



Post Office Box 888343
ATLANTA, GEORGIA 30356-0343
TELEPHONE 770.392.0980
FACSIMILE 770.392.2193
WWW.SOUTHERNACTUARIAL.COM

March 25, 2011

Ms. Nina Hurtubise
Director of Finance
Ft. Pierce Utilities Authority
P. O. Box 3191
Ft. Pierce, FL 34948-3191

Re: Governmental Accounting Standards Board Statement No. 45 Actuarial Valuation Report

Dear Nina:

Pursuant to your request, we have prepared an actuarial valuation of the post-employment benefits provided by the Ft. Pierce Utilities Authority. Our valuation was prepared in accordance with our understanding of the requirements set forth in Governmental Accounting Standards Board Statement No. 45 (GASB 45).

We have attached several tables as follows:

Table I	<i>Summary of Results</i>
Table II	<i>Required Disclosures</i>
Table III	<i>Discussion of Results</i>
Table IV	<i>Summary of Actuarial Methods & Assumptions</i>
Table V	<i>Summary of Benefits</i>
Table VI	<i>Summary of Participant Data</i>

If you have any questions, please do not hesitate to call me.

Sincerely,

Charles T. Carr
Consulting Actuary

Enclosures as stated

The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE I
SUMMARY OF RESULTS

	<u>As of</u> <u>September 30, 2010</u>	<u>As of</u> <u>September 30, 2011</u>
A. Development of the Annual Required Contribution (ARC)		
1. Normal Cost:		
a. Current Retirees:		
i. Under age 65	\$ 0	\$ 0
ii. Over age 65	<u>0</u>	<u>0</u>
iii. Total current retirees	\$ 0	\$ 0
b. Active Employees:		
i. Currently eligible	\$ 0	\$ 0
ii. Not yet eligible	<u>153,000</u>	<u>153,000</u>
iii. Total active employees	<u>\$ 153,000</u>	<u>\$ 153,000</u>
c. Total Normal Cost	<u>\$ 153,000</u>	<u>\$ 153,000</u>
2. Unfunded Actuarial Accrued Liability (UAAL):		
a. Current Retirees:		
i. Under age 65	\$ 294,000	\$ 287,000
ii. Over age 65	<u>0</u>	<u>0</u>
iii. Total current retirees	\$ 294,000	\$ 287,000
b. Active Employees:		
i. Currently eligible	\$ 620,000	\$ 605,000
ii. Not yet eligible	<u>1,264,000</u>	<u>1,474,000</u>
iii. Total active employees	<u>\$ 1,884,000</u>	<u>\$ 2,079,000</u>
c. Total UAAL	<u>\$ 2,178,000</u>	<u>\$ 2,366,000</u>
3. Annual Required Contribution (ARC):		
a. Normal Cost	\$ 153,000	\$ 153,000
b. Amortization of UAAL	120,000	119,000
c. Amortization of Net OPEB Obligation	<u>1,000</u>	<u>13,000</u>
d. Total ARC	<u>\$ 274,000</u>	<u>\$ 285,000</u>



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE I

**SUMMARY OF RESULTS
(continued)**

	<u>As of September 30, 2010</u>	<u>As of September 30, 2011</u>
B. Development of the Annual OPEB Cost		
1. ARC	\$ 274,000	\$ 285,000
2. Interest on the Net OPEB Obligation	1,000	9,000
3. Adjustment to the ARC	<u>(1,000)</u>	<u>(13,000)</u>
4. Total Annual OPEB Cost	<u>\$ 274,000</u>	<u>\$ 281,000</u>
 C. Development of the Net OPEB Obligation		
1. Annual OPEB Cost	\$ 274,000	\$ 281,000
2. Employer Contributions	(55,000)	(55,000)
3. Interest on Employer Contributions	<u>(1,000)</u>	<u>(1,000)</u>
4. Increase in the Net OPEB Obligation	\$ 218,000	\$ 225,000
5. Net OPEB Obligation (beginning of year)	<u>13,000</u>	<u>231,000</u>
6. Net OPEB Obligation (end of year)	<u>\$ 231,000</u>	<u>\$ 456,000</u>



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE II

REQUIRED DISCLOSURES

A. Schedule of Employer Contributions

Year Ended September 30	ARC	% Contributed	Annual OPEB Cost	% Contributed
2009	\$ 165,000	92%	\$ 165,000	92%
2010	274,000	20%	274,000	20%
2011	285,000	20%	281,000	20%

B. Schedule of Funding Progress

Actuarial Valuation Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) – (1)	Funded Ratio (1) ÷ (2)	(4) Covered Payroll	UAAL As % of Covered Payroll (3) ÷ (4)
October 1, 2008	\$ 0	\$2,094,000	\$2,094,000	0.0%	\$15,035,000	13.9%
October 1, 2010	0	2,274,000	2,274,000	0.0%	\$14,700,000	15.5%

Note: The entry age normal cost method was used to determine the unfunded liability as of October 1, 2008.

C. Actuarial Methods and Assumptions

<i>Valuation date</i>	October 1, 2010
<i>Actuarial cost method</i>	Projected unit credit
<i>Amortization method</i>	30-year open period; level-dollar payment
<i>Investment return</i>	4.00% per annum (includes inflation at 2.75% per annum)
<i>Healthcare cost trend rate(s)</i>	5.00% per annum



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE III

DISCUSSION OF RESULTS

General Comments

The liabilities and costs presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, the contributions expected to be made by retirees in the future, the incidence and level of benefit coverage in the future, and the future demographic experience of the current active employees of the Authority and current retirees and their covered dependents. Descriptive information about the assumptions is presented in Table IV.

Anyone referring to this report should remember that the cost developed pursuant to GASB 45 is only an estimate of the true cost of providing post-employment benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. As discussed below, the calculated cost is entirely dependent upon the assumptions made as presented herein. If any of the assumptions is changed, then the costs shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the costs shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, we have reviewed the impact of changing two key assumptions, the assumed investment return (or discount rate) and the assumed increase in healthcare cost (or trend rate). The results of our review are presented in the following paragraphs.

Investment Return

GASB 45 requires the actuary to use an investment return assumption that is based on the expected long-term return on the assets which will be used to provide the OPEB benefits being valued. If there are no invested assets, which is typically the case where there is not a benefit trust designated to pay the promised benefits, then the actuary must look to the expected long-term return on the Authority's surplus funds. With respect to the enclosed OPEB valuation, we have used an assumed investment return of 4.00% per annum, with 2.75% of this amount being attributed to inflation.

If the Authority were to establish or participate in a pre-funding arrangement, then we anticipate that the assets of such a trust fund would be invested in a diversified manner that would justify a higher assumed investment return. In this case, a 60%/40% mix of equity and fixed income



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE III

***DISCUSSION OF RESULTS
(continued)***

investments may justify the use of a 7.00% per annum investment assumption. On this basis, the OPEB costs as of September 30, 2010 would change as follows:

<u>As of September 30, 2010</u>	<u>Based on a 4.00% Investment Return</u>	<u>Based on a 7.00% Investment Return</u>
Normal cost	\$153,000	\$93,000
Unfunded actuarial accrued liability	\$2,178,000	\$1,574,000
Annual required contribution (ARC)	\$274,000	\$212,000
Annual OPEB cost	\$274,000	\$317,000
Net OPEB obligation	\$231,000	\$168,000

Healthcare Cost Trend Rate

The healthcare cost trend rate is used to predict the future healthcare claims costs. Because of the effect of compounding the annual assumed increases in claims costs, OPEB liabilities are extremely sensitive to changes in the trend rate. In this case, if the medical trend rates were to be increased or decreased by 1.00% per annum, then the OPEB costs as of September 30, 2010 would change as follows:

<u>As of September 30, 2010</u>	<u>Based on a 1.00% Decrease in Trend Rate</u>	<u>Based on a 1.00% Increase in Trend Rate</u>
Normal cost	\$128,000	\$184,000
Unfunded actuarial accrued liability	\$1,950,000	\$2,676,000
Annual required contribution (ARC)	\$236,000	\$333,000
Annual OPEB cost	\$236,000	\$333,000
Net OPEB obligation	\$193,000	\$290,000

Health Insurance Subsidy

The Ft. Pierce Utilities Authority offers optional health insurance coverage to its retirees under the same self-insured program that is used to provide health insurance coverage to active employees. During 2011, retirees contribute \$637.18 per month for single health insurance coverage plus an additional \$637.17 per month for spousal coverage. These premiums do not vary with age, even though expected claims typically increase with age.



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE III

***DISCUSSION OF RESULTS
(continued)***

Monthly retiree health insurance claims are expected to be \$1,425.00 at age 62 and are expected to increase or decrease at the rate of 3.00% for each year of age. The expected claims cost was developed based on average reported claims per member during the period January 1, 2007 through June 30, 2010, assuming a 14.00% increase in average claims from 2007 to 2008, a 13.00% increase in average claims from 2008 to 2009, a 12.00% increase in average claims from 2009 to 2010, and an 11.00% increase in average claims from 2010 to 2011, and giving greater weight to more recent experience.

Because the expected retiree health claims exceed the expected retiree premiums, there is an implied subsidy in the health insurance that is offered to retirees even though the Authority does not provide explicitly subsidized health insurance to its retirees. This implied subsidy is the source of liability that is reflected in this valuation report.

The Authority also offers dental coverage as well as \$1,000 of optional life insurance coverage to retirees. Because retirees pay the full premium for these coverages, dental claims costs are not assumed to be age-related, and life insurance premiums are assumed to be age-adjusted, we have assumed that there is no implied subsidy attributable to retiree dental and life insurance coverage.

Changes in Assumptions and Methods Since the Previous Valuation

We have changed numerous actuarial assumptions and methods since the prior valuation was prepared, as follows:

- (1) The actuarial cost method was changed from the individual entry age normal cost method to the projected unit credit cost method. The cost method attributes a portion of the total projected liability to past service and attributes the remaining portion to future service. Under the entry age normal cost method, past service liability is determined based on a benefit accrual rate that is typically a level percentage of payroll. Under the projected unit credit cost method, past service liability is determined on an individual basis by applying the ratio of each individual's past service to his total projected service for this purpose. The projected unit credit cost method generally results in a smaller accrued liability and a larger normal cost than the amounts developed under the entry age normal cost method.
- (2) The unfunded liability payment (or "amortization payment") was changed from an amount determined as a level percentage of payroll to a level dollar amount. When benefits are not



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE III

DISCUSSION OF RESULTS
(continued)

pay-related, as is the case with retiree health insurance benefits, we believe that it is more appropriate to use a level-dollar amortization method, especially when a “rolling” or open-ended amortization period is used.

- (3) We have updated the mortality basis from the 1983 Group Annuity Table to the RP-2000 Mortality Table to reflect increased life expectancy. This change slightly increases the costs and liabilities under GASB 45.
- (4) We have changed the assumed incidence of disability and pre-retirement employment termination as described in Table IV, item B. These changes reflect our “standard” assumptions for public employers and do not significantly affect the valuation results.
- (5) We have reduced the assumed interest (or discount) rate from 4.50% per annum to 4.00% per annum to reflect a decline in expected long-term fixed income rates of return. This change increases the costs and liabilities under GASB 45.
- (6) The health care trend rates were changed from 8.50% graded down to 4.50% to a flat 5.00% for all future years.
- (7) The expected 2010/11 monthly claims cost at ages 45, 50, 55, and 60 were changed from \$758.22, \$1,025.80, \$1,340.70, and \$1,684.30 for males, respectively, and \$992.63, \$1,162.28, \$1,378.12, and \$1,618.99 for females, respectively, to \$862.15, \$999.47, \$1,158.66, and \$1,343.20 for both males and females, respectively. This change reflects decreased expected claims cost since the prior valuation was prepared and this change reduced the costs and liabilities under GASB 45.

Projection of Liabilities

In order to help the Authority anticipate its future obligation with respect to the post-employment healthcare coverage provided to retirees and their dependents, we have projected the OPEB liabilities for a 20-year period beginning October 1, 2010. However, as discussed previously, this projection, like all costs and liabilities shown in this report, is entirely dependent upon the assumptions that are outlined in Table IV herein. If any of these assumptions is changed or not completely realized, then the amounts shown below will change. Also important is the fact that the projection does not anticipate new or replacement employees as the current group of employees retires or otherwise terminates their employment.



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE III

***DISCUSSION OF RESULTS
(continued)***

(continued)

	Projected Implicit <u>Subsidy</u>
2010/11	\$55,000
2011/12	\$77,000
2012/13	\$97,000
2013/14	\$115,000
2014/15	\$120,000
2015/16	\$133,000
2016/17	\$155,000
2017/18	\$162,000
2018/19	\$189,000
2019/20	\$212,000
2020/21	\$234,000
2021/22	\$239,000
2022/23	\$246,000
2023/24	\$258,000
2024/25	\$252,000
2025/26	\$236,000
2026/27	\$244,000
2027/28	\$247,000
2028/29	\$251,000
2029/30	\$252,000

If a projection is needed for any purposes other than a casual analysis of the Authority's future obligation, we strongly recommend that a sensitivity analysis be performed and that multiple projections be prepared using different combinations of assumptions to provide a range of the possible future exposure for the Authority with respect to its post-employment healthcare costs.



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE IV

SUMMARY OF ACTUARIAL METHODS & ASSUMPTIONS

A. Actuarial Cost Method

The *projected unit credit cost method* was used to determine all liabilities, with the liability for each active employee assumed to accrue over his working lifetime based on elapsed time from his date of hire until retirement.

B. Decrements

- **Mortality**
Sex-distinct mortality rates set forth in the RP-2000 mortality table for annuitants and non-annuitants
- **Disability**
Sex-distinct disability rates set forth in the Wyatt 1985 Disability Study (Class 1)
- **Permanent Withdrawal from Active Status**
Sex-distinct withdrawal rates set forth in the Scale 155 table
- **Retirement**
Retirement was assumed to occur as follows:
 1. *For employees who have earned at least 25 years of service:*

40% of eligible employees are assumed to retire each year between 25 and 35 years of service, with 100% of eligible employees assumed to retire upon the attainment of 35 years of service.
 2. *For all other employees:*

Retirement is assumed to occur at the rate of 10% at age 60, 5% at age 61, 12% at age 62, 6% at age 63, 14% at age 64, 65% at age 65, 25% at age 66, 30% at age 67, 40% at age 68, 50% at age 69, and 100% at age 70.

C. Investment Return (Discount Rate)

4.00% per annum (includes inflation at 2.75% per annum)



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE IV

***SUMMARY OF ACTUARIAL METHODS & ASSUMPTIONS
(continued)***

D. Healthcare Cost Trend Rates

The cost of covered medical services has been assumed to increase at the rate of 5.00% per year, compounded annually.

E. Claims Cost (Healthcare Insurance)

The expected health insurance claims cost for a 62-year old covered individual for the period October 1, 2010 through September 30, 2011 is assumed to be \$1,425 per month.

F. Implied Subsidy (Dental and Life Insurance)

There is no implied subsidy for dental insurance since we have assumed that the dental insurance cost for covered individuals does not increase with age. There is no implied subsidy for life insurance since we have assumed that the life insurance premiums are age-related.

G. Age-Related Morbidity

The cost of covered medical services has been assumed to increase with age at the rate of 3.00% per annum.

H. Retiree Contributions

Retirees electing post-employment healthcare coverage have been assumed to make monthly contributions during the period October 1, 2010 through September 30, 2011 equal to \$637.18 for single coverage plus an additional \$637.17 for spousal coverage.

I. Cost-of-Living Increases

Retiree contributions have been assumed to increase in accordance with the healthcare cost trend assumption.



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE IV

SUMMARY OF ACTUARIAL METHODS & ASSUMPTIONS
(continued)

J. Future Participation Rate

20% of eligible employees were assumed to elect coverage for themselves upon retirement or disability, with 50% of these individuals also assumed to elect coverage for their spouse. Coverage is assumed to end once the retiree and his spouse become eligible for Medicare (age 65).

K. Age Difference Between Husbands and Wives

Husbands are assumed to be three years older than wives.

L. COBRA Assumption

Future healthcare coverage provided solely pursuant to COBRA was not included in the OPEB valuation; because the COBRA premium is determined periodically based on plan experience, we assumed that the COBRA premium to be paid by the participant fully covers the cost of providing healthcare coverage during the relevant period.



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE V

SUMMARY OF BENEFITS

A. Other Post-Employment Benefits (OPEBs)

The Ft. Pierce Utilities Authority provides optional post-employment healthcare, dental, and life insurance coverage to eligible individuals under a self-insured health insurance program and a fully-insured life insurance program.

B. Eligible Individuals

Eligible individuals include all regular, full-time employees of the Ft. Pierce Utilities Authority who retire from active service and are eligible for retirement or disability benefits under the City of Fort Pierce Retirement and Benefit System. Under certain conditions, eligible individuals for healthcare coverage also include spouses and dependent children.

C. Required Monthly Premium for Post-Employment Healthcare Coverage

Retirees must pay a monthly premium as determined periodically by the Authority and/or the insurance carrier. As of January 1, 2011, the retiree premium for single health insurance coverage was \$637.18 per month plus an additional \$637.17 per month for spousal coverage. The premium varies depending on whether the retiree elects single, couple, single plus children, or family coverage.



**GASB 45 ACTUARIAL VALUATION FOR THE
FT. PIERCE UTILITIES AUTHORITY**

TABLE VI

SUMMARY OF PARTICIPANT DATA

1. Number of participants included:

Current retirees:

Under age 65	16
Over age 65	<u>0</u>
Total current retirees	16

Active employees:

Active employees fully eligible for benefits	49
Active employees not yet fully eligible for benefits	<u>236</u>
Total active employees	<u>285</u>

Total number of participants 301

(Note: Most of the retirees have elected dental coverage only. Also, DROP retirees are included in the active employee category.)

2. Average age of active employees 47.7 years

3. Age and service distribution for active employees:

<u>Age</u>	<u>Years of Service</u>										<u>Total</u>
	Less than 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	More than 39	
Under 25	0	3	0	0	0	0	0	0	0	0	3
25-29	2	13	5	1	0	0	0	0	0	0	21
30-34	1	13	6	3	0	0	0	0	0	0	23
35-39	2	10	7	1	2	1	0	0	0	0	23
40-44	1	11	8	7	4	4	2	0	0	0	37
45-49	3	15	7	7	5	6	1	0	0	0	44
50-54	0	17	13	10	5	6	7	2	0	0	60
55-59	3	5	9	10	4	3	2	1	0	0	37
60-64	1	4	5	6	4	3	4	0	0	0	27
65-69	0	2	2	1	2	0	1	0	0	0	8
70 and over	1	1	0	0	0	0	0	0	0	0	2
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	14	94	62	46	26	23	17	3	0	0	285

