



ACTUARIAL VALUATION REPORT

for the

City of Pittsburgh

Firemen's Relief and Pension Fund

as of

January 1, 2007

Report Date: July 14, 2008

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Section One: Introduction

At the request of the City of Pittsburgh, we have completed an actuarial valuation of the City of Pittsburgh Firemen's Relief and Pension Fund as of January 1, 2007. Our actuarial valuation is based upon participant data as of January 1, 2007 and upon asset information as of December 31, 2006 as provided by the City. This report has been completed in accordance with generally accepted actuarial principles and practices, and reflects our current understanding of applicable laws and regulatory requirements.

This valuation was prepared to satisfy the funding and disclosure requirements of Act 205 of 1984. It also contains the cost components that may be used to compute the Plan's Minimum Municipal Obligation (MMO).

The City has qualified under Distress Level III, as defined in Act 205 of 1984. The City is also permitted to utilize provisions of Act 82 of 1998. As a result, the unfunded actuarial accrued liability as of January 1, 1998 is being amortized over 40 years.

Under Act 205, a Level III municipality is mandated to aggregate the assets of its pension plans into a single trust. An annual calculation is made to determine each Plan's portion of the assets. The receipts and disbursements for each Plan are added to the Plan's allocated value from the prior year. Then, the year's investment income is allocated proportionately to each Plan in accordance with procedures set forth in Act 205. As of December 31, 2006 the calculated value of assets in the Firemen's Relief and Pension Fund is \$142,787,099. Section Nine contains exhibits illustrating the calculation of this amount.

2007 Results

Certain highlights of this actuarial valuation compared with the prior valuation are shown in Section Three. The use of pension bond proceeds to reduce the Unfunded Actuarial Accrued Liability has split the funding of the pension plan into actuarial costs and debt service. The actuarial costs consist of Normal Cost, administrative expense contributions and amortization payments to eliminate the remainder of the Unfunded Actuarial Accrued Liability. The actuarial information used to develop contribution requirements according to the rules of Act 205 is shown in Section Five. Debt service payments repay the money borrowed and subsequently deposited into the plan. Information concerning the annual debt service is contained in Section Ten. The demographics of the Plan population are summarized in Section Eight.

The actuarial cost components as of January 1, 2007 compared to the prior year are as follows:

	Current Year 2007	Prior Year 2005
<i>Normal Cost as a Percentage of Total W-2 Payroll</i>	9.210%	8.951%
<i>Expenses as a Percentage of Total W-2 Payroll</i>	2.400%	1.400%
<i>Amortization Payment</i>	\$11,765,333	\$6,041,482

The change in actuarial costs from valuation to valuation can be affected by changes in Plan provisions, assumption changes, and experience changes. Pension bonds were issued in March 1998. The debt service payment for 2007 is approximately \$5.60 million.

Act 82

Act 82 of 1998 also has an impact on the actuarial costs of this pension plan. Act 82 allowed the City to change the amortization schedule for its Unfunded Actuarial Accrued Liability since pension bond proceeds were deposited into the pension plan during 1998 that changed the ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability by more than 25 percent.

Act 82 allows the City to amortize the January 1, 1998 Unfunded Actuarial Accrued Liability, reduced by pension bond proceeds deposited during 1998, over a 40-year period. The annual amortization payment is calculated in several steps. An amortization payment is calculated that eliminates the Unfunded Actuarial Accrued Liability net of 1998 bond proceeds over a 40-year period using 8.75 percent interest. Next, the future value of these payments at the end of the 40-year period is calculated using 8.75 percent interest. Finally, an amortization payment is calculated using 10 percent interest that will have the same future value as the previous calculation. The 10 percent amortization amount becomes the amortization payment starting in 1998.

Act 82 requires that valuations include a comparative interest rate tabulation. This annual tabulation compares the balance of the accumulated Act 82 amortization payments using the actual earnings of the fund during the year with the balance assuming a 10 percent rate of return. If the fund earns more than 10 percent during the year, there will be an actuarial gain. If the fund earns less than 10 percent, there will be an actuarial loss. The gain or loss from the comparative interest rate tabulation will be combined with the other actuarial gains or losses for the year to determine the aggregate annual gain or loss. The comparative interest rate tabulation is included in Table 07-2. A similar calculation is included in Table 07-6 which is part of the information that will be used to determine State Aid.

Adjustment to Current Pay

Firefighters continued to earn atypical amounts of overtime during 2005 and 2006. An adjustment was made to remove the effects of this atypical overtime from the pay used to project benefits that will be paid in the future. For participants not eligible to retire as of January 1, 2007, pay for 2006 was multiplied by 0.875 to adjust for the unusually high overtime pay.

Assumption Changes

Act 205 requires that the City have an experience study prepared every four years. The purpose of the experience study is to compare the plan's actual experience with the valuation assumptions. This comparison can indicate that actuarial assumptions should be changed. The last experience study was prepared as of January 1, 2005.

There were no assumption changes during the period from January 1, 2005 through January 1, 2007.

Benefit Changes

There were no benefit changes during the period from January 1, 2005 through January 1, 2007. At the present time there may be discrepancies between the pension benefits contained in the collective bargaining agreements and City ordinances. It is our understanding that any discrepancies will be resolved and the benefits provided will be those described in Section Four of this report.

Experience Changes

Plan experience during the year affects the Plan cost for the following year. Both the normal cost and the amortization payment can change.

Normal cost is the portion of the total cost allocated to the current year by the actuarial cost method. Unless Plan provisions or assumptions change, normal cost usually remains fairly stable, changing only moderately from year to year. The changes that do occur relate to changes in the age and service distribution of the participant group.

Generally, experience changes affect the current year's actuarial gain or loss to a greater degree than they affect normal cost. Since foresight can never be perfect, actuarial assumptions will not perfectly match the experience that actually develops from year to year. The determination and amortization of actuarial gains and losses provide the mechanism for correcting these gains and losses and maintaining the Plan's funding on a sound basis.

The actuarial gain or loss computed in the current valuation reflects differences since the prior valuation between actual experience and the experience anticipated by the actuarial assumptions. Act 205 requires the amortization of actuarial gains or losses over a 15-year period. An actuarial gain will reduce the total amortization payment and an actuarial loss will increase the payment.

The Plan experienced a net actuarial loss of \$50,924,405. The major reason for the loss was that an unusually high number of firefighters retired or became disabled during 2005 and 2006. In these two years, 206 firefighters retired. This number is significantly greater than the less than 20 retirements anticipated per year based on prior retirement patterns for this plan. Also, it is more than twice the number of firefighters that retired in the five preceding years (2000 through 2004). During 2005 and 2006, 31 firefighters became disabled. The actuarial assumption anticipated that less than 10 firefighters would become disabled each year.

Another factor in the loss was the increase in pay during the two year period, particularly among those firefighters that retired. Firefighters are the only employee group that has overtime included in the pay used to calculate benefits. The excess overtime first noted in the January 1, 2005 valuation report has continued in spite of fire station closings. Part of the reason may be the high number of retirements and disabilities, which would tend to increase the number of overtime hours required from the remaining firefighters. Another factor that may have contributed to the increase in overtime is that there are no currently active firefighters who were hired in the period from 2002 through 2004.

A significant number of new firefighters (129) were hired during 2005 and 2006. These firefighters may reduce future overtime needs.

Another factor in the overall loss was contribution losses that arose because the Minimum Municipal Obligation calculations based on previous valuations were compared to actuarial requirements based on the January 1, 2005 valuation reports. Act 205 required that the Minimum Municipal Obligation calculation for 2005 be presented to City Council by September 30, 2004. As a result, the 2005 contributions had to be based on an earlier valuation and could not reflect the contribution requirements of the 2005 actuarial valuation.

Accounting Information

This valuation also includes certain actuarial information required for accounting purposes. Section Six is a summary of the actuarial present values of accumulated Plan benefits and the pension benefit obligation.


Section Two: Certification

In the actuary's opinion, the actuarial assumptions used in the valuation are reasonably related to the experience of the Plan and to reasonable expectations. They represent the actuary's best estimate of anticipated experience under the Plan. To the best of our knowledge, the report is complete and accurate, based on the data herein.

We will be happy to answer any questions concerning this report and provide further information as needed.

MOCKENHAUPT BENEFITS GROUP

Prepared and Certified by:



G. Herbert Loomis, F.S.A., E.A., M.A.A.A.
Consulting Actuary

Section Three: Valuation Highlights

Participant Count	01/01/07	01/01/05	Change
Total Active	622	737	(115)
Vested	150	287	(137)
Not Vested	472	450	22
Total In Payment Status	1,198	1,029	169
Retirement Benefits	598	432	166
Disability Benefits	252	237	15
Survivor Benefits	348	360	(12)
Deferred	4	1	3
Total	1,824	1,767	57

Average Monthly Benefit

<i>In Payment Status</i>			
Retirement Benefits	\$2,587	\$2,008	\$579
Disability Benefits	\$2,006	\$1,817	\$189
Survivor Benefits	\$ 581	\$ 542	\$ 39
Deferred	\$2,745	\$2,877	\$(132)

Active Participant Averages

Hire Age	29.7	29.4	0.3
Attained Age	43.1	47.7	(4.6)
Normal Retirement Age	53.0	53.6	(0.6)
Assumed Future Service	19.0	15.0	4.0
Monthly Compensation	\$5,634	\$6,362	\$(728)

Financial Data

Market Value of Assets	\$142,787,099	\$145,995,397	\$ (3,208,298)
Accumulated Employee Contributions	\$ 24,084,425	\$ 34,718,107	\$(10,633,682)

Cost Components

Normal Cost as a percentage of total payroll	9.210%	8.951%	0.259%
Expenses as a percentage of total payroll	2.400%	1.400%	1.000%
Total	11.610%	10.351%	1.259%
Amortization Payment	\$11,765,333	\$6,041,482	\$ 5,723,851

Section Four: Summary of Plan Provisions

Plan Year

- ▼ Twelve-month period beginning January 1 and ending December 31

Plan Established

- ▼ May 25, 1933

Principal Definitions

Employee

- ▼ Any uniformed employee of the City of Pittsburgh Bureau of Fire

Retirement Benefit Commencement Date

- ▼ Assumed to be the first day of the month coincident with or next following eligibility for and election to retire

Service Increment

- ▼ Additional monthly benefit of \$20 for each completed year of service in excess of 20 years, excluding years of service after age 65

Service

- ▼ Completed years of service calculated from date of hire through date of retirement or severance, plus periods of service purchased

Normal Form of Payment

- ▼ Monthly pension benefit payable for life

Participation Requirements

Entry date

- ▼ Date of hire

Compensation

Average Compensation

- ▼ Total W-2 wages
- ▼ Compensation averaged over the 36-month period prior to retirement or severance

Normal Retirement

Eligibility

Members hired before January 1, 1976

Monthly Benefit

- ▼ Later of age 50 or Completion of 20 years of service
- ▼ Completion of 20 years of service
- ▼ Equal to 50% of average compensation plus service increment, if any

Late Retirement

Eligibility

Amount of Benefit

- ▼ Employment beyond normal retirement
- ▼ Normal retirement benefit based upon average compensation as calculated at actual retirement

Disability

Eligibility

- ▼ Permanent disablement in line of duty *or*
- ▼ Permanent disablement (not in line of duty) after completing 10 years of service

Benefit Amount

- ▼ 50% of earnings in year prior to disablement

Benefit Commencement Date

- ▼ First day of calendar month following determination of disablement *and*
- ▼ Continuing for the duration of disability prior to normal retirement date and life thereafter

Vesting

- ▼ If member completed 20 years of service, may collect normal retirement benefit based on average compensation at termination (providing terminated member continues contributions at rate in effect at termination)
- ▼ Benefit deferred to age 50

Death Benefits

Accidental Death

- ▼ Benefit plus return of member's accumulated contributions
- ▼ Benefit plus workers' compensation or other payments is equal to 50% of member's wages at death
- ▼ Payable for 500 weeks or until surviving spouse dies or remarries
- ▼ If no surviving spouse or unmarried children, dependent parents receive payments

- *Children Benefits*
(*No surviving spouse/or discontinued payment to surviving spouse*)

- ▼ Unmarried child under age 18 receives payments equal to 25% of payments to spouse
- ▼ Total payments to one family may not exceed 50% of member's wages at time of death
- ▼ \$60 minimum monthly payment if only one child
- ▼ If maximum amount payable, divide equally among entitled children
- ▼ Payments terminate when child reaches age 18, dies, marries
- ▼ Payments may continue indefinitely to incompetent child

Death Prior to Retirement
Active service/ not accidental

- ▼ If so elected, spouse paid benefit equal to 50% of pension member would have received if retired on date of death
- ▼ No election, accumulated contributions without interest paid to beneficiary or estate

Death After Retirement

- ▼ If so elected, spouse paid benefit equal to 50% of pension member was receiving
- ▼ No surviving spouse, benefit may be paid to surviving children or dependent parents

Lump Sum Benefit

- ▼ Lump sum of \$1,200 to beneficiary of any deceased member

Employee Contributions

- ▼ 6 percent of compensation plus \$1 per month
- ▼ \$1 per month ceases at age 65
- ▼ If surviving spouse benefit elected, add 1/2 percent of compensation

Section Five: Development of Contribution Requirements

Table 07-1: Normal Cost and Actuarial Accrued Liability

Normal Cost

Retirement Benefits	\$2,799,083
Disability Benefits	1,350,403
Preretirement Death Benefits	141,267
Postretirement Death Benefits	2,109
Refunds to Withdrawals	74,102
Medicare Premium Benefits	0
Vested Benefits	<u>14,345</u>
Total	\$4,381,309

Actuarial Accrued Liability

Actuarial Present Value of Benefits at Attained Age

	<u>Deferred</u>	<u>In Payment</u>	<u>Active</u>	<u>All</u>
Retirement Benefits	\$1,133,375	\$ 161,335,975	\$94,110,839	\$256,580,189
Disability Benefits	0	51,269,789	30,677,947	81,947,736
Survivor Benefits	0	16,126,139	0	16,126,139
Preretirement Death Benefits	0	0	2,581,469	2,581,469
Postretirement Death Benefits	0	0	63,088	63,088
Refunds to Withdrawals	0	0	760,915	760,915
Medicare Premium Benefits	0	0	0	0
Vested Benefits	<u>0</u>	<u>0</u>	<u>270,737</u>	<u>270,737</u>
Total	\$1,133,375	\$228,731,903	\$128,464,995	\$358,330,273

Actuarial Present Value of Future Normal Costs

Retirement Benefits	\$31,928,273	
Disability Benefits	15,318,693	
Preretirement Death Benefits	1,601,389	
Postretirement Death Benefits	21,267	
Refunds to Withdrawals	862,383	
Medicare Premium Benefits	0	
Vested Benefits	<u>185,866</u>	
Total	\$49,917,871	(\$49,917,871)

Actuarial Accrued Liability

\$308,412,402

Unfunded Actuarial Accrued Liability

Actuarial Accrued Liability	\$308,412,402
Actuarial Value of Assets	<u>(142,787,099)</u>
Unfunded Actuarial Accrued Liability	\$ 165,625,303

Table 07-2: Actuarial (Gain) Loss Determination

Reconciliation of Funded Status

Unfunded Actuarial Accrued Liability as of January 1, 2005			\$ 109,774,231
	2005	2006	
Normal Cost/Administrative Expenses Assumed	\$ 5,857,868	\$ 6,194,696	12,052,564
Interest Charged at Valuation Rate			21,662,962
Contributions Made			
- Municipality	\$ 4,381,086	\$ 3,802,790	
- State Aid Allocated	4,665,276	3,947,132	
- Employees	<u>3,698,820</u>	<u>3,085,437</u>	\$ (23,580,541)
Interest Credited at Valuation Rate			(1,812,256)
Special Adjustment Because of Higher Act 82 Interest Rate			<u>(1,409,175)</u>
Expected Unfunded Actuarial Accrued Liability Before Adjustments			\$116,687,785
Experience from Investment Return			
- Comparative Interest Rate Amortization Tab. (Gain) Loss		\$ 1,370,701	
- Other Investment Return (Gain) Loss		<u>60,942</u>	1,431,643
Experience (Gain) Loss from all Other Sources			47,505,874
Increase (Decrease) in Actuarial Accrued Liability			
- Benefit Modifications for Actives		\$ 0	
- Benefit Modifications for Retirees		0	
- Changes in Actuarial Assumptions		<u>0</u>	<u>0</u>
Actual Unfunded Actuarial Accrued Liability			<u>\$165,625,303</u>
Loss (Gain) to be Amortized			
Experience (Gain) Loss from January 1, 2005			\$ 48,937,517
Actuarially Required Contributions and Bond Proceeds with Interest		\$27,379,685	
Actual Contributions with Interest		<u>(25,392,797)</u>	
Contribution (Gain) Loss			<u>1,986,888</u>
Loss (Gain) to be Amortized			\$50,924,405

Comparative Interest Rate Amortization Tabulation

<i>Balance Calculated Using Actual Investment Return</i>	2005	2006	
Act 82 Amortization Balance at January 1	\$ 45,221,367	\$ 52,713,234	
Act 82 Amortization Payment	<u>4,333,255</u>	<u>4,333,255</u>	
Comparative Interest Rate Balance at January 1	\$ 49,554,622	\$ 57,046,489	
Actual Investment Return on Balance	<u>3,158,612</u>	<u>6,310,483</u>	
Actual Act 82 Amort. Balance at December 31	\$ 52,713,234	\$63,356,972	
\$ 63,356,972			
<i>Balance Calculated Using 10 Percent Investment Return</i>			
Comparative Interest Rate Balance at January 1	\$ 49,554,622	\$ 58,843,339	
Interest at 10 Percent	<u>4,955,462</u>	<u>5,884,334</u>	
Comparative Act 82 Amort. Bal. at December 31	\$ 54,510,084	\$ 64,727,673	\$ 64,727,673
<i>Comparative Interest Rate Amortization Tabulation (Gain) Loss</i>			\$ 1,370,701

Table 07-3: Amortization of Unfunded Actuarial Accrued Liability

Source	Original Amount	Year Est.	Target Year	Remaining Balance	Remaining Payments	Annual Amount
Initial	\$73,627,561	1998	2037	\$91,912,738	31	\$4,333,255
Assumption Change	\$(2,712,163)	1998	2017	\$(2,015,884)	11	\$(269,183)
Experience Gain	\$(7,309,856)	1999	2013	\$(4,548,451)	7	\$(824,061)
Experience Gain	\$(10,034,869)	2000	2014	\$(6,867,518)	8	\$(1,130,372)
Experience Loss	\$14,852,702	2001	2015	\$11,011,580	9	\$1,671,810
Experience Loss	\$1,151,699	2002	2016	\$914,123	10	\$129,540
Investment Loss	\$18,857,549	2002	2032	\$17,577,396	26	\$1,594,334
Assumption Change	\$(17,287,129)	2003	2022	\$(15,703,809)	16	\$(1,710,460)
Ben. Mod. - Actives	\$957,341	2003	2022	\$869,660	16	\$94,723
Ben. Mod. - Retired	\$6,733,210	2003	2012	\$4,689,727	6	\$954,164
Experience Gain	\$(1,201,890)	2003	2017	\$(1,011,682)	11	\$(135,091)
Investment Loss	\$27,829,106	2003	2032	\$26,854,552	26	\$2,435,805
Assumption Change	\$847,777	2005	2024	\$812,202	18	\$83,883
Experience Gain	\$(10,559,362)	2005	2019	\$(9,793,736)	13	\$(1,186,861)
Agg. Changes through Last Valuation	N/A	N/A	N/A	\$22,788,160	N/A	\$1,708,231
Assumption Change	N/A					.
Ben. Mod. - Actives	N/A					
Ben. Mod. - Retired	N/A					
Experience Loss	\$50,924,405	2007	2021	\$50,924,405	15	\$5,723,847
Agg. Changes-2007	N/A	N/A	2021	\$50,924,405	15	\$5,723,847
Aggregate Changes	N/A	N/A	2025	\$73,712,565	19	\$7,432,078
Aggregate	N/A	N/A		\$165,625,303		\$11,765,333

Details of the Calculation of Act 82 Payment

Act 82 Unfunded Actuarial Accrued Liability	\$ 73,627,561
40-Year Amortization Payment	\$ 6,138,285
Future Value at end of 40-Year period	\$ 2,109,653,057
Payment to provide the same future value with 10% annual earnings	\$ 4,333,255

Table 07-4: Required Municipal Contributions

The Financial Requirement of the Plan is based on the Normal Cost Percentage and other components shown below. The Normal Cost Percentage is applied to the payroll of the members for the applicable fiscal year.

Normal Cost (Table 07-1)	\$ 4,381,309
Total Annual Payroll	\$ 47,573,078
Percentages for Budget	
• Normal Cost (Normal Cost divided by Total Annual Payroll)	9.210%
• Administrative Expense (as a % of Payroll)	2.400%
• Gross Normal Cost	11.610%
Net Amortization Payment (Table 07-3)	\$ 11,765,333
Funding Adjustment	\$ 0

Section Six: Accounting Information

Accumulated Plan Benefits	<u>01/01/07</u>	<u>01/01/05</u>
Assets at Market Value	<u>\$142,787,099</u>	<u>\$145,995,397</u>
Actuarial Present Value of Vested Benefits		
Retired	\$228,731,903	
Deferred	1,133,375	
Employee Contributions	2,539,152	
Active	<u>34,339,624</u>	
Total	<u>\$266,744,054</u>	<u>\$199,220,937</u>
Unfunded Actuarial Present Value of Vested Benefits	<u>\$123,956,955</u>	<u>\$ 53,225,540</u>
Actuarial Present Value of Accrued Benefits		
Retired	\$228,731,903	
Deferred	1,133,375	
Employee Contributions	354,482	
Active	<u>57,872,904</u>	
Total	<u>\$288,092,664</u>	<u>\$230,713,276</u>
Unfunded Actuarial Present Value of Accrued Benefits	<u>\$145,305,565</u>	<u>\$ 84,717,879</u>

GAS #27 Information

Summary of Annual Pension Cost and Net Pension Obligation (NPO) for Prior Years

	2005	2006
Annual required contribution (ARC)	\$ 9,046,362	\$ 7,749,922
Interest on NPO	0	0
Adjustment to the ARC	<u>0</u>	<u>0</u>
Annual Pension cost	9,046,362	7,749,922
Contributions made	<u>\$ 9,046,362</u>	<u>\$ 7,749,922</u>
Change in NPO	0	0
NPO, Beginning of Year (1/1)	<u>0</u>	<u>0</u>
NPO, End of Year (12/31)	\$ 0	\$ 0

Annual Pension Cost for the Year Beginning 1/1/2007

Annual Required Contribution (ARC)	\$ 7,850,916
Interest on NPO	0
Adjustment to the ARC	<u>0</u>
Annual Pension Cost	\$ 7,850,916

Other Information from the 1/1/2007 Actuarial Valuation for GAS #25 and GAS #27

Actuarial Cost Method	Entry Age
Asset Valuation Method	Market Value
	Level Dollar
Amortization Method	Closed
Aggregate Remaining Amortization Period (Years)	40
Actuarial Assumptions	
Investment Rate of Return	8.75%
Projected Salary Increases	5.75%
Underlying Inflation Rate	3.50%

Section Seven: Actuarial Basis of Valuation

Actuarial Assumptions: January 1, 2007

Economic

Interest Rate	8.75 percent increase per annum
Salary Projection	5.75 percent increase per annum
	Merit Increase 2.25 percent increase per annum
	Inflation 3.5 percent increase per annum
One Time Pay Adjustment	For this valuation only, the 2006 pay for those participants who have not yet attained normal retirement age is multiplied by 0.875 before applying the salary projection scale to project benefits, to offset the effects of atypical amounts of overtime pay earned for 2006.

Employee Characteristics

Mortality	RP-2000 Mortality Tables, with adjustments to reflect Pittsburgh Pension Plan mortality experience as confirmed by experience studies. The adjusted rates are based on the following:
<i>Active Participants</i>	RP-2000 Mortality Tables – Employee Rates of Mortality
<i>Inactive Participants</i>	RP-2000 Mortality Tables for Healthy Annuitants, adjusted by blue collar ratios (Table 5-5 of <i>RP-2000 Mortality Tables Report</i>) and set forward two years in age for healthy and deferred retirees and set forward five years in age for disabled retirees.
<i>Surviving Beneficiaries</i>	RP-2000 Rates, adjusted for healthy inactives as above, and further adjusted by ratios of female beneficiary experience to overall female RP-2000 Healthy Annuitant Mortality Rates (Appendix D of <i>RP-2000 Mortality Tables Report</i>)

Sample Rates (Rounded):

Age	Active Male Participant	Male Regular Retiree	Male Disabled Retiree	Male Beneficiary
45	0.15%	0.45%	0.56%	0.57%
55	0.30%	0.88%	1.06%	1.16%
65	0.76%	2.01%	2.68%	2.54%
75	N/A	5.27%	7.05%	5.60%
85	N/A	13.86%	18.34%	14.36%

Age	Active Female Participant	Female Regular Retiree	Female Disabled Retiree	Female Beneficiary
45	0.11%	0.19%	0.23%	0.23%
55	0.23%	0.44%	0.62%	0.62%
65	0.58%	1.37%	1.86%	1.74%
75	N/A	3.69%	4.90%	3.93%
85	N/A	10.24%	13.67%	10.61%

Withdrawal

Sample rates:

Age	Rate
20	0.82%
25	0.79%
30	0.76%
35	0.70%
40	0.53%
45	0.27%
50	0.06%
55	0.00%

Disablement

Sample rates:

Age	Male	Female
30	0.14%	0.17%
40	0.33%	0.64%
50	1.00%	1.26%
60	2.97%	2.27%

Retirement Age

Percentage of employees eligible for retirement who retire at each age:

Age	Percentage
50	8
51	3
52	3
53	3
54	3
55	3
56	3
57	3
58	9
59	9
60	9
61	9
62	18
63	18
64	18
65	100

Duty Related Mortality	Twenty percent of deaths in active service are assumed to be duty related.
Duty Related Disability	Fifty percent of disabilities occurring during employment are assumed to occur in the line of duty.
Percentage Married	Eighty percent of male participants and 65 percent of female participants.
Spouse Age	Female spouse assumed to be two years younger than male spouse.

Actuarial Basis of Valuation: Actuarial Cost Method

The actuarial costs of this Plan are determined under the Entry Age Normal Actuarial Cost Method as described in Act 205 of 1984. The total contribution (the financial requirements of the Pension Plan) is made up of three components: normal cost, administrative expense and amortization payment or funding adjustment.

Normal Cost

For each active participant covered by the Plan, normal cost is calculated to be the annual contribution necessary to completely fund the participant's pension by the participant's retirement age. Contributions are assumed to begin with the year of employment and to be a constant percentage of the participant's annual pay.

For the Plan, normal cost is expressed as a percentage of the total annual payroll of the participants used in budgeting of required contributions.

Administrative Expense

Estimated annual expense to be incurred by the fund for the contribution year for which the financial requirements are determined.

Actuarial Accrued Liability

Total actuarial present value of all future benefits less the actuarial present value of the future normal costs. The total unfunded actuarial accrued liability as of the valuation date is the actuarial accrued liability less the total value of all assets owned by the Plan.

Amortization Payment

Sum of the annual level amortization contribution requirements specified by the Act for the applicable portions of the unfunded actuarial accrued liability. The Plan's unfunded actuarial accrued liability was re-established in 1998. In the subsequent years, experience gains and losses, changes in benefit provisions, and changes in valuation assumptions would result in increases or decreases to the unfunded actuarial accrued liability. If the unfunded actuarial accrued liability is negative, the amortization payment is zero and a funding adjustment is created.

Section Eight: Demographic Summaries

Distribution of Active Members by Age and Service

Years of Service											
Age	Number of People in Category										Total by Age
	1	2	3	4-5	6-10	11-15	16-20	21-25	26-30	30+	
< 20	0	0	0	0	0	0	0	0	0	0	0
20-24	14	3	0	0	0	0	0	0	0	0	17
25-29	28	13	0	0	3	0	0	0	0	0	44
30-34	12	23	0	0	28	1	0	0	0	0	64
35-39	9	8	0	0	53	21	0	0	0	0	91
40-44	3	5	0	0	52	33	14	0	0	0	107
45-49	4	3	0	0	24	21	29	22	14	0	117
50-54	2	1	0	0	9	10	21	32	26	9	110
55-59	0	0	0	0	4	2	14	9	3	22	54
60-64	0	0	0	0	0	3	2	1	4	8	18
65+	0	0	0	0	0	0	0	0	0	0	0
Total	72	56	0	0	173	91	80	64	47	39	622

Age Distribution of Deferred Vested Participants

Persons Entitled to Deferred Benefits			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	0.00	0.00
30-34	0	0.00	0.00
35-39	0	0.00	0.00
40-44	0	0.00	0.00
45-49	1	\$ 34,521.84	\$ 34,521.84
50-54	2	65,905.80	32,952.90
55-59	0	0.00	0.00
60-64	0	0.00	0.00
65-69	0	0.00	0.00
70-74	1	31,315.68	31,315.68
75-79	0	0.00	0.00
80-84	0	0.00	0.00
85+	0	0.00	0.00
Total	4	\$ 131,743.32	\$ 32,935.83

Age Distribution of Retired Participants

Regular Retirements			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	0.00	0.00
30-34	0	0.00	0.00
35-39	0	0.00	0.00
40-44	0	0.00	0.00
45-49	0	0.00	0.00
50-54	53	\$ 2,123,714.16	\$ 40,070.08
55-59	151	5,903,162.88	39,093.79
60-64	86	3,212,257.68	37,351.83
65-69	80	2,557,467.96	31,968.35
70-74	60	1,653,731.52	27,562.19
75-79	75	1,605,933.12	21,412.44
80-84	67	1,125,877.80	16,804.15
85+	26	381,950.16	14,690.39
Total	598	\$18,564,095.28	\$ 31,043.64

Age Distribution of Retired Participants

Disability Retirements			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	0	0.00	0.00
30-34	0	0.00	0.00
35-39	3	\$ 89,164.20	\$ 29,721.40
40-44	2	50,267.16	25,133.58
45-49	4	111,856.92	27,964.23
50-54	30	928,342.44	30,944.75
55-59	58	1,685,607.12	29,062.19
60-64	40	1,141,989.72	28,549.74
65-69	22	518,773.68	23,580.62
70-74	22	425,527.08	19,342.14
75-79	38	614,660.52	16,175.28
80-84	25	382,187.52	15,287.50
85+	8	119,191.92	14,898.99
Total	252	\$ 6,067,568.28	\$ 24,077.65

Age Distribution of Retired Participants

Survivors			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	2	\$ 11,242.32	\$ 5,621.16
30-34	0	0.00	0.00
35-39	0	0.00	0.00
40-44	0	0.00	0.00
45-49	5	76,790.76	15,358.15
50-54	8	101,351.04	12,668.88
55-59	12	138,270.84	11,522.57
60-64	15	130,307.64	8,687.18
65-69	34	337,678.32	9,931.72
70-74	41	322,136.28	7,856.98
75-79	79	500,516.76	6,335.66
80-84	72	454,842.48	6,317.26
85+	80	360,468.00	4,505.85
Total	348	\$ 2,433,604.40	\$ 6,993.12

Age Distribution of Retired Participants

All Persons Receiving Benefits			
Age Group	Number of People	Total Annual Benefit	Average Annual Benefit
< 30	2	\$ 11,242.32	\$ 5,621.16
30-34	0	0.00	0.00
35-39	3	89,164.20	29,721.40
40-44	2	50,267.16	25,133.58
45-49	9	188,647.68	20,960.85
50-54	91	3,153,407.64	34,652.83
55-59	221	7,727,040.84	34,963.99
60-64	141	4,484,555.04	31,805.35
65-69	136	3,413,919.96	25,102.35
70-74	123	2,401,394.88	19,523.54
75-79	192	2,721,110.40	14,172.45
80-84	164	1,962,907.80	11,968.95
85+	114	861,610.08	7,557.98
Total	1,198	\$ 27,065,268.00	\$ 22,592.04

Demographic Data as of January 1, 2007

Changes in Plan Participation for Active Members

Active Members	Number
As of January 1, 2005	737
New Entrants	126
Transfer From Another Plan	<u>3</u>
Total	866
Separation from Active Service	
Separation with a Deferred Benefit	(2)
Separation without a Deferred Benefit	(3)
Transfer to another Plan	0
Disability	(31)
Death	(2)
Retirement with a Service Retirement Benefit	<u>(206)</u>
Total Separations	(244)
Data Adjustments	<u>0</u>
Active Members as of January 1, 2007	622

Changes in Plan Participants for Inactive Members and Survivors

	Deferred Vested	Regular Retirements	Disability Retirement	Survivors		Total
				Child	Other	
As of January 1, 2005	1	432	237	2	358	1,030
New Benefit Recipients	2	206	31	0	31	270
Death	0	(39)	(16)	0	(43)	(98)
Other Cessation of Benefits	0	0	0	0	0	0
Net Data Adjustments	1	(1)	0	0	0	0
As of January 1, 2007	4	598	252	2	346	1,202

Section Nine: Plan Assets

Combined Municipal Pension Trust Fund Calendar Year 2005

Source of Asset Information

The assets of the Aggregated Trust for the City's pension plans are summarized in the following tables based on the information provided by the City and by Maher Duessel . Assets are shown at market value.

Summary of Values for Aggregated Trust

	<u>1/1/05</u>	<u>1/1/06</u>
Market Value of Assets - Cash Basis	\$374,352,191	\$370,222,407
Accrued Interest	1,659,618	2,019,803
Accrued Contributions	0	0
Other Receivables	368,969	150,645
Accrued Expenses and Other Payables	<u>(2,772,371)</u>	<u>(3,055,629)</u>
Market Value of Assets - Accrual Basis	\$373,608,407	\$369,337,226

Summary of Transactions for the Aggregated Trust

Balance as of January 1, 2005		\$373,608,407
Contributions Toward Pension Liability		
- Policemen's	\$20,694,711	
- Firemen's	12,745,182	
- Municipal	<u>13,170,545</u>	\$ 46,610,438
Miscellaneous Contributions and Pass Through Items		5,377,776
Interest and Dividends		10,562,500
Net Appreciation (Decline) in Fair Value Of Investments		11,028,379
Payments to Participants		
- Policemen's	\$ 31,964,175	
- Firemen's	22,159,854	
- Municipal	<u>20,269,564</u>	(74,393,593)
Expenses		<u>(3,456,681)</u>
Balance as of December 31, 2005		\$369,337,226

Undivided Participation Calculation Calendar Year 2005 - Accrual Basis

	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
January 1, 2005 Market Value	\$117,821,971	\$145,995,397	\$ 109,791,039	\$373,608,407
Plan-Specific Contributions	22,023,542	13,456,288	15,209,403	50,689,233
Plan-Specific Distributions	<u>(32,313,136)</u>	<u>(22,397,656)</u>	<u>(20,578,509)</u>	<u>(75,289,301)</u>
Sub-Total	\$107,532,377	\$137,054,029	\$ 104,421,933	\$349,008,339
Sub-Total Percentages	30.81%	39.27%	29.92%	100.00%
Allocated Expenses	(789,036)	(1,005,694)	(766,243)	(2,560,973)
Allocated Investment Earnings	<u>7,052,366</u>	<u>8,988,848</u>	<u>6,848,646</u>	<u>22,889,860</u>
December 31, 2005 Market Value	\$113,795,707	\$145,037,183	\$110,504,336	\$369,337,226

Contributions and Distributions for 2005 - Accrual Basis

Plan-Specific Contributions	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
State Aid:				
General Municipal				
Pension System State Aid	\$ 5,894,520	\$ 4,665,276	\$ 6,605,725	\$17,165,521
Supplemental State Aid	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<i>Total State Aid</i>	\$ 5,894,520	\$ 4,665,276	\$ 6,605,725	\$17,165,521
Member Contributions	3,164,191	3,698,820	3,027,239	9,890,250
City Contributions	11,636,000	4,381,086	3,537,581	19,554,667
Pass Through Contributions	1,328,831	702,200	2,038,858	4,069,889
Miscellaneous Income	<u>0</u>	<u>8,906</u>	<u>0</u>	<u>8,906</u>
Total Contributions	\$22,023,542	\$13,456,288	\$ 15,209,403	\$50,689,233

Plan-Specific Distributions

Benefit Payments to Participants	\$31,397,909	\$22,108,444	\$18,889,235	\$ 72,395,588
Refunds to Participants	566,266	51,410	1,380,329	1,998,005
Administrative Expenses	<u>348,961</u>	<u>237,802</u>	<u>308,945</u>	<u>895,708</u>
Total Distributions	\$32,313,136	\$22,397,656	\$20,578,509	\$75,289,301

Combined Municipal Pension Trust Fund Calendar Year 2006

Source of Asset Information

The assets of the Aggregated Trust for the City's pension plans are summarized in the following tables based on the information provided by the City and by Maher Duessel. Assets are shown at market value.

Summary of Values for the Aggregated Trust

	1/1/06	1/1/07
Market Value of Assets – Cash Basis	\$ 370,222,407	\$ 377,673,832
Accrued Interest	2,019,803	1,187,226
Accrued Contributions	0	0
Other Receivables	150,645	55,719
Accrued Expenses and Other Payables	<u>(3,055,629)</u>	<u>(3,548,053)</u>
Market Value of Assets – Accrual Basis	\$ 369,337,226	\$ 375,368,724

Summary of Transactions for the Aggregated Trust

Balance as of January 1, 2006		\$ 369,337,226
Contributions toward Pension Liability		
- Policemen's	\$ 22,679,783	
- Firemen's	10,835,359	
- Municipal	<u>13,651,024</u>	\$ 47,166,166
Miscellaneous Contributions and Pass Through Items		6,205,362
Interest and Dividends		12,426,048
Net Appreciation (Decline) in Fair Value of Investments		25,033,821
Payments to Participants		
- Policemen's	\$ 34,069,007	
- Firemen's	27,821,443	
- Municipal	<u>19,963,839</u>	(81,854,289)
Expenses		<u>(2,945,610)</u>
Balance as of December 31, 2006		\$ 375,368,724

Undivided Participation Calculation Calendar Year 2006 - Accrual Basis

	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
January 1, 2006 Market Value	\$113,795,707	\$145,037,183	\$110,504,336	\$369,337,226
Plan-Specific Contributions	24,017,572	11,510,167	15,648,833	51,176,572
Plan-Specific Distributions	<u>(34,437,246)</u>	<u>(28,067,856)</u>	<u>(20,251,973)</u>	<u>(82,757,075)</u>
Sub-Total	\$103,376,033	\$128,479,494	\$105,901,196	\$337,756,723
Sub-Total Percentages	30.61%	38.04%	31.35%	100.00%
Allocated Expenses	(625,308)	(777,090)	(640,426)	(2,042,824)
Allocated Investment Earnings	<u>12,138,342</u>	<u>15,084,695</u>	<u>12,431,788</u>	<u>39,654,825</u>
December 31, 2006 Market Value	\$114,889,067	\$142,787,099	\$117,692,558	\$375,368,724

Contributions and Distributions for 2006- Accrual Basis

Plan-Specific Contributions	<u>Policemen's</u>	<u>Firemen's</u>	<u>Municipal</u>	<u>Total</u>
State Aid:				
General Municipal Pension System State Aid	\$ 5,120,770	\$ 3,947,132	\$ 5,562,429	\$14,630,331
Supplemental State Aid	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<i>Total State Aid</i>	\$ 5,120,770	\$ 3,947,132	\$ 5,562,429	\$14,630,331
Member Contributions	3,142,571	3,085,437	2,958,836	9,186,844
City Contributions	14,416,442	3,802,790	5,129,759	23,348,991
Pass Through Contributions	1,337,789	664,400	1,997,809	3,999,998
Miscellaneous Income	<u>0</u>	<u>10,408</u>	<u>0</u>	<u>10,408</u>
Total Contributions	\$24,017,572	\$11,510,167	\$15,648,833	\$51,176,572

Plan-Specific Distributions

Benefit Payments to Participants	\$33,824,518	\$27,814,042	\$19,225,300	\$ 80,863,860
Refunds to Participants	244,489	7,401	738,539	990,429
Administrative Expenses	<u>368,239</u>	<u>246,413</u>	<u>288,134</u>	<u>902,786</u>
Total Distributions	\$34,437,246	\$28,067,856	\$20,251,973	\$82,757,075

Section Ten: Supplementary Exhibits for Plans Funded With Pension Bond Proceeds

**Table 07-5: Unfunded Actuarial Accrued Liability Excluding Assets
Arising from Pension Bond Proceeds**

Assets Excluding Pension Bond Proceeds			
Assets Excluding Bond Proceeds at January 1, 2005			\$69,398,240
Receipts	2005	2006	
Employer Contributions	\$ 7,663,217	\$7,084,921	
Employee Contributions	3,698,820	3,085,437	
State Aid	4,665,276	3,947,132	
Supplemental State Assistance	0	0	
Investment Income	2,156,534	2,374,542	
Net Appreciation	1,874,081	4,084,500	
Pass Through Contributions	<u>711,106</u>	<u>674,808</u>	
 Total Receipts			 42,020,374
Disbursements			
Monthly Benefit Payments	\$21,406,244	\$ 27,149,642	
Refund of Employee Contributions	51,410	7,401	
Administrative Expenses	1,028,126	1,318,277	
Pass Through Payments	<u>702,200</u>	<u>664,400</u>	
 Total Disbursements			 (52,327,700)
 Assets Excluding Bond Proceeds at January 1, 2007			 \$59,090,914
 Unfunded Actuarial Accrued Liability Excluding Assets from Bond Proceeds			
Actuarial Accrued Liability (Table 07-1)			\$308,412,402
Assets Excluding Bond Proceeds at January 1, 2007			(59,090,914)
Adjusted Unfunded Actuarial Accrued Liability			\$249,321,488

**Table 07-6: Actuarial (Gain) Loss Determination Excluding Assets
Arising from Pension Bond Proceeds**

Reconciliation of Funded Status

Unfunded Actuarial Accrued Liability as of January 1, 2005			\$186,371,388
	2005	2006	
Normal Cost/Administrative Expenses Assumed	\$ 5,857,868	\$ 6,194,696	12,052,564
Interest Charged at Valuation Rate			35,653,911
Contributions Made			
- Municipality	\$ 7,663,217	\$ 7,084,921	
- State Aid Allocated	4,665,276	3,947,132	
- Employees	<u>3,698,820</u>	<u>3,085,437</u>	(30,144,803)
Interest Credited at Valuation Rate			(2,124,480)
Special Adjustment Because of Higher Act 82 Interest Rate			<u>(2,884,235)</u>
Expected Unfunded Actuarial Accrued Liability Before Adjustments			\$ 198,924,345
Experience from Investment Return			
- Comparative Int. Rate Amortization Tab. (Gain) Loss		\$ 2,805,491	
- Other Investment Return (Gain) Loss		<u>505,771</u>	3,311,262
Experience (Gain) Loss from all Other Sources			47,085,881
Increase (Decrease) in Actuarial Accrued Liability			
- Benefit Modifications for Actives		\$ 0	
- Benefit Modifications for Retirees		0	
- Changes in Actuarial Assumptions		<u>0</u>	<u>0</u>
Actual Unfunded Actuarial Accrued Liability			<u>\$249,321,488</u>

Loss (Gain) to be Amortized

Experience (Gain) Loss from January 1, 2005		\$ 50,397,143
Actuarially Required Contributions	\$34,830,633	
Actual Contributions with Interest	<u>(32,269,283)</u>	
Contribution (Gain) Loss		<u>2,561,350</u>
Loss (Gain) to be Amortized		\$ 52,958,493

Comparative Interest Rate Amortization Tabulation

<i>Balance Calculated Using Actual Investment Return</i>	2005	2006	
Act 82 Amortization Balance at January 1	\$ 92,557,020	\$ 107,891,029	
Act 82 Amortization Payment	<u>8,869,108</u>	<u>8,869,108</u>	
Comp Interest Rate Balance at January 1	\$ 101,426,128	\$ 116,760,137	
Actual Investment Return on Balance	<u>6,464,901</u>	<u>12,916,006</u>	
Actual Act 82 Amort. Balance at December 31	\$107,891,029	\$129,676,143	\$129,676,143
 <i>Balance Calculated Using 10 Percent Investment Return</i>			
Comparative Interest Rate Bal. at January 1	\$ 101,426,128	\$ 120,437,849	
Interest at 10 Percent	<u>10,142,613</u>	<u>12,043,785</u>	
Comparative Act 82 Amort. Bal. at December 31	\$ 111,568,741	\$ 132,481,634	\$132,481,634
 <i>Comparative Interest Rate Amortization Tabulation (Gain) Loss</i>			\$ 2,805,491

Table 07-7: Amortization of Unfunded Actuarial Accrued Liability Excluding Assets Arising from Pension Bond Proceeds

Source	Original Amount	Year Est.	Target Year	Remaining Balance	Remaining Payments	Annual Amount
Initial	\$150,697,522	1998	2037	\$188,122,785	31	\$8,869,108
Assumption Change	\$(2,712,163)	1998	2017	\$(2,015,884)	11	\$(269,183)
Experience Gain	\$(8,740,776)	1999	2013	\$(5,438,821)	7	\$(985,373)
Experience Gain	\$(5,967,507)	2000	2014	\$(4,083,957)	8	\$(672,206)
Experience Loss	\$5,187,425	2001	2015	\$3,845,882	9	\$583,893
Experience Loss	\$12,280,996	2002	2016	\$991,716	10	\$140,536
Investment Loss	\$9,840,706	2002	2032	\$9,172,665	26	\$ 831,994
Assumption Change	\$(17,287,129)	2003	2022	\$(15,703,810)	16	\$(1,710,460)
Ben. Mod. - Actives	\$957,341	2003	2022	\$869,660	16	\$94,723
Ben. Mod. - Retired	\$6,733,210	2003	2012	\$4,689,726	6	\$ 954,163
Experience Gain	\$(930,312)	2003	2017	\$(783,083)	11	\$(104,566)
Investment Loss	\$14,203,883	2003	2032	\$13,706,474	26	\$1,243,227
Assumption Change	\$847,777	2005	2024	\$812,202	18	\$83,883
Experience Loss	\$2,347,661	2005	2019	\$2,177,440	13	\$263,875
Agg. Changes though Last Valuation	N/A	N/A	N/A	\$8,240,210	N/A	\$454,506
Assumption Change	N/A					
Ben. Mod. - Actives	N/A					
Ben. Mod. - Retired	N/A					
Experience Loss	\$52,958,493	2007	2021	\$52,958,493	15	\$5,952,476
Agg. Changes -2007	N/A	N/A	2021	\$52,958,493	15	\$5,952,476
Aggregate Changes	N/A	N/A	2023	\$61,198,703	17	\$6,406,982
Aggregate	N/A	N/A		\$249,321,488		\$15,276,090

Details of the Calculation of Act 82 Payment

Act 82 Unfunded Actuarial Accrued Liability	\$ 150,697,522
40-Year Amortization Payment	\$ 12,563,560
Future Value at end of 40-Year period	\$ 4,317,941,320
Payment to provide the same future value with 10% annual earnings	\$ 8,869,108

**Debt Service Schedule by Plan Year
Pension Bond Issue of March 10, 1998**

	Date of Original Borrowing	Total Principal Borrowed	Total Principal to this Plan	Percentage to this Plan	Date of Refinancing
	3/10/98	\$255,865,000.00	\$77,782,960.48	30.1%	N/A
Plan Year	Required Principal Pymt.	Required Interest Pymt.	Annual Debt Service	Premium or Discount Amortized	Principal Balance at Valuation Date
1997					
1998		\$2,531,176.79	\$2,531,176.79		\$77,782,960.48
1999	\$ 304,000.00	5,053,765.57	5,357,765.57		77,782,960.48
2000	304,000.00	5,036,665.57	5,340,665.57		77,478,960.48
2001	304,000.00	5,019,474.37	5,323,474.37		77,174,960.48
2002	304,000.00	5,001,963.97	5,305,963.97		76,870,960.48
2003	304,000.00	4,984,316.77	5,288,316.77		76,566,960.48
2004	304,000.00	4,966,487.17	5,270,487.17		76,262,960.48
2005	761,520.00	4,934,627.98	5,696,147.98		75,958,960.48
2006	705,280.00	4,890,447.65	5,595,727.65		75,197,440.48
2007	747,840.00	4,846,303.81	5,594,143.81		74,492,160.48
2008	779,760.00	4,799,614.54	5,579,374.54		73,744,320.48
2009	842,080.01	4,746,261.58	5,588,341.59		72,964,560.48
2010	915,040.01	4,688,193.78	5,603,233.79		72,122,480.47
2011	981,920.01	4,628,913.78	5,610,833.79		71,207,440.46
2012	2,398,560.01	4,522,674.15	6,921,234.16		70,225,520.45
2013	3,339,440.02	4,341,092.29	7,680,532.31		67,826,960.44
2014	3,553,760.02	4,119,567.87	7,673,327.89		64,487,520.42
2015	3,865,360.02	3,878,446.47	7,743,806.49		60,933,760.40
2016	4,122,240.03	3,618,849.46	7,741,089.49		57,068,400.38
2017	5,546,480.03	3,304,616.06	8,851,096.09		52,946,160.35
2018	4,023,440.02	2,993,593.66	7,017,033.68		47,399,680.32
2019	6,089,120.04	2,661,890.89	8,751,010.93		43,376,240.30
2020	6,505,600.04	2,246,265.13	8,751,865.17		37,287,120.26
2021	6,949,440.04	1,802,248.81	8,751,688.85		30,781,520.22
2022	7,425,200.06	1,327,885.67	8,753,085.73		23,832,080.18
2023	7,932,880.06	821,069.03	8,753,949.09		16,406,880.12
2024	8,474,000.06	279,641.99	8,753,642.05		8,474,000.06

Section Eleven: Glossary

Accrued Benefit

The portion of the participant's retirement benefit that is attributable to service completed before the calculation date. The calculation typically uses actual service as of the calculation date and may involve other factors such as average pay at the determination date and projected service through the retirement eligibility date.

Act 205 of 1984

Municipal Pension Plan Funding Standard and Recovery Act of December 18, 1984, P.L. 1005, No. 205. The Act controls pension funding in Pennsylvania. This Act also provides for reporting of actuarial information and for a recovery program for qualifying municipalities.

Actuarial Accrued Liability

The portion of the actuarial cost assigned to prior years.

Actuarial Assumptions

Factors used by the actuary to forecast future events. These factors include items relating to future economic conditions, the survival of the participants and their beneficiaries, and the length of employment.

Actuarial Cost Method

A means of assigning costs to periods of employment. This method is used to determine a funding level that will provide sufficient assets to pay benefits for each participant upon retirement. Act 205 specifies that the entry age normal cost method, as described in the Act, should be used for this determination.

Actuarial Gain or Loss

The effect on the actuarial accrued liability of differences between events as predicted by the actuarial assumptions and those that actually occurred. This difference can increase or decrease the contribution in future years.

Actuarial Present Value

The lump sum value that is equivalent to an expected series of future payments. This value is determined by using the actuarial assumptions. An actuarial present value, as of the valuation date, represents the amount of funds that would be sufficient to provide the series of payments, if experience precisely matches the actuarial assumptions.

Actuarial Value of Assets

The value of current plan assets which is used by the actuary to evaluate the current funding status and determine future funding requirements. Pennsylvania Code, Title 16, Part IV, Section 203.2(a) requires that this value be between 80 and 120 percent of the fair market value of the assets.

Administrative Expenses

The average of expenses to administer the plan that is paid in the year preceding the most recent valuation and the anticipated expenses for the year following this valuation. The average is converted to a percentage of payroll and used as part of the Minimum Municipal Obligation calculation.

Amortization Payment

The annual payment required to eventually eliminate the unfunded actuarial accrued liability according to the schedule established in Act 205.

Funding Adjustment

Occurs when the actuarial value of assets exceeds the actuarial accrued liability; it is defined by Act 205 as 10 percent of the excess. This adjustment reduces the amount that must be contributed to the pension plan.

General Municipal Pension System State Aid

Annually municipalities receive a portion of the insurance premium tax levied on casualty insurance companies headquartered outside of Pennsylvania. If they have paid firefighters, they also receive a portion of the premium tax on out-of-state fire insurance companies. These taxes are distributed according to formula contained in Act 205.

Minimum Municipal Obligation

The amount that must be contributed to a pension plan by a municipality for a given year. The calculation of this amount uses the normal cost, anticipated administrative expenses, amortization payment or funding adjustment, and anticipated employee contributions to determine a municipality's contribution requirement. General Municipal Pension System State Aid may be used to reduce the contribution.

Normal Cost

The actuarial cost assigned to a given year to pay for the portion of the anticipated benefit derived from service during that year.

Unfunded Actuarial Accrued Liability

The amount by which the actuarial accrued liability exceeds the actuarial value of assets. A valuation will identify the value of changes in the unfunded actuarial accrued liability that result from changes in plan benefits, actuarial assumptions, or actuarial gains and losses.

Vesting

The participant's non-forfeitable right to receive a benefit, provided that the participant survives until benefit eligibility.