Orlando Utilities Commission Pension Plan

Actuarial Valuation Report as of October 1, 2019

ANNUAL EMPLOYER CONTRIBUTION FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2021

GRS

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January 29, 2020

Pension Plan Trustees
Orlando Utilities Commission Pension Plan
Orlando, Florida

Re: Orlando Utilities Commission Pension Plan Actuarial Valuation as of October 1, 2019 and Actuarial Disclosures

Dear Trustees:

The results of the October 1, 2019 Annual Actuarial Valuation of the Orlando Utilities Commission Pension Plan (the "Plan") are presented in this report.

This report was prepared at the request of the Pension Plan Trustees and is intended for use by the Plan and those designated or approved by the Trustees. This report may be provided to parties other than the Orlando Utilities Commission only in its entirety and only with the permission of the Trustees. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the Plan's funding progress, and to determine the employer contribution rate for the fiscal year ending September 30, 2021. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results associated with the benefits described in this report for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in the section of this report entitled Actuarial Assumptions and Cost Method. This report includes risk metrics on page 5 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through October 1, 2019. The valuation was based upon information furnished by Orlando Utilities Commission, concerning Plan benefits, financial information, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by Orlando Utilities Commission.

This report was prepared using assumptions adopted by the Trustees as authorized and prescribed by the Florida Statutes. The prescribed assumptions are the assumed mortality in accordance with Florida Statutes Chapter 112.63. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. Additional information about the actuarial assumptions is included in the section of this report entitled Actuarial Assumptions and Cost Methods.

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This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Orlando Utilities Commission Pension Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Peter N. Strong and Melissa R. Moskovitz are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. 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 increase in plan costs or required contribution rates have been taken into account in the valuation.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

By: Pete Strong
Peter N. Strong, FSA, MAAA, FCA
Enrolled Actuary No. 17-6975

By: Melissa R. Moskovitz
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Enrolled Actuary No. 17-6467

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SECTION A

DISCUSSION OF VALUATION RESULTS

Discussion of Valuation Results

Nature of the Plan

The Plan consists of a traditional pension plan and a cash balance plan. The traditional pension plan covers full-time employees hired before January 1, 1998 who did not elect to transfer to the defined contribution plan as of that date. In May 2011, OUC established a cash balance plan for all members not covered by the traditional pension plan who were employed on or after May 1, 2011. This valuation treats the two benefit structures applicable to two employee subgroups as one blended defined benefit plan with unallocated assets. All plan assets are available to pay all benefits to any plan member.

Comparison of Required Employer Contributions

The minimum required employer contribution developed in this year's valuation is compared below with that of the previous valuation.

	For FYE 9/30/2021 Based on 10/1/2019 Valuation	For FYE 9/30/2020 Based on 10/1/2018 Valuation	Change	For FYE 9/30/2019 Based on 10/1/2017 Valuation
Required Employer Contribution	$ 19,173,416	$ 22,405,165	$ (3,231,749)	$ 22,490,926
As % of Covered Payroll	18.50 %	22.22 %	(3.72) %	24.02 %
Estimated Employee Contribution*	$ 415,499	$ 485,651	$ (70,152)	$ 557,000
As % of Covered Payroll	0.40 %	0.48 %	(0.08) %	0.59 %
Total Contributions	$ 19,588,915	$ 22,890,816	$ (3,301,901)	$ 23,047,926
As % of Covered Payroll	18.90 %	22.70 %	(3.80) %	24.61 %

* 4% member contribution rate for employees covered by the traditional pension plan.

The required contribution has been calculated as though payments would be made at the end of each quarter. Pursuant to Chapter 112, Florida Statutes, employer contributions must be made on at least a quarterly basis.

The actual employer contribution for the year ending September 30, 2019 was $22,490,926 compared to the required contribution of $22,490,926.

Revisions in Benefits

The Plan was amended since the last valuation to allow the terms of a Cash Balance Plan member's employment agreement to stipulate the annual pay credits (as dollar amounts) to a specific member's Cash Balance account in lieu of the pay credit scale shown in the Plan document (which varies by the sum of age plus service). One current member (the General Manager and CEO of OUC) has such an employment agreement. This change increased the required employer contribution by $10,364 (0.01% of covered payroll) and increased the Unfunded Actuarial Accrued Liability (UAAL) by $67,821 as of October 1, 2019.

Please see the Actuarial Impact Statement dated December 18, 2019 for further details (including the estimated impact if the change were measured as of October 1, 2018).

Please see Section F of this report for a description of additional changes pursuant to the plan amendments and restatement which do not have a direct actuarial impact on the Plan.

Revisions in Actuarial Assumptions and Methods

There were no revisions in the actuarial assumptions or methods since the last actuarial valuation.

Actuarial Experience

There was a net actuarial gain of $933,340 since the last valuation. The gain was primarily due to a higher than expected investment return (on the smoothed actuarial value of assets) of 8.1% compared to the assumed rate of 7.25%. The return on the market value of assets was 4.3%. The gain was partially offset by liability experience losses due to fewer than expected terminations in the Cash Balance Plan (50 actual versus 91 expected), slightly higher than expected salary increases for traditional pension plan members (3.85% actual versus 3.75% expected), and lower mortality experience among retirees than expected (20 actual deaths with $313,000 in annual benefits versus 25 expected deaths and an expected reduction of $514,000 in annual benefits). The net actuarial gain for the year resulted in a decrease in the annual required employer contribution of $103,640, or 0.10% of covered payroll.

Analysis of Change in Employer Contribution

The components of change in the required employer contribution are as follows:

Contribution Rate Last Year	22.22 %
Experience (Gains) or Losses	(0.10)
Payment on Unfunded Liability	(3.56) *
Change in Employer Normal Cost Rate	(0.13)
Administrative Expense	0.06
Change in Assumptions	-
Change in Method	-
Plan Amendment	0.01
Contribution Rate This Year	18.50

*Largely due to the expiration of a charge amortization base established in 2014

Funded Ratio

The funded ratio as of October 1, 2019 is 81.1% compared to 78.7% as of October 1, 2018. The funded ratio is equal to the Actuarial Value of Assets divided by the Actuarial Accrued (Past Service) Liability.

Variability of Future Contribution Rates

The Actuarial Cost Method used to determine the contribution rate is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year.

Over time, if the year-to-year gains and losses offset each other, the contribution rate would be expected to return to the current level.

The Market Value of Assets exceeds the Actuarial Value of Assets Available for Benefits by $12,651,829 as of the valuation date (see Section C). This difference will be gradually recognized over the next several years causing the required contribution to decrease slightly, in the absence of offsetting losses.

Relationship to Market Value

If we were not using an asset smoothing method, the required contribution rate for the fiscal year ending September 30, 2021 would have been 17.13% ($17,753,546), and the funded ratio as of October 1, 2019 would have been 83.6%. This is a decrease from 83.9% as of October 1, 2018.

Conclusion

The remainder of this report includes detailed actuarial valuation results, financial information, miscellaneous information and statistics, and a summary of plan provisions.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Florida Statutes. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2019	2018
Ratio of the market value of assets to total payroll	4.23	4.28
Ratio of actuarial accrued liability to payroll	5.06	5.10
Ratio of actives to retirees and beneficiaries	1.3	1.3
Ratio of net cash flow to market value of assets	-2.5%	-2.1%

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

SECTION B

VALUATION RESULTS

PARTICIPANT DATA		
	10/1/2019 Actuarial Valuation	**10/1/2018 Actuarial Valuation**
ACTIVE MEMBERS		
Number	1,176	1,181
Covered Annual Payroll	$ 100,621,441	$ 97,896,432
Average Annual Pay	$ 85,562	$ 82,893
Average Age	46.4	46.1
Average Past Service	11.5	11.4
Average Age at Hire	34.9	34.7
RETIREES & BENEFICIARIES*		
Number	923	913
Annual Benefits	$ 31,953,616	$ 30,673,845
Average Annual Benefit	$ 34,619	$ 33,597
Average Age	70.9	70.6
DISABILITIES (DEFERRED OR RECEIVING BENEFITS)		
Number in Cash Balance Plan	0	2
Total Cash Balances	$ 0	$ 198,806
Average Cash Balances	$ 0	$ 99,403
Average Age	0.0	60.6
Number in Traditional Pension Plan	6	6
Annual Benefits	$ 132,802	$ 132,802
Average Annual Benefit	$ 22,134	$ 22,134
Average Age	62.8	61.8
TERMINATED VESTED MEMBERS		
Number in Cash Balance Plan	115	106
Total Cash Balances	$ 7,650,636	$ 6,570,570
Average Cash Balances	$ 66,527	$ 61,987
Average Age	48.1	47.3
Number in Traditional Pension Plan	28	32
Annual Benefits	$ 337,581	$ 392,209
Average Annual Benefit	$ 12,056	$ 12,257
Average Age	56.9	56.4

*Includes COLA benefits and benefits paid under Qualified Domestic Relations Orders.

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)			
A. Valuation Date	10/1/2019 *After* *Plan Changes*	10/1/2019 *Before* *Plan Changes*	10/1/2018
B. ADEC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021	9/30/2020
C. Assumed Dates of Employer Contributions	Quarterly	Quarterly	Quarterly
D. Annual Payment to Amortize Unfunded Actuarial Accrued Liability	$ 12,218,608	$ 12,211,555	$ 15,312,431
E. Employer Normal Cost	$ 5,607,429	$ 5,606,773	$ 5,523,946
F. ADEC if Paid on Valuation Date: D+E	$ 17,826,037	$ 17,818,328	$ 20,836,377
G. ADEC Adjusted for Frequency of Payments	$ 18,612,343	$ 18,604,294	$ 21,755,470
H. Covered Payroll	$ 100,621,441	$ 100,621,441	$ 97,896,432
I. ADEC as % of Covered Payroll: G ÷ H	18.50%	18.49%	22.22%
J. Assumed Increase in Covered Payroll to Contribution Year	3.00%	3.00%	3.00%
K. Covered Payroll in Contribution Year	$ 103,640,084	$ 103,640,084	$ 100,833,325
L. ADEC for Contribution Year: I x K	$ 19,173,416	$ 19,163,052	$ 22,405,165
M. ADEC as % of Covered Payroll in Contribution Year: L ÷ K	18.50%	18.49%	22.22%

ACTUARIAL VALUE OF BENEFITS AND ASSETS			
A. Valuation Date	10/1/2019 *After Plan Changes*	10/1/2019 *Before Plan Changes*	10/1/2018
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	$177,841,773	$177,772,403	$182,989,625
b. Vesting Benefits	18,191,765	18,191,765	16,934,624
c. Disability Benefits	-	-	-
d. Preretirement Death Benefits	5,308,244	5,307,887	5,140,268
e. Return of Member Contributions	-	-	-
f. Total	201,341,782	201,272,055	205,064,517
2. Inactive Members			
a. Service Retirees & Beneficiaries	342,511,594	342,511,594	328,246,068
b. Disability Retirees	1,485,190	1,485,190	1,682,251
c. Terminated Vested Members	8,192,023	8,192,023	7,746,557
d. Total	352,188,807	352,188,807	337,674,876
3. Total for All Members	$553,530,589	$553,460,862	$542,739,393
C. Actuarial Accrued (Past Service) Liability	$509,160,742	$509,092,921	$499,289,270
D. Actuarial Present Value of Accumulated Plan Benefits per FASB Statement No. 35	$484,680,447	$484,653,540	$474,473,125
E. Plan Assets			
1. Market Value	$425,766,210	$425,766,210	$419,017,244
2. Actuarial Value	$413,114,381	$413,114,381	$392,721,746
F. Unfunded Actuarial Accrued Liability: (C. - E.2.)	$ 96,046,361	$ 95,978,540	$106,567,524
G. Actuarial Present Value of Projected Covered Payroll	$870,798,998	$870,798,998	$829,183,493
H. Actuarial Present Value of Projected Member Contributions	$ 2,070,335	$ 2,070,335	$ 2,510,969

ENTRY AGE ACTUARIAL COST METHOD
CALCULATION OF EMPLOYER NORMAL COST

A. Valuation Date	October 1, 2019 *After* *Plan Changes*	October 1, 2019 *Before* *Plan Changes*	October 1, 2018
B. Normal Cost for			
1. Service Retirement Benefits	$ 4,666,257	$ 4,665,604	$ 4,774,236
2. Vesting Benefits	935,750	935,750	885,927
3. Disability Benefits	-	-	-
4. Preretirement Death Benefits	212,091	212,088	206,475
5. Total for Future Benefits	5,814,098	5,813,442	5,866,638
6. Assumed Amount for Administrative Expenses	279,665	279,665	217,587
7. Total Normal Cost	6,093,763	6,093,107	6,084,225
C. Expected Member Contribution	486,334	486,334	560,279
D. Employer Normal Cost: B7 - C	$ 5,607,429	$ 5,606,773	$ 5,523,946
E. Employer Normal Cost as a % of Covered Payroll	5.57%	5.57%	5.64%

Liquidation of the Unfunded Actuarial Accrued Liability

The Unfunded Actuarial Accrued Liability (UAAL) is being amortized as a level dollar amount over the number of years remaining in the amortization period. Details relating to the UAAL are as follows.

UAAL AMORTIZATION PERIOD AND PAYMENTS						
Original UAAL				Current UAAL		
Date Established	Source	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment
10/1/2014	Method Change	20	$ 97,987,543	11	$ 77,396,099	$ 9,743,780
10/1/2015	(Gain)/Loss	15	(1,456,021)	11	(1,204,431)	(151,632)
10/1/2015	Assumption Change	15	29,124,712	11	24,092,176	3,033,084
10/1/2016	(Gain)/Loss	15	(1,047,303)	12	(899,909)	(107,053)
10/1/2016	Assumption Change	15	171,295	12	147,187	17,509
10/1/2016	Plan Amendment	5	377,489	2	156,369	80,920
10/1/2017	(Gain)/Loss	15	(1,707,339)	13	(1,544,789)	(174,791)
10/1/2018	(Gain)/Loss	15	(1,291,602)	14	(1,230,822)	(133,199)
10/1/2019	(Gain)/Loss	15	(933,340)	15	(933,340)	(97,063)
10/1/2019	Plan Amendment	15	67,821	15	67,821	7,053
			$ 121,293,255		$ 96,046,361	$ 12,218,608

Amortization Schedule	
Year	Expected UAAL
2019	$ 96,046,361
2020	89,905,252
2021	83,318,926
2022	76,341,878
2023	68,858,993
2024	60,833,600
2029	11,088,128
2030	-

Open Group Projection

PROJECTED ACTUARIAL VALUATION RESULTS						
Actuarial Valuation Date	Fiscal Year End	Actuarially Determined Employer Contribution	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio
10/1/2019	9/30/2021	$ 19,173,416	$ 413,114,381	$ 509,160,742	$ 96,046,361	81.1%
10/1/2020	9/30/2022	18,691,256	429,853,282	513,208,703	83,355,421	83.8%
10/1/2021	9/30/2023	18,222,085	442,854,243	515,775,773	72,921,530	85.9%
10/1/2022	9/30/2024	18,054,529	453,108,622	515,996,205	62,887,583	87.8%
10/1/2023	9/30/2025	17,871,309	463,422,979	516,521,583	53,098,604	89.7%
10/1/2024	9/30/2026	17,738,305	473,362,077	516,552,496	43,190,419	91.6%
10/1/2025	9/30/2027	17,683,760	482,686,518	515,805,375	33,118,857	93.6%
10/1/2026	9/30/2028	17,647,329	491,465,114	514,275,225	22,810,111	95.6%
10/1/2027	9/30/2029	17,627,584	499,891,756	512,046,813	12,155,057	97.6%
10/1/2028	9/30/2030	7,494,005	507,860,510	508,946,691	1,086,181	99.8%
10/1/2029	9/30/2031	7,949,525	515,912,405	505,457,645	-	102.1%
10/1/2030	9/30/2032	8,182,211	512,614,731	500,539,126	-	102.4%
10/1/2031	9/30/2033	8,432,691	509,300,632	495,252,054	-	102.8%
10/1/2032	9/30/2034	8,688,160	506,569,344	490,497,069	-	103.3%
10/1/2033	9/30/2035	8,927,268	501,734,233	483,459,621	-	103.8%
10/1/2034	9/30/2036	9,229,192	496,815,682	476,198,712	-	104.3%

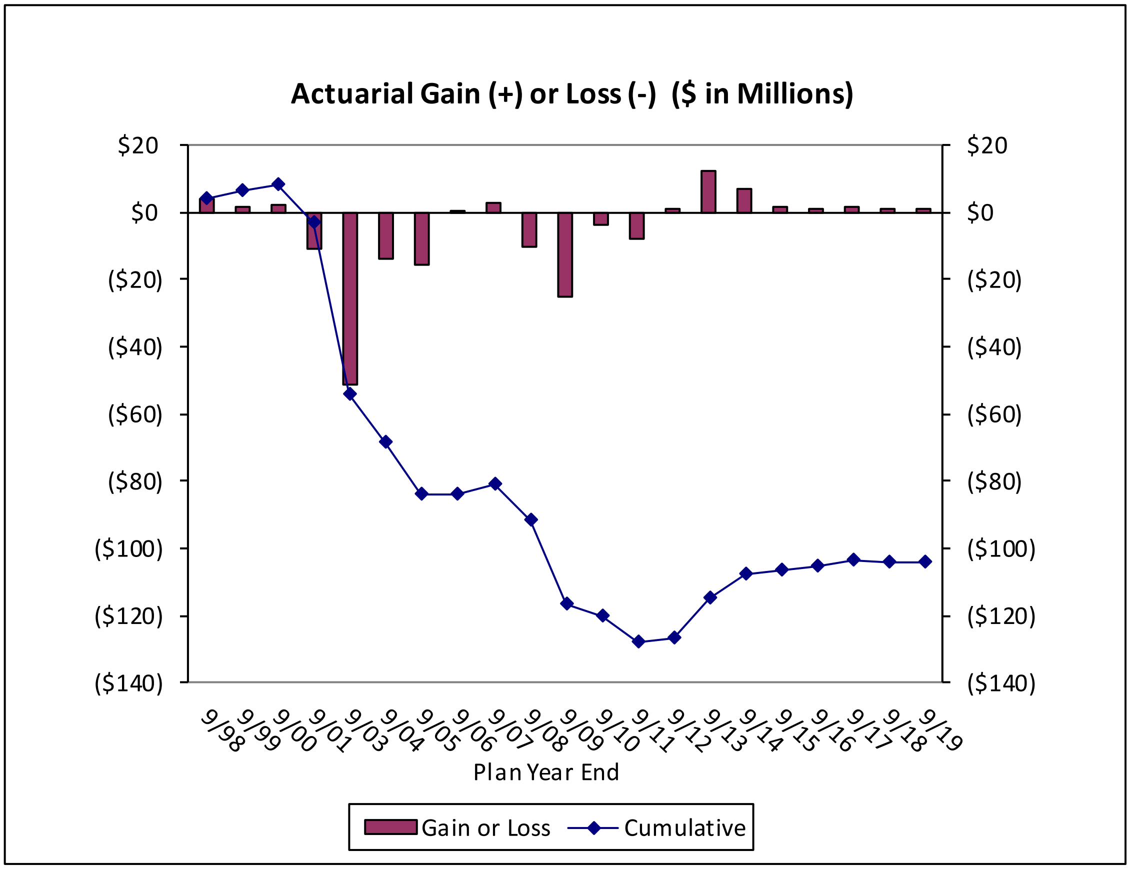
Actuarial Gains and Losses

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain/(loss) based on the entry age normal method for the past year is computed as follows:

1. Last Year's UAAL	$ 106,567,524
2. Last Year's Employer Normal Cost	5,523,946
3. Last Year's Employer Contributions	22,490,926
4. Interest at the Assumed Rate on:	
a. 1 and 2 for one year	8,126,632
b. 3 from dates paid	815,296
c. a - b	7,311,336
5. This Year's Expected UAAL 1 + 2 - 3 + 4c	96,911,880
6. This Year's Actual UAAL (Before Any Changes in Benefits and Assumptions)	95,978,540
7. Net Actuarial Gain/(Loss): 5 - 6	933,340
8. Gain/(Loss) Due to Investments	3,162,957
9. Gain/(Loss) Due to Other Sources: 7 - 8	(2,229,617)
10. Change in UAAL Due to Any Changes in Benefits and Assumptions	67,821
11. This Year's Actual UAAL (After Any Changes in Benefits and Assumptions): 6 + 10	96,046,361

Actuarial gains and losses in previous years have been as follows:

Year Ended	Gain/(Loss)
9/30/98	$ 4,185,711
9/30/99	1,908,161
9/30/00	2,001,644
9/30/01	(11,107,942)
9/30/03	(51,448,368)
9/30/04	(14,118,497)
9/30/05	(15,425,560)
9/30/06	160,195
9/30/07	2,839,647
9/30/08	(10,382,639)
9/30/09	(25,058,893)
9/30/10	(3,432,804)
9/30/11	(7,931,805)
9/30/12	1,180,109
9/30/13	12,043,484
9/30/14	6,781,305
9/30/15	1,456,021
9/30/16	1,047,303
9/30/17	1,707,339
9/30/18	1,291,602
9/30/19	933,340


Actuarial Gain (+) or Loss (-) ($ in Millions)
$20
$0
($20)
($40)
($60)
($80)
($100)
($120)
($140)
9/98
9/99
9/00
9/01
9/03
9/04
9/05
9/06
9/07
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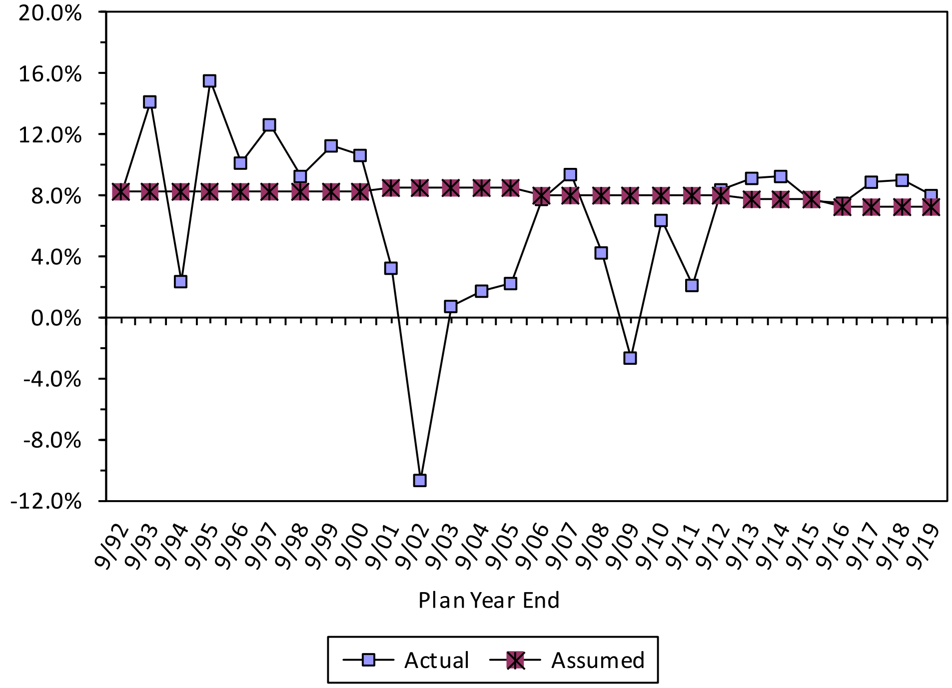
9/15
9/16
9/17
9/18
9/19
Plan Year End
Gain or Loss
Cumulative

The fund earnings and salary increase assumptions have considerable impact on the cost of the Plan, so it is important that they are in line with the actual experience. The following table shows a recent history of actual fund earnings and salary increase rates compared to the assumed rates:

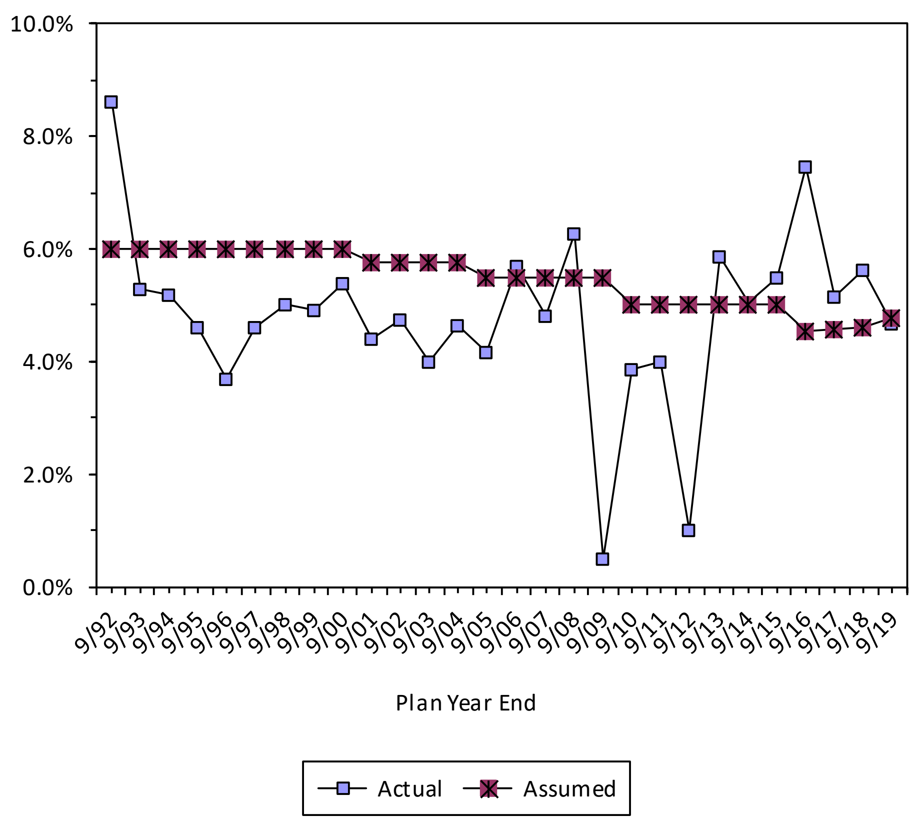
	Investment Return		Salary Increases	
Year Ending	**Actual**	**Assumed**	**Actual**	**Assumed**
9/30/1992	8.2 %	8.25 %	8.6 %	6.00 %
9/30/1993	14.1	8.25	5.3	6.00
9/30/1994	2.4	8.25	5.2	6.00
9/30/1995	15.5	8.25	4.6	6.00
9/30/1996	10.1	8.25	3.7	6.00
9/30/1997	12.7	8.25	4.6	6.00
9/30/1998	9.3	8.25	5.0	6.00
9/30/1999	11.3	8.25	4.9	6.00
9/30/2000	10.7	8.25	5.4	6.00
9/30/2001	3.2	8.50	4.4	5.75
9/30/2002	(10.7)	8.50	4.8	5.75
9/30/2003	0.8	8.50	4.0	5.75
9/30/2004	1.8	8.50	4.6	5.75
9/30/2005	2.3	8.50	4.2	5.50
9/30/2006	7.8	8.00	5.7	5.50
9/30/2007	9.4	8.00	4.8	5.50
9/30/2008	4.3	8.00	6.3	5.50
9/30/2009	(2.6)	8.00	0.5	5.50
9/30/2010	6.3	8.00	3.9	5.00
9/30/2011	2.1	8.00	4.0	5.00
9/30/2012	8.4	8.00	1.0	5.00
9/30/2013	9.1	7.75	5.9	5.00
9/30/2014	9.2	7.75	5.0	5.00
9/30/2015	7.6	7.75	5.5	5.00
9/30/2016	7.5	7.25	7.5	4.55
9/30/2017	8.9	7.25	5.2	4.59
9/30/2018	9.1	7.25	5.6	4.62
9/30/2019	8.1	7.25	4.7	4.77
Average of All Years Shown	6.5 %	---	4.8 %	---

The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuations both at the beginning and the end of each year.

History of Investment Return Based on Actuarial Value of Assets



History of Salary Increases



Actual (A) Compared to Expected (E) Decrements Among Active Employees

Year Ended	Number Added During Year A	Number Added During Year E	Normal & Early Retirement A	Normal & Early Retirement E	Disability Retirement A	Disability Retirement E	Death A	Death E	Terminations Vested A	Terminations Other A	Terminations Totals A	Terminations Totals E	Active Members End of Year
Traditional Pension Plan													
9/30/2002	0	0	29	44	0	2	3	1	6	0	6	13	**658**
9/30/2003	0	0	24	43	0	2	2	1	11	0	11	11	**621**
9/30/2004	0	0	24	43	0	2	4	2	5	0	5	9	**588**
9/30/2005	0	0	26	44	0	2	0	2	7	0	7	8	**555**
9/30/2006	0	0	36	50	0	2	2	2	2	0	2	7	**515**
9/30/2007	0	0	27	49	2	2	0	2	3	4	7	6	**479**
9/30/2008	0	0	33	48	0	2	1	2	2	0	2	5	**443**
9/30/2009	0	0	20	47	0	2	1	2	0	0	0	4	**422**
9/30/2010	1	0	28	29	0	2	0	1	0	0	0	3	**395**
9/30/2011	0	0	38	28	0	2	1	1	1	0	1	2	**355**
9/30/2012	0	0	30	33	1	2	2	1	1	0	1	2	**321**
9/30/2013	1	0	30	33	0	2	0	1	5	0	5	1	**287**
9/30/2014	0	0	24	31	0	2	0	1	0	0	0	1	**263**
9/30/2015	0	0	33	31	0	2	0	1	0	0	0	1	**230**
9/30/2016	0	0	25	30	0	0	3	1	1	0	1	1	**201**
9/30/2017	0	0	31	28	0	0	0	1	1	0	1	0	**169**
9/30/2018	0	0	26	26	0	0	0	1	0	0	0	0	**143**
9/30/2019	0	0	21	23	0	0	0	1	0	0	0	0	**122**
Totals	2	0	505	660	3	28	19	24	45	4	49	74	
Expected 9/30/2020				21		0		1				0	
Cash Balance Plan													
9/30/2012	19	50	3	7	0	2	0	1	12	35	47	21	**758**
9/30/2013	58	61	4	8	7	2	2	1	24	24	48	19	**755**
9/30/2014	65	67	7	8	1	2	1	1	20	14	34	18	**777**
9/30/2015	71	79	4	13	2	3	1	1	14	25	39	18	**802**
9/30/2016	129	50	5	12	0	0	1	3	10	5	15	57	**910**
9/30/2017	119	87	9	16	0	0	2	2	17	27	44	77	**974**
9/30/2018	122	84	9	17	0	0	0	2	15	34	49	84	**1,038**
9/30/2019	84	89	16	20	0	0	2	2	11	39	50	91	**1,054**
Totals	667	567	57	101	10	9	9	13	123	203	326	385	
Expected 9/30/2020				21		0		3				75	

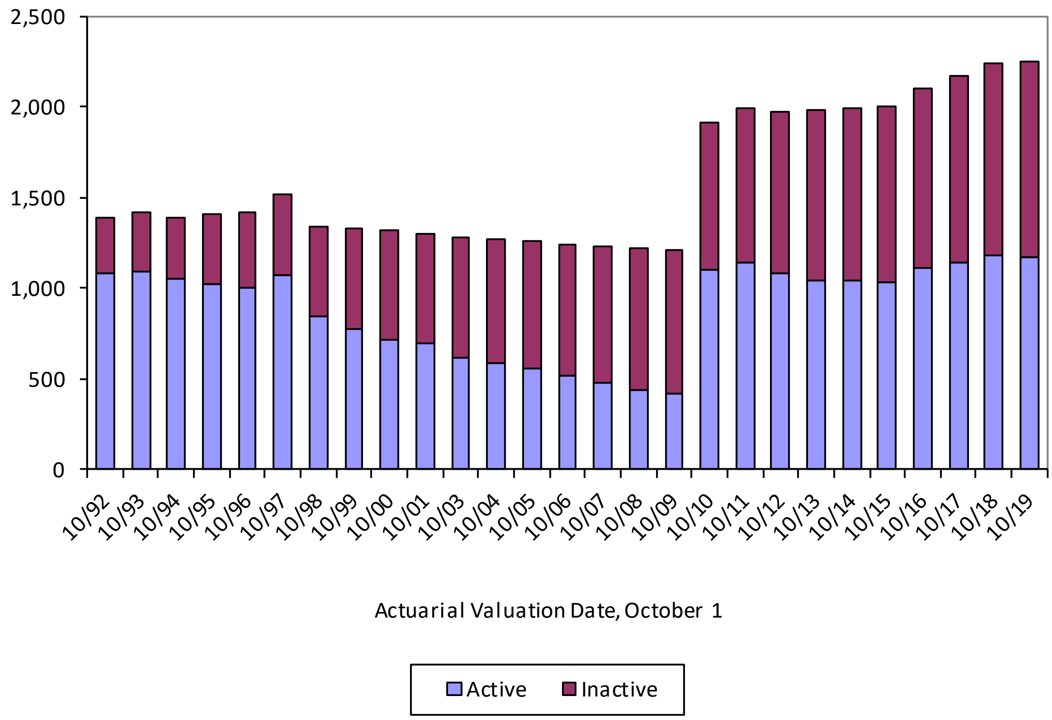
RECENT HISTORY OF VALUATION RESULTS

Valuation Date	Number of Members Active	Number of Members Inactive	Covered Annual Payroll	Actuarial Value of Assets	Employer Normal Cost*** Amount	Employer Normal Cost*** % of Payroll
10/1/1992	1,086	306	$38,566,337	$110,048,366	$3,226,220	8.36 %
10/1/1993	1,094	323	40,318,967	125,478,328	2,960,272	7.34
10/1/1994	1,052	341	40,645,961	127,557,755	2,706,006	6.66
10/1/1995	1,024	387	40,525,414	140,666,432	3,470,125	8.56
10/1/1996	1,008	414	40,540,266	152,202,484	3,240,881	7.99
10/1/1997	1,075 *	443	43,240,797	169,603,158	3,127,299	7.23
10/1/1998	847 **	498	36,404,917	179,808,287	2,391,378	6.57
10/1/1999	779	549	34,778,576	193,358,416	2,152,232	6.19
10/1/2000	719	598	33,802,501	208,334,966	2,764,276	8.18
10/1/2001	696	601	34,113,735	203,818,902	4,250,601	12.46
10/1/2003	621	659	33,332,980	224,562,213	3,968,409	11.91
10/1/2004	588	682	32,844,874	219,853,057	5,848,145	17.81
10/1/2005	555	705	32,393,300	243,972,731	5,969,287	18.43
10/1/2006	515	728	31,686,048	254,461,877	5,776,429	18.23
10/1/2007	479	753	30,981,376	268,893,745	5,165,819	16.67
10/1/2008	443	778	30,479,169	254,352,846	9,507,264	31.19
10/1/2009	422	789	28,963,856	241,001,979	12,095,155	41.76
10/1/2010	1,106	812	69,967,434	251,496,569	13,226,017	18.90
10/1/2011	1,144	846	73,230,186	252,224,649	14,688,780	20.06
10/1/2012	1,079	892	70,147,352	267,020,081	19,643,172	28.00
10/1/2013	1,042	939	72,478,712	286,722,421	19,004,497	26.22
10/1/2014	1,040	956	75,405,142	310,012,409	4,766,970	6.32
10/1/2015	1,032	967	78,313,766	328,381,518	4,839,155	6.18
10/1/2016****	1,111	993	86,572,980	344,552,501	5,090,011	5.88
10/1/2017	1,143	1,033	90,906,955	368,621,666	5,173,713	5.69
10/1/2018	1,181	1,059	97,896,432	392,721,746	5,523,946	5.64
10/1/2019	1,176	1,072	100,621,441	413,114,381	5,607,429	5.57

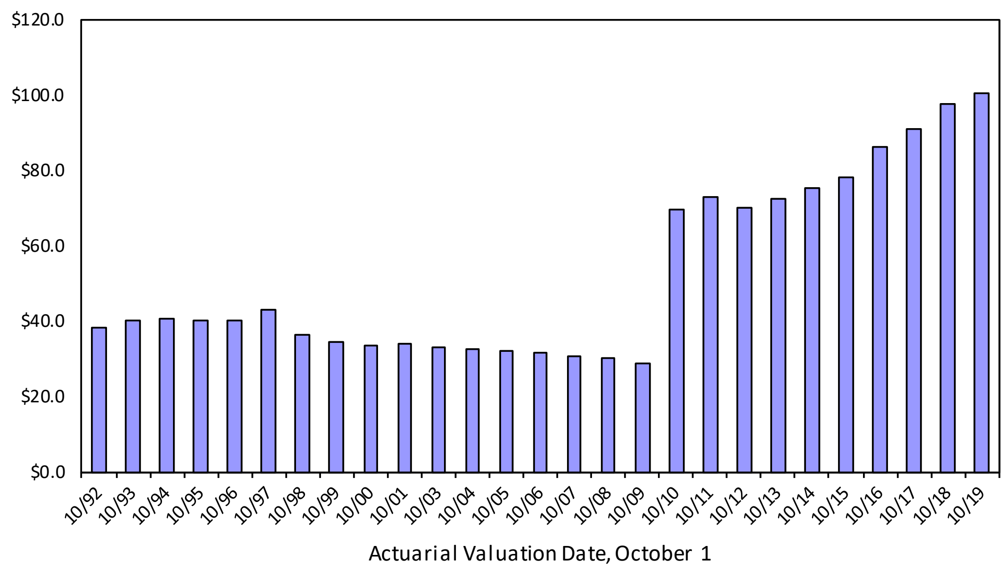
* The increase from '96 to '97 is due to inclusion of 79 former St. Cloud employees.
** The decrease from ’97 to ’98 is due to 143 employees transferring to Defined Contribution Plan.
*** Aggregate funding method used prior to October 1, 2014.
**** Reflects Actuarial Impact Statement dated June 15, 2017.

Recent History of Valuation Results (Continued)

Recent History of Numbers of Members



Recent History of Covered Payroll ($ in Millions)



Recent History of the Unfunded Actuarial Accrued Liability and Funded Ratio

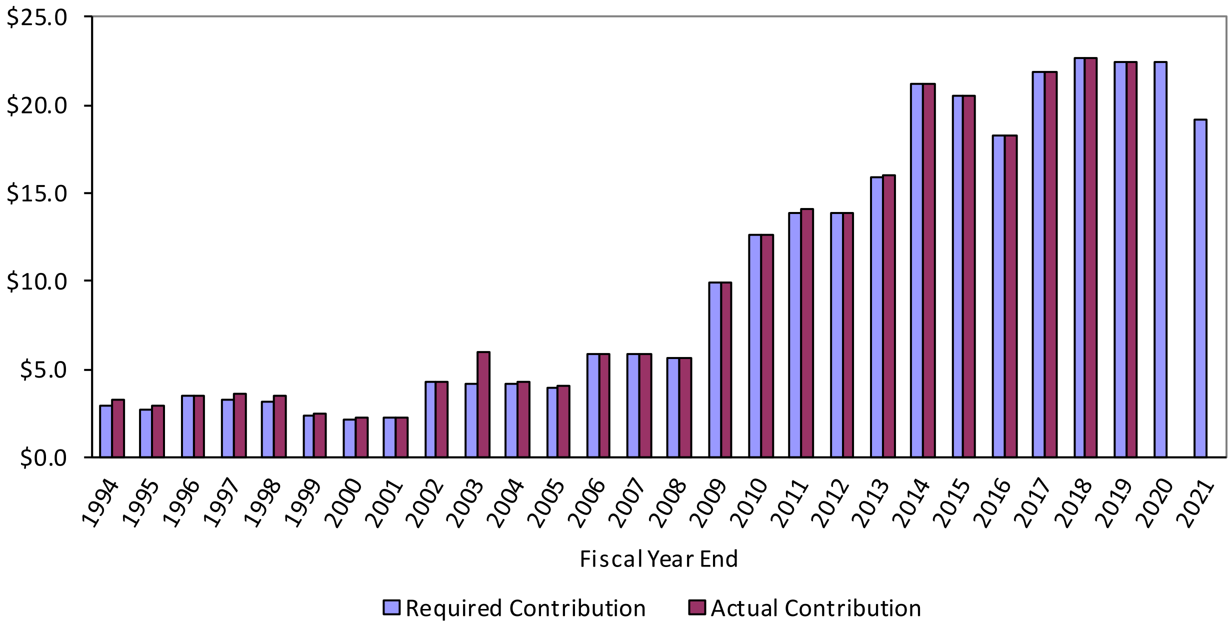
Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL As % of Covered Payroll (b - a) / c
10/1/1992	$110,048,366	-	-	-	$38,566,337	-
10/1/1993	125,478,328	-	-	-	40,318,967	-
10/1/1994	127,557,755	-	-	-	40,645,961	-
10/1/1995	140,666,432	$145,148,060	$4,481,628	96.9 %	40,525,414	11.1 %
10/1/1996	152,202,484	153,235,342	1,032,858	99.3	40,540,266	2.5
10/1/1997	169,603,158	164,797,178	(4,805,980)	102.9	43,240,797	(11.1)
10/1/1998	179,808,287	171,340,336	(8,467,951)	104.9	36,404,917	(23.3)
10/1/1999	193,358,416	183,332,431	(10,025,985)	105.5	34,778,576	(28.8)
10/1/2000	205,886,587	209,333,935	3,447,348	98.4	33,802,501	10.2
10/1/2001	203,818,902	218,357,743	14,538,841	93.3	34,113,735	42.6
10/1/2003	224,562,213	236,163,511	11,601,298	95.1	33,332,980	34.8
10/1/2004	219,853,057	244,485,261	24,632,204	89.9	32,844,874	75.0
10/1/2005	243,972,731	266,617,632	22,644,901	91.5	32,393,300	69.9
10/1/2006	254,461,877	275,758,525	21,296,648	92.3	31,686,048	67.2
10/1/2007	268,893,745	285,786,436	16,892,691	94.1	30,981,376	54.5
10/1/2008	254,352,846	297,139,500	42,786,654	85.6	30,479,169	140.4
10/1/2009	241,001,979	306,798,448	65,796,469	78.6	28,963,856	227.2
10/1/2010	251,496,569	339,186,958	87,690,389	74.1	69,967,434	125.3
10/1/2011	252,224,649	352,684,289	100,459,640	71.5	73,230,186	137.2
10/1/2012	267,020,081	401,073,223	134,053,142	66.6	70,147,352	191.1
10/1/2013	286,722,421	412,298,594	125,576,173	69.5	72,478,712	173.3
10/1/2014	310,012,409	421,558,835	111,546,426	73.5	75,405,142	147.9
10/1/2015	328,381,518	460,083,794	131,702,276	71.4	78,313,766	168.2
10/1/2016 *	344,552,501	471,508,790	126,956,289	73.1	86,572,980	146.6
10/1/2017	368,621,666	485,865,130	117,243,464	75.9	90,906,955	129.0
10/1/2018	392,721,746	499,289,270	106,567,524	78.7	97,896,432	108.9
10/1/2019	413,114,381	509,160,742	96,046,361	81.1	100,621,441	95.5

* Reflects Actuarial Impact Statement dated June 15, 2017.

RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS				
Valuation Date	End of Year To Which Valuation Applies	Required Employer Contribution Amount	Required Employer Contribution % of Payroll	Actual Employer Contribution for Year to Which Valuation Applies
10/1/1992	9/30/1993	-	-	-
10/1/1993	9/30/1994	$ 2,960,272	7.34 %	$ 3,230,549
10/1/1994	9/30/1995	2,706,006	6.66	2,896,534
10/1/1995	9/30/1996	3,470,125	8.56	3,555,309
10/1/1996	9/30/1997	3,240,881	7.99	3,662,399
10/1/1997	9/30/1998	3,127,299	7.23	3,544,420
10/1/1998	9/30/1999	2,391,378	6.57	2,468,225
10/1/1999	9/30/2000	2,152,232	6.19	2,311,353
10/1/2000	9/30/2001	2,308,286	6.83	2,308,286
10/1/2001	9/30/2002	4,250,601	12.46	4,250,601
10/1/2001	9/30/2003	4,224,413	12.46	5,972,937
10/1/2003	9/30/2004	4,172,703	12.52	4,277,001
10/1/2003	9/30/2005	3,984,391	12.52	4,021,572
10/1/2004	9/30/2006	5,840,101	18.72	5,891,438
10/1/2005	9/30/2007	5,872,213	19.32	5,872,213
10/1/2006	9/30/2008	5,665,227	19.12	5,665,887
10/1/2008	9/30/2009	9,969,736	32.71	9,972,135
10/1/2009	9/30/2010	12,683,273	45.77	12,682,074
10/1/2010	9/30/2011	13,868,008	19.82	14,149,906
10/1/2010	9/30/2012	13,856,257	19.82	13,930,576
10/1/2011	9/30/2013	15,862,317	21.03	16,009,039
10/1/2012	9/30/2014	21,184,220	29.32	21,184,220
10/1/2013	9/30/2015	20,499,734 *	27.46	20,499,734 *
10/1/2014	9/30/2016	18,321,715 **	23.59	18,321,715 **
10/1/2015	9/30/2017	21,875,854	27.12	21,875,854
10/1/2016	9/30/2018	22,613,555 ***	25.36	22,613,555
10/1/2017	9/30/2019	22,490,926	24.02	22,490,926
10/1/2018	9/30/2020	22,405,165	22.22	---
10/1/2019	9/30/2021	19,173,416	18.50	---

* Before reflecting the prepaid contribution of $1,965,498.
** Before reflecting the prepaid contribution of $519,190.
*** Reflects Actuarial Impact Statement dated June 15, 2017.
Note: The difference between actual and required contributions for the '96-'97 year consists of contributions for St. Cloud employees and interest.

Recent History of Required and Actual Contributions ($ in Millions)



Actuarial Assumptions and Cost Method

Valuation Methods

Actuarial Cost Method – Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce/(increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities – Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) dollar contributions over a reasonable period of future years.

Actuarial Value of Assets – The Actuarial Value of Assets is calculated by recognizing 20% of the difference between the Market Value of Assets and the expected Actuarial Asset Value. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 90% of the Market Value of plan assets and whose upper limit is 110% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

Valuation Assumptions

The actuarial assumptions used in the valuation are shown in this Section. The decrement assumptions were established following the Experience Study Report dated August 24, 2015.

Economic Assumptions

The investment return rate assumed in the valuation is 7.25% per year, compounded annually (net after investment expenses).

The inflation rate assumed in this valuation was 2.25% per year. The inflation rate is defined to be the long-term rate of annual increases in the prices of goods and services.

Pay increase assumptions for individual active members are as follows:

Rounded	% Increase in Salary		
Years of Service	Merit and Seniority	Base Inflation	Total Increase
0-1	5.25%	2.25%	7.50%
2-3	4.55%	2.25%	6.80%
4-5	2.75%	2.25%	5.00%
6-7	2.25%	2.25%	4.50%
8-9	2.05%	2.25%	4.30%
10+	1.50%	2.25%	3.75%

Demographic Assumptions

The mortality table used was the RP-2000 Combined Healthy Participant Mortality Table for active members and the RP-2000 Mortality Table for Annuitants for non-disabled inactive members, with mortality improvement projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 50% blue collar adjustment and a 50% white collar adjustment. These are the same rates used for Regular Class members in the July 1, 2018 actuarial valuation of the Florida Retirement System (FRS) Pension Plan (based on the 2014 FRS experience study report), in accordance with Florida Statutes Chapter 112.63.

Sample Attained	(Active) Probability of Dying Next Year		Future Life Expectancy (years)	
Ages (in 2019)	Men	Women	Men	Women
50	0.21 %	0.15 %	35.80	38.85
55	0.35	0.24	30.68	33.70
60	0.61	0.39	25.75	28.68
65	1.06	0.69	21.10	23.86
70	1.73	1.21	16.79	19.36
75	2.88	2.04	12.91	15.26
80	4.88	3.42	9.54	11.62

Sample Attained	(Inactive) Probability of Dying Next Year		Future Life Expectancy (years)	
Ages (in 2019)	Men	Women	Men	Women
50	0.55 %	0.23 %	34.88	38.50
55	0.60	0.32	30.26	33.48
60	0.75	0.46	25.59	28.58
65	1.12	0.72	21.06	23.83
70	1.73	1.21	16.79	19.36
75	2.88	2.04	12.91	15.26
80	4.88	3.42	9.54	11.62

For disabled retirees, the mortality table used was the RP-2000 mortality for disabled annuitants, set-back 4 years for males and set-forward 2 years for females, with no provision being made for future mortality improvements. These are the same rates used for Regular Class members in the July 1, 2018 actuarial valuation of the FRS Pension Plan (based on the 2014 FRS experience study report) , in accordance with Florida Statutes Chapter 112.63.

Sample Attained	Probability of Dying Next Year		Future Life Expectancy (years)	
Ages	Men	Women	Men	Women
50	2.38 %	1.35 %	20.25	23.74
55	3.03	1.87	17.78	20.46
60	3.67	2.41	15.55	17.43
65	4.35	3.13	13.44	14.58
70	5.22	4.29	11.39	11.96
75	6.58	5.95	9.43	9.65
80	8.70	8.23	7.65	7.66

The rates of retirement are as follows:

	Assumed Retirement Rates					
	Traditional Pension Plan Years of Service			Cash Balance Plan Years of Service		
Age	< 24	24 - 29	30 +	< 30	30 - 34	35 +
< 51	N/A	6%	12%	N/A	25%	100%
51	N/A	12%	15%	N/A	25%	100%
52	N/A	16%	15%	N/A	25%	100%
53	N/A	18%	20%	N/A	25%	100%
54	N/A	17%	10%	N/A	25%	100%
55	6%	16%	10%	N/A	25%	100%
56	3%	9%	15%	N/A	25%	100%
57	8%	9%	15%	N/A	25%	100%
58	8%	9%	20%	N/A	25%	100%
59	12%	15%	30%	N/A	25%	100%
60	15%	20%	30%	N/A	25%	100%
61	21%	20%	15%	N/A	25%	100%
62	21%	40%	30%	25%	30%	100%
63	30%	20%	40%	15%	40%	100%
64	20%	25%	25%	15%	25%	100%
65	55%	55%	55%	35%	55%	100%
66	45%	45%	45%	30%	45%	100%
67 - 68	40%	40%	40%	25%	40%	100%
69 - 74	50%	50%	50%	50%	50%	100%
75 +	100%	100%	100%	100%	100%	100%

Rates of separation from active membership for the Traditional Pension Plan are 1.1% per year for males and 1.7% per year for females. Separation rates for the Cash Balance Plan vary by gender, age, and years of service, as follows:

	% of Active Members Separating Within Next Year												
	Years of Service - Males							**Years of Service - Females**					
Age	0	1	2	3	4	5 +	Age	0	1	2	3	4	5 +
< 25	35%	30%	7.5%	5%	5%	5.0%	< 43	50%	25%	12.5%	10%	5%	4.0%
25	35%	30%	7.5%	5%	5%	4.8%	43	50%	25%	12.5%	10%	5%	4.2%
26	35%	30%	7.5%	5%	5%	4.6%	44	50%	25%	12.5%	10%	5%	4.4%
27	35%	30%	7.5%	5%	5%	4.4%	45	50%	25%	12.5%	10%	5%	4.6%
28	35%	30%	7.5%	5%	5%	4.2%	46	50%	25%	12.5%	10%	5%	4.8%
29	35%	30%	7.5%	5%	5%	4.0%	47	50%	25%	12.5%	10%	5%	5.0%
30	35%	30%	7.5%	5%	5%	3.8%	48	50%	25%	12.5%	10%	5%	5.2%
31	35%	30%	7.5%	5%	5%	3.6%	49	50%	25%	12.5%	10%	5%	5.4%
32	35%	30%	7.5%	5%	5%	3.4%	50	50%	25%	12.5%	10%	5%	5.6%
33	35%	30%	7.5%	5%	5%	3.2%	51	50%	25%	12.5%	10%	5%	5.8%
34	35%	30%	7.5%	5%	5%	3.0%	52 +	50%	25%	12.5%	10%	5%	6.0%
35	35%	30%	7.5%	5%	5%	2.8%							
36	35%	30%	7.5%	5%	5%	2.6%							
37	35%	30%	7.5%	5%	5%	2.5%							
38 +	35%	30%	7.5%	5%	5%	2.4%							

The rate of interest credited on account balances for active members is 5.0% per year for fiscal year ending 2020 (based on the actual investment return for fiscal year ending 2019), and is assumed to be 5.0% per year for each year thereafter. 4.0% per year is assumed for vested terminated members.

The annual rate of payroll growth assumed is 3.0%.

The annual future COLA rate for eligible traditional pension plan members is 1.0% for 2020 (based on the actual COLA granted for the year effective January 1, 2020) and 1.0% per year, compounded annually, for each year thereafter. The 1.0% COLA assumption is the approximate equivalent annual COLA based on the 50^{th} percentile of expected COLAs payable over the next 30 years.

Changes from previous valuation:

None.

Miscellaneous and Technical Assumptions

Administrative & Investment Expenses	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the average of the expenses over the previous 2 years. Assumed administrative expenses are added to the Normal Cost.
Benefit Service	Fractional service is used to determine the amount of benefit payable under the Plan. Pay credits for the cash balance plan are based on whole years of service.
Data Assumptions/ Adjustments	Where complete participant data was not available, we have used data assumptions which we believe are reasonable and internally consistent.
Decrement Operation	Mortality decrements operate during retirement eligibility.
Decrement Timing	Decrements of all types are assumed to occur at the beginning of the year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the valuation date.
Forfeitures	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
Incidence of Contributions	Employer contributions are assumed to be made at the end of each calendar quarter. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Marriage Assumption	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be four years older than female spouses for active member valuation purposes.
Normal Form of Benefit	50% Joint and Survivor Annuity for traditional pension plan members. Cashout of account balance for cash balance plan members.
Pay Increase Timing	End of fiscal year. This is equivalent to assuming that reported pays represent rate of pay on the valuation date.
Service Credit Accruals	It is assumed that members accrue one year of service credit per year.
Employees on Disability Leave	Active members reported as "Active LTD" are assumed to return to active status, unless otherwise indicated.

Glossary

Actuarial Accrued Liability (AAL)	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
Actuarial Assumptions	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
Actuarial Cost Method	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
Actuarial Equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV)	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
Actuarial Present Value of Future Benefits (APVFB)	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB Statement Nos. 67 and 68.
Actuarial Value of Assets	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially determined employer contribution (ADEC).
Amortization Method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.

Amortization Payment	That portion of the plan contribution or ADEC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
Amortization Period	The period used in calculating the Amortization Payment.
Actuarially Determined Employer Contribution (ADEC)	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADEC consists of the Employer Normal Cost and Amortization Payment.
Closed Amortization Period	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
Employer Normal Cost	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Equivalent Single Amortization Period	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
Experience Gain/Loss	A measure of the difference between the normal cost rate from last year and the normal cost rate from this year.
Funded Ratio	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
GASB	Governmental Accounting Standards Board.
Normal Cost	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
Open Amortization Period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
Unfunded Actuarial Accrued Liability (UAAL)	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
Valuation Date	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

SECTION C

PENSION FUND INFORMATION

Summary of Assets at Market Value

Item	September 30 2019	September 30 2018
A. Receivables:		
1. Member Contributions	$ -	$ -
2. Employer Contributions	-	-
3. Investment Income & Other	347,827	467,612
4. Total Receivables	347,827	467,612
B. Investments		
1. Short-Term Investments	14,379,175	9,365,237
2. Domestic Equities	176,973,447	188,071,829
3. International Equities	61,390,922	59,567,131
4. Domestic Fixed Income	89,419,325	82,639,498
5. International Fixed Income	-	-
6. Real Estate	43,884,341	42,580,676
7. Alternative Investments	27,512,097	21,673,786
8. Other Mutual Fund Investments	12,520,278	15,094,667
9. Total Investments	426,079,585	418,992,824
C. Liabilities		
1. Benefits/Refunds Payable	-	-
2. Accrued Expenses and Other Payables	(24,947)	(26,007)
3. Due Brokers	(636,255)	(417,185)
4. Total Liabilities	(661,202)	(443,192)
D. Market Value of Assets Held in Trust	425,766,210	419,017,244
E. Contribution Paid for Future Period	-	-
F. Market Value of Assets Available for Benefits	$ 425,766,210	$ 419,017,244
G. Allocation of Investments		
1. Short-Term Investments	3.4%	2.2%
2. Domestic Equities	41.5%	44.9%
3. International Equities	14.4%	14.2%
4. Domestic Fixed Income	21.0%	19.7%
5. International Fixed Income	0.0%	0.0%
6. Real Estate	10.3%	10.2%
7. Alternative Investments	6.5%	5.2%
8. Other Mutual Fund Investments	2.9%	3.6%
9. Total Investments	100.0%	100.0%

Summary of Fund's Income and Disbursements

Item	September 30 2019	September 30 2018
A. Market Value of Assets at Beginning of Year	$ 419,017,244	$ 390,854,892
B. Revenues and Expenditures		
1. Contributions		
a. Employee Contributions	475,337	555,513
b. Employer Contributions	22,490,926	22,613,555
c. Other	-	-
d. Total	22,966,263	23,169,068
2. Investment Income		
a. Interest, Dividends, and Other Income	9,007,408	9,164,288
b. Net Realized and Unrealized Gains/(Losses)	10,606,085	30,060,658
c. Investment Expenses	(2,015,168)	(2,185,523)
d. Net Investment Income	17,598,325	37,039,423
3. Benefits and Refunds		
a. Monthly Benefits and Refunds	(33,576,028)	(31,726,403)
b. Other	-	-
c. Total	(33,576,028)	(31,726,403)
4. Administrative and Miscellaneous Expenses	(239,594)	(319,736)
5. Transfers	-	-
C. Market Value of Assets Available for Benefits	425,766,210	419,017,244
D. Contribution Paid for Future Period	-	-
E. Market Value of Assets Held in Trust	$ 425,766,210	$ 419,017,244

Development of Actuarial Value of Assets

	Year Ending 9/30/2019	Year Ending 9/30/2018
A. Beginning of Year Assets		
1. Market Value	$ 419,017,244	$ 390,854,892
2. Actuarial Value	392,721,746	368,621,666
B. End of Year Market Value of Assets	425,766,210	419,017,244
C. Net of Contributions Less Disbursements	(10,849,359)	(8,877,071)
D. Actual Net Investment Earnings	17,598,325	37,039,423
E. Expected Investment Earnings	28,079,037	26,403,277
F. Expected Actuarial Value End of Year: A2 + C + E	409,951,424	386,147,872
G. Market Value End of Year Less Expected Actuarial Value: B - F	15,814,786	32,869,372
H. 20% of Difference	3,162,957	6,573,874
I. End of Year Assets		
1. Actuarial Value: F + H	413,114,381	392,721,746
2. Final Actuarial Value Within 90% to 110% of Market Value	413,114,381	392,721,746
J. Recognized Investment Return: E + H + I2 - I1	31,241,994	32,977,151
K. Gain/(Loss) Due to Investments	3,162,957	6,573,874
L. Recognized Rate of Return	8.1 %	9.1 %

Investment Rate of Return

Year Ending September 30th	Investment Rate of Return: Market Value *	Investment Rate of Return: Actuarial Value
1992	10.7 %	8.2 %
1993	14.6	14.1
1994	0.9	2.4
1995	15.8	15.5
1996	8.8	10.1
1997	23.9	12.7
1998	(1.4)	9.3
1999	12.2	11.3
2000	10.9	10.7
2001	(16.2)	3.2
2002	(9.8)	(10.7)
2003	16.1	0.8
2004	8.4	1.8
2005	13.9	2.3
2006	7.1	7.8
2007	16.0	9.4
2008	(15.0)	4.3
2009	(2.4)	(2.6)
2010	9.7	6.3
2011	(0.8)	2.1
2012	21.2	8.4
2013	12.9	9.1
2014	9.6	9.2
2015	1.5	7.6
2016	9.3	7.5
2017	14.1	8.9
2018	9.6	9.1
2019	4.3	8.1
Average Returns:		
Last 5 Years	7.7 %	8.2 %
Last 10 Years	9.0 %	7.6 %
All Years Shown	6.9 %	6.5 %

*Net of investment expenses after 2005.

SECTION D

FINANCIAL ACCOUNTING INFORMATION

FASB STATEMENT NO. 35 INFORMATION		
A. Valuation Date	10/1/2019	10/1/2018
B. Actuarial Present Value of Accumulated Plan Benefits		
1. Vested Benefits		
a. Members Currently Receiving Payments	$ 343,996,784	$ 329,928,319
b. Terminated Vested Members	8,192,023	7,746,557
c. Other Members	126,075,773	131,019,300
d. Total	478,264,580	468,694,176
2. Non-Vested Benefits	6,415,867	5,778,949
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	$ 484,680,447	$ 474,473,125
4. Accumulated Contributions of Active Members	$ 19,426,350	$ 21,684,066
C. Changes in the Actuarial Present Value of Accumulated Plan Benefits		
1. Total Value at Beginning of Period	$ 474,473,125	$ 460,434,751
2. Increase/(Decrease) During the Period Attributable to:		
a. Change in Actuarial Assumptions	0	0
b. Plan Amendment	26,907	0
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	43,756,443	45,764,777
d. Benefits Paid	(33,576,028)	(31,726,403)
e. Net Increase	10,207,322	14,038,374
3. Total Value at End of Period	$ 484,680,447	$ 474,473,125
D. Market Value of Assets	$ 425,766,210	$ 419,017,244

SECTION E

MEMBERSHIP DATA AND STATISTICAL INFORMATION

Reconciliation of Membership Data from October 1, 2018 through October 1, 2019	Traditional	Cash Balance	Total
A. Active Members			
1. Number Included in Last Valuation	143	1,038	1,181
2. New Members	0	82	82
3. Rehired Members	0	0	0
4. Non-Vested Employment Terminations	0	(39)	(39)
5. Vested Employment Terminations	0	(11)	(11)
6. Terminations Resulting in Other Deferred Benefits	0	0	0
7. Service Retirements	(21)	(16)	(37)
8. Disability Retirements	0	0	0
9. Deaths	0	(2)	(2)
10. Other	0	2	2
11. Number Included in This Valuation	122	1,054	1,176
B. Terminated Vested Members			
1. Number Included in Last Valuation	32	106	138
2. Additions from Active Members	0	11	11
3. Lump Sum Payments/Refunds	(1)	(1)	(2)
4. Payments Commenced	(3)	(1)	(4)
5. Rehired	0	0	0
6. Deaths	0	0	0
7. Other (Data Adjustment / Additions from Other Deferred Benefits)	0	0	0
8. Number Included in This Valuation	28	115	143
C. Other Deferred Benefits (Survivors & Disabilities)			
1. Number Included in Last Valuation	1	2	3
2. Additions from Active Members	0	0	0
3. Additions from Service Retirees (Deferred Survivor)	0	0	0
4. Payments Commenced	0	0	0
5. Rehired	0	0	0
6. Other (Additions to Terminated Vested Members)	0	(2)	(2)
7. Number Included in This Valuation	1	0	1
D. Retirees and Beneficiaries			
1. Number Included in Last Valuation	892	2	894
2. Additions from Active Members	21	16	37
3. Additions from Terminated Vested Members	3	1	4
4. Additions from Other Deferred Benefits	0	0	0
5. Deaths Resulting in No Further Payments	(20)	0	(20)
6. End of Certain Period - No Further Payments	0	0	0
7. Lump Sum Payments	0	(13)	(13)
8. Rehired	0	0	0
9. Other (Data Adjustment)	1	0	1
10. Number Included in This Valuation	897	6	903
E. QDRO Alternate Payees			
1. Number Included in Last Valuation	24	0	24
2. Additions	2	0	2
3. Lump Sum Payments	0	0	0
4. Deaths Resulting in No Further Payments	(1)	0	(1)
5. Number Included in This Valuation	25	0	25

ORLANDO UTILITIES COMMISSION PENSION PLAN
ACTIVE MEMBERS ON OCTOBER 1, 2019
TRADITIONAL MEMBERS

Age	Years of Service							
Group	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	Totals
30-34								
Total Pay								
Avg. Pay								
35-39								
Total Pay								
Avg. Pay								
40-44					3	1		4
Total Pay					$262,789	$225,750		$488,539
Avg. Pay					$87,596	$225,750		$122,135
45-49					9	5		14
Total Pay					$803,737	$460,328		$1,264,065
Avg. Pay					$89,304	$92,066		$90,290
50-54					10	10	12	32
Total Pay					$842,865	$1,152,312	$1,156,780	$3,151,957
Avg. Pay					$84,287	$115,231	$96,398	$98,499
55-59					4	11	25	40
Total Pay					$369,843	$1,346,106	$2,467,883	$4,183,832
Avg. Pay					$92,461	$122,373	$98,715	$104,596
60-64					5	5	10	20
Total Pay					$360,785	$515,253	$1,163,654	$2,039,692
Avg. Pay					$72,157	$103,051	$116,365	$101,985
65-99					1	3	8	12
Total Pay					$69,093	$224,313	$736,851	$1,030,258
Avg. Pay					$69,093	$74,771	$92,106	$85,855
Total No.					32	35	55	122
Total Pay					$2,709,113	$3,924,062	$5,525,168	$12,158,343
Avg. Pay					$84,660	$112,116	$100,458	$99,659

ORLANDO UTILITIES COMMISSION PENSION PLAN
ACTIVE MEMBERS ON OCTOBER 1, 2019
CASH BALANCE MEMBERS

Age	Years of Service							
Group	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	Totals
Under 25	28							28
Total Pay	$1,784,507							$1,784,507
Avg. Pay	$63,732							$63,732
25-29	61	10						71
Total Pay	$3,642,458	$773,917						$4,416,375
Avg. Pay	$59,712	$77,392						$62,202
30-34	57	25	22					104
Total Pay	$3,866,445	$1,653,048	$1,702,716					$7,222,209
Avg. Pay	$67,832	$66,122	$77,396					$69,444
35-39	62	27	30	8	1			128
Total Pay	$4,201,869	$2,109,909	$2,460,623	$750,895	$97,587			$9,620,884
Avg. Pay	$67,772	$78,145	$82,021	$93,862	$97,587			$75,163
40-44	71	39	43	16	9			178
Total Pay	$5,525,466	$3,137,424	$3,490,755	$1,778,335	$922,570			$14,854,551
Avg. Pay	$77,823	$80,447	$81,180	$111,146	$102,508			$83,453
45-49	50	31	40	27	25	5	1	179
Total Pay	$4,172,184	$2,715,565	$3,195,918	$2,317,003	$2,262,667	$541,805	$495,000	$15,700,143
Avg. Pay	$83,444	$87,599	$79,898	$85,815	$90,507	$108,361	$495,000	$87,710
50-54	30	26	33	28	19	13	9	158
Total Pay	$2,653,887	$2,506,700	$2,712,359	$2,770,703	$1,834,169	$1,664,252	$1,145,143	$15,287,214
Avg. Pay	$88,463	$96,412	$82,193	$98,954	$96,535	$128,019	$127,238	$96,755
55-59	32	19	21	21	10	3	9	115
Total Pay	$3,048,014	$1,499,232	$2,146,592	$2,015,057	$772,683	$287,527	$1,038,868	$10,807,973
Avg. Pay	$95,250	$78,907	$102,219	$95,955	$77,268	$95,842	$115,430	$93,982
60-64	11	8	12	17	13	5	1	67
Total Pay	$1,018,514	$687,422	$1,122,472	$1,423,205	$1,377,188	$616,211	$115,613	$6,360,625
Avg. Pay	$92,592	$85,928	$93,539	$83,718	$105,938	$123,242	$115,613	$94,935
65-99	1	8	11	4	2			26
Total Pay	$88,564	$674,939	$1,125,489	$357,193	$162,431			$2,408,616
Avg. Pay	$88,564	$84,367	$102,317	$89,298	$81,215			$92,639
Total No.	403	193	212	121	79	26	20	1,054
Total Pay	$30,001,910	$15,758,155	$17,956,926	$11,412,392	$7,429,295	$3,109,795	$2,794,625	$88,463,097
Avg. Pay	$74,446	$81,648	$84,702	$94,317	$94,042	$119,608	$139,731	$83,931

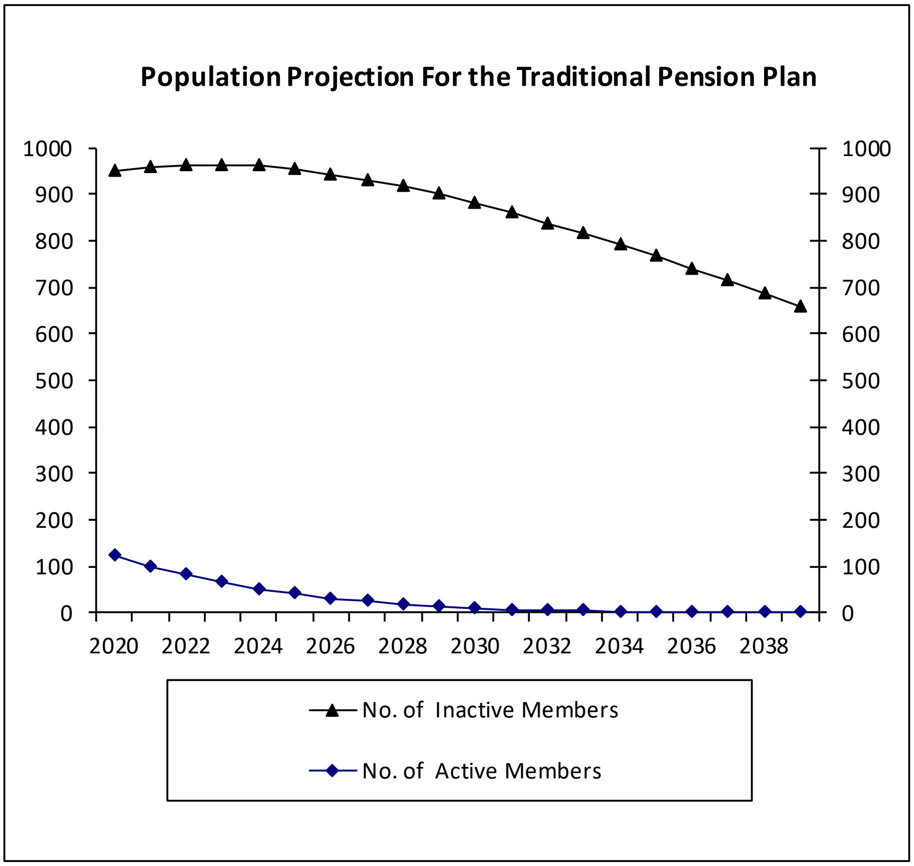
Inactive Members on October 1, 2019

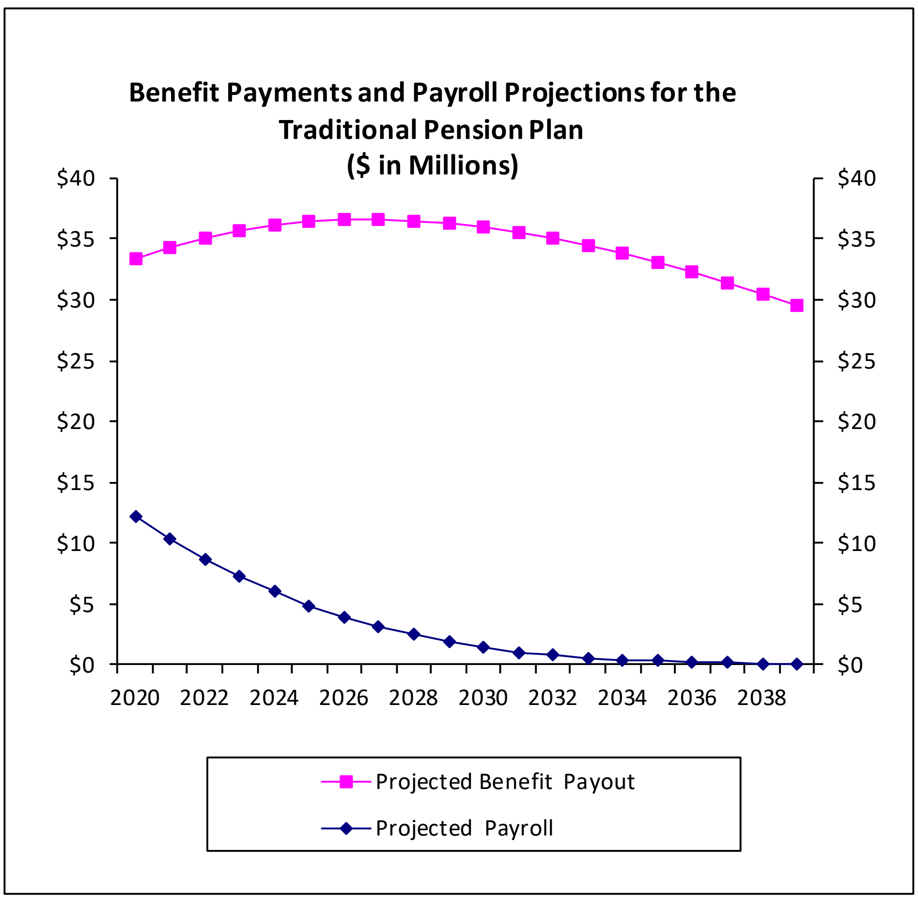
	Terminated Vested				Disabled				Retired*				Beneficiaries*	
	Traditional		Cash Balance		Traditional		Cash Balance		Traditional		Cash Balance		Traditional	
Age	No.	Annual Benefits	No.	Current Cash Balance	No.	Annual Benefits	No.	Current Cash Balance	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	0	$0	40	$1,614,643	0	$0	0	$0	0	$0	0	$0	2	$44,670
45-49	2	26,212	23	1,738,711	0	0	0	0	4	152,060	0	0	1	9,011
50-54	7	82,690	22	1,391,930	0	0	0	0	15	658,165	0	0	4	31,502
55-59	11	164,117	26	2,416,060	2	40,019	0	0	78	4,017,999	0	0	4	69,471
60-64	8	64,562	4	489,292	0	0	0	0	122	5,426,149	4	109,057	21	416,770
65-69	0	0	0	0	4	92,783	0	0	175	7,022,869	2	17,680	24	426,484
70-74	0	0	0	0	0	0	0	0	159	5,243,835	0	0	18	392,368
75-79	0	0	0	0	0	0	0	0	100	3,426,273	0	0	34	679,480
80-84	0	0	0	0	0	0	0	0	51	1,777,419	0	0	20	268,651
85-89	0	0	0	0	0	0	0	0	35	1,027,712	0	0	20	269,518
90 & Up	0	0	0	0	0	0	0	0	11	275,262	0	0	19	191,211
Total	**28**	**$337,581**	**115**	**$7,650,636**	**6**	**$132,802**	**0**	**$0**	**750**	**$29,027,743**	**6**	**$126,737**	**167**	**$2,799,136**

* Totals include $243,008 in benefits payable under Qualified Domestic Relations Orders.

PROJECTED PAYROLL AND RETIREMENT BENEFITS
FOR THE TRADITIONAL PENSION PLAN

Fiscal Year End	No. of Active Members	Projected Payroll	No. of Inactive Members	Projected Benefit Payout
2020	122	$12,158,343	951	$33,305,113
2021	100	10,387,483	959	34,236,588
2022	81	8,723,062	964	34,993,564
2023	65	7,275,276	964	35,620,761
2024	51	5,982,418	961	36,128,686
2025	40	4,852,149	954	36,405,867
2026	31	3,909,930	944	36,542,554
2027	24	3,117,746	932	36,540,244
2028	18	2,460,593	917	36,437,106
2029	14	1,889,878	900	36,235,457
2030	10	1,430,987	881	35,984,238
2031	7	1,040,957	861	35,563,862
2032	5	774,945	839	35,035,969
2033	4	592,663	816	34,470,457
2034	3	443,490	792	33,802,175
2035	2	329,003	767	33,068,272
2036	1	242,558	741	32,287,394
2037	1	163,033	714	31,439,507
2038	1	113,177	687	30,530,073
2039	0	85,479	659	29,575,282


Population Projection For the Traditional Pension Plan
1000
900
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
No. of Inactive Members
No. of Active Members


Benefit Payments and Payroll Projections for the Traditional Pension Plan ($ in Millions)
$40
$35
$30
$25
$20
$15
$10
$5
$0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
Projected Benefit Payout
Projected Payroll

SECTION F

SUMMARY OF PLAN PROVISIONS

Summary of Current Traditional Pension Plan Provisions

A. Governing Document

Plan established by the Orlando Utilities Commission, which was most recently amended and restated as described in the Actuarial Impact Statement dated December 18, 2019. The Plan is also governed by certain provisions of Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

B. Effective Date

September 1, 1954

C. Plan Year

October 1 through September 30

D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes, it is a single employer plan.

E. Eligibility Requirements

Each regular full-time or part-time employee is eligible on the date he becomes a regular employee. A regular employee is one who is regularly scheduled for at least 20 hours of work weekly and whose employment is expected to last at least 12 months. The Traditional Pension Plan has been closed to those hired on or after January 1, 1998 and those employees are participating in a defined contribution plan. Effective May 1, 2011, the plan is closed to a terminated vested participant of the Traditional Pension Plan who is re-employed; a retired participant of the Traditional Pension Plan who is rehired in a regular full time position is eligible to be a participant, pension benefits are suspended for the period of re-employment.

F. Credited Service/Benefit Service

Service is measured as continuous service from date of employment to date of termination from active employment to nearest month for which member has made required contributions and has not received a refund of contributions.

G. Compensation

Base compensation excluding bonuses, commissions, shift differential, overtime or other forms of nonrecurring compensation. Lump sum payment for unused leave is not included.

H. Average Final Compensation (AFC)

The average of Compensation over the highest 36 consecutive months immediately preceding termination or retirement.

I. Normal Retirement

Eligibility: A member may retire on the first day of the month coincident with or next following age 62 and 5 years of Credited Service. Transferred St. Cloud employees who terminate employment prior to May 1, 2007 may retire on or after age 65.

Benefit: The Accrued Benefit computed at retirement date. The Accrued Benefit is 2.5% of AFC multiplied by Benefit Service up to a maximum of 30 years. The Accrued Benefit is 4.1% or 2.7% of AFC multiplied by Benefit Service up to a maximum of 30 years for members whose job position is “Chief Executive Officer” or “Chief Financial Officer,” respectively.

For transferred St. Cloud employees, the Accrued Benefit is:

- 1.75% of AFC multiplied by the first 10 years of St. Cloud Credited Service, plus
- 2.0% of AFC multiplied by St. Cloud Credited Service in excess of 10 years, plus
- 2.5% of AFC multiplied by years of Benefit Service with OUC after April 30, 1997,
- subject to a maximum of 75% of AFC

Normal Form of Benefit: 50% Joint and Survivor Annuity; other options are also available.

COLA: Payable to eligible retirees in accordance with Section U.

J. Early Retirement

Eligibility: A member may retire with a reduced benefit on the first day of the month coincident with or next following the earlier of age 55 with 10 years of Credited Service, or 25 year of Credited Service regardless of age.

Benefit: The Accrued Benefit, reduced by 0.0833% for each month by which the Early Retirement date precedes the Normal Retirement date.

For transferred St. Cloud employees who leave employment prior to May 1, 2007, the reduction is a full actuarial reduction.

Normal Form of Benefit: 50% Joint and Survivor Annuity; other options are also available.

COLA: Payable to eligible retirees in accordance with Section U.

K. Delayed Retirement

Same as Normal Retirement with computation made as of the Delayed Retirement Date.

L. Service Connected Disability

Not Applicable

M. Non-Service Connected Disability

Not Applicable

N. Death Before Retirement

Eligibility:	All members with 10 or more years of Credited Service.
Eligible Survivor:	To be eligible for the survivor annuity payable for the life of the survivor, the survivor must be the spouse.
Minimum Benefit	Refund of accumulated member contributions with interest.
Benefit:	Before Earliest Retirement Age: For eligible survivors of members who die prior to being eligible for Early Retirement, one-half (1/2) of the Early Retirement Benefit payable to the spouse starting at the member's earliest retirement age. The Early Retirement Benefit is reduced by 0.5% for each month that the benefit commencement date precedes the Normal Retirement Date. Ineligible survivors will receive the Minimum Benefit.
Benefit:	After Earliest Retirement Age: For eligible survivors of members who die while eligible to Retire, one-half (1/2) of the Accrued Benefit payable to the spouse. If the member was eligible for Early Retirement and not yet eligible for Normal Retirement, the benefit is reduced by 0.0833% for each month that the benefit commencement date precedes the Normal Retirement Date. In the case of simultaneous death, a benefit will be paid for 60 months only.
Normal Form of Benefit:	Payable for lifetime of the eligible survivor.
COLA:	None

O. Death After Retirement

Benefit determined by the form of benefit elected upon retirement.

P. Optional Forms

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are a Single life Annuity, a 5 or 10 Year Certain and Life Annuity, or the 50%, 75% and 100% Joint and Survivor Annuity options.

Q. Vested Termination/Severance Benefits

Eligibility:	Members with 5 or more years of Credited Service have earned a non-forfeitable right to Plan benefits, provided they elect to leave their accumulated contributions in the fund. Members with less than 5 years of Credit Service are not vested.
Benefit:	Vested members: The vested portion of the Accrued Benefit as of the date of termination, payable at Normal Retirement Date. A member with at least 10 years of Credited Service may elect to receive a reduced benefit beginning any time after reaching his or her Early Retirement Date. The benefit will be reduced by 0.5% for each month prior to Normal Retirement date.
Normal Form of Benefit:	50% Joint and Survivor Annuity; other options are also available.
COLA:	None

R. Refunds

Eligibility:	All members; A refund is in lieu of any vested benefits otherwise due.
Benefit:	Refund of the member's contributions with interest. Interest is credited at the rate of 2.5% through May 31, 1976, 5% from June 1, 1976 through September 30, 1988, and 7.5% thereafter.

S. Member Contributions

4.0% of Compensation is paid through the later of age 62 or when maximum benefit accrual is reached.

T. Employer Contributions

The additional amount determined by the actuary to properly fund the Plan according to State laws.

U. Cost of Living Increases

Prior to the amendment referenced below, the last cost-of-living adjustment (COLA) granted was effective October 1, 1999, and annual COLAs were paid outside the Plan.

Based on the amendment effective January 1, 2015, the total amount of prior annual COLA increases after October 1, 2000 are paid from the Pension Plan.

Additionally, future COLAs will be paid to eligible retirees (includes current members who retire from active employment) starting when the member is retired and reaches age 65. These increases will be compounded annually and are based on the net return on Plan investments for the previous fiscal year in accordance with the following schedule:

Net Investment Return	COLA Rate
≤ 4.0%	0.0%
> 4.0% and ≤ 8.0%	1.0%
> 8.0% and ≤ 12.0%	1.5%
> 12.0%	2.0%

Past and future COLAs are payable only to members who retire from active employment and are payable for the lifetime of the retiree. Upon death of the retiree, all COLAs cease, and the benefit payable to the survivor, if any, is based on the original benefit the retiree was receiving when the member first retired.

V. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed an Orlando Utilities Commission Traditional Pension Plan liability if continued beyond the availability of funding by the current funding source.

W. Changes From Previous Valuation

Language has been added to the Plan that changes the pension benefit multiplier in the Traditional Pension Plan based on an executed Employment Agreement.

The interest rate contained in the definition of Actuarial Equivalence for the Traditional Pension Plan has been changed from 7.5% to the interest rate most recently adopted by the Committee (which shall be equal to the actuarial assumed investment return) effective for all retirement dates on or after October 1, 2019.

Summary of Current Cash Balance Plan Provisions

A. Governing Document

The Cash Balance Plan was adopted by the Orlando Utilities Commission effective May 1, 2011 as part of the OUC Hybrid Retirement Program document signed on April 29, 2011. Plan established by the Orlando Utilities Commission, which was most recently amended and restated as described in the Actuarial Impact Statement dated December 18, 2019. The Plan is also governed by certain provisions of Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

B. Effective Date

May 1, 2011

C. Plan Year

October 1 through September 30

D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes, it is a single employer plan.

E. Eligibility Requirements

Each regular full-time or part-time employee hired on or after January 1, 1998 and who is employed on May 1, 2011 is automatically eligible to participate on the Effective Date. A regular employee is one who is regularly scheduled for at least 20 hours of work weekly and whose employment is expected to last at least 12 months. Each regular full-time or part-time employee hired on or after the Effective Date is eligible to participate in the Cash Balance Plan. Regular full-time or part time employees who were hired prior to January 1, 1998 who elected to transfer from the Traditional Pension Plan to the Defined Contribution Plan are also automatically eligible on the Effective Date.

F. Credited Service/Benefit Service

For purpose of determining retirement eligibility and Pay Credits (see Section H), Credited Service is based on Plan Years in which the employee works at least 1,000 hours. In the event a former employee of OUC is rehired, such service shall commence as if the employee was a newly hired employee.

G. Compensation

Base compensation excluding bonuses, commissions, shift differential, overtime or other forms of nonrecurring compensation. Effective May 1, 2011, lump sum merit awards as defined in the personnel policies of OUC shall be included in compensation.

H. Pay Credits

Pay Credits are granted each September 30th for actively employed eligible members and are based on the following schedule:

Age Plus Credited Service	Pay Credit
0 - 24	5%
25 - 34	6%
35 - 44	7%
45 - 54	8%
55 - 64	9%
65 - 74	10%
75 - 84	11%
85+	12%

For purposes of the above schedule, age is defined as the age of the employee as of the most recent birthday immediately preceding the date the Pay Credits are granted.

I. Interest Credits

The annual interest crediting rate for active members is based on the net return on investments in accordance with the following schedule:

Net Investment Return	Interest Credit
≤ 4.0%	4.0%
> 4.0% and ≤ 8.0%	5.0%
> 8.0% and ≤ 12.0%	5.5%
> 12.0%	6.0%

For Plan Years beginning prior to October 1, 2019: Vested members who terminate employment receive the 4.0% minimum interest crediting rate until eligibility for receipt of benefits.

For Plan Years beginning on or after October 1, 2019: Vested terminated members who terminate employment will receive the interest rate most recently adopted by the Committee (the actuarial assumed investment return) reduced by 3.25%, until eligibility for receipt of benefits.

J. Account Balance

The Account Balance is the accumulated value of Pay and Interest Credits. Actively employed eligible members as of May 1, 2011 were granted retroactive Pay Credits based on Section H above and Interest Credits of 4% from date of hire through September 30, 2010. For members who were previously employed and rehired by OUC, retroactive Pay and Interest credits were granted provided the employee had at least 5 years of Credited Service at the time of initial separation. Pay and Interest Credits were granted for such rehires only upon implementation of the Cash Balance Plan.

K. Additional Credit for Traditional Pension Plan Employees

Additional credits were provided upon implementation of the Cash Balance Plan for members who had transferred from the Traditional Pension Plan to the Defined Contribution Plan in 1998. The additional credit was determined as the difference between the lump sum amount that was transferred to the Defined Contribution Plan and the amount the employee would have received had he/she been a member of the Defined Contribution Plan from initial hire date through 1998 and earned annual interest at 7%. This additional amount was credited for such members during 1998, and is included in the Account Balance as of September 30, 2010.

L. Normal Retirement

Eligibility: A member may retire on the first day of the month coincident with or next following the earlier of age 62 and 5 years of Credited Service, or 30 years of continuous Credited Service.

Benefit: For members who retire on or before September 30, 2019: The Account Balance computed at retirement, or, at the employee's election, an actuarially equivalent annuity based on the following assumptions:

- The most recent mortality table as adopted by the Committee
- Annual interest of 7.5%
- Annual cost-of-living adjustment based on the member's election

For members who retire on or after October 1, 2019: The Account Balance computed at retirement, or, at the employee's election, an actuarially equivalent annuity based on the interest rate most recently adopted by the Committee (the actuarial assumed investment return) reduced by 4.25% and the mortality table most recently adopted by the Committee.

Normal Form of Benefit: Single Life Annuity; other options are also available as described in Section S.

COLA: See Section W.

M. Early Retirement

Not Applicable

N. Delayed Retirement

Same as Normal Retirement with computation made as of the Delayed Retirement Date.

O. Service Connected Disability

Eligibility: Members with 5 or more years of Credited Service who become permanently and totally disabled prior to eligibility for Normal Retirement. Benefits are not payable until Normal Retirement Eligibility.

Benefit: Account Balance as of date of disability, with Interest Credits through Normal Retirement Date. Member may select an annuity option as described in Section S.

P. Non-Service Connected Disability

Eligibility: Members with 5 or more years of Credited Service who become permanently and totally disabled prior to eligibility for Normal Retirement. Benefits are not payable until Normal Retirement Eligibility.

Benefit: Account Balance as of date of disability, with Interest Credits through Normal Retirement Date. Member may select an annuity option as described in Section S.

Q. Death Before Retirement

Eligibility: No service requirement.

Eligible Survivor: Employee's designated beneficiary.

Benefit: Less than 5 years of Credited Service: Eligible survivors of members who die prior to completing 5 years of Credited Service receive payment of the member's Account Balance as of date of death.

Five (5) or more years of Credited Service: Eligible survivors of members who die after completing at least 5 years of Credited Service receive payment of the member's Account Balance as of date of death.

R. Death After Retirement

Benefit determined by the form of benefit elected upon retirement.

S. Optional Forms

For members who retire on or before September 30, 2019: In lieu of electing the Normal Form of benefit, the optional forms of benefits available to retirees are Joint and Survivor Annuity options or a lump sum payment of Account Balance, based on the following actuarial equivalence assumptions:

- The most recent mortality table as adopted by the Committee
- Annual interest of 7.5%
- Annual cost-of-living adjustment based on the member's election

For members who retire on or after October 1, 2019: In lieu of electing the Normal Form of benefit, the optional forms of benefits available to retirees are a 20-year term certain annuity or a lump sum payment of Account Balance. The interest rate used to convert the Cash Balance "Notional Account" to a 20-year term certain annuity shall be the interest rate most recently adopted by the Committee (the actuarial assumed investment return) reduced by 2.25%.

T. Vested Termination/Severance Benefits

Eligibility: Members with 5 or more years of Credited Service earn a non-forfeitable right to Plan benefits. Members with less than 5 years of Credited Service are not vested and their Account Balances are forfeited upon termination.

Benefit: Vested members: Pay Credits cease upon termination. Account Balance as of termination with annual Interest Credits until Normal Retirement date as described in Section I.

Normal Form of Benefit: Single Life Annuity; other options are also available as described in Section S.

COLA: See Section W.

U. Member Contributions

None.

V. Employer Contributions

The additional amount determined by the actuary to properly fund the Plan according to State laws.

W. Cost of Living Increases

For members who retire on or before October 1, 2019: Members may elect an actuarially reduced annuity and receive future annual increases of 1%, 2%, or 3%. Members may also elect an actuarially equivalent annuity without any future cost-of-living increases.

For members who retire after October 1, 2019: N/A.

X. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed an Orlando Utilities Commission Cash Balance Plan liability if continued beyond the availability of funding by the current funding source.

Y. Changes From Previous Valuation

Effective October 1, 2019, the annuity options available under the Cash Balance Plan have been changed from an Actuarially Equivalent life annuity with or without survivorship benefits (50%, 75% or 100%) and with or without an annual cost-of-living adjustment (of 1%, 2% or 3% per year) to either a 20-year term certain annuity or a life annuity only.

Effective October 1, 2019, the interest rate used to convert the Cash Balance "Notional Account" to a 20-year term certain annuity shall be the interest rate most recently adopted by the Committee (the actuarial assumed investment return) reduced by 2.25%.

Effective October 1, 2019, the actuarial assumptions used to convert the Cash Balance "Notional Account" to a life annuity shall include the interest rate most recently adopted by the Committee (the actuarial assumed investment return) reduced by 4.25% and the mortality table most recently adopted by the Committee.

Effective October 1, 2019, the interest crediting rate on the Cash Balance "Notional Accounts" of terminated vested Members changes from 4.0% to the interest rate most recently adopted by the Committee (the actuarial assumed investment return) reduced by 3.25%. This results in no change as of October 1, 2019, since the current actuarial assumed investment return is 7.25%.

For Cash Balance Plan Members who retire after October 1, 2019, the Cash Balance "Notional Account" at retirement will be trued up and credited with a 5.0% interest credit from October 1st through the retirement effective date.

Effective with the Plan Year ending September 30, 2020, the annual interest credits to the Cash Balance "Notional Accounts" will be based on the Pension Trust investment earnings performance for the same period (eliminating the one-year lag period).

Pay credits may be changed based on an executed Employment Agreement.