CITY OF GAINESVILLE GENERAL EMPLOYEES' PENSION PLAN<br>2015 ACTUARIAL VALUATION REPORT<br>AUGUST 2016

ACTUARIAL VALUATION AS OF OCTOBER 1, 2015
TO DETERMINE CONTRIBUTIONS TO BE PAID IN THE FISCAL YEAR BEGINNING OCTOBER 1, 2016

August 11, 2016
Honorable Mayor and
Members of the City Commission
City of Gainesville
P.O. Box 490

Gainesville, Florida 32602

Members of the Commission:

## CITY OF GAINESVILLE GENERAL EMPLOYEES' PENSION PLAN 2015 ACTUARIAL VALUATION REPORT

This report presents the results of the 2015 actuarial valuation of the City of Gainesville General Employees' Pension Plan. Actuarial Concepts was retained by the City to perform the actuarial valuation and prepare this report. This actuarial valuation 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 and, in our opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112 Florida Statutes. There is no benefit or expense to be provided by the Plan and/or paid from the Plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends that require a material increase in Plan costs or required contribution rates have been taken into account in the valuation.

The use of the valuation results for financial or administrative purposes other than those outlined in the report is not recommended without an advance review by Actuarial Concepts of the appropriateness of such application.

Members of our staff are available to discuss this report and related issues.
Very truly yours,

## ACTUARIAL CONCEPTS



By: $\qquad$
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## SECTION 1

## KEY VALUATION RESULTS SUMMARY

The 2015 valuation of the General Employees' Pension Plan presents a statement of the estimated financial position of the Plan as of October 1, 2015. Information in the report provides bases for determining contribution requirements and current funded status.

## Key Results Synopsis

The major conclusions of the report are:

- The Plan experienced an overall actuarial gain over the last 12 months of approximately $\$ 4.7$ million due to asset yields greater than assumed and salary increases less than assumed.
- The City contribution rates have increased from the 2014 valuation rates due to the lowering of the investment return assumption from $8.3 \%$ to $8.2 \%$.
- The Plan's actuarial accrued liabilities are $66 \%$ funded based on the funding assumptions and the actuarial value of assets ( $66 \%$ funded based on market value).


## Changes Since Last Valuation

There have been no changes to the actuarial cost method since the last valuation. However, future disability benefit provisions have been transferred from the disability plan to this Plan effective February 19, 2015. Also, several actuarial assumptions have been changed.

The Plan assumed investment return rate has been lowered to $8.2 \%$. This reduction is part of a plan to reduce the assumed return to $7.9 \%$ over the next three years.

The mortality assumptions were revised to include projections of future mortality improvement.

The current future payroll growth assumption is 4.5\%; Florida Statute 112.64(5)(b) permits use of the original payroll growth assumption as long as the 10-year average was met when the assumption was adopted (and it was). With the recent payroll growth experience less than the assumed growth, and likely expected to continue due to non-increasing employment levels and dampened individual salary increase experience, a lowering of this assumed growth rate is recommended. Note the net effect of a significant payroll growth assumption is to "back load" the repayment of the unfunded actuarial accrued liability, and even if met, transfers the repayment well into the future. See page 3-7 for the current repayment schedule.

A summary of current Plan provisions is included in Appendix A. Actuarial assumptions and cost method are summarized in Appendix B, along with explanations of other valuation procedures.

## Plan Experience

For the 12 months ended September 30, 2015, the actual experience under the Plan, in aggregate, was better than expected, resulting in a net actuarial gain of approximately $\$ 4.7$ million. This gain is primarily the result of asset and salary gains.


Salary Increases


## City Contribution Requirements



| Contribution Type | 2015-2016 | 2016-2017 |  |
| :--- | ---: | ---: | ---: |
| Annual Required Contribution | $\$ 14,098,494$ | $\$$ | $14,625,236$ |
| Monthly Required Contribution | $1,174,875$ |  | $1,218,770$ |

For the 2015-16 plan year, the required City contribution rate (assumed payable monthly) is $16.88 \%$ of expected $2015-16$ total annual payroll, or $\$ 14,098,494$. This required contribution is developed as the sum of the normal cost and amortization of each UAAL base over 30 years from inception. In addition to this contribution amount, members contribute $5 \%$ of gross pay to the Plan.

For the 2016-17 plan year, the required City contribution rate (assumed payable monthly) is $17.45 \%$ of expected $2016-17$ total annual payroll, or $\$ 14,625,236$. This required contribution is developed as the sum of the normal cost and amortization of each UAAL base over 30 years from inception. In addition to this contribution amount, members contribute $5 \%$ of gross pay to the Plan.

## Plan Funded Status - Projected Liabilities

Current Funded Status


* Includes DROP Account balance of \$12,457,815.

A comparison of assets with the actuarial present value (APV) of benefits accrued based on credited service to date, but projected salary at retirement (referred to as creditedprojected benefits), is often used to judge the progress to date of funding the "ultimate" liability associated with service earned to date. The credited-projected benefit liability is not normally expected to be $100 \%$ funded, but a maturing plan's funded ratio should increase over time. The AAL APVs were developed using an assumed rate of interest discount of $8.2 \%$ for the plan year ending September 30, 2015.

The actuarial accrued liability funded status has remained the same since the last valuation; the $66 \%$ funded level is based on actuarial value of assets. On a market value basis, the funded percent is about the same at $66 \%$.

## Plan Funded Trend

## Funded Trend


*Includes DROP Account balance of \$12,457,815.

The funding level has remained the same since the last valuation.

## Valuation Trend



Projected liabilities have increased about as expected, taking into account the recent changes to the actuarial assumptions. The UAAL has also increased for the same reason. The favorable plan experience has partially offset this increase. The lowering of the assumed investment return increased the UAAL about $\$ 5$ million. The expected UAAL increase due to the negative amortization effect of the amortization methodology based on the $4.5 \%$ future payroll growth assumption increased the UAAL about $\$ 5$ million. The actuarial gain lowered the UAAL by about $\$ 5$ million.

## Membership Trend



Additional information on all Plan members can be found in Appendix D.

## True Costs

It should be noted that the true costs of a retirement plan cannot be determined until its future unfolds. No one can precisely predict the interest earnings on fund assets, member termination rates, future salary levels, mortality experience, etc. Estimates based on experience with similar groups, along with the judgment of the actuary and the plan sponsor, can provide a reasonable approximation of this true cost. As actual experience emerges under the Plan, it will be necessary to study the continued appropriateness of the techniques and assumptions employed and to adjust the contribution rate as necessary.

## SECTION 2

## ACTUARIAL VALUATION DEVELOPMENT

## Date and Basis of Valuation

Estimated liabilities with respect to the benefits provided by the General Plan and the contributions required to fund these liabilities have been determined as of October 1, 2015, based upon:

1. the provisions of the Plan, as in effect on October 1, 2015, as summarized in Appendix A;
2. the actuarial assumptions and actuarial cost method, as summarized in Appendix B;
3. the statement of fund assets at September 30, 2015, provided by the City, as summarized in Appendix C; and
4. the member data as of September 30, 2015, provided by the City, as summarized in Appendix D.

The statement of trust fund assets has been supplied by the City. The member data has been supplied by the City and provided as an actual representation of the current participating group. While the asset and member information was reviewed for overall reasonableness, Actuarial Concepts has relied on the City for this information and does not assume responsibility for either its accuracy or completeness.

Member Reconciliation

|  | Members |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actives | Retirees, Beneficiaries | DROP <br> Retirees | Pending <br> Refunds | Vested Terminateds | Ltd Members and Part-Time Employees | Disableds |
| Members at 10/01/14 | 1,450 | 1,056 | 92 | 8 | 301 | 96 | 42 |
| Increase (Decrease) Due to: |  |  |  |  |  |  |  |
| Retirements | (34) | 62 | (16) | - | (11) | (1) | - |
| DROP Retirements | (17) | - | 17 | - | - | - | - |
| Nonvested Terminations | (73) | - | - | 73 | - | - | - |
| Vested Terminations | (28) | - | - | - | 29 | (1) | - |
| New Entrants | 162 | - | - | - | - | - | - |
| Deaths | (1) | (21) | (1) | 1 | (1) | - | - |
| Rehires | 6 | - | - | - | - | - | - |
| Disableds | (1) | - | - | - | - | - | 1 |
| To LP Status | - | - | - | - | - | - | - |
| Benefit \$0 after Social Security Offset | - | - | - | - | - | - | (6) |
| Contrib. Refunded | - | (1) | - | (58) | (3) | (2) | - |
| From ICMA | 1 | - | - | - | - | - | - |
| Rec in error | - | - | - | - | - | - | - |
| Members at 10/1/15 | 1,465 | 1,096 | 92 | 24 | 315 | 92 | 37 |

## 2015 Valuation Table

1. Participation

| (a) Number of Active Members | 1,465 |
| :--- | ---: |
| (b) Number of Inactive Members | 1,656 |
| (c) Annual Valuation Payroll for Contributing Members | $\$ 0,223,575$ |
| (d) Total Valuation Payroll | $80,223,575$ |

2. Actuarial Present Value (APV) of Future Benefits as of $10 / 1 / 15$
(a) Active Members
(1) Retirement

176,583,122
(2) Withdrawal 6,584,173
(3) Disability 5,575,296
(4) Death 1,626,975
(5) Refund of Contributions 1,708,505
(6) Total
\$ 192,078,071
(b) DROP Accounts Value

12,457,815
(c) DROP Retirees

50,712,266
(d) Retirees and Beneficiaries

282,287,912
(e) Disabled Retirees

1,426,720
(f) Vested Terminateds, Limited Members and Pending Refunds

8,913,374
(g) Total APV Future Benefits
\$ 547,876,158
3. APV Apportionment of line 2(g)*
(a) APV of Total Future Normal Costs 58,998,350
(b) Actuarial Accrued Liability [(2g)-(3a)] 488,877,808
(c) Actuarial Value of Assets (excludes DROP assets for funding)

324,954,509
(d) Unfunded AAL (UAAL) [(3b)-(3c)]
\$ 163,923,299
4. Breakdown of UAAL on line 3(d)
(a) UAAL [3(d)] 163,923,299
(b) Change in UAAL Due to Assumption Change
(c) UAAL Before Change [(4a)-(4b)]

4,768,798
\$ 159,154,501
(d) Expected UAAL

163,862,627
(e) Actuarial (Gain) Loss [(4c)-(4d)]
\$ $(4,708,126)$

|  | Contribution Requirements Due ** | End of Month | 10/01/16 |  | quiv. Annual \$ Amount | Percentage of Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) Plan Normal Cost excluding Expenses |  |  | \$ | 7,512,426 | 8.96\% |
|  | (b) Expense Normal Cost |  |  |  | 633,264 | 0.76\% |
|  | (c) Plan Total Normal Cost [(5a)+(5b)] |  |  | \$ | 8,145,690 | 9.72\% |
|  | (d) Amortization of UAAL |  |  |  | 10,671,228 | 12.73\% |
|  | (e) Total Required Plan Contribution [(5c)+(5d)] |  |  | \$ | 18,816,918 | 22.45\% |
|  | (f) Estimated Member Contributions |  |  |  | 4,191,682 | 5.00\% |
|  | (g) Net City Required Contributions [(5e)-(5f)] |  |  | \$ | 14,625,236 | 17.45\% |

* Calculated in accordance with the Individual Entry Age Actuarial Cost Method.
** Payments start one year from valuation date; includes a payroll growth rate of $4.5 \%$ per year.


## Explanation of Financial Values - Valuation Table

Actuarial Present Value of Future Benefits (line 2f)
The actuarial present value (APV) of future benefits is determined by first measuring the benefit amount that would be available for each member at various future dates (assuming future service credits earned and future salary increases awarded) under each of the events provided for by the Plan (retirement, disability, death, termination of employment). Then the future value of those benefit entitlements is determined by multiplying the various benefit amounts by the then current value of the annuities associated with those amounts. Finally, the APV of those future benefit values is determined by applying discounts to recognize the time value of money and probabilities of death, disability, termination of employment, etc.

## APV of Total Future Normal Costs (line 3a)

The APV of total future normal costs is that portion of the total APV of future benefits, as described above, that is assigned to future plan years by the Individual Entry Age Actuarial Cost Method (described in Appendix B).

Actuarial Accrued Liability (line 3b) and
Unfunded Actuarial Accrued Liability (line 3d)
The actuarial accrued liability (AAL) and the unfunded AAL (UAAL) (the AAL less the actuarial value of assets) are actuarial values generated under the Individual Entry Age Actuarial Cost Method, as described in Appendix B. The AAL is not the APV of benefits accrued to date by members but is an actuarially determined amount based on the accrual of Individual Entry Age normal cost amounts due prior to the valuation date. The liability for benefits accrued to date (the APV of accumulated benefits) is provided in Section 3.

Plan Total Normal Cost (line 5c)
The Plan normal cost for the 12-month period beginning on the valuation date has been determined by first calculating for each member an individual yearly normal cost (that changes in dollar amount as pay increases, but is constant as a percent of each individual's pay), then adding together to obtain the Plan normal cost amount as of the beginning of the year. This preliminary total is then adjusted for interest credits assuming contributions are made monthly and an amount to allow for expected annual expenses.

## Total Required Plan Contribution (line 5e)

The required contribution for the 2015-16 plan year is the annual amount necessary to cover the normal cost (based on the 2014 valuation normal cost rate applied to expected 2015-16 payroll) and amortize each UAAL base over a period of 30 years from inception (with one year of payment delay), or 29 years of payments, assuming 12 regular payments per year including interest adjustment. The amortization of the UAAL incorporates an assumption that Plan membership payroll will grow at the rate of $4.5 \%$ per year over each respective remaining amortization period.

The required contribution for the 2016-17 plan year is the annual amount necessary to cover the normal cost (based on the 2015 valuation normal cost rate applied to expected 2016-17 payroll) and amortize each UAAL base over a period of 30 years from inception (with one year of payment delay), or 29 years of payments, assuming 12 regular payments per year including interest adjustment. The amortization of the UAAL incorporates an assumption that Plan membership payroll will grow at the rate of $4.5 \%$ per year over each respective remaining amortization period.

Discussion of the implications of these assumptions is presented in Section 3.

Concėpts

## Estimated 10-Year Contribution Projections



The above chart estimates the anticipated future contribution requirements over the next 10 years taking into account the effect of the asset "smoothing" method as well as the anticipated effect of the completion of any UAAL amortization bases (there are none in the next 10 years; see page 3-6). It also shows the anticipated effect of the level percentage of pay funding method (costs are calculated as a level percentage of payroll, so contributions increase in dollar amount as future payroll increases). Note that the projected contribution decreases over the next three years are attributable to the phase out of prior asset losses and the phase in of recent asset gains. Thereafter, the expected dollar growth continues as future payrolls are assumed to increase. The projection contributions assume that the assumptions are realized (there would be no expected future gains or losses due to future experience different than that assumed).

## Current Market Value of Assets vs. Expected Retirement Benefits

| Year | Market Value of Assets with Expected Interest Less Retirement Benefits | Expected Retirement Benefits of Current and Emerging Retirees |
| :---: | :---: | :---: |
| 2015 | \$ 322,146,133 | \$ 30,238,431 |
| 2016 | 318,323,685 | 30,742,508 |
| 2017 | 313,683,719 | 31,320,489 |
| 2018 | 308,085,295 | 32,112,974 |
| 2019 | 301,235,316 | 32,843,556 |
| 2020 | 293,093,056 | 33,850,620 |
| 2021 | 283,276,066 | 34,931,222 |
| 2022 | 271,573,482 | 35,996,544 |
| 2023 | 257,845,964 | 37,530,720 |
| 2024 | 241,458,613 | 39,535,211 |
| 2025 | 221,723,008 | 41,480,585 |
| 2026 | 198,423,709 | 43,448,234 |
| 2027 | 171,246,219 | 45,843,805 |
| 2028 | 139,444,605 | 48,477,979 |
| 2029 | 102,401,084 | 50,572,407 |
| 2030 | 60,225,565 | 53,539,297 |
| 2031 | 11,624,764 | 56,599,523 |
| 2032 | - | 60,302,970 |
| 2033 | - | 63,878,946 |
| 2034 | - | 66,574,532 |
| 2035 | - | 69,245,228 |
| 2036 | - | 71,907,449 |
| 2037 | - | 76,094,910 |
| 2038 | - | 79,255,375 |
| 2039 | - | 80,429,063 |
| 2040 | - | 80,412,398 |
| 2041 | - | 81,029,941 |
| 2042 | - | 81,639,604 |
| 2043 | - | 82,519,933 |
| 2044 | - | 77,647,379 |

Estimated Valuation Financial Values Assuming 6.2\% Interest per F.S. Chapter 112.664(1)(b)

1. Participation

| (a) Number of Active Members |  | 1,465 |
| :---: | :---: | :---: |
| (b) Number of Inactive Members |  | 1,656 |
| (c) Annual Valuation Payroll for Contributing Members | \$ | 80,223,575 |
| (d) Total Valuation Payroll |  | 80,223,575 |
| 2. Actuarial Present Value (APV) of Future Benefits as of | 10/1/15 |  |
| (a) Active Members |  |  |
| (1) Retirement |  | 258,102,247 |
| (2) Withdrawal |  | 10,756,264 |
| (3) Disability |  | 7,544,195 |
| (4) Death |  | 2,329,562 |
| (5) Refund of Contributions |  | 1,266,771 |
| (6) Total | \$ | 279,999,039 |
| (b) DROP Accounts Value |  | 12,457,815 |
| (c) DROP Retirees |  | 62,918,095 |
| (d) Retirees and Beneficiaries |  | 337,625,291 |
| (e) Disabled Retirees |  | 1,615,218 |
| (f) Vested Terminated, Limited Members and Pending Refunds |  | 12,329,336 |
| (g) Total APV Future Benefits | \$ | 706,944,794 |

3. APV Apportionment of line 2(g)*
(a) APV of Total Future Normal Costs 103,196,369
(b) Actuarial Accrued Liability [(2g)-(3a)] 603,748,425
(c) Actuarial Value of Assets (excludes DROP assets for funding)
(d) Unfunded AAL (UAAL) [(3b)-(3c)]

| $324,954,509$ |
| ---: |
| $\$ \quad 278,793,916$ |

4. Breakdown of UAAL on line 3(d)
(a) UAAL [3(d)] 278,793,916
(b) Change in UAAL Due to Assumption Change
(c) UAAL Before Change [(4a)-(4b)]
(d) Expected UAAL
$\begin{array}{r}119,639,415 \\ \hline \$ \quad 159,154,501\end{array}$
(e) Actuarial (Gain) Loss [(4c)-(4d)]
\$ $(4,708,126)$

| 5. | Contribution Requirements Due ${ }^{* *} \quad \begin{gathered}\text { End of } \\ \text { Month }\end{gathered}$ | 10/01/16 |  | quiv. Annual \$ Amount | Percentage of Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) Plan Normal Cost excluding Expenses |  | \$ | 11,473,427 | 13.69\% |
|  | (b) Expense Normal Cost |  |  | 626,964 | 0.75\% |
|  | (c) Plan Total Normal Cost [(5a)+(5b)] |  | \$ | 12,100,391 | 14.44\% |
|  | (d) Amortization of UAAL |  |  | 13,987,683 | 16.69\% |
|  | (e) Total Required Plan Contribution [(5c)+(5d)] |  | \$ | 26,088,074 | 31.13\% |
|  | (f) Estimated Member Contributions |  |  | 4,191,682 | 5.00\% |
|  | (g) Net City Required Contributions [(5e)-(5f)] |  | \$ | 21,896,392 | 26.13\% |

* Calculated in accordance with the Individual Entry Age Actuarial Cost Method.
** Payments start one year from valuation date; includes a payroll growth rate of $4.5 \%$ per year.

This pro forma valuation estimates the effect on projected liabilities and contribution requirements if the Plan were to earn a return over the long term at a lower rate than the current assumed rate. A 200 basis point difference in assumed rate was selected in accordance with Florida Statutes $112664(1)(b)$. Although projected liabilities would increase by about $29 \%$, the net City contribution would increase by about $48 \%$ because the increase had no prior funding, whereas the present value of benefits based on current assumptions are partially funded. For returns between the current valuation rate and the pro forma rate, one can interpolate an estimate of resultant contribution requirements. Note if long term returns are greater than the current valuation assumed rate, the expected contribution requirements would be less than the current valuation requirement.

## Derivation of Current UAAL

Development of UAAL as of Valuation Date

1. (a) Unfunded Actuarial Accrued Liability (UAAL) as of $10 / 1 / 14 \quad \$ \quad 158,410,459$
(b) Increase Due to Amendments
(c) Payment Delay Effects
(d) UAAL Subject to Amortization
2. Normal Cost - Year Ended 9/30/15
3. Interest Accrued on (1) and (2)
4. Contributions - Year Ended 9/30/15
5. Interest Accrued on (4)
6. Expected UAAL at $10 / 01 / 15[(1)+(2)+(3)-(4)-(5)]$
7. Changes Due to:
(a) Actuarial Assumptions
(b) Plan Amendments
(c) Actuarial (Gain)/Loss
(d) Total
8. UAAL at Valuation Date

4,768,798
$(4,708,126)$
\$ 60,672

163,923,299

Projected liabilities have increased about as expected, taking into account the recent change to the actuarial assumptions. The UAAL has also increased for the same reason. The favorable plan experience has partially offset this increase. The lowering of the assumed investment return increased the UAAL about $\$ 5$ million. The expected UAAL increase due to the negative amortization effect of the amortization methodology based
on the $4.5 \%$ future payroll growth assumption increased the UAAL about $\$ 5$ million. The actuarial gain lowered the UAAL by about $\$ 5$ million.

## SECTION 3

## ANALYSIS OF VALUATION RESULTS

A comparison of the 2014 and 2015 valuation results is presented in the table on page 3-3.

## Discussion of Valuation Results

There have been no changes to the actuarial cost method since the last valuation. However, future disability benefit provisions have been transferred from the disability plan to this Plan effective February 19, 2015. Also, several actuarial assumptions have been changed.

The Plan assumed investment return rate has been lowered to $8.2 \%$. This reduction is part of a plan to reduce the assumed return to $7.9 \%$ over the next three years.

The mortality assumptions were revised to include projections of future mortality improvement.

A summary of current Plan provisions is included in Appendix A. Actuarial assumptions and cost method are summarized in Appendix B, along with explanations of other valuation procedures.

If the participating group remained unchanged and all the actuarial assumptions were realized, the Plan's experience would be as anticipated, and there would be no actuarial gain or loss. If the experience were less favorable than anticipated, an actuarial loss would result; if more favorable, an actuarial gain would result.

For the 12 months ended September 30, 2015, the actual experience under the Plan, in aggregate, was better than expected, resulting in a net actuarial gain of approximately $\$ 4.7$ million. This gain is primarily the result of asset and salary gains.

Future valuations will monitor the Plan's experience to determine whether actuarial gains or losses have occurred since the previous valuation. Recognition of these actuarial gains or losses will be made through adjustments to the UAAL and amortized over the same period as used for the pre-adjusted UAAL.

It should be noted that the true costs of a retirement plan cannot be determined until its future unfolds. No one can precisely predict the interest earnings on fund assets, member termination rates, future salary levels, mortality experience, etc. Estimates based on experience with similar groups, along with the judgment of the actuary and the Plan sponsor, can provide a reasonable approximation of this true cost. As actual experience emerges under the Plan, it will be necessary to study the continued appropriateness of the techniques and assumptions employed and to adjust the contribution rate as necessary.

## Valuation Comparison Table

| 1. Member Data | 10/1/14 | $\begin{gathered} 10 / 1 / 15 \\ \text { Before Changes } \\ \hline \end{gathered}$ | 10/1/15 <br> After Changes |
| :---: | :---: | :---: | :---: |
| (a) Active Members Under NRA | 1,450 | 1,465 | 1,465 |
| (b) Active Members Over NRA (included above) | - | - | - |
| (c) DROP Retirees | 92 | 92 | 92 |
| (d) Retirees, Beneficiaries and Disableds | 1,056 | 1,096 | 1,096 |
| (e) Vested Terminated and Limited Members | 405 | 468 | 468 |
| (f) Total Anticipated Valuation Payroll for | \$ 79,930,261 | \$ 80,223,575 | \$ 80,223,575 |
| Next 12 Months |  |  |  |
| (g) Actuarial Present Value (APV) | 689,823,338 | 692,615,613 | 696,648,413 |
| of Future Valuation Payroll |  |  |  |
| (h) Total Annual Benefit Payments | 23,959,680 | 25,593,516 | 25,593,516 |
| 2. Assets |  |  |  |
| (a) Market Value | 347,480,566 | 334,603,948 | 334,603,948 |
| (b) Actuarial Value | 306,917,954 | 324,954,509 | 324,954,509 |
| 3. Liabilities |  |  |  |
| (a) APV of Future Benefits |  |  |  |
| (1) Active Members Under NRA |  |  |  |
| --Retirement | 176,667,104 | 173,476,893 | 176,583,122 |
| --Withdrawal | 6,297,406 | 6,434,816 | 6,584,173 |
| --Disability | 5,612,433 | 5,496,863 | 5,575,296 |
| --Death | 1,612,217 | 1,599,724 | 1,626,975 |
| --Refund of Contributions | 1,693,015 | 1,734,608 | 1,708,505 |
| --Total | \$ 191,882,175 | \$ 188,742,904 | \$ 192,078,071 |
| (2) Active Members Over NRA (included above) | - | - | - |
| (3) DROP Accounts Value | 11,311,721 | 12,457,815 | 12,457,815 |
| (4) DROP Retirees | 49,045,143 | 50,211,780 | 50,712,266 |
| (5) Retirees and Beneficiaries | 263,181,917 | 279,952,206 | 282,287,912 |
| (6) Disabled Members | - | 1,418,450 | 1,426,720 |
| (7) Vested Terminated and Limited Members | 8,441,971 | 8,778,951 | 8,913,374 |
| (8) Total | \$ 523,862,927 | \$ 541,562,106 | \$ 547,876,158 |
| (b) APV of Vested Accrued Benefits | 423,903,682 | 430,236,225 | 446,920,421 |
| (c) APV of All Accrued Benefits | 426,872,026 | 433,288,424 | 450,025,197 |
| (d) Actuarial Accrued Liability (AAL) |  |  |  |
| (1) Retirement | 127,563,450 | 125,548,563 | 127,272,119 |
| (2) Withdrawal | 2,368,509 | 2,383,474 | 2,418,050 |
| (3) Disability | 2,265,278 | 2,212,856 | 2,233,299 |
| (4) Death | 1,071,162 | 1,069,721 | 1,083,176 |
| (5) Refund of Contributions | 79,262 | 75,194 | 73,077 |
| (6) Inactives | 331,980,752 | 352,819,202 | 355,798,087 |
| (7) Total | \$ 465,328,413 | \$ 484,109,010 | \$ 488,877,808 |
| (e) Unfunded AAL (UAAL) | 158,410,459 | 159,154,501 | 163,923,299 |
| 4. Breakdown of Plan Normal Costs |  |  |  |
| (a) Retirement | 6,343,889 | 6,232,255 | 6,370,741 |
| (b) Withdrawal | 463,947 | 474,090 | 483,840 |
| (c) Disability | 416,141 | 408,105 | 412,644 |
| (d) Death | 69,601 | 68,839 | 70,187 |
| (e) Refund of Contributions | 173,727 | 178,642 | 175,014 |
| (f) Expense | 669,625 | 633,577 | 633,264 |
| (g) Total | \$ 8,136,930 | \$ 7,995,508 | \$ 8,145,690 |

Valuation Comparison Table (continued)


* Assumed payable at the end of each month as determined from prior actuarial valuation.

Includes a payroll growth rate of $4.5 \%$.
** Includes expense normal cost.
${ }^{\text {*** }}$ Includes interest adjustments at the valuation interest rate on amounts to end of year.

Development of Past Excess Contributions (PEC)

| PEC for Year Ended 9/30/15 | Without <br> Interest Adjustment | With Interest Adjustment |
| :---: | :---: | :---: |
| (a) PEC Beginning of Year |  | \$ 124,266,858 |
| (b) (1) Contribution Required by City | \$ 12,728,606 | 13,211,521 |
| (2) Contribution Required by Members | 4,266,449 | 4,426,415 |
| (3) Total Contribution Requirements | \$ 16,995,055 | \$ 17,637,936 |
| (c) (1) Actual City Contributions Paid * | 11,746,935 | 12,224,716 |
| (2) Actual Member Contributions Paid | 4,429,289 | 4,609,441 |
| (3) Total Contributions Paid | \$ 16,176,224 | \$ 16,834,157 |
| (d) PEC End of Year |  | 133,594,202 |

* Includes expense normal cost amount of \$633,577.
** Cannot be used for contribution offsets unless a portion of the 2004 UAAL base is reinstated equal to any credit taken and amortized over remaining 20 years.


## Effect of Amortization Policy on Contribution Requirements

In determining the contribution rate for the UAAL, it has been assumed that total member payroll will grow at the rate of $4.5 \%$ per year. Since an increasing payroll is assumed for determining liabilities, it could be considered inconsistent not to make a similar assumption for amortizing such liabilities. The following table illustrates the amortization of the UAAL in accordance with the adopted level-percentage-of-increasing-payroll approach:


[^0]UAAL Repayment Schedule

| Fiscal Year | Remaining UAAL Balance Beginning of FY | Amortization <br> Payments Assumed Payable Monthly |  |
| :---: | :---: | :---: | :---: |
| 2015-2016 | \$ 163,923,299 | \$ | 10,137,921 |
| 2016-2017 | 166,785,088 |  | 10,671,228 |
| 2017-2018 | 169,325,160 |  | 11,151,434 |
| 2018-2019 | 171,572,384 |  | 11,653,248 |
| 2019-2020 | 173,480,195 |  | 12,177,644 |
| 2020-2021 | 174,997,197 |  | 12,725,638 |
| 2021-2022 | 176,066,716 |  | 13,298,292 |
| 2022-2023 | 176,626,325 |  | 13,896,715 |
| 2023-2024 | 176,607,317 |  | 14,522,068 |
| 2024-2025 | 175,934,144 |  | 15,175,561 |
| 2025-2026 | 174,523,798 |  | 15,858,461 |
| 2026-2027 | 172,285,140 |  | 16,572,092 |
| 2027-2028 | 169,118,180 |  | 17,317,836 |
| 2028-2029 | 164,913,284 |  | 18,097,138 |
| 2029-2030 | 159,550,320 |  | 18,911,510 |
| 2030-2031 | 152,897,730 |  | 19,762,527 |
| 2031-2032 | 144,811,520 |  | 20,651,841 |
| 2032-2033 | 135,134,169 |  | 21,581,174 |
| 2033-2034 | 123,693,439 |  | 22,552,327 |
| 2034-2035 | 110,301,092 |  | 21,825,100 |
| 2035-2036 | 96,569,494 |  | 22,807,229 |
| 2036-2037 | 80,686,972 |  | 22,571,926 |
| 2037-2038 | 63,747,641 |  | 24,044,398 |
| 2038-2039 | 43,882,640 |  | 21,581,859 |
| 2039-2040 | 24,958,570 |  | 9,075,034 |
| 2040-2041 | 17,534,628 |  | 10,970,580 |
| 2041-2042 | 7,523,764 |  | 5,753,155 |
| 2042-2043 | 2,136,822 |  | 1,353,379 |
| 2043-2044 | 899,679 |  | 921,218 |
| 2044-2045 | 12,086 |  | 12,531 |
| 2045-2046 | - |  | - |

## Current Plan Liabilities/Asset Comparison

## Accumulated Plan Benefits

1. Actuarial Present Value (APV) of Vested Accrued Benefits
(a) Vested Terminated Participants
(b) Retirees and Beneficiaries
(c) Disabled Members
(d) DROP Accounts Value
(e) DROP Retirees
(f) Active Participants
(g) Total APV of Vested Accrued Benefits
2. APV of Nonvested Accrued Benefits
3. APV of Accumulated Plan Benefits [(1)+(2)]
4. Actuarial Value of Assets
$306,917,954 \quad 324,954,509$
5. Excess (if any) of APV of Accumulated Plan

Benefits over the Actuarial Value of Assets [(3)-(4)]
143,749,200 125,070,688
6. Percent Funded [(4)/(3)]
$68 \% \quad 72 \%$

## Statement of Changes in Accumulated Plan Benefits

1. APV of Accumulated Plan Benefits at

10/1/14
\$ 450,667,154
2. Increase (Decrease) During the Year Attributable to:
(a) Plan Amendment
(b) Change in Actuarial Assumptions
$(18,744,123)$
(c) System Changes
(d) DROP Retiree Account Changes

1,146,094
(e) Benefit Payments
(f) Change in Benefits and APV Factors
3. $\mathrm{APV}^{*}$ of Accumulated Plan Benefits at

10/1/15
\$ 450,025,197

[^1]
## Current Funded Status



A comparison of current actuarial value of assets of the fund with the current actuarial present value (APV) of benefits accrued based on credited service and salary to date is now a required disclosure under Florida Statutes, Chapter 112.63. This measurement is often used as a surrogate for the liability if the Plan were to stop future benefit accruals. It is called "current liability" since it is based only on current earned benefits, even though the actual payment of those benefits extends many years into the future. The accumulated benefit liability APVs were developed using the statute required assumed rate of future investment return of 7.75\% for plan year ending September 30, 2015.

The current liability is normally expected to be more than $100 \%$ funded for an ongoing plan since the plan will ultimately be liable for a greater accrued benefit (the creditedprojected benefit). The current liability funded level is $72 \%$ (based on actuarial value of assets). If market value of assets were used to determine funded status, the funded percentage would be $72 \%$.

## Comparison of Actual and Assumed Salary Increases

| Period Ended <br> September 30 | Actual Rate <br> of Increase | Assumed <br> Rate of <br> Increase |
| :---: | :---: | :---: |
| 2004 | $9.35 \%$ | $5.36 \%$ |
| 2005 | $1.75 \%$ | $5.59 \%$ |
| 2006 | $11.83 \%$ | $5.46 \%$ |
| 2007 | $7.91 \%$ | $5.61 \%$ |
| 2008 | $6.14 \%$ | $5.63 \%$ |
| 2009 | $4.40 \%$ | $5.68 \%$ |
| 2010 | $3.00 \%$ | $5.77 \%$ |
| 2011 | $3.01 \%$ | $5.73 \%$ |
| 2012 | $3.45 \%$ | $5.74 \%$ |
| 2013 | $2.65 \%$ | $5.66 \%$ |
| 2014 | $2.74 \%$ | $5.64 \%$ |
| 2015 | $2.74 \%$ | $5.56 \%$ |

Comparison of Actual and Assumed Investment Returns*

| Period Ended <br> September 30 | Actual Rate <br> of Return* | Assumed <br> Rate of <br> Return |
| :---: | :---: | :---: |
| 2004 | $16.40 \%$ | $9.25 \%$ |
| 2005 | $10.40 \%$ | $9.25 \%$ |
| 2006 | $10.31 \%$ | $9.25 \%$ |
| 2007 | $11.06 \%$ | $9.25 \%$ |
| 2008 | $7.41 \%$ | $9.25 \%$ |
| 2009 | $-2.59 \%$ | $9.25 \%$ |
| 2010 | $9.47 \%$ | $8.50 \%$ |
| 2011 | $-2.43 \%$ | $8.50 \%$ |
| 2012 | $0.50 \%$ | $8.50 \%$ |
| 2013 | $9.08 \%$ | $8.40 \%$ |
| 2014 | $13.16 \%$ | $8.30 \%$ |
| 2015 | $9.81 \%$ | $8.20 \%$ |

*Based on actuarial value of assets.

## Calculation of Actual Rate of Investment Return

| Plan Year Ended September 30, 2015 |  |  |
| :---: | :---: | :---: |
| R | $=$ | 2 I , where |
|  |  | M1+M2-I |
| I | = | the interest, dividends, plus appreciation or (depreciation), net of investment expense |
| M1 | $=$ | beginning actuarial value |
| M2 | $=$ | ending actuarial value |
| R | = | $2 \times \$ 28,427,084$ |
|  |  | \$295,606,233 + \$312,496,694-\$28,427,084 |
| R | $=$ | \$56,854,168 |
|  |  | \$579,675,843 |
| R | $=$ | 9.81\% |

## Additional Disclosures

There are no additional disclosures required under Rules 22D-1.003(4)(f) and (g) of the State of Florida, Department of Management Services, Division of Retirement.

## SECTION 4

## ALTERNATIVE PRO FORMA RESULTS ASSUMING

## NO PENSION BOND ISSUE

This section presents an alternative pro forma actuarial valuation based on assuming no pension bond issue occurred in 2003. The purpose of this alternative valuation is to determine what contribution requirements would be applicable had the bond proceeds not been placed into the pension fund.

If the City had not undertaken a pension bond issue to pre-fund the unfunded actuarial accrued liability, and paid contributions as reported in the financial statements for the past two years, net City contribution requirements would be $22.28 \%$ of payroll, rather than $17.45 \%$ as shown on page $2-3$ of this valuation report. Translated into dollar amounts for the 2015-16 fiscal year, contributions would have been required to be increased from $\$ 14.625$ million to $\$ 18.681$ million.

The alternative pro forma results assuming no pension bond issue are presented on the following page.

## 2015 Valuation Table - Alternative Pro Forma Results Assuming No Pension Bond Issue

| 1. Participation |  |  |  |
| :---: | :---: | :---: | :---: |
| (a) Number of Active Members |  |  | 1,465 |
| (b) Number of Inactive Members |  |  | 1,656 |
| (c) Annual Valuation Payroll for Contributing Members |  | \$ | 80,223,575 |
| (d) Total Valuation Payroll |  |  | 80,223,575 |
| 2. Actuarial Present Value (APV) of Future Benefits as of 10/1/15 |  |  |  |
| (a) Active Members |  |  |  |
| (1) Retirement |  |  | 176,583,122 |
| (2) Withdrawal |  |  | 6,584,173 |
| (3) Disability |  |  | 5,575,296 |
| (4) Death |  |  | 1,626,975 |
| (5) Refund of Contributions |  |  | 1,708,505 |
| (6) Total |  | \$ | 192,078,071 |
| (b) DROP Accounts Value |  |  | 12,457,815 |
| (c) DROP Retirees |  |  | 50,712,266 |
| (d) Retirees and Beneficiaries |  |  | 282,287,912 |
| (e) Disabled Retirees |  |  | 1,426,720 |
| (f) Vested Terminated, Limited Members and Pending Refunds |  |  | 8,913,374 |
| (g) Total APV Future Benefits |  | \$ | 547,876,158 |
| 3. APV Apportionment of line 2(g)* |  |  |  |
| (a) APV of Total Future Normal Costs |  |  | 58,998,350 |
| (b) Actuarial Accrued Liability [(2g)-(3a)] |  |  | 488,877,808 |
| (c) Actuarial Value of Assets |  |  | 275,160,605 |
| (d) Unfunded AAL (UAAL) [(3b)-(3c)] |  | \$ | 213,717,203 |
| 4. Breakdown of UAAL on line 3(d) |  |  |  |
| (a) UAAL [3(d)] |  |  | 213,717,203 |
| (b) Change in UAAL Due to Assumption Change |  |  | 4,768,798 |
| (c) UAAL Before Change [(4a)-(4b)] |  | \$ | 208,948,405 |
| (d) Expected UAAL |  |  | 211,545,632 |
| (e) Actuarial (Gain) Loss [(4c)-(4d)] |  | \$ | $(2,597,227)$ |
|  | Equiv. Annual \$ Amount |  | ercentage of Payroll |
| (a) Plan Normal Cost excluding Expenses | \$ 7,512,426 |  | 8.96\% |
| (b) Expense Normal Cost | 633,264 |  | 0.76\% |
| (c) Plan Total Normal Cost [(5a)+(5b)] | \$ 8,145,690 |  | 9.72\% |
| (d) Amortization of UAAL | 14,727,125 |  | 17.57\% |
| (e) Total Required Plan Contribution [(5c)+(5d)] | \$ 22,872,815 |  | 27.28\% |
| (f) Estimated Member Contributions | 4,191,682 |  | 5.00\% |
| (g) Net City Required Contributions [(5e)-(5f)] | \$ 18,681,133 |  | 22.28\% |

[^2]
## SUMMARY OF PLAN PROVISIONS THAT AFFECT THE VALUATION

1. Ordinances:
2. Member:
3. Member Contributions:
4. Credited Service:
5. Earnings:

Original Ordinance: Chapter 2, Article VII, Division 5 (Employees Pension Plan)
Most Recent Ordinance No. 120218 effective September 10, 2012

All full-time, permanent employees of the City of Gainesville (except police officers and firefighters) or the Gainesville Gas Company are eligible for membership in the Plan upon date of hire.

5\% of Earnings.
The number of full and fractional years worked from date of hire to date of termination or retirement, plus any unused sick leave and personal critical leave bank (PLCB) credits.

For service earned on or after October 1, 2012, no service shall be credited for unused sick leave or PLCB credits earned on or after October 1, 2012.

Employees who previously chose to participate in the City's 457 plan or defined contribution plan and elect to transfer to this Plan may purchase Credited Service for periods of employment during which they participated in the previous plan.

Pay received by a Member as compensation for services to the City, including vacation termination pay, overtime pay, longevity pay and certain other specified pay.

For Members with hire dates on or before October 1, 2012, no more than 300 hours of overtime pay earned after October 1, 2012 shall be included, nor shall termination vacation pay.

For Members with hire dates on or after October 2, 2012, no more than 150 hours of overtime pay earned after October 1, 2012 shall be included, nor shall termination vacation pay.
6. Final Average Earnings:
7. Accrued Benefit:

For Members with hire dates on or before October 1, 2007, the average of a Member's monthly Earnings for the 36 consecutive months that produce the highest average, as of the date of benefit determination.

For Members with hire dates on or after October 2, 2007 but on or before October 1, 2012, the average of a Member's monthly Earnings for the 48 consecutive months that produce the highest average, as of the date of benefit determination.

For Members with hire dates on or after October 2, 2012, the average of a Member's monthly Earnings for the 60 consecutive months that produce the highest average, as of the date of benefit determination.

For City employees with hire dates on or before October 1, 2012, a monthly benefit payable for life, starting at Normal Retirement Age, equal to 2\% of Final Average Earnings times Credited Service.

For City employees with hire dates on or after October 2, 2012, a monthly benefit payable for life, starting at Normal Retirement Age, equal to $1.8 \%$ of Final Average Earnings times Credited Service.

For Gainesville Gas Company Employees, a monthly benefit payable for life starting at Normal Retirement Age, equal to:
(i) the accrued benefit earned under the Gainesville Gas Company Employees'

Pension Plan ("predecessor plan") as of January 10, 1990; plus
(ii) 2\% of Final Average Earnings times Credited Service earned after January 10, 1990; plus
(iii) for each year of service earned after January 10, 1990, an additional 2\% of Final Average Earnings will be credited, not to exceed the service years earned under the accrued benefit formula under the predecessor plan; less
(iv) for each year of predecessor plan service credited under (iii) above, the portion of the accrued benefit determined under (i) above based on such years.
8. Normal Retirement:
9. Early Retirement:

For Members with hire dates on or before October 1, 2007, the eligibility date is the earlier of age 65 and 10 years of Credited Service or 20 years of Credited Service at any age.

For Members with hire dates on or after October 2, 2007 and on or before October 1, 2012, the eligibility date is the earlier of age 65 and 10 years of Credited Service or 25 years of Credited Service at any age.

For Members with hire dates on or after October 2, 2012, the eligibility date is the earlier of age 65 and 10 years of Credited Service or 30 years of Credited Service at any age.

Benefit - Accrued Benefit payable as of the Normal Retirement Date.

For Members with hire dates on or before October 1, 2012, the eligibility date is the attainment of age 55 and 15 years of Credited Service.

For Members with hire dates on or after October 2, 2012, the eligibility date is the attainment of age 60 and 20 years of Credited Service.

Benefit - Accrued Benefit reduced 5/12\% for each month by which the Early Retirement Date precedes the date on which the Member would have reached age 65.
10. Disability Benefit:

Eligibility
In-Line-of-Duty - All Plan members.
Not-in-Line-of-Duty - Completion of at least five consecutive years as a regular employee.

## Amount

A monthly benefit payable for life or until termination of disability or until superseded by retirement benefits earned under the General Employees' Pension Plan equal to the Member's Average Monthly Earnings times the greater of his/her years of creditable service times $2 \%$ with a minimum $42 \%$ for in-line-of-duty disability and $25 \%$ for not-in-line-of-duty, offset by (i) retirement benefits* in payment status, and (ii) his/her disability benefit percentage, up to a maximum of $50 \%$, multiplied by the initial monthly Social Security Primary Insurance Amount-whether or not in payment status-to which a Member is entitled. Benefit is limited to $\$ 3,750$ per month or an amount equal to his/her maximum benefit percentage with the above reductions, payable beginning the month of disability or the month following the termination of sick leave payments.

* The disability benefit shall only be reduced by the amount of early or normal retirement benefit that is attributable to City contributions. The City is currently reviewing this offset to determine applicability now that the plans are combined.

11. Death Benefit before Retirement:

If a Member should die before becoming eligible for any retirement benefits, the beneficiary shall be entitled to a refund, without interest, of the deceased's Member Contributions to the fund. After becoming eligible for retirement, a $2 / 3$ survivor annuity is payable to a surviving spouse.

If a Member who has at least 16 years of Credited Service becomes terminally ill or accidentally dies, other employees may contribute their unused vacation time toward his(her) length of Credited Service. Service credits may be added until they provide the ill or deceased Member with 20 years. The beneficiary is then entitled to receive an amount equal to the Member's Accrued Benefit based on 20 years of Credited Service, payable immediately as a $2 / 3$ survivor annuity.
12. Death Benefit after Retirement:
13. Termination Benefit:
14. DROP Provision:

Excess of Member Contributions, without interest, over benefits paid, unless the optional benefit form, if any, applies.

If a Member should terminate prior to completing five years of Credited Service, no benefits are payable except the return of Member Contributions, without interest. After the completion of five years but less than Normal or Early Retirement eligibility, a Member is entitled to a benefit equal to the Accrued Benefit payable at age 65 for life.

Members with 27 but less than 35 years of Credited Service may elect to participate in the deferred retirement option program (DROP), for a maximum of 60 months or until the conclusion of 35 years of Credited Service if less. The Member's Accrued Benefit is calculated as of the date of entry into DROP, deposited in the DROP
account and paid to the Member at termination of employment.

For Members whose DROP participation begins on or before October 1, 2012, interest shall accrue at $6 \%$.

For Members whose DROP participation begins on or after October 2, 2012, interest shall accrue at $2.25 \%$.
15. Cost-of-Living Increase:

For Members eligible for Normal Retirement as of September 10, 2012, a $2 \%$ per year increase for retired Members with at least 20 years of Credited Service on or before October 1, 2012, and their beneficiaries, commencing at the later of October 1, 2000, or the October 1 following the Member's age 62.

For non-vested and vested members as of September 10, 2012, the eligibility date is attainment of age 65 and 25 years of Credited Service.

For new members as of September 10, 2012, the eligibility date is attainment of age 65 and 30 years of Credited Service.

Cost-of-living increases do not apply during the DROP period.

CITY OF GAINESVILLE
GENERAL EMPLOYEES' PENSION PLAN

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND ACTUARIAL COST METHOD

Actuarial Assumptions

1. Investment Return:
8.2\% per annum, compounded annually*; net of investment expense.
2. Salary Increase Rate:

| Years of Service | Rate* |
| :---: | :---: |
| 6 and Under | 7.00\% |
| 7-11 | 6.00 |
| 12-16 | 4.00 |
| Over 16 | 3.75 |

3. Mortality Rates:

RP-2000 Combined Healthy Mortality TableDynamic with projection to valuation year

Probability of Death Within One Year After Attaining Age Shown

| $\frac{\text { Age }}{25}$ | $\frac{\text { Male }}{0.0323 \%}$ | $\underline{\text { Female }}$ |
| :--- | :--- | :--- |
| 35 | 0.0717 | $0.1680 \%$ |
| 35 | 0.1239 | 0.0402 |
| 45 | 0.2718 | 0.0882 |
| 55 | 1.0309 | 0.2409 |
| 65 |  | 0.9003 |

4. Mortality Rates - Disabled Lives: RP-2000 Disability Mortality Table Unhealthy with projection to valuation year

Probability of Death Within One Year
After Attaining Age Shown

| $\frac{\text { Age }}{25}$ | $\frac{\text { Male }}{1.9412 \%}$ | $\underline{\text { Female }}$ |
| :--- | :--- | :--- |
| 35 | 2.0936 | $0.6030 \%$ |
| 45 | 1.8548 | 0.6311 |
| 55 | 2.6580 | 0.5849 |
| 65 | 4.0610 | 1.4666 |
|  |  | 2.5996 |

*Includes underlying long-term rate of inflation of 3.75\% per annum.
5. Termination Rates:

Probability of Terminating Service (for reasons other than death, disability or retirement) Within One Year After Attaining Age and Service Shown

|  | $\frac{\text { Males }}{\text { Years of Service }}$ |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Age | $\frac{0-1}{14.0} \%$ | $\frac{1-2}{12.0} \%$ | $\underline{2-3}$ | $\underline{3-4}$ | $\underline{4-5}$ | $\underline{5+}$ |
| Under 30 | 14.0 | 12.0 | 8.0 | $6.0 \%$ | $5.0 \%$ | $4.0 \%$ |
| $30-34$ | 14.0 | 12.0 | 8.0 | 6.0 | 5.0 | 3.0 |
| $35-39$ | 12.0 | 8.0 | 6.0 | 5.0 | 2.5 |  |
| $40-64$ | 14.0 | 12.0 | 8.0 | 6.0 | 5.0 | 2.0 |
| 65 and Over | 14.0 |  |  |  | 5.0 | 0.0 |

## Females

|  | Years of Service |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Age | $\frac{0-1}{22.0} \%$ | $\frac{1-2}{16.0} \%$ | $\frac{2-3}{13.0} \%$ | $\frac{3-4}{11.0} \%$ | $\frac{4-5}{10.0} \%$ | $\frac{5+}{7.0} \%$ |
| Under 30 | 22.0 | 16.0 | 13.0 | 11.0 | 10.0 | 5.0 |
| $30-34$ | 22.0 | 16.0 | 13.0 | 11.0 | 10.0 | 4.0 |
| $35-39$ | 22.0 | 16.0 | 13.0 | 11.0 | 10.0 | 3.0 |
| $40-64$ | 16.0 | 13.0 | 11.0 | 10.0 | 0.0 |  |

6. Retirement Rates:

Members with Hire Dates On or Before October 1, 2007
Probability of Retiring Within
One Year After Retirement Eligibility
After Attaining Age and Service Shown

|  | Years of Service |  |  |  |  |  |
| :--- | :---: | :---: | :--- | :---: | :--- | :---: |
| Age | $\underline{10-14}$ | $\underline{15-19}$ | $\underline{20}$ | $\underline{21-24}$ | $\underline{25-26}$ | $\underline{27+}$ |
| 56 \& Under | $0.0 \%$ | $7.5 \%$ |  | $20.0 \%$ | $5.0 \%$ | $10.0 \%$ |
| $57-59$ | 0.0 | 7.5 | 30.0 | 7.5 | 10.0 | $25.0 \%$ |
| $60-64$ | 0.0 | 7.5 | 30.0 | 30.0 | 10.0 | 25.0 |
| $65 \&$ Over | 33.0 | 33.0 | 50.0 | 30.0 | 20.0 | 100.0 |

Members with Hire Dates On or After October 2, 2007 But On or Before October 1, 2012
Probability of Retiring Within
One Year After Retirement Eligibility
After Attaining Age and Service Shown

| Age | Years of Service |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 10-14 | 15-19 | 20-24 | $\underline{25}$ | 26-29 | 30+ |
| 56 \& Under | 0.0\% | 5.0\% | 5.0\% | 20.0\% | 10.0\% | 25.0\% |
| 57-59 | 0.0 | 5.0 | 5.0 | 30.0 | 10.0 | 25.0 |
| 60-64 | 0.0 | 5.0 | 5.0 | 30.0 | 10.0 | 25.0 |
| 65 \& Over | 33.0 | 33.0 | 33.0 | 50.0 | 20.0 | 100.0 |

Members with Hire Dates On or After October 2, 2012
Probability of Retiring Within
One Year After Retirement Eligibility
After Attaining Age and Service Shown

|  | Years of Service |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | $\frac{10-14}{56}$ \& Under | $0.0 \%$ | $\frac{15-19}{5.0 \%}$ | $\frac{20-24}{5.0 \%}$ | $\underline{25}$ | $\frac{26-29}{5.0} \%$ |
| $57-59$ | 0.0 | 5.0 | 5.0 | 5.0 | $\frac{30+}{25.0} \%$ |  |
| $60-61$ | 0.0 | 5.0 | 5.0 | 5.0 | 5.0 | 25.0 |
| 62 | 0.0 | 7.5 | 15.0 | 15.0 | 15.0 | 25.0 |
| $63-64$ | 0.0 | 5.0 | 5.0 | 5.0 | 5.0 | 50.0 |
| 65 \& Over | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 100.0 |

7. Disability Rates:

| Age | Probability of Disability <br> Within One Year <br> After Attaining Age Shown |
| :--- | :---: |
| 25 | $0.0745 \%$ |
| 35 | 0.1320 |
| 45 | 0.3080 |
| 55 | 0.9090 |

8. Marital Status and Spouse's Age:
$100 \%$ of members assumed to be married; male spouses assumed two years older than female members, and female spouses assumed two years younger than male members.
9. Growth Rate of Future
4.5\% per year.
10. Underlying Long-term Inflation Rate:
3.75\% per year.
11. Plan Expenses:

Equal to the annual average of actual administrative expenses incurred since the last valuation.

## Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These estimates are combined to produce the longterm expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation are summarized in the following table:

Development of Long Term Discount Rate

| Domestic Equity | $3 \%$ | $2 \%$ | $4.5 \%$ | $9.5 \%$ | $50.0 \%$ | $4.750 \%$ |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: |
| Intnl Equity | $3 \%$ | $2 \%$ | $5.5 \%$ | $10.5 \%$ | $30.0 \%$ | $3.150 \%$ |
| Domestic Bonds | $3 \%$ | $2 \%$ | $0.5 \%$ | $5.5 \%$ | $2.0 \%$ | $0.110 \%$ |
| Intnl Bonds | $3 \%$ | $2 \%$ | $1.5 \%$ | $6.5 \%$ | $0.0 \%$ | $0.000 \%$ |
| Real Estate | $3 \%$ | $2 \%$ | $2.5 \%$ | $7.5 \%$ | $16.0 \%$ | $1.200 \%$ |
| Alternative Investment* | $3 \%$ | $2 \%$ | $3.5 \%$ | $7.5 \%$ | $0.0 \%$ | $0.000 \%$ |
| US Treasuries* | $3 \%$ | $0 \%$ | $0.0 \%$ | $3.0 \%$ | $0.0 \%$ | $0.000 \%$ |
| Cash | $3 \%$ | $-2 \%$ | $0.0 \%$ | $1.0 \%$ | $2.0 \%$ | $0.020 \%$ |
| Total |  |  |  |  | $100.0 \%$ | $9.230 \%$ |

[^3]
## Discount Rate

The discount rate used to measure the total pension liability was $8.2 \%$. The projection of cash flows used to determine the discount rate assumed that City contributions will continue to be made at actuarially determined contribution rates based on the funding requirements of Florida Statutes, taking into account the applicable member rate. Based on those assumptions, the pension plan's net fiduciary position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was used as the discount rate and applied to all periods of projected benefit payments to determine the total pension liability.

## Actuarial Value of Assets

To determine the Plan's contribution requirements, actuarial value of assets is determined by adjusting the expected value of assets as of any valuation date by a portion of the cumulative differences of the market value of assets and the expected actuarial value of assets starting prospectively from October 1, 2004. (As of October 1, 2004, expected value was set equal to market value.) Each difference is fully recognized over a period not to exceed five years. The expected actuarial value of assets as of any valuation date is determined by applying actual Plan contributions and disbursements and the assumed investment yield to the previous year's expected actuarial value of assets adjusted for any fully recognized cumulative differences. The adjustment is further modified, if necessary, by an amount sufficient to ensure that the actuarial value of assets is not less than $80 \%$ nor more than $120 \%$ of market value

## Actuarial Cost Method

To determine the Plan's contribution requirements, the Individual Entry Age Actuarial Cost Method was used. Under this method, the cost of each member's projected retirement benefit is funded through a series of annual payments, determined as a level percentage of each year's earnings from age at hire to assumed exit age. This level
percentage, known as normal cost, is thus computed as though the Plan had always been in effect. A yearly normal cost for each member is individually determined by multiplying each member's level percentage by the applicable yearly earnings, then adding together to obtain the normal cost amount for the Plan for that year. The accrued value of normal cost payments due prior to the valuation date is termed the actuarial accrued liability (AAL). This amount minus actuarial value of assets is known as the unfunded actuarial accrued liability (UAAL). If the actuarial value of assets exceeds the AAL, the UAAL is negative. The annual cost of a plan consists of two components: normal cost and a payment, which may vary between prescribed limits, toward the UAAL. If the UAAL is negative, the amortization payment becomes a credit.

Actuarial gains (or losses), a measure of the difference between actual experience and that expected based upon the actuarial assumptions during the period between two valuation dates, as they occur, reduce (or increase) the UAAL.

It is intended that the UAAL bases (whether charge or credit) established from the previous valuation (as modified by any impact statements) be amortized over a 30-year period from inception (thus over their respective remaining periods as of the valuation date) and that any newly-established UAAL charge or credit bases be amortized over a 30-year period from inception through monthly contributions expressed as a level percentage of each month's total payroll, incorporating an assumption that future payroll will grow at the rate of $4.5 \%$ per year. Changes in the UAAL resulting from actuarial gains or losses, ordinance changes or changes in actuarial assumptions will be amortized over a 30-year period.

Each base amortization is established at date of inception and determines a payment schedule comprised of increasing dollar amounts (but level as a percentage of future expected payroll). Since there is a one-year delay in starting repayment of the base, the payment schedule is based upon 29 years of payments ( 30 years from inception date).

Subsequent valuations recalculate the payment schedule using the then remaining UAAL base assuming the minimum payments were made, and a revised schedule is determined in the same manner as the initial schedule, but over the then remaining amortization period. Thus, each year's amortization payment is a fixed dollar amount that is applied to fully amortize the associated base by the end of the 30-year period, irrespective of actual future payroll.

## Miscellaneous Valuation Procedures

1. Projected retirement benefits were limited to IRC Section 415 benefit limits applicable to the current plan year (for 2015, $\$ 210,000$ ), payable as a life annuity, beginning at or after age 62, reduced as applicable for earlier benefit commencement with assumed increases equal to the assumed long-term rate of inflation.
2. Projected earnings were limited to IRC Section 401(a)(17) compensation limits applicable to the current plan year (for 2015, $\$ 265,000$ ) with assumed increases equal to the assumed long-term rate of inflation.
3. Annual covered payroll is the amount of total pensionable earnings paid during the prior fiscal year for employees who are currently active members in the Plan (which does not include employees still working but retired under the DROP provisions). Valuation payroll is payroll expected to be paid during the current fiscal year, determined using prior-year covered payroll and the salary increase assumption by individual member. Contribution requirements for the next fiscal year are based on valuation payroll for the current fiscal year projected for one year using the payroll growth assumption.
4. Member information is current as of October 1, 2015.
5. No liability was recognized in the valuation for nonvested employees who have terminated, whether or not a break in service has occurred as of the valuation date, since any potential liability for this group is not significant. Note that upon rehire, any applicable prior employment service credits will be fully recognized in the valuation.
6. The contribution requirement includes an amount to recognize the Plan's anticipated administrative expenses based on actual prior experience (see assumptions). This amount is reflected in the required normal cost.
7. The payroll growth rate has been established at $4.5 \%$, down from the original $5 \%$ rate, for the remaining amortization period. Although the intent continues to be to use the original payroll growth basis "grandfathered" by the State rather than to adjust based on actual 10-year experience, it was judged prudent voluntarily to lower the assumed rate consistent with the adjustment in assumed investment return and salary increase rates.
8. Service credits were adjusted by 0.15 year for employees in the paid-time-off (PTO) program and 0.25 year for employees not in the PTO program for benefit determination to recognize any accumulated unused sick leave.
9. Final year of earnings was increased by $10 \%$ if service greater than $24,8 \%$ if service greater than $17,6 \%$ if service greater than $12,4 \%$ if service greater than 7 and $2 \%$ if service 7 or less for benefit determination for non-PTO employees to recognize credits for special pay. No final earnings adjustment was made for PTO employees.

## CITY OF GAINESVILLE <br> GENERAL EMPLOYEES' PENSION PLAN

## TRUST FUND BALANCE

The September 30, 2015, financial statements of the Plan showed the following value of investments available for Plan benefits:

|  |  | Book <br> Value |  | Market <br> Value |
| :---: | :---: | :---: | :---: | :---: |
| Cash and Equivalents | \$ | 5,268,066 | \$ | 5,268,066 |
| Alternative Investments |  | 125,772 |  | 484,173 |
| Equities |  | 189,392,263 |  | 265,454,146 |
| Real Estate |  | 37,340,494 |  | 54,938,842 |
| Government Bonds |  | 726,773 |  | 741,968 |
| Corporate Bonds |  | 3,961,286 |  | 4,044,103 |
| Mortgage \& Asset Backed Securities |  | 272,850 |  | 278,554 |
| Equity in Treasury |  | 3,603,826 |  | 3,603,826 |
| Receivable for Investments Sold |  | 91,543 |  | 91,543 |
| Payable for Investments Purchased |  | $(456,341)$ |  | $(456,341)$ |
| Due from Disability Plan |  | 52,421 |  | 52,421 |
| Dividends Receivable |  | 143,875 |  | 143,875 |
| Interest Receivable |  | 58,556 |  | 58,556 |
| Reserve - DROP |  | $(12,457,815)$ |  | $(12,457,815)$ |
| Payables |  | $(99,784)$ |  | $(99,784)$ |
| Total | \$ | 228,023,785 | \$ | 322,146,133 |
| Statement Value <br> (includes \$32,863,391 in accumulat |  | tions) |  | 312,496,694 |

## CITY OF GAINESVILLE <br> GENERAL EMPLOYEES' PENSION PLAN <br> DEVELOPMENT OF ACTUARIAL (STATEMENT) VALUE OF ASSETS

## 10/1/15 Development

1. Market Value of Assets as of $10 / 1 / 15^{*} \$ 322,146,133$
2. Expected Value of Assets as of $10 / 1 / 15 \quad 288,267,059$
3. Current Year's Difference
4. $20 \%$ of Current Difference [(3)x0.2]
5. Previous Year's Cumulative Adjustments*

29,730,446
6. Preliminary Actuarial Value of Assets $[(2)+(4)+(5)]$

312,496,694
7. $80 \%$ of Market Value [(1)x0.8] 257,716,906
8. $120 \%$ of Market Value [(1) $\times 1.2$ ] $386,575,360$
9. Actuarial Value of Assets within $20 \%$ of Market Value 312,496,694 Corridor at 10/1/15
10. DROP Accounts Value at $10 / 1 / 15$
11. Actuarial Value of Assets at $10 / 1 / 15^{*}$ 324,954,509

* Excludes DROP reserves for averaging purposes.


## CITY OF GAINESVILLE <br> GENERAL EMPLOYEES' PENSION PLAN

## ANALYSIS OF CHANGES IN ACTUARIAL VALUE OF ASSETS

Actuarial Value of Assets as of 10/01/14
\$ 295,606,233

Add:

City Contributions
Member Contributions
Realized Gains (Losses) - Market Value
Unrealized Gains (Losses) - Market Value
Transfer from Disability Plan
Interest and Dividends
Net Appreciation (Depreciation)
Total Additions
Deduct:
Benefit Payments
Refund of Contributions
Benefit Payments to DROP
Interest paid to DROP accounts
Administrative Expenses
Investment Expenses
Total Deductions

Actuarial Value of Assets as of 10/01/15*
312,496,694
(includes $\quad \$ 32,863,391 \quad$ in accumulated member contributions)

* Before addition of DROP reserves to AVA.


## RECONCILIATION OF DROP ACCOUNTS

Value at Beginning of Year
Payments Credited to Accounts
Investment Earnings Credited
Withdrawals from Accounts
Value at End of Year
\$ 11,311,721
3,818,727
698,778
3,371,411
\$ 12,457,815

CITY OF GAINESVILLE
GENERAL EMPLOYEES' PENSION PLAN

RECONCILIATION OF PLAN MEMBERS 10/01/14-10/01/15

|  | Actives | Retirees, Beneficiaries | DROP <br> Retirees | Pending <br> Refunds | Vested Terminateds | Limited Members \& Part Time | Disableds |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10/01/14 Members | 1,450 | 1,056 | 92 | 8 | 301 | 96 | 42 |
| Increase (Decrease) Due to: |  |  |  |  |  |  |  |
| Retirements | (34) | 62 | (16) | - | (11) | (1) | - |
| DROP Retirements | (17) | - | 17 | - | - | - | - |
| Nonvested Terminations | (73) | - | - | 73 | - | - | - |
| Vested Terminations | (28) | - | - | - | 29 | (1) | - |
| New Entrants | 162 | - | - | - | - | - | - |
| Deaths | (1) | (21) | (1) | 1 | (1) | - | - |
| Rehires | 6 | - | - | - | - | - | - |
| Disableds | (1) | - | - | - | - | - | 1 |
| To LP Status | - | - | - | - | - | - | - |
| Benefit \$0 after Social Security Offset | - | - | - | - | - | - | (6) |
| Contrib. Refunded | - | (1) | - | (58) | (3) | (2) | - |
| From ICMA | 1 | - | - | - | - | - | - |
| Rec in error | - | - | - | - | - | - | - |
| 10/01/15 Members | 1,465 | 1,096 | 92 | 24 | 315 | 92 | 37 |

## INACTIVE MEMBERS AT 10/01/15

|  | Number | Benefit <br> Amount |  |
| :---: | :---: | :---: | :---: |
| Retirees and Beneficiaries Currently Receiving Benefits | 1,096 | \$ | 25,593,516 |
| DROP Retirees | 92 |  | 4,005,372 |
| Disabled Members | 37 |  | 200,935 |
| Vested Terminated Members Entitled to Future Benefits | 315 |  | 2,412,620 |
| Limited Members | 92 |  | 50,702 |
| Pending Refunds | 24 |  | * |
| Total | 1,656 | \$ | 32,263,145 |

[^4]
## CITY OF GAINESVILLE

## GENERAL EMPLOYEES' PENSION PLAN

DISTRIBUTION OF ACTIVE MEMBERS BY ATTAINED AGE AND COMPLETED YEARS OF VESTING SERVICE AS OF 10/01/15

Completed Years of Service

| Attained Age | 0 | 1 | 2 | 3-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 \& Over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Under 25 | 12 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 25-29 | 24 | 19 | 7 | 11 | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 84 |
| 30-34 | 19 | 8 | 12 | 27 | 47 | 20 | 1 | 0 | 0 | 0 | 0 | 134 |
| 35-39 | 19 | 17 | 17 | 24 | 51 | 46 | 18 | 1 | 0 | 0 | 0 | 193 |
| 40-44 | 21 | 5 | 13 | 21 | 46 | 61 | 30 | 14 | 0 | 0 | 0 | 211 |
| 45-49 | 10 | 9 | 6 | 22 | 54 | 52 | 39 | 20 | 9 | 0 | 0 | 221 |
| 50-54 | 12 | 9 | 6 | 23 | 48 | 45 | 41 | 24 | 18 | 1 | 0 | 227 |
| 55-59 | 10 | 6 | 9 | 14 | 41 | 36 | 39 | 18 | 10 | 1 | 1 | 185 |
| 60 | 1 | 1 | 1 | 8 | 4 | 2 | 5 | 2 | 2 | 1 | 0 | 27 |
| 61 | 2 | 1 | 2 | 3 | 12 | 5 | 6 | 2 | 1 | 0 | 1 | 35 |
| 62 | 1 | 0 | 2 | 3 | 6 | 7 | 7 | 0 | 2 | 0 | 0 | 28 |
| 63 | 1 | 2 | 0 | 2 | 7 | 8 | 6 | 1 | 0 | 0 | 1 | 28 |
| 64 | 1 | 0 | 0 | 0 | 8 | 5 | 4 | 1 | 1 | 0 | 1 | 21 |
| 65 \& Over | 4 | 2 | 0 | 3 | 9 | 13 | 5 | 7 | 0 | 0 | 3 | 46 |
| Total | 137 | 84 | 79 | 165 | 355 | 301 | 201 | 90 | 43 | 3 | 7 | 1465 |

Average Age at Entry = 36.7
Average Age at Valuation $=46.6$
Average Years of Service $=9.9$

## CITY OF GAINESVILLE

GENERAL EMPLOYEES' PENSION PLAN

DISTRIBUTION OF ACTIVE MEMBERS AND ANNUALIZED EARNINGS

## BY AGE AS OF 10/01/15




[^0]:    * Includes credit for additional contributions made with pension obligation bond proceeds.

[^1]:    * Based on $8.2 \%$ interest, RP-2000 Group Annuity Mortality Table projected to 2015, and other assumed decrements as described in Appendix B.

[^2]:    * Calculated in accordance with the Individual Entry Age Actuarial Cost Method.
    ** Payments start one year from valuation date; includes a payroll growth rate of $4.5 \%$ per year.

[^3]:    * Policy allocation less than 1\%.

[^4]:    * Reserve equals \$109,010.

