Worcester Retirement System

Worcester, Massachusetts
(A Component Unit of the City of Worcester, Massachusetts)

Comprehensive Annual Financial Report

Fiscal Year Ended December 31, 2011

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(A Component Unit of the City of Worcester, Massachusetts)

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For the Fiscal Year Ended December 31, 2011

Prepared by the Staff of the
Worcester Retirement System

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Introductory Section

Worcester Retirement System

Room 103 City Hall Worcester Massachusetts 01608 Phone (508) 799 1062

Chairman's Letter

June 11, 2012

Dear Members of the Worcester Retirement System:

On behalf of the Worcester Retirement Board (Board), I am pleased to present the Comprehensive Annual Financial Report (CAFR) of the Worcester Retirement System (WRS) for the year ended December 31, 2011. The report is designed to provide a detailed look at the financial, investment and actuarial aspects of the WRS.

A comprehensive report is being issued in the interest of full disclosure to WRS members and to demonstrate the diligent stewardship and internal controls that are in place to protect assets and maintain financial integrity. The last eight consecutive CAFRs have been awarded the Certificate of Achievement for Excellence in Financial Reporting making WRS one of only four retirement systems in New England to receive this prestigious award, a fact of which we are all very proud.

The Board typically meets at least twice a month. There is one meeting to discuss benefit issues and at least one other to discuss investment issues and conduct due diligence on those investments. It is the fiduciary responsibility of the Board to insure that current and future pensions will be paid. Therefore, safeguarding the WRS investment portfolio is a top priority. In that regard, the WRS has a policy that incorporates an asset allocation with a 20-year time horizon consistent with participant demographics containing asset classes that involve investment risk to reap the rewards of potential stellar returns and but to also diversify those assets to mitigate risks during the inevitable times when certain asset classes experience sub-par returns.

The investment markets became difficult to navigate again in 2011 after they had rebounded the previous two years from a very difficult 2008. The time weighted investment return of -0.84% for our fund was well below the actuarial benchmark of 8.00%. While real estate and fixed income produced positive returns and there were slightly positive results for domestic equities and tactical asset allocation, other asset classes such as international and emerging market equities and to a lesser extent alternative investments were a drag on performance..

Last year the WRS unfunded actuarial accrued liability increased from $300.1 million to $339.1 million on an actuarial basis and increased by $52.0 million to $395.2 million on a market basis. The funded ratio decreased from 70.7% to 67.7% on an actuarial basis. There was a total experience loss of $35.3 million with an investment experience loss of $49.8 million and a gain of $14.3 million from salary experience. Additionally, there was an experience gain of $1.3 million from granting a COLA of 2.5% instead of 3.0% but there was an increase in the actuarial accrued liability of $5.2 million by virtue of increasing the COLA base from $12,000 to $13,000. There were miscellaneous experience losses of $1.3 million as well.

The current schedule sets an employer funding requirement of $35.3 million up from $32.7 million in the prior year. The funding schedule matures in 2035 and is scheduled to increase by 5% in fiscal 2015 and 4% annual increases starting in fiscal 2016 until maturity.

I would like to thank the other members of the Board for their diligence on retirement matters and the Board's investment consultant, actuary and independent auditors for their assistance with the preparation of this report and advice on other matters. I would also like to thank the Board's legal representatives for their counsel and the Public Employee Retirement Administration Commission for their oversight of our actions.

Finally, I would like to commend the staff of WRS for their diligent work in preparing this report and their commitment to continually improving administrative operations. I encourage members to carefully review this report as it contains a wealth of information about your retirement system.

Sincerely,

James DelSignore

James DelSignore, CPA
Chairman

Worcester Retirement System
Room 103 City Hall Worcester Massachusetts 01608 Phone (508) 799 1062

June 11, 2012

Worcester Retirement Board
City Hall Room 103
455 Main Street
Worcester, MA 01608

Dear Mr. Chairman and Members of the Board:

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the Worcester Retirement System (WRS) for the year ended December 31, 2011. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the WRS for its CAFR for the year ended December 31, 2010. This was the eighth consecutive year that the WRS has achieved this prestigious award. In order to be awarded a Certificate of Achievement, the WRS must publish an easily readable and efficiently organized CAFR. This report must satisfy both accounting principles generally accepted in the United States of America and applicable legal requirements. Management accepts responsibility for the contents of the report.

A Certificate of Achievement is valid for a period of one year only. We believe that our current CAFR continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

GASB Statement No. 34 requires that management provide a narrative introduction, overview and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to compliment the MD&A and should be read in conjunction with it. The WRS's MD&A can be found immediately following the report of the independent auditor.

History of the WRS

The WRS became operative as of January 1, 1945. The WRS is a contributory defined benefit plan that covers eligible employees of the City of Worcester (except Worcester Public School teachers) and the Worcester Housing Authority (WHA). The WRS is administered by a five member Board consisting of the City Auditor, two representatives elected from the membership, a City Manager representative and a fifth member chosen by the other four who cannot be an employee, retiree or official of the City. One Board member is elected from the group to serve as Chairman.

Investment Results

The WRS has an Investment Policy Statement which establishes investment objectives and policies providing the framework for investments. This Policy is reviewed on an annual basis. A summary of the Investment Policy is included in the Investment Section. The System uses a custodian bank to safeguard the assets and ensure proper settlement and recording of transactions.

An integral part of the overall investment policy is the asset allocation policy. This is designed to provide an optimal mix of asset classes to both preserve principal and provide adequate funds to pay pension benefits. Both traditional assets (cash, bonds, domestic stocks, domestic fixed income and mortgages) and nontraditional assets (real estate, international stock and fixed income, venture capital, mezzanine financing, hedge funds, timber, natural resources, infrastructure and leveraged buyouts) are part of the mix. The investment market results have demonstrated the importance of a diversified asset allocation.

WRS dollar-weighted investment return of -0.5% for 2011 was less than both the actuarial expected rate of return and the Investment policy benchmark. Please refer to the Investment Section of this CAFR for more information on investment results.

Chapter 68 of the Acts of 2007, An Act to Reduce the Stress on Local Property Taxes Through Enhanced Pension Fund Investment, was signed into law July 25, 2007. This Act amends MGL chapter 32 section 22 and directs the Public Employee Retirement Administration Commission (PERAC) to conduct an annual analysis of all Massachusetts public pension plans. The assessment includes the investment performance and funded ratio of each system every January 1st in accordance with the established methodology and standard. Systems failing to meet the standard are mandated to transfer the systems assets to the Massachusetts Pension Reserve Investment Management (PRIM) Board. The WRS met these mandated standards for each year since 2007 and are not subject to the mandatory transfer of system assets.

Major Initiatives

Benefits

A cost of living adjustment (COLA) was provided for retirees and survivors effective July 1, 2011. The 2.5% COLA was paid on a base of $12,000 (maximum $300). This was the first time the WRS did not grant the maximum allowed by law since enactment of the legislation in 1997.

An increase from $6,000 to $9,000 annually in the Survivor Allowance payable to certain widows effective January 1, 2011 as provided for in §27 and 28 of Chapter 131 of the Acts of 2010 was accepted as a local option in October 2010.

Signed into law on November 18, 2011, Chapter 176 of the Acts of 2011 became effective February 16, 2012 and is thought to reform and modernize the pension laws for Public employees in Massachusetts. The law creates a new benefit structure for employees hired on or after April 2, 2012. The new age factors established will increase the minimum age for retirement. Calculation of the pension will use a 5 year average and contains anti-spiking provisions for both new members and current employees.

Administration

The WRS strives to provide quality service and information to active and retired members and their beneficiaries. To assist in this effort, we maintain and continually update our Internet site through the City web page, which includes our CAFR, at www.worcesterma.gov/retirement-board .

Internal and Budgetary Controls

The WRS management is responsible for maintaining a system of internal controls designed to provide reasonable, but not absolute, assurance that the financial statements are fairly stated in accordance with accounting principles generally accepted in the United States of America while adequately safeguarding the assets. We believe the current internal controls accomplish this goal. The concept of reasonable assurance recognizes that the cost of internal controls should not exceed their anticipated benefits. Also, the evaluation of costs and benefits requires estimates and judgments by management.

The WRS budget is presented to and approved by the Board each year. All the expenditures are reviewed by the Board at its monthly meeting.

Accounting

This report has been prepared in accordance with accounting principals generally accepted in the United States of America. The basic financial statements are presented in accordance with the principles of the Government Accounting Standards Board (GASB), including guidelines established by GASB Statements No. 25, *Financial reporting for defined benefit plans*; No. 34, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments*; No. 37, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments: Omnibus*, No. 38, *Certain Financial Statement Note Disclosures*; and No. 40 *Deposit and Investment Risk Disclosures (an amendment of GASB No. 3).*

Sullivan, Rogers & Company, LLC, a firm of licensed certified public accountants, performed the audit for the WRS. The goal of the independent audit is to provide reasonable assurance that the financial statements for the year ended December 31, 2011 are free of material misstatements. The report of the independent auditors is included in the Financial Section of this report. Sullivan, Rogers & Company, LLC has issued an unqualified opinion on the WRS's basic financial statements for the year ended December 31, 2011.

Actuarial Funding

The WRS has retained the services of The Segal Company, an independent actuarial firm, to conduct an annual actuarial valuation of the WRS. The funded ratio is one measure of the financial condition of the WRS. The funded ratio is calculated by dividing the net assets of the WRS by the projected pension liability. The projected pension liability is a measure of the present value of total pension benefits estimated to be payable in the future to both current and future retirees and/or beneficiaries. A higher funding ratio gives the members a greater degree of assurance that their pension benefits are secure. As of January 1, 2012, the funded ratio of the WRS was calculated at 67.74%, a 2.99% decrease from the prior year.

Acknowledgements

The publication of this report represents the combined efforts of the WRS Board, staff, Sullivan, Rogers & Company, LLC and consultants. We are proud to present this report to our members. We feel it is important to provide a CAFR for our members and other interested parties to follow the progress of the WRS.

Respectfully submitted,

Elizabeth A. Early
Executive Secretary

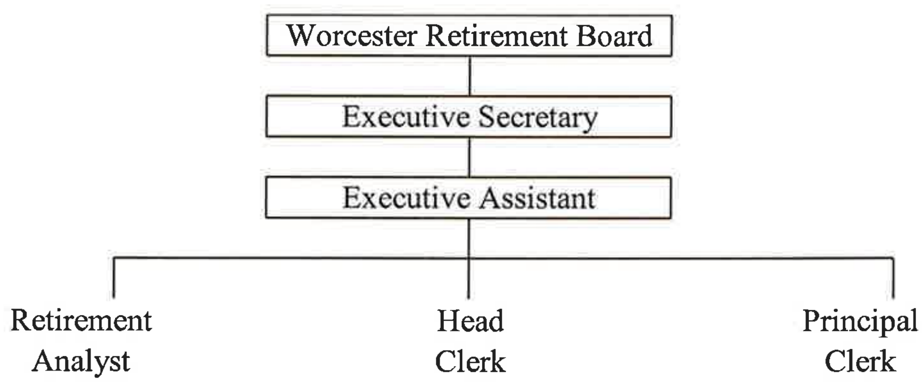
Retirement Board Members

		Terms
James DelSignore	Ex-Officio Member	N/A
Stephen F. Wentzell	City Manager Appointee	At the discretion of the City Manager
Elizabeth A. Early	Elected Member	11/01/2010 - 10/31/2013
John F. Mahan	Elected Member	01/01/2012 - 12/31/2014
Thomas Wade	Appointed Member	01/09/2009 - 01/08/2012

Administrative Staff

Elizabeth A. Early	Executive Secretary
Judith McMillen	Executive Assistant
Donna McCaffrey	Retirement Analyst
Barbara Zecco	Head Clerk
Eileen Powers	Principal Clerk

Organizational Chart*



* Does not include investment professionals who provide services to the WRS. A list of these investment professionals is located on the following page.

CONSULTANTS AND PROFESSIONAL SERVICES

DOMESTIC EQUITY MANAGERS
Lee Munder Capital Group
Boston, MA
Loomis Sayles & Company, L.P.
Boston, MA
PENN Capital Management Co, Inc
Philadelphia, PA
State Street Global Advisors
Boston, MA

DOMESTIC FIXED MANAGERS
OPUS Investment Management, Inc.
Worcester, MA
Loomis Sayles & Company, L.P.
Boston, MA

INTERNATIONAL EQUITY MANAGERS
Acadian Asset Management
Boston, MA
State Street Global Advisors
Boston, MA
Lazard Asset Management
New York, NY

ALTERNATIVE CAPITAL
INVESTMENT MANAGERS
Ascent Venture Management
Boston, MA
Benchmark Plus Management
Tacoma, WA
Boston Capital Ventures
Boston, MA
Boston Millennia Partners
Boston, MA
Charlesbank Capital Partners
Boston, MA
Concord Partners L.P.
Waltham, MA
Global Infrastructure Partners
New York, NY
Harvest Partners, LLC
New York, NY
INVESCO Private Capital, Inc.
Atlanta, GA
New England Partners Capital L.P.
Boston, MA
Newstone Capital Partners, L.P.
Los Angeles, CA
Northstar Capital, LLC
Minneapolis, MN
PIMCO Funds
New York, NY
Standard Life Investments Limited
Edinburgh, UK
The Riverside Company
New York, NY
Vitruvian Partners
London, England
White Deer Energy TE L.P.
Houston, TX

REAL ESTATE MANAGERS
AEW Capital Management, L.P.
Boston, MA
Bailard Fund Services, Inc.
Foster City, CA
Heitman Investment Management
Chicago, IL
Intercontinental Real Estate Corp.
Boston, MA
INVESCO Core Real Estate
Dallas, TX
RMK Timberland a div. of Regions Bank
Atlanta, GA
Mass PRIM
Boston, MA
Apollo Real Estate Advisors
Atlanta, GA
Hancock Timber Resource Group
Boston, MA

HEDGE FUNDS
Actos Alternatives Management, LLC
New York, NY
Blackstone Alternative Asset Management
New York, NY

LEGAL ADVISORS
The Law Offices of Michael Sacco
Southampton, MA

DISABILITY INSURANCE CONSULTANTS
Disability Management Services, Inc.
Springfield, MA

INDEPENDENT AUDITORS
Sullivan, Rogers & Company, LLC
Burlington, MA

INVESTMENT ADVISORS
Meketa Investment Group
Westwood, MA

ACTUARIAL CONSULTANT
The Segal Company
Boston, MA

CUSTODIAN
State Street Corporation
Boston, MA

COMMISSION RECAPTURE BROKERS
BNY ConvergEx Group
New York, NY

SECURITIES LENDING
State Street Corporation
Boston, MA

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Worcester Retirement System Massachusetts

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended
December 31, 2010

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.

Linda C. Davidson

President

Jeffrey R. Esser

Executive Director

Financial Section

SULLIVAN ROGERS & COMPANY
Certified Public Accountants

SULLIVAN, ROGERS & COMPANY, LLC
Corporate Place I, Suite 204 • 99 South Bedford Street
Burlington, Massachusetts 01803
P • 781-229-5600 F • 781-229-5610 www.sullivan-rogers.com

Independent Auditors' Report

To the Honorable Retirement Board
Worcester Retirement System

We have audited the accompanying basic financial statements of the Worcester Retirement System (WRS), a component unit of the City of Worcester, Massachusetts, as of and for the year ended December 31, 2011, as listed in the table of contents. These financial statements are the responsibility of the WRS's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the WRS as of December 31, 2011, and the respective change in financial position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

In accordance with Government Auditing Standards, we have also issued our report dated June 11, 2012, on our consideration of the WRS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards and should be considered in assessing the results of our audit.

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (located on pages 14 through 19) and historical pension information (located on page 32) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Our audit was conducted for the purpose of forming an opinion on the WRS's basic financial statements. The supplementary information, introductory section, investment section, actuarial section and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements. The supplementary information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole. The introductory, investment, actuarial and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

June 11, 2012

Management's Discussion & Analysis

Our discussion and analysis of the Worcester Retirement System's (WRS) financial performance provides an overview of the WRS's financial activities for the fiscal year ended December 31, 2011. Please read it in conjunction with the transmittal letter in the Introductory Section, at the front of this report, and the basic financial statements that follow this discussion. The Management's Discussion and Analysis (MD&A) is intended to serve as an introduction to the WRS's basic financial statements, as well as to offer readers of the WRS's financial statements a narrative view and analysis of the WRS's financial activities.

Financial Highlights

The WRS's funding objective is to meet long-term benefit obligations through contributions and investment income. As of December 31, 2011, the funded ratio was 67.74% based on the actuarial value of assets at that date.

Net assets decreased during the year by $25.9 million or 3.8%, because of poor investment returns ($5.6 million) and negative cash flow ($20.3 million). Net assets are the residual of the WRS's assets in excess of the WRS's liabilities as of the statement date. The WRS's assets are held in trust to meet future benefit payments.

Total investment losses were $5.6 million. The dollar-weighted investment rate of return was (0.5%) compared with a return of 13.6% in the previous year (refer to the "Investment Results" table in the Investment Section).

Overview of the Financial Statements

The basic financial statements are comprised of a Statement of Plan Net Assets, Statement of Changes in Plan Net Assets, Notes to the Financial Statements and Required Supplementary Information.

The ***Statement of Plan Net Assets*** presents information on the WRS's assets and liabilities and the resulting net assets held in trust for pension benefits. This is calculated using the following formula: Assets – Liabilities = Net Assets held in trust for pension benefits. This statement reflects the WRS's investments at fair value, as well as cash, receivables and other assets and liabilities. The Statement of Plan Net Assets reports the financial position of the WRS at December 31, 2011. Over time, the increase or decrease in net assets serves as a useful indicator of the WRS's financial health.

The ***Statement of Changes in Plan Net Assets*** presents information showing how the WRS's net assets held in trust for pension benefits changed during the year ended December 31, 2011. It reflects contributions by members and participating employers along with deductions for retirement benefits, refunds, withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing and securities lending activities.

Management's Discussion & Analysis

The ***Notes to the Financial Statements*** provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The ***Required Supplementary Information*** includes this MD&A and schedules of funding progress and employers' contributions.

Financial Analysis

The WRS's total assets as of December 31, 2011 were $693.9 million and were primarily comprised of cash and cash equivalents, receivables, and investments. Total assets decreased $48.0 million, or 6.5%, from the prior year primarily due to investment losses.

Total liabilities as of December 31, 2011 were $37.9 million and were primarily comprised of collateral held under securities lending arrangements and amounts due to the Commonwealth of Massachusetts and other systems. Total liabilities decreased by $22.2 million.

The following tables present current and prior year data on the WRS's financial statements.

Management's Discussion & Analysis

Net Assets

Net assets of the WRS totaled $656.0 million at the close of the fiscal year and are summarized as follows:

Plan Net Assets
(In thousands of dollars)

Assets	2011	2010
Cash and cash equivalents	$ 1,882	$ 2,775
Investments	654,228	679,158
Securities lending short-term collateral investment pool	35,442	57,161
Receivables:		
Interest due and accrued	1,005	1,131
Due from Commonwealth of Massachusetts and other systems	494	422
Receivable for securities sold	21	1,258
Other	875	87
Total assets	693,947	741,992
Liabilities		
Accounts payable and accrued expenses	290	377
Due to Commonwealth of Massachusetts and other systems	2,121	2,229
Payable for securities purchased	93	324
Collateral held on securities lending transactions	35,442	57,161
Total liabilities	37,946	60,091
Net assets held in trust for pension benefits	$ 656,001	$ 681,901

Management's Discussion & Analysis

Changes in Net Assets

The WRS's total net assets decreased by $25.9 million during the current fiscal year and are summarized as follows:

Changes in Net Assets

(in thousands of dollars)

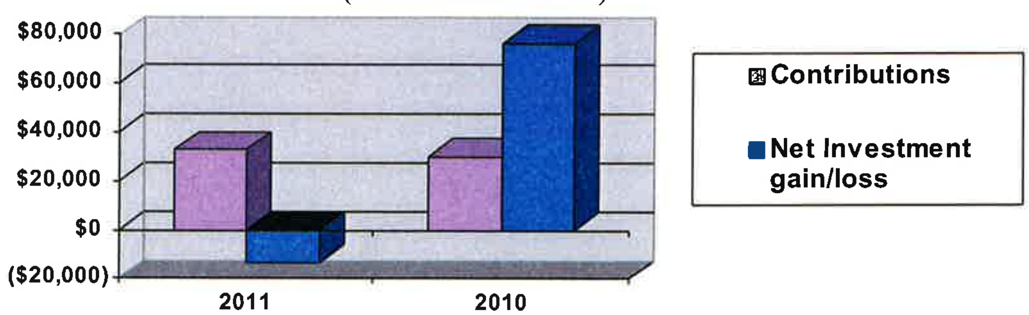
	2011	2010
Additions		
Contributions:		
Employers	$ 32,706	$ 30,197
Plan members	14,527	14,732
Reimbursements from Commonwealth of Massachusetts	1,597	1,726
Reimbursements from other Systems	488	422
Net investment income:		
Interest and dividends	11,322	10,053
Securities lending income	152	176
Net realized and unrealized gains (losses)	(13,612)	76,542
Less: management fees	(3,434)	(3,390)
Less: borrower rebates & fees	(60)	(106)
Total additions	43,686	130,352
Deductions		
Benefits payments to plan members and beneficiaries	64,478	61,274
Reimbursements to other systems	2,128	2,229
Refunds and transfers of plan member accounts to other systems	2,411	2,127
Administrative expenses	569	557
Total deductions	69,586	66,187
Change in plan net assets	(25,900)	64,165
Net assets held in trust for pension benefits:		
Beginning of year	681,901	617,736
End of year	$ 656,001	$ 681,901

Management's Discussion & Analysis

Additions to Plan Net Assets

The amount needed to finance benefits is accumulated through the collection of employers' and plan members' contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 COLA's and through earnings on investments. Contributions and net investment gains for calendar year 2011 resulted in total gains to net assets of $43.7 million. Employers' contributions increased by $2.5 million in 2011. The WRS had a net investment loss of $5.6 million in 2011 versus a gain of $83.3 million in 2010.

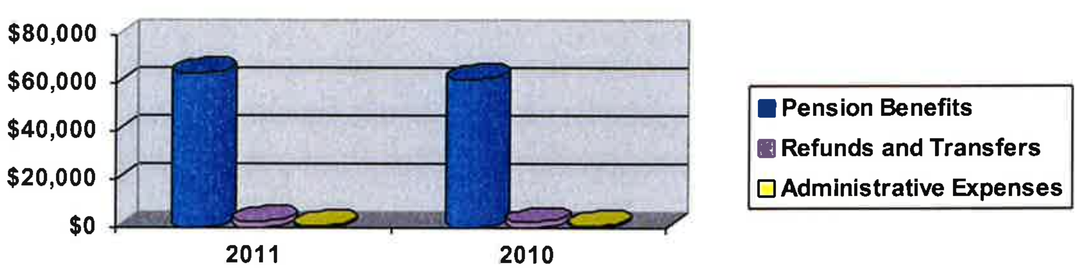
Additions to Plan Net Assets
(in thousands of dollars)



Deductions from Plan Net Assets

The primary deductions of the WRS include the payment of pension benefits to participants and beneficiaries, refunds of contributions, and the costs of administering the WRS. Total deductions from net assets for 2011 were $69.6 million, which represents an increase of 5.1% over deductions of $66.2 million in 2010. The payment of pension benefits increased by $3.2 million, or 5.2%, over the previous year. The increase in these expenses resulted from an increase in benefit payments to newer retirees with higher average compensation and a small decrease in the number of pensioners and beneficiaries.

Deductions from Plan Net Assets
(in thousands of dollars)



Management's Discussion & Analysis

Overall Financial Position of WRS

Due to a decline in the financial markets, the WRS has experienced a decrease in its investment portfolio for the fiscal year ending December 31, 2011. However, management believes the WRS is in a solid financial position and will be able to meet its obligations.

Contacting WRS's Financial Management

This financial report is designed to provide the Board, our membership, taxpayers, investors, and creditors with a general overview of the WRS's financial results and to demonstrate WRS's accountability for the funding it receives. If you have any questions about this report or need additional financial information, contact the Worcester Retirement System, City Hall Room 103, 455 Main Street, Worcester, Massachusetts 01608.

WORCESTER RETIREMENT SYSTEM
(A Component Unit of the City of Worcester, Massachusetts)
Statement of Plan Net Assets
December 31, 2011

Assets		
Cash & Cash Equivalents	$	1,882,343
Investments:		
Equities		158,761,556
Fixed Income		100,860,546
Pooled Equities		147,198,801
Pooled Fixed Income		24,710,484
Real Estate		81,715,298
Alternative Investments		140,981,753
Total investments		654,228,438
Securities lending short-term collateral investment pool		35,442,360
Receivables:		
Accrued interest and dividends		1,004,668
Due from Commonwealth of Massachusetts and other systems		493,590
Receivable for securities sold		20,589
Other		875,067
Total receivables		2,393,914
Total plan assets		693,947,055
Liabilities		
Accounts payable and accrued expenses		289,779
Due to Commonwealth of Massachusetts and other systems		2,120,518
Payable for securities purchased		92,632
Collateral held on securities lending transactions		35,442,360
Total plan liabilities		37,945,289
Net assets held in trust for pension benefits	$	656,001,766

See accompanying notes to financial statements.

WORCESTER RETIREMENT SYSTEM
(A Component Unit of the City of Worcester, Massachusetts)
Statement of Changes in Plan Net Assets
Year ended December 31, 2011

Additions:		
Contributions:		
Employers	$	32,706,347
Plan members		14,526,760
Reimbursements from Commonwealth of Massachusetts		1,596,702
Reimbursements from other systems		488,176
Total contributions		49,317,985
Investment income (loss):		
Interest and dividends		11,321,836
Securities lending income		152,350
Net realized and unrealized gains		(13,612,022)
Less: management fees		(3,434,273)
Less: borrower rebates and fees under securities lending program		(59,659)
Net investment income		(5,631,768)
Total additions		43,686,217
Deductions:		
Benefit payments to plan members and beneficiaries		64,477,915
Reimbursements to other systems		2,127,935
Refunds and transfers of plan member accounts to other systems		2,410,536
Administrative expenses		569,245
Total deductions		69,585,631
Change in plan net assets		(25,899,414)
Net assets held in trust for pension benefits:		
Beginning of year		681,901,180
End of year	$	656,001,766

See accompanying notes to financial statements.

Notes to Financial Statements
December 31, 2011

1. Summary of Significant Accounting Policies

(a) Financial Reporting Entity

Because of the significance of its operational and financial relationship with the City of Worcester, Massachusetts (City), the Worcester Retirement System (WRS) is included as a blended component unit in the City's financial statements.

(b) Basis of Accounting

The accompanying financial statements are presented on the accrual basis of accounting.

(c) Revenue Recognition

Contributions are recognized as additions in the period when they become due pursuant to formal commitments, statutory or contractual requirements. Investment income is recognized when earned.

(d) Benefits and Refunds

Benefits and refunds to WRS members and beneficiaries are recognized as deductions when due and payable in accordance with the terms of the WRS.

(e) Cash and Investments

Cash is considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments are reported at fair value. Fair values of investments are based on quotations from a national securities exchange except for pooled funds, venture capital and real estate, for which fair values are estimated as detailed below.

Pooled Funds

The fair value of shares in managed investment pools is based on unit values reported by the funds.

Venture Capital and Alternative Investments

Venture capital investments are recorded at fair value as determined in good faith by the general partners of the venture capital firms after consideration of pertinent information, including current financial position and operating results, price-earnings multiples and available market prices of similar companies' securities, the nature of securities, marketability, restrictions on disposition and other appropriation and do not necessarily represent amounts which might ultimately be realized, since such amounts depend on future circumstances and cannot reasonably be determined until individual securities are liquidated.

Real Estate

The fair value of real estate funds is based on independent third-party appraisals. The investment managers of the funds are responsible for the reported value of those investments. However, because of the inherent uncertainty of valuation, those estimated values may differ significantly from the values that would have been used had a ready market for the real estate existed, and the differences could be material.

(f) Basis of Investment Transactions

Purchases and sales of investments are recorded on the trade date. Transactions remaining unsettled as of year-end are recorded as payables for securities purchased and as a receivable for securities sold.

(g) Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Fair values of real estate funds and venture capital funds have been estimated in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed.

(h) Administrative Expenses

Administrative expenses are financed by investment income.

2. Plan Description

(a) General

The WRS is a cost-sharing multiple-employer public employee retirement system established by the City on June 12, 1944, under Massachusetts General Laws (MGL), Chapter 32, and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). The WRS is a defined benefit pension plan that covers certain eligible employees of the City and the Worcester Housing Authority.

Membership in the WRS is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 20 hours weekly, except for City school teachers, who participate in the Massachusetts Teachers' Retirement System.

Membership in the WRS was as follows at December 31, 2011:

Active employees	3,178
Pensioners and beneficiaries	2,776
Inactive employees	759
Total members	6,713
Number of participating employers	2

The WRS is administered by a five-person Retirement Board (the Board) consisting of the City Auditor, who serves *ex-officio*; two members who are elected by the participants in or retired from the service of the WRS; a fourth member appointed by the City Manager; and a fifth member appointed by the other members.

(b) Significant Plan Provisions and Requirements

Benefit provisions and state law establishes contribution requirements of the WRS. Members of the WRS become vested after 10 years of creditable service. Normal retirement occurs at age 65 except for employees of the City's Police and Fire departments, whose normal retirement age is 55. Retired employees receive an allowance based upon the average of their three highest average salary years of service multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law.

Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period.

Employees may elect early retirement after 20 years of service or at any time after attaining age 55 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

Under MGL, c.32 Section 3(8)(c), members leaving the City's employment to work for other Massachusetts governmental units, the WRS transfers their accumulated account balances and creditable service to the retirement system of their new employer. Other such retirement systems are in turn required to make comparable transfers to the WRS for employees coming to work at the City or the Worcester Housing Authority. Liability for the service transfer is not calculated until the member's actual retirement date. Per statute, the PERAC actuary shall consider length of service as well as acceptance of military service credit and salary cap provisions if applicable in calculating the liability.

3. Deposits and Investments

Deposits and investments made by the WRS are governed by the MGL c.32. The WRS has the ability to invest in equity securities, corporate bonds, annuities and other specified investments in accordance with state laws and regulations.

Deposits - Custodial Credit Risk

Custodial credit risk for deposits is the risk that, in the event of a bank failure, the WRS's deposits may not be recovered. The WRS's policy for custodial credit risk of deposits is to rely on FDIC insurance coverage for the first $250,000 of deposits held at each financial institution. As of December 31, 2011, the WRS's bank balance of $367,802 was not exposed to custodial credit risk.

Investments Summary

The WRS's investments at December 31, 2011 are presented below. All investments are presented by investment type, with debt securities presented by maturity.

Investment Type	Fair Value	Investment Maturities (in Years) Less Than 1	1 - 5	6 - 10	More Than 10
Debt Securities:					
U.S. Treasuries....................	$ 54,151,838	$ 13,695,102	$ 17,290,465	$ 10,438,575	$ 12,727,696
U.S. Agencies.....................	22,572,509	308	6,053,302	1,131,483	15,387,416
Corporate bonds...................	37,986,839	10,022,871	10,759,398	8,608,475	8,596,095
Money market mutual funds......	1,841,274	1,841,274	-	-	-
Debt security mutual funds.......	34,506,612	24,710,484	-	-	9,796,128
Total debt securities.............	151,059,072	$ 50,270,039	$ 34,103,165	$ 20,178,533	$ 46,507,335
Other Investments:					
Equity securities....................	28,135,136				
Equity mutual funds..............	289,620,814				
Real estate investments...........	81,715,298				
Alternative investments..........	140,981,753				
Total other investments.........	540,453,001				
Total investments.................	$ 691,512,073				

Investments - Interest Rate Risk of Debt Securities

Interest rate risk for debt securities is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The WRS's policies for interest rate risk intend that the average duration of investments remain fairly stable over time and be focused in the intermediate range. The WRS's debt security managers are not permitted to make large-scale changes in portfolio duration in an attempt to anticipate interest rate changes. However, they are permitted to shift portfolio duration within a limited range (defined by their guidelines) in an effort to enhance performance.

Investments - Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the WRS will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The WRS's policy for custodial credit risk of investments intends that all investments are either insured and/or registered in the name of the WRS. As of December 31, 2011, the WRS was not exposed to custodial credit risk.

Investments - Credit Risk of Debt Securities

Credit risk for debt securities is the risk that an issuer or other counterparty to a debt security will not fulfill its obligations. The WRS's policies for credit risk of debt securities includes a policy of an 80%/20% split between investment grade (BBB/Baa and above) and below investment grade (BB/Ba and lower) debt securities. In monitoring credit risk, the WRS relies on credit ratings assigned by Moody's and Standard & Poor's. As of December 31, 2011, the credit quality ratings of the WRS's debt securities are as follows:

	Investment Type			
Quality Ratings *	Corporate Bonds	Money Market Mutual Funds	Debt Security Mutual Funds	Fair Value
AAA.................	$ 395,213	$ -	$ 2,876,469	$ 3,271,682
AA+.................	546,522	-	14,354	560,876
AA...................	-	-	17,618	17,618
AA-..................	840,523	-	-	840,523
A+...................	1,879,866	-	-	1,879,866
A.....................	981,059	-	32,725	1,013,784
A-....................	3,394,912	-	495,837	3,890,749
BBB+................	1,339,463	-	-	1,339,463
BBB.................	2,216,023	-	-	2,216,023
BBB-................	2,389,850	-	9,368	2,399,218
BB+..................	1,185,320	-	-	1,185,320
BB...................	2,147,018	-	12,692	2,159,710
BB-..................	1,263,771	-	37,220	1,300,991
B+....................	1,461,356	-	56,957	1,518,313
B.....................	2,528,663	-	40,405	2,569,068
B-....................	1,656,439	-	-	1,656,439
CCC+................	693,431	-	-	693,431
CCC.................	1,234,224	-	579,463	1,813,687
CCC-................	135,300	-	-	135,300
CC...................	177,125	-	263,764	440,889
C.....................	81,675	-	-	81,675
D.....................	226,725	-	380,112	606,837
Unrated..............	11,212,361	1,841,274	29,689,628	42,743,263
Total.................	$ 37,986,839	$ 1,841,274	$ 34,506,612	$ 74,334,725

* Per the rating scale of Standard & Poors, a national credit rating organization

Deposits and Investments – Foreign Currency Risk

Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment or a deposit. The WRS's policy is to limit investments in non-U.S. dollar-denominated securities to not exceed 10% of the total market value of investments at all times. As of December 31, 2011, the WRS's exposure to foreign currency risk is as follows:

Deposit/Investment Type	U.S. Dollar Balances	Currency
Corporate bonds.............	$ 675,584	Indonesian rupiah
U.S. Agencies................	479,939	Mexican peso
Corporate bonds.............	507,732	South Korean won
Corporate bonds.............	587,115	Philippine peso
Corporate bonds.............	253,904	Austalian dollar
Corporate bonds.............	172,563	Euro
U.S. Agencies................	525,870	Euro
Corporate bonds.............	210,826	Indian rupee
Corporate bonds.............	475,986	Brazilian real
U.S. Agencies................	614,556	Brazilian real
U.S. Agencies................	123,768	Uruguayan peso
Total...........................	$ 4,627,843	

Investments – Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the WRS's investment in a single issuer. The WRS's policy for concentration of credit risk instructs investment managers not to invest more than 5% of their portfolio at market value in a single security, or in the securities of a single issuer or its subsidiaries. U.S. Treasury, U.S. government agency, mutual fund and pooled fund investments are exempted from this restriction. As of December 31, 2011, the WRS was not exposed to concentration of credit risk.

4. Securities Lending Transactions

PERAC has issued supplemental regulations that permit the WRS to engage in securities lending transactions. These transactions are conducted by the WRS's custodian, who lends certain securities owned by the WRS to other broker-dealers and banks pursuant to a form of loan agreement. The WRS and the borrowers maintain the right to terminate all securities lending transaction on demand.

The custodian lends, at the direction of the lending agent, the WRS's securities and cash received (including both U.S. and foreign currency), U.S. government securities, sovereign debt of foreign countries, and irrevocable bank letters of credit as collateral. The custodian does not have the ability to pledge or sell collateral unless the borrower defaults. Borrowers are required to deliver cash collateral in amounts equal to not less than 105% of the market value of foreign securities on loan and 102% of the market value of domestic securities on loan (Required Collateral Level). If at any time the market value of the collateral for any loan decreases to 100% or less of the market value of the loaned securities, borrowers are required to provide additional collateral sufficient to increase the market value of the collateral to at least the Required Collateral Level.

The WRS does not impose any restrictions on the amount of securities lent on its behalf by the custodian. There were no failures by any borrowers to return loaned securities or pay distributions thereon, nor were there any losses from default of the borrowers or the custodian for the year ended December 31, 2011. The cash collateral received on each loan was invested; together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. The relationship between the average maturities of the investment pool and loans was affected by the maturities of the loans made by other plans that invested cash collateral in the collective investment pool, which the WRS could not determine. At December 31, 2011, the WRS had no credit risk exposure to borrowers because the amounts the WRS owed the borrowers exceeded the amounts owed the WRS. The cash collateral held and the fair value of the securities on loan for the WRS at December 31, 2011 and 2010 was $35,442,360 and $25,200,131 and $57,161,050 and $51,212,279, respectively. Borrower rebates and fees paid to the broker were $59,659 for the year ended December 31, 2011.

5. Funding Policy

Chapter 32 of MGL governs the contributions of plan members and the City. Depending on their employment date, active System members must contribute anywhere between 5%-11% of their gross regular compensation. Members hired after December 31, 1978 must contribute an additional 2% of regular compensation in excess of $30,000. These deductions earn interest at a rate determined by PERAC that vests based upon years of service. Employers are required to pay into the WRS its share of the system-wide actuarial determined contribution that is apportioned among the employers based on annual covered payroll.

Contributions are recognized as additions in the period when they become due pursuant to formal commitments, statutory or contractual requirements. Benefits and refunds are recognized as deductions when incurred and administrative expenses are funded through investment earnings.

Except for a portion of benefits owed due to cost-of-living adjustments granted through June 30, 1998, member employers are required to contribute the remaining amounts necessary to finance benefits. Member employer contributions are determined by the annual actuarial valuation.

COLA's granted through June 30, 1998 are reimbursed by the Commonwealth of Massachusetts (the Commonwealth). COLA's granted subsequent to June 30, 1998 must be granted by the Board and are the responsibility of the WRS. COLA may be approved in excess of the Consumer Price Index but not to exceed 3% of the base retirement allowance.

A 2.5% COLA was provided for retirees and survivors effective July 1, 2011 on a base of $12,000. Chapter 188 of the Acts of 2010 of the Commonwealth enables retirement system boards to increase the maximum base retirement allowance in multiples of $1,000. The Board of the WRS has adopted an increase to the base from $12,000 to $13,000 effective July 1, 2012.

The funded status of the WRS at January 1, 2012, the most recent actuarial valuation date, is as follows:

Schedule of Funding Progress

Actuarial Valuation Date		Actuarial Value of Plan Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio (%)		Covered Payroll	UAAL as a Percent of Covered Payroll (%)
		(a)	(b)	(b - a)	(a/b)		(c)	(b - a)/c
1/1/2012	$	712,110,360	1,051,190,790	339,080,430	67.74	$	159,669,859	212.36

The schedules of funding progress, presented as required supplementary information (RSI) following the notes to the financial statements, present multi-year trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the AAL for benefits.

The significant methods and assumptions of the latest actuarial valuation are as follows:

Valuation Date	January 1, 2012
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level payments on the 2002 and 2010 ERI liability and the Section 90 ACD liability; payment on the remaining unfunded liability increases 4% per year beginning with fiscal 2016 payment. Prior to fiscal 2016, the appropriation for fiscal 2013 and 2014 are 8% higher than the prior fiscal year; the payment on the remaining unfunded liability for fiscal 2015 is 10.75% higher than the prior year.
Remaining amortized period (period is closed)	6 years for the 2002 ERI liability 9 years for the 2010 ERI liability 2 years for the Section 90 ACD liablity and 23 years for the remaining unfunded liability 23 years is the equivalent single amortization period (ESAP)

Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and expected return on a market value basis, and is recognized over a five-year period, further adjusted, if necessary, to be within 10% of the market value.

Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases	4.75%
Rate of inflation	3.75%
Cost of living adjustments	3.00% of the first $13,000 of retirement income

6. Legally Required Reserve Accounts

The balances in the WRS' legally required reserves as of December 31, 2011 are as follows:

Description		Amount	Purpose
Annuity Savings Fund	$	165,908,395	Active members' contribution balance
Annuity Reserve Fund		55,706,829	Retired members' contribution account
Military Service Fund		15,751	Members' contribution account while on military leave
Pension Reserve Fund		406,546,659	Amounts appropriated to fund future retirement
Pension Fund		27,824,132	Remaining net assets
Total	$	656,001,766	

All reserve accounts are funded at levels required by state law.

7. Implementation of GASB Pronouncements

During fiscal year 2011, the WRS implemented the following GASB pronouncements:

- GASB Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions.*
- GASB Statement No. 55, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments.*
- GASB Statement No. 56, *Codification of Accounting and Financial Reporting Guidance Contained in the AICPA Statements on Auditing Standards.*
- GASB Statement No. 58, *Accounting and Financial Reporting for Chapter 9 Bankruptcies.*

The implementation of these pronouncements had no reporting impact for the WRS.

Required Supplementary Information
December 31, 2011

The following reflects the Schedule of Funding Progress under the Entry-Age-Normal Actuarial Cost Method, which is the required method for all retirement systems governed by MGL, c.32. The WRS believes that this method of valuation more clearly reflects the actual funding status of the WRS.

Schedules of Funding Progress

Actuarial Valuation Date	Actuarial Value of Plan Assets * (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b - a)	Funded Ratio (%) (a/b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll (%) (b - a)/c
1/1/2007	$ 716,796,770	837,608,233	120,811,463	85.58	$ 152,838,201	79.05
1/1/2008	759,410,332	889,924,310	130,513,978	85.33	156,585,326	83.35
1/1/2009	631,893,995	929,569,464	297,675,469	67.98	166,050,095	179.27
1/1/2010	679,509,973	987,692,295	308,182,322	68.80	166,392,075	185.21
1/1/2011	724,997,822	1,025,075,423	300,077,601	70.73	157,720,871	190.26
1/1/2012	712,110,360	1,051,190,790	339,080,430	67.74	159,669,859	212.36

* The 1/1/2007 and 1/1/2008 actuarial valuations valued plan assets at market value. The 1/1/2009 through 1/1/2012 actuarial valuations valued plan assets at the difference between the expected return and the actual investment return on a market value basis, recognized over a five-year period.

Schedule of Employer Contributions

Year Ended December 31	Annual Required Contributions (ARC)	Percentage of ARC Contributed (%)
2006	$ 23,354,603	100
2007	24,166,318	100
2008	24,947,158	100
2009	28,505,066	100
2010	29,770,499	101
2011	32,706,347	100

Supplementary Information
December 31, 2011

Schedule of Administrative Expenses

The composition of administrative expenses for the year ended December 31, 2011 is as follows:

Personal services:	
Staff salaries	$ 329,523
Board Member compensation	15,000
Insurance	41,700
Total personal services	386,223
Professional services:	
Legal expenses	53,152
Actuarial fees	27,500
Audit fees	20,000
Medical fees	11,091
Total Professional services	111,743
Miscellaneous:	
Travel	5,684
Other	65,595
Total miscellaneous	71,279
Total administrative expenses	$ 569,245

Schedule of Investment and Consultants' Expenses

Investment expenses		
Management fees:		
Domestic & equity managers	$	279,773
Venture capital funds		1,228,690
Domestic fixed income managers		325,310
International investments managers		691,494
Real estate investments managers		556,620
Consultant fees		170,000
Custodial fees		182,386
Total management fees		3,434,273
Securities lending fees:		
Borrowers rebates		19,840
Fees		39,819
Total securities lending fees		59,659
Total investment expenses	$	3,493,932
Consultant expenses:		
Independent audit fees	$	20,000
Actuarial fees		27,500
Legal fees		53,152
Medical fees		11,091
Total consultant expenses	$	111,743

Investment Section

Report on Investment Activity

The information contained in the Investment Section of the Comprehensive Annual Financial Report (CAFR) has been prepared by Meketa Investment Group, acting as the investment consultant for the Worcester Retirement System (WRS). All investment information herein has been reconciled between the WRS, the investment managers hired by the WRS, and Meketa Investment Group. The investment returns presented herein were calculated in a manner consistent with that specified in the Global Investment Performance Standards (GIPS®), as developed by the CFA Institute.

Outline of Investment Policies

The purpose of this document is to set forth the goals and objectives of the WRS, and to establish guidelines for the implementation of investment strategy.

The Board of the WRS recognizes that a stable, well-articulated investment policy is crucial to the long-term success of the WRS. As such, the Board has developed this Investment Policy Statement with the following goals in mind:

- To clearly and explicitly establish the objectives and constraints that govern the investment of the WRS's assets,
- To establish a long-term target asset allocation with a high likelihood of meeting the WRS's objectives given the explicit constraints, and
- To protect the financial health of the WRS through the implementation of this stable long-term investment policy.

I. Worcester Retirement System Goals

The WRS was established to provide retirement income for the City of Worcester and WHA employees and their families. The WRS's assets are structured to provide real growth from capital gains and income, while maintaining sufficient liquidity to meet the WRS's benefit payments.

II. Investment Objectives

The investment strategy of the WRS is designed to ensure the prudent investment of funds in such a manner as to provide real growth of assets over time while protecting the value of the assets from undue volatility or risk of loss.

Risk Objectives

- To accept a level of market risk consistent with moderate interim volatility without sacrificing the potential for long-term real growth of assets.

- To use extensive diversification to minimize or eliminate completely exposure to company and industry-specific risks in the aggregate investment portfolio.

- To avoid extreme levels of volatility that could adversely affect WRS's portfolio.

- To limit the likelihood of investment return patterns that could negatively impact the funded status of the WRS.

Return objective

- Within the risk constraints outlined above, to achieve the highest real return possible.

- To achieve, over long time periods, investment returns consistent with the actuarial return on assets of 8.00%.

III. Investment Constraints

Legal and Regulatory

The WRS is a qualified defined benefit pension plan governed by the Massachusetts General Laws, Chapter 32 and recently amended by Chapter 176 of the Acts of 2011. Investment procedures and restrictions stipulated under these regulations must be followed.

The Board intends to manage the assets of the WRS at all times in accordance with the provisions of the Public Employee Retirement Administration Commission (PERAC) and the Massachusetts General Laws, Chapter 32. The Board will retain legal counsel when appropriate to review contracts and provide advice with respect to applicable statutes and regulations.

Time Horizon

The WRS will be managed on a going-concern basis. The assets of the WRS will be invested with long-term time horizon (twenty years or more), consistent with the participant demographics and the purpose of the WRS.

Liquidity

The WRS exhibits a moderate need for interim liquidity. Cash outflows for benefit payments are expected to grow from approximately $64.5 million to close to $97.5 million over the next ten years, while cash flows are expected to rise from approximately $49.3 million to $69.3 million (covering normal costs, expenses and amortization payments) over the same period. This pattern results in a net negative cash flow of up to 4.3% of WRS assets, based on the WRS's year-end asset value and the actuarial assumed rate of return of 8.00% per year.

Tax Considerations

The WRS is a tax-exempt entity. Therefore, investments and strategies will be evaluated only on the basis of expected risks and potential returns.

IV. Risk and Return Considerations

The WRS's Board recognizes that a persistent positive relationship exists between risk and return, whether risk is described as possibility of loss or as interim volatility. The Board also recognizes that investors are rarely compensated for risks that can be eliminated through diversification. Within the risk and return parameters discussed above, the Board accepts the risks associated with investing in the capital markets (market risks), but will minimize wherever possible those risks for which the WRS is unlikely to be compensated (non-market or diversifiable risks).

V. Diversification

The WRS's Board recognizes that a primary element of risk control is diversification. Therefore, investments will be allocated across multiple classes of assets, chosen in part for their low correlation of returns. Within each asset type, investments will be distributed across many individual holdings, thus further reducing volatility. In addition, each investment manager's guidelines will specify the largest permissible investment in any one asset, and the largest permissible investment in any group of related assets.

The WRS's aggregate equity portfolio will be diversified by individual issue, capitalization, and industry (international equity portfolios will also be diversified by country). The WRS's aggregate fixed income portfolio will, at a minimum, be diversified by individual issue, by issuer, by maturity, and by industry. Residual cash will be swept by the custody bank into a short-term fixed income investment pool that is broadly diversified across individual issue and issuer. The WRS's aggregate real estate portfolio will be invested across a spectrum of geographic regions and property types.

The specific degrees of diversification within the above asset classes will be addressed in each manager's investment guidelines.

VI. Asset Allocation

The Board recognizes that the allocation of monies to various asset classes will be the major determinant of the WRS return and risk experience over time. Therefore, the WRS will allocate investments across those asset classes that, based on historical and expected returns and risks, provide the highest likelihood of meeting the WRS's investment objectives.

A. Permissible Asset Classes

Because investment in any particular asset class may or may not be consistent with the objectives of the WRS, the Board has specifically indicated those asset classes that may be utilized when investing the WRS's assets, and are summarized as follows:

Asset Type	Asset Class	Purpose
Equity	U.S. Common Stocks	Total Return Potential
Equity	Non-U.S. Common Stocks	Total Return Potential Diversification
Equity	Private Equity	Total Return Potential Diversification
Fixed Income	Investment Grade Bonds	Return Stability Income
Fixed Income	TIPS	Return Stability Income
Fixed Income	High Yield Bonds/ Bank Loans	Total Return Potential Diversification Income
Real Estate	Real Estate	Total Return Potential Diversification Income
Real Estate	Timber	Total Return Potential Diversification Income
Hedge Funds	Absolute Return Strategies	Return Stability Diversification
Infrastructure	Private Infrastructure	Total Return Potential Diversification Income
Natural Resources	Public/Private Natural Resources	Total Return Potential Diversification
Fixed Income / Equity	Global Tactical Asset Allocation	Total Return Potential Diversification
Cash	Cash Equivalents	Liquidity Return Stability

B. Expected Returns, Risks, and Correlations for Permissible Asset Classes

The risk and return behavior of the WRS will be driven primarily by the allocation of investments across asset classes. In determining the appropriate allocation, the expected return and risk behavior of each asset class and the likely interaction of various asset classes in a portfolio must be examined.

C. Long-Term Target Allocations

Based on the investment objectives and constraints of the WRS, and on the expected behavior of the permissible asset classes, the Board will specify a long-term target allocation for each class of permissible assets. These targets will be expressed as a percentage of the WRS's overall market value, surrounded by a band of permissible variation resulting from market forces.

The long-term target allocations are intended as strategic goals, not short-term imperatives. Thus, it is permissible for the overall System's asset allocation to deviate from the long-term target, as would likely occur during manager transitions, asset class restructurings, and other temporary changes in the WRS. Deviations from targets that occur due to capital market changes are discussed after the following table:

Asset Allocation Targets

	Target (%)	Range (%)
Domestic Equity	**25%**	**20-30%**
Foreign Equity	**22%**	**17-27%**
Investment Grade Bonds	**7%**	**5-9%**
Treasury Inflation-Protected Securities (TIPS)	**5%**	**3-7%**
High Yield Bonds / Bank Loans	**7%**	**5-9%**
Real Estate[1]	**9%**	**7-11%**
Timber	**3%**	**2-4%**
Private Equity[1]	**8%**	**6-10%**
Hedge Funds[1]	**3%**	**2-4%**
Global Tactical Asset Allocation	**7%**	**5-9%**
Infrastructure	**2%**	**1-3%**
Natural Resources	**2%**	**1-3%**
Cash[2]	**0%**	**<5%**

[1] The Retirement System is restricted by PERAC to target allocations of 10% for real estate, 10% for private equity, and 10% for hedge fund strategies. The System will make reasonable attempts to maintain those allocations, recognizing that market fluctuations and the funding requirements of alternative investments may result in short-term deviations from the targets.

[2] The cash target of zero defines the System's objective of keeping cash balances as low as possible, at least below 5% at all times. The Retirement Board is aware, however, that a certain cash balance is needed for the efficient operation of the System and its various portfolios.

D. Rebalancing

In general, cash flows to and from the WRS will be allocated in such a manner as to move each asset class toward its target allocation.

The Board recognizes that, periodically, market forces may move the WRS's allocations outside the target ranges. The Board also recognizes that failing to rebalance the allocations would unintentionally change the WRS's structure and risk posture. However, the Board understands that constant rebalancing would result in a significant increase in explicit and implicit trading costs to the WRS. Consequently, the Board has established a process to rebalance the allocations periodically.

On at least an annual basis, if any strategic allocation is outside the specified target range, assets will be shifted to return the strategy to the target range. The specific plan for rebalancing will identify those assets that can be shifted at the lowest possible risk and cost, if the rebalancing cannot be accomplished solely by allocating contributions and withdrawals.

E. Changes to Asset Allocation

Once established, permanent changes in the WRS's target asset allocation will take place only in response to significant changes in the objectives and constraints of the WRS, or in response to material changes in the fundamental nature or appropriateness of the asset classes themselves.

VII. Review of Investment Policy, Asset Allocation, and Performance

The Investment Policy Statement will be reviewed at least annually, and specifically upon each actuarial valuation, to ensure that the objectives and constraints remain relevant. However, the Board recognizes the need for a stable long-term policy for the WRS, and major changes to this policy statement will be made only when significant developments in the circumstances of the WRS occur. The Board will notify PERAC of any changes to this document within ten days of the effective date of those changes.

The asset allocation of the WRS will be reviewed on an on-going basis, and at least annually. When necessary, such reviews may result in a rebalancing of asset allocations. In general, the Board intends that the WRS will adhere to its long-term target allocations, and that major changes to these targets will be made rarely and only in response to significant developments in the circumstances of the WRS.

The Board will specifically evaluate the performance of the WRS relative to its objectives and to the returns available from the capital markets during the period under review. In general, the Board will utilize relative, rather than absolute, benchmarks in evaluating performance.

VIII. Trading and Proxy Voting by Investment Managers

In accordance with the fiduciary and other obligations imposed on investment managers by their agreements with the Board, all trades executed by managers must be for the exclusive benefit of the WRS's participants and beneficiaries. Managers are expected to seek best execution on all trades. This is addressed in the individual manager guidelines.

The Board recognizes that the right to vote proxies for securities held represents an asset of the WRS.

As such, the Board has specifically delegated the responsibility for voting all security proxies to the individual managers. The Board believes that the voting of proxies constitutes an investment decision by the managers, and that prudent voting of proxies is important to the overall performance of the WRS. Investment managers are expected to execute all proxy votes in a timely fashion and to provide a full written accounting of proxy votes on an annual basis.

IX. Management Structure

To diversify the WRS's assets so as to minimize the risk associated with dependence on the success of one enterprise, the Board Members have decided to employ a multi-manager team approach to investing System assets.

A consultant will be employed whose responsibilities will be to: 1) provide risk and return assumptions for various asset classes, 2) to diversify WRS so as to minimize risk, while enhancing the probability of achieving the WRS's return objectives, and 3) to evaluate the performance and compliance of investment managers.

Investment managers will be employed to utilize individual expertise within their assigned area of responsibility. Each manager will be governed by individual investment guidelines.

X. Implementation

All monies invested for the WRS after the adoption of this investment policy statement shall conform to this statement.

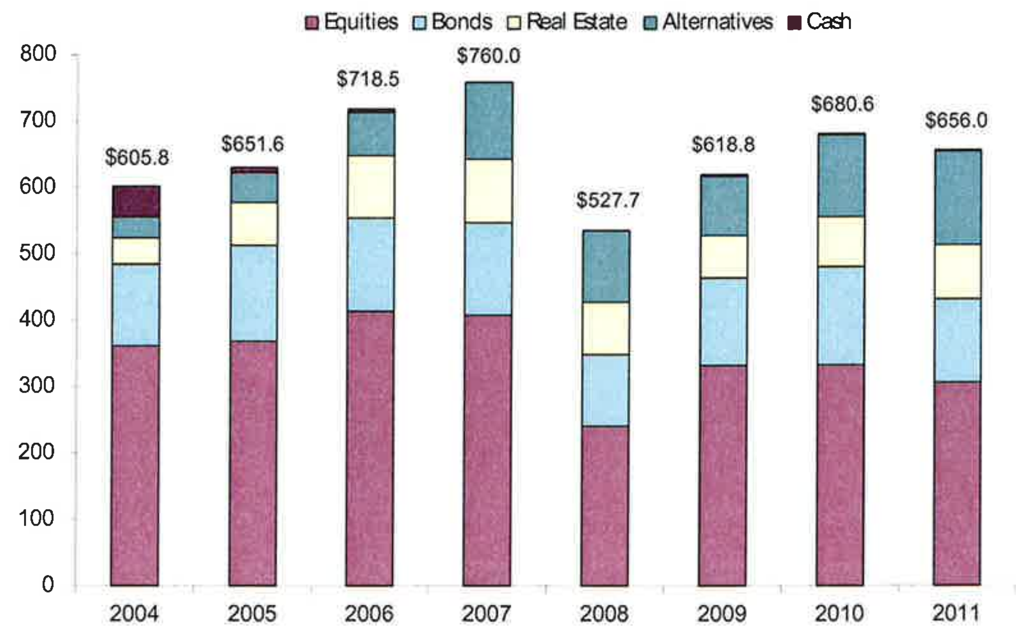
INVESTMENT RESULTS[1]

	4Q11	1 YR	3 YR	5 YR	10 YR	Since Inception	Inception Date
Total System	**4.9**	**-0.5**	**10.7**	**1.5**	**5.3**	**7.3**	**10/1/1995**
CPI (inflation)	-0.5	3.0	2.4	2.3	2.5	2.4	
Total Equity	**8.0**	**-6.6**	**14.0**	**-1.3**	**4.2**	**4.3**	**4/1/1998**
Russell 3000	12.1	1.0	14.9	0.0	3.5	3.2	
MSCI ACWI Free (ex. U.S.)	3.7	-13.7	10.7	-2.9	6.3	3.7	
Total Fixed Income	**2.3**	**5.9**	**13.3**	**6.9**	**6.9**	**6.6**	**1/1/1998**
Barclays Universal	1.4	7.4	7.7	6.4	6.0	6.2	
Total Open-End Real Estate	**3.5**	**11.2**	**-0.7**	**-2.0**	**4.7**	**5.9**	**1/1/1999**
NCREIF ODCE	3.0	16.0	-1.8	-0.3	6.2	7.2	
Total Absolute Return[2]	**0.9**	**-1.9**	**5.8**	**1.4**	**NA**	**3.8**	**7/1/2005**
HFRI Fund of Funds Composite	-0.3	-5.5	3.6	-0.7	3.3	2.0	
Total Global Tactical Asset Allocation	**4.3**	**2.4**	**12.2**	**NA**	**NA**	**1.6**	**8/1/2007**
60% S&P 500 / 40% Barclays Aggregate	5.0	6.2	11.0	2.5	4.2	2.2	

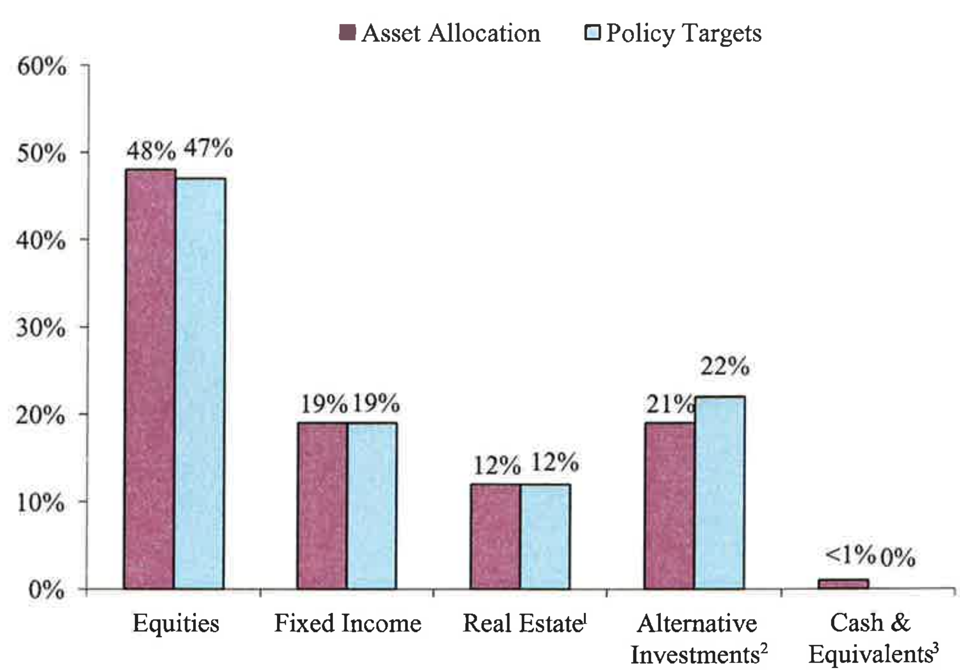
1 The WRS's policy is a time weighted average of the representative asset class benchmarks.

2 Other alternative investments include private equity, infrastructure, and natural resources limited partnerships that are measured by dollar-weighted, rather than time-weighted returns. For the calendar year period covered by this report, the WRS's private equity investments increased by \$3.3 million, including \$11.9 million in capital called and \$10.5 million in distributions. The WRS's private infrastructure investments increased by \$0.1 million, there were no capital calls in 2011 and \$0.5 million distributed. The WRS's private natural resources investments increased by \$1.9 million, including \$0.7 million called and \$0.0 million distributed.

ASSET ALLOCATION - ASSET SIZE (ROUNDED TO NEAREST MILLION)



AGGREGATE ASSET ALLOCATION VS. POLICY TARGETS



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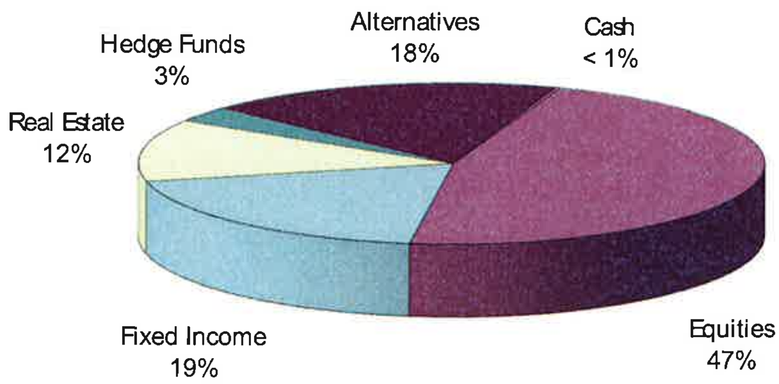
[1] The Real Estate policy target includes a strategic allocation to Timber of 3%.

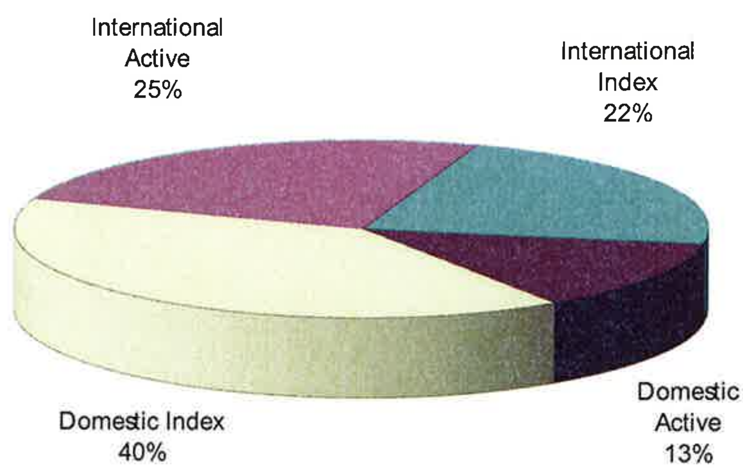
[2] The Alternative Investments allocation includes Private Equity, Absolute Return, Global Tactical Asset Allocation, Infrastructure and Natural Resources assets.

[3] Includes cash and cash held by managers within separate accounts.

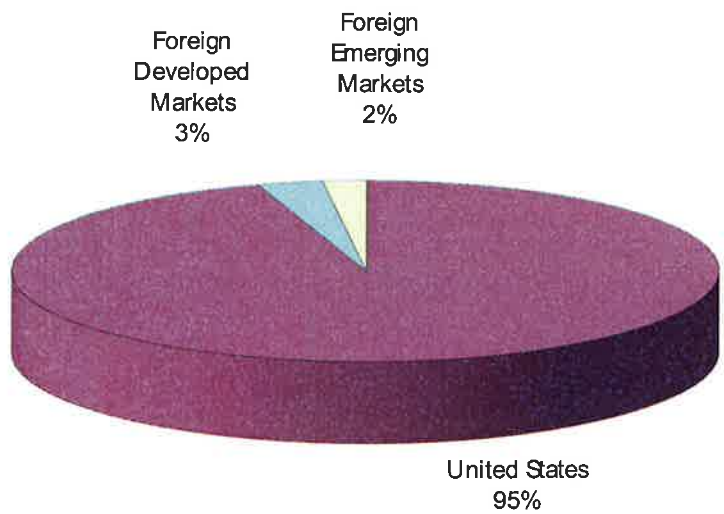
AGGREGATE ASSET ALLOCATION



EQUITY ALLOCATION



FIXED INCOME ALLOCATION



TEN LARGEST STOCK HOLDINGS BY FAIR VALUE

Company	Number of Shares	Fair Value ($mm)	% of Domestic Stock	Industry
Sinclair Broadcast Group	18,675	0.2	0.1%	Broadcasting
Great Plains Energy	9,342	0.2	0.1%	Energy
Vertex Pharmaceuticals	5,555	0.2	0.1%	Pharmaceuticals Biotechnology & Life Sciences
Trinity Industries	5,862	0.2	0.1%	Construction & Farm Machinery
Brocade Communications	29,203	0.2	0.1%	Communications & Equipment
Triumph Group	2,514	0.1	0.1%	Aerospace & Defense
Key Energy Services	9,282	0.1	0.1%	Oil & Gas Equipment Services
Chart Industries	2,631	0.1	0.1%	Industrial Machinery
Catalyst Health Solutions	2,690	0.1	0.1%	Health Care Services
Pinnacle Entertainment	13,744	0.1	0.1%	Casinos & Gaming

A complete portfolio is available upon request.

TEN LARGEST FIXED INCOME HOLDINGS BY FAIR VALUE

	Security	Coupon (%)	Maturity Date	Number of Shares	Market Value	% of Bonds
1.	Fannie Mae	4.0%	25-Oct-36	625,000	$665,973	0.5%
2.	Greenwich Capital	4.6%	10-Aug-42	655,000	662,236	0.5%
3.	Fannie Mae	3.5%	25- Jul -40	609,342	627,647	0.5%
4.	Morgan Stanley	6.8%	15-Jul-33	620,000	607,942	0.5%
5.	Silverstone	1.0%	21-Jan-55	600,000	598,729	0.5%
6.	Bear Stearns	5.7%	11-Sep-38	520,000	580,040	0.4%
7.	Morgan Stanley	6.2%	15-Jan-39	480,000	480,580	0.4%
8.	JP Morgan Chase	4.2%	15-Aug-46	425,000	455,094	0.4%
9.	Wells Fargo	4.4%	15-Nov-43	420,000	452,448	0.3%
10.	WF RBS	4.4%	15-Jun-44	425,000	449,217	0.3%

A complete portfolio is available upon request.

Schedule Of Fees & Commissions

Investment Manager Fees: December 31, 2011	
Acadian Asset Management	$215,571
Aetos Capital	104,163
AEW Capital Management	50,000
Ascent Venture Management, Inc. II	4,065
Ascent Venture Management, Inc. III	44,165
Ascent Venture Management, Inc. IV	163,769
Ascent Venture Management, Inc. V	149,082
Bailard	108,850
Boston Company	9,925
Boston Millennium Partners II	49,837
BPIF Blackstone	139,638
Charlesbank Capital Partners V	32,516
Charlesbank Capital Partners VI	42,977
Global Infrastructure Partners	157,791
Hancock	63,079
Heitman Investment Management	33,158
Intercontinental Real Estate Corp	37,500
Invesco	25,000
Lazard	323,312
Lee Munder	101,412
Loomis Sayles	248,139
Newstone I	28,764
Newstone II	24,589
Northstar V	90,912
OPUS	45,128
OPUS TIPS	32,043
Penn Capital	85,011
PRIT Hedge Fund	11,242
PRIT Real Estate	108,603

(continued)

SCHEDULE OF FEES & COMMISSIONS

Investment Manager Fees: December 31, 2011	
Riverside Capital Appreciation 2000	5,097
Riverside Capital Appreciation 2003	18,513
Riverside Europe III	36,570
RMK Balanced Timberland B	59,444
RMK Fund I	31,152
RMK Select Timberland Fund II	48,892
SSgA Daily EAFE Index	90,379
SSgA EAFE Index	34,638
SSgA EAFE Small Cap Index	11,399
SSgA Flagship Index	21,306
SSgA Global Natural Resources	6,269
SSgA Russell 1000 Value Index	30,208
SSgA Russell 1000 Growth Index	29,888
SSgA S&P Midcap Index	11,949
VEF Advisors II	4,895
VEF Advisors IV	11,048
White Deer	100,000
Total Investment Manager Fees	**3,081,887**
State Street Bank (Custodian Bank Fee)	182,386
Meketa Investment Group (Consultant Fee)	170,000
Security Lending Fees / (Income)	59,659
Total Other Fees	**412,045**
Total Fees	**$3,493,932**

(concluded)

COMMISSIONS TO BROKERS

Broker Name	Total Commissions ($)	Total Shares	$/Share
AQUA SECURITIES LP	5	257	0.02
BARCLAYS CAPITAL LE	720	18,030	0.04
BEAR STEARNS SECURITIES CORP	172	4,310	0.04
BLOOMBERGTRADEBOOK LLC	762	76,244	0.01
BNP PARIBAS BROKERAGE SECURITIES INC	57	2,850	0.02
BNY CONVERGEX LJR	17,712	472,344	0.04
BREAN MURRAY, CARRET& CO., LLC	532	13,305	0.04
BTIG, LLC	1,374	68,677	0.02
CANACCORDGENUITY INC	166	3,552	0.05
CANTOR FITZGERALD + CO.	1,656	50,803	0.03
CITIGROUPGLOBAL MARKETS INC	136	2,769	0.05
COWEN ANDCOMPANY, LLC	192	4,790	0.04
CRAIG - HALLUM	394	8,946	0.04
CREDIT SUISSE SECURITIES (USA) LLC	897	24,695	0.04
DAVENPORT& CO. OF VIRGINIA, INC.	470	11,743	0.04
DEUTSCHE BANK SECURITIES INC	760	19,007	0.04
EAST SHORE PARTNERS, INC	95	2,380	0.04
FRIEDMAN BILLINGS + RAMSEY	272	6,795	0.04
GOLDMAN SACHS + CO	181	7,950	0.02
GOLDMAN SACHS INTERNATIONAL	5,736	286,789	0.02
HIBERNIA SOUTHCOAST CAPITAL INC	399	11,325	0.04
HOWARD WEIL DIVISION LEGG MASON	980	24,495	0.04
INSTINET	9,192	247,266	0.04
INVESTMENT TECHNOLOGY GROUP INC.	74	3,106	0.02
ISI GROUPINC	89	2,215	0.04
J.P. MORGAN SECURITIES INC.	960	24,107	0.04
JANNEY MONTGOMERY, SCOTT INC	232	5,791	0.04
JEFFERIES+ COMPANY INC	770	20,237	0.04
JMP SECURITIES	301	6,024	0.05
JOHNSON RICE + CO	211	5,282	0.04
JONESTRADING INSTITUTIONAL SERVICES LLC	7,753	223,940	0.03
KEEFE BRUYETTE + WOODS INC	216	5,052	0.04
KEYBANC CAPITAL MARKETS INC	858	20,935	0.05
KNIGHT EQUITY MARKETS L.P.	1,393	69,544	0.02
LAZARD CAPITAL MARKETS LLC	136	3,391	0.04
LEERINK SWANN AND COMPANY	42	833	0.05
LIQUIDNETINC	1,528	50,925	0.03
LONGBOW SECURITIES LLC	219	5,478	0.04
MACQUARIESECURITIES (USA) INC	199	4,985	0.04
MERRILL LYNCH PIERCE FENNER + SMITH INC	797	19,925	0.04
MERRILL LYNCH PROFESSIONAL CLEARING CORP	32	800	0.04

(continued)

Broker Name	Total Commissions ($)	Total Shares	$/Share
MIZUHO SECURITIES USA INC.	108	2,710	0.04
MKM PARTNERS LLC	231	6,520	0.04
MND PARTNERS	100	3,336	0.03
MORGAN JOSEPH + CO INC	92	2,310	0.04
MORGAN KEEGAN & CO INC	104	2,294	0.05
MORGAN STANLEY CO INCORPORATED	1,770	44,633	0.04
NEEDHAM +COMPANY	359	8,467	0.04
OPPENHEIMER + CO. INC.	412	9,347	0.04
PICKERINGENERGY PARTNERS, INC	60	1,495	0.04
PRITCHARDCAPITAL PARTNERS LLC	99	2,485	0.04
PULSE TRADING LLC	144	7,180	0.02
RAYMOND JAMES AND ASSOCIATES INC	1,546	38,651	0.04
RBC CAPITAL MARKETS	944	25,297	0.04
ROBERT W.BAIRD CO.INCORPORATE	668	27,871	0.03
ROTH CAPITAL PARTNERS LLC	60	1,509	0.04
SANDLER ONEILL + PART LP	281	6,089	0.05
SANFORD CBERNSTEIN CO LLC	488	21,063	0.03
SCOTT & STRINGFELLOW, INC	259	6,475	0.04
SIDOTI + COMPANY LLC	828	20,690	0.04
SIMMONS +COMPANY INTERNATIONAL	326	8,142	0.04
STATE STREET GLOBAL MARKETS, LLC	24	609	0.04
STEPHENS,INC.	406	9,572	0.04
STERNE AGEE & LEACH INC.	152	3,812	0.04
STIFEL NICOLAUS + CO INC	915	21,995	0.04
SUNTRUST CAPITAL MARKETS, INC.	1,380	34,188	0.04
THE BENCHMARK COMPANY, LLC	482	12,045	0.04
THINKPANMURE LLC	140	2,798	0.05
UBS SECURITIES LLC	458	11,457	0.04
WEDBUSH MORGAN SECURITIES INC	25	625	0.04
WELLS FARGO SECURITIES, LLC	667	16,376	0.04
WILLIAM BLAIR & COMPANY L.L.C	316	6,319	0.05
WUNDERLICH SECURITIES INC.	176	4,394	0.04

(concluded)

Investment Summary

	Market Value 12/31/2011 ($ mm)	% of Asset Class	% of System
Total System	**656.0**	**NA**	**100**
Total Domestic Equity Assets	**163.5**	**100**	**25**
Financials	24.5	15	4
Information Technology	29.4	18	4
Industrials	19.6	12	3
Consumer Discretionary	19.6	12	3
Energy	18.0	11	3
Health Care	18.0	11	3
Consumer Staples	16.4	10	2
Materials	6.5	4	1
Utilities	6.5	4	1
Telecommunication Services	3.3	2	< 1
Total Foreign Equity Assets	**142.4**	**100**	**22**
Europe-Developed	64.6	45	10
Pacific Rim/Australia Asia-Developed	40.3	28	5
Emerging Markets	35.7	25	5
Other (Non-EAFE)	1.7	1	0
Total Fixed Income Assets	**125.6**	**100**	**19**
Credit	27.6	22	4
U.S. Treasury	41.4	33	6
Bank Loans	23.9	19	4
Mortgage Backed	15.1	12	2
U.S. Agency	6.3	5	1
Commercial Mortgage Backed	6.3	5	1
Other	3.8	3	1
Asset Backed	1.3	1	< 1
Total Alternative Assets	**222.7**	**100**	**34**
Real Estate	81.7	37	12
Alternative Assets	119.9	54	18
Hedge Funds	21.2	10	3
Cash & Cash Equivalents	**1.8**	**100**	**< 1**

LIQUIDITY PROFILE

Benefits payments totaled approximately $64.5 million during the year and along with other payments of $5.1 million resulted in total cash outflows of $69.6 million in 2011. These payments were partially offset by a contribution of approximately $32.7 million from employers and other cash receipts of $16.6 million for a total of $49.3 million in 2011. This resulted in a negative cash flow of approximately $20.3 million for the fiscal year. Note that these figures do not incorporate expected income and asset gains from the WRS's investments. The WRS's portfolio is structured with a long-term expected return of 8.00%.

Actuarial Section

SEGAL

THE SEGAL COMPANY
116 Huntington Avenue, 8th Floor Boston, MA 02116
T 617.424.7336 F 617.424.7390 www.segalco.com

Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President & Actuary
kriley@Segalco.com

June 8, 2012

City of Worcester Retirement Board
City Hall, Room 103
455 Main Street
Worcester, MA 01608

Dear Board Members:

The Segal Company has performed a January 1, 2012 actuarial valuation of the City of Worcester Retirement System. This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Retirement Board are reasonably related to the experience of and the expectations for the Plan.

As part of performing the valuation, The Segal Company was furnished member data by the City of Worcester Retirement System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary. In addition, the administrative staff furnished financial statements that were not audited by the actuary.

The funding objective of the plan is to provide for the current cost of benefits (*i.e.,* normal cost) and to reduce the unfunded liability to zero by June 30, 2035. The normal cost is expected to remain at a level percentage of payroll. The remaining liability of the 2002 ERI is amortized over a 6-year period (by June 30, 2018) with level payments. The 2010 ERI liability is amortized over a 9-year period (by June 30, 2021) with level payments. The Section 90 ACD liability is amortized over a 2-year period (by June 30, 2014) with level payments. The remaining unfunded liability is amortized over a 23-year period with payments increasing at the rate of 4.0% per year for fiscal 2016 and later. The fiscal 2013 appropriation of $35,322,855 is calculated to be 8.0% greater than the fiscal 2012 appropriation. The fiscal 2014 appropriation is calculated to be 8.0% greater than fiscal 2013. In fiscal 2015, the payment on the remaining unfunded liability is calculated to be 10.75% greater than in fiscal 2014. Beginning in fiscal 2016, the payment on the remaining unfunded liability is 4% greater than the prior year's payment. In the prior valuation, the System was fully funded by June 30, 2035 and the remaining unfunded liability was amortized in increasing (4.0% per year) payments beginning in fiscal 2014.

Actuarial valuations have been performed annually. This is consistent with the guidelines promulgated by PERAC and GASB. The previous valuation was performed as of January 1, 2011.

The assumptions and methods used for funding purposes met the parameters set for the disclosures presented in the financial section by GASB Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans.*

The Segal Company has prepared, and included as part of this report, all the supporting schedules for the Actuarial Section and Statistical Section of the CAFR. In addition, we have prepared the Schedules of Funding Progress and the Schedule of Employer Contributions found in the Financial Section of the CAFR.

Please let us know if you have any questions on this material.

Sincerely,

THE SEGAL COMPANY

By: Kathleen A. Riley

Kathleen A. Riley, FSA, MAAA
Senior Vice President and Actuary

I. Summary of Actuarial Assumptions and Actuarial Cost Method

The actuarial assumptions, as set forth in the accompanying supporting schedules, were selected by the Worcester Retirement Board and actuary. Unless stated otherwise, the actuarial assumptions are based upon the actuarial valuation as of January 1, 2012, which was adopted by the WRS on May 10, 2012.

Mortality Rates

Healthy — RP-2000 Combined Healthy Mortality Table projected 12 years with Scale AA

Disabled — RP-2000 Combined Healthy Mortality Table set forward 5 years projected 12 years with Scale AA

The RP-2000 Combined Healthy Mortality Table projected 12 years with Scale AA was determined to contain provisions appropriate to reasonably reflect future mortality improvement, based on a review of mortality experience as of the measurement date.

Termination Rates before Retirement

	Rate (%)			
	Mortality		Group 1 and 2	
Age	**Male**	**Female**	**Disability**	**Withdrawal**
20	0.03	0.02	0.01	12.00
25	0.03	0.02	0.03	8.78
30	0.04	0.02	0.04	5.55
35	0.07	0.04	0.07	3.93
40	0.10	0.06	0.13	2.31
45	0.13	0.09	0.18	1.89
50	0.17	0.14	0.24	1.46
55	0.29	0.25	0.30	0.00
60	0.56	0.48	0.35	0.00

Notes: *55% of the disability rates shown represent accidental disability.*
20% of the accidental disabilities will die from the same cause as the disability.
55% of the death rates shown represent accidental death.

	Mortality		Group 4	
Age	**Male**	**Female**	**Disability**	**Withdrawal**
20	0.03	0.02	0.13	2.10
25	0.03	0.02	0.25	1.88
30	0.04	0.02	0.38	1.65
35	0.07	0.04	0.38	1.11
40	0.10	0.06	0.38	0.56
45	0.13	0.09	1.25	0.28
50	0.17	0.14	1.56	0.00
55	0.29	0.25	1.50	0.00
60	0.56	0.48	1.06	0.00

Notes: *90% of the disability rates shown represent accidental disability.*
60% of the accidental disabilities will die from the same cause as the disability.
90% of the death rates shown represent accidental death.

Retirement Rates

	Rate (%)		
Age	**Groups 1 and 2**	**Age**	**Group 4**
50	3.0	50	5.0
51-54	1.0	51-54	1.0
55	2.0	50	16.0
56	2.0	51	9.0
57	3.0	52	9.0
58	3.0	53	12.0
59	3.0	54	11.0
60	8.0	55	24.0
61	7.0	56	14.0
62	15.0	57	20.0
63	11.0	58	13.0
64	10.0	59	19.0
65	36.0	60	100.0
66	22.0	61	
67	22.0	62	
68	22.0	63	
69	25.0	64	
70	100.0	65	

Unknown Data for Participants

Same as those exhibited by participants with similar known characteristics.

Age of Spouse

Females 3 years younger than their spouses.

Percent-Married

80%

Benefit Election

All participants are assumed to elect option A.

Net Investment Return

8.00%

Salary Increases

4.75% (includes allowance for inflation of 3.75%)

Interest on Employee Contributions

3.50%

Administrative Expenses

$600,000 for calendar year 2012, increasing 3.75% per year

2011 Salary

2011 salary equal to salaries provided in the data, except for new hires where salaries were calculated from annualized contributions divided by the contribution rate(s) reported.

Total Service

Total creditable service based on adjusted date of hire.

Net 3(8)(c) Liability

Estimated liability of $15.3 million based on estimated net annual benefits of $1.7 million.

Actuarial Value of Assets

Market value of assets as reported in the System's Annual Statement less unrecognized return in each of the last five years. Unrecognized return is equal to the difference between the actual market value return and the expected market value return and is recognized over a five-year period, further adjusted, if necessary, to be within 10% of the market value.

Actuarial Cost Method

Entry Age Normal Actuarial Cost Method. Entry Age is the age of the participant less Total Service as defined above. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary.

Recent Changes

The investment return assumption was lowered from 8.50% to 8.25% as of January 1, 2006. As of January 1, 2011, it was further lowered to 8.00%.

The salary increase assumption was lowered as of January 1, 2003 from 5.50% to 5.00%. As of January 1, 2011, it was further lowered to 4.75%.

An asset smoothing method was first applied with the January 1, 2000 valuation and modified as of January 1, 2004. As of December 31, 2004, the actuarial value of assets was set equal to market value. As of January 1, 2009, the actuarial value of assets was changed from market value of assets to a five-year smoothing method. As of January 1, 2010, the actuarial value of assets was changed from being within 20% of the market value of assets to being within 10% of the market value of assets.

The mortality assumption for healthy participants was changed from the 1994 Group Annuity Mortality Table to the RP-2000 Combined Healthy Mortality Table projected 12 years with Scale AA as of January 1, 2012.

The disabled life mortality table was changed from the 1994 Group Annuity Mortality Table set forward 10 years to the 1994 Group Annuity Mortality Table set forward 7 years, as of January 1, 2010. As of January 1, 2011, the table was changed to the 1994 Group Annuity Mortality Table set forward 5 years. As of January 1, 2012, the assumption was changed to the RP-2000 Combined Healthy Mortality Table set forward 5 years projected 12 years with Scale AA.

The estimated liability for future 3(8)(c) payments was lowered from $20.1 million based on estimated net annual benefits of $2.4 million to $15.7 million based on estimated net annual benefits of $1.8 million as of January 1, 2011 and to an estimated liability of $15.3 million based on net annual benefits of $1.7 million as of January 1, 2012.

As of January 1, 2012, the annual rates of retirement and disability were changed.

The administrative expense assumption was changed from $625,000 to $600,000 as of January 1, 2012.

II. Schedule of Active Member Valuation Data

Valuation date	Number	Projected annual payroll ($)	Annual average pay ($)	% Increase in average pay
1/1/2007	3,397	152,838,201	44,992	5.82
1/1/2008	3,299	156,585,326	47,464	5.49
1/1/2009	3,352	166,050,095	49,538	4.37
1/1/2010	3,287	166,392,075	50,621	2.19
1/1/2011	3,208	157,720,871	49,165	-2.88
1/1/2012	3,178	159,669,859	50,242	2.19

III. Schedule of Retirants and Beneficiaries Added to and Removed from Rolls

	Added to Rolls		Removed from Rolls		Rolls - end of year			
Year ended	Number	Annual allowances[1]	Number	Annual allowances	Number	Annual allowances[1]	% Increase in annual allowances	Average annual allowances
2006	78	1,891,430	133	1,760,235	2,864	53,571,242	1.80	18,705
2007	105	2,719,667	120	1,728,323	2,849	55,329,380	3.28	19,421
2008	93	2,867,851	150	2,034,502	2,792	56,905,570	2.85	20,382
2009	97	3,476,053	115	1,643,865	2,774	59,512,448	4.58	21,454
2010	182	5,534,863	158	2,487,548	2,798	63,008,939	5.88	22,519
2011	88	2,550,597	109	1,683,482	2,776	64,470,827	2.32	23,216

[1] Annual allowances are shown for retirees in pay status at the end of the year.

IV. Solvency Test

	Actuarial Accrued Liability				Portion of Actuarial Accrued Liability Covered by Assets		
Valuation Date	(1) Active member contributions	(2) Retirees and beneficiaries	(3) Active/Inactive members (Employer financed)	Actuarial value of assets	(1)	(2)	(3)
1/1/2007	138,456,863	444,678,593	254,472,777	716,796,770	100	100	53
1/1/2008	144,175,273	476,412,539	269,336,498	759,410,332	100	100	52
1/1/2009	152,780,052	488,818,808	287,970,604	631,893,995	100	98	0
1/1/2010	158,217,390	524,211,594	305,263,311	679,509,973	100	99	0
1/1/2011	158,761,215	573,267,875	293,046,333	724,997,822	100	99	0
1/1/2012	165,908,395	586,490,665	298,791,730	712,110,360	100	93	0

V. Analysis of Financial Experience

	Year Ended December 31,				
	2011	2010	2009	2008	2007
1. Unfunded actuarial accrued liability as of January 1	$ 300,077,601	$ 308,182,322	$ 297,675,469	$ 130,513,978	$ 120,811,463
2. Normal cost as of January 1	23,414,464	24,074,576	23,936,084	22,574,842	22,122,545
3. Employer and employee contributions during year	(46,308,754)	(44,157,370)	(42,695,664)	(39,375,618)	(36,995,766)
4. Interest					
(a) For whole year on (1)+(2)	25,879,365	27,411,194	26,532,953	12,629,827	11,792,055
(b) For half year on (3)	(1,674,395)	(1,645,804)	(1,591,325)	(1,467,582)	(1,378,882)
(c) Total interest	24,204,970	25,765,390	24,941,628	11,162,245	10,413,173
5. Expected unfunded actuarial liability	301,388,281	313,864,918	303,857,517	124,875,447	116,351,415
6. Actual unfunded actuarial accrued liability	339,080,430	300,077,601	308,182,322	297,675,469	130,513,978
7. (Gain) or loss for the year: (6)-(5)	$ 37,692,149	$ (13,787,317)	$ 4,324,805	$ 172,800,022	$ 14,162,563
8. Investment (gain) or loss	$ 49,817,777	$ (9,317,263)	$ (55,454,843)	$ 275,514,085	$ (3,341,587)
9. (Gains) or losses from sources other than investments	(14,469,293)	(32,351,823)	12,290,038	2,601,602	1,694,376
10. Plan changes	5,186,817	3,879,584	-	-	-
11. Assumption changes	(2,843,152)	24,002,185	47,489,610	(105,315,665)	15,809,774

VI. Summary of Plan Provisions

The following summarizes the major provisions of Chapter 32 of the Massachusetts General Laws.

Plan Year

January 1 – December 31

Retirement Benefits

Employees covered by the Contributory Retirement Law are classified into one of four groups depending on job classification. Group 1 comprises most positions in state and local government. It is the general category of public employees. Group 4 comprises mainly police and firefighters. Group 2 is for other specified hazardous occupations. (Officers and inspectors of the State Police are classified as Group 3.)

The annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the following table based on the age of the member at retirement.

Age Last Birthday at Date of Retirement

Percent	Group 1	Group 2	Group 4
2.5	65 or over	60 or over	55 or over
2.4	64	59	54
2.3	63	58	53
2.2	62	57	52
2.1	61	56	51
2.0	60	55	50
1.9	59	--	49
1.8	58	--	48
1.7	57	--	47
1.6	56	--	46
1.5	55	--	45

A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

The maximum annual amount of the retirement allowance is 80 percent of the member's final three-year average salary. Any member who is a veteran also receives an additional yearly retirement allowance of $15 per year of creditable service, not exceeding $300. The veteran allowance is paid in addition to the 80 percent maximum.

Employee Contributions

Employees hired before January 1, 1975 contribute 5 percent of their salary; employees hired after January 1, 1975 and before December 31, 1983 contribute 7 percent; employees hired after January 1, 1984 contribute 8 percent; employees hired after July 1, 1996 contribute 9 percent.

In addition, employees hired after December 31, 1978 contribute an additional 2 percent of salary in excess of $30,000.

Employees hired after 1983 who leave with less than five years of credited service receive no interest on their contributions, and employees who leave with five but less than ten years receive one-half the rate of regular interest otherwise payable. Commencing July 1, 2010, employees who voluntarily terminate employment, who have less than 10 years of service and request a refund, receive 3% interest on their contributions.

Retirement Benefits (Superannuation)

Members of Group 1, 2 or 4 may retire upon the attainment of age 55. For retirement at ages below 55, twenty years of creditable service is required.

Members who terminate before age 55 with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the System).

Ordinary Disability Benefits

A member who is unable to perform his job due to a non-occupational disability will receive a retirement allowance if he has ten or more years of creditable service and has not reached age 55. The annual amount of such allowance shall be determined as if the member retired for superannuation at age 55, based on the amount of creditable service at the date of disability. For veterans, there is a minimum benefit of 50 percent of the member's most recent year's pay plus an annuity based on his or her own contributions.

Accidental Disability Benefit

For a job-connected disability the benefit is 72 percent of the member's most recent annual pay plus an annuity based on his own contributions, plus additional amounts for surviving children. Benefits are capped at 75 percent of annual rate of regular compensation for employees who become members after January 1, 1988.

Death Benefits

In general, the beneficiary of an employee who dies in active service will receive a refund of the employee's own contributions. Alternatively, if the employee were eligible to retire on the date of his or her death, a spouse's benefit will be paid equal to the amount the employee would have received under Option C. The surviving spouse of a member who dies with two or more years of credited service has the option of a refund of the employee's contributions or a monthly benefit regardless of eligibility to retire, if they were married for at least one year. The allowance provided for under this option shall not be less than $250 per month, and there are additional amounts for surviving children.

If an employee's death is job-connected, the spouse will receive 72 percent of the member's most recent annual pay in addition to a refund of the member's accumulated deductions, plus additional amounts for surviving children. However, in accordance with Section 100 of Chapter 32, the surviving spouse of a police officer, firefighter or corrections officer is killed in the line of duty will be eligible to receive an annual benefit equal to the maximum salary held by the member at the time of death, and will be eligible for pay increases that would have been awarded to the officer if they were still living.

"Heart and Lung Law" and Cancer Presumption

Any case of hypertension or heart disease resulting in total or partial disability or death to a uniformed fireman or permanent member of a police department, or certain employees of a county correctional facility is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. Any case of disease of the lungs or respiratory tract resulting in total disability or death to a uniformed fireman is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. There is an additional presumption for uniformed firemen that certain types of cancer are job-related if onset occurs while actively employed or within five years of retirement.

Options

Members may elect to receive a full retirement allowance payable for life under Option A. Under Option B a member may elect to receive a lower monthly allowance in exchange for a guarantee that at the time of death contributions not expended for annuity payments will be refunded to his beneficiary. Option C allows the member to take a lesser retirement allowance in exchange for providing a survivor with two-thirds of the lesser amount. Option C pensioners will have their benefits converted from a reduced to a full retirement if the beneficiary predeceases the retiree.

Post-Retirement Benefits

The Board has adopted the provisions of Section 51 Chapter 127 of the Acts of 1999, which provide that the Retirement Board may approve an annual COLA in excess of the Consumer Price Index but not to exceed a 3% COLA on the first $12,000 of a retirement allowance. As of July 1, 2012, this will increase to an annual COLA in excess of the CPI, but not to exceed 3% of the first $13,000 of a retirement allowance. Cost-of-living increases granted prior to July 1, 1998 are reimbursed by the Commonwealth and are not reflected in this report.

Changes in Plan Provisions

The Board has increased the Section 101 annual allowance from $6,000 to $9,000.

As permitted by Section 19 of Chapter 188 of the Acts of 2010, the Board has adopted an increase to the retiree COLA base from $12,000 to $13,000 as of July 1, 2012.

Statistical Section

STATISTICAL SECTION

This part of the WRS' Comprehensive Annual Financial Report presents information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the WRS' overall financial health.

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Schedule of Additions to Plan Net Assets by Source

Fiscal Year	Plan Member Contributions	Employer Contributions	Employer Contributions as % of Covered Payroll	Investment Income(a)	Other(b)	Total
2002	$ 12,393,094	12,956,778	8.71	$ (67,805,128)	3,615,546	(38,839,710)
2003	11,691,887	18,928,252	13.25	115,602,944	2,783,268	149,006,351
2004	12,187,208	20,150,377	14.52	66,454,940	3,530,693	102,323,218
2005	12,509,613	23,579,478	16.03	55,470,779	3,015,645	94,575,515
2006	13,448,309	23,354,603	16.01	91,535,233	2,982,027	131,320,172
2007	13,922,938	24,166,318	15.81	61,690,401	2,800,696	102,580,353
2008	14,695,126	24,947,158	15.93	(213,653,903)	1,553,980	(172,457,639)
2009	14,785,935	28,505,066	17.17	109,307,795	2,308,137	154,906,933
2010	14,731,633	30,196,904	18.15	83,274,908	2,148,586	130,352,031
2011	14,526,760	32,706,347	20.74	(5,631,768)	2,084,878	43,686,217

(a) Net of Investment expenses

(b) Includes state pension reimbursements and transfer of employees' contributions from other public pension plans as defined by Massachusetts General Law, Chapter 32.

Schedule of Deductions from Plan Net Assets by Type

Fiscal Year	Benefits	Administrative Expenses	Withdrawals(a)	Total
2002	$ 43,540,572	$ 561,697	$ 3,802,339	$ 47,904,608
2003	47,848,502	440,294	3,866,838	52,155,634
2004	50,517,094	518,078	3,704,908	54,740,080
2005	52,105,583	556,781	3,996,263	56,658,627
2006	53,350,080	621,648	4,568,178	58,539,906
2007	55,033,466	555,774	4,377,551	59,966,791
2008	56,516,348	554,276	3,303,810	60,374,434
2009	58,698,242	538,983	4,511,626	63,748,851
2010	61,274,343	557,170	4,355,679	66,187,192
2011	64,477,915	569,245	4,538,471	69,585,631

(a) Includes amounts for employee withdrawals and employee transfers to other governmental units.

Schedule of Total Change in Net Assets

Fiscal Year	Total Change in Net Assets
2002	$ (86,744,318)
2003	96,862,717
2004	47,583,138
2005	37,916,888
2006	72,780,266
2007	42,613,562
2008	(232,832,073)
2009	91,158,082
2010	64,164,839
2011	(25,899,414)

Schedule of Benefit Expenses by Type

Year ended December 31	Regular	Disability	Beneficiary	COLA	Annuities	Total
2002	$ 18,332,032	$ 8,532,815	$ 4,771,934	$ 7,056,425	$ 4,847,366	$ 43,540,572
2003	21,186,242	8,706,365	5,105,775	7,422,192	5,427,928	47,848,502
2004	22,505,296	9,192,940	5,145,320	7,795,981	5,877,557	50,517,094
2005	22,855,516	9,796,237	4,830,540	8,581,377	6,041,913	52,105,583
2006	23,016,975	10,282,032	4,999,986	8,846,248	6,204,839	53,350,080
2007	23,437,804	10,890,179	5,081,340	9,147,566	6,476,577	55,033,466
2008	23,937,559	11,123,001	5,285,744	9,355,548	6,814,496	56,516,348
2009	24,711,047	11,798,651	5,331,443	9,522,992	7,334,109	58,698,242
2010	26,885,194	11,404,371	5,621,282	9,695,254	7,668,242	61,274,343
2011	28,911,453	11,616,006	5,677,792	9,878,255	8,394,409	64,477,915

Schedule of Retired Members by Type of Benefit

	12/31/2011	12/31/2010	12/31/2009	12/31/2008	12/31/2007	12/31/2006	12/31/2005	12/31/2004	12/31/2003	12/31/2002
Superannuation										
Group 1	1,499	1,524	1,482	1,493	1,545	1,560	1,577	1,622	1,653	1,653
Group 2&4	306	302	289	276	270	263	269	270	262	254
Total	1,805	1,826	1,771	1,769	1,815	1,823	1,846	1,892	1,915	1,907
Ordinary Disability										
Group 1	34	33	36	39	43	42	44	41	42	42
Group 2&4	8	7	6	6	7	7	6	5	7	6
Total	42	40	42	45	50	49	50	46	49	48
Accidental Disability										
Group 1	124	117	124	130	128	125	139	139	140	147
Group 2&4	296	301	315	317	319	318	323	321	315	319
Total	420	418	439	447	447	443	462	460	455	466
Benficiaries										
Group 1	304	311	340	349	361	373	389	395	408	417
Group 2&4	205	203	182	182	176	176	172	174	169	163
Total	509	514	522	531	537	549	561	569	577	580
Total Retired Members										
Group 1	1,961	1,985	1,982	2,011	2,077	2,100	2,149	2,197	2,243	2,259
Group 2&4	815	813	792	781	772	764	770	770	753	742
Total	2,776	2,798	2,774	2,792	2,849	2,864	2,919	2,967	2,996	3,001

Source: Actuarial valuation as of January 1, 2012

Schedule of Average Benefit Payments (2011)

	2011 (a)		
Years of Credited Service	Average Monthly Benefit ($)	Average Final Average Salary ($)	Number of Retired Members (b)
0	706	4,320	1
1 - 5	1,365	18,653	34
6 - 10	952	22,003	175
11 - 15	1,018	23,755	350
16 - 20	1,329	26,953	405
21 - 25	1,819	33,984	376
26 - 30	2,626	40,393	312
31 - 35	3,402	50,416	395
36 - 40	3,497	52,215	187
41 - 45	3,003	43,288	30
46 - 50	2,381	43,069	2
51 - 55	3,334	51,857	1

(a) Data in the format presented in this table is provided beginning in calendar year 2011, which is the first year data in this format is available. Please see the "Schedule of Average Benefit Payments (2002-2010)" for average benefit payment data for calendar years 2002-2010.

(b) Since the data in this table is organized by creditable service, it does not include "Beneficiaries"

Schedule of Average Benefit Payments (2002-2010) (a)

Year ended December 31	Number	Annual benefits ($)	Monthly average ($)	Annual average ($)	% Increase
2002	3,001	43,540,572	1,209	14,509	2.56
2003	2,996	47,848,502	1,331	15,971	10.08
2004	2,967	50,517,094	1,419	17,026	6.61
2005	2,919	52,105,583	1,488	17,850	4.84
2006	2,864	53,350,080	1,552	18,628	4.36
2007	2,849	55,033,466	1,610	19,317	3.70
2008	2,792	56,516,348	1,687	20,242	4.79
2009	2,774	58,698,242	1,763	21,160	4.54
2010	2,798	61,274,343	1,825	21,899	3.49

(a) Data in the format presented in this table is provided for calendar years 2002-2010. The table provides for the most comprehensive average benefit payment data available for this time period.

Schedule of Participating Employers

Fiscal Year	Employer Name	Number of Covered Employees	Percentage of Total Covered Employees
2002	City of Worcester	3,404	95.5%
2002	Worcester Housing Authority	162	4.5%
2011	City of Worcester	2,990	94.1%
2011	Worcester Housing Authority	188	5.9%

Source: The WRS administrative staff