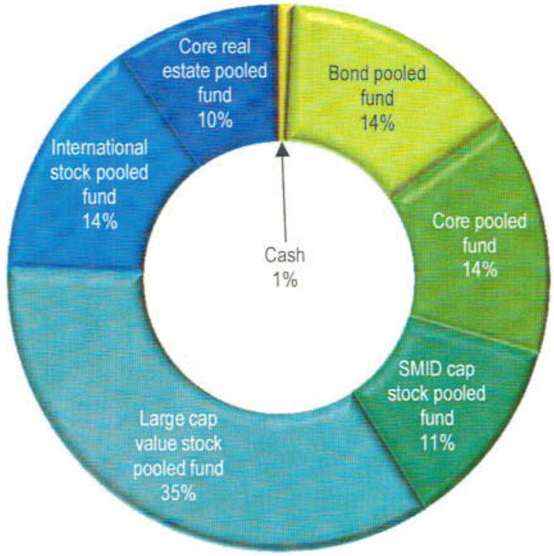
Market Value of Assets as of October 1, 2019	$79,635,741
Minus DROP account balances	($209,061)
Minus advance employer contributions	$0
Adjustment for unrecognized gain or loss as shown above, but restricted to an amount that keeps the actuarial value of assets within an 80%-120% corridor of the market value	($10,365,986)
Actuarial Value of Assets as of October 1, 2019	**$69,060,694**

Historical Actuarial Value of Assets	
October 1, 2010	$22,614,476
October 1, 2011	$25,770,913
October 1, 2012	$29,428,849
October 1, 2013	$34,186,402
October 1, 2014	$39,139,813
October 1, 2015	$43,802,617
October 1, 2016	$49,150,405
October 1, 2017	$55,087,022
October 1, 2018	$62,274,992
October 1, 2019	$69,060,694

Market Value of Assets

Table II-B

	As of October 1, 2019
Market Value of Assets	**$79,635,741**
Cash	$714,904
Bond pooled fund	$11,438,456
Core pooled fund	$11,359,022
SMID cap stock pooled fund	$9,134,878
Large cap value stock pooled fund	$27,563,501
International stock pooled fund	$11,517,890
Core real estate pooled fund	$7,705,071
Employer contribution receivable	$202,019

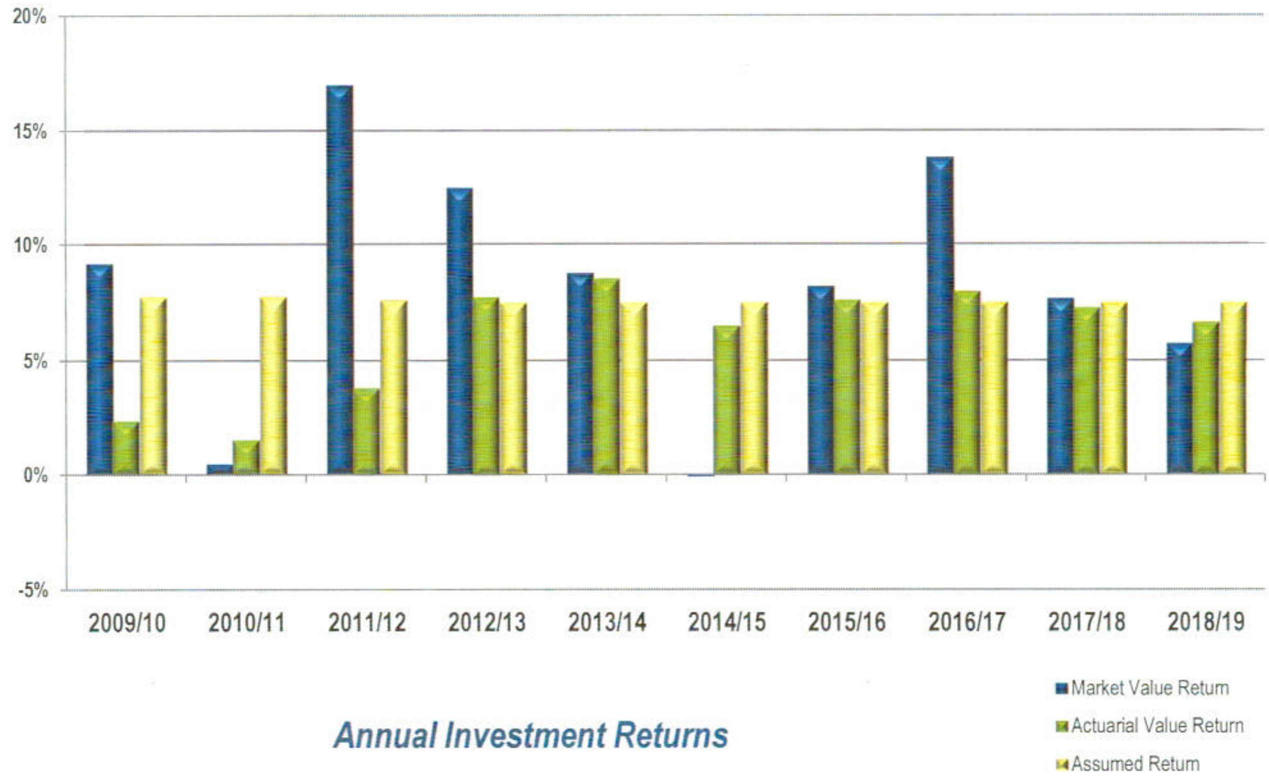


Historical Market Value of Assets

October 1, 2010	$23,908,450
October 1, 2011	$26,851,614
October 1, 2012	$34,322,299
October 1, 2013	$41,202,814
October 1, 2014	$47,229,985
October 1, 2015	$49,091,985
October 1, 2016	$55,049,778
October 1, 2017	$64,680,370
October 1, 2018	$72,691,870
October 1, 2019	$79,635,741

Investment Return

Table II-C



Annual Investment Returns

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2009/10	9.20%	2.39%	7.75%
2010/11	0.51%	1.55%	7.75%
2011/12	16.98%	3.80%	7.60%
2012/13	12.48%	7.73%	7.50%
2013/14	8.78%	8.51%	7.50%
2014/15	-0.06%	6.49%	7.50%
2015/16	8.20%	7.60%	7.50%
2016/17	13.84%	7.97%	7.50%
2017/18	7.66%	7.28%	7.50%
2018/19	5.75%	6.65%	7.50%
10yr. Avg.	8.21%	5.97%	7.56%

Asset Reconciliation

Table II-D

	Market Value	Actuarial Value
As of October 1, 2018	**$72,691,870**	**$62,274,992**
Increases Due To:		
Employer Contributions	$3,944,403	$3,944,403
Employee Contributions	$495,591	$495,591
Service Purchase Contributions	$313,056	$313,056
Total Contributions	$4,753,050	$4,753,050
Interest and Dividends	$0	
Realized Gains (Losses)	$0	
Unrealized Gains (Losses)	$4,259,241	
Total Investment Income	$4,259,241	$4,228,588
Other Income	$0	
Total Income	**$9,012,291**	**$8,981,638**
Decreases Due To:		
Monthly Benefit Payments	($1,913,701)	($1,913,701)
Refund of Employee Contributions	($62,382)	($62,382)
DROP Credits		($127,516)
Total Benefit Payments	($1,976,083)	($2,103,599)
Investment Expenses	$0	
Administrative Expenses	($92,337)	($92,337)
Advance Employer Contribution		$0
Total Expenses	**($2,068,420)**	**($2,195,936)**
As of October 1, 2019	**$79,635,741**	**$69,060,694**

Historical Trust Fund Detail

Table II-E

Income

Plan Year	Employer Contribs.	Employee Contribs.	Service Purchase Contribs.	Interest / Dividends	Realized Gains / Losses	Unrealized Gains / Losses	Other Income
2009/10	$3,369,001	$0	$108,611	$0	$0	$1,892,055	$0
2010/11	$3,488,302	$0	$25,297	$0	$0	$129,284	$0
2011/12	$3,592,027	$0	$0	$0	$0	$4,788,443	$0
2012/13	$3,582,952	$5,032	$50,811	$0	$0	$4,435,541	$0
2013/14	$3,388,803	$204,808	$0	$0	$0	$3,720,443	$0
2014/15	$2,872,570	$363,834	$0	$0	$0	-$31,288	$0
2015/16	$2,936,336	$417,945	$0	$0	$0	$4,102,297	$0
2016/17	$3,109,997	$446,412	$0	$0	$0	$7,747,395	$0
2017/18	$4,502,326	$481,568	$0	$0	$0	$5,065,294	$0
2018/19	$3,944,403	$495,591	$313,056	$0	$0	$4,259,241	$0

Expenses / *Other Actuarial Adjustments*

Plan Year	Monthly Benefit Payments	Contrib. Refunds	Admin. Expenses	Invest. Expenses	DROP Credits	Advance Employer Contribs.
2009/10	$493,766	$1,228	$80,887	$0	$27,090	$9
2010/11	$616,599	$0	$83,120	$0	$28,905	$0
2011/12	$812,474	$9,903	$87,408	$0	$52,947	$0
2012/13	$1,111,743	$0	$82,078	$0	-$52,091	$105,758
2013/14	$1,187,207	$716	$98,960	$0	-$35,533	$382,004
2014/15	$1,228,602	$1,682	$112,832	$0	$28,534	-$189,566
2015/16	$1,391,516	$8,934	$98,335	$0	$65,827	-$155,031
2016/17	$1,570,371	$8,108	$94,733	$0	$84,622	-$143,165
2017/18	$1,926,988	$19,192	$91,508	$0	-$120,935	$0
2018/19	$1,913,701	$62,382	$92,337	$0	$127,516	$0

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

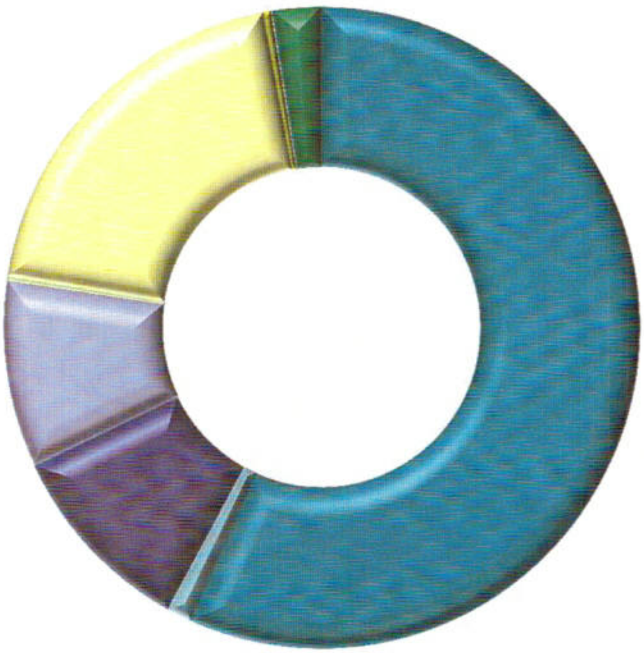
Advance Employer Contribution as of October 1, 2018	$0
Additional Employer Contribution	$3,944,403
Immediate Application of Advance Employer Contribution	$0
Minimum Required Contribution	($3,944,403)
Net Increase in Advance Employer Contribution	$0
Advance Employer Contribution as of October 1, 2019	$0

DROP Account Reconciliation

DROP Balance as of October 1, 2018	$81,545
DROP Benefit Credits	$118,865
DROP Investment Credits	$8,651
DROP Benefits Paid Out	$0
Net DROP Credit	$127,516
DROP Balance as of October 1, 2019	$209,061

Summary of Participant Data

Table III-A



Participant Distribution by Status

As of October 1, 2019

Actively Employed Participants	
Active Participants	276
DROP Participants	6
Inactive Participants	
Deferred Vested Participants	48
Due a Refund of Contributions	46
Deferred Beneficiaries	1
Participants Receiving a Benefit	
Service Retirements	95
Disability Retirements	2
Beneficiaries Receiving	12
Total Participants	**486**

Number of Participants Included in Prior Valuations

	Active	*DROP*	*Inactive*	*Retired*	*Total*
October 1, 2010	245	1	18	32	296
October 1, 2011	239	1	22	40	302
October 1, 2012	230	2	29	48	309
October 1, 2013	222	2	28	59	311
October 1, 2014	237	1	36	64	338
October 1, 2015	244	2	50	72	368
October 1, 2016	251	4	67	82	404
October 1, 2017	267	3	79	97	446
October 1, 2018	273	3	94	103	473
October 1, 2019	276	6	95	109	486

Data Reconciliation

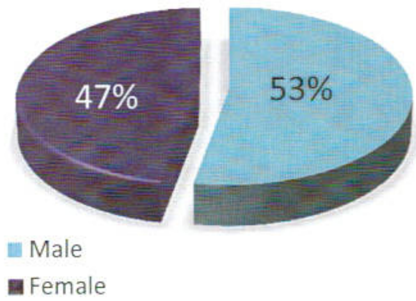
Table III-B

	Active	DROP	Deferred Vested	Due a Refund	Def. Benef.	Service Retiree	Disabled Retiree	Benef. Rec'v.	Total
October 1, 2018	273	3	47	46	1	89	2	12	**473**
Change in Status									
Re-employed									
Terminated	(22)		4	18					
Retired	(4)		(2)			6			
Participation Ended									
Transferred Out	(3)	3							
Cashed Out			(1)	(17)					**(18)**
Died									
Participation Began									
Newly Hired	32								**32**
Transferred In									
New Beneficiary									
Other Adjustment				(1)					**(1)**
October 1, 2019	276	6	48	46	1	95	2	12	**486**

Active Participant Data

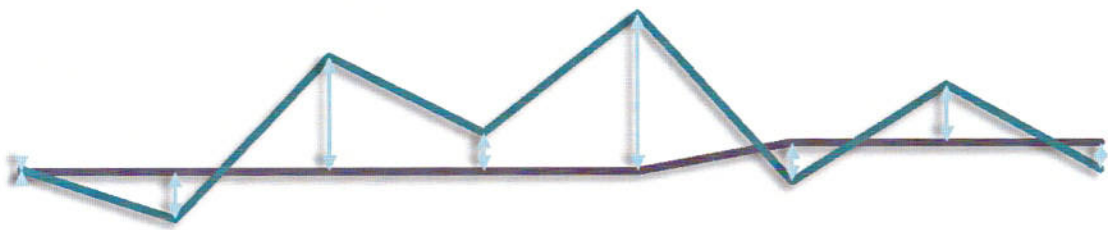
Table III-C

Gender Mix



As of October 1, 2019

Average Age	46.9 years
Average Service	9.1 years
Total Annualized Compensation for the Prior Year	$18,015,562
Total Expected Compensation for the Current Year	$18,916,341
Average Increase in Compensation for the Prior Year	4.07%
Expected Increase in Compensation for the Current Year	5.00%
Accumulated Contributions for Active Employees	$2,177,195



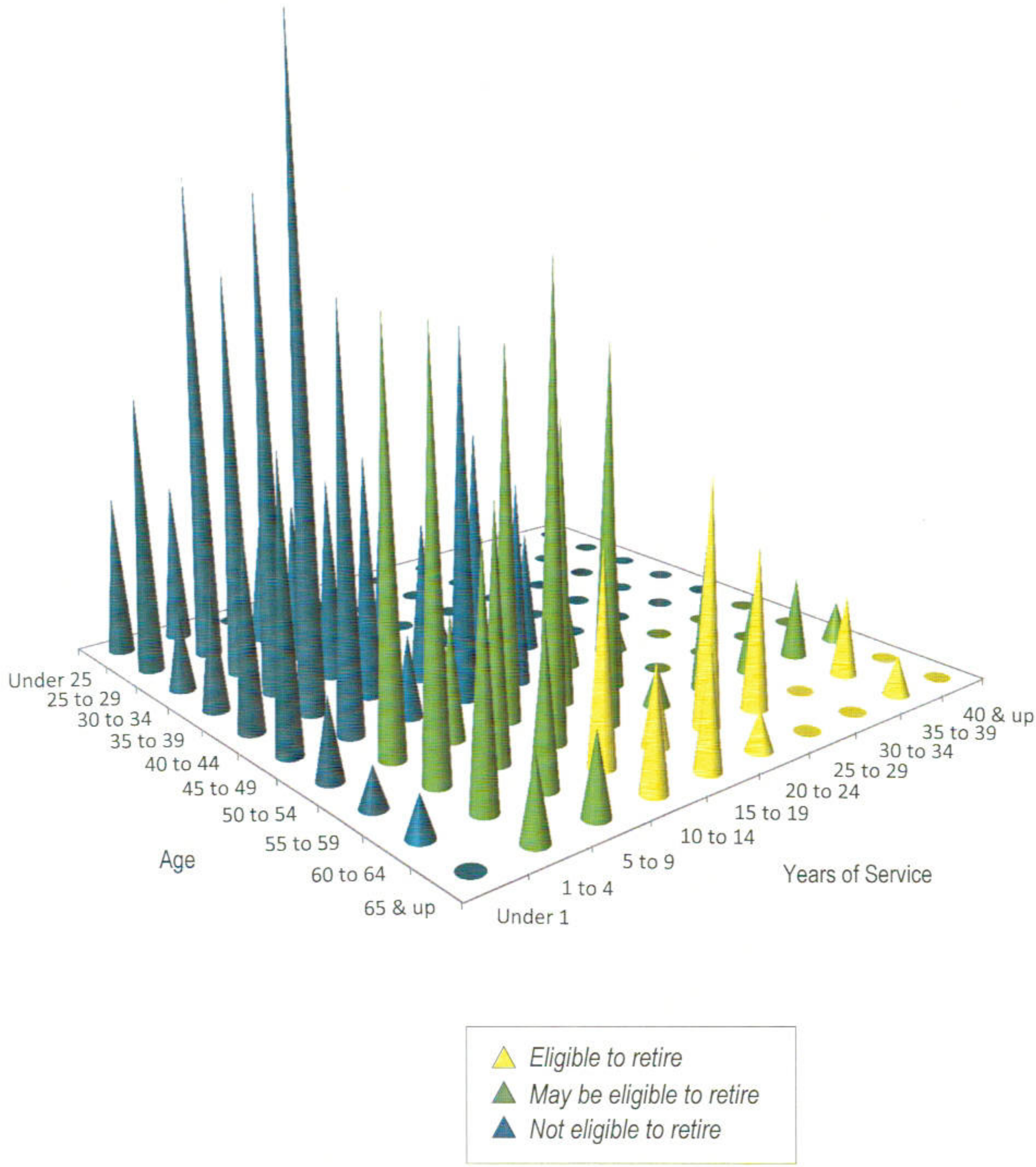
Actual vs. Expected Salary Increases

Active Participant Statistics From Prior Valuations

	Average Age	*Average Service*	*Average Salary*	*Average Expected Salary Increase*	*Average Actual Salary Increase*
October 1, 2010	46.5	9.0	$55,423	5.80%	5.25%
October 1, 2011	46.8	9.3	$55,503	6.19%	1.93%
October 1, 2012	47.1	9.4	$55,056	4.00%	4.08%
October 1, 2013	48.1	10.0	$55,891	4.00%	2.30%
October 1, 2014	47.5	9.8	$56,613	4.00%	8.03%
October 1, 2015	48.1	9.9	$58,486	4.00%	5.36%
October 1, 2016	48.2	9.7	$63,019	4.00%	9.57%
October 1, 2017	47.3	9.2	$63,134	5.00%	3.63%
October 1, 2018	46.8	9.0	$63,868	5.00%	7.03%
October 1, 2019	46.9	9.1	$65,274	5.00%	4.07%

Active Age-Service Distribution

Table III-D



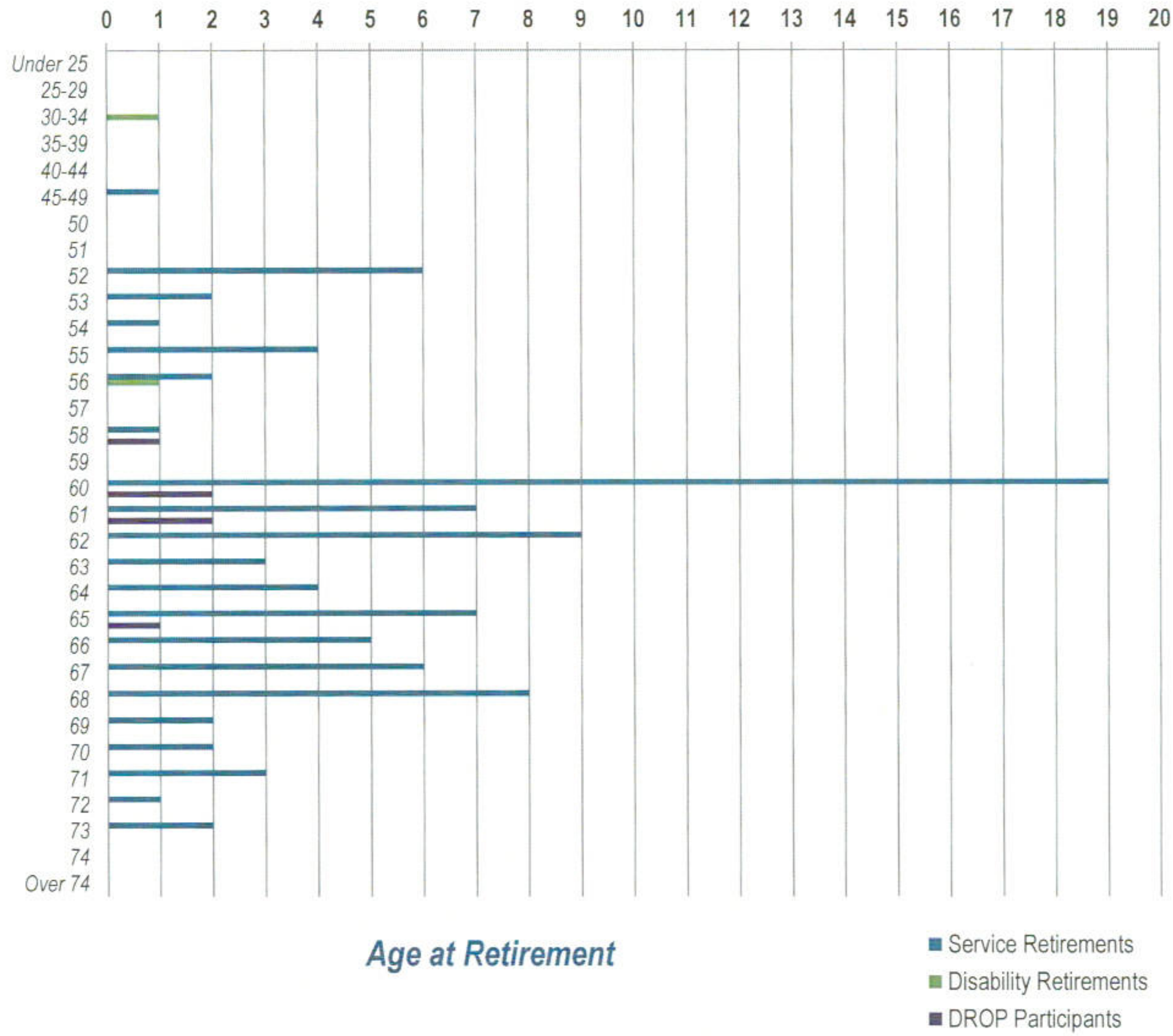
Active Age-Service-Salary Table

Table III-E

Attained Age	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	Total
	Completed Years of Service										
Under 25	4	4	0	0	0	0	0	0	0	0	8
Avg.Pay	36,547	40,531	0	0	0	0	0	0	0	0	38,539
25 to 29	7	12	3	1	0	0	0	0	0	0	23
Avg.Pay	41,813	42,585	60,703	50,119	0	0	0	0	0	0	45,041
30 to 34	2	10	4	2	0	0	0	0	0	0	18
Avg.Pay	58,305	52,931	58,347	63,537	0	0	0	0	0	0	55,910
35 to 39	3	12	5	5	1	0	0	0	0	0	26
Avg.Pay	59,244	67,673	61,556	60,827	59,425	0	0	0	0	0	63,890
40 to 44	5	16	6	4	6	3	0	0	0	0	40
Avg.Pay	56,153	60,793	91,342	66,016	79,114	70,627	0	0	0	0	68,803
45 to 49	7	10	2	9	5	2	1	0	0	0	36
Avg.Pay	31,820	59,002	59,725	88,272	86,701	63,677	63,933	0	0	0	65,318
50 to 54	2	10	3	9	7	5	0	0	0	0	36
Avg.Pay	54,749	79,231	38,162	67,613	62,928	86,211	0	0	0	0	69,344
55 to 59	1	10	6	11	9	1	4	2	2	1	47
Avg.Pay	80,909	63,207	59,385	72,863	59,760	50,608	88,257	73,567	61,341	103,268	67,773
60 to 64	1	6	4	5	2	6	4	0	2	0	30
Avg.Pay	73,467	68,273	109,100	62,805	62,161	96,371	73,463	0	96,097	0	80,737
65 & up	0	2	2	3	3	1	0	0	1	0	12
Avg.Pay	0	61,892	77,251	61,446	79,389	44,067	0	0	51,522	0	66,365
Total	32	92	35	49	33	18	9	2	5	1	276
Avg.Pay	46,894	60,163	70,071	70,372	69,953	80,177	78,979	73,567	73,280	103,268	65,274

Inactive Participant Data

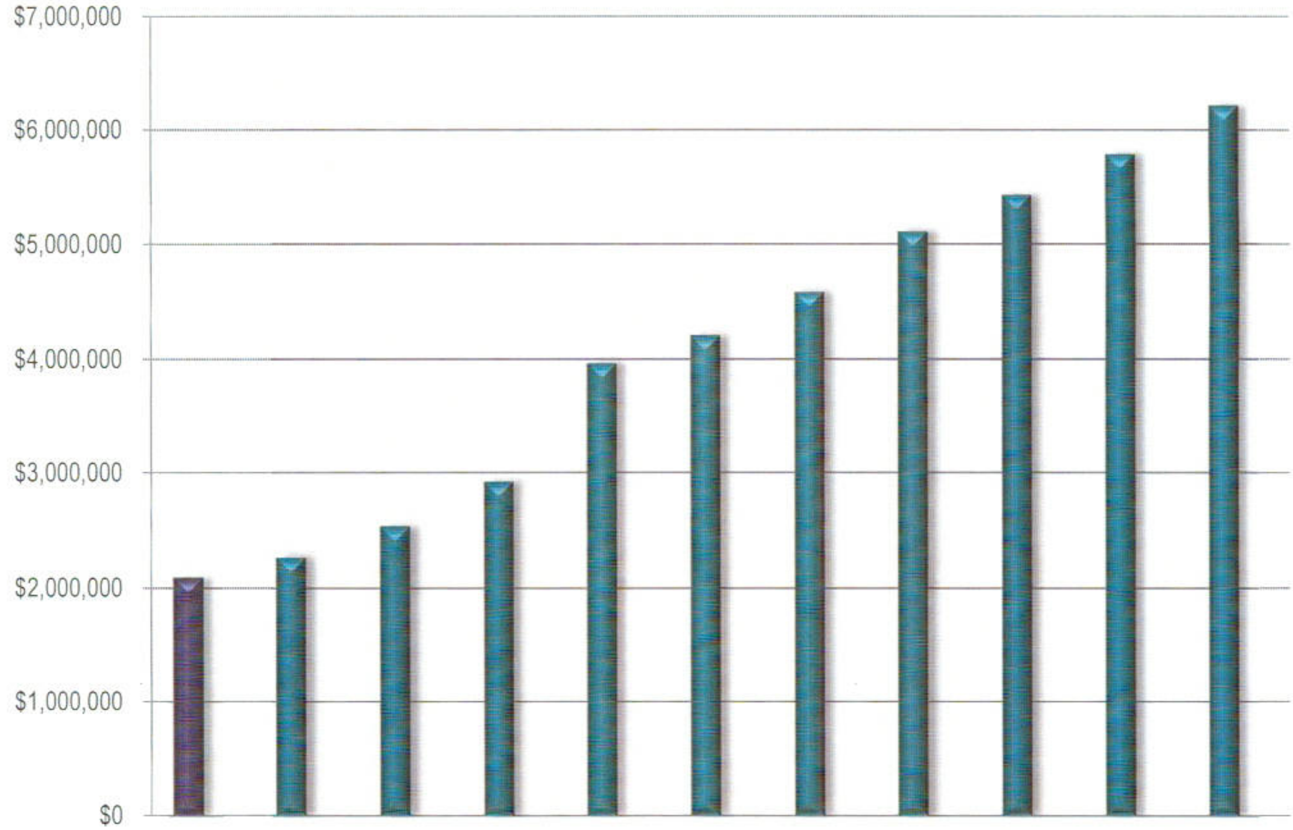
Table III-F



	Average Monthly Benefit
Service Retirements	$1,548.38
Disability Retirements	$730.07
Beneficiaries Receiving	$1,337.09
DROP Participants	$2,381.28
Deferred Vested Participants	$1,058.49
Deferred Beneficiaries	$1,858.39

Projected Benefit Payments

Table III-G



Actual	
For the period October 1, 2018 through September 30, 2019	$2,094,948
Projected	
For the period October 1, 2019 through September 30, 2020	$2,275,386
For the period October 1, 2020 through September 30, 2021	$2,543,508
For the period October 1, 2021 through September 30, 2022	$2,926,309
For the period October 1, 2022 through September 30, 2023	$3,972,014
For the period October 1, 2023 through September 30, 2024	$4,215,723
For the period October 1, 2024 through September 30, 2025	$4,589,408
For the period October 1, 2025 through September 30, 2026	$5,115,342
For the period October 1, 2026 through September 30, 2027	$5,434,021
For the period October 1, 2027 through September 30, 2028	$5,794,159
For the period October 1, 2028 through September 30, 2029	$6,216,386

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, adjusted to reflect a five-year phase-in of the net investment appreciation.

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

7.50% per annum

4. **Salary Increases**

Plan compensation is generally assumed to increase at the rate of 5.00% per annum, unless actual plan compensation is known for a prior plan year.

Average final compensation is increased by 4.50% with respect to general employees who terminate their employment prior to October 1, 2023, by 3.00% with respect to such employees who terminate their employment during the period October 1, 2023 through September 30, 2028, and by 1.50% with respect to such employees who terminate their employment during the period October 1, 2028 through September 30, 2033.

Average final compensation is increased by 15.00% with respect to management employees who terminate their employment prior to October 1, 2021, by 10.00% with respect to such employees who terminate their employment during the period October 1, 2021 through September 30, 2026, and by 5.00% with respect to such employees who terminate their employment during the period October 1, 2026 through September 30, 2031.

Summary of Actuarial Methods and Assumptions — Table IV-A

(continued)

5. **Decrements**

• Pre-retirement mortality:	Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB
• Post-retirement mortality:	Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB
• Disability:	Age- and gender-based rates of disability were assumed, ranging from 0.067% for males and 0.040% for females at age 25, 0.119% for males and 0.118% for females at age 35, 0.462% for males and 0.435% for females at age 45, and 1.000% for males and 0.840% for females at age 55.
• Termination:	The rate of withdrawal for a participant with less than two years of service was assumed to be 18.00% per year. The rate of withdrawal for a participant with at least two years of service, but less than four years of service, was assumed to be 14.00% per year. The rate of withdrawal for a participant with at least four years of service, but less than six years of service, was assumed to be 9.00% per year. With respect to participants with at least six years of service, the termination rates are gender-based, ranging from 14.50% for males and 17.10% for females at age 25 to 0.00% for both genders at age 55.
• Retirement:	For those participants who have met the age and service requirements to retire with a normal retirement benefit prior to age 60, retirement is assumed to occur at the rate of 70% upon the attainment of normal retirement age, 10% per year at each of the next five years, and 100% six years after normal retirement age. For all other participants, retirement is assumed to occur at the rate of 70% upon the attainment of normal retirement age, 10% per year at each of the next two years, and 100% three years after normal retirement age.

No decrements are assumed during the first year immediately following the valuation date.

6. **Form of Payment**

Future retirees have been assumed to select the single life annuity.

Summary of Actuarial Methods and Assumptions — Table IV-A

(continued)

7. **Expenses**

The total projected benefit liability has been loaded by 1.25% to account for anticipated administrative expenses. 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 methods or assumptions have been 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, 2016, 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.*

(2) *Effective October 1, 2016, the assumed increase in future annual salaries was changed from 4.00% per year to 5.00% per year.*

(3) *Effective October 1, 2014, the mortality basis was changed from a 2007 projection of the RP-2000 Mortality Table to a 2015 projection.*

(4) *Effective October 1, 2013, in connection with the elimination from pensionable earnings of overtime earned after September 30, 2012 in excess of 300 hours per year and payments for unused sick and annual leave accrued after that date, the loading that was previously applied to average final compensation to account for such extra compensation will gradually be phased out over a 20-year period.*

(5) *Effective October 1, 2012, the assumed interest (or discount) rate was reduced from 7.60% per annum to 7.50% per annum.*

(6) *Effective October 1, 2011, the assumed interest (or discount) rate was reduced from 7.75% per annum to 7.60% per annum.*

(7) *Effective October 1, 2011, the assumed increase in plan compensation was reduced to 4.00% per year.*

(8) *Effective October 1, 2011, a loading was added to average final compensation to account for the payment of unused sick and annual leave upon termination of employment. With respect to general employees, this loading is equal to 6.00% of average final compensation. With respect to management employees, the loading is equal to 20.00% of average final compensation for employment terminations prior to October 1, 2016, 15.00% of average final compensation for employment terminations during the period October 1, 2016 through September 30, 2021, 10.00% of average final compensation for employment terminations during the period October 1, 2021 through September 30, 2026, and 5.00% of average final compensation for employment terminations during the period October 1, 2026 through September 30, 2031.*

(9) *Effective October 1, 2011, no decrements were assumed during the first year immediately following the valuation date.*

Changes in Actuarial Methods and Assumptions — Table IV-B

(continued)

(10) Effective October 1, 2009, the administrative expense assumption was changed from a flat $100,000 per year to a 1.25% loading of the total projected benefit liability.

Summary of Plan Provisions

Table V-A

1. **Monthly Accrued Benefit**

Employees Hired On and After October 1, 2013:
1.80% of Average Final Compensation multiplied by Credited Service

General Employees Hired Prior to October 1, 2013:
2.00% of Average Final Compensation multiplied by Credited Service

Management Employees Hired Prior to October 1, 2013:
3.00% of Average Final Compensation multiplied by Credited Service

(Note: The benefit payable from the qualified pension plan is limited to the allowable amount pursuant to Internal Revenue Code (IRC) section 415.)

2. **Normal Retirement Age and Benefit**

- **Age**
  Employees Hired On and After October 1, 2013:
  Age 65 with at least 10 years of Vested Service; or
  Age 60 with at least 30 years of Vested Service
  General Employees Hired Prior to October 1, 2013:
  Age 60 with at least six years of Vested Service; or
  Age 56 with at least 30 years of Vested Service
  Management Employees Hired Prior to October 1, 2013:
  Age 52 with at least three years of Vested Service; or
  Age 48 with at least 20 years of Vested Service
- **Amount**
  Monthly Accrued Benefit
- **Form of Payment**
  Single life annuity (normal form of payment);
  Actuarially reduced 10-year certain and life annuity (optional);
  Actuarially reduced 50% joint and contingent annuity (optional);
  Actuarially reduced $66^{2}/_{3}$% 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; or
  Actuarially equivalent lump sum distribution (automatic if the single sum value of the participant's benefit is less than or equal to $5,000 or the monthly annuity is less than $100)

(Note: A participant may change his joint annuitant up to two times after retirement.)

Summary of Plan Provisions

Table V-A

(continued)

3. **Disability Eligibility and Benefit**

- **Eligibility**

Employees Hired On or After October 1, 2013:	*10 years of Vested Service*
General Employees Hired Prior to October 1, 2013:	*Six years of Vested Service*
Management Employees Hired Prior to October 1, 2013:	*Three years of Vested Service*

- **Condition**
  The participant must become totally and permanently disabled as determined by the Board of Trustees.
- **Amount Payable**
  Same as for Normal Retirement

4. **Delayed Retirement Age and Benefit**

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

5. **Deferred Vested Benefit**

- **Age**
  Employees Hired On and After October 1, 2013:
  Any age with at least 10 years of Vested Service
  General Employees Hired Prior to October 1, 2013:
  Any age with at least six years of Vested Service
  Management Employees Hired During the Period October 2, 2003 through September 30, 2013:
  Any age with at least three years of Vested Service
  Management Employees Hired Prior to October 2, 2003:
  Any age with no service requirement
- **Amount**
  Monthly Accrued Benefit (payable at Normal Retirement Age)
- **Form of Payment**
  Same as for Normal Retirement

Summary of Plan Provisions

Table V-A

(continued)

6. Pre-Retirement Death Benefit

In the case of the death of a vested participant prior to retirement, his beneficiary will receive the participant's Monthly Accrued Benefit commencing at the participant's Normal Retirement Age or an actuarially equivalent benefit commencing prior to Normal Retirement Age. If the beneficiary is neither a spouse nor a dependent child, then the pre-retirement death benefit will also be adjusted actuarially to account for any difference between the ages of the participant and beneficiary.

7. Average Final Compensation

Employees Hired On and After October 1, 2013:	*Average of the highest six years of Compensation*
General Employees Hired Prior to October 1, 2013:	*Average of the highest five years of Compensation*
Management Employees Hired Prior to October 1, 2013:	*Average of the highest three years of Compensation*

8. Compensation

Total cash remuneration for services rendered; with respect to bargaining employees, overtime in excess of 300 hours per year earned after September 30, 2012 and payments for unused sick and annual leave accrued after that date are excluded from compensation; with respect to non-bargaining employees, overtime in excess of 300 hours per year earned after June 30, 2011 and payments for unused sick and annual leave accrued after that date are excluded from compensation; annual compensation in excess of $200,000 (as indexed) is excluded in accordance with Internal Revenue Code (IRC) §401(a)(17).

9. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death. In the case of employees who were hired prior to October 1, 2003, the participant must pay the full actuarial cost of his service earned prior to October 1, 2003 in order to receive a retirement benefit for such service. In addition, participants may purchase up to five years of service credit for previous full-time employment with the federal government, including military service, or with any state, county, or city government other than the Town of Davie, provided that no retirement benefit is provided for such service under another retirement plan.

10. Vested Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death.

Summary of Plan Provisions

Table V-A

(continued)

11. Participation Requirement

All full-time general and management employees of the Town of Davie, Florida automatically become a participant in the plan on their date of hire.

12. Accumulated Contributions

The Employee Contributions accumulated with interest at the rate of 6.00% per annum; if a non-vested participant terminates his employment, he receives his Accumulated Contributions in lieu of any other benefits payable from the plan; vested participants may optionally elect to receive their Accumulated Contributions in lieu of any other benefits payable from the plan.

13. Participant Contribution

3.00% of earnings with respect to participants hired on or after October 1, 2013; 1.00% of earnings with respect to all other participants for the period after the collective bargaining agreement ratification date up to the first payroll after October 1, 2013, increasing to 1.50% of earnings for the period through September 30, 2014, and increasing to 2.50% of earnings thereafter.

14. Definition of Actuarially Equivalent

- **Interest Rate**
  8.00% per annum
- **Mortality Table**
  1994 Group Annuity Reserving Table, projected to 2002 by Scale AA

15. Automatic Cost-of-Living Adjustment (COLA)

All benefits include an automatic 3% annual cost-of-living adjustment which is effective for payments made at least five years after initial retirement.

16. Plan Effective Date

October 1, 2003

17. Deferred Retirement Option Plan (DROP)

A participant who reaches his Normal Retirement Age is eligible to participate in the DROP for a period of up to 60 months. DROP accounts are credited with interest at the rate of 6.50% per annum.

Summary of Plan Amendments

Table V-B

No significant plan changes 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) With respect to employees hired after September 30, 2013, average final compensation is based on a six-year average instead of a three- or five-year average. (Ordinance 2013-18)

(2) With respect to employees hired after September 30, 2013, normal retirement age is the earlier of age 65 with at least 10 years of service or age 60 with at least 30 years of service. (Ordinance 2013-18)

(3) With respect to employees hired after September 30, 2013, the benefit formula multiplier was reduced from 2.00% or 3.00% to 1.80%. (Ordinance 2013-18)

(4) With respect to employees hired after September 30, 2013, the vesting requirement, as well as the pre-retirement death benefit and disability requirements, is increased to 10 years of service. (Ordinance 2013-18)

(5) With respect to employees hired after September 30, 2013, a mandatory employee contribution was added to the plan equal to 3.00% of pensionable earnings. (Ordinance 2013-18)

(6) With respect to employees hired prior to October 1, 2013, a mandatory employee contribution was added to the plan equal to 1.00% of pensionable earnings for the period after the collective bargaining agreement ratification date up to the first payroll after October 1, 2013, increasing to 1.50% of pensionable earnings for the period through September 30, 2014, and increasing to 2.50% of pensionable earnings thereafter. (Ordinance 2013-18)

(7) Overtime earned after September 30, 2012 in excess of 300 hours per year and payments for unused sick and annual leave accrued after that date are excluded from pensionable earnings. (Ordinance 2013-18)

(8) The plan was been amended with respect to non-bargaining employees to exclude from plan compensation overtime in excess of 300 hours per year earned after June 30, 2011 and payments for unused annual and sick leave that accrues after that date.

(9) The plan was amended to allow the Town's police or fire chief to join this plan in the event that the chief has been promoted from a position that is covered by the Town's police or firefighter plan. If such an election is made, then a transfer of assets will be made from the police or firefighter plan into this plan, where the amount of the transfer is equal to the actuarially equivalent value of the pension benefit previously accrued under the police or firefighter plan.