PERAC AUDIT REPORT

Worcester
Contributory Retirement System

JAN. 1, 2009 - DEC. 31, 2011

PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION
COMMONWEALTH OF MASSACHUSETTS

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April 17, 2013

The Public Employee Retirement Administration Commission has completed an examination of the Worcester Retirement System pursuant to G.L. c. 32, § 21. The examination covered the period from January 1, 2009 to December 31, 2011. This audit was conducted in accordance with the accounting and management standards established by the Public Employee Retirement Administration Commission in regulation 840 CMR 25.00. Additionally, all supplementary regulations approved by PERAC and on file at PERAC are listed in this report.

In our opinion, the financial records are being maintained and the management functions are being performed in conformity with the standards established by the Public Employee Retirement Administration Commission with the exception of that noted in the finding presented in this report.

In closing, I acknowledge the work of examiner Scott Henderson who conducted this examination, and express appreciation to the Board of Retirement and staff for their courtesy and cooperation.

Sincerely,

Joseph E. Connarton

Joseph E. Connarton
Executive Director

EXPLANATION OF FINDING AND RECOMMENDATION

<u>Reconciliation of Cash Accounts:</u>
The Worcester Retirement Board uses four separate bank accounts for its financial activities. The Office of the City Treasurer prepares formal reconciliations for three of those accounts. The auditor observed the Treasurer did not provide the details included in the reconciliation process to the Retirement Board during the audit period. A Retirement Board staff person prepares formal reconciliations for the same three accounts independent of the Office of the City Treasurer. Our inquiries determined that these finalized documents were not compared to each other on a regular basis.

The other bank account not included in the evaluation noted above is used for paying the retiree payroll. A file is transmitted to the bank that details the direct deposit activity and the checks issued. The bank then provides a list of outstanding checks. This provides very limited control over these significant financial transactions.

Recommendation: The City Treasurer shall be the custodian of the retirement system's funds according to G.L. c. 32, § 23 (2) (a). As custodian of the retirement fund, the Treasurer is obligated to perform a monthly reconciliation of all retirement system cash accounts. This process is necessary to maintain proper internal control by segregating reconciliation duties. The Treasurer must be instructed to provide appropriate paperwork (bank statement, reconciliation, and outstanding check list) to the Retirement Board on a monthly basis for all operating accounts. The check number, date issued, payee, and amount of the check should be included as part of the reconciliation provided to the Retirement Board. Any discrepancies with general ledger balances must be promptly identified and resolved. If the Retirement Board does not receive completed reconciliations by the end of the following month, it should formally request the reconciliation in writing from the Treasurer's Office.

<u>Board Response:</u>
The Retiree Payroll Bank Account will be enrolled in a positive pay program through Bank of America, which will strengthen the control over the payroll transaction.

<u>FINAL DETERMINATION</u>:
PERAC Audit staff will follow up in six (6) months to ensure appropriate actions have been taken regarding all findings.

STATEMENT OF LEDGER ASSETS AND LIABILITIES

	AS OF DECEMBER 31, 2011	2010	2009
Net Assets Available For Benefits:			
Cash	$1,882,343	$2,775,421	$5,328,370
Fixed Income Securities	100,860,546	114,886,192	97,249,299
Equities	16,339,543	28,193,845	32,828,686
Pooled Domestic Equity Funds	147,198,801	138,970,391	153,977,582
Pooled International Equity Funds	142,422,014	165,447,123	131,055,822
Pooled Domestic Fixed Income Funds	24,710,484	33,339,606	30,627,508
Pooled Alternative Investment Funds	119,862,658	96,844,896	75,400,181
Pooled Real Estate Funds	81,715,298	74,863,259	62,541,276
Hedge Funds	21,119,095	26,612,273	29,797,137
Interest Due and Accrued	1,004,668	1,130,572	1,062,423
Accounts Receivable	1,389,246	1,767,344	616,983
Accounts Payable	(2,502,928)	(2,929,742)	(2,748,927)
Total	$656,001,767	$681,901,180	$617,736,339
Fund Balances:			
Annuity Savings Fund	$165,906,349	$158,795,055	$158,227,507
Annuity Reserve Fund	55,577,828	57,227,557	51,017,078
Pension Fund	27,824,133	32,197,013	31,670,882
Military Service Fund	15,751	15,720	15,673
Expense Fund	0	0	0
Pension Reserve Fund	406,677,705	433,665,835	376,805,200
Total	$656,001,767	$681,901,180	$617,736,339

STATEMENT OF CHANGES IN FUND BALANCES

	Annuity Savings Fund	Annuity Reserve Fund	Pension Fund	Military Service Fund	Expense Fund	Pension Reserve Fund	Total All Funds
Beginning Balance (2009)	$152,780,052	$49,266,004	$29,869,099	$15,595	$0	$296,433,205	$528,363,954
Receipts	15,527,861	1,482,831	30,848,404	78	3,696,645	104,723,080	156,278,898
Interfund Transfers	(8,310,151)	7,762,814	24,898,422	0	0	(24,351,085)	0
Disbursements	(1,770,254)	(7,494,571)	(53,945,043)	0	(3,696,645)	0	(66,906,513)
Ending Balance (2009)	158,227,507	51,017,078	31,670,882	15,673	0	376,805,200	617,736,339
Receipts	15,192,303	1,538,055	32,354,491	47	3,947,683	80,709,968	133,742,547
Interfund Transfers	(12,497,629)	12,567,213	23,779,749	0	0	(23,849,333)	0
Disbursements	(2,127,126)	(7,894,789)	(55,608,108)	0	(3,947,683)	0	(69,577,706)
Ending Balance (2010)	158,795,055	57,227,557	32,197,013	15,720	0	433,665,835	681,901,180
Receipts	14,866,286	1,667,863	34,799,726	31	4,003,518	(8,216,934)	47,120,491
Interfund Transfers	(5,344,457)	5,223,267	18,892,386	0	0	(18,771,196)	0
Disbursements	(2,410,536)	(8,540,858)	(58,064,992)	0	(4,003,518)	0	(73,019,904)
Ending Balance (2011)	$165,906,349	$55,577,828	$27,824,133	$15,751	$0	$406,677,705	$656,001,767

STATEMENT OF RECEIPTS

	FOR THE PERIOD ENDING DECEMBER 31, 2011	2010	2009
Annuity Savings Fund:			
Members Deductions	$13,875,458	$14,029,012	$14,455,942
Transfers from Other Systems	554,396	568,929	259,684
Member Make Up Payments and Re-deposits	96,906	111,150	70,309
Member Payments from Rollovers	0	22,543	0
Investment Income Credited to Member Accounts	339,526	460,669	741,926
Sub Total	14,866,286	15,192,303	15,527,861
Annuity Reserve Fund:			
Investment Income Credited to the Annuity Reserve Fund	1,667,863	1,538,055	1,482,831
Pension Fund:			
3 (8) (c) Reimbursements from Other Systems	488,176	422,175	382,427
Received from Commonwealth for COLA and Survivor Benefits	1,596,702	1,726,411	1,925,710
Pension Fund Appropriation	32,706,347	30,196,905	28,505,066
Settlement of Workers' Compensation Claims	8,500	9,000	35,200
Sub Total	34,799,726	32,354,491	30,848,404
Military Service Fund:			
Investment Income Credited to the Military Service Fund	31	47	78
Expense Fund:			
Investment Income Credited to the Expense Fund	4,003,518	3,947,683	3,696,645
Pension Reserve Fund:			
Interest Not Refunded	15,759	6,635	12,375
Miscellaneous Income	54	245	1,331
Excess Investment Income (Loss)	(8,232,746)	80,703,088	104,709,374
Sub Total	(8,216,934)	80,709,968	104,723,080
Total Receipts	$47,120,491	$133,742,547	$156,278,898

STATEMENT OF DISBURSEMENTS

	FOR THE PERIOD ENDING DECEMBER 31,		
	2011	2010	2009
Annuity Savings Fund:			
Refunds to Members	$1,486,182	$1,355,957	$1,174,918
Transfers to Other Systems	924,354	771,169	595,337
Sub Total	2,410,536	2,127,126	1,770,254
Annuity Reserve Fund:			
Annuities Paid	8,394,409	7,668,243	7,334,109
Option B Refunds	146,449	226,546	160,462
Sub Total	8,540,858	7,894,789	7,494,571
Pension Fund:			
Pensions Paid:			
Regular Pension Payments	28,911,453	26,885,194	19,113,926
Survivorship Payments	2,260,176	1,895,837	1,922,368
Ordinary Disability Payments	481,273	410,682	921,480
Accidental Disability Payments	11,134,734	10,993,690	15,397,979
Accidental Death Payments	3,134,043	3,362,400	3,283,838
Section 101 Benefits	137,124	136,499	1,041,089
3 (8) (c) Reimbursements to Other Systems	2,127,935	2,228,553	2,741,372
State Reimbursable COLA's Paid	9,878,255	9,695,254	9,522,992
Sub Total	58,064,992	55,608,108	53,945,043
Expense Fund:			
Board Member Stipend	15,000	15,000	15,000
Salaries	329,523	341,203	347,559
Legal Expenses	63,897	62,591	66,814
Medical Expenses	346	995	852
Travel Expenses	5,684	3,721	1,766
Administrative Expenses	12,637	18,660	11,823
Professional Services	48,500	47,500	47,500
Education and Training	540	960	500
Furniture and Equipment	1,998	1,200	0
Management Fees	3,081,888	3,045,303	2,784,997
Custodial Fees	182,386	175,211	202,664
Consultant Fees	170,000	170,000	170,000
Service Contracts	49,421	25,239	10,178
Fiduciary Insurance	41,700	40,101	36,991
Sub Total	4,003,518	3,947,683	3,696,645
Total Disbursements	$73,019,904	$69,577,706	$66,906,513

INVESTMENT INCOME

	FOR THE PERIOD ENDING DECEMBER 31,		
	2011	2010	2009
Investment Income Received From:			
Cash	$2,918	$6,790	$10,499
Fixed Income	4,747,772	5,223,609	5,173,892
Equities	507,927	548,024	1,434,618
Pooled or Mutual Funds	6,515,482	4,635,405	4,042,954
Commission Recapture	10,632	11,048	2,603
Total Investment Income	11,784,731	10,424,875	10,664,566
Plus:			
Realized Gains	14,979,310	15,270,203	36,058,477
Unrealized Gains	78,350,336	131,627,543	140,275,276
Interest Due and Accrued - Current Year	1,004,668	1,130,572	1,062,423
Sub Total	94,334,314	148,028,318	177,396,176
Less:			
Paid Accrued Interest on Fixed Income Securities	(268,613)	(385,822)	(604,175)
Realized Loss	(6,350,537)	(16,343,242)	(13,071,573)
Unrealized Loss	(100,591,131)	(54,012,164)	(62,804,513)
Interest Due and Accrued - Prior Year	(1,130,572)	(1,062,423)	(949,626)
Sub Total	(108,340,853)	(71,803,652)	(77,429,888)
Net Investment Income (Loss)	(2,221,808)	86,649,542	110,630,854
Income Required:			
Annuity Savings Fund	339,526	460,669	741,926
Annuity Reserve Fund	1,667,863	1,538,055	1,482,831
Military Service Fund	31	47	78
Expense Fund	4,003,518	3,947,683	3,696,645
Total Income Required	6,010,938	5,946,454	5,921,480
Net Investment Income (Loss)	(2,221,808)	86,649,542	110,630,854
Less: Total Income Required	6,010,938	5,946,454	5,921,480
Excess Income (Loss) To The Pension Reserve Fund	($8,232,746)	$80,703,088	$104,709,374

SCHEDULE OF ALLOCATION OF INVESTMENTS OWNED

(percentages by category)

	AS OF DECEMBER 31, 2011	
	MARKET VALUE	PERCENTAGE OF TOTAL ASSETS
Cash	$1,882,343	0.3%
Fixed Income	100,860,546	15.4%
Equities	16,339,543	2.5%
Pooled Domestic Equity Funds	147,198,801	22.4%
Pooled International Equity Funds	142,422,014	21.7%
Pooled Domestic Fixed Income Funds	24,710,484	3.8%
Pooled Alternative Investment Funds	119,862,658	18.3%
Pooled Real Estate Funds	81,715,298	12.5%
Hedge Funds	21,119,095	3.2%
Grand Total	$656,110,781	100.0%

For the year ending December 31, 2011, the rate of return for the investments of the Worcester Retirement System was -0.39%. For the five-year period ending December 31, 2011, the rate of return for the investments of the Worcester Retirement System averaged 1.57%. For the 27-year period ending December 31, 2011, since PERAC began evaluating the returns of the retirement systems, the rate of return on the investments of the Worcester Retirement System was 8.85%.

The composite rate of return for all retirement systems for the year ending December 31, 2011 was 0.27%. For the five-year period ending December 31, 2011, the composite rate of return for the investments of all retirement systems averaged 1.38%. For the 27-year period ending December 31, 2011, since PERAC began evaluating the returns of the retirement systems, the composite rate of return on the investments of all retirement systems averaged 9.11%.

SUPPLEMENTARY INVESTMENT REGULATIONS

The Worcester Retirement System submitted the following supplementary investment regulations, which were approved by the Public Employee Retirement Administration Commission on:

December 27, 2011
With respect to the Worcester Retirement Board ("the Board") investment in the Capital International Private Equity Fund VI, LP ("Fund"), the following shall apply:

In accordance with such investment, the Board is granted an exemption from the provisions of 840 CMR 17.03(2)(e) regarding parties in interest, as the Fund has indicated that any such engagement may, but is unlikely, to occur. Notwithstanding the provisions of this paragraph, the Fund shall be deemed in compliance with this regulation provided that if a transaction with a party in interest comes to the attention of the Fund, the Fund notifies the Board and PERAC.

The Board is granted an exemption from the provisions of 840 CMR 16.02(5) with respect to indemnification obligations, as contemplated in the Subscription and Partnership Agreements. In the event that the provisions related to indemnification obligations of the Subscription and Partnership Agreements conflict with the provisions of this regulation related to indemnification, the provisions of the Subscription and Partnership Agreements shall control. The Board determines hereby that the risk of undertaking the potential liability as set forth in the Subscription and Partnership Agreements does not outweigh the potential benefit of investing in the Fund.

The Board is granted an exemption from 840 CMR 19.01(7)(a)(6) with respect to fees based on committed capital, as the Partnership Agreement contemplates that such fees will, after a certain period, be based on a percentage per annum of capital contributions rather than committed capital. Notwithstanding the limits established herein fees may be based upon committed capital until the earlier to occur of (i) the last day of the Investment Period, as defined in the Partnership Agreement, and (ii) the date a successor fund (as defined in the Partnership Agreement, an unrelated investment fund having investment objectives and strategies substantially similar to the investment objectives of the Fund) begins to pay management fees.

The following provisions of 840 CMR 21.01 are amended as follows:
(i) 840 CMR 21.01(1) is amended by adding at the end of such provision: Notwithstanding the provisions of this regulation, the Fund may make purchases of securities by partial payment of their cost in connection with levered purchases and deferred payment structures as part of its investment strategy;

(ii) 840 CMR 21.01(2) amended by adding at the end of such provision: Notwithstanding the provisions of this regulation, although the Fund does not intend to engage in short sales as conventionally understood, the Fund is not prohibited from doing so under the Partnership Agreement and cannot be precluded from making investments using a structure that could resemble a short sale, for example, in cases where direct legal ownership of an investment in non-public securities by the Fund may be limited for regulatory or similar reasons;

(iii) 840 CMR 21.01(3),(4) and (5) are amended by adding at the end of each provision: Notwithstanding the provisions of this regulation, the Fund may use derivatives and engage in hedging activities for non–speculative purposes in connection with its investments;

(iv) 840 CMR 21.01(6) is amended by adding at the end of such provision: Notwithstanding the provisions of this regulation, the Fund may make investments in non-public securities;

(v) 840 CMR21.01(7) is amended by adding at the end of such provision: Notwithstanding the provisions of this regulation, although the Fund does not intend to make direct investments in mortgages, the Fund is not prohibited from doing so under the Partnership Agreement and cannot be precluded from making such investments;

(vi) 840 CMR 21.01(8) is amended by adding at the end of such provision: Notwithstanding the provisions of this regulation, the Fund may make collateral loans in connection with levered purchases;

(vii) 840 CMR 21.01(9) is amended by adding at the end of such provision: Notwithstanding the provisions of this regulation, the Fund may make loans to employees of, or individuals affiliated with, its portfolio companies in connection with its investments; and

(viii) 840 CMR 21.01(10) is amended at the end of such provision: Notwithstanding the provisions of this regulation, although the Fund is generally prohibited from making direct purchases or leases of real estate, such investments could be made with the consent of the Fund's advisory committee and the Fund cannot be precluded from making such investments.

The Fund's objective is to acquire, hold and dispose of securities, mainly through privately negotiated equity and equity - related investments operating primarily in global emerging markets outside of the U.S., in order to seek long term appreciation. The Board is satisfied with respect to representations made by the Fund with respect to providing the Board with a carve out provision to avoid investments that would potentially violate provisions of M.G.L. c. 32, s. 23(2)(g)(ii)(iii).

<u>March 14, 2011</u>
16.08
The Worcester Retirement Board is authorized to invest in the State Street Global Advisors Global Natural Resources Non-Lending Index Fund. Because of the passive nature of this mandate and the very limited number of possible providers of this particular type of index fund, the Board did not conduct a conventional search process. Instead, the Board's consultant identified and solicited proposals from possible providers of this index product. Based on the appropriateness of its product relative to the Board's needs as well as other factors such as fees and liquidity, the Board voted to select the SSgA Global Natural Resources Non-Lending Index Fund for this mandate. The Board's familiarity with SSgA as an existing manager was also considered.

<u>December 1, 2010</u>
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board may invest in Newstone Capital Partners II. The Board has been a satisfied investor in Newstone Capital Partners

I. The management team and strategy remain the same and the Board has submitted the required regulatory documents.

SUPPLEMENTARY INVESTMENT REGULATIONS (Continued)

Notwithstanding the provisions of the Public Employee Retirement Administration Commission's investment regulations, the Worcester Retirement Board may exercise its discretion to invest funds of the Worcester Retirement System (the "System") in Newstone Capital Partners II, L.P. (the "Fund"), as contemplated by 840 CMR 19.00 et. seq., and while the funds of the System are invested in Partnership Interests (as defined in the Fund's Amended and Restated Limited Partnership Agreement) of the Fund, for purposes of applying the rules set forth in 840 CMR 16.00 et. seq., 17.00 et. seq., and 19.00 et. seq., investments of the System shall not be deemed to include any of the underlying assets of the Fund, but shall only include the Partnership Interests of the Fund, and the Fund shall not be deemed to be an investment manager or fiduciary to the System; provided that the Fund's general partner shall use its reasonable best efforts at all times to conduct the affairs of the Fund such that the assets of the Fund would not constitute plan assets of any ERISA partner subject to Title I of ERISA Section 4975 of the Internal Revenue Code of 1986, as amended, pursuant to the United States Department of Labor at Section 2510.3-101 of Part 2510 of Chapter XXV, Title 29 of the Code of Federal Regulations.

June 25, 2010

Notwithstanding the provisions of any statute or regulations of the Public Employee Retirement Administration Commission to the contrary, including the provisions of 840 CMR 21.01(1)(4)(5) and (6), the Worcester Retirement Board is hereby granted an exemption from restrictions on investment and may invest a portion of the funds of the Worcester Retirement System in the fund known as White Deer Energy, L.P.(the "Fund"). The Fund is a private equity fund which will invest in middle-market energy companies. The Fund will target $50 to $100 million equity investments in companies active in oil and gas production, oil service and equipment manufacturing and in energy infrastructure, primarily in North America.

October 11, 2009

16.08

The Worcester Retirement Board is authorized to invest in State Street Global Advisors' Russell 1000 Growth Non-Lending Index Fund. The Board did not conduct a traditional competitive search process in selecting this manager, but the Board's investment consultant did solicit proposals from several major providers of Russell 1000 Growth index funds and the Board made its selection based on objective consideration of the criteria contained in the responses. The benefits accruing to the Board from SSgA being an existing manager were also considered.

August 13, 2009

16.08

In accordance with Investment Guideline 99-2, the Worcester Retirement Board is authorized to modify its international equity index mandate with State Street Global Advisors. As it transitions out of securities lending funds and seeks to maximize portfolio liquidity, the Board will be adding an investment in SSgA's Daily MSCI-EAFE Index Fund to its existing SSgA MSCI-EAFE Index funds which provide less liquidity.

June 4, 2009
16.08
In accordance with Investment Guideline 99-22, the Worcester Retirement Board is authorized to transfer assets from four State Street Global Advisors index funds that incorporate securities lending to four corresponding index funds that do not allow securities lending. These modifications will ensure that the Board has daily liquidity on the funds in question. The funds involved are the S&P 500 Index, Russell 1000 Value Index, S&P 400 Mid Cap Index, and MSCI-EAFE Index.

March 3, 2009
(1) Notwithstanding the provisions of the Public Employee Retirement Administration Commission regulations, the Worcester Retirement Board may invest funds of the Worcester Retirement System ("System") in the fund known as Aslan Realty Partners IV, LLC (the "Fund"), and while the assets of the System are so invested, the assets of the System shall be deemed to include, for purposes of applying the rules set forth in 840 CMR 16.00 et seq., 17.00 et seq., and 840 CMR 21.01, the System's interest in the Fund but not any of the underlying assets of the Fund; provided that, at all times, either (1) less than twenty-five percent (25%) of each class of equity interest in the Fund is held by "benefit plan investors" (within the meaning of the Employee Retirement Income Security Act of 1974, as amended ("ERISA") and the regulations promulgated thereunder), or (2) the Fund qualifies as a "venture capital operating company" or "real estate operating company" within the meaning of ERISA and the regulations promulgated thereunder.

(2) The limitations and restrictions of 840 CMR Section 19.01(6) shall not apply to the Fund for the two-year period commencing on the date of the Fund's initial investment.

February 9, 2009
19.01(6)
Notwithstanding the provisions of the Public Employee Retirement Administration Commission regulations, the Worcester Retirement Board may invest funds of the Worcester Retirement System (the "System") in the fund known as AEW Partners VI, L.P. (the "Fund"), and while the assets of the System are so invested, the assets of the System shall be deemed to include, for purposes of applying the rules set forth in 840 CMR 16.00 et seq., 17.00 et seq.; and 840 CMR 21.01, the System's interest in the Fund but not any of the underlying assets of the Fund; provided that, at all times, either (1) less than twenty-five percent (25%) of each class of equity interest in the Fund is held by "benefit plan investors" (within the meaning of the Employee Retirement Income Security Act of 1974, as amended ("ERISA") and the regulations promulgated thereunder), or (2) the Fund qualifies as a "venture capital operating company" or "real estate operating company" within the meaning of ERISA and the regulations promulgated thereunder.

The limitations and restrictions of 840 CMR Section 19.01(6) shall not apply to the Fund for the two-year period commencing on the date of the Fund's initial investment.

October 28, 2008
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board may invest in the Riverside Capital Appreciation Fund V. The Board has been a satisfied investor in predecessor funds

with Riverside Capital. Performance has been good and the strategy and investment team are essentially unchanged. The manager has submitted an updated exemption application.

March 24, 2008
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in Ascent Venture Partners V. The Board has been a satisfied investor in Ascent Venture Partners IV. The management team and strategy are unchanged and Ascent Venture Partners has submitted an updated Exemption Application.

February 25, 2008
Notwithstanding the provisions of any statute or regulations of the Public Employee Retirement Administration Commission to the contrary, including the provisions of 840 CMR 21.01(2)(3)(4) and (5), the Worcester Retirement Board is hereby granted an exemption from restrictions on investment and may invest eight million dollars ($8,000,000) of the funds of the Worcester Retirement System (the "System") in the fund known as the Global Infrastructure Partners Fund I, a Guernsey limited partnership ("Fund"). The Fund will primarily seek to make control-oriented equity, equity-related and investments in debt securities in infrastructure and infrastructure-related assets including in businesses that own, operate, develop, manage or support infrastructure-related assets in energy, transportation and water sectors.

January 18, 2008
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board may invest in Northstar Mezzanine Partners V. The Board has been a satisfied investor in Northstar's two preceding funds. The management team and investment strategy are unchanged. The manager has submitted an updated Exemption Application.

June 27, 2007
21.01(2)(3)(4)(5)
Notwithstanding the provisions of any statute or regulations of the Public Employee Retirement Administration Commission to the contrary, including the provisions of 840 CMR 21.01(2)(3)(4) and (5), the Worcester Retirement Board is hereby granted an exemption from restrictions on investment and may invest a portion of the funds of the Worcester Retirement System (the "System") in the fund known as the EB Daily Valued Global Alpha I Fund of Mellon Capital Management Corporation.

June 27, 2007
Notwithstanding the provisions of the Public Employee Retirement Administration Commission regulations, the Worcester Retirement Board may invest funds of the Retirement System (the "System") in the fund known as the RREEF Global Real Estate Securities Fund (US$ Hedged Strategy) LP (the "Fund"), and effective as of the date of the initial investment by the System of any of its assets in the Fund, while the assets of the System are so invested, the activities and investments of the Fund, directly or indirectly, shall be deemed to satisfy the prohibited transaction rules set forth in 840 CMR 16.00 et seq. and 840 CMR 17.03 to the extent such activities satisfy the prohibited transaction rules set forth in Section 406 of the U.S. Employee Retirement Income

Security Act of 1974, as amended ("ERISA"), taking into account the statutory exemptions available under ERISA, and Prohibited Transaction Class Exemption 84-14, as amended, Prohibited Transaction Class Exemption 2003-24, and other available class exemptions.

May 22, 2007
Notwithstanding the provisions of the Public Employee Retirement Administration Commission's investment regulations, the Worcester Retirement Board may exercise its discretion to invest funds of the Worcester Retirement System (the "System") in Newstone Capital Partners, L.P. (the "Fund"), as contemplated by 840 CMR 19.00 et seq., and while the funds of the System are invested in Partnership Interests (as defined in the Fund's Amended and Restated Limited Partnership Agreement) of the Fund, for purposes of applying the rules set forth in 840 CMR 16.00 et seq., 17.00 et seq. and 19.00 et seq., investments of the System shall not be deemed to include any of the underlying assets of the Fund, but shall only include the Partnership Interests of the Fund, and the Fund shall not be deemed to be an investment manager or fiduciary to the System; provided that the Fund's general partner shall use its reasonable best efforts at all times to conduct the affairs of the Fund such that the assets of the Fund would not constitute plan assets of any ERISA partner subject to Title I of ERISA Section 4975 of the Internal Revenue Code of 1986, as amended, pursuant to the United States Department of Labor at Section 2510.3-101 of Part 2510 of Chapter XXV, Title 29 of the Code of Federal Regulations.

March 13, 2007
17.03
Notwithstanding the provisions of the Public Employee Retirement Administration Commission's investment regulations, the Worcester Retirement Board may exercise its discretion to invest funds of the Worcester Retirement System (the "System") in Harvest Partners V, L.P. (the "Fund"), as contemplated by 840 CMR 19.01(6), and while the funds of the System are invested in shares of the Fund, for purposes of applying the rules set forth in 840 CMR 16.00 et seq. and 17.00 et seq., investments of the System shall not be deemed to include any of the underlying assets of the Fund, but shall only include the shares of the Fund, and the Fund shall not be deemed to be an investment manager or fiduciary to the System; provided that the General Partner shall use its reasonable best efforts at all times to conduct the affairs of the Partnership such that the assets of the Partnership would not constitute plan assets of any ERISA partner subject to Title I of ERISA or Section 4975 of the Internal Revenue Code of 1986, as amended, pursuant to the United States Department of Labor at Section 2510.3-101 of Part 2510 of Chapter XXV, Title 29 of the Code of Federal Regulations.

February 21, 2007
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in Boston Millennia Partners III. The Board has been a satisfied investor in BMP's predecessor partnership as well as in a previous venture partnership managed by this team while at a different firm. The management team remains intact and, after conducting due diligence on the firm, the board and its consultant are confident in BMP's capabilities.

February 15, 2007
17.03
Notwithstanding the provisions of the Public Employee Retirement Administration Commission regulations, the Worcester Retirement Board may invest funds of the Retirement System (the "System") in the fund known as the INVESCO Non-US Partnership Fund II, LP (the "Fund"), and effective as of the date of the initial investment by the System of any of its assets in the Fund, while the assets of the System are so invested, the activities and investments of the Fund, directly or indirectly, shall be deemed to satisfy the prohibited transaction rules set forth in 840 CMR 16.00 et seq. and 840 CMR 17.03 to the extent such activities satisfy the prohibited transaction rules set forth in Section 406 of the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA"), taking into account statutory exemptions under ERISA, and Prohibited Transaction Class Exemption 84-14, as amended, and other available class exemptions.

February 13, 2007
Notwithstanding the provisions of the Public Employee Retirement Administration Commission regulations, the Worcester Retirement Board may invest funds of the Retirement System (the "System") in the fund known as INVESCO Core Real Estate USA, LLC (the "Fund"), and effective as of the date of the initial investment by the System of any of its assets in the Fund, while the assets of the System are so invested, the assets of the System shall be deemed to include, for purposes of applying the rules set forth in 840 CMR 16.00 et seq. and 17.00 et seq., the System's interest in the Fund but not any of the underlying assets of the Fund; provided that, at all times, the Fund qualified as a "venture capital operating company" within the meaning of the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

December 4, 2006
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in the Riverside Capital Europe Fund III. The Board has been a satisfied investor in two of Riverside's preceding domestic buyout funds, both of which have produced impressive returns to date. The new fund focuses on European rather than domestic investments but the Board and its consultant have decided that this investment is appropriate because of:

1. the strong results from the two domestic buyout funds that the Board has invested in
2. the impressive performance of Riverside's precious European buyout fund,
3. the basic investment process and strategy is the same, and
4. most importantly, the same management team that has overseen the domestic operations also oversees the European operations.

December 4, 2006
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in the Standard Life European Strategic Partners Fund 2006. The Board has been a satisfied investor in Standard Life's first ESP Fund (2000) and the basic strategy as well as the management team are essentially the same. The manager has submitted the required updated regulatory documents.

June 26, 2006
16.08
In accordance with Investment Guideline 99-2, the Worcester Retirement Board is authorized to transfer its assets from TBC's International ACWI (All Countries World Index) Fund to TBC's EAFE Value Fund. The two funds are managed by the same portfolio management team and in a similar style, with the difference being that the ACWI Fund includes a small allocation to emerging market equities. Since the Board recently hired a separate manager dedicated to emerging market equities, the Board is making this change in order to avoid any overlap between the two managers. By slightly limiting its investment universe, the Boston Company will focus on international developed market equities while the newly hired manager will be responsible for emerging market equities.

May 15, 2006
16.05
Notwithstanding the provisions of 840 CMR 16.00 et seq., the Worcester Retirement Board may be permitted to invest funds of the Worcester Retirement System in the funds known as Aetos Capital Multi-Strategy Arbitrage Cayman Fund, Aetos Capital Distressed Investment Strategies Cayman Fund, Aetos Capital Long/Short Strategies Cayman Fund and/or Aetos Capital Market Neutral Strategies Cayman Fund (collectively "Aetos Funds") noting that as a so-called hedge fund of funds, the Aetos Funds do not trade securities, and therefore do not pay brokerage commissions or use soft dollars; and, the Aetos Funds do not vote proxies or participate in tender offers, because said Funds do not own individual securities.

May 15, 2006
16.00, 17.00, 18.00, 19.00 and 21.00
Notwithstanding the provisions of 840 CMR 16.00 et seq., the Worcester Retirement Board may be permitted to invest funds of the Worcester Retirement System in BPIF Non-Taxable L.P., a Delaware limited partnership (the "Fund"), noting that as a so-called hedge fund of funds, the Fund invests in other funds, and while Blackstone Alternative Asset Management L.P., the Fund's general partner ("General Partner") can comply with the provisions of 840 CMR 16.00 et seq. with respect to the Fund's direct investments, it cannot make such representations regarding any indirect investments, or the investments of the funds which it does not directly manage.

December 12, 2005
16.08
In accordance with Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in Northstar Mezzanine Partners IV. The system has been a satisfied investor in Northstar Mezzanine Partners III, the immediate predecessor fund, and has submitted updated Disclosure Statement and Exemption Application forms.

October 19, 2005
19.01(8)
The Worcester Retirement Board is authorized to increase the Board's maximum allocation to alternative investments (venture capital, private equity, et. al.) from the current regulatory maximum of 5% of total portfolio assets at the time of investment to 10%. The Board's current allocation is about 4% and it is unlikely that the allocation will rise as high as 10%. Nevertheless, because of the

special challenges involved in investing in this asset class, the Board would like the flexibility to exceed the existing 5% limit. The Board has had experience investing in alternative investments since 1992.

June 24, 2005
16.08
In accordance with PERAC Investment Guideline 99-2, the Worcester Retirement Board is authorized to modify its large cap equity mandate with State Street Global Advisors by transferring assets from the S&P 500 Index Fund to the Russell 1000 Value and Russell 1000 Growth index funds. Together, the two Russell 1000 funds cover the same large cap universe as the S&P 500, but the separation into the two style-specific funds will offer the board greater flexibility to control risk, and to take advantage of opportunities, relative to its growth/value allocation.

May 6, 2005
19.01(6)
Notwithstanding the provisions of Public Employee Retirement Administration Commission regulations, including 840 CMR 21.01(6), the City of Worcester Retirement Board may exercise its investment discretion to invest funds of the City of Worcester Retirement System (the "System") in the shares of a real estate investment trust known as Hancock Timberland VII Inc. (the "Fund"), as contemplated by 840 CMR 19.01(6), and while funds of the System are invested in shares of the Fund, for purposes of applying the rules set forth in 840 CMR 16.00 et seq. and 17.00 et seq., investments of the System shall not be deemed to include any of the underlying assets of the Fund, but shall only include the shares of the Fund, and the Fund shall not be deemed to be an investment manager or fiduciary to the System; provided that at all times the Fund qualifies as a "real estate operating company" within the meaning of the Employee Retirement Security Act of 1974, as amended ("ERISA") and the regulations promulgated there under, or the assets of the Fund are otherwise not treated as "plan assets" of the System.

May 2, 2005
16.08
In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in Charlesbank Equity Fund VI. The Board has been a satisfied investor in the predecessor fund, Charlesbank Equity Fund V.

January 31, 2005
16.08
In accordance with Investment Guideline 99-2, the Worcester Retirement Board is authorized to make a modest modification to its large cap equity index mandate with State Street Global Advisors. Standard & Poor's has announced that it will be adopting a free-float methodology for all their U.S. equity indexes, with final implementation scheduled for September 2005. In order to help address concerns over the possible market impact of this rebalancing, S&P has created provisional indexes. In hopes of avoiding whatever market impacts might be caused by the full transformation later this year, the Worcester Retirement Board has decided to switch from SSGA's S&P 500 Index Fund to the SSGA S&P 500 Flagship Securities Lending Provisional Fund.

SUPPLEMENTARY INVESTMENT REGULATIONS (Continued)

February 25, 2004
19.01(6)
Notwithstanding the provisions of Public Employee Retirement Administration Commission regulations, the City of Worcester Retirement Board may invest funds of the City of Worcester Retirement System (the "System") with a real estate investment fund, as contemplated by 840 CMR 19.01(4)-(6), known as Heitman Value Partners, L.P. ("the Fund"), and while the funds of the System are so invested the assets of the System shall be deemed to include, for purposes of applying the rules set forth in 840 CMR 16.00 et seq. and 17.00 et seq.; the System's interest in the Fund but not any of the underlying assets of the Fund; provided that, at all times, the Fund qualifies as a "real estate operating company" or venture capital operating company" within the meaning of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and the regulations promulgated thereunder, or the assets of the Fund otherwise would not be treated as subject to ERISA.

October 27, 2003
16.08
In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement Board may invest in the Ascent Venture Partners IV Fund. The board has been an investor in Ascent's two predecessor funds and the investment results from those two partnerships have been satisfactory to date.

October 20, 2003
16.08
In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement Board is authorized to invest in the Riverside Capital Appreciation Fund 2003. This is the immediate successor fund to the Riverside Capital Appreciation Fund 2000, in which the Board invested in 2001. The earlier fund has had strong performance to date and the new fund is to be managed by the same investment team and with the same investment objectives.

September 22, 2003
16.08
Under the terms of Investment Guideline 99-2, the Worcester Retirement System is authorized to make a minor modification to its investment-grade fixed income mandate with Opus Investment Management. Under this change, Opus will create a separate account for Treasury Inflation-Protected Securities (TIPS), a segment of the market included in the universe the firm currently manages. Since the United States has issued only ten offerings of TIPS bonds and the account will not require active management, Opus will manage this account for a fee of only 0.10% which is lower than the fee for the system's existing core bond account.

September 22, 2003
16.08
The Worcester Retirement Board is authorized to make a modest modification to its high-yield investment mandate with Loomis Sayles. This modification involves no change in the overall investment objective or in the account's benchmark.

Under this modification, Loomis Sayles is authorized to invest in senior loans ("bank loans") up to 20% of the market value of the account. These are loans that are made by banks to the same universe of companies that comprises the high yield market. Because these loans are typically senior in the capital structure as well as secured by collateral, they typically have better default recovery rates and superior risk-adjusted performance than conventional high-yield bonds. Also, since these loans are adjustable-rate in nature, they have very little volatility from interest-rate changes.

Thus, it is expected that the inclusion of senior loans will help to preserve principal and reduce volatility in the high-yield portfolio.

<u>August 14, 2001</u>
16.08
In accordance with Investment Guideline 99-2, the Worcester Retirement Board is authorized to modify its fixed income management mandate with Loomis Sayles. The existing mandate calls for Loomis to invest in "high yield" corporate bonds and lower-investment-grade corporate bonds in approximately equal amounts. In order to simplify the board's portfolio structure, the lower-investment-grade portion of the account will be eliminated and Loomis will concentrate on high-yield bonds. The board has had a satisfactory relationship with Loomis Sayles for over five years and the firm is recognized within the industry as a leading manager of high-yield bonds.

<u>June 13, 2001</u>
16.08
In accordance with PERAC Investment Guideline 99-2, the Worcester Retirement Board may modify its international equity mandate with The Boston Company. The Board currently invests in TBC's International Equity Pooled Fund and TBC makes small tactical allocations to emerging markets through its Emerging Markets Pooled Fund. TBC has created a single commingled fund, the Pooled Employees International ACWI (ex U.S.) Equity Fund by which to accomplish the same investment strategy in a more efficient manner. The Board will incur no cost or change in fees by making this modification.

<u>October 19, 2000</u>
16.08
The Worcester Retirement System may invest in the Standard Life European Strategic Partners Fund. This is an alternative investments "fund-of-funds" in which, according to an agreement between the Board and Standard Life, decisions as to the actual selection of investment partnerships will be made by Standard Life in a process not overseen by the Board. The Board will periodically monitor the selection process used by Standard Life.

<u>April 6, 2000</u>
16.08
In accordance with PERAC Investment Guideline 99-2, the Worcester Retirement Board may re-allocate 50% of the assets currently invested in the SSGA S&P 500 Flagship Fund into the SSGA Equal Weighted S&P 500 Fund. Under this modification, the Board will be invested in the same universe of stocks but will reduce its exposure to large capitalization growth stocks and increase its exposure to the smaller stocks within the S&P 500 Index. The board believes this modification will

decrease its exposure to stocks that may be over-valued and increase its exposure to stocks that may represent better value.

March 20, 2000
16.08
In accordance with PERAC Investment Guideline 99-3, the Worcester Retirement System may invest in Boston Millennia Partners II, L.P. The System has not been invested in Boston Millennia Partners (BMP) I but information provided by the System, by the System's Investment Consultant, and by the manager indicates that BMP II can be reasonably considered a successor fund to one of the System's existing funds, Boston Capital Ventures (BCV) III. The general partners and other key managers of BMP are essentially the same team that managed BCV III. These men, led by Managing General Partner Dana Callow, Jr., created BMP in 1997, working initially in the same office space, and still maintain management responsibility for the investments in BVC III. Also, the investment objective of BMP II is the same as for BCV III.

NOTES TO FINANCIAL STATEMENTS

NOTE 1 – SUMMARY OF PLAN PROVISIONS

The plan is a contributory defined benefit plan covering all Worcester Retirement System member unit employees deemed eligible by the retirement board, with the exception of school department employees who serve in a teaching capacity. The Teachers' Retirement Board administers the pensions of such school employees.

ADMINISTRATION

There are 105 contributory retirement systems for public employees in Massachusetts. Each system is governed by a retirement board, and all boards, although operating independently, are governed by Chapter 32 of the Massachusetts General Laws. This law in general provides uniform benefits, uniform contribution requirements, and a uniform accounting and funds structure for all systems.

PARTICIPATION

Participation is mandatory for all full-time employees. Eligibility with respect to part-time, provisional, temporary, seasonal, or intermittent employment is governed by regulations promulgated by the retirement board, and approved by PERAC. Membership is optional for certain elected officials.

There are 3 classes of membership in the Retirement System:

Group 1:

General employees, including clerical, administrative, technical, and all other employees not otherwise classified.

Group 2:

Certain specified hazardous duty positions.

Group 4:

Police officers, firefighters, and other specified hazardous positions.

NOTES TO FINANCIAL STATEMENTS (Continued)

MEMBER CONTRIBUTIONS

Member contributions vary depending on the most recent date of membership:

Prior to 1975:	5% of regular compensation
1975 - 1983:	7% of regular compensation
1984 to 6/30/96:	8% of regular compensation
7/1/96 to present:	9% of regular compensation
1979 to present:	an additional 2% of regular compensation in excess of $30,000.

RATE OF INTEREST

Interest on regular deductions made after January 1, 1984 is a rate established by PERAC in consultation with the Commissioner of Banks. The rate is obtained from the average rates paid on individual savings accounts by a representative sample of at least 10 financial institutions.

RETIREMENT AGE

The mandatory retirement age for some Group 2 and Group 4 employees is age 65. Most Group 2 and Group 4 members may remain in service after reaching age 65. Group 4 members who are employed in certain public safety positions are required to retire at age 65. There is no mandatory retirement age for employees in Group 1.

SUPERANNUATION RETIREMENT

A member is eligible for a superannuation retirement allowance (service retirement) upon meeting the following conditions:

- completion of 20 years of service, or
- attainment of age 55 if hired prior to 1978, or if classified in Group 4, or
- attainment of age 55 with 10 years of service, if hired after 1978, and if classified in Group 1 or 2

NOTES TO FINANCIAL STATEMENTS (Continued)

AMOUNT OF BENEFIT

A member's annual allowance is determined by multiplying average salary by a benefit rate related to the member's age and job classification at retirement, and the resulting product by his creditable service. The amount determined by the benefit formula cannot exceed 80% of the member's highest three year average salary. For veterans as defined in G.L. c. 32, § 1, there is an additional benefit of $15 per year for each year of creditable service, up to a maximum of $300.

- Salary is defined as gross regular compensation. For employees who become members after January 1, 2011, regular compensation is limited to 64% of the federal limit found in 26 U.S.C. 401(a)(17).

- Average Salary is the average annual rate of regular compensation received during the 3 consecutive years that produce the highest average, or, if greater, during the last three years (whether or not consecutive) preceding retirement.

- The Benefit Rate varies with the member's retirement age, but the highest rate of 2.5% applies to Group 1 employees who retire at or after age 65, Group 2 employees who retire at or after age 60, and to Group 4 employees who retire at or after age 55. A .1% reduction is applied for each year of age under the maximum age for the member's group. For Group 2 employees who terminate from service under age 55, the benefit rate for a Group 1 employee shall be used.

DEFERRED VESTED BENEFIT

A participant who has completed 10 or more years of creditable service is eligible for a deferred vested retirement benefit.

The participant's accrued benefit is payable commencing at age 55, or the completion of 20 years, or may be deferred until later at the participant's option.

WITHDRAWAL OF CONTRIBUTIONS

Member contributions may be withdrawn upon termination of employment. The interest rate for employees who first become members on or after January 1, 1984 who voluntarily withdraw their contributions with less than 10 years of service will be 3%. Interest payable on all other withdrawals will be set at regular interest.

NOTES TO FINANCIAL STATEMENTS (Continued)

DISABILITY RETIREMENT

The Massachusetts Retirement Plan provides 2 types of disability retirement benefits:

ORDINARY DISABILITY

Eligibility: Non-veterans who become totally and permanently disabled by reason of a non-job related condition with at least 10 years of creditable service (or 15 years creditable service in systems in which the local option contained in G.L. c. 32, § 6(1) has not been adopted).

Veterans with ten years of creditable service who become totally and permanently disabled by reason of a non-job related condition prior to reaching "maximum age". "Maximum age" applies only to employees classified in Group 4 who are subject to mandatory retirement.

Retirement Allowance: Equal to the accrued superannuation retirement benefit as if the member was age 55. If the member is a veteran, the benefit is 50% of the member's final rate of salary during the preceding 12 months, plus an annuity based upon accumulated member contributions plus credited interest. If the member is over age 55, he or she will receive not less than the superannuation allowance to which he or she is entitled.

ACCIDENTAL DISABILITY

Eligibility: Applies to members who become permanently and totally unable to perform the essential duties of the position as a result of a personal injury sustained or hazard undergone while in the performance of duties. There are no minimum age or service requirements.

Retirement Allowance: 72% of salary plus an annuity based on accumulated member contributions, with interest. Any member injured while working out of title retiring after July 1, 2009, has such allowance based on the salary of the permanent title held on the date of injury. This amount is not to exceed 100% of pay. For those who became members in service after January 1, 1988 or who have not been members in service continually since that date, the amount is limited to 75% of pay. There is an additional pension of $751.80 per year (or $312 per year in systems in which the local option contained in G.L. c. 32, § 7(2)(a)(iii) has not been adopted), per child who is under 18 at the time of the member's retirement, with no age limitation if the child is mentally or physically incapacitated from earning. The additional pension may continue up to age 22 for any child who is a full time student at an accredited educational institution. An additional $15.00 per year of service, not to exceed $300 annually may be added to the benefit in systems in which the local option contained in G.L. c. 32, § 7(2)(e) has been adopted.

NOTES TO FINANCIAL STATEMENTS (Continued)

ACCIDENTAL DEATH

Eligibility: Applies to members who die as a result of a work-related injury or if the member was retired for accidental disability and the death was the natural and proximate result of the injury or hazard undergone on account of which such member was retired.

Allowance: An immediate payment to a named beneficiary equal to the accumulated deductions at the time of death, plus a pension equal to 72% of current salary and payable to the surviving spouse, dependent children or the dependent parent, plus a supplement of $751.80 per year, per child (or $312 per year in systems in which the local option contained in G.L. c. 32, § 9(2)(d)(ii) has not been adopted) payable to the spouse or legal guardian until all dependent children reach age 18 or 22 if a full time student, unless mentally or physically incapacitated.

The surviving spouse of a member of a police or fire department or any corrections officer who, under specific and limited circumstances detailed in the statute, suffers an accident and is killed or sustains injuries resulting in his death, may receive a pension equal to the maximum salary for the position held by the member upon his death.

In addition, an eligible family member may receive a one time payment of $100,000 from the State Retirement Board.

DEATH AFTER ACCIDENTAL DISABILITY RETIREMENT

Effective November 7, 1996, Accidental Disability retirees were allowed to select Option C at retirement and provide a benefit for an eligible survivor. For Accidental Disability retirees prior to November 7, 1996, who could not select Option C, if the member's death is from a cause unrelated to the condition for which the member received accidental disability benefits, a surviving spouse will receive an annual allowance of $6,000. For Systems that accept the provisions of Section 28 of Chapter 131 of the Acts of 2010, the amount of this benefit is $9,000.

DEATH IN ACTIVE SERVICE

Allowance: An immediate allowance equal to that which would have been payable had the member retired and elected Option C on the day before his or her death. For death occurring prior to the member's superannuation retirement age, the age 55 benefit rate is used. The minimum annual allowance payable to the surviving spouse of a member in service who dies with at least two years of creditable service is $3,000, provided that the member and the spouse were married for at least one year and living together on the member's date of death.

The surviving spouse of such a member in service receives an additional allowance equal to the sum of $1,440 per year for the first child, and $1,080 per year for each additional child until all dependent children reach age 18 or 22 if a full time student, unless mentally or physically incapacitated.

COST OF LIVING

If a system has accepted Chapter 17 of the Acts of 1997, and the Retirement Board votes to pay a cost of living increase (COLA) for that year, the percentage is determined based on the increase in the Consumer Price Index used for indexing Social Security benefits, but cannot exceed 3.0%. Section 51 of Chapter 127 of the Acts of 1999, if accepted, allows boards to grant COLA increases greater than that determined by CPI but not to exceed 3.0%. The first $12,000 of a retiree's total allowance is subject to a COLA. The total COLA for periods from 1981 through 1996 is paid for by the Commonwealth of Massachusetts.

Under the provisions of Chapter 32, § 103(j) inserted by Section 19 of Chapter 188 of the Acts of 2010, systems may increase the maximum base on which the COLA is calculated in multiples of $1,000. Presently that amount is $12,000. Each increase must be accepted by a majority vote of the Retirement Board and approved by the legislative body.

METHODS OF PAYMENT

A member may elect to receive his or her retirement allowance in one of 3 forms of payment.

Option A: Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the member's death.

Option B: A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided, however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree's beneficiary or beneficiaries of choice.

Option C: A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, 2/3 of the allowance is payable to the member's designated beneficiary (who may be the spouse, or former spouse who is unmarried at the time of retirement for a member whose retirement becomes effective on or after February 2, 1992, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or “pops up” to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable “pops up” to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

ALLOCATION OF PENSION COSTS

If a member’s total creditable service was partly earned by employment in more than one retirement system, the cost of the "pension portion" is allocated between the different systems pro rata based on the member’s service within each retirement system.

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES

The accounting records of the System are maintained on a calendar year basis in accordance with the standards and procedures established by the Public Employee Retirement Administration Commission.

Cash accounts are considered to be funds on deposit with banks and are available upon demand.

Short Term Investments are highly liquid investments that will mature within twelve months from the date of acquisition.

Investments are reported at their fair value. Securities traded on recognized exchanges are valued at the most recent sales price at year end. If no sale was reported, the mean of the bid and asked price is used when available, or the most recent bid price. Mutual, commingled and pooled funds are valued based on the net asset or unit value at year end. Real estate and alternative investments are valued based on estimates provided by the managers of those respective investments. Purchases and sales of securities are reflected on the date the trade is initiated. Realized gain or loss is largely based on the difference between the cost or the value at the prior year end and the funds realized upon liquidation. Dividend income is generally recorded when received. Interest income is recorded as earned on an accrual basis. Income from alternative investments is recorded as reported by the managing partner. Appreciation or depreciation in the value of investments consists of the unrealized gains and losses reported as the difference between the previous period and the current value.

The system makes estimates and assumptions that affect the reported values of assets and liabilities and the reported amounts added and deducted during the reporting periods. The fair value of real estate and alternative investment holdings are generally estimated in the absence of reliable exchange values. The actual funds realized upon liquidation may differ from these estimates.

The provisions of Massachusetts General Laws Chapter 32, § 23 (2) generally govern the investment practices of the system. The Board retains an investment consultant to closely monitor the implementation and performance of their investment strategy and advise them of the progress toward full funding of the system. That strategy seeks to balance the exposure to common deposit and investment risks related to custody, credit concentrations, interest rate and foreign currency fluctuations.

Operating expenses include the ordinary and necessary cost of investment and professional services and the other miscellaneous administrative expenses of the system.

NOTES TO FINANCIAL STATEMENTS (Continued)

The Annuity Savings Fund is the fund in which members' contributions are deposited. Voluntary contributions, re-deposits, and transfers to and from other systems, are also accounted for in this fund. Members' contributions to the fund earn interest at a rate determined by PERAC. Interest for some members who withdraw with less than ten years of service is transferred to the Pension Reserve Fund. Upon retirement, members' contributions and interest are transferred to the Annuity Reserve Fund. Dormant account balances must be transferred to the Pension Reserve Fund after a period of ten years of inactivity.

The Annuity Reserve Fund is the fund to which a member's account is transferred upon retirement from the Annuity Savings Fund and Special Military Service Credit Fund. The annuity portion of the retirement allowance is paid from this fund. Interest is credited monthly to this fund at the rate of 3% annually on the previous month's balance.

The Special Military Service Credit Fund contains contributions and interest for members while on a military leave for service in the Armed Forces who will receive creditable service for the period of that leave.

The Expense Fund contains amounts transferred from investment income for the purposes of administering the retirement system.

The Pension Fund contains the amounts appropriated by the governmental units as established by PERAC to pay the pension portion of each retirement allowance.

The Pension Reserve Fund contains amounts appropriated by the governmental units for the purposes of funding future retirement benefits. Any profit or loss realized on the sale or maturity of any investment or on the unrealized gain of a market valued investment as of the valuation date is credited to the Pension Reserve Fund. Additionally, any investment income in excess of the amount required to credit interest to the Annuity Savings Fund, Annuity Reserve Fund, and Special Military Service Credit Fund is credited to this Reserve account.

The Investment Income Account is credited with all income derived from interest and dividends of invested funds. At year-end the interest credited to the Annuity Savings Fund, Annuity Reserve Fund, Expense Fund, and Special Military Service Credit Fund is distributed from this account and the remaining balance is transferred to the Pension Reserve Fund.

NOTE 3 - SUPPLEMENTARY MEMBERSHIP REGULATIONS

The Worcester Retirement System submitted the following supplementary membership regulations, which were approved by the Public Employee Retirement Administration Commission on:

February 22, 1999
Payments
Effective September 1, 1998 all retirement payments made by the Worcester Retirement System [may] be made by electronic funds transfer. This will be a direct deposit system and [may] apply to all amounts payable to Worcester Retirement System's members and beneficiaries. This provision is not mandatory for any member or beneficiary of the Worcester Retirement System. The Worcester Retirement Board will provide electric fund transfer notices to retirees when they first enroll in the program; any time there is a change in their monthly amount and at year-end (12/31).

July 27, 1998
Payments
Effective September 1, 1998, all retirement payments made by the Worcester Retirement System shall be made by electronic funds transfer. This will be a direct deposit system and shall apply to all amounts payable to the Worcester Retirement System's members and beneficiaries. (AMENDED FEBRUARY 22, 1999)

February 17, 1998
Recovery of Earnings
In excess of limitations set forth in M.G.L. c. 32, s. 91A. Disabled members of the Worcester Retirement System whose calendar year earnings exceed an amount which when added to the member's retirement allowance is greater than the amount of regular compensation which would have been payable to such member if such member had continued in service in the grade held by him at the time he was retired plus the sum of five thousand dollars, must refund to the Worcester Retirement System the amount of said overearnings in either a lump-sum or, in the alternative, if the member can demonstrate that a lump-sum payment would result in financial hardship, a monthly payment schedule of not more than six months, provided the member amply demonstrates financial hardship to the Board's satisfaction.

March 29, 1993
Membership
All part-time, provisional, temporary or intermittent employees who are regularly scheduled to work twenty (20) or more hours per week are required to become members of the Worcester Retirement System and to make weekly contributions to the system pursuant to G.L. c. 32, §22 (1)(b). Those employees who are not regularly scheduled to work at least twenty (20) hours per week will not be allowed membership in the Worcester Retirement System.

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 4 - ADMINISTRATION OF THE SYSTEM

The System is administered by a five-person Board of Retirement consisting of the City Auditor who shall be a member ex-officio, a second member appointed by the governing authority, a third and fourth member who shall be elected by the members in or retired from the service of such system, and a fifth member appointed by the other four board members.

Ex-officio Member:	James Delsignore, Chairman		
Appointed Member:	Stephen Wentzell	Until a successor is appointed	
Elected Member:	Elizabeth Early	Term Expires:	10/31/13
Elected Member:	John F. Mahan	Term Expires:	12/31/14
Appointed Member:	Thomas Wade	Term Expires:	01/09/15

The Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the system. The board must annually file a financial statement of condition for the system with the Executive Director of PERAC.

The investment of the system's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the system has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the System must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by two persons designated by the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer - Custodian:	)	Coverage provided to a limit of $50,000,000
Ex-officio Member:	)	under a master MACRS sponsored policy issued
Elected Members:	)	through a layered program with Travelers,
Appointed Members:	)	National Union Fire, and Arch. Separate fidelity
Staff Employees:	)	Coverage pertaining to ERISA/Crime to a limit of
		$1,000,000 issued through Travelers Casualty
		and Surety Company, deductible $10,000.

NOTE 5 - ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by The Segal Company as of January 1, 2012.

The actuarial liability for active members was	$455,154,875
The actuarial liability for inactive members was	9,545,250
The actuarial liability for retired members was	586,490,665
The total actuarial liability was	$1,051,190,790
System assets as of that date were (actuarial value)	712,110,360
The unfunded actuarial liability was	$339,080,430
The ratio of system's assets to total actuarial liability was	67.7%
As of that date the total covered employee payroll was	$159,669,859

The normal cost for employees on that date was	9.1% of payroll
The normal cost for the employer including administrative expenses was	5.7% of payroll

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	8.00% per annum
Rate of Salary Increase:	4.75% per annum

GASB STATEMENT NO. 25, DISCLOSURE INFORMATION
AS OF JANUARY 1, 2012

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Cov. Payroll ((b-a)/c)
1/1/2012	$712,110,360	$1,051,190,790	$339,080,430	67.7%	$159,669,859	212.4%
1/1/2011	$724,997,822	$1,025,075,423	$300,077,601	70.7%	$157,720,871	190.3%
1/1/2010	$679,509,973	$987,692,295	$308,182,322	68.8%	$166,392,075	185.2%
1/1/2009	$631,893,995	$929,569,464	$297,675,469	68.0%	$166,050,095	179.3%
1/1/2008	$759,410,332	$889,924,310	$130,513,978	85.3%	$156,585,326	83.4%
1/1/2007	$716,796,770	$837,608,233	$120,811,463	85.6%	$152,838,201	79.0%

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 6 - MEMBERSHIP EXHIBIT

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Retirement in Past Years										
Superannuation	196	89	59	71	65	94	66	83	156	59
Ordinary Disability	1	2	1	3	1	1	1	0	1	2
Accidental Disability	15	12	11	20	13	16	19	7	7	3
Total Retirements	212	103	71	94	79	111	86	90	164	64
Total Retirees, Beneficiaries and Survivors	2,995	2,991	2,967	2,977	2,890	2,884	2,792	2,781	2,809	2,772
Total Active Members	3,628	3,345	3,421	3,346	3,404	3,407	3,352	3,287	3,185	3,173
Pension Payments										
Superannuation	$18,332,032	$21,186,242	$22,505,297	$22,855,516	$23,016,975	$23,437,805	$23,937,559	$19,113,926	$26,885,194	$28,911,453
Survivor/Beneficiary Payments	2,079,554	2,153,708	2,158,826	1,965,880	2,086,434	2,098,361	2,186,684	1,922,368	1,895,837	2,260,176
Ordinary Disability	436,372	404,987	525,001	570,800	645,979	660,922	627,219	921,480	410,682	481,273
Accidental Disability	8,096,443	8,301,378	8,667,939	9,225,437	9,636,053	10,229,256	10,495,782	15,397,979	10,993,690	11,134,734
Other	11,333,986	11,606,678	12,429,366	13,571,542	14,390,976	13,902,964	14,084,476	16,589,290	15,422,707	15,277,356
Total Payments for Year	$40,278,387	$43,652,993	$46,286,429	$48,189,175	$49,776,417	$50,329,308	$51,331,720	$53,945,043	$55,608,108	$58,064,992

PERAC
Five Middlesex Avenue | Third Floor
Somerville, MA | 02145
Ph: 617.666.4446 | Fax: 617.628.4002
TTY: 617.591.8917 | Web: www.mass.gov/perac