

November 11, 2009



Actuaries and Administrators  
145 Revere Drive  
Northbrook, Illinois 60062-1555  
847-509-7740 Fax: 847-509-7745  
www.TepferConsulting.com

Ms. Cindy Von Holten  
City of Sterling  
212 Third Avenue  
Sterling, IL 61081

RE: City of Sterling Police Pension Fund

Dear Cindy:

Enclosed are 2 copies of our actuarial valuation report for the **Sterling Police Pension Fund** for the fiscal year May 1, 2009 through April 30, 2010.

The results of our valuation indicate that the recommended minimum contribution from the City for the next tax year is **\$510,296 or 30.05%** of current payroll. This contribution coupled with the anticipated \$161,355 or 9.91% of current payroll to be collected from participating police officers will be sufficient to meet the State statutory requirements described in 40 ILCS 5/3. Further information is provided within our report. Under the State definition, the pension fund is 76.65% funded and is in *a strong* financial position.

With the publication of Statement No. 25 of the Governmental Accounting Standards Board, we have revised our report to include the calculation of the unadjusted Annual Required Contribution. (ARC) We have chosen to calculate this contribution as a level dollar funded amortization of the unfunded liability over a closed 40-year period beginning with the date of adoption of GASB 25. This amount is \$469,927 or 27.68% of participating payroll.

We ask that you review the sections entitled "Actuarial experience since the last actuarial valuation" and "Factors Influencing the Choice of Actuarial Assumptions" beginning on page 3 for a complete explanation of what has occurred since the last actuarial valuation.

Sincerely,

**TEPFER CONSULTING GROUP, LTD.**

A handwritten signature in blue ink, appearing to read 'AHT', is written over the printed name of Arthur H. Tepfer.

Arthur H. Tepfer, A.S.A., M.A.A.A.  
Consulting Actuary

AHT/lf

**CITY OF STERLING**  
**POLICE PENSION FUND**

**ACTUARIAL VALUATION**  
**AS OF MAY 1, 2009 FOR THE**  
**FISCAL YEAR ENDING APRIL 30, 2010**

**November 11, 2009**

	<u>Page</u>
<b>SECTION I DISCUSSION</b>	
Valuation Objectives	1
Results of Valuation	9
<b>SECTION II SUPPORTING EXHIBITS</b>	
<b>Summary of Results</b>	
Exhibit 1    General Valuation Results	10
Exhibit 2    Summary of Specific Valuation Results	11
Exhibit 3-A  Development of Recommended Minimum City Contribution	14
Exhibit 3-B  Development of Statutorily Required City Contribution	15
Exhibit 3-C  Reconciliation of the Change in the Statutorily Required Contribution	16
Exhibit 3-D  Derivation of Experience Gain or Loss	17
Exhibit 4-A  Summary Of Demographic Information	19
Exhibit 4-B  Age and Service Distribution	20
Exhibit 5-A  Asset Information	21
Exhibit 5-B  Development of Actuarial Value of Assets	23
Exhibit 5-C  Analysis of Investment Return	25
Exhibit 5-D  Thirty - Year Projection of Payments	26
<b>APPENDIX 1    GASB NO. 25 DISCLOSURE INFORMATION</b>	<b>27</b>
<b>APPENDIX 2    STATEMENT OF ACTUARIAL ASSUMPTIONS</b>	<b>29</b>
<b>APPENDIX 3    SUMMARY OF PRINCIPAL PLAN PROVISIONS</b>	<b>32</b>
<b>APPENDIX 4    GLOSSARY</b>	<b>35</b>

**Tepfer Consulting Group, Ltd.** was retained by the **City of Sterling and the City of Sterling Police Pension Fund** to perform an independent actuarial valuation for the Police Pension Fund. This valuation is permitted under 40 ILCS 5/22, Section 503.2.

The actuarial valuation was performed for the year ended April 30, 2010 and indicates a **statutorily required contribution in accordance with 40 ILCS 5/3, Section 125 of \$477,105 or 28.10% of member payroll, a recommended minimum contribution of \$510,296 or 30.05% of payroll, and an Annual Required Contribution in accordance with paragraph 36f of Statement No. 25 of the Governmental Accounting Standards Board of \$469,927 or 27.68% of payroll.** These contributions are net of contributions made by active member police officers during the fiscal year.

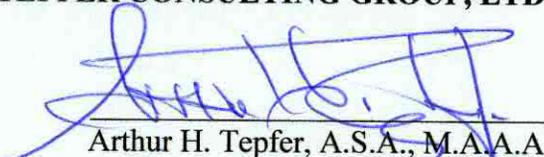
The results shown in this report have been calculated under the supervision of a qualified Actuary as defined in appropriate State statutes. All results are based upon demographic data submitted by the Police Pension Fund, financial data submitted by the Police Pension Fund, applications of actuarial assumptions, and generally accepted actuarial methods.

In our opinion, all calculations and procedures are in conformity with generally accepted actuarial principles and practices; and the results presented comply with the requirements of the applicable State statute, Actuarial Standards Board, or Statements of Governmental Accounting Standards, as applicable.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and future expectations, and represent a reasonable and adequate approach to the financing of the retirement program. The costs, actuarial liabilities and other information presented in this report, in our opinion, fully and fairly disclose the actuarial position of the plan.

The undersigned certifies that the results presented in this report are accurate and correct to the best of my knowledge.

**TEPFER CONSULTING GROUP, LTD.**



Arthur H. Tepfer, A.S.A., M.A.A.A.  
Enrolled Actuary #08-02352

November 11, 2009



VALUATION OBJECTIVES  
(Continued)

The actuarial cost method selected to determine plan contributions is the Entry Age Normal Cost Method. Under this actuarial cost method, ideally, the ongoing cost as a percentage of total payroll should remain fairly stable. The actuarial valuation process is usually repeated each year and is to a certain extent self-correcting. As part of this actuarial cost method, any deviation of actual experience from the chosen actuarial assumptions will be reflected in future contributions. A complete description of this actuarial cost method is explained in Appendix 4 of this report.

In this method, the normal cost is determined by assuming each member covered by the plan entered the plan under the same conditions that will apply to future plan entrants. The annual normal cost assigned to each year of an employee's career is calculated as a level percentage of his assumed earnings each year. These normal costs accumulate to the present value of the employee's benefit at his retirement age.

Under the Entry Age Normal Cost Method, the total funding of projected benefit costs is allocated between an unfunded liability, representing past benefit history, and future normal costs. This allocation is based on the assumption that the municipality will pay the normal cost for each plan year on a regular basis. Another feature of this method is that only the unfunded liability is affected by the experience of the plan, and therefore any adjustments are made in the future amortization payments.

Appendix 3 of this report contains a summary of the principal provisions of the applicable statute.

Comments on Recommended Minimum Contribution Level

Effective July 1, 1993, there were two changes to the State statute governing the determination of the required contribution to the Police Pension Fund. First, the *period* over which the amortization of any unfunded accrued liabilities is payable was extended 13 years from the year 2020 to the year 2033. Second, the method for determination of the *amount* of amortization payment was changed from a level dollar amount to an amount which will vary in dollars, but is expected to remain a level percentage of payroll. Effectively, these changes dramatically modify the funding pattern originally established and used since 1980 for plans covered under the statute. **On August 5, 1995, the Circuit Court of Cook County declared the changes in the State Statute to be unconstitutional.** On October 18, 1996, the Illinois Supreme Court reversed the Circuit Court decision and remanded the case back to the Court for a full hearing on the issues. The Circuit Court ultimately found the changes to be constitutionally acceptable.

VALUATION OBJECTIVES  
(Continued)

Despite the statutory language which may require an application of this liberalized approach, we feel that funding under the new method severely undermines the benefit security of the retirement system and transfers the payment for currently earned pensions to future generations of taxpayers. For these reasons, our valuation report presents a recommended minimum contribution which will operate to maintain the fundamental fiscal soundness of the retirement program, although a statutorily required contribution has also been calculated. The calculation of the recommended minimum contribution is based upon an amortization payment of any unfunded accrued liabilities as a level dollar amount over 40 years from July 1, 1993, the effective date of P.A. 87-1265. The calculation of the statutorily required contribution is based upon an amortization payment of any unfunded accrued liabilities as a level percentage of payroll over 40 years from July 1, 1993, the effective date of P.L. 87-1265.

Although, I sincerely do not agree with the method of determining the amortization of the unfunded accrued liability under the "new method" (I cannot and will not condone the calculation of the payment as a level percentage of payroll); nonetheless, I would be remiss if I did not advise my funds as to a "statutory" acceptable calculation under the State law. ***I patently consider the calculation to be actuarially unsound for funding of municipal retirement programs.***

Effective for periods beginning after June 15, 1996, the Governmental Accounting Standards Board has issued Statement No. 25 "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans". This Statement establishes a financial reporting framework for defined benefit pension plans that distinguishes between two categories of information: (a) current financial information about plan assets and financial activities and (b) actuarially determined information, from a long-term perspective, about the funded status of the plan and the progress being made in accumulating sufficient assets to pay benefits when due. The calculation of the Annual Required Contribution (ARC) is described in paragraph 36f of the Statement and is based upon an amortization payment of any unfunded accrued liabilities as either a level dollar amount or a level percentage of total payroll over a maximum of 40 years from the effective date of the Statement. Any significant increase in the total unfunded actuarial liability resulting from a change in actuarial methodology should be amortized over a period not less than 10 years.

Actuarial experience since the last actuarial valuation

As part of the actuarial valuation process, it is helpful to examine the actual experience of the fund as compared to the experience which is expected by the actuarial assumptions. The measurement of any deviations of actual to expected experience is commonly referred to as a "Gain and Loss Analysis". In performing this analysis, the actuary analyzes each actuarial assumption used in the valuation process. It is highly unlikely that actual experience will follow expected experience on a year-by-year basis. It is hoped that over the long term, if the actuarial assumptions are "reasonable", the total gains and losses will offset each other.

**VALUATION OBJECTIVES  
(Continued)**

A “gain and loss analysis’ is a useful tool to examine whether the actuarial assumptions used to determine the municipal tax levy are suitable. Care must be taken in placing too much credibility in a short-term analysis as the assumptions are more appropriately measured over the long term. Nonetheless, an annual evaluation of the actuarial assumptions will assist in identifying trends which, if unnoticed, can lead to inappropriate conclusions. When these trends are recognized, it is the actuary’s responsibility to modify one or more of the assumptions to better anticipate future experience.

Some assumptions are easier to measure than others. In small plans, credible analysis can generally be made regarding the economic (financial) assumptions. These primarily include investment and salary increase assumptions. Unfortunately, it is often impossible to establish credible long term analysis of demographic assumptions (rates of termination, disability, retirement and mortality). Therefore, in choosing demographic assumptions, the actuary generally relies upon standardized tabular assumptions modified only by fund-specific characteristics.

The actuarial gain and loss analysis for the current year is presented in Exhibit 3-C and 3-D of the report. Exhibit 3-C shows the impact of the actuarial gains or losses on the statutorily required contribution through a reconciliation of this contribution from the end of the prior valuation year to the end of the current valuation year. Exhibit 3-D derives the actuarial gain or loss in total as well as separating the individual financial and demographic components.

The overall experience gain (loss) for the year was \$ (1,423,746) or 9.82% of the accrued liability at the beginning of the plan year. The dollar amount for the plan’s current statutorily required contribution is 141.37% of the prior year’s contribution. When measured as a percentage of payroll, the contribution level has changed from 18.14% to 25.32%.

Factors Influencing the Choice of Actuarial Assumptions

As part of the consulting process, it is our policy to talk with selected members of the Board of Trustees for the **City of Sterling Police Pension Fund** in order to obtain information which will enable the Actuary to properly choose the actuarial assumptions which are most appropriate for the current cost determination for the pension fund.

Prior to the meeting, statistics are compiled concerning historical investment returns, salary increases, retirement incidence and other factors which are influential in the actuarial assumption setting process. Based upon an analysis of the specifics as they relate to the **City of Sterling Police Pension Fund** and a general understanding of the inter-relationships of the actuarial assumptions, the Board and the Actuary reach a mutual agreement as to the assumptions which will be used in the current actuarial valuation.

VALUATION OBJECTIVES  
(Continued)

Published statistics regarding experience for police and firefighters are available from the State of Illinois Department of Insurance. These statistics form the basis of the actuarial assumptions selected by the State Actuary in the valuation of pension funds covered under the Downstate Pension System. We have found in our consulting, that whenever appropriate, the actuarial assumptions used by the State Actuary are relied upon as a starting point. However, in order to make the calculations more "*Sterling-sensitive*", the analysis of the actual historical performance is carefully examined.

Experience Analysis

The results of our experience analysis indicate that most of the experience loss has been on the financial side (relating to investment return).

Demographic considerations

For this valuation, it was noted that the force and the pension fund continues to remain stable as to its size and demographic composition. It was observed that the number of inactive participants as compared to active participants in the Fund is acceptable and less than the State average (approximately 41% of the total participants are inactive as compared to 41% in the last valuation). Measured on a liability basis the Fund is also less than the State averages. Approximately 48% of the Fund's total liability is attributed to inactive participants compared to a State average of about 52%. These measurements indicate a demographically stable fund which is substantially stronger than the average fund in the State. The average age and service of the active participating group is also slightly less than the State average

What is of concern however, is that there are currently 5 officers who are eligible to retire and another 4 officers who will become eligible in the next 5 years. This represents almost 30% of the current active group. Pension payments are now generally fixed and overall financial planning can be achieved. Absent a large growth in the active force, with proper funding, the fund's position should remain relatively stable for the foreseeable future.

As would be expected in this situation, a moderate portion of the assets available for investment (75%) has been committed to provide benefits for existing pensioners and beneficiaries. Essentially then, 75% of the assets in the plan are already dedicated to cover the liabilities for the currently retired participants. This is a very acceptable situation given the strong funding levels. As indicated earlier, the average age and service of the active participating group is less than the State average, but the pension rolls keep growing and liabilities continue to increase. We will monitor closely the retirement patterns which emerge in later years to assure that the appropriate retirement rates are in place for our analysis.

VALUATION OBJECTIVES  
(Continued)

The demographic actuarial assumptions used for this valuation represent no change from those used in the prior valuation performed by our firm. These include, as a result of the publication of a recent independent study analyzing demographic experience among police and fire pension funds in the Downstate System, changes in the retirement, disability and withdrawal assumptions, as well as the use of a more modern mortality table from those used by the State Actuary.

Financial considerations

In these uncertain times, despite the drop in earnings, the fund continues to experience short-term investment growth as can be noted in the charts in Section 5B and 5C of this valuation. Furthermore, the fund continues to maintain strong funded ratios.

**However, during the 2009 fiscal year, investment income was less than the plan expenses. Essentially then, all of the investment income is being used to cover the expenses of the fund. Additionally, municipal contributions and contributions by active police officers are also being used to pay current expenses. These funds are generally the major source of new funds for investment purposes to accumulate reserves.** This is a warning sign that the fund is experiencing a change in growth patterns and will, therefore, not accumulate as rapidly as in prior years. Please refer to the chart in Exhibit 2 which illustrates the stability in growth. This remains a time for caution in overall investment philosophy.

The rate of return during the 2009 year was (13.14%) Despite this, the fund continues to generally earn acceptable rates of return over the short term. As shown in Exhibit 5-C of our report, the composite rate of return for the fund since 2000 is 2.70%. and the rate of return since 1988 is 6.02%. Comparative salary increases and the greater than average rates of investment return over the past years indicate that the general financial assumptions used by the State actuary continue to be inappropriate for this Fund.

**During the past fiscal year, there was a proper municipal contribution which has served the funding well.** The funding percentage decreased from 88.5% last year to 76.7% this year solely because of the poor investment return.

Like most other Police and Fire funds, the fund experienced an investment loss during the fiscal year ending April 30, 2009, but because of the use of the smoothing method for valuing plan assets, the effect on the contribution requirement was mitigated.

Based upon the comparative rate of funding (approximately 76%) as well as a comparison of actual rates of investment return to salary increases, we have determined that a continuation of the assumed investment return rate of 8% was unacceptable as a long-term assumption to be used in determining the funding requirements for the year May 1, 2009 to April 30, 2010.

**VALUATION OBJECTIVES  
(Continued)**

For this valuation, an interest rate of 7¾% was chosen to reflect the portfolio composition, investment philosophy and historical performance as compared to other funds in the State. This rate includes an inflation component of 2½%.

Furthermore, as a result of a recent study performed by our firm, we are continuing the actuarial assumption with regard to salary increases for active participants to a table which is more representative of increases in the Downstate system. The results of this study indicate that salaries increase more rapidly in the earlier years of employment and level off in the later years. The prior assumption anticipated a constant annual increase in salaries and we believe that in our current environment and in analyzing the actual salary growth of the participants, this approach is inappropriate. Consistent with the investment assumption, these tabular rates include an inflation component of 2½%.

The financial assumptions, including the continued use of the actuarial value of assets instead of market value, and except for the investment return assumption noted above indicate no change from the prior year.

Comparison with Other Funds

We are including a comparison to certain State averages which may prove helpful in assessing how the fund compares to similarly situated programs.

	<u>Sterling (2008)</u>	<u>State*</u>
Funded Ratio	76.65%	61.50%
Percentage of Liability for Inactives	48.42%	51.50%
Percentage of Total Assets for Inactives (market basis)	75.82%	83.74%

\* Based upon published reports for FYE 2006

Examination should be focused on the funding progress contained in Exhibit 2 of our report.

**VALUATION OBJECTIVES**  
**(Continued)**

Thirty-year Payout Projections

Exhibit 5D presents an illustration of projected payments from the Trust Fund for a 30-year period commencing with the valuation date. These projections are based upon the actuarial assumptions selected for the fund concerning death, disability and retirement actually occurring. Care should be taken in interpreting or relying on these results-- particularly for Funds with fewer than 50 participants. The credibility of this type of projection is rarely realized beyond 10 years.

## **RESULTS OF VALUATION**

The following exhibits present the results of our actuarial valuation of the **City of Sterling Police Pension Fund** for the fiscal year May 1, 2009 through April 30, 2010.

Exhibit 1 indicates that the recommended minimum contribution from the City is \$510,296 or 30.05% of total participating payroll. Under the actuarial cost method selected, this percentage of payroll should remain reasonably level over the lifetime of the plan.

Exhibits 2 and 3 provide specific information used to develop the recommended minimum and statutorily required City contribution.

Exhibit 4 presents a brief description of the demographic characteristics of the current member group.

Exhibit 5 shows information relating to the pension assets.

Appendix 1 provides information in accordance with the Governmental Accounting Standards Board relating to financial disclosure of pension costs in the auditor's report.

**GENERAL VALUATION RESULTS FOR FISCAL YEAR**  
**MAY 1, 2009 THROUGH APRIL 30, 2010**

1.	Entry Age Normal Cost:	\$ 331,798
2.	Unfunded Actuarial Accrued Liability (or Surplus):	3,385,992
3.	Actuarial Value of Assets:	11,113,057
4.	Annual Salaries of Active Police Officers:	1,628,207
5.	Recommended Minimum Contribution from the City:	510,296
	Contribution Percentage:	30.05%*

\* Projected for the fiscal year ending April 30, 2010.

SUMMARY OF SPECIFIC VALUATION RESULTS

	<u>Number</u>	<u>Actuarial Present Value of Projected Benefits</u>	<u>Entry Age Normal Cost</u>
1. Active Police Officers:	30		
Retirement Pension:		\$8,769,677	\$227,472
Survivors Pension:		258,785	13,753
Disability Pension:		968,728	59,305
Withdrawal Pension:		290,021	31,268
	<hr/>	<hr/>	<hr/>
TOTAL . . . . .	30	\$10,287,211	\$331,798
2. Inactive Police Officers and Survivors:			
Normal Retirees:	16	\$6,293,934	
Alternate Payees:	0	0	
Widows (Survivors):	5	727,175	
Children (Survivors):	0	0	
Disabled Retirees:	0	0	
Deferred Vested:	0	0	
Terminated/Separated:	<u>0</u>	<u>0</u>	
TOTAL . . . . .	21	\$7,021,109	

**SUMMARY OF SPECIFIC VALUATION RESULTS  
(Continued)**

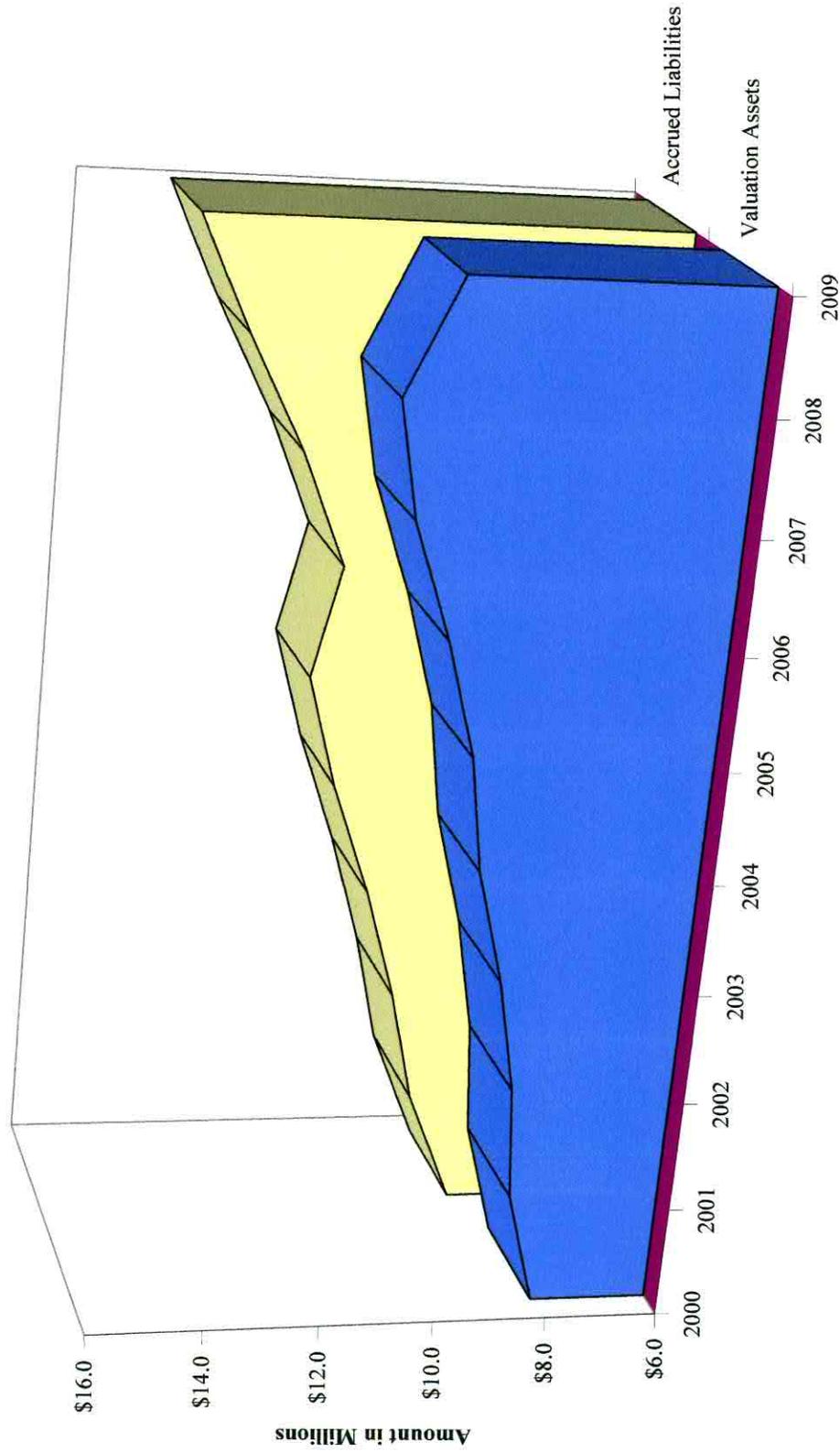
3.	Total Actuarial Present Value of Projected Benefits:	\$17,308,320
4.	Actuarial Present Value of Future Normal Costs:	2,809,271
5.	Entry Age Accrued Liability: [(3) - (4)]	14,499,049
6.	Actuarial Value of Assets:	11,113,057
7.	Unfunded Actuarial Accrued Liability (or Surplus): [(5) - (6)]	3,385,992
8.	Funded Ratio Percentage: [(6) ÷ (5)] x 100	76.65%

**HISTORY OF FUNDED PERCENTAGES**

<u>For the Year beginning May 1</u>	<u>Valuation Assets</u>	<u>Accrued Liabilities</u>	<u>Funded Percentage</u>
2009	\$11,113,057	\$14,499,049	76.65%
2008	11,967,931	13,519,812	88.52%
2007	11,537,623	12,432,905	92.80%
2006	10,778,895	11,544,004	93.37%
2005	10,159,721	11,967,912	84.89%
2004	9,832,522	11,342,940	86.68%
2003	9,248,119	10,561,600	87.56%
2002	8,834,759	9,901,011	89.23%
2001	8,652,557	9,383,686	92.21%
2000	8,053,832	8,477,880	95.00%

The chart on the following page presents a progression of these percentages in graphical form.

COMPARISON OF ASSETS AND LIABILITIES



**DEVELOPMENT OF RECOMMENDED MINIMUM CITY CONTRIBUTION**

	Fiscal Year May 1, 2009 through <u>April 30, 2010</u>
1. Entry Age Normal Cost:	\$331,798
2. Recommended Minimum Payment to Amortize Unfunded Accrued Liability <u>as a level dollar amount</u> over 24.16701 Years from May 1, 2009:	291,544
3. Interest on (1) and (2):	48,309
4. Credit for Surplus:	0
5. Total Recommended Minimum Contribution for Fiscal Year 2010: [(1) + (2) + (3) + (4)]	671,651
6. Active Member Contributions (9.91% of Salaries):	161,355
7. Net Recommended Minimum City Contribution: [(5) - (6)]	510,296

**DEVELOPMENT OF STATUTORILY REQUIRED CITY CONTRIBUTION**  
*(NOTE THAT THIS CONTRIBUTION CALCULATION IS NOT RECOMMENDED)*

	Fiscal Year May 1, 2009 through <u>April 30, 2010</u>
1. Entry Age Normal Cost:	\$331,798
2. Minimum Payment to Amortize Unfunded Accrued Liability <u>as a level percentage of payroll</u> over 24.16701 Years from May 1, 2009:	260,740
3. Interest on (1) and (2):	45,922
4. Credit for Surplus:	0
5. Total Statutorily Required Contribution for Fiscal Year 2010: [(1) + (2) + (3) + (4)]	638,460
6. Active Member Contributions (9.91% of Salaries):	161,355
7. Net Statutorily Required City Contribution: [(5) - (6)]	477,105

**RECONCILIATION OF THE CHANGE  
IN THE STATUTORILY REQUIRED CITY CONTRIBUTION**

1.	Statutorily Required Contribution for Year ending April 30, 2009:	\$304,077
2.	Increase in Normal Cost and Amortization Payment due to anticipated pay changes:	12,712
3.	Increase/(Decrease) in Normal Cost resulting from actual pay changes:	( 4,511)
4.	Effect of Asset Smoothing:	120,212
5.	Increase/(Decrease) resulting from changes in assumptions:	31,279
6.	Increase/(Decrease) resulting from other demographic and financial sources (retirements, deaths, new entrants, salary changes, etc.):	13,336
7.	Statutorily Required Contribution for Year ending in 2009:	477,105

**DERIVATION OF EXPERIENCE GAIN(LOSS) AS OF MAY 1, 2009**

1.	Unfunded Actuarial Accrued Liability at May 1, 2008:	\$1,551,881
2.	Normal Cost Due at May 1, 2008:	310,607
3.	Interest on (1) and (2) to May 1, 2009 (at 8.00% per year):	148,999
4.	Contributions made for the prior year with interest to May 1, 2009:	455,430
5.	Expected Unfunded Actuarial Accrued Liability at May 1, 2009 Before Assumption Changes [(1) + (2) + (3) - (4)]:	1,556,057
6.	Change in Unfunded Actuarial Accrued Liability due to Assumptions Change at May 1, 2009:	406,189
7.	Expected Unfunded Actuarial Accrued Liability at May 1, 2009 [(5) + (6)]:	1,962,246
8.	Actual Unfunded Actuarial Accrued Liability at May 1, 2009:	3,385,992
9.	Gain (Loss) for the prior Plan Year [(7) - (8)]:	\$ (1,423,746)

**DERIVATION OF EXPERIENCE GAIN(LOSS) AS OF MAY 1, 2009**

The experience gain (loss) reported above is the net result of the following:

1.	<u>FINANCIAL SOURCES</u>	
	a) Investment experience (based upon market value of assets):	\$ (2,270,161)
	b) Contribution experience:	( 31,462)
	c) Benefit Payments experience:	13,778
	d) Salary increases (greater)/lower than expected:	<u>48,020</u>
	Total from Financial Sources:	(2,239,825)
2.	<u>DEMOGRAPHIC SOURCES</u>	
	Mortality, retirement, disability, termination, etc.:	89,311
3.	<u>ACTUARIAL ADJUSTMENTS</u>	
	Market value adjustment for asset smoothing, including expenses	726,768
4.	<u>GAIN (LOSS) ALL SOURCES</u>	
	Total Gain (Loss) for the prior Plan Year [(1) + (2) + (3)]	\$ (1,423,746)

SUMMARY OF DEMOGRAPHIC INFORMATION AS OF MAY 1, 2009

	<u>Number</u>	<u>Projected Annual Salaries (Fiscal Year 2010)</u>
Active Police Officers:	30	\$1,628,207

	<u>Number</u>	<u>Total Monthly Benefits</u>
Normal Retirees:	16	\$ 44,085
Alternate Payees:	0	0
Survivors (Widows):	5	8,233
Survivors (Children):	0	0
Disabled Retirees:	0	0
Deferred Vested:	0	0
Terminated/Separated:	0	0 *

\* Return of Contributions

The actuarial valuation was performed as of May 1, 2009 to determine contribution requirements for fiscal year 2010.

AGE AND SERVICE DISTRIBUTION

Attained Age	COMPLETED YEARS OF SERVICE											Total	Average Salaries
	0-1	2-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+			
15-19	2											0	-
20-24		3										5	38,891
25-29		4										4	42,547
30-34		2		1								3	46,068
35-39			2	3								5	55,693
40-44				2	2							4	59,683
45-49					1	3						4	62,494
50-54						1						3	70,709
55-59									2			2	73,023
60-64									1			0	-
65+												0	-
<b>TOTAL</b>	<b>2</b>	<b>9</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>54,274</b>

Age = 37.63 Years

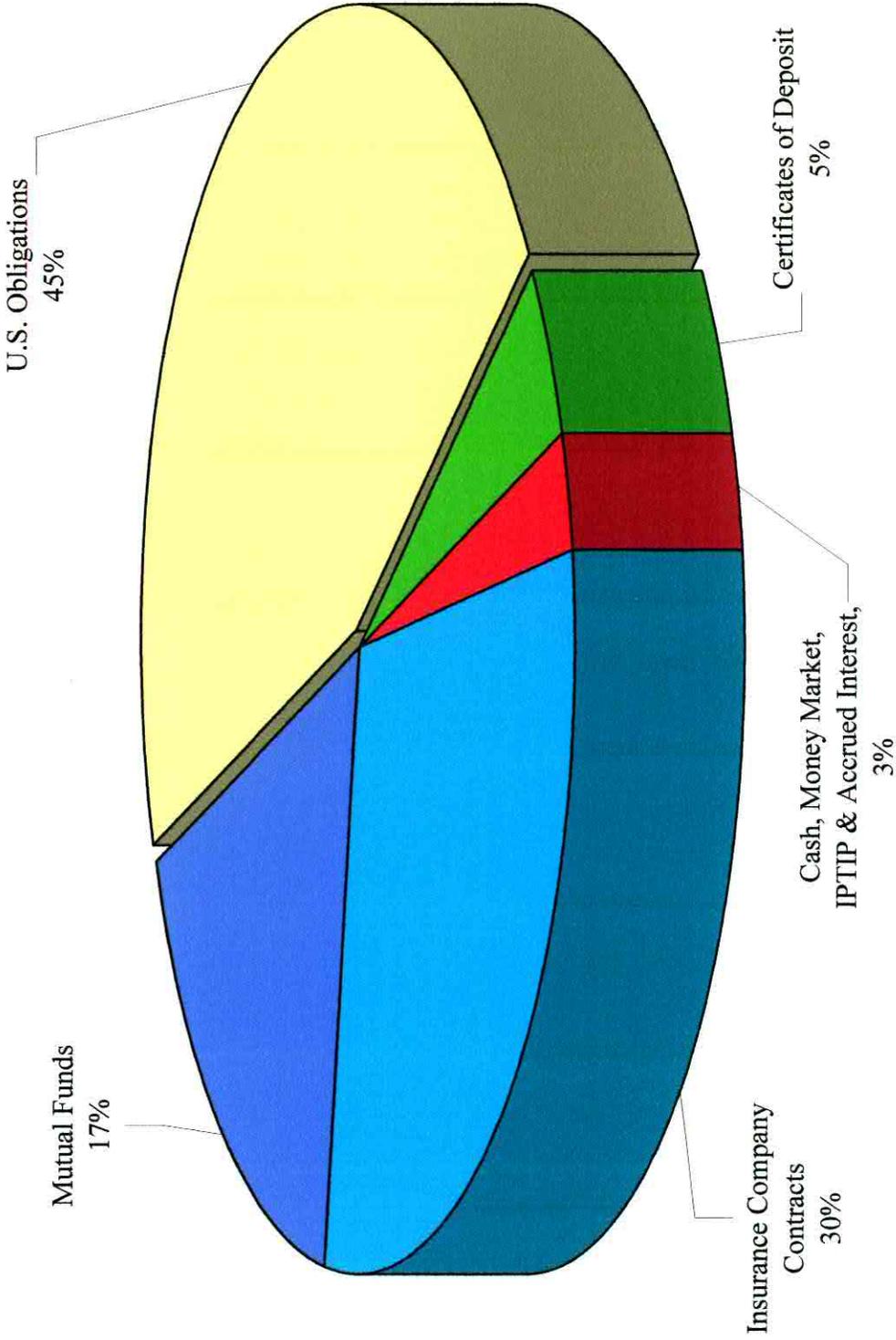
Service = 13.10 Years

**ASSET INFORMATION**

Cash, Money Market, IPTIP	\$273,480
Certificates of Deposit	440,685
State and Local Obligations	0
U.S. Government Obligations	4,183,413
Insurance Company Contracts	2,774,312
Pooled Investment Accounts	0
Mutual Funds	1,566,973
Common Stock	0
Preferred Stock	0
Taxes Receivable	0
Accrued Interest	22,018
Other Receivables	0
Net Liabilities	0
	<hr/>
Net Present Assets at Market Value	\$9,260,881

The chart on the following page shows the percentage of invested assets.

ASSET INFORMATION



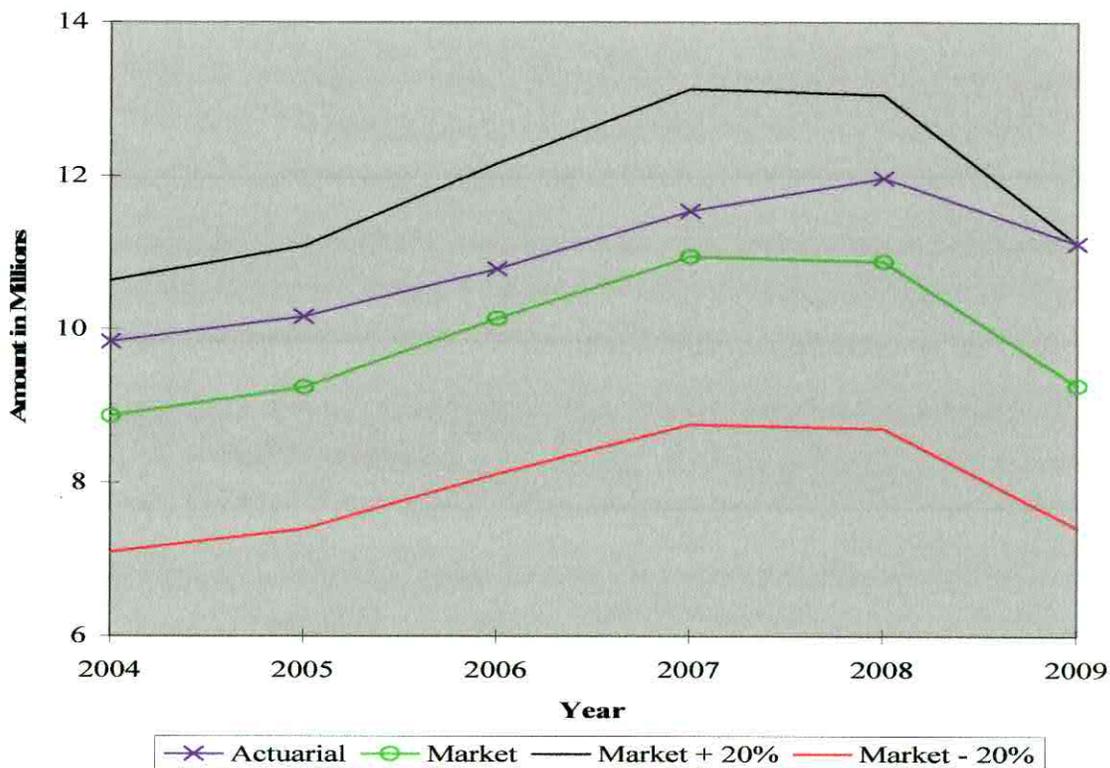
**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS**

1.	Actuarial Value of Assets, May 1, 2008	\$11,967,931
2.	Contributions Received During 2008-2009	439,808
3.	Benefit Payments and Expenses Made During 2008-2009	682,153
4.	Assumed Interest at 8.00% on (1), (2) and (3)	948,548
5.	Preliminary Actuarial Value of Assets: [(1) + (2) - (3) + (4)]	12,674,134
6.	Market Value, May 1, 2009	9,260,881
7.	Preliminary Adjustment Account:	
	a) Amount: [(5) - (6)]	3,413,253
	b) Percentage: [(7a) ÷ (6) x 100%]	36.86%
8.	Final Adjustment Amount	
	a) Amount	1,852,176
	b) Percentage	20.00%
9.	Final Actuarial Value of Assets, May 1, 2009: [(6) + (8a)]	11,113,057
10.	Three-Year Adjustment Amount (Effective May 1, 2008-Next Adjustment May 1, 2011)	0
11.	Final Actuarial Value of Assets, May 1, 2009	\$ 11,113,057

**ASSET HISTORY**

<u>For the Year beginning May 1</u>	<u>Actuarial Value of Assets</u>	<u>Market Value of Assets</u>
2009	\$11,113,057	\$9,260,881
2008	11,967,931	10,879,937
2007	11,537,623	10,942,076
2006	10,778,895	10,132,598
2005	10,159,721	9,236,110
2004	9,832,522	8,862,120

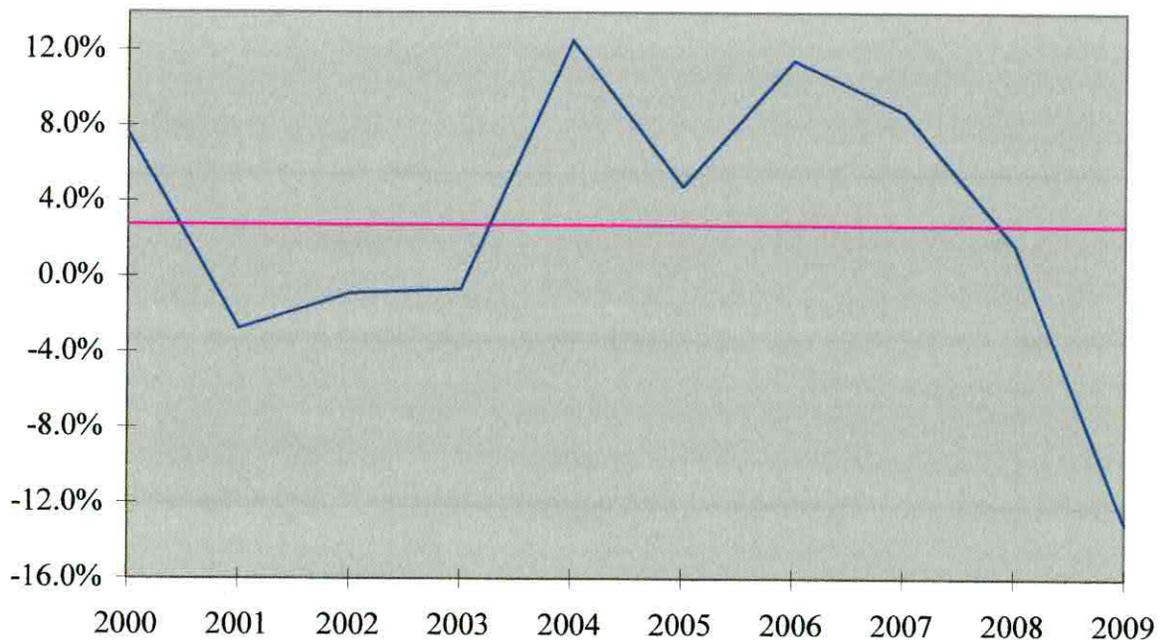
The chart below presents a comparison between the Actuarial Value of Assets and the Market Value of Assets for the current year and the five preceding years. The chart also illustrates the corridor 20% above and 20% below the Market Value of Assets.



**ANALYSIS OF INVESTMENT RETURN**

<u>Fiscal Year Ending April 30</u>	<u>Annual Rate of Return</u>
2009	-13.14%
2008	1.66
2007	8.73
2006	11.45
2005	4.77
2004	12.50
2003	-0.07
2002	-0.91
2001	-2.79
2000	7.52
 <u>Composite</u>	
2000-2009	2.70%

The following chart presents a progression of these percentages in graphical form.



THIRTY - YEAR PROJECTION OF PAYMENTS

Year	Payouts from Active Group Upon		Death	Retirement	Disability	Payouts from		Total
	Termination	Deferred Pension				Retired Group	Deferred Pensioners	
2009	5,835	0	5,090	71,237	6,378	627,832	0	716,372
2010	7,381	0	6,989	131,369	12,693	620,598	0	779,030
2011	7,421	0	7,105	174,229	19,010	612,581	0	820,346
2012	7,360	0	8,934	225,985	24,764	603,768	0	870,811
2013	3,474	0	11,161	266,478	30,387	594,156	0	905,656
2014	2,536	0	12,753	323,758	36,018	583,608	0	958,673
2015	801	0	14,788	378,749	41,695	572,072	0	1,008,105
2016	0	0	16,105	443,349	47,590	559,513	0	1,066,557
2017	0	0	18,020	497,633	53,338	545,894	0	1,114,885
2018	0	0	19,374	536,238	59,108	531,240	0	1,145,960
2019	0	0	21,138	572,476	64,963	515,580	0	1,174,157
2020	0	0	22,415	617,513	70,713	498,997	0	1,209,638
2021	0	0	24,024	682,464	75,909	481,610	0	1,264,007
2022	0	0	25,144	755,936	81,413	463,449	0	1,325,942
2023	0	0	26,717	802,183	86,326	444,693	0	1,359,919
2024	0	0	27,869	839,023	92,229	425,512	0	1,384,633
2025	0	0	29,189	890,068	98,100	406,056	0	1,423,413
2026	0	0	30,115	930,199	104,761	386,447	0	1,451,522
2027	0	0	31,315	966,339	109,997	366,821	0	1,474,472
2028	0	0	32,076	1,015,994	114,224	347,243	0	1,509,537
2029	0	0	33,027	1,047,870	118,326	327,703	0	1,526,926
2030	0	0	33,652	1,099,718	123,697	308,195	0	1,565,262
2031	0	0	34,416	1,129,729	130,687	288,778	0	1,583,610
2032	0	0	34,808	1,177,193	138,389	269,503	0	1,619,893
2033	0	0	35,326	1,208,636	141,837	250,366	0	1,636,165
2034	0	0	35,416	1,241,503	144,984	231,325	0	1,653,228
2035	0	0	35,682	1,288,746	149,479	212,367	0	1,686,274
2036	0	0	35,136	1,331,543	151,652	193,499	0	1,711,830
2037	0	0	35,115	1,356,340	152,885	174,750	0	1,719,090
2038	0	0	34,516	1,367,638	156,921	156,268	0	1,715,343

**GASB STATEMENT NO. 25 DISCLOSURE INFORMATION**

**DEVELOPMENT OF THE ANNUAL REQUIRED CONTRIBUTION OF THE  
MUNICIPALITY**

	Fiscal Year May 1, 2009 through <u>April 30, 2010</u>
1. Entry Age Normal Cost	\$331,798
2. Actuarial Accrued Liability	14,499,049
3. Actuarial Value of Assets	11,113,057
4. Unfunded Actuarial Accrued Liability	3,385,992
5. Minimum Payment to Amortize Unfunded Actuarial Accrued Liability Over 40 Years from Effective Date of Application of GASB 25 (28 years remaining)	299,484
6. Total Annual Required Contribution for Fiscal Year April 30, 2010: [(1) + (5)]	631,282
7. Active Member Contributions (9.91% of Salaries):	161,355
8. <b>Annual Required Contribution (ARC) payable at the beginning of the current fiscal year: [(6) - (7)]</b>	<b>469,927</b>

**GASB STATEMENT NO. 25 DISCLOSURE INFORMATION**  
**(Continued)**

NOTES:

- The Annual Required Contribution as of May 1, 2009 has been determined under the Governmental Accounting Standards Board Statement No. 25 and is required disclosure for the fiscal year ending April 30, 2010. The Entry Age Normal Cost and the Actuarial Accrued Liability were determined using the Entry Age Normal Actuarial Cost Method.
- The Entry Age Normal Cost has been determined as a level percentage of projected payroll of the active members of the group. The amortization method for the Unfunded Actuarial Accrued Liability is determined as a level dollar amount over the closed Maximum Amortization Period as defined in Governmental Accounting Standards Board Statement No. 25.
- All values were determined on the basis of the actuarial assumptions and methods as more fully described in Appendix 2 of this report.

**ACTUARIAL ASSUMPTIONS**

***Mortality***

**Active Lives**

RP-2000 Combined Healthy Mortality Table (male) with blue collar adjustment and with a 200% load for participants under age 50 and 125% for participants age 50 and over. Five percent (5%) of deaths amongst active police officers are assumed to be in the performance of their duty.

**Non-Active Lives**

RP-2000 Combined Healthy Mortality Table (male) with blue collar adjustment and with a 200% load for participants under age 50 and 125% for participants age 50 and over.

***Investment Return***

7.75% per annum, compounded annually (net of expenses).

***Termination***

Illustrative rates of withdrawal from the plan for reasons other than death or disability are as follows:

<u>Age</u>	<u>Rate of Withdrawal</u>
25	.0734
30	.0416
35	.0223
40	.0119
45	.0102
50	---

It is assumed that terminated police officers will not be rehired.

***Salary Increases***

Representative values of assumed salary increases are as follows:

<u>Age</u>	<u>Increase %</u>
25	4.8611
30	2.9848
35	2.0341
40	1.5239
45	1.3083
50	1.1846
55	1.1220

An additional inflation allowance of 2.50% per year is added to the above.

**ACTUARIAL ASSUMPTIONS  
(Continued)**

***Disability Rates***

Incidence of disability amongst police officers eligible for disability benefits:

<u>Age</u>	<u>Rate</u>
25	.0013
30	.0026
35	.0044
40	.0071
45	.0108
50	.0159

15% of disabilities amongst active police officers are assumed to be in the performance of their duty.

***Retirement Rates***

Retirements are assumed to occur between the ages of 50 and 69 in accordance with the following table:

<u>Age</u>	<u>Rate of Retirement</u>	<u>Age</u>	<u>Rate of Retirement</u>
50	.36	60	.22
51	.22	61	.30
52	.18	62	.39
53	.19	63	.48
54	.19	64	.57
55	.20	65	.65
56	.20	66	.74
57	.20	67	.83
58	.21	68	.91
59	.21	69	1.00

**ACTUARIAL ASSUMPTIONS  
(Continued)**

***Expenses***

None assumed.

***Marital Status***

85% of police officers are assumed to be married.

***Spouse's Age***

Wives are assumed to be 3 years younger than their husbands.

***Actuarial Asset Basis***

A preliminary actuarial value of assets is calculated by accumulating the prior year's actuarial value with adjustments for contributions and benefit payments at the valuation interest rate. The market value is subtracted from the preliminary actuarial value. The difference, the preliminary adjustment account, is divided by the market value. Then using the following table, the final actuarial value of assets is calculated by adding the final adjustment account to the market value.

<b><u>Percentage of Market Value (Plus or Minus)</u></b>	
<b><u>Preliminary Adjustment Account</u></b>	<b><u>Final Adjustment Account</u></b>
0% to 10%	Same as preliminary adjustment account
10% to 20%	10% plus 2/3 of the excess over 10%
20% to 30%	16 2/3% plus 1/3 of the excess over 20%
Over 30%	20%

Effective May 1, 2011, a 3-year cumulative analysis of the actuarial value of assets will be made. If the final actuarial value differentiates by more than 10% (plus or minus) from the market value of assets, the final actuarial value of assets will be further adjusted to equal 90% or 110% of the market value of assets.

***Actuarial Cost Method:***

Entry Age Normal Cost

---

**SUMMARY OF PRINCIPAL PLAN PROVISIONS**

**Definitions**

**Police Officer (3-106):** Any person appointed to the police force and sworn and commissioned to perform police duties.

**Persons excluded from Fund (3-109):** Part-time officers, special police officer, night watchmen, traffic guards, clerks and civilian employees of the department. Also, police officers who fail to pay the required fund contributions or who elect the Self-Managed Plan option.

**Creditable Service (3-110):** Time served by a police officer, excluding furloughs in excess of 30 days, but including leaves of absences for illness or accident and periods of disability where no disability pension payments have been received and also including up to 3 years during which disability payments have been received provided contributions are made.

**Pension (3-111)**

***Normal Pension Age***

Age 50 with 20 or more years of creditable service.

***Normal Pension Amount***

50% of annual salary held in the year preceding retirement; or for persons terminating on or after July 1, 1987, the annual salary held on the last day of service, whichever is greater plus 2% of such annual salary for service in excess of 20 years (total maximum 20%), plus 1% of such annual salary for additional service in excess of 30 years (total maximum 5%); or for persons terminating on or after January 1, 1999, 50% of the greater of the annual salary held in the year preceding retirement or the annual salary held on the last day of service, plus 2½% of such annual salary for service from 20 to 30 year (maximum 25%)].

Minimum Monthly Benefit: \$1,000

Maximum Benefit Percentage: 75% of salary

***Mandatory Retirement Pension Date***

Mandatory retirement due to age by law with between 8 and 20 years of creditable service.

***Mandatory Pension Amount***

2½% of annual salary held in the year preceding retirement times years of creditable service, or for persons terminating on or after July 1, 1987, 2½% of annual salary held on the last day of service times years of credible service, whichever is greater.

**SUMMARY OF PRINCIPAL PLAN PROVISIONS**  
**(Continued)**

***Termination Retirement Pension Date***

Separation of service (not mandatory) after Pension Date: completion of between 8 and 20 years of creditable service.

***Termination Pension Amount***

Commencing at age 60, 2½% of annual salary held in the year preceding termination times years of creditable service or refund of contributions, or for persons terminating on or after July 1, 1987, 2½% of annual salary held on the last day of service times years of credible service, whichever is greater.

***Pension Increase***

**Non-Disabled**

3% increase of the original pension amount after attainment of age 55 for each year elapsed since retirement, followed by an additional 3% of the original pension amount on each January thereafter. Effective July 1, 1993, 3% of the amount of pension payable at the time of the increase including increases previously granted, rather than 3% of the originally granted pension amount.

**Disabled**

3% increase of the original pension amount after attainment of age 60 for each year he or she received pension payments, followed by an additional 3% of the original pension amount in each January thereafter.

**Pension to Survivors (3-112)**

***Death of Retired Member***

100% of pension amount to surviving spouse (or dependent children).

***Death While in Service (Not in line of duty)***

With 20 years of creditable service, the pension amount earned as of the date of death.

With between 10 and 20 years of creditable service, 50% of the salary attached to the rank for the year prior to the date of death.

***Death in Line of Duty***

100% of the salary attached to the rank for the last day of service year prior to date of death.

***Minimum Survivor Pension***

\$1,000 per month to all surviving spouses.

SUMMARY OF PRINCIPAL PLAN PROVISIONS  
(Continued)

**Disability Pension - Line of Duty (3-114.1)**

***Eligibility***

Suspension or retirement from police service due to sickness, accident or injury while on duty.

***Pension***

Greater of 65% of salary attached to rank at date of suspension or retirement and the retirement pension available. Minimum \$1,000 per month.

**Disability Pension - Not on Duty (3-114.2)**

***Eligibility***

Suspension or retirement from police service for any cause other than while on duty.

***Pension***

50% of salary attached to rank at date of suspension or retirement. Minimum \$1,000 per month.

**Other Provisions**

***Marriage After Retirement (3-120)***

No surviving spouse benefit available.

***Refund (3-124)***

At death prior to completion of 10 years of service, contributions are returned without interest to widow.

At termination with less than 20 years of service, contributions are refunded upon request.

***Contributions by Police Officers (3-125.1)***

Beginning January 1, 2001, 9.91% of salary including longevity, but excluding overtime pay, holiday pay, bonus pay, merit pay or other cash benefit.

---

## GLOSSARY

***Actuarial Accrued Liability***

See *Entry Age Normal Cost Method*

***Actuarial Assumptions***

The economic and demographic predictions used to estimate the present value of the plan's future obligations. They include estimates of investment earnings, salary increases, mortality, withdrawal and other related items. The *Actuarial Assumptions* are used in connection with the *Actuarial Cost Method* to allocate plan costs over the working lifetimes of plan participants.

***Actuarial Cost Method***

The method used to allocate the projected obligations of the plan over the working lifetimes of the plan participants. Also referred to as an *Actuarial Funding Method*.

***Actuarial Funding Method***

See *Actuarial Cost Method*

***Actuarial Gain (Loss)***

The excess of the actual *Unfunded Actuarial Accrued Liability* over the expected *Unfunded Actuarial Accrued Liability* represents an *Actuarial Loss*. If the expected *Unfunded Actuarial Accrued Liability* is greater, an *Actuarial Gain* has occurred.

***Actuarial Present Value***

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of *Actuarial Assumptions*.

***Actuarial Value of Assets***

The asset value derived by using the plan's *Asset Valuation Method*.

***Asset Valuation Method***

A valuation method designed to smooth random fluctuations in asset values. The objective underlying the use of an asset valuation method is to provide for the long-term stability of employer contributions.

***Employee Retirement Income Security Act of 1974 (ERISA)***

The primary federal legislative act establishing funding, participation, vesting, benefit accrual, reporting, and disclosure standards for pension and welfare plans.

**GLOSSARY**  
**(Continued)**

***Entry Age Normal Cost Method***

One of the standard actuarial funding methods in which the *Present Value of Projected Plan Benefits* of each individual included in the *Actuarial Valuation* is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The portion of this *Actuarial Present Value* allocated to a valuation year is called the *Normal Cost*. The portion of this *Actuarial Present Value* not provided for at a valuation date by the *Actuarial Present Value* of future *Normal Costs* is called the *Actuarial Accrued Liability*.

***Normal Cost***

The portion of the *Present Value of Projected Plan Benefits* that is allocated to a particular plan year by the *Actuarial Cost Method*. See *Entry Age Normal Cost Method* for a description of the Normal Cost under the *Entry Age Normal Cost Method*.

***Present Value of Future Normal Costs***

The present value of future normal costs determined based on the *Actuarial Cost Method* for the plan. Under the *Entry Age Normal Cost Method*, this amount is equal to the excess of the *Present Value of Projected Plan Benefits* over the sum of the *Actuarial Value of Assets* and *Unfunded Actuarial Accrued Liability*.

***Present Value of Projected Plan Benefits***

The present value of future plan benefits reflecting projected credited service and salaries. The present value is determined based on the plan's actuarial assumptions.

***Statement No. 25 of the Governmental Accounting Standards Board (GASB No. 25)***

The accounting statement that established the standards of financial accounting and reporting for the financial statements of defined benefit pension plans.

***Unfunded Actuarial Accrued Liability***

The excess of the *Actuarial Accrued Liability* over the *Actuarial Value of Assets*.