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**City of Hartford
Municipal
Employee's
Retirement Fund
(MERF)**

Actuarial Survey

July 1, 2002

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Section I

Actuarial Costs for Maintaining MERF

	Police	Firefighters	Board of Education	General Government	Total Membership
Active Membership					
Number of Employees	425	361	1,097	636	2,519
Annual Payroll (000)	(1) \$29,876	\$22,260	35,417	\$29,945	\$117,498
Normal Actuarial Costs					
A. Actuarial Present Value of Future Benefits (000)					
Active Members	\$150,018	\$125,209	\$107,877	\$143,339	\$526,443
Terminated Non-Vested Members	374	314	273	359	1,320
Terminated Vested Members	4,464	240	2,042	6,994	13,740
Retired Members	160,568	156,033	65,147	160,166	541,914
Old Plans COLA 1987/1990/1997/1999/2001	<u>1,656</u>	<u>1,582</u>	<u>2,029</u>	<u>358</u>	<u>5,625</u>
Total	\$317,080	\$283,378	\$177,368	\$311,216	\$1,089,042
B. Valuation Assets (Adjusted Value) (000)					
	\$303,308	\$274,240	\$116,761	\$266,081	\$960,390*
C. Actuarial Present Value of Future Normal Costs (A) - (B) (000)					
	\$13,772	\$9,138	\$60,607	\$45,135	\$128,652
D. Actuarial Present Value of Future Salaries (000)					
	\$236,979	\$216,577	\$399,532	259,117	\$1,112,205
E. Normal Actuarial Costs as Percentage of Payroll					
Service Pension (C)/(D)	(2) 5.81%	4.22%	15.17%	17.42%	
Disability Pension	(3) <u>3.00%</u>	<u>3.00%</u>	<u>1.00%</u>	<u>1.00%</u>	
Total Normal Cost Percent	8.81%	7.22%	16.17%	18.42%	
F. Employee Contributions					
	<u>7.84%</u>	<u>8.00%</u>	<u>4.01%</u>	<u>5.39%</u>	
G. Net Normal Actuarial Costs Payable by City (E) - (F)					
	(4) 0.97%	(0.78%)	12.16%	13.03%	

* Includes \$3.0 million receivable from CMERS.

- (1) Salaries have been adjusted for groups in negotiations by 3% (was 3.3% last year) per year for the period of each open contract, and non-bargaining groups by 3% (was 3.3% last year) per year for one full fiscal year from the measurement date.
- (2) Normal Actuarial Costs as level percentage of future payrolls (including overtime) for funding actuarial present values required for all future service pensions, survivor's benefits thereon, and refunds on terminations.
- (3) Annual term Normal Actuarial Costs for establishing actuarial liabilities for new disability pensions, and survivor benefits thereon, at time pensions are approved.
- (4) Social Security (F.I.C.A.) taxes are also paid by the City and Employees, except for primarily Police and Firefighters. The tax rate is 7.65% for 2002 and 7.65% for 2003 and is applied to earnings below the wage base. For 2002 the wage base is \$84,900, increasing to \$87,000 for 2003. All employees hired on or after April 1, 1986 must be covered by the Medicare portion of the Social Security Act. The Medicare tax rate is 1.45%.

Section II

Actuarial Balance Sheet as of July 1, 2002

Valuation Assets on July 1, 2002 (Adjusted Value)

Investments held by City Treasurer (includes Cash and Accounts Payable)	\$ 13,667,000
Assets held by Banks as Investment Managers and Custodians at Adjusted Value (1)	939,499,000
Estimated Experience Assets of One Insurance Company (including Reserves for Purchased Annuities)	4,224,000
Receivable from CMERS*	<u>3,000,000</u>
Total Valuation Assets (Adjusted Value) July 1, 2002	\$960,390,000

Actuarial Liabilities on July 1, 2002

Actuarial Liability for Inactive Members (2)

Regular Retirement Annuities	\$464,386,000 (3)	
Disability Retirement Annuities	58,443,000	
Survivor-Only Annuities	24,710,000	
Deferred Benefits for Terminated Non-Vested Members	1,320,000	
Deferred Benefits for Terminated Vested Members	<u>13,740,000</u>	
		562,599,000

Actuarial Liability for Future Retirement Benefits for Currently Active Members (4)	<u>397,791,000</u>
Total Actuarial Liabilities	\$960,390,000

(1) See Actuarial Assumptions for explanation of Adjusted Value of Valuation Assets. Cost basis and market value are shown on following page.

(2) Includes actuarial liabilities for retiree Cost of Living Adjustment (COLA) effective July 1, 1987, July 1, 1990, July 1, 1997, July 1, 1999, and July 1, 2001 for both MERF and the unfunded plans (PBF, FRF, and RAF). Unfunded plans COLA actuarial liability included is \$3,078,000 for 1987 COLA, \$813,000 for 1990 COLA, \$1,347,000 for 1997 COLA, \$267,000 for 1999 COLA, and \$120,000 for 2001 COLA.

(3) Includes actuarial liabilities for annuities purchased from insurance companies revalued on the actuarial basis used for this survey.

(4) The Actuarial Present Value of Future Retirement Benefits for currently active members is \$526,443,000. This includes the actuarial accrued liability for Local 1716 members who transferred to the State Plan on July 1, 1986 and for Local 566 members who transferred on August 1, 1988. The difference between this Actuarial Present Value and the Actuarial Liability for current members will be funded by future City and Employee Contributions.

* Connecticut Municipal Employees' Retirement System (CMERS). Estimated value of assets expected to be transferred from CMERS to this plan for members whose pension benefits were transferred prior to July 1, 2002.

Assets as of July 1, 2002

Investment Managers	Cost Basis	Market Value
Treasurer's Account (includes Cash and Accounts Payable)	\$ 17,767,000	\$ 17,021,000
Citibank - Advisory Accounts	794,674,000	792,139,000
State Street Bank & Trust Company	112,744,000	98,706,000
Insurance Carrier*	<u>6,426,000</u>	<u>4,755,000</u>
Total	\$931,611,000	\$912,621,000
Receivable from CMERS**	<u>3,000,000</u>	<u>3,000,000</u>
Grand Total	\$934,611,000	\$915,621,000

* *Aetna Life*

** *Connecticut Municipal Employees' Retirement System (CMERS). Estimated value of assets expected to be transferred from CMERS to this plan for members whose pension benefits were transferred prior to July 1, 2002.*

Section III

Comments on Valuation Results

The recommended contribution rates are Normal Actuarial Costs of 0.97% for Police, (0.78%) for Firefighters, 12.16% for Board of Education and 13.03% for General Government. The Normal Actuarial Cost ratios should be applied to the appropriate membership payrolls.

Changes in Contribution Rates

Contribution rates have increased for all groups as compared to last year primarily due to investment losses only partially offset by the change of the inflation assumption in the Salary Scale only from 3.3% to 3%, combined with steady increases in benefit payments caused by several years of pension enhancements. Please note that the salaries used were adjusted for groups which are currently in negotiations by 3% (was 3.3% last year) per year for the period of each open contract and non-bargaining groups by 3% (was 3.3% last year) per year for one full fiscal year from the measurement date. Also, for Police under age 45, overtime has been limited to no more than 20% of base pay as the actual overtime rate in 2002 is not expected to continue.

Adjusted Value of Assets

The adjusted value of assets includes \$3 million in funds assumed owed the MERF from the State of Connecticut Municipal Employees' Retirement System (CMERS). The \$3 million is the estimated value of assets expected to be transferred from CMERS to this plan for members whose pension benefits were transferred prior to July 1, 2002.

Investment Returns

According to the Funds Evaluation Services of SEI, State Street, and Russell/Mellon, the combined pension fund had the following investment returns (gross of fees):

12-Month Period Ending	Rate of Return	12-Month Period Ending	Rate of Return
June 30, 1990	10.0%	December 31, 1996	13.1%*
December 31, 1990	1.6%	June 30, 1997	20.7%**
June 30, 1991	8.3%	December 31, 1997	21.6%**
December 31, 1991	19.4%	June 30, 1998	18.0%**
June 30, 1992	10.1%	December 31, 1998	13.7%**
December 31, 1992	9.4%	June 30, 1999	10.4%**
June 30, 1993	12.1%	December 31, 1999	12.1%**
December 31, 1993	9.3%	June 30, 2000	8.8%**
June 30, 1994	2.9%	December 31, 2000	3.2%**
December 31, 1994	0.9%	June 30, 2001	-2.1%***
June 30, 1995	15.1%	December 31, 2001	-2.7%***
December 31, 1995	21.0%	June 30, 2002	-3.1%***
June 30, 1996	14.9%	December 31, 2002	-6.7%***

* Sum of first 9 months by SEI of 8.0% and last 3 months by State Street of 5.1%.

** 12 months of State Street.

*** Starting January 1, 2001 provided by Russell/Mellon analytical services.

It should be noted that if the last three fiscal years' (1999-2000, 2000-2001, and 2001-2002) gross rates of return on market value are compounded, the average rate was 1.1%. For the three previous fiscal years (1998-1999, 1999-2000, and 2000-2001), the gross average rate was 5.6%. On a calendar year basis, the 2000, 2001, and 2002 and the 1999, 2000, and 2001 gross average rates were -2.2% and 4.0%, respectively (9.6% for average of 1998, 1999, and 2000).

The net return on adjusted assets for 1999-2000, 2000-2001, and 2001-2002 were estimated to be 13.6% and 8.1%, and 3.0% respectively. Investment expenses for 1999-2000, 2000-2001, and 2001-2002 have been estimated to be 0.32%, 0.34%, and 0.36% of adjusted assets, respectively.

Please note adjusted assets are used to determine City contribution rates. Under the basis for determining adjusted assets, each year's gains are distributed over four years in order to moderate fluctuations and their impact on the plan's contribution rate. The gains not recognized in the adjusted asset total this year will be included in following years.

1999 Experience Study

This study reflects the application of the results of the 1999 Experience Study of December 17, 1999. It is recommended that the City have another review of actual and expected experience in 2004 in order to update the actuarial assumptions at that time.

Membership

The active membership of MERF as of October 1, 2002, was 2,519, a decrease of 126 from the total of 2,645 last year. Police membership decreased by 29, Firefighters decreased by 12, Board of Education decreased by 26, and General Government decreased by 59.

Status of Fund

Please note the comments on the sound financial condition of the MERF fund found in the letter of this report.

Change of Actuarial Assumptions

Please refer to Section VII Actuarial Assumptions (pages 18-20) for a list of new and old actuarial assumptions.

Section IV

Accounting Information

A. FASB Statements No. 35

The following information is based on Statement No. 35 (Accounting and Reporting by Defined Benefit Pension Plans) of the Financial Accounting Standards Board. The figures below are the actuarial present value of plan benefits accumulated through July 1, 2002. For retired members and survivors, this includes the actual benefit they are receiving including the COLA's effective July 1, 1987, July 1, 1990, July 1, 1997, July 1, 1999, and July 1, 2001. It also includes the COLA for retirees and survivors under the three unfunded plans, PBF, FRF, and RAF. Deferred benefits for members who terminated in a vested status, accumulated contributions of members who terminated in a non-vested status, and accrued benefits for Locals 1716 and 566, net of amortization payments to Connecticut Municipal Employees' Retirement System (CMERS), are also included.

For active members, we have calculated the benefits accumulated for service to July 1, 2002 and have considered the compensation over the appropriate averaging period ending on July 1, 2002. In computing actuarial present values, the regular valuation assumptions outlined in Section VII are used. There is no projection of future salary increases.

The asset figure is the market value of assets and is less than the adjusted asset figure used in the valuation. The adjusted asset figure is found in Section II, Actuarial Balance Sheet.

Actuarial Present Value of Accumulated Plan Benefits as of July 1, 2002

Vested (including employee contributions for non-vested members)	\$801,264,000
Non-Vested	<u>8,283,000</u>
Total	\$809,547,000
Net Assets at Market Value Available for Benefits as of July 1, 2002	\$912,621,000* 1.127

* Excludes \$3 million receivable from CMERS.

B. GASB Statement No. 5

The following information provided is based on Statement No. 5 of the Governmental Accounting Standards Board on "Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Governmental Employees".

The amount shown below as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess the plan's funding status on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among plans. The measure is independent of the actuarial funding method used to determine contributions to the plan.

The Pension Benefit Obligation was based on the actuarial valuation at July 1, 2002. Significant actuarial assumptions used include (a) rate of return on the investment of present and future assets of 8.00 percent per year compounded annually, (b) projected salary increase of 3 percent per year compounded annually, attributable to inflation*, (c) additional projected salary increases which vary by age and group, attributable to promotion or merit, and (d) no post-retirement benefit increases.

At July 1, 2002 the excess of assets (Cost Basis) over Pension Benefit Obligation was \$51,167,000 as follows:

Pension Benefit Obligation:

Retirees and beneficiaries currently receiving benefits (1)	\$547,539,000
Terminated employees not yet receiving benefits	15,060,000
Current employees:	
Accumulated employee contributions including allocated investments earnings	60,883,000
Employer-Financed Vested Employees (2)	231,352,000
Employer-Financed Non-Vested Employees	<u>25,610,000</u>
Total Pension Benefit Obligation	\$880,444,000
Net assets available for benefits, Cost Basis (Market Value \$912,621,000)**	\$931,611,000**
Excess of assets over Pension Benefit Obligation	\$51,167,000

(1) Includes \$3,078,000 for Old Plans COLA effective 7/1/1987, \$813,000 for Old Plans COLA effective 7/1/1990, \$1,347,000 for Old Plans COLA effective 7/1/1997, \$267,000 for Old Plans COLA effective 7/1/1999, and \$120,000 for Old Plans COLA effective 7/1/2001.

(2) Includes \$14,734,000 for Locals 1716 and 566 now in CMERS.

* For Police, overtime for those under age 45 was limited to 20% of base pay.

** Excludes \$3 million receivable from CMERS.

1.058

C. GASB Statements No. 25 and 27

The following information is based on the Governmental Accounting Standards Board Statement No. 25 on "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans" and Statement No. 27 on "Accounting for Pensions by State and Local Governmental Employers".

Schedule of Employer Contributions

Year Ended June 30	Annual Required Contribution	Percentage Contributed	Net Annual Required Contribution *	Miscellaneous **	Net Percentage Contributed
1997	\$9,028,651	100%	\$8,558,150	\$470,501	100%
1998	9,019,116	100%	8,563,860	455,256	100%
1999	8,984,312	100%	8,576,940	407,372	100%
2000	7,301,471	100%	7,036,870	264,601	100%
2001	759,283	100%	470,000	289,283	100%
2002	332,806	100%	0	332,806	100%

* City's cash contribution to MERF.

** Funds transferred from State of Connecticut's Connecticut Municipal Employees' Retirement System (CMERS) and Aetna annuity payments.

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets *	Actuarial Accrued Liability (AAL) #	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a÷b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)÷c)
7/1/1997	\$688,311,000	\$665,478,000	\$(22,833,000)	103.4%	\$99,812,000	-22.9%
7/1/1998	772,757,000	716,332,000	(56,425,000)	107.9%	106,825,000	-52.8%
7/1/1999	858,805,000	753,379,000	(105,426,000)	114.0%	110,398,000	-95.5%
7/1/2000	944,652,000	805,453,000	(139,199,000)	117.3%	112,921,000	-123.3%
7/1/2001	978,884,000	865,570,000	(113,314,000)	113.1%	119,609,000	-94.7%
7/1/2002	957,390,000	880,444,000	(76,946,000)	108.7%	117,498,000	-65.5%

During the fiscal year ending June 30, 1997, the City implemented the provisions of Governmental Accounting Standards Board (GASB) Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans", and elected to implement early the provisions of GASB Statement No. 27, "Accounting for Pensions by State and Local Governmental Employers". The information required for completion of GASB No. 25 and No. 27 for the fiscal year ending June 30, 2002 was prepared based upon the previous year's actuarial valuation (2001 Actuarial Survey) and additional information for fiscal year 2001-2002. It was contained in a separate report which was sent to the City's auditors, Scully & Wolf, LLP on December 19, 2002.

The information required for completion of GASB No. 25 and No. 27 for the fiscal year ending June 30, 2003 will be prepared based upon the current year's actuarial valuation (2002 Actuarial Survey) and additional information for fiscal year 2002-2003. It will be contained in a separate report and submitted to the City's auditors.

* Excludes receivable from CMERS, and for July 1, 1997 excludes 1/4 of realized gain from the Webber/Mitchell-Hutchins litigation and 1/4 of unrealized loss due to reappraisal of 10 Prospect Street.

Liability shown is on a PBO basis.

Section V

Hartford MERF - Summary of Principal Provisions of Pension Plan July 1, 2002

PROVISIONS FOR:

Retirement Pensions:

POLICE OFFICERS AND FIREFIGHTERS

Firefighters hired before July 1, 2000: 2.65% of Final Average Pay (rate of weekly pay immediately preceding retirement times 52, plus for firefighters who work a 42 hour week, holiday pay) multiplied by years of service up to 20 plus a decreasing percentage for years over 20.

Firefighters hired after June 30, 2000: 2.5% of Final Average Pay (rate of weekly pay immediately preceding retirement times 52, plus for firefighters who work a 42 hour week, holiday pay) multiplied by years of service up to 20 plus 2% of Final Average Pay for years of service over 20.

Sworn Police Officers hired before July 2, 1999: 2.65% of Final Average Pay for highest 3 of last 5 years multiplied by years of service up to 20 plus a decreasing percentage for years over 20. Final Average Pay includes a provision for over-time and private duty pay.

Sworn Police Officers hired after July 1, 1999: 2.5% of Final Average Pay for highest 3 of last 5 years times years of service up to 20 plus 2% for years of service over 20.

BOARD OF EDUCATION MEMBERS

2% of Final Average Pay for highest 5 of last 10 years times years of service, with maximum benefit of 70% of Final Average Pay. Final Average pay for HFSHP and Local 2221, Hartford Federation of Paraprofessionals is based on highest 3 out of last 5 years. Benefit for Local 2221 is 2.5% of Final Average Pay multiplied by years of service up to 20 plus 2% of Final Average Pay for years of service over 20 (maximum of 10 years).

GENERAL GOVERNMENT MEMBERS

2% of Final Average Pay for highest 2 of last 5 years times years of service with maximum benefit of 70% of Final Average Pay. Benefit for CHPEA*, HMEA**, Non-bargaining (excluding Library) and MLA members is 2.5% of Final Average Pay. Non-bargaining (excluding Library) have a maximum benefit of 80% of Final Average Pay. CHPEA*, HMEA**, and MLA members have a maximum benefit of 70% of Final Average Pay (highest 2 of last 5 years). For CHPEA*, and HMEA** (who retire prior to July 1, 2000) members increase maximum benefit to 80% of Final Average Pay with sick exchange provision. Benefits for Non-bargaining who have 5-year option are based on highest 5 out of last 10 years. SCG members Final Average Pay based on highest 5 out of last 10 years. SCG members have benefit reduced by 1% of average Social Security covered earnings for all years included in computation of Social Security primary benefit.

**Applies to October 1, 1997 active employees only who remain in the unit and retire therefrom.*

***Applies to December 1, 1998 active employees only who remain in the unit and retire therefrom.*

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

BOARD OF EDUCATION MEMBERS

**GENERAL GOVERNMENT
MEMBERS**

Retirement Pensions:

Non-Sworn Police Officers: 2.5% of Final Average Pay for highest 3 of last 5 years times years of service, with maximum benefit of 80% of Final Average Pay.

Assistant Police Chief, Police Chief, Assistant Fire Chief and Fire Chief: Same as Non-Bargaining.

Firefighters, Sworn Police Officers who are hired before July 2, 1999 and Non-Sworn Police Officers have a sick exchange provision which allows them to buy up to 4 years of pension credit of 2.5% of Final Average Pay per year purchased.

Sworn Police Officers have a maximum benefit of 70% of Final Average Pay. For Sworn Police Officers hired before July 2, 1999 increase maximum benefit to 80% of Final Average Pay with sick exchange provision. Firefighters have a maximum benefit of 80% of Final Average Pay. For firefighters hired before July 1, 2000 increase maximum benefit to 85% of Final Average Pay with sick exchange provision.

Firefighters hired before July 1, 1984 can elect current or new provisions prior to January 1, 2001.

Normal Form of Benefit:

For unmarried members: life annuity.

For unmarried members: life annuity.

For unmarried members: life annuity.

For married members: surviving spouse benefit of 25% of member's final year's earnings, if non-service connected death, and surviving spouse benefit of 50% of member's final year's earnings, if service connected death.

For married members: life annuity with 50% to survivor.

For married members: life annuity with 50% to survivor.

For married Non-Sworn Police Officers: life annuity with 50% to survivor.

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

BOARD OF EDUCATION MEMBERS

**GENERAL GOVERNMENT
MEMBERS**

**Normal Retirement Age
and Service Requirement:**

Firefighters hired before July 1, 2000 and Sworn Police Officers hired before July 2, 1999: Full benefits after 20 years of continuous service. Sworn Police Officers hired after July 1, 1999: Full benefits after 25 years of service. Firefighters hired after June 30, 2000: 25 years of continuous service. Non-Sworn Police Officers: Full benefits after 20 years of service, or age 60 plus 10 years of continuous service, or after 15 years of continuous service, if contributions are left in the MERF for 5 more years before retirement.

Age 60 plus 10 years of continuous service. Members are also eligible at age 55 with 25 years of service.

Age 60 plus 10 years of service (10 years of continuous service for SCG, Non-bargaining and Library members). SCG members are also eligible at age 55 with 25 years of continuous service. HMEA and CHPEA members are eligible after 25 years of service with no minimum age. October 1, 1997 active CHPEA members who remain in the unit and retire therefrom are eligible after 20 years of continuous service with no minimum age. December 1, 1998 active HMEA members who remain in the unit and retire therefrom are eligible after 20 years of continuous service with no minimum age. Library members are eligible after 25 year of continuous service with no minimum age. MLA members are eligible after 20 years of continuous service with no minimum age. Non-bargaining (excluding Library) members are eligible after 20 years or after 15 years of service, if contributions are left in the MERF for 5 more years before retirement.

Optional Early Retirement:

Firefighters and Sworn Police Officers: Age 50 with 10 years of continuous service, actuarially reduced or reduced at 2% per whole year and fractional year prior to Normal Retirement Age. Non-Sworn Police Officers: Age 55 with 10 years of service, reduced at 4% per whole year prior to age 60.

At age 55 with 10 years of service, reduced at 4% per whole year prior to age 60. Local 818 reduced by 2%.

At age 55 with 10 years of service reduced at 4% per whole year prior to age 60. For SCG members, at age 55 with 10 years of continuous service reduced at 2% per whole year and fraction year prior to age 60.

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

BOARD OF EDUCATION MEMBERS

**GENERAL GOVERNMENT
MEMBERS**

**Vesting of Earned Deferred
Pension:**

Firefighters and Sworn Police Officers: After 10 years of continuous service.
Non-Sworn Police Officers: After 10 years of service.

After 10 years of service. Payments begin no earlier than age 55.
For SCG members, 10 years of continuous service.

**Benefits to Survivors:
(Death of Active Member
Prior to Retirement)**

Surviving Spouse: 25% of final year's earnings (50% if service connected death), payable until death or remarriage. Surviving Child: \$100 per month for first child, \$50 for each additional child (10% of final year's earnings if service connected death, or 15% if no surviving spouse). Total benefit, including Worker's Compensation, cannot exceed 100% of current pay rate for Member's rank. Non-Sworn Police Officers: Same as General Government members.

Member must meet qualifications for vesting. Surviving Spouse: 50% of pension which Member is receiving or would be entitled to when retired, payments beginning no earlier than date of Member's 55th birthday. Surviving Spouse benefits are payable until death or remarriage.

**Refund of Contributions
upon Discontinuance of
Employment or at Death
(Non-Vested Members):
(May be taken in lieu of
earned deferred pension
by vested members)**

Refund of total contributions, without interest. Non-Sworn Police Officers: Same as General Government members.

Termination: Refund of total contributions, with 3% interest compounded annually.
Death: Refund of total contributions without interest.

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

BOARD OF EDUCATION MEMBERS

**GENERAL GOVERNMENT
MEMBERS**

**Pensions for Permanent,
Total Disability - Service
Requirements:**

5 years of continuous service, but no requirement if disability is service connected as defined in Worker's Compensation Act.
Non-Sworn Police Officers: Same as General Government members.

10 years of continuous service, except no requirement if disability is service connected as defined in Worker's Compensation Act.

**Amount of Total Disability
Pension:**
(Payable so long as total disability continues.)

Retirement Pension with minimum of 25% of "final average pay." If disability is service connected, the pension equals 100% of the Member's final annual pay less Worker's Compensation benefits.
Non-Sworn Police Officers: Same as General Government members.

Retirement Pension using Final Average Pay for last 10 years. If disability is service connected, amount not less than 50% of Member's final annual pay at time of disability, less Worker's Compensation Benefits.

**Pensions for Permanent
Partial Disability:**
(Where earnings capacity is reduced by at least 10%.)

Ten years of continuous service, but no service requirement if disability is service connected. Same as disability pension with reduction for less than 15 years of service. If service connected, pension equals 50% of final annual pay if 15 years of service, with reductions for less than 15 years of service. If at least 20 years of service, pension equals retirement pension.
Non-Sworn Police Officers: Same as General Government members.

Retirement Pension using Final Average Pay for last 10 years. Subject to a minimum pension of \$10 monthly, and maximum 1-2/3% of the reduction in income times years of service. If the disability is service connected, the minimum benefit is not to be less than 50% of the reduction in earnings.

PROVISIONS FOR:

**POLICE OFFICERS AND
FIREFIGHTERS**

**Member's Contribution
Rate of Total Earnings:
(City pays full balance of
costs to fund MERF
benefits; also Members and
City pay taxes for those
covered by Social Security.)**

Firefighters and Sworn Police Officers hired before July 2, 1999: 8%.
Sworn Police Officers hired after July 1, 1999: 6.5%.
Non-Sworn Police Officers: 4% on earnings taxed for Social Security and 7% on excess.

BOARD OF EDUCATION MEMBERS

4% on earnings taxed for Social Security and 7% on excess.

**GENERAL GOVERNMENT
MEMBERS**

4% on earnings taxed for Social Security and 7% on excess. SCG members contribute 3% and 6%. Non-bargaining members electing 2-year option contribute 5% and 8%. CHPEA members hired before October 1, 1997 contribute 6.5% and 9.5%. HMEA members hired before December 1, 1998 contribute 6% and 9%. CHPEA members hired after September 30, 1997, HMEA members hired after November 30, 1998, and MLA members contribute 5% and 8%.

Assistant Police Chief, Police Chief, Assistant Fire Chief and Fire Chief: Same as Non-Bargaining.

Note 1 Any Member (other than a Police Officer or Firefighter) who was a Member before January 1, 1958 is guaranteed a minimum total benefit, including Social Security based on earnings from the City, equal to the pension the Member would have received under the terms of the MERF plan in existence prior to the enactment of the 1957 Special Act No. 347. Also, several active Members who transferred to MERF on or after July 1, 1968 from the City's Retirement Allowance Fund are entitled to a pension determined by the RAF provisions if it is greater than that based on the MERF provisions.

Note 2 Section 2-166 of the Municipal Code provides a minimum benefit of \$155 monthly for all pensions granted by reason of service or for service-connected disability, and for joint annuitants under elected options, except members for whom Social Security taxes have been paid and anyone for whom more than half of the total pension is paid by the Metropolitan District.

Note 3 All members (other than SCG) may purchase up to 4 years of pension credit for military service. Pension credit is at the following rates of Final Average Pay per year purchased:

Sworn Police Officers, Firefighters, CHPEA members hired before October 1, 1997, HMEA members hired before December 1, 1998, Non-bargaining (including Assistant Police Chief, Police Chief, Assistant Fire Chief, and Fire Chief), Non-Sworn Police Officers, and MLA	2.50%
Other (including CHPEA members hired after September 30, 1997, HMEA members hired after November 30, 1998)	2.00%

Note 4 All members (other than Sworn Police Officers hired after July 1, 1999, all Board of Education members, CHPEA, HMEA, Library, and SCG) may exchange accumulated sick leave upon retirement for up to 4 years of pension service time. October 1, 1997 active CHPEA members who remain in the unit and retire therefrom by July 1, 2001, may exchange accumulated sick leave upon retirement for up to 4 years of pension service time. December 1, 1998 active HMEA members who remain in the unit and retire therefrom may exchange accumulated sick leave upon retirement for up to 4 years of pension service time. Additional pension service time may be purchased from accumulated sick leave at the rate of twenty days of accumulated sick leave for each year of pension service time.

Section VI

Actuarial Cost Method

The "Aggregate Actuarial Cost Method" (first adopted for the 1969 valuation) is used for determining the future rates of contributions needed for funding service retirements. This method is designed to produce stable "percentage-of-payroll" Normal Actuarial Costs over a period of years and this aim will be achieved so long as the emerging experience conforms with the actuarial assumptions.

Using this method, an actuarial valuation was made of the actuarial present value of all future normal retirement pensions for active members (including survivor benefits and refunds of employee contributions). The actuarial present value, needed for future payments to present pensioners and deferred vested pensioners and survivors was subtracted from the Valuation Assets (Adjusted Value) to determine the current Valuation Assets (Adjusted Value) available for future benefits for active members. The latter figure was subtracted from the actuarial present value of future benefits for active members in order to determine the remaining actuarial present value to be funded by future contributions. Finally, the net remainder was divided by the actuarial present value of all future salaries, and the total Normal Actuarial Costs for future contributions was determined as a level percentage of future annual payrolls.

Since the MERF fund includes several classifications of members who have different provisions for benefits and contributions, it was necessary to apply this method by separate actuarial valuations for Police, Firefighters, Board of Education, and General Government.

A provision is included for the Normal Actuarial Costs for disability pensions. On this basis the additional actuarial liabilities for such annuities will be set up from year to year as the benefits are approved, without advance funding of such actuarial costs. The "percentage-of-payroll" Normal Actuarial Costs for these benefits were based on a study of the actual past experience as explained in the actuarial assumptions. In view of the differing benefit provisions these estimates were made separately for Police Officers and Firefighters, and for all other classifications combined.

Section VII

Actuarial Assumptions

The actuarial assumptions used in the 2002 MERF valuation are as follows:

Mortality Basis: UP-94 Projected by Scale AA to Year of valuation plus 10 years (2012 for July 1, 2002 valuation), with separate male and female tables.

Termination: Yearly Rates of Employee Termination

<u>Age</u>	<u>Non-Uniformed</u>	<u>Uniformed</u>
20	10.0%	5.0%
25	7.0%	2.0%
30	5.0%	2.0%
35	4.0%	2.0%
40+	0.0%	0.0%

Salary Scale: 3% for salary increases **plus** a percentage for promotion or merit increases (was 3.3% for salary increases **plus** a percentage for promotion or merit increases). For Police under age 45, overtime limited to less than or equal to 20% of base pay.

Yearly Rates of Increases for Promotion or Merit

<u>Age</u>	<u>Police</u>	<u>Firefighters</u>	<u>Non-Uniformed</u>
25 and under	6.0%	5.0%	4.0%
30	3.5%	2.5%	4.0%
35	2.2%	1.6%	2.1%
40	1.2%	1.1%	1.0%
Over 40	1.0%	1.0%	1.0%

Salaries are adjusted for groups in negotiations by 3% per year for the period of each open contract, and non-bargaining groups by 3% per year for one full fiscal year from the measurement date (was salaries are adjusted for groups in negotiations by 3.3% per year for the period of each open contract, and non-bargaining groups by 3.3% per year for one full fiscal year from the measurement date).

Investment Return: 8.00% per year, net of investment expenses.

Assumed Retirement Age:

Board of Education: Age 62.

General Government: Earlier of age 58 with 25 years service and age 62 with 10 years service.

All Police: Age 50 with 20 years service. **Maximum retirement age of 65.**

Firefighters: Age 53 with 25 years service. **Maximum retirement age of 65.**

For both Uniformed and Non-Uniformed who have reached Assumed Retirement Age, retirement after one year.

Early Retirement:

Actuarial present value of future retirement benefits for active members has been increased by 5% to cover the additional actuarial cost due to early retirement factors which are more liberal than a straight actuarial reduction.

Social Security:

Future tax wage bases are developed by projecting the 2002 base of \$84,900 forward at 4% per year. (Was future tax wage bases are developed by projecting the 2002 base of \$84,900 forward at 4.3% per year.)

Marital Status at Retirement:

Non-Uniformed:

Males - 82% married, spouse 3 years younger.
Females - 40% married, spouse same age.

Uniformed:

All - 90% married, spouse 2 years younger.

Normal Actuarial Costs for Disability:

Based on study of actual experience. The amount considered is the cost of establishing a reserve for the temporary annuity payable until normal retirement date.

Normal Actuarial Costs for Survivors

Costed explicitly.

Refund of Employee Contribution: Actuarial present value of future retirement benefits for active members has been increased by a percentage based on actual refunds made over the past 5 years.

Expenses other than Investment Expenses: All actuarial present values of future benefits have been increased by 2.50% to cover expenses other than investment expenses.

Valuation Assets (Adjusted Value): In order to smooth the year-to-year fluctuations in asset values, the asset values are adjusted by phasing in recognition of capital appreciation, i.e., realized and unrealized gains and losses. Capital appreciation is recognized over a four-year period at 25% per year. The assets held by the insurance companies include the funds on deposit for future purchase of annuities, as well as the reserves and contingency reserves for annuities already purchased which are subject to experience rating.

Sick Exchange: If provision available, four years are purchased by all actives.

Military and Prior Service Buy-backs: When buy-back occurs, date of hire is adjusted accordingly.

Section VIII

Membership Data - 2002

Table 1 - Active Members

	Number	Payroll*	Average Annual Pay*
Police	425	\$29,875,800	\$70,296
Firefighters	361	22,259,900	61,662
Board of Education	1,097	35,416,800	32,285
General Government	<u>636</u>	<u>29,944,700</u>	<u>47,083</u>
TOTAL	2,519	\$117,497,200	\$46,644

** Basic salary plus overtime and private duty pay, if applicable. Salaries are adjusted for groups in negotiations 3% per year for the period of each open contract, and non-bargaining groups by 3% per year for one full fiscal year from the measurement date.*

Table 2 - Terminated Non-Vested Members and Total Monthly Annuities

Number	Total Monthly Annuities
947	N/A (all Non-Vested, return of employee contributions pending)

Table 3 - Number of Pensioners and Total Monthly Annuities**

	Service Pensions		Disability Pensions		Survivor Benefit		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Police	348	\$1,083,742	61	\$113,315	44	\$33,559	453	\$1,230,616
Firefighters	287	897,362	134	316,455	75	65,067	496	1,278,884
Board of Education	554	549,621	23	11,125	80	20,937	657	581,683
General Government	578	1,222,992	26	17,704	161	103,529	765	1,344,225
Vested Deferred Pensions	<u>95</u>	<u>137,094</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>95</u>	<u>137,094</u>
TOTAL***	1,862	\$3,890,811	244	\$458,599	360	\$223,092	2,466	\$4,572,502

*** Thirteen pensioners receiving benefits as retiree and as survivor are included in both groups.*

**** An additional monthly benefit for the July 1, 1987, July 1, 1990, July 1, 1997, July 1, 1999, and July 1, 2001, COLA's for the unfunded plans (PBF, FRF, and RAF) is also included in the total liabilities for MERF.*

Table 4 – Reconciliation

	Lives				
	Police	Firefighters	Board of Education	General Government	Total Membership
Actives					
at 7/1/2001	454	373	1,123	695	2,645
Adds	18	0	64	64	146
Deletes	<u>(47)</u>	<u>(12)</u>	<u>(90)</u>	<u>(123)</u>	<u>(272)</u>
At 7/1/2002	425	361	1,097	636	2,519
Pensioners					
At 7/1/2001	433	493	668	742	2,336
Adds	29	14	15	57	115
Deletes	<u>(9)</u>	<u>(11)</u>	<u>(26)</u>	<u>(34)</u>	<u>(80)</u>
At 7/1/2002	453	496	657	765	2,371
Vested Deferred Pensioners					
At 7/1/2001	4	1	18	50	73
Adds	6	1	7	19	33
Deletes	<u>0</u>	<u>0</u>	<u>(4)</u>	<u>(7)</u>	<u>(11)</u>
At 7/1/2002	10	2	21	62	95

	Monthly Annuities				
	Police	Firefighters	Board of Education	General Government	Total Membership
Pensioners					
At 7/1/2001	1,110,238	1,250,727	570,177	1,247,542	4,178,684
Adjustments	21,151	3,347	(1,674)	126	22,950
Adds	112,591	44,785	21,264	123,286	301,926
Deletes	<u>(13,364)</u>	<u>(19,975)</u>	<u>(8,084)</u>	<u>(26,729)</u>	<u>(68,152)</u>
At 7/1/2002	1,230,616	1,278,884	581,683	1,344,225	4,435,408
Vested Deferred Pensioners					
At 7/1/2001	5,605	747	20,164	50,499	77,015
Adds	26,445	880	6,919	35,660	69,904
Deletes	<u>0</u>	<u>0</u>	<u>(2,483)</u>	<u>(7,342)</u>	<u>(9,825)</u>
At 7/1/2002	32,050	1,627	24,600	78,817	137,094

CITY OF HARTFORD MERF - POLICE

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	2	4	2		1	1						10
25-29	7	6		2	12	5						32
30-34	1	8	1	2	8	60	12	2				94
35-39	3	4		4	6	34	37	22				110
40-44	1				1	9	15	44	22			92
45-49			1			4	4	19	30			58
50-54						1	1	10	7	1		20
55-59								1	1	1		3
60-64							1	2				3
65-69											3	3
70-74												
> 74												
ALL AGES	14	22	4	8	28	114	70	100	60	2	3	425

CITY OF HARTFORD MERF - POLICE

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	32934	35318	44000		51317	55101						40156
25-29	32940	37921		43060	50805	66795						46496
30-34	32825	38031	42530	60167	53968	75835	81621	104914				70969
35-39	32923	40144		43399	60674	71387	74153	87581				71769
40-44	32919				61926	80703	65972	79413	78135			76347
45-49			144526			60864	69350	73713	75769			74810
50-54						58177	77891	76880	73367	80724		74958
55-59								58877	60126	32273		50425
60-64							43524	89571				74222
65-69											61490	61490
70-74												
> 74												
ALL AGES	32926	37892	68764	47506	54239	73634	73022	80382	76096	56499	61490	70296

CITY OF HARTFORD MERF - FIREFIGHTERS

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24			1	1								2
25-29			7	7	5	7	2					28
30-34			8	3	6	30	4					51
35-39			3	3	4	27	14	12	1			64
40-44			2	2	3	20	9	38	17			91
45-49					1	8	3	16	37			65
50-54						2	1	7	22	3	5	40
55-59							1	3		1	11	16
60-64											4	4
65-69												
70-74												
> 74												
ALL AGES			21	16	19	94	34	76	77	4	20	361

CITY OF HARTFORD MERF - FIREFIGHTERS

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24			41727	44289								43008
25-29			42796	44941	51526	60709	45293					49548
30-34			46601	42026	53154	61235	65232					57172
35-39			42002	45274	51754	61888	64143	63663	78514			60629
40-44			41056	46893	51353	59286	65536	67035	66576			63567
45-49					53913	58589	59988	67110	65756			64759
50-54						58039	63161	65475	65010	59010	64133	64137
55-59							63103	69235		58610	72040	70116
60-64											77248	77248
65-69												
70-74												
> 74												
ALL AGES			43916	44660	52187	60675	63105	66462	65890	58910	71105	61661

CITY OF HARTFORD MERF - BOARD OF EDUCATION

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	3	3	7	3	2							18
25-29	6	10	16	16	6	18						72
30-34	5	7	20	25	12	43	12	1				125
35-39	7	12	15	25	15	57	17	9				157
40-44	8	10	9	21	18	70	23	10	5			174
45-49	10	15	9	27	9	51	29	24	17	4		195
50-54	3	5	9	11	7	33	24	39	24	10	10	175
55-59	4	2	8	5	1	22	19	16	19	11	16	123
60-64	1	1	3	7	1	4	6	6	6	5	3	43
65-69	2	1			1	5	1		1			11
70-74				2			1	1				4
> 74												
ALL AGES	49	66	96	142	72	303	132	106	72	30	29	1097

CITY OF HARTFORD MERF - BOARD OF EDUCATION

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	28681	23674	18776	25665	18509							22362
25-29	56265	37374	24755	22014	29875	23794						28711
30-34	20301	35553	34160	30519	29338	27126	29468	24420				29545
35-39	52277	32078	30091	27523	29166	30033	34202	39319				31688
40-44	30966	35038	29498	30982	30265	28198	32646	33774	50261			30878
45-49	39699	36552	33297	37092	26918	29788	31184	31667	38332	45977		33373
50-54	43639	46156	35809	28502	26926	29505	34222	36596	30799	39717	37273	33813
55-59	49766	50136	30526	24610	19196	38518	41414	36860	32877	34543	31757	35956
60-64	82321	61008	28696	35098	30834	43154	35711	33785	33697	32294	34203	36321
65-69	29077	25262				22865	45970	34354		34354		36804
70-74				18057			28846	26529				22872
> 74												
ALL AGES	40944	36281	29998	29935	28531	29780	33908	35116	34768	37418	33913	32285

CITY OF HARTFORD MERF - GENERAL GOVERNMENT

NUMBER OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	4	2		1								7
25-29	7	1	5	1	1	1	1					17
30-34	6	2	5	5	1	5	7	1				32
35-39	10	5	3	2		11	19	13	1			64
40-44	8	4	4	1	3	13	20	20	13	1		87
45-49	5	9	6	3	2	13	23	35	28	6		130
50-54	5	4	6	3	5	22	17	24	32	12	3	133
55-59	3	5	1	6	3	19	16	18	17	7	5	100
60-64			3	2		8	5	4	6	3	3	34
65-69		1				4	5	5	4		2	21
70-74		1				3	1	1				6
> 74						2		1	1		1	5
ALL AGES	48	34	33	24	15	101	114	122	102	29	14	636

CITY OF HARTFORD MERF - GENERAL GOVERNMENT

AVERAGE SALARY OF PERSONS IN PROCESSING GROUP BY AGE AND YEARS OF SERVICE

October 1, 2002

COMPLETED YEARS OF CREDITED SERVICE

AGE	< 1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30 +	ALL YEARS
< 20												
20-24	33017	28040		24024								30310
25-29	36467	31659	39482	33021	43017	46256	31659					37547
30-34	41213	42089	46480	45525	39903	31823	47856	30743				42382
35-39	30110	40091	38447	48662		39900	38766	41892	50398			38823
40-44	26162	33688	51734	30580	11241	40831	45056	52590	55534	55116		44553
45-49	38123	39563	24012	52106	35343	53867	48499	55160	62766	51862		51790
50-54	56209	47944	29720	42473	46128	53561	53001	58956	53461	53245	47517	52600
55-59	31362	67859	48143	58798	34345	45989	49278	60392	56959	60167	56165	53570
60-64			33972	11241		20441	58408	34407	61834	23135	27609	36495
65-69		11241				49436	35014	28088	53512		23033	37362
70-74		11241				27122	9754	46746				24851
> 74						11304		11493	71737		11594	23487
ALL AGES	35641	41669	37107	44649	34734	43492	46370	52427	57506	51579	40276	47083

Section IX

City of Hartford Section 415(m) Fund

The Section 415(m) Fund* is an unfunded "excess benefit plan" to provide that portion of certain retirees' pension benefits that exceed the limits permitted under Section 415 of the Federal Internal Revenue Code (IRC).

	<u>July 1, 2002</u>	<u>July 1, 2001</u>
1. Number of retirees and beneficiaries receiving benefits	4	10
2. Annual benefits payable	\$ 21,000	\$ 69,000
3. Present value of benefits	\$66,000	\$129,000

The "actives" are funded through MERF. The City provides contributions for the retirees' benefits payable each year, as determined by the Pension Commission.

Actuarial Assumptions

The actuarial assumptions used in the 2002 Section 415(m) Fund valuation are as follows:

Mortality Basis:	UP-94 Projected by Scale AA to Year of valuation plus 10 years (2012 for July 1, 2002 valuation), with separate male and female tables.
Termination:	N/A.
Salary Scale:	N/A.
Investment Return:	8.00% per year, net of investment expenses.
Assumed Retirement age:	Immediate as all are retired.
Increases in dollar limit on benefits under IRC Section 415:	3% per year.

Benefits

Retiree pension amounts in excess of IRC Section 415 limits. Benefits which do not exceed such amounts are payable from the City's MERF Plan. IRC Section 415 limits are assumed to increase annually and thus decrease the benefits payable from this Plan and increase the portion of the benefits payable from the City's MERF Plan.

**Section 415(m) Fund adopted by the Court of Common Council on March 24, 1997.*