

Mayor and Council of the
City of Dalton
Employees' Pension Plan

Actuarial Valuation
As of January 1, 2021

Determines the Contribution
For the 2022 Fiscal Year



	<u>Page</u>
Discussion	1
<u>Funding Results</u>	
Table I-A	Minimum Required Contribution I-1
Table I-B	Sensitivity Analysis I-2
Table I-C	Gain and Loss Analysis I-3
Table I-D	Present Value of Future Benefits I-4
Table I-E	Present Value of Accrued Benefits I-5
Table I-F	Present Value of Vested Benefits I-6
Table I-G	Projected Unit Credit Accrued Liability I-7
Table I-H	Projected Unit Credit Normal Cost I-8
Table I-I	Unfunded Liability Bases I-9
<u>Accounting Results</u>	
GASB 67/68 Supplement as of December 31, 2020	
<u>Assets</u>	
Table II-A	Actuarial Value of Assets II-1
Table II-B	Market Value of Assets II-2
Table II-C	Investment Return II-3
Table II-D	Asset Reconciliation II-4
Table II-E	Historical Trust Fund Detail II-5
Table II-F	Other Reconciliations II-6
<u>Data</u>	
Table III-A	Summary of Participant Data III-1
Table III-B	Data Reconciliation III-2
Table III-C	Active Participant Data III-3
Table III-D	Active Age-Service Distribution III-4
Table III-E	Active Age-Service-Salary Table III-5
Table III-F	Inactive Participant Data III-6
Table III-G	Projected Benefit Payments III-7
<u>Methods & Assumptions</u>	
Table IV-A	Summary of Actuarial Methods and Assumptions IV-1
Table IV-B	Changes in Actuarial Methods and Assumptions IV-3
<u>Plan Provisions</u>	
Table V-A	Summary of Plan Provisions V-1
Table V-B	Summary of Plan Amendments V-4



March 18, 2021

Introduction

This report presents the revised results of the January 1, 2021 actuarial valuation of the Mayor and Council of the City of Dalton Employees' Pension Plan. This valuation is based upon the participant data and asset information provided as of January 1, 2021 by the City of Dalton and Dalton Utilities. Except for a cursory review for reasonableness, 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 January 1, 2021 and to determine the minimum required contribution under Georgia Code Section 47-20-10 for the 2022 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 minimum required contribution rate.

Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2022 plan year. The minimum required contribution is \$2,600,285 (or 18.24% of covered payroll), which represents a decrease of \$650,864 (or a decrease of 5.31% of covered payroll) from the prior year.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate decreased by 21.95% of covered payroll due to investment gains, increased by 20.4% of covered payroll due to demographic experience, and decreased by 3.76% of covered payroll due to a change in the amortization payment. The market



value of assets earned 13.21% during the 2020 plan year, whereas a 6.75% annual investment return was required to maintain a stable contribution rate.

Georgia Code Section 47-20-10 sets forth many of the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City will meet the minimum funding requirement if the employer contributions are at least equal to the annual required contribution under GASB 25/27. In addition, Georgia Code Section 47-20-13 exempts public plan sponsors from the minimum funding requirements if the plan's actuarial value of assets exceeds 150% of the present value of accumulated retirement system benefits.

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 \$156,406,895. As illustrated in Table I-A, current assets are sufficient to cover \$140,899,437 of this amount, the employer's 2021 expected contribution will cover \$3,251,149 of this amount, the employer's 2022 expected contribution will cover \$2,600,285 of this amount, and future employee contributions will cover \$1,751,766 of this amount, leaving \$7,904,258 to be covered by future employer funding after 2022. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

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 projected unit credit funding method for this plan. Under this method, the contribution requirement is expected to increase over time as the active participants age.

Contents of the Report

Tables I-D through I-H 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 January 1, 2021, 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 Georgia Code Section 47-20-10. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs



have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,

Charles T. Carr

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

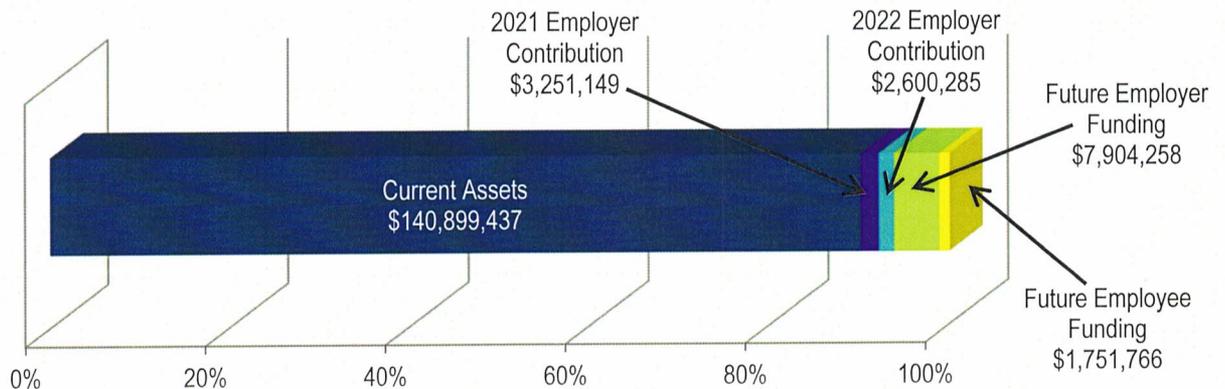
Enrolled Actuary No. 20-04927

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 2022 Plan Year

Normal Cost for the 2021 Plan Year	\$2,505,019
Unfunded Liability Amortization Payment for the 2021 Plan Year	\$685,560
Expense Allowance for the 2021 Plan Year	\$50,000
Expected Employee Contribution for the 2021 Plan Year	(\$687,037)
	\$2,553,542
Interest Adjustment to Reflect Contributions After January 1, 2021	\$46,743

Required Employer Contribution for the 2022 Plan Year **\$2,600,285**

Exemption Test Under Georgia Code Section 47-20-13

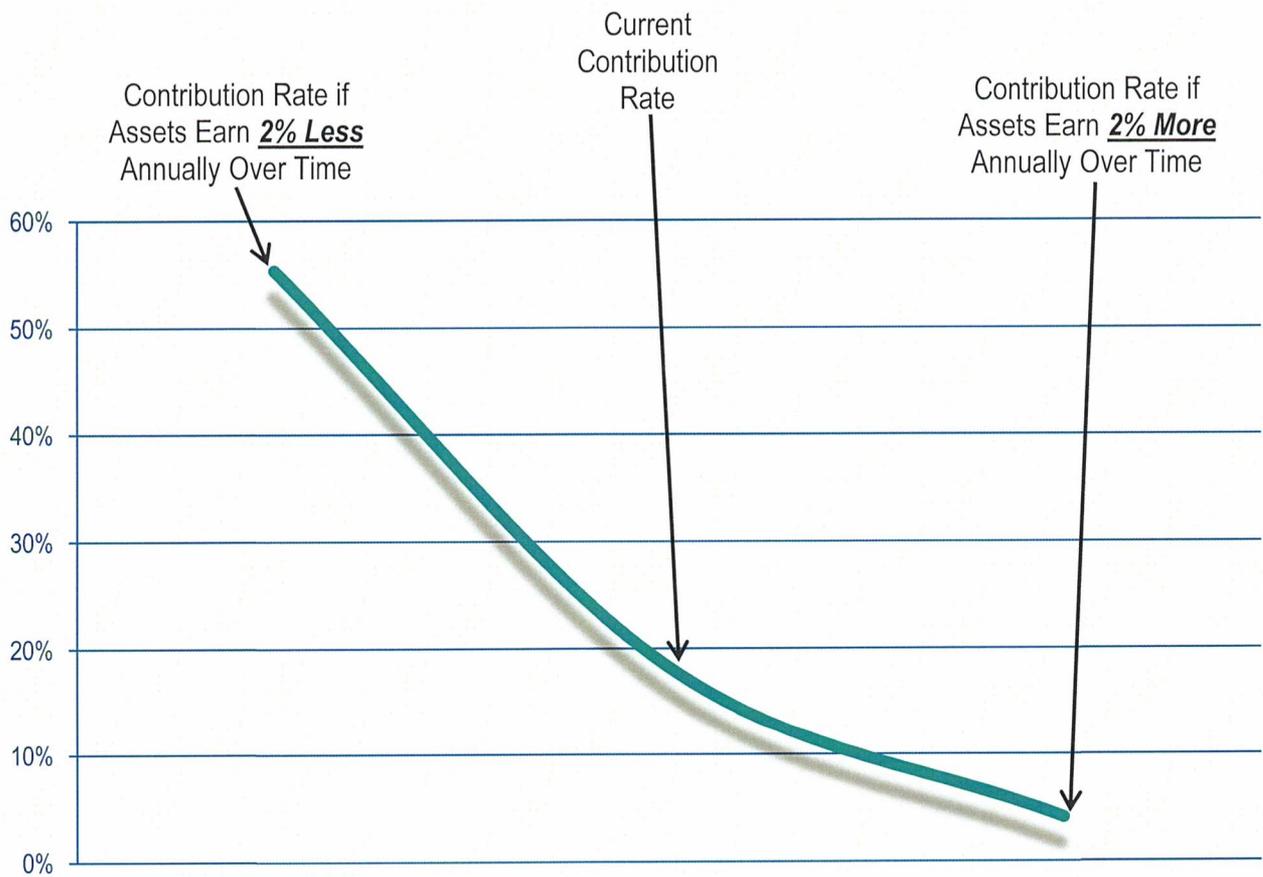
Actuarial Value of Assets	\$140,899,437
Present Value of Accumulated Retirement System Benefits	\$142,090,304
Funded Ratio	99.16%

(If the funded ratio is at least 150%, then the plan is exempt from the State minimum funding standards.)



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

Previous minimum required contribution rate	23.55%
Increase (decrease) due to investment gains and losses	-21.95%
Increase (decrease) due to demographic experience	20.40% *
Increase (decrease) due to change in amortization payment	-3.76%
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>18.24%</u>

* *balancing item*

Source of Change in the Unfunded Liability

Previous unfunded liability	\$19,331,727
Increase due to interest	\$846,527
Decrease due to amortization payments	(\$6,790,586)
Increase (decrease) due to plan experience	(\$5,679,812)
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	\$0
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	<u>\$7,707,856</u>



Present Value of Future Benefits

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$66,911,059	\$66,911,059	\$66,911,059
Termination benefits	\$1,061,028	\$1,061,028	\$1,061,028
Disability benefits	\$0	\$0	\$0
Death benefits	\$68,649	\$68,649	\$68,649
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$68,040,736	\$68,040,736	\$68,040,736
<u>Deferred Vested Participants</u>			
Retirement benefits	\$1,929,989	\$1,929,989	\$1,929,989
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$1,929,989	\$1,929,989	\$1,929,989
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$79,453,868	\$79,453,868	\$79,453,868
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$6,241,561	\$6,241,561	\$6,241,561
DROP participants	\$0	\$0	\$0
Sub-total	\$85,695,429	\$85,695,429	\$85,695,429
<u>Grand Total</u>	<u>\$155,666,154</u>	<u>\$155,666,154</u>	<u>\$155,666,154</u>
Present Value of Future Payroll	\$35,035,510	\$35,035,510	\$35,035,510
Present Value of Future Employee Contribs.	\$1,751,766	\$1,751,766	\$1,751,766
Present Value of Future Employer Contribs.	\$13,755,692	\$13,755,692	\$13,755,692



Present Value of Accrued Benefits

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$53,543,688	\$53,543,688	\$53,543,688
Termination benefits	\$864,006	\$864,006	\$864,006
Disability benefits	\$0	\$0	\$0
Death benefits	\$57,192	\$57,192	\$57,192
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$54,464,886	\$54,464,886	\$54,464,886
<u>Deferred Vested Participants</u>			
Retirement benefits	\$1,929,989	\$1,929,989	\$1,929,989
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$1,929,989	\$1,929,989	\$1,929,989
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$79,453,868	\$79,453,868	\$79,453,868
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$6,241,561	\$6,241,561	\$6,241,561
DROP participants	\$0	\$0	\$0
Sub-total	\$85,695,429	\$85,695,429	\$85,695,429
<u>Grand Total</u>	<u>\$142,090,304</u>	<u>\$142,090,304</u>	<u>\$142,090,304</u>

Funded Percentage 99.16% 99.16% 99.16%

(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	\$53,543,688	\$53,543,688	\$53,543,688
Termination benefits	\$864,006	\$864,006	\$864,006
Disability benefits	\$0	\$0	\$0
Death benefits	\$57,192	\$57,192	\$57,192
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$54,464,886	\$54,464,886	\$54,464,886
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$1,929,989	\$1,929,989	\$1,929,989
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$1,929,989	\$1,929,989	\$1,929,989
<i><u>Due a Refund of Contributions</u></i>	\$0	\$0	\$0
<i><u>Deferred Beneficiaries</u></i>	\$0	\$0	\$0
<i><u>Retired Participants</u></i>			
Service retirements	\$79,453,868	\$79,453,868	\$79,453,868
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$6,241,561	\$6,241,561	\$6,241,561
DROP participants	\$0	\$0	\$0
Sub-total	\$85,695,429	\$85,695,429	\$85,695,429
<i><u>Grand Total</u></i>	<u>\$142,090,304</u>	<u>\$142,090,304</u>	<u>\$142,090,304</u>



Projected Unit Credit Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$59,960,391	\$59,960,391	\$59,960,391
Termination benefits	\$958,507	\$958,507	\$958,507
Disability benefits	\$0	\$0	\$0
Death benefits	\$62,977	\$62,977	\$62,977
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$60,981,875	\$60,981,875	\$60,981,875
<u>Deferred Vested Participants</u>			
Retirement benefits	\$1,929,989	\$1,929,989	\$1,929,989
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$1,929,989	\$1,929,989	\$1,929,989
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$79,453,868	\$79,453,868	\$79,453,868
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$6,241,561	\$6,241,561	\$6,241,561
DROP participants	\$0	\$0	\$0
Sub-total	\$85,695,429	\$85,695,429	\$85,695,429
<u>Grand Total</u>	<u>\$148,607,293</u>	<u>\$148,607,293</u>	<u>\$148,607,293</u>
less Actuarial Value of Assets	(\$140,899,437)	(\$140,899,437)	(\$140,899,437)
<u>Unfunded Accrued Liability</u>	<u>\$7,707,856</u>	<u>\$7,707,856</u>	<u>\$7,707,856</u>



Projected Unit Credit Normal Cost

Table I-H

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$2,456,824	\$2,456,824	\$2,456,824
Termination benefits	\$45,309	\$45,309	\$45,309
Disability benefits	\$0	\$0	\$0
Death benefits	\$2,886	\$2,886	\$2,886
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,505,019	\$2,505,019	\$2,505,019
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<i><u>Due a Refund of Contributions</u></i>	\$0	\$0	\$0
<i><u>Deferred Beneficiaries</u></i>	\$0	\$0	\$0
<i><u>Retired Participants</u></i>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<i><u>Grand Total</u></i>	<u>\$2,505,019</u>	<u>\$2,505,019</u>	<u>\$2,505,019</u>



Unfunded Liability Bases

Table I-I

<u>Description</u>	<u>Original Amount</u>	<u>Outstanding Balance</u>	<u>Amortization Payment</u>	<u>Years Rem.</u>
	Total	\$7,707,856	\$685,560	
		↓	↓	
1/1/2020 Combined Base	\$19,331,727	\$13,387,668	\$1,190,740	19
2020 Experience Gain	(\$5,679,812)	(\$5,679,812)	(\$505,180)	19



Actuarial Value of Assets

Table II-A

Market Value of Assets as of January 1, 2021	\$140,899,437
Minus advance employer contributions	\$0
Actuarial Value of Assets as of January 1, 2021	<u>\$140,899,437</u>

<u>Historical Actuarial Value of Assets</u>	
January 1, 2012	\$61,883,573
January 1, 2013	\$66,758,929
January 1, 2014	\$75,640,022
January 1, 2015	\$83,354,743
January 1, 2016	\$84,855,903
January 1, 2017	\$91,950,265
January 1, 2018	\$104,453,266
January 1, 2019	\$101,903,850
January 1, 2020	\$122,508,482
January 1, 2021	\$140,899,437

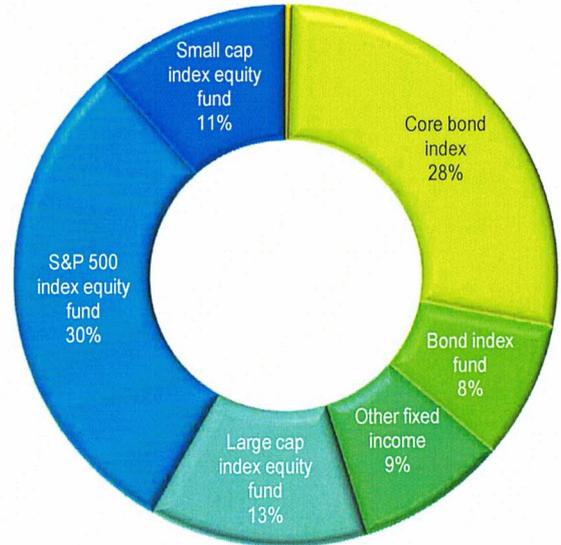


Market Value of Assets

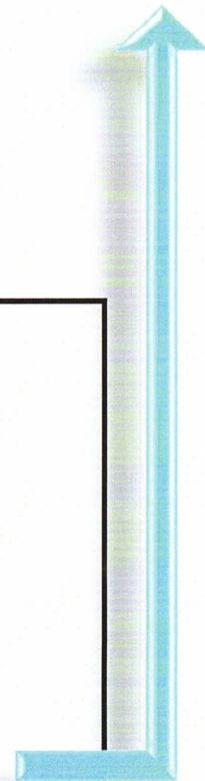
Table II-B

As of January 1, 2021

Market Value of Assets	<u>\$140,899,437</u>
Cash and cash equivalents	\$603,002
Core bond index	\$38,992,068
Bond index fund	\$11,536,930
Other fixed income	\$12,557,451
Large cap index equity fund	\$18,338,135
S&P 500 index equity fund	\$42,752,686
Small cap index equity fund	\$16,122,712
Accounts payable	(\$3,547)

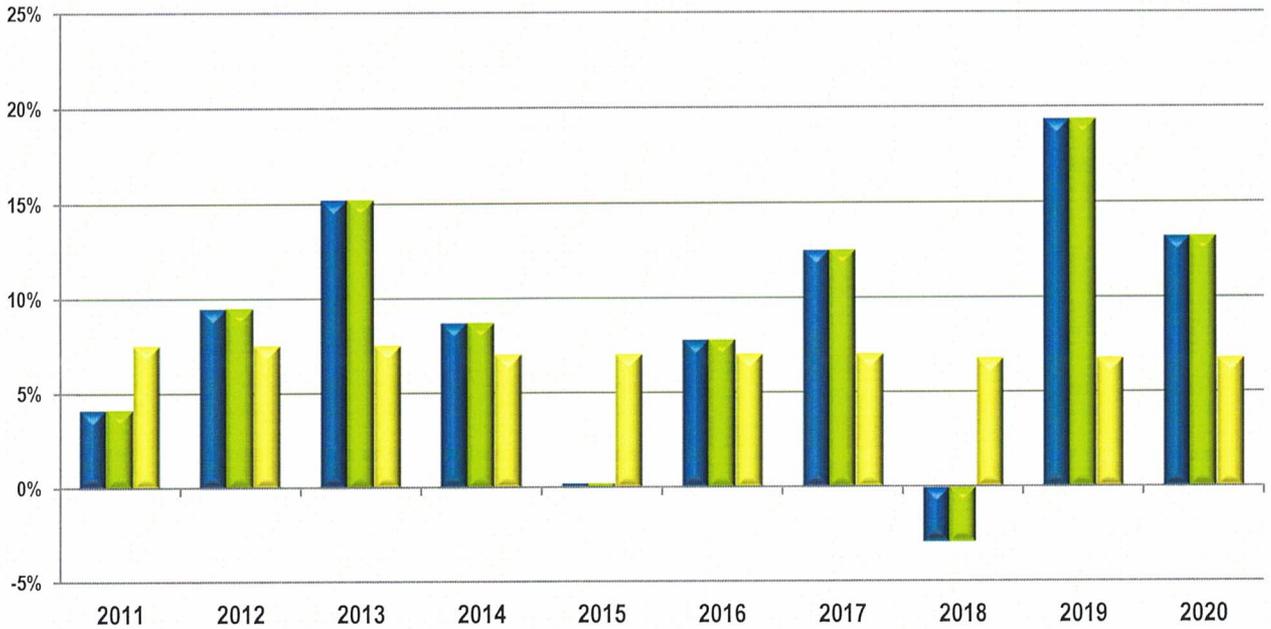


Historical Market Value of Assets	
January 1, 2012	\$62,158,721
January 1, 2013	\$66,758,929
January 1, 2014	\$75,640,022
January 1, 2015	\$83,354,743
January 1, 2016	\$84,855,903
January 1, 2017	\$92,134,902
January 1, 2018	\$104,453,266
January 1, 2019	\$101,903,850
January 1, 2020	\$122,508,482
January 1, 2021	\$140,899,437



Investment Return

Table II-C



Annual Investment Returns

■ Market Value Return
■ Actuarial Value Return
■ Assumed Return

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2011	4.12%	4.14%	7.50%
2012	9.48%	9.50%	7.50%
2013	15.19%	15.19%	7.50%
2014	8.71%	8.71%	7.00%
2015	0.23%	0.23%	7.00%
2016	7.77%	7.77%	7.00%
2017	12.49%	12.51%	7.00%
2018	-2.92%	-2.92%	6.75%
2019	19.33%	19.33%	6.75%
2020	13.21%	13.21%	6.75%
10yr. Avg.	8.57%	8.57%	7.07%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of January 1, 2020	\$122,508,482	\$122,508,482
<i>Increases Due To:</i>		
Employer Contributions	\$9,130,197	\$9,130,197
Employee Contributions	\$677,164	\$677,164
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$9,807,361</u>	<u>\$9,807,361</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$5,561,843	
Unrealized Gains (Losses)	\$10,950,286	
Total Investment Income	<u>\$16,512,129</u>	\$16,325,808
Other Income	\$0	
Total Income	<u>\$26,319,490</u>	<u>\$26,133,169</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$7,662,936)	(\$7,662,936)
Refund of Employee Contributions	\$0	\$0
Total Benefit Payments	<u>(\$7,662,936)</u>	<u>(\$7,662,936)</u>
Investment Expenses	(\$186,321)	
Administrative Expenses	(\$79,278)	(\$79,278)
Advance Employer Contribution		\$0
Total Expenses	<u>(\$7,928,535)</u>	<u>(\$7,742,214)</u>
As of January 1, 2021	<u><u>\$140,899,437</u></u>	<u><u>\$140,899,437</u></u>



Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Employee	Service	Interest /	Realized	Unrealized	Other
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Purchase</u>	<u>Dividends</u>	<u>Gains /</u>	<u>Gains /</u>	<u>Income</u>
			<u>Contribs.</u>		<u>Losses</u>	<u>Losses</u>	
2011	\$3,977,435	\$938,804	\$0	\$564,535	\$843,312	\$1,206,718	\$0
2012	\$4,220,538	\$880,846	\$0	\$714,938	\$942,984	\$4,310,015	\$0
2013	\$4,374,373	\$856,937	\$0	\$743,561	\$1,155,066	\$8,288,096	\$0
2014	\$6,789,929	\$836,978	\$0	\$819,365	\$2,537,770	\$3,417,790	\$0
2015	\$7,099,693	\$784,870	\$0	\$1,166,608	\$3,496,413	-\$4,313,054	\$602
2016	\$6,841,734	\$769,248	\$0	\$0	\$4,321,811	\$2,492,238	\$9,853
2017	\$7,225,029	\$727,343	\$0	\$0	\$3,994,252	\$7,749,037	\$0
2018	\$7,311,443	\$688,300	\$0	\$0	\$3,421,230	-\$6,300,899	\$0
2019	\$7,728,729	\$663,908	\$0	\$0	\$4,121,853	\$15,839,031	\$0
2020	\$9,130,197	\$677,164	\$0	\$0	\$5,561,843	\$10,950,286	\$0

Expenses

Plan	Benefit	Admin.	Invest.	Other Actuarial Adjustments
<u>Year</u>	<u>Payments</u>	<u>Expenses</u>	<u>Expenses</u>	<u>Advance</u>
				<u>Employer</u>
				<u>Contribs.</u>
2011	\$5,811,768	\$54,330	\$134,134	\$83,551
2012	\$6,296,942	\$38,180	\$133,991	-\$275,148
2013	\$6,350,443	\$49,725	\$136,772	\$0
2014	\$6,499,344	\$50,890	\$136,877	\$0
2015	\$6,513,876	\$61,983	\$158,113	\$0
2016	\$6,904,592	\$42,900	\$208,393	\$184,627
2017	\$7,133,475	\$59,239	\$184,583	-\$184,627
2018	\$7,440,532	\$50,901	\$178,057	\$0
2019	\$7,499,751	\$70,763	\$178,375	\$0
2020	\$7,662,936	\$79,278	\$186,321	\$0

Note: Realized gains and losses include interest and dividends after 2015.



Other Reconciliations

Table II-F

Advance Employer Contribution

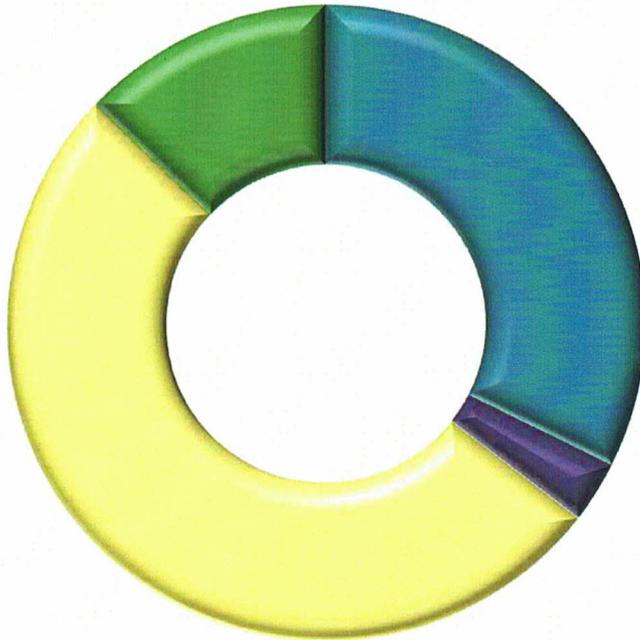
Advance Employer Contribution as of January 1, 2020	\$0
Additional Employer Contribution	\$9,130,197
Minimum Required Contribution	<u>(\$9,130,197)</u>
Net Increase in Advance Employer Contribution	\$0
Advance Employer Contribution as of January 1, 2021	<u><u>\$0</u></u>



Summary of Participant Data

Table III-A

As of January 1, 2021

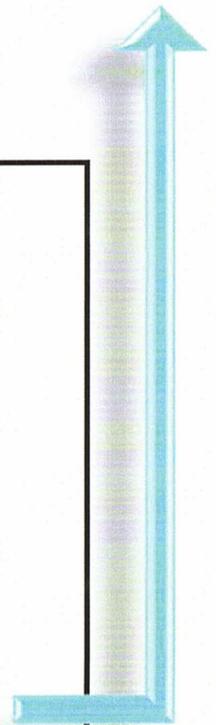


Participant Distribution by Status

<u>Actively Employed Participants</u>		
◆	Active Participants	188
◆	DROP Participants	0
<u>Inactive Participants</u>		
◆	Deferred Vested Participants	18
◆	Due a Refund of Contributions	0
◆	Deferred Beneficiaries	0
<u>Participants Receiving a Benefit</u>		
◆	Service Retirements	299
◆	Disability Retirements	0
◆	Beneficiaries Receiving	74
Total Participants		579

Number of Participants Included in Prior Valuations

	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
January 1, 2012	358	0	10	314	682
January 1, 2013	333	0	11	320	664
January 1, 2014	311	0	13	327	651
January 1, 2015	293	0	11	326	630
January 1, 2016	268	0	12	346	626
January 1, 2017	249	0	14	357	620
January 1, 2018	227	0	16	364	607
January 1, 2019	211	0	18	355	584
January 1, 2020	198	0	19	368	585
January 1, 2021	188	0	18	373	579



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>January 1, 2020</u>	198	0	19	0	0	300	0	68	585
<u>Change in Status</u>									
Re-employed									
Terminated									
Retired	(10)		(1)			11			
<u>Participation Ended</u>									
Transferred Out									
Cashed Out									
Died						(12)		(4)	(16)
<u>Participation Began</u>									
Newly Hired									
Transferred In									
New Beneficiary								10	10
<u>Other Adjustment</u>									
<u>January 1, 2021</u>	188	0	18	0	0	299	0	74	579

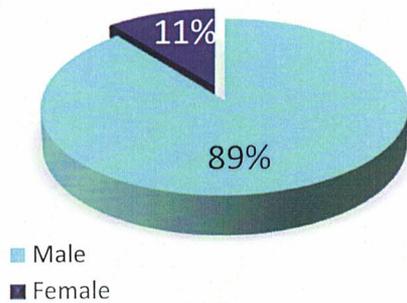


Active Participant Data

Table III-C

Gender Mix

As of January 1, 2021



Average Age	50.9 years
Average Service	23.1 years
Total Annualized Compensation for the Prior Year	\$13,308,216
Total Expected Compensation for the Current Year	\$13,740,735
Average Increase in Compensation for the Prior Year	10.06%
Expected Increase in Compensation for the Current Year	3.75%



Actual vs. Expected Salary Increases

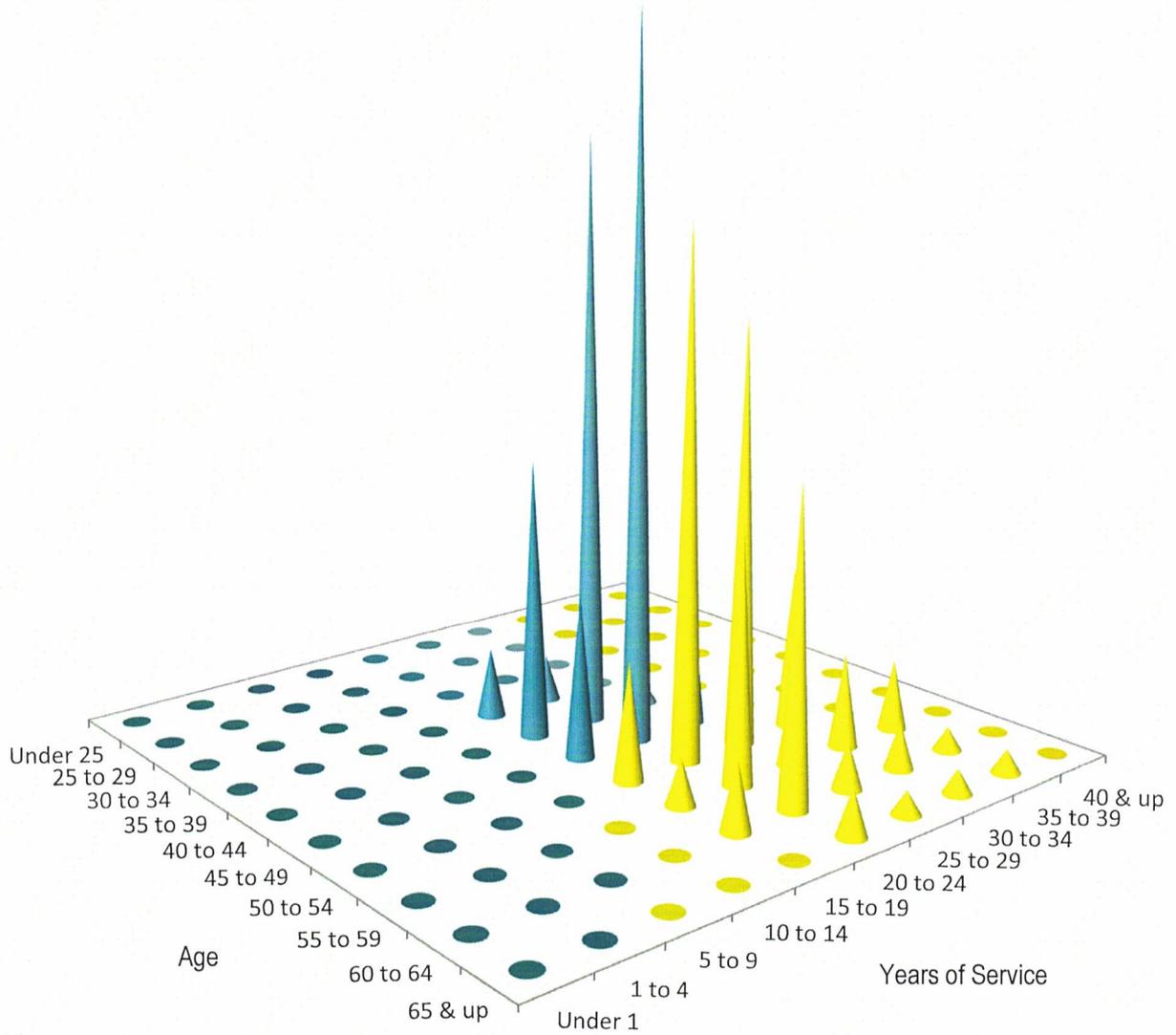
Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
January 1, 2012	46.6	16.6	\$51,735	4.00%	-2.50%
January 1, 2013	46.8	17.0	\$51,628	4.00%	3.06%
January 1, 2014	47.6	17.9	\$53,580	4.00%	3.10%
January 1, 2015	48.1	18.7	\$55,013	4.00%	2.76%
January 1, 2016	48.3	19.5	\$56,533	4.00%	3.21%
January 1, 2017	49.1	20.3	\$58,362	4.00%	3.33%
January 1, 2018	49.2	20.9	\$60,121	4.00%	3.20%
January 1, 2019	49.8	21.6	\$62,990	3.75%	3.81%
January 1, 2020	50.4	22.3	\$65,080	3.75%	2.52%
January 1, 2021	50.9	23.1	\$70,788	3.75%	10.06%



Active Age-Service Distribution

Table III-D



▲ Eligible to retire
▲ May be eligible to retire
▲ Not eligible to retire



Active Age-Service-Salary Table

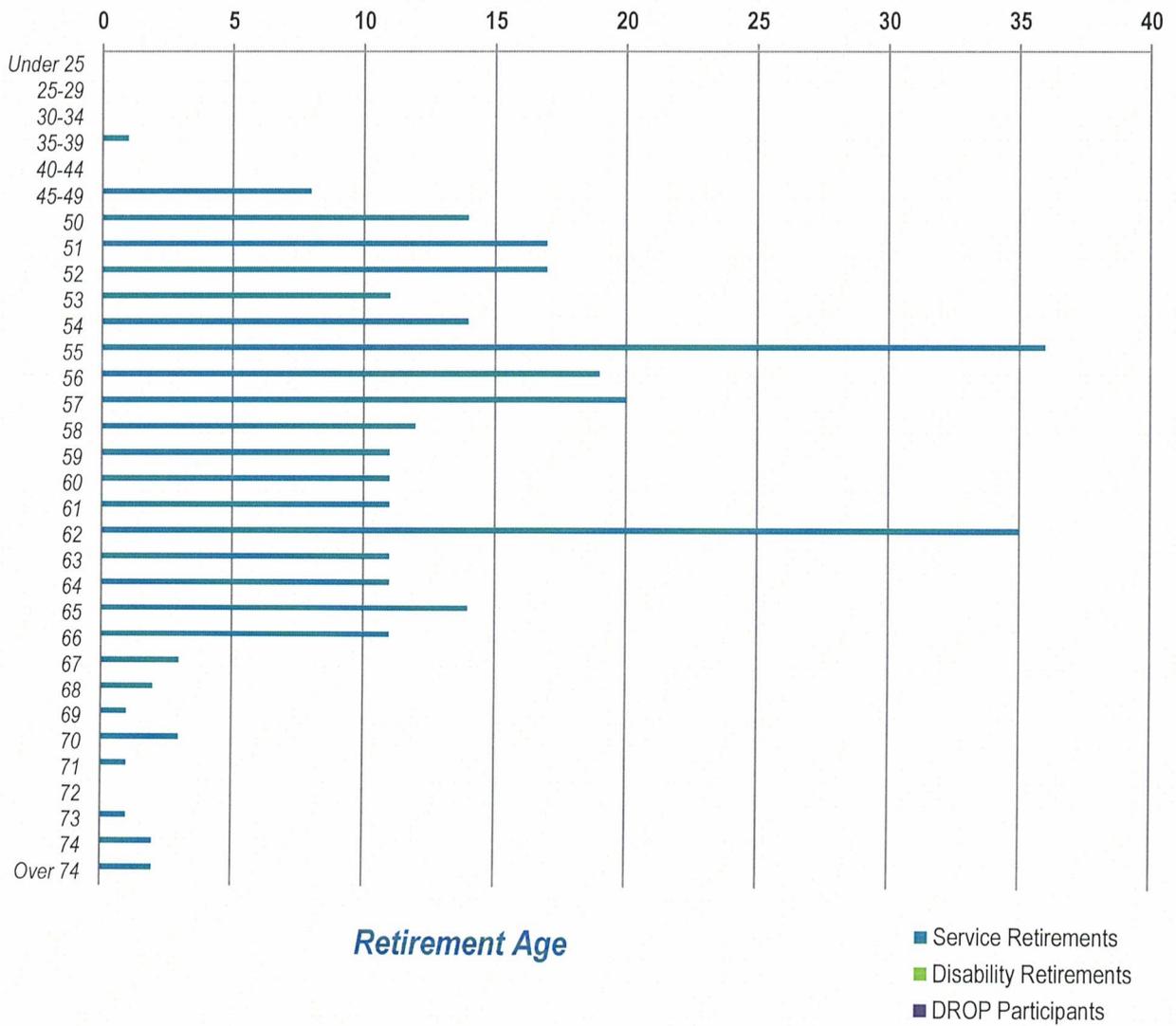
Table III-E

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	0
Avg.Pay	0	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	0
Avg.Pay	0	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	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	3	2	0	0	0	0	0	5
Avg.Pay	0	0	0	0	54,505	69,364	0	0	0	0	0	60,448
40 to 44	0	0	0	0	12	25	1	0	0	0	0	38
Avg.Pay	0	0	0	0	62,495	69,658	49,957	0	0	0	0	66,878
45 to 49	0	0	0	0	7	30	6	0	0	0	0	43
Avg.Pay	0	0	0	0	61,237	80,195	71,341	0	0	0	0	75,874
50 to 54	0	0	0	0	5	22	18	7	0	0	0	52
Avg.Pay	0	0	0	0	67,679	60,369	79,266	85,603	0	0	0	71,010
55 to 59	0	0	0	0	2	11	4	4	3	0	0	24
Avg.Pay	0	0	0	0	68,757	67,461	80,017	100,069	76,582	0	0	76,236
60 to 64	0	0	0	0	3	13	2	2	1	0	0	21
Avg.Pay	0	0	0	0	64,625	67,696	59,292	89,939	48,896	0	0	67,680
65 & up	0	0	0	0	0	2	1	1	1	0	0	5
Avg.Pay	0	0	0	0	0	43,668	54,338	56,726	60,191	0	0	51,718
Total	0	0	0	0	32	105	32	14	5	0	0	188
Avg.Pay	0	0	0	0	62,872	69,749	74,931	88,293	67,767	0	0	70,788



Inactive Participant Data

Table III-F



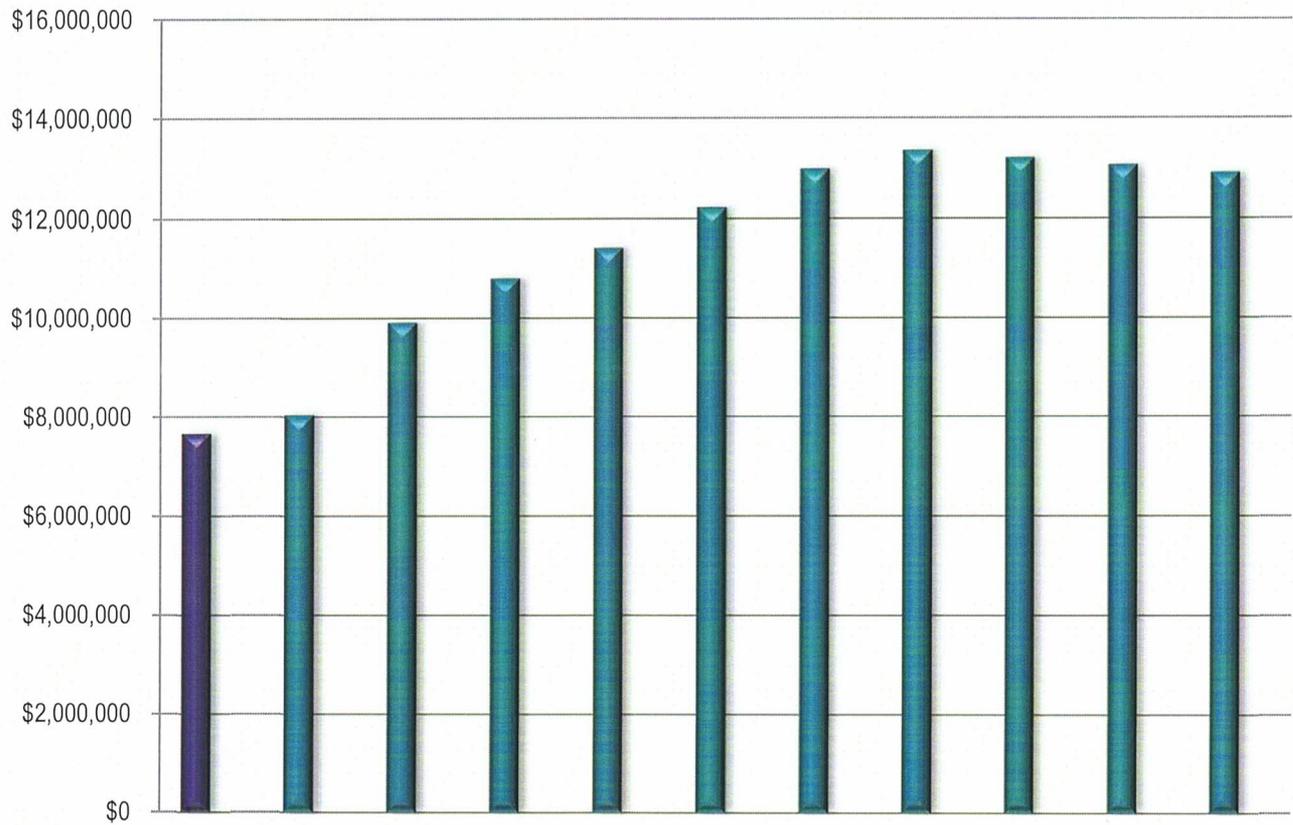
Average Monthly Benefit

Service Retirements	\$1,970.07
Disability Retirements	Not applicable
Beneficiaries Receiving	\$830.19
DROP Participants	Not applicable
Deferred Vested Participants	\$1,529.20
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-G

Actual

For the period January 1, 2020 through December 31, 2020

\$7,662,936

Projected

For the period January 1, 2021 through December 31, 2021

\$8,030,533

For the period January 1, 2022 through December 31, 2022

\$9,910,392

For the period January 1, 2023 through December 31, 2023

\$10,796,914

For the period January 1, 2024 through December 31, 2024

\$11,414,309

For the period January 1, 2025 through December 31, 2025

\$12,214,642

For the period January 1, 2026 through December 31, 2026

\$12,986,564

For the period January 1, 2027 through December 31, 2027

\$13,354,474

For the period January 1, 2028 through December 31, 2028

\$13,208,172

For the period January 1, 2029 through December 31, 2029

\$13,063,594

For the period January 1, 2030 through December 31, 2030

\$12,903,162



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

Projected unit credit cost method. Under this actuarial cost method, the actuarial accrued liability is equal to the accumulated benefits earned to the valuation date for all participants, but adjusted to reflect expected increases in each participant's final average compensation. The normal cost is equal to one additional year's benefit accrual for all active participants on the same basis.

2. Amortization Method

The unfunded actuarial accrued liability is amortized over a 20-year period from January 1, 2020 with level dollar payments.

3. Asset Method

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

4. Interest (or Discount) Rate

6.75% per annum

5. Salary Increases

Plan compensation is assumed to increase at the rate of 3.25% per annum, unless actual plan compensation is known for a prior plan year.

6. Decrements

- Pre-retirement mortality: Sex-distinct rates set forth in the PUB-2010 Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2017
- Post-retirement mortality: Sex-distinct rates set forth in the PUB-2010 Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2017
- Disabled mortality: Sex-distinct rates set forth in the PUB-2010 Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2017



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

- **Disability:** Rates of disability increase with age up to age 60; sample rates for males include a 0.04% probability of disability at age 20, a 0.10% probability of disability at age 30, a 0.23% probability of disability at age 40, a 0.64% probability of disability at age 50, and a 2.24% probability of disability at age 65; sample rates for females include a 0.02% probability of disability at age 20, a 0.07% probability of disability at age 30, a 0.18% probability of disability at age 40, a 0.50% probability of disability at age 50, and a 1.27% probability of disability at age 65.
- **Termination:** Rates of employment termination decrease with age up to age 55; sample rates include a 23.00% probability of termination at age 20, a 23.00% probability of termination at age 25, a 20.50% probability of termination at age 30, an 11.50% probability of termination at age 35, a 6.50% probability of termination at age 40, a 5.50% probability of termination at age 45, a 5.00% probability of termination at age 50, and a 4.00% probability of termination at age 55.
- **Retirement:** Employees are assumed to retire at the earliest of the following ages: (i) any age upon the completion of 30 years of service; (ii) age 55 upon the completion of 25 years of service; or (iii) age 65 upon the completion of five years of service.

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

7. Contingent Annuitants

80% of male participants and 60% of female participants are assumed to have a surviving spouse of the opposite gender; males are assumed to be three years older than females for this purpose.

8. Expenses

Administrative expenses of \$50,000 per year have been assumed. In addition, the interest rate set forth in item 4. above is assumed to be net of investment expenses and commissions.

9. Data-Related Assumptions

For active employees, service is assumed to be based on the period following their date of hire. No active employees are assumed to have incurred any breaks in their service, to have purchased additional service credit, or to have elected the special \$100 monthly pension described in plan section 3.03.



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 several years:

- (1) *Effective January 1, 2020, the mortality basis was changed from the RP-2000 Combined Mortality Table with full generational improvements in mortality using Scale AA to the PUB-2010 Mortality Table for general employees with full generational improvements in mortality using Scale MP-2017.*
- (2) *Effective January 1, 2020, the amortization period was extended from 10 years to 20 years.*
- (3) *Effective January 1, 2018, the assumed interest (or discount) rate was decreased from 7.00% per annum to 6.75% per annum.*
- (4) *Effective January 1, 2018, the assumed increase in future salaries was decreased from 4.00% per year to 3.25% per year.*
- (5) *Effective January 1, 2018, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table to the RP-2000 Combined Mortality Table with full generational improvements in mortality using Scale AA.*
- (6) *Effective January 1, 2014, the unfunded liability is amortized over a 10-year period with level-dollar payments. Previously, the unfunded liability was being amortized over a period of up to 30 years as a level percentage of payroll.*
- (7) *Effective January 1, 2014, the interest (or discount) rate was reduced from 7.50% per annum to 7.00% per annum.*
- (8) *Effective January 1, 2014, the mortality basis was changed from the unprojected RP-2000 Mortality Table to the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.*
- (9) *Effective January 1, 2014, the marriage assumption was changed from 70% of males and 50% of females assumed to be married to 80% of males and 60% of females assumed to be married.*
- (10) *Effective January 1, 2014, an expense allowance of \$50,000 per year was added.*
- (11) *Effective January 1, 2013, the minimum required contribution for the 2013 and later fiscal years is determined based on the actuarial valuation of the plan as of the January 1 preceding each fiscal year.*



Summary of Plan Provisions

Table V-A

1. Monthly Accrued Benefit

1.80% of Average Monthly Compensation multiplied by Years of Service (§1.21)

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

Earliest of: (i) any age with at least 30 Years of Service;
(ii) age 55 with at least 25 Years of Service; or
(iii) age 65 with at least five Years of Service (§3.01)

• Amount

Monthly Accrued Benefit (§3.01)

• Form of Payment

10-year certain and life annuity, with a 55% survivor annuity payable to the participant's eligible spouse after the expiration of the certain period; for this purpose, an eligible spouse is one to which the participant has been married for at least one year. (§§3.02 and 6.01)

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

Earlier of: (i) age 50 with at least 15 Years of Service, or
(ii) age 55 with at least 10 Years of Service (§4.01)

• Amount

Monthly Accrued Benefit (*payable at Normal Retirement Age*); or
Monthly Accrued Benefit reduced by 0.5% for each month by which the participant's Early Retirement Age precedes his Normal Retirement Age (*payable at Early Retirement Age*)
(§§1.01 and 4.02)

• Form of Payment

Same as for Normal Retirement (§4.02)

4. Delayed Retirement Age and Benefit**• Age**

After Normal Retirement Age

• Amount

Monthly Accrued Benefit

• Form of Payment

Same as for Normal Retirement

(§3)



Summary of Plan Provisions

Table V-A

(continued)

5. Deferred Vested Benefit

- **Age**
Any age with at least 10 Years of Service
- **Amount**
Monthly Accrued Benefit (*payable at age 65*); or
Monthly Accrued Benefit reduced by 0.5% for each month by which the participant's retirement age precedes age 65 (*payable as early as age 55*)
- **Form of Payment**
10-year certain and life annuity
(§8.02)

6. Disability Benefit

None

7. Pre-Retirement Death Benefit

For participants who die prior to retirement and who are eligible for Early or Normal Retirement:

10-year certain annuity, plus a 55% survivor annuity payable to the participant's eligible spouse after the expiration of the certain period; for this purpose, an eligible spouse is one to which the participant has been married for at least one year. (§5.02)

For all other participants who die prior to retirement:

None

8. Average Monthly Compensation

The participant's Average Monthly Compensation is equal to the average of the participant's highest 36 consecutive "basic monthly earnings" during his last 120 months of employment; "basic monthly earnings" are equal to total compensation for a calendar year, excluding lump sum payments for severance and unused sick and vacation leave, and are deemed to be earned uniformly throughout each calendar year; annual compensation is limited to \$200,000 per year (as indexed) pursuant to Internal Revenue Code (IRC) section 401(a)(17). (§§1.02 and 1.15)



Summary of Plan Provisions

Table V-A

(continued)

9. Employee Contribution

Effective January 1, 2008, all participating employees are required to contribute 5% of their pensionable earnings to the plan. Prior to January 1, 2008, the employee contribution rate was 5% for the period through December 31, 1984 and 4% for the period January 1, 1985 through December 31, 2007. (§9.03)

A participant who terminates his employment for any reason (or his eligible beneficiary) and who is not otherwise entitled to a monthly benefit will receive a refund of his Employee Contributions accumulated with interest at the rate of 3% per annum beginning as of the end of the year during which the contribution is made. All other participants may optionally choose to receive a refund of their Employee Contributions accumulated with interest in lieu of receiving any additional benefits under the plan. (§§1.19, 8.01, and 8.02)

10. Years of Service

Years of Service are equal to the years and months of covered employment, where a month of service is granted for each calendar month during which the individual works in covered employment for all or a portion of that month. (§§1.09 and 1.17)

11. Participation Requirement

All full-time employees of a participating employer who were hired prior to July 1, 2002 are eligible to participate in the plan after completing six months of service as a covered employee, except that the Mayor, Councilmen, Commissioners, and Authority Members are not eligible to participate in the plan. Participating employers include: (i) the City of Dalton and the Public Safety Commission, the Water, Light and Sinking Fund Commission, and the Recreation Commission of the City; (ii) the Northwest Georgia Trade and Convention Center Authority; (iii) the Dalton-Whitfield Convention Visitors Bureau; and (iv) the Dalton-Whitfield Regional Solid Waste Management Authority. (§§1.12, 1.13, 2.03, and 2.08)

12. Original Effective Date

January 1, 1967; the current plan was effective on July 1, 1982. (§1.10)



Summary of Plan Amendments

Table V-B

No significant plan changes have been adopted since the completion of the previous valuation.

