



Freiman Little Actuaries, LLC
4105 Savannahs Trail
Merritt Island, FL 32953

Phone: (321) 453-6542
Fax: (321) 453-6998

Deerfield Beach Municipal Firefighters' Pension Trust Fund

Actuarial Valuation as of October 1, 2013



April 10, 2014

REPORT TO DETERMINE MINIMUM FUNDING REQUIREMENTS
FOR THE PLAN AND FISCAL YEAR
ENDING SEPTEMBER 30, 2014



April 10, 2014

Board of Trustees
Deerfield Beach Municipal Firefighters' Pension Trust Fund
Deerfield Beach, Florida

RE: Actuarial Valuation as of October 1, 2013

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2013 for the Deerfield Beach Municipal Firefighters' Pension Trust Fund (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal year ending September 30, 2014 and provides an analysis of experience since the last valuation. In addition to providing the summary and derivation of actuarial findings, this report describes the data, assumptions, and methods used to create these results.

Statement by Enrolled Actuary:

"This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of 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 which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation."

We look forward to the presentation of these results to you in person and we are always available to answer any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Little".

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-6619

A handwritten signature in black ink, appearing to read "Paula C. Freiman".

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-5796

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Section

1

Board Summary

This report presents the results of the October 1, 2013 actuarial valuation of the Deerfield Beach Municipal Firefighters' Pension Trust Fund (the Plan).

Summary of Principal Valuation Results

A summary of the key valuation findings as of October 1, 2013 are compared with the results of the prior valuation below.

Minimum Funding Requirements

Fiscal Year Ending	September 30, 2013	September 30, 2014
Expected Employee Contributions	\$939,123	\$896,623
Expected State Funding	618,479	618,479
Expected City Contributions	<u>5,105,188</u>	<u>5,051,768</u>
Total Minimum Funding Requirement	\$6,662,790	\$6,566,870

Funded Status

Valuation Date	October 1, 2012	October 1, 2013
Accrued Liability (AL)	\$120,019,498	\$125,150,438
Actuarial Value of Assets	\$86,701,434	\$92,608,974
Unfunded Accrued Liability (UAL)	\$33,318,064	\$32,541,464
Funded Percentage	72.2%	74.0%

Key Assumptions

Valuation Date	October 1, 2012	October 1, 2013
Assumed Rate of Investment Return	7.625%	7.625%
Salary Increase Assumption	5% to 11%	5% to 11%
Inflation	4.000%	4.000%
Funding Method	Entry Age	Entry Age

Summary of Significant Events

Determination of the funded status of the Plan and minimum funding requirements are based on participant data, asset information, Plan provisions, actuarial methods and assumptions, as well as contributions made to the Plan by the State of Florida. Any significant events associated with these items are discussed in the following.

Participant Data

While the number of active Members decreased by 9, the covered payroll used in the valuation decreased by 4.5%. The following provides a summary of the actual to the expected pay increases for continuing active members, by individual, for the 12 month periods ending on the date specified.

Year Ending September 30,	Actual	Expected
2013	3%	9%
2012	7%	9%
2011	6%	9%
2010	8%	9%
2009	8%	9%
2008	2%	9%
2007	10%	9%
2006	15%	9%
2005	17%	7%
2004	6%	7%

Overall, there was a demographic gain primarily due to pay increases less than expected. This gain was offset by terminations less than expected. We note that the number of terminations has been low or non-existent since the Plan was closed to new entrants. We will continue to monitor termination experience and recommend a review of all assumptions once the Plan closure has been in place for five years (2016).

In general, should a pattern of consistent gains or losses develop, assumptions may require revision.

Assets

While the return on the Market Value of Assets was 11.1%, the return on the Actuarial Value of Assets was 6.5% in comparison to the 7.625% assumed rate of return. This produced an investment loss on an actuarial value of assets basis. The following provides a summary of the actual to the expected return on investments for the 12 month periods ending on the date specified.

Year Ending September 30,	Market Value	Actuarial Value	Assumed Return
2013	11.1%	6.5%	7.625%
2012	15.3%	0.8%	7.625%
2011	(1.1%)	0.1%	7.625%
2010	6.9%	1.5%	7.625%
2009	(1.2%)	2.5%	7.625%
2008	(12.8%)	5.7%	7.625%
2007	10.2%	11.8%	7.625%
2006	9.3%	9.5%	7.625%
2005	12.9%	5.0%	7.625%
2004	12.4%	3.7%	8.000%
Average	6.0%	4.6%	7.662%

Investment returns less than the assumed rate of return result in increased annual minimum required contributions.

Plan Provisions

There were no amendments made to Plan provisions during the year.

A transfer of fire services to the Broward County Sheriff's Office (BSO) was effective October 1, 2011. We recommend the ordinance be amended to reflect how the Plan currently operates.

Methods

As all of the amortization bases are currently being amortized over 18 years, we have implemented a "Fresh Start" combining all of the outstanding bases into a single base amortized over 18 years.

Assumptions

The mortality table continues to be the RP-2000 Combined Mortality Table. Scale AA has been applied to reflect mortality improvements to the valuation year.

State Contributions

The Estimated Minimum Required City Contribution assumes that the premium tax money received from the State will be in the same amount received in the prior year. Should the amount received in the fiscal year ending September 30, 2013 be less than expected, the City will need to contribute any potential shortfall to the Plan.

Section 2 Results Derivation

In this section, the assets and liabilities of the Plan are shown in detail. Assets and liabilities are then compared to determine the funded status and minimum funding requirements. Finally, analysis is performed to explain movement in results from the prior valuation.

While asset information is based on the fair market value of assets, along with any techniques used to smooth out market fluctuations, liabilities are determined through a combination of the benefit provisions, participant census data which contains information for the members who will receive those benefits, and the methods and assumptions used with regard to how benefits will be paid to members. A summary of participant data, an outline of the benefit provisions, and a description of the methods and assumptions used in this valuation are described in Section 4.

Financial Information

Over the life of the Plan, the majority of assets are typically generated from investment return. In this section, we describe how the assets of the Plan are invested, show how the actuarial value of assets is derived, and review the investment results since the prior valuation.

Investment Allocation

	October 1, 2012		October 1, 2013	
Equity Securities	\$37,425,051	43 %	\$44,054,959	45 %
Fixed Income (Corp./Gov't. Bonds)	25,893,977	30 %	22,765,317	24 %
Hedge Funds	7,888,513	9 %	8,419,143	9 %
Real Estate (REITs)	6,478,299	8 %	7,508,304	8 %
MLPs	0	0 %	4,520,300	5 %
Cash & Cash Equivalents	3,051,546	4 %	3,429,934	4 %
Net Receivables/Payables	286,498	0 %	335,666	0 %
Self-Directed DROP	<u>4,945,610</u>	<u>6 %</u>	<u>4,764,732</u>	<u>5 %</u>
Fair Market Value of Assets	<u>\$85,969,494</u>	100 %	<u>\$95,798,355</u>	100 %

Reconciliation of Market Value of Assets

Year Ending September 30,	2012	2013
1. Market Value Beginning of Year	\$75,109,266	\$85,969,494
2. Contributions		
a. City	\$4,130,730	\$5,105,188
b. State	843,844	782,884
c. Member	<u>970,105</u>	<u>945,101</u>
d. Total Contributions	\$5,944,679	\$6,833,173
3. Investment earnings		
a. Unrealized Gains and Losses	\$7,395,422	\$5,007,420
b. Realized Gains and Losses	2,519,711	2,469,095
c. Interest and Dividends	2,018,210	2,398,861
d. Other Income	8,116	157,821
e. Investment Expenses	<u>(474,666)</u>	<u>(462,966)</u>
f. Net Investment Income	\$11,466,793	\$9,570,231
4. Deductions		
a. Retirement Benefits	\$(4,083,614)	\$(4,758,846)
b. Share Account Distribution	(141,541)	(125,535)
c. Refunds	0	(69,581)
d. DROP Account Distribution	(2,057,227)	(1,319,608)
e. Administrative Expenses	<u>(268,862)</u>	<u>(300,973)</u>
f. Total	\$(6,551,244)	\$(6,574,543)
5. Net Increase (Decrease)	\$10,860,228	\$9,828,861
6. Market Value End of Year	<u>\$85,969,494</u>	<u>\$95,798,355</u>

Reconciliation of DROP Account Balances

Year Ending September 30,	2012	2013
1. Beginning Balance	\$9,867,098.64	\$10,752,312.20
2. Additions	\$2,062,680.36	\$1,734,873.67
3. Interest	\$879,759.76	\$742,959.02
4. Distributions	\$2,057,226.56	\$1,319,608.13
5. Ending Balance	\$10,752,312.20	\$11,910,536.76

Note: DROP account balances are included in the reconciliation of the market value of Plan assets shown on the prior page.

Development of Historical Gain or Loss on Market Value of Assets

	2013	2012
1. Market Value of Assets - Beginning of Year	\$85,969,494	\$75,109,266
2. Contributions	6,833,173	5,944,679
3. Benefit Payments + Administrative Expenses	(6,574,543)	(6,551,244)
4. Interest	<u>6,543,964</u>	<u>5,631,214</u>
5. Expected Value of Assets at End of Year	\$92,772,088	\$80,133,915
6. Market Value of Assets - End of Year	\$95,798,355	\$85,969,494
7. Gain (Loss) for Plan Year = (6) - (5)	\$3,026,267	\$5,835,579
	2011	2010
1. Market Value of Assets - Beginning of Year	\$76,415,091	\$72,425,351
2. Contributions	4,450,606	4,109,941
3. Benefit Payments + Administrative Expenses	(4,920,887)	(5,106,138)
4. Interest	<u>5,763,243</u>	<u>5,453,900</u>
5. Expected Value of Assets at End of Year	\$81,708,053	\$76,883,054
6. Market Value of Assets - End of Year	\$75,109,266	\$76,415,091
7. Gain (Loss) for Plan Year = (6) - (5)	\$(6,598,787)	\$(467,963)

Development of Actuarial Value of Assets

1.	Market Value of Assets as of 9/30/2013			\$	95,798,355
2.	Phase-In Gains (Losses) Over Five Year Period				
		Original Gain (Loss)	Percent Unrecognized		Unrecognized Gain (Loss)
a.	Year Ending 9/30/2013	\$ 3,026,267	80%	\$	2,421,014
b.	Year Ending 9/30/2012	5,835,579	60%		3,501,347
c.	Year Ending 9/30/2011	(6,598,787)	40%		(2,639,515)
d.	Year Ending 9/30/2010	(467,963)	20%		<u>(93,593)</u>
e.	Total			\$	3,189,253
3.	Cumulative Balance of State Monies Available for Benefit Improvement			\$	128
4.	Preliminary Actuarial Value of Assets as of 9/30/2013 = 1. - 2.e. - 3.			\$	92,608,974
5.	Corridor Around Market Value				
a.	Minimum = 80% of Market Value of Assets			\$	76,638,684
b.	Maximum = 120% of Market Value of Assets			\$	114,958,026
c.	Corridor Adjustment to Preliminary Actuarial Value			\$	0
6.	Actuarial Value of Assets as of 9/30/2013 (4. + 5.c.)			\$	92,608,974

Historical Asset Values

Year Ending September 30	Market Value	Actuarial Value
2013	\$95,798,355	\$92,608,974
2012	85,969,494	86,701,434
2011	75,109,266	86,605,981
2010	76,415,091	86,997,197
2009	72,425,351	86,680,011
2008	72,652,519	83,960,958
2007	82,980,679	79,039,657
2006	74,138,460	69,710,124
2005	66,860,427	62,669,274
2004	58,347,127	58,806,662
2003	51,326,518	56,133,532
2002	43,136,915	51,611,851
2001	44,417,498	53,300,998
2000	50,708,282	50,566,155
1999	45,774,225	45,774,225
1998	40,890,140	40,890,140
1997	40,873,253	35,810,174
1996	32,339,555	29,988,083
1995	27,061,993	25,783,730

10-Year Average of Historical Rates of Investment Return

Year Ending September 30	Market Value	Actuarial Value	Assumed Return
2013	11.1%	6.5%	7.625%
2012	15.3%	0.8%	7.625%
2011	(1.1%)	0.1%	7.625%
2010	6.9%	1.5%	7.625%
2009	(1.2%)	2.5%	7.625%
2008	(12.8%)	5.7%	7.625%
2007	10.2%	11.8%	7.625%
2006	9.3%	9.5%	7.625%
2005	12.9%	5.0%	7.625%
2004	12.4%	3.7%	8.000%
Average	6.0%	4.6%	7.662%

Historical Contribution Amounts (as a Dollar Amount)

Year Ending September 30	Expected Member Contributions	Recognized State Funding	City Contributions	Total
2013	\$939,123	\$803,172	\$5,105,188	\$6,847,483
2012	923,800	823,567	4,130,730	5,878,097
2011	1,018,252	820,216	2,501,215	4,339,683
2010	1,023,848	835,023	2,240,989	4,099,860
2009	985,587	890,684	1,860,792	3,373,063
2008	946,204	957,389	1,648,569	3,552,162
2007	887,636	618,479	1,837,841	3,343,956
2006	865,986	561,509	1,765,776	3,193,271
2005	586,188	482,526	1,777,709	2,846,423
2004	561,016	456,783	1,166,292	2,184,091
2003	541,429	585,796	924,595	2,051,820
2002	749,413	346,039	443,541	1,538,993
2001	698,010	262,501	326,020	1,286,531
2000	655,231	262,501	577,694	1,495,426
1999	509,705	248,537	276,606	1,034,848
1998	450,613	248,537	203,242	902,392
1997	417,923	231,182	381,771	1,030,876
1996	414,697	188,899	426,007	1,029,603
1995	378,958	150,340	545,094	1,074,392
1994	322,154	142,724	515,036	979,914

Historical Contribution Amounts (as a Percent of Pay)

Year Ending September 30	Member Contributions	Recognized State Funding	City Contributions	Total
2013	9.0 %	7.7 %	48.9 %	65.6 %
2012	9.0 %	8.0 %	40.2 %	57.2 %
2011	9.0 %	7.2 %	22.1 %	38.3 %
2010	9.0 %	7.3 %	19.7 %	36.0 %
2009	9.0 %	8.1 %	17.0 %	34.1 %
2008	9.0 %	9.1 %	15.7 %	33.8 %
2007	9.0 %	6.3 %	18.6 %	33.9 %
2006	9.0 %	5.8 %	18.4 %	33.2 %
2005	9.0 %	7.4 %	27.3 %	43.7 %
2004	9.0 %	7.3 %	18.7 %	35.0 %
2003	9.0 %	9.7 %	15.4 %	34.1 %
2002	9.0 %	4.2 %	5.3 %	18.5 %
2001	9.0 %	3.4 %	4.2 %	16.6 %
2000	9.0 %	3.6 %	7.9 %	20.5 %
1999	9.0 %	4.4 %	4.9 %	18.3 %
1998	9.0 %	5.0 %	4.1 %	18.1 %
1997	9.0 %	5.0 %	8.2 %	22.2 %
1996	9.0 %	4.1 %	9.2 %	22.3 %
1995	9.0 %	3.6 %	12.9 %	25.5 %
1994	9.0 %	4.0 %	14.4 %	27.4 %

Derivation of State Contribution Funding Reserves

Year Ending 9/30	State Contributions			Recurring Cost Benefit Improvements	Base Plus Recurring Cost Benefit Improvements	One-time Use Benefit Improvements (Share Account Allocations)	Recognized State Funding	Cumulative Balance Available Upon Benefit Improvement
	Regular	Supplemental	Total					
2013	\$ 640,735	\$ 142,149	\$ 782,884	\$ 0	\$ 618,479	\$ 184,693	\$ 803,172	\$ 128
2012	823,518	20,326	843,844	0	618,479	205,088	823,567	20,416
2011	820,253	0	820,253	0	618,479	201,737	820,216	139
2010	835,016	0	835,016	0	618,479	216,544	835,023	102
2009	763,718	127,026	890,744	0	618,479	272,205	890,684	109
2008	802,571	6,122	808,693	0	618,479	338,910	957,389	49
2007	767,224	0	767,224	0	618,479	0	618,479	148,745
2006	561,509	0	561,509	0	618,479	0	561,509	0
2005	482,526	0	482,526	0	618,479	0	482,526	0
2004	456,783	0	456,783	0	618,479	0	456,783	0
2003	433,349	0	433,349	0	618,479	0	585,796	0
2002	346,039	0	346,039	355,978	618,479	0	346,039	0
2001	301,242	0	301,242	0	262,501	0	262,501	152,447
2000	319,774	0	319,774	13,964	262,501	0	262,501	113,706
1999	304,970	0	304,970	0	248,537	0	248,537	56,433
1998	<u>248,537</u>	<u>0</u>	<u>248,537</u>	<u>0</u>	<u>248,537</u>	<u>0</u>	<u>248,537</u>	<u>0</u>
	\$ <u>8,907,764</u>	\$ <u>295,623</u>	\$ <u>9,203,387</u>	\$ <u>369,942</u>		\$ <u>1,419,177</u>	\$ <u>9,203,259</u>	



Historical Payment Amounts

Year Ending September 30	Retirement Benefits	Refunds	Administrative Expenses	Total
2013	\$6,203,989	\$69,581	\$300,973	\$6,574,543
2012	6,282,382	0	268,862	6,551,244
2011	4,646,600	21,064	253,223	4,920,887
2010	4,817,243	4,343	284,552	5,106,138
2009	2,808,889	28,018	332,191	3,169,098
2008	2,869,511	92,294	156,342	3,118,147
2007	2,262,220	*	126,427	2,388,647
2006	1,960,217	85,105	183,683	2,229,005
2005	2,098,440	0	118,203	2,216,643
2004	1,535,530	115,779	124,068	1,775,377
2003	979,401	93,305	93,606	1,166,312
2002	888,470	18,117	98,083	1,004,670
2001	967,333	34,894	97,293	1,099,520
2000	934,999	0	83,027	1,018,026
1999	727,270	6,535	37,198	771,003

*Refunds were not separated from retirement benefits for the fiscal year ending September 30, 2007.

Historical Share Allocations

Year Ending 9/30	(1) Forfeitures	(2) State Contribution Over 618,479	(3) Available Funds	(4) Eligible Members	(5) Individual Share Allocation	(6) Total Share Allocations
2013	986	184,731	185,807	207	897	185,679
2012	0	205,039	205,178	208	986	205,088
2011	1,072	201,774	202,948	201	1,009	202,809
2010	0	216,537	216,646	202	1,072	216,544
2009	3,411	272,265	275,725	198	1,392	275,616
2008	778	190,214	191,139	194	985	191,090
2007			148,745	191	778	148,598

Present Value of Benefits

Valuation Date October 1,	2012	2013
1. Active Members		
a. Service Retirement	\$53,299,386	\$49,456,311
b. Deferred Benefits	5,271,948	5,067,424
c. Survivor Benefits	181,672	173,680
d. Disability Benefits	<u>1,313,005</u>	<u>1,235,923</u>
e. Total for Active Members	\$60,066,011	\$55,933,338
2. Vested Terminated Members	\$134,924	\$0
3. Members in Payment Status		
a. Monthly Retirement Benefits	\$66,727,281	\$73,151,319
b. Current DROP Balance	10,752,312	11,910,537
c. Beneficiaries	1,017,090	911,153
d. Disability Retirement	<u>1,940,507</u>	<u>1,922,152</u>
e. Total in Payment Status	\$80,437,190	\$87,895,161
4. Share Account Balances		
a. Active Members	\$729,096	\$832,661
b. Members Currently in DROP	144,027	169,704
c. Members in Payment Status	<u>81,135</u>	<u>108,384</u>
d. Total Share Account Balances	\$954,258	\$1,110,749
5. All Members	<u>\$141,592,383</u>	<u>\$144,939,248</u>

Accrued Liability

Valuation Date October 1,	2012	2013
1. Active Members		
a. Service Retirement	\$35,715,231	\$33,350,910
b. Deferred Benefits	2,262,691	2,277,989
c. Survivor Benefits	89,976	90,478
d. Disability Benefits	<u>425,228</u>	<u>425,151</u>
e. Total for Active Members	\$38,493,126	\$36,144,528
2. Vested Terminated Members	\$134,924	\$0
3. Members in Payment Status		
a. Monthly Retirement Benefits	\$66,727,281	\$73,151,319
b. Current DROP Balance	10,752,312	11,910,537
c. Beneficiaries	1,017,090	911,153
d. Disability Retirement	<u>1,940,507</u>	<u>1,922,152</u>
e. Total for Members in Payment Status	\$80,437,190	\$87,895,161
4. Share Account Balances		
a. Active Members	\$729,096	\$832,661
b. Members Currently in DROP	144,027	169,704
c. Members in Payment Status	<u>81,135</u>	<u>108,384</u>
d. Total Share Account Balances	\$954,258	\$1,110,749
5. All Members	<u>\$120,019,498</u>	<u>\$125,150,438</u>

Normal Cost

Valuation Date October 1,	2012	2013
1. Preliminary Normal Cost		
a. Service Retirement	\$2,447,947	\$2,335,371
b. Deferred Benefits	407,972	393,714
c. Survivor Benefits	12,549	11,867
d. Disability Benefits	<u>124,116</u>	<u>118,277</u>
e. Preliminary Normal Cost	\$2,992,584	\$2,859,229
f. Preliminary Normal Cost as a % of Pay	28.7%	28.7%
2. Total Normal Cost		
a. Preliminary Normal Cost	\$2,992,584	\$2,859,229
b. Administrative Expense	<u>268,862</u>	<u>300,973</u>
c. Total Normal Cost	\$3,261,446	\$3,160,202
d. Total Normal Cost as a % of Pay	31.3%	31.7%
3. Normal Cost Net of Expected Employee Contributions		
a. Total Normal Cost	\$3,261,446	\$3,160,202
b. Expected Employee Contributions	<u>(939,123)</u>	<u>(896,623)</u>
c. Employer Normal Cost	\$2,322,323	\$2,263,579
d. Employer Normal Cost as a % of Pay	22.3%	22.7%
4. Valuation Payroll	\$10,434,701	\$9,962,476

Unfunded Accrued Liability

Derivation of Unfunded Accrued Liability (UAL)

Unfunded Accrued Liability as of October 1,	2013
1. Actuarial Accrued Liability	\$125,150,438
2. Actuarial Value of Assets	<u>(92,608,974)</u>
3. Unfunded Accrued Liability	\$32,541,464

Determination of Expected Unfunded Accrued Liability

1. Unfunded Accrued Liability for Prior Year	\$33,318,064
2. Employer Normal Cost (Including Administrative Expenses)	2,322,323
3. Interest on UAL and NC	2,717,580
4. Contributions	
a. City	\$(5,105,188)
b. Recognized State of Florida Contributions	<u>(803,172)</u>
c. Total	\$(5,908,360)
5. Interest on Contributions for Time on Deposit	(203,412)
6. Change in Plan, Methods or Assumptions	<u>287,717</u>
7. Expected Unfunded Accrued Liability	\$32,533,912

Calculation of (Gain) or Loss

1. Actual Unfunded Accrued Liability	\$32,541,464
2. Expected Unfunded Accrued Liability	<u>32,533,912</u>
3. Total (Gain) or Loss	\$7,552
4. Breakdown of (Gain) or Loss	
a. Investment Experience	\$971,152
b. Demographic Experience	<u>(963,600)</u>
c. Total (Gain) or Loss	\$7,552

Amortization of Unfunded Liability

The Unfunded Actuarial Accrued Liability is being amortized as a level dollar amount. Changes in the Unfunded Actuarial Accrued Liability due to plan changes, assumption changes, method changes, or gains and losses are all amortized over a period not to exceed the longest expected working lifetime of the active group.

Amortization Bases

Effective October 1,	Source	Remaining Balance	Years Remain	Amortization Payment
2013	Unfunded Accrued Liability	\$32,541,464	18	\$3,142,787

Projected Unfunded Accrued Liability and Amortization Payments

Plan Year Beginning October 1,	UAL Outstanding Bases	Amortization Payment
2013	\$32,541,464	\$3,142,787
2014	31,640,326	3,142,787
2015	30,670,476	3,142,787
2016	29,626,675	3,142,787
2017	28,503,284	3,142,787
2018	27,294,235	3,142,787
2019	25,992,996	3,142,787
2020	24,592,537	3,142,787
2021	23,085,293	3,142,787
2022	21,463,122	3,142,787
2023	19,717,261	3,142,787
2024	17,838,278	3,142,787
2025	15,816,022	3,142,787
2026	13,639,569	3,142,787
2027	11,297,162	3,142,787
2028	8,776,146	3,142,787
2029	6,062,903	3,142,787
2030	3,142,775	3,142,775

The Governmental Accounting Standards Board requires the total of all amortization payments in a year to be at least equal to a 30-year amortization of the total Unfunded Accrued Liability. We have shown the projection carrying each base forward with the amortization payments expected in the future. Should the total of all amortization payments in a year fall below a 30-year amortization payment, the actual payment required would be adjusted.

Actions Taken to Reduce Unfunded Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded accrued liability. This payment is designed to reduce the unfunded accrued liability in an orderly fashion over the next 18 years.

Cumulative Actuarial Experience (for Variable Benefit Determination)

Valuation Date	Actuarial Gain (Loss) Total	Portion of Gain Used for Variable Benefit	Variable Benefit Granted	Cumulative Actuarial Experience
10/1/1979	92,476	5,517	4.0%	86,959
10/1/1980	10,007	8,536	4.0%	88,430
10/1/1981	(1,095)	0	0.0%	87,335
10/1/1982	(171,763)	0	0.0%	(84,428)
10/1/1983	436,967	8,088	4.0%	344,451
10/1/1984	(537,204)	0	0.0%	(192,753)
10/1/1985	1,330,535	54,254	4.0%	1,083,528
10/1/1986	1,346,574	55,436	4.0%	2,374,666
10/1/1987	256,745	61,295	4.0%	2,570,116
10/1/1988	(949,158)	0	0.0%	1,620,958
10/1/1989	1,648,108	77,266	4.0%	3,191,800
10/1/1990	(1,307,591)	0	0.0%	1,884,209
10/1/1991	1,498,270	114,106	4.0%	3,268,373
10/1/1992	(1,175,149)	0	0.0%	2,093,224
10/1/1993	1,054,865	0	0.0%	3,148,089
10/1/1994	61,555	0	0.0%	3,209,644
10/1/1995	1,256,280	196,663	4.0%	4,269,261
10/1/1996	1,646,817	242,272	4.0%	5,673,806
10/1/1997	2,253,047	286,389	4.0%	7,640,464
10/1/1998	865,890	314,208	4.0%	8,192,146
10/1/1999	(5,803)	0	0.0%	8,186,343
10/1/2000	739,211	336,087	4.0%	8,589,467
10/1/2001	(10,466,741)	0	0.0%	(1,877,274)
10/1/2002	(5,619,214)	0	0.0%	(7,496,488)
10/1/2003	(799,969)	0	0.0%	(8,296,457)
10/1/2004	(4,443,626)	0	0.0%	(12,740,083)
10/1/2005	(3,376,482)	0	0.0%	(16,116,565)
10/1/2006	267,777	0	0.0%	(15,848,788)
10/1/2007	3,252,734	0	0.0%	(12,596,054)
10/1/2008	907,703	0	0.0%	(11,688,351)
10/1/2009	(3,855,896)	0	0.0%	(15,544,247)
10/1/2010	(5,648,520)	0	0.0%	(21,192,767)
10/1/2011	(6,064,957)	0	0.0%	(27,257,724)
10/1/2012	(5,729,463)	0	0.0%	(32,987,187)
10/1/2013	(7,552)	0	0.0%	(32,994,739)

Note: Information in the above table prior to October 1, 2006 is as shown in the report of the prior actuary. Because a cumulative loss exists as of October 1, 2013 no Variable Benefit is payable.

Minimum Funding Requirements

Valuation as of October 1, Funding for Fiscal Year Ending September 30,	2012 2013	2013 2014
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Development of Minimum Required Contribution

1. Total Normal Cost	\$3,261,446	\$3,160,202
2. Amortization of UAL	<u>3,133,940</u>	<u>3,142,787</u>
3. Minimum Required Contribution BOY	\$6,395,386	\$6,302,989
4. Interest Assuming Periodic Payment	<u>267,404</u>	<u>263,881</u>
5. Minimum Required Contribution	\$6,662,790	\$6,566,870

Contributions as a Dollar Amount

1. Expected Employee Contributions	\$939,123	\$896,623
2. Expected State Funding	618,479	618,479
3. Expected City Contributions	<u>5,105,188</u>	<u>5,051,768</u>
4. Minimum Required Contribution	\$6,662,790	\$6,566,870

Contributions as a Percent of Payroll*

1. Valuation Payroll	\$10,434,701	\$9,962,476
2. Expected Employee Contributions	9.0%	9.0%
3. Expected State Funding	5.9%	6.2%
4. Expected City Contributions	<u>48.9%</u>	<u>50.7%</u>
5. Minimum Required Contribution	63.8%	65.9%

*Contributions as a percent of payroll are provided for reporting purposes only. With a closed plan, the payroll levels continue to decrease over time creating percent of payroll results which increase even if the dollar contributions remain the same.

Reconciliations

Reconciliation of Funded Status

	Unfunded Accrued Liability	Funded Percentage	Change in Unfunded Accrued Liability	Change in Funded Percentage
As of Prior Valuation	\$33,318,064	72.2 %		
Changes in Contribution Rate due to:				
Normal Operation of Plan	32,430,888	74.3 %	\$(887,176)	2.1 %
Investment Loss	33,402,040	73.5 %	971,152	(0.8)%
Demographic Experience	32,438,440	74.1 %	(963,600)	0.6 %
Assumption Change	32,541,464	74.0 %	<u>103,024</u>	<u>(0.1)%</u>
Total Changes			\$(776,600)	1.8 %
As of Current Valuation	\$32,541,464	74.0 %		

Reconciliation of City Minimum Funding Requirement

Dollar Amount

As of Prior Valuation	\$5,105,188
Changes in Contribution due to:	
Normal Operation of Plan	\$23,342
Change in Expenses	33,335
Investment Loss	97,368
Demographic Experience	(219,821)
Assumption Change	<u>12,356</u>
Total Changes	\$(53,420)
As of Current Valuation	\$5,051,768

Section 3 Accounting Information

Information Required by GASB 25

REQUIRED SUPPLEMENTARY INFORMATION (GASB 25)

SCHEDULES OF FUNDING PROGRESS (\$000'S)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Accrued Liability (AL) -Entry Age (b)	Unfunded Accrued Liability (UAL) (b - a)	Funded Ratio (a/b)	Covered Payroll (c)	UAL as % of Covered Payroll ((b - a) / (c))
10/1/13	\$92,609	\$125,150	\$32,541	74.0 %	\$9,962	326.7 %
10/1/12	86,701	120,019	33,318	72.2 %	10,435	319.3 %
10/1/11	86,606	112,087	25,481	77.3 %	10,264	248.3 %
10/1/10	86,997	101,862	14,865	85.4 %	11,314	131.4 %
10/1/09	86,680	95,806	9,126	90.5 %	11,376	80.2 %
10/1/08	83,961	89,281	5,320	94.0 %	10,951	48.6 %
10/1/07	79,040	85,119	6,079	92.9 %	10,513	57.8 %
10/1/06	69,710	78,919	9,209	88.3 %	9,863	93.4 %
10/1/05	62,669	71,467	8,798	87.7 %	9,622	91.4 %
10/1/04	58,807	70,107	11,300	83.9 %	6,513	173.5 %

Information prior to October 1, 2006 is as shown in the report of the prior actuary.

REQUIRED SUPPLEMENTARY INFORMATION (GASB 25)**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ending 30-Sep	Annual Required Contribution (ARC)	Actual City Plus State Contributions Made	Percentage Contributed
2013	\$5,908,360	\$5,908,360	100.0%
2012	4,954,297	4,954,297	100.0%
2011	3,321,431	3,321,431	100.0%
2010	3,076,012	3,076,012	100.0%
2009	2,750,854	2,751,476	100.0%
2008	2,605,958	2,605,958	100.0%
2007	2,399,350	2,456,320	102.4%
2006	2,248,302	2,327,285	103.5%
2005	2,234,092	2,260,235	101.2%
2004	1,599,539	1,623,075	101.5%

Information prior to the year ended September 30, 2006 is as shown in the report of the prior actuary.

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

Valuation Date	October 1, 2013
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Closed
Remaining Amortization Period	18 Years
Asset Valuation Method	5-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return*	7.625%
Projected Salary Increases*	5% to 11%
*Includes Inflation at Cost-of-Living Adjustments	4.000% 0.000%

Information Required by GASB 27

Annual Pension Cost and Net Pension Obligation

Fiscal Year Ending September 30,	2013	2012	2011	2010
1. Beginning of year NPO	\$(347,551)	\$(355,645)	\$(347,376)	\$(339,299)
2. Contributions Made	5,908,360	4,954,297	3,321,431	3,076,012
3. Pension Cost	<u>5,917,072</u>	<u>4,962,391</u>	<u>3,313,162</u>	<u>3,067,935</u>
4. End of year NPO (1. - 2. + 3.)	\$(338,839)	\$(347,551)	\$(355,645)	\$(347,376)
1. ARC (City and State)	\$5,908,360	\$4,954,297	\$3,321,431	\$3,076,012
2. Interest on NPO	(26,501)	(27,118)	(26,487)	(25,872)
3. Amortization of NPO	<u>35,213</u>	<u>35,212</u>	<u>18,218</u>	<u>17,795</u>
4. Pension Cost	\$5,917,072	\$4,962,391	\$3,313,162	\$3,067,935

Statement of Accumulated Plan Benefits (FASB 35)

The following table is based on prior accounting standards and is required by the State. The present value of accrued benefits is an estimate of the liability for all benefits accrued to date.

Valuation as of October 1,	2012	2013
1. Actuarial present value of accumulated plan benefits		
a. Participants currently receiving benefits	\$80,662,352	\$88,173,249
b. Other participants	<u>23,477,994</u>	<u>20,810,086</u>
c. Total vested plan benefits	\$104,140,346	\$108,983,335
d. Total non-vested plan benefits	<u>5,818,289</u>	<u>6,050,458</u>
e. Total accumulated plan benefits	\$109,958,635	\$115,033,793
2. Change in accumulated plan benefits		
a. Accumulated plan benefits beginning of year	\$102,881,570	\$109,958,635
b. Increase (decrease) during year attributable to:		
i. Plan amendment	\$205,088	\$184,693
ii. Change in assumptions	2,383,804	95,147
iii. Benefits paid	(6,282,382)	(6,273,570)
iv. Increase for interest and probability of payment due to decrease in discount period and benefits accrued	<u>10,770,555</u>	<u>11,068,888</u>
v. Net increase (decrease)	\$7,077,065	\$5,075,158
c. Accumulated plan benefits end of year	\$109,958,635	\$115,033,793

Other Disclosures Required by the State of Florida

Valuation as of October 1,	2012	2013
Other Disclosures (where applicable)		
Present value of active member:		
Future salaries (attained age)	\$76,001,266	\$69,724,358
Future salaries (entry age)	N/A	N/A
Future contributions (attained age)	\$6,840,114	\$6,275,192
Future contributions (entry age)	N/A	N/A
Future contributions (other sources)	N/A	N/A
Future expected benefit payments (entry age)	N/A	N/A
Current contribution balance for active members*	\$7,226,182	\$7,082,545

*Note: Non-vested terminations receive a refund of contributions without interest.



Section
4Supplementary
Information

Summary of Participant Data

Member Statistics

Fiscal Year Beginning	October 1, 2012	October 1, 2013
<u>Active Participants</u>		
Number	111	102
Average Age	35.7	35.9
Average Service	9.8	10.2
Percent Male	91.9%	92.2%
Average Annual Pay	\$ 101,848	\$ 102,500
Total Covered Payroll	\$11,305,082	\$10,454,989
Valuation Payroll	\$10,434,701	\$ 9,962,476
<u>Terminated Vested Participants</u>		
Number	1	0
Average Age	34.0	0.0
Percent Male	0%	0%
Average Monthly Benefit	\$ 2,375	\$ 0
<u>DROP Participants</u>		
Number	20	19
Average Age	50.9	50.3
Percent Male	95.0%	89.5%
Average Monthly Benefit	\$ 7,484	\$ 6,508

Member Statistics (Continued)

Fiscal Year Beginning	October 1, 2012	October 1, 2013
<u>Service Retirements</u>		
Number	64	74
Average Age	59.5	59.0
Percent Male	100.0%	100.0%
Average Monthly Benefit ^{(1) and (2)}	\$ 5,434	\$ 5,705
<u>Beneficiaries</u>		
Number	5	4
Average Age	75.4	73.9
Percent Male	0.0%	0.0%
Average Monthly Benefit	\$ 2,267	\$ 2,560
<u>Disabled</u>		
Number	7	7
Average Age	58.3	59.3
Percent Male	71.4%	71.4%
Average Monthly Benefit	\$ 1,984	\$ 1,984
<u>Total in Payment Status</u>		
Number	76	85
Average Age	60.4	59.8
Percent Male	90.8%	92.9%
Average Monthly Benefit	\$ 4,908	\$ 5,251

Notes:

- (1) As of October 1, 2012, an average monthly benefit of \$4,972 is payable to retirees after every Social Security level income option annuity is at the reduced level for 18 retirees with such option.
- (2) As of October 1, 2013, an average monthly benefit of \$5,306 is payable to retirees after every Social Security level income option annuity is at the reduced level for 18 retirees with such option.

Number of Active Members by Age and Service as of October 1, 2013

Age	Service							Total
	<1	<5	<10	<15	<20	<25	<30	
<25		2						2
<30		5	13					18
<35		2	20	9				31
<40		1	11	11				23
<45			3	9	5			17
<50				7	3			10
<55					1			1
<60								0
Total	0	10	47	36	9	0	0	102

Active Valuation Pay by Age and Service as of October 1, 2013

	Service							Total
	<1	<5	<10	<15	<20	<25	<30	
<25		83,924						83,924
<30		78,300	92,776					88,755
<35		79,079	96,814	108,621				99,097
<40		80,211	101,408	114,568				106,780
<45			101,206	111,918	120,896			112,668
<50				108,839	122,544			112,950
<55					116,729			116,729
<60								
Total		79,772	97,052	111,305	120,982			102,500

Reconciliation of Plan Participants

	Act.	Term. Vested	DROP	Retiree	Survivor	Disability Retiree	Totals
As of October 1, 2009	129	0	20	43	4	6	202
Active							
To Retiree	(1)			1			0
To DROP Participant	(7)		7				0
To Refunded Termination	(1)						(1)
DROP Participant							
To Retiree			(6)	6			0
Retiree							
To Survivor Benefits				(1)	1		0
New Hires	0						0
As of October 1, 2010	120	0	21	49	5	6	201
Active							
To DROP Participant	(3)		3				0
To Vested Termination	(1)	1					0
DROP Participant							
To Retiree			(2)	2			0
Service Retiree							
To Disability Retiree				(1)		1	0
New Hires	8						8
As of October 1, 2011	124	1	22	50	5	7	209
Active							
To DROP Participant	(7)		7				0
To Retiree	(5)			5			0
To Nonvested	(1)						(1)
DROP Participant							
To Retiree			(9)	9			0
As of October 1, 2012	111	1	20	64	5	7	208
Active							
To DROP Participant	(5)		5				0
To Retiree	(4)			4			0
DROP Participant							
To Retiree			(6)	6			0
Vested Termination Paid Refund		(1)					(1)
Survivor Death					(1)		(1)
As of October 1, 2013	102	0	19	74	4	7	206

Number of Participants Eligible for Retirement or DROP as of October 1, 2013

Age	Eligible for Early Retirement	Eligible for Normal Retirement	Eligible for DROP	Electing Early Retirement	Electing Normal Retirement	Electing DROP
40						1
41					1	
42						
43						
44						
45					1	
46						1
47	1		1	1		
48	1		1		1	1
49	1		1			2
50	1		1			
51						
52						
53						
54						
Total	4	0	4	1	3	5

Early Retirement Eligibility: Age 47 with 10 years Credited Service

Normal Retirement Eligibility: Earlier of (1) age 52 with 10 years of Credited Service, or (2) 20 years of Credited Service

DROP Eligibility: The earlier of age 47 and 20 years of Service.

Outline of Plan Provisions

Effective Date: March 22, 1977.

Plan Year: The 12-month period from October 1st to the following September 30th.

Member: Full-time firefighters become Members immediately upon hire.

Actuarial Equivalence: Actuarial Equivalence is determined using the interest rate and mortality used in the actuarial funding valuation of the Plan. In the event of a change in valuation funding assumptions, the factors used to determine optional forms of benefit are changed effective the October 1 subsequent to the October 1 in which the valuation funding assumptions were changed.

Credited Service: Total number of years, and fractional parts of years, while Employee Contributions were made. Employee Contributions with interest may be repaid within 90 days of rehire to reinstate prior service. Accumulated leave time over 350 hours of annual leave and 520 hours of sick leave, is includable as part of Credited Service, if no payment is received for such time directly by the Member. Time spent in the military service while on leave of absence is included if the Member returns as a firefighter within 1 year of release from military service.

A Member with an honorable discharge from prior military service may purchase up to four years of such prior military service to be used in the determination of the amount of benefits payable, but not towards eligibility for such benefits. Prior military service may be purchased at any time, but may not be credited until a Member has attained 16 years of Credited Service without inclusion of the prior military service purchase. Members who separate from service prior to attaining 16 years are refunded the amount paid for purchase without interest. Additionally, prior firefighter service for which no current or future retirement benefit is payable may be purchased according to the same rules applicable to the purchase of prior military service. The total aggregate number of prior military service years and prior service as a firefighter that may be purchased is four.

Vesting: 100% upon earning ten years of Credited Service.

Salary: Total cash remuneration paid to a firefighter for services rendered.

Employee Contributions: 9.0% of Salary. A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions without interest.

Vested Members who terminate employment prior to being eligible to receive an annuity may leave their accumulated contributions in the fund, and upon as early as age 47 begin commencement of the reduced Accrued Benefit, as defined under Early Retirement.

Average Final Compensation (AFC): Average of Salary for the three highest years of Credited Service. Effective December 2002, AFC is determined by inclusion of the three highest nonconsecutive and non-overlapping years of Salary consisting of 79 pay periods total.

All or a portion of accumulated leave, up to 350 hours of annual leave and 520 hours of sick leave, is includable as part of compensation during the highest three years of contributing service. Any firefighter who did not have 25 years of Credited Service as of December 31, 1994 may elect to receive actual payment for the annual leave or sick leave hours accumulated. If such an election is made, the annual leave or sick leave for which payment is received does not go toward the Credited Service or the Average Final Compensation determination, and no Employee Contributions are deducted for such payment.

Normal Retirement Date: First day of the month coincident with or next following the earlier of (1) completion of 20 years of Credited Service without regard to age, or (2) attainment of age 52 and completion of 10 years of Credited Service.

Normal Retirement Benefit: The Accrued Benefit.

Accrued Benefit: The Accrued Benefit is computed according to the following formula, limited to no more than 90% of Average Final Compensation:

$3.0\% \times \text{Average Final Compensation} \times \text{Credited Service up to 10}$

Plus

$3.25\% \times \text{Average Final Compensation} \times \text{Credited Service Over 10}$

This benefit is payable as a 10 year certain and continuous annuity.

Early Retirement Date: The first day of any month prior to the Normal Retirement Date after attainment of age 47 or the completion of 10 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit reduced by 1% per year by which the commencement of benefits precedes the Normal Retirement Date.

Disability Benefit: The benefit payable to any Member who becomes totally and permanently disabled not in the line of duty after having earned 10 years of Credited Service prior to the Normal Retirement Date is the greater of (1) the Accrued Benefit and (2) 25% of Average Final Compensation as of the disability retirement date, payable as a 10 year certain and continuous annuity commencing the first day of the month after the board of trustees determines such entitlement. Any portion due for a partial month is paid together with the first payment.

Members are not required to meet the 10 years of Credited Service requirement for Disability Benefits payable in the event of total and permanent disability in the line of duty. The line of duty Disability Benefit is the greater of (1) the Accrued Benefit and (2) 42% of Average Final Compensation as of the disability retirement date, payable as a 10 year certain and continuous annuity commencing the first day of the month next following the date of disability.

Disability Benefit payments cease at the earlier of (1) the payment due preceding recovery prior to Normal Retirement Date, (2) the payment due preceding the date of death or the 120th monthly payment, whichever is later, for death without recovery, or (3) the payment due preceding the Normal Retirement Date while still disabled. The Credited Service of a Member who recovers from disability and reenters the service of the City as a firefighter will be deemed to have been continuous, but the period beginning with the first month for which Disability Benefits were payable and ending with the date of reentry to service is not counted as Credited Service.

Death Benefits: The beneficiary of a Member who dies after completion of 10 years Credited Service is paid the Accrued Benefit commencing on the first day of the month following the date of death. This benefit is payable as a 10 year certain annuity, or on an actuarially equivalent basis.

Members who terminate non-vested due to death are entitled to a return of Employee Contributions with interest.

Optional Forms of Benefit: The Accrued Benefit described above is payable in the form of a 10 year certain and continuous annuity. Members may optionally choose an actuarially equivalent (1) joint and survivor option (with 50%, 75% or 100% continuance), (2) a period certain and life option with 5, 10 or 15 years certain, (3) a single life annuity, (4) a joint and last survivor option with (50%, 66 2/3%, 75%, or

100% continuance), or (5) such other amount and form of payment will best meet the circumstances of the Member.

Deferred Retirement Option Plan (DROP): Members are eligible to enter the DROP at the earlier of age 47 with at least 10 years of service and their Normal Retirement Date. DROP participants are not eligible for death or disability benefits. The Accrued Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit is credited or debited according to the Member's self-directed investment options or using the net fund return (or a combination thereof).

The maximum DROP participation duration is determined based on Credited Service at DROP entry, as follows:

Credited Service	Maximum DROP Years
<28	5
<29	4
<30	3
30	2
>30	0

Election to participate in the DROP is forfeited if not exercised within the first 30 years of Credited Service.

Upon termination of employment, firefighters in the DROP receive the balance in the DROP account either as a lump sum, installment or annuity payments.

Variable Benefit: A uniform percentage increase no more than 4% in any one calendar year is granted to retirees and beneficiaries, where the cost of this benefit increase is financed solely from the investment return on fund assets greater than the investment return assumed for purposes of the actuarial valuation of the fund, limited by the total experience gained under the Plan as compared to all actuarial assumptions.

Share Account: Effective June 17, 2008, Ordinance No. 2008-017 was adopted establishing a Share Plan where revenues received from the State of Florida under Chapter 175 in excess of \$618,479 (the adjusted base amount) that are not specifically allocated to a different benefit enacted after that date are divided equally amongst Plan participants (excluding vested terminations) as of the first of the year for which the revenues were received.

Transfer of Fire Services to BSO: Effective October 1, 2011 the City transferred fire services to the Broward County Sheriff's Office (BSO) with the following effect on how the Plan operates:

- Members actively employed on October 1, 2011 chose whether to continue benefit accruals under this Plan or whether they instead chose to begin benefit accruals under the Florida Retirement System (FRS). All members of the fund opted to continue as members of this Plan. Active members continue to accrue benefits under the Plan in the way they would have had the transfer of services not occurred. Pensionable pay is that being paid by BSO effective October 1, 2011.
- Members in the Deferred Retirement Option Program (DROP) at the time of the transfer of services began to accrue services under FRS immediately. DROP members may choose to allow their monthly benefit to continue to be credited to their DROP account or to alternatively retire for purposes of the Plan and begin receipt of monthly benefits and their DROP balance.

- Members retired at the time of the transfer of services continue to be paid their monthly benefits and DROP balance, if any, in exactly the way benefits would have been paid had the transfer of services not occurred.

There are no future new entrants to the Plan effective October 1, 2011.

Description of Assumptions and Methods

Assumed Investment Return (Net of Expenses): 7.625% per year

Salary Increase – Individual: 11.0% per year up to 8 years, 5% each year thereafter. Salary in year of retirement is increased 30%.

Inflation: 4.0% per year

Administrative Expenses: Prior year's actual administrative expense added to Normal Cost

Percentage Married at Retirement: 80% of active Members are assumed to be married at retirement.

Spouse Ages: Where spousal information was supplied, that information was used. Otherwise, wives are assumed to be three years younger than their husbands.

Mortality: The RP-2000 Combined Mortality Table projected to the valuation year using Scale AA.

Retirement: Members are assumed to retire at a rate of 100% upon retirement eligibility.

Termination: Unisex rates, as follows:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
<=19	0.000	31	0.044	38	0.037	45	0.030
20-25	0.050	32	0.043	39	0.036	46	0.029
26	0.049	33	0.042	40	0.035	47	0.028
27	0.048	34	0.041	41	0.034	>=48	0.000
28	0.047	35	0.040	42	0.033		
29	0.046	36	0.039	43	0.032		
30	0.045	37	0.038	44	0.031		

Disability: Unisex rates, as follows:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
<=15	0.0000	34	0.0022	43	0.0039	52	0.0120
16-21	0.0014	35	0.0023	44	0.0044	53	0.0131
22-25	0.0015	36	0.0024	45	0.0051	54	0.0143
26-27	0.0016	37	0.0025	46	0.0059	55	0.0155
28-29	0.0017	38	0.0026	47	0.0070	56	0.0168
30	0.0018	39	0.0028	48	0.0079	57	0.0181
31	0.0019	40	0.0030	49	0.0090	58	0.0195
32	0.0020	41	0.0032	50	0.0100	59	0.0209
33	0.0021	42	0.0035	51	0.0110	>=60	0.0000

On and Off Duty Disability and Death: 75% of disabilities are assumed to be in the line of duty.

Funding Method: Entry Age Normal (level percent of salary).

Actuarial Value of Assets: The market value of assets is adjusted to recognize gains and losses over a five-year period. The Actuarial Value of Assets shall not be more than 120% or less than 80% of the market value of assets.

Glossary of Actuarial Terms

Present Value of Benefits (PVB): The present value, as of the valuation date, of all benefits that will become payable by the Plan for the current group of members in the census.

Normal Cost (NC): The value of the portion of the total benefit for active members which accrues in the year following the valuation date. Under the Entry Age Normal (Level Percent of Salary) funding method, the NC is a constant fraction of salary from the member's date of entry into the Plan to the member's assumed date of termination, retirement, disability or death.

Accrued Liability (AL): This is the portion of the PVB attributable to the past at the valuation date. For active members, AL is the annual NC accumulated from date of entry to the valuation date for each member. For retired and terminated members, the PVB and the AL are equal. The AL is the estimated liability owed by the pension fund at the valuation date.

Unfunded Accrued Liability (UAL): Any excess of the Accrued Liability over the fund assets. A negative UAL indicates fund assets are greater than the Accrued Liability, otherwise known as a surplus.

Actuarial Value of Assets: The value of assets used in the actuarial valuation of the Plan which is compared to the AL to determine the UAL and minimum funding requirements. A method may be used to smooth out short term volatility in the fair market value of assets.