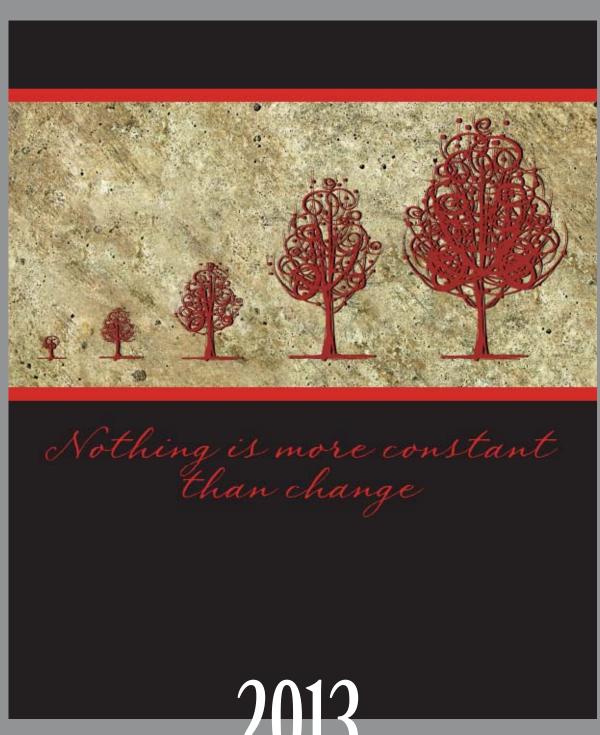
# PENNSYLVANIA **MUNICIPAL RETIREMENT SYSTEM**

COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR THE YEAR ENDED DECEMBER 31, 2013 & 2012



2013

# The PMRS

# Vision

To be Pennsylvania local governments' pension administrator *of choice*.



# Mission

The Pennsylvania Municipal Retirement System seeks to help Pennsylvania's local governments, regardless of size or resources, secure the future retirement of their employees by providing comprehensive, cost efficient and professional pension administration services through a pension plan tailored to the participants' and sponsors' requirements.

# The Pennsylvania Municipal Retirement System

Comprehensive Annual Financial Report For the Fiscal Year Ended December 31, 2013 and 2012

Paul Corbin, Chairman

Pennsylvania Municipal Retirement Board

James B. Allen, Secretary

Pennsylvania Municipal Retirement System

Office Location

Eastgate Center 1010 North 7th Street, Suite 301 Harrisburg, Pennsylvania 17102-1400

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P. O. Box 1165 Harrisburg, Pennsylvania 17108-1165

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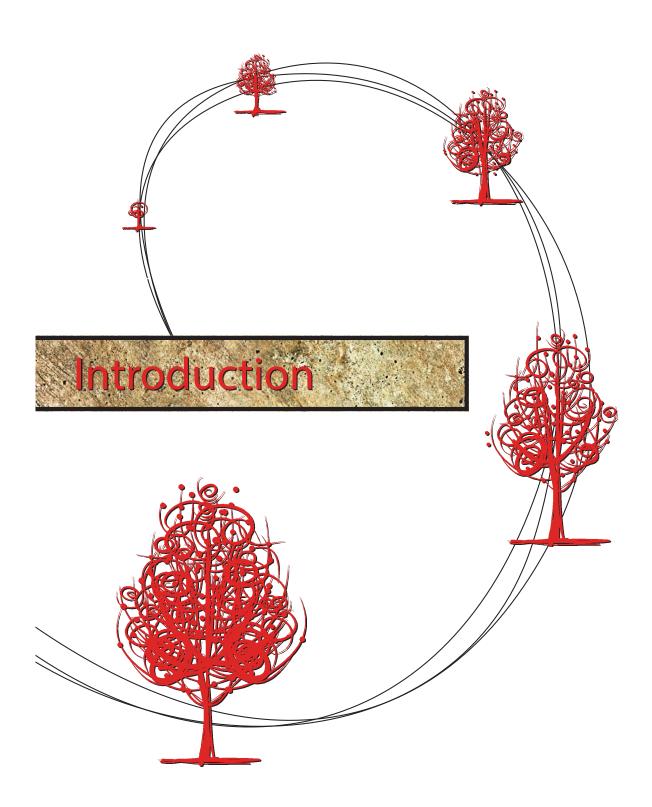
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#### **Letter of Transmittal**



P.O. Box 1165, Harrisburg, PA 17108-1165

June 27, 2014

Pennsylvania Municipal Retirement Board Pennsylvania Municipal Retirement System P.O. Box 1165 Harrisburg, Pennsylvania 17108-1165

Consistent with the agency's commitment to full financial disclosure, we are honored to submit the Pennsylvania Municipal Retirement System's (the System) Comprehensive Annual Financial Report for the fiscal year ended December 31, 2013. As required by the Pennsylvania Municipal Retirement Law, Act of 1974, P.L. 34, No. 15 (the Act) as amended, the System distributes the Comprehensive Annual Financial Report (CAFR) to our governing board, to the members of the General Assembly of Pennsylvania, to each participating municipal employer, and to all other interested parties upon request. The CAFR is also published on the System's website. The System is solely responsible for the accuracy of the data in this report. As the two individuals primarily responsible for the System's financial records, we offer our assurances that we have made every effort to present a comprehensive report. To the best of our knowledge, the enclosed information is accurate in all material respects.

#### **OVERVIEW OF THE SYSTEM**

The Pennsylvania Municipal Retirement System, which is an agent multiple-employer system, is head-quartered in Harrisburg, Pennsylvania. The System is a state retirement agency created by act of the Pennsylvania General Assembly in 1974. Responsibility for the organization and administration of the System is vested in the eleven-member Pennsylvania Municipal Retirement Board (the Board).

The System administers sound, cost-effective pension plans on a contracted basis for local government employees throughout the Commonwealth. Our services include accounting services, actuarial valuations,

employee consultation and record keeping, and asset management. Any Pennsylvania county, city, town, township, borough, municipal authority, or institution supported and maintained by a municipality may participate. The Statistical Section of this report lists all participating plans as of January 1, 2013.

The System offers various plan designs: defined benefit, cash balance, and hybrid. The annual benefit is dependent upon the individual municipality's contracted benefit package. Each pension plan is designed based on the plan sponsor's specific needs. Benefits provided to participants in the System are typically dependent upon both age and service requirements. In addition to standard monthly pension benefits, plans routinely include provisions for vesting, disability benefits, survivor benefits, and death benefits. A plan's cost is determined by the individual plan's benefit structure, demographics and financial condition. The System's individual plans may have an employer contribution and an employee contribution or just an employer charge. Employer contributions typically range from 4% to 12% of projected payroll for municipal employees and from 12% to 20% for police and firefighters. The employee contribution is determined by plan contract. In 2013, plan requirements ranged from no employee contribution to as high as 7.5% of earnings.

#### **ECONOMIC ENVIRONMENT**

The first few months of 2013 contained a blend of economic data, and fortunately, the first quarter of 2013 saw the positive data prevail. Despite concerns from both consumers and corporate America that the economy was at risk of stalling, the US economy expanded at the rate of an estimated 2.5%. Additionally, employment, manufacturing, and housing numbers remained strong during the period, with housing numbers achieving results that had not been seen since 2006. The first quarter ended with a still low inflation environment while the Federal Reserve held interest rates at historic lows by continuing its quantitative easing, or monthly bond buying program.

The first quarter's downside data came in the form of a considerable drop in consumer confidence. The drop appeared to coincide with the government's implementation of sequestration; a ten year program that calls for \$85.4 billion in federal budget reductions year over year.

The second quarter of 2013 echoed most of the positive themes established during the first quarter. Economic indicators remained positive for the period, with respectable increases in GDP, job growth, and housing statistics. Consumer confidence, after nose-diving in the first quarter, provided a bit of upside surprise by reaching its highest levels since January 2008.

A bit of uncertainty closed out the second quarter, as Fed Chair Ben Bernanke alluded to the idea that the Fed may soon start applying the brakes to its ongoing quantitative easing program. Investors took this as a nod toward higher inflation down the road, and the possibility that business and housing expansion could begin to constrict. Concerns also lingered over economic slowdowns overseas, and the fact that U.S. exports were already strained.

The third quarter of 2013 was anything but dull, delivering a government shutdown, a military standoff with Syria, and the Fed chair back tracking on his previous quarter's commentary that suggested a tapering of the federal government's bond buying program may be in sight. Given all of the "noise" that was evident during the third quarter, the economic indicators remained solid for the period. Housing and manufacturing figures were both strong, with manufacturing levels rising to its highest point over the past 12-months. Job growth remained positive, but did slow for the period, and the only down tick came in the form of a very slight drop in the consumer confidence index; a drop believed to be directly related to near term concerns over the government shutdown and debt ceiling issues.

The economy continued its strong run and closed out 2013 in impressive fashion. The last quarter of 2013 saw a GDP growth rate of 3.2%, a manufacturing index figure of 57% (its 55th straight month of expansion), and an inflation rate that came in at only 1.5%. Also, federal lawmakers passed a budget, and the budget sequestration initiated earlier in 2013 was

scaled back a bit from its original level. Finally, after sending a series of mixed messages, the Fed began tapering its bond buying program; a move that sparked a very positive reaction from investors.

The surprise of 2013 was that with all of the turmoil in the world, the financial markets seemed to shrug all of the bad news away and simply decided to focus on the positive. This made for a very rewarding year for those seeking to stay the course.

#### FINANCIAL INFORMATION

The System's financial statements were prepared in accordance with generally accepted accounting principles of the United States of America. The financial statements and the required supplementary information in the report have been prepared in accordance with the standards for disclosure following GASB Statement No. 25, 31, 34, 37, 40, and 50 guidelines. The independent auditors' report is located in the Financial Section on page 16 and the Management's Discussion and Analysis commences on page 18.

The accrual basis of accounting is used to record all financial transactions including assets, liabilities, revenues, and expenses. Gains and losses on sales and exchanges of investments are recognized on the transaction date. Significant accounting policies are detailed in the Financial Section under "Notes to Financial Statements."

The System's net assets totaled \$1,951,247,370 as of December 31, 2013. In 2013, the System's net assets increased by \$289,321,131. Investment-related gains increased the portfolio by \$310,197,505 and contributions added \$62,434,272. Benefit payments and administrative expenses reduced the total assets by \$83,310,716. Additional information is detailed in the Financial Section ("Statements of Plan Net Position" and "Statements of Changes in Plan Net Position") located on pages 22 and 23.

The System has established internal computerized control policies and procedures for the review and verification of all receipts and payments made to and from the fund. In addition, the System's staff prepares a yearly budget which must be adopted by the Board. The budget is also presented to and reviewed by the Local Government Committees of the Pennsylvania House and Senate at least two months prior

to the beginning of the fiscal year. The committees can approve the budget, reject it, or take no action by the end of the year in which case the proposed budget becomes final. Budgetary controls include monthly review and presentation by management with bimonthly Board reviews. The 2013 administrative budget was adopted in September 2012 and set at \$3.72 million exclusive of investment fees. Expenditures (exclusive of investment fees) in 2013 amounted to \$3,723,590. More information on the System's expenses is included in the Financial Section of this report ("Schedule 3 - Administrative Expenses").

#### **REVENUES**

The System was established by law to pay pension benefits when due. It accumulates sufficient funds to pay benefits through employee contributions, employer contributions, and investment earnings. The following schedule presents a summary of revenues for the fiscal year ending December 31, 2013, and also shows the amount and percentage of increases and decreases in relation to December 31, 2012, revenues.

Municipal contributions are based upon an actuarial valuation, using the Entry Age Normal Actuarial Cost Method, computed as a percentage of the total compensation of all active members during the period for which the amount is determined.

Member contributions vary according to the type of pension plan. Under Articles II and III of the Act, members are required to contribute 3% to 8% of their

salary. The amount a member contributes under Article IV of the Act is based upon contracted plan provisions and is principally expressed as a percent of compensation or salary.

Investment revenues are a combination of earnings from bonds, equities, real estate, and a short-term cash management fund. During the 2013 fiscal year, the fair value of the System's investment portfolio

increased from \$1,663,443,325 to \$1,951,674,668. The largest increase of investment revenue came from an appreciation of equities.

The final portion of revenue is derived from assessments. Each municipality is charged a \$20 assessment per member to help cover administrative expenses incurred by the System. Any fluctuation in assessments is caused by the number of members per municipality and can be affected by employee turnover or new plans being added or plans leaving the System in previous years.

Ten-year historical trend information listing the System's revenues by source is presented in Part I of the Statistical Section of this report.

#### **EXPENSES**

The System's primary expense represents the purpose for which it was created: payment of benefits. The following schedule presents a summary of the System's expenses for the fiscal year ending December 31, 2013, and shows the percentage of increases and decreases in relation to December 31, 2012 amounts. The major expense-related items for 2013 were payment of benefits, refunds of withdrawing plans, refunds of contributions due to termination or death, and administrative expenses. A breakdown of the System's expenses including ten-year historical trend information is presented in Part I of the Statistical Section of this report.

#### Revenues

Additions to Plan Net Assets	2013 Amounts	Percent of Total	2012 Amounts	Increase (Decrease) from 2012	Percent of Increase (Decrease)
Member Contributions	\$ 22,416,432	6.02%	\$ 20,981,612	\$ 1,434,820	6.84%
Municipal Contributions	39,706,080	10.66	37,974,023	1,732,057	4.56
Assessments	311,760	0.08	298,320	13,440	4.51
Investment Income/(loss)	310,197,575	83.25	187,755,253	122,442,322	65.21
Total	\$372,631,847	100.00%	\$247,009,208	\$125,622,639	50.86%

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Deductions from Plan Net Assets	2013 Amounts	Percent of Total	2012 Amounts	Increase (Decrease) from 2012	Percent of Increase (Decrease)
Annuity benefits	\$69,231,495	83.10%	\$63,390,100	\$5,841,395	9.21%
Terminations	10,355,631	12.43	8,437,610	1,918,021	22.73
Administrative	3,723,590	4.47	3,424,363	299,228	8.74
Total	\$83,310,716	100.00%	\$75,252,072	\$8,058,645	10.71%

#### **INVESTMENT HIGHLIGHTS**

The time-weighted rate of return for the System's investments during the fiscal year ended December 31, 2013 was 19.4%, ranking in the 16th percentile of the Investment Metrics (IM) Public Fund Universe. The cumulative ten-year return was 7.3% on an annualized basis and ranked in the 29th percentile. After discussions with the Investment Consultant and the Actuary, the Board made the decision to lower the actuarial assumed rate of return from 6.0% to 5.5%.

The return by asset class and their weighting in the portfolio are as follows: Large Cap Domestic Equity returned 34.8% (Class as percentage of portfolio: 28.4%); Fixed Income produced -2.0 (14.0%); Small Cap Domestic Equity yielded a return of 42.3% (17.5%); International Equity returned 25.6% (14.6%); Real Estate produced 11.3% (15.3%); and the International Emerging Markets asset class had an annualized return of -3.3% (8.0%) At the year-end, the portfolio had a commitment in cash equivalents representing 2.3% of the portfolio.

#### **FUNDING**

The System's level of funding is based on the actuarial reserve method. Funds are derived from the excess of revenues over expenses and are accumulated by the System in order to meet current and future benefit obligations to retirees and beneficiaries. As the funding level increases, the assets accumulate and strengthen the investment income potential. The increase in net assets for the 2013 fiscal year was \$289,321,131. This represents an increase in the fund balance of 17.4% over the 2012 fund balance.

To comply with GASB Statement No. 25 disclosure requirements, the "Schedule of Funding Progress" was calculated based on the most recent actuarial valuation dated January 1, 2013. The funded ratio decreased from 103.8% at January 1, 2012 to 99.1% as of the last valuation date of January 1, 2013. In aggregate the System is in a net deficit primarily due to the change in the assumed rate of return which results in a higher overall actuarial liability. As a result the surplus has decreased from \$65.6 million as of January 1, 2012 to a deficit of \$16.9 million as of January 1, 2013. However the ratio of market value of assets to actuarial liability actually increased from 86.3% to 87.3% reflecting actual growth of assets being greater than the actual growth of liabilities. Additional information on

the System's actuarial value, liabilities, and funding progress can be found in the Actuarial and Financial Sections of this report. As an agent multiple-employer Public Employee Retirement System (PERS), the System reports to each of the trustees of the plans it administers, providing the governing authority of the member plans with complete actuarial, accounting, and funding data. Detailed information on the System's plan funding can be found in the Financial Section (Schedules 1 and 2) and the Actuarial Section of this report on page 52.

#### **MAJOR INITIATIVES**

2013 was a year of "Change" and of preparation for change. The Board welcomed three new members at the January meeting and one "new" member reappeared wearing a new "representing" title. The new members sworn in were: Steven T. Heinly (Representing Active Police Officers); George Milakovic, (representing the Pennsylvania State Association of Township Commissioners) and Salvatore J. Panto, Jr., (representing the Pennsylvania Municipal League.) The Board also welcomed back Barry Sherman, who previously represented the active police officers in the system. In his new position as a retiree, he rejoined the Board as the retiree representative.

The Board also spent a considerable amount of time devoted to preparing for the transition to a new PMRS Secretary. In the spring of 2013 PMRS Secretary James B. Allen announced his plans to retire effective April 2014. This announcement set in motion a search for a replacement. While that process produced a set of candidates considered in the fall of 2013, the Board ultimately elected to undertake a second search. Before doing so the agency obtained a commitment from Secretary Allen to delay his retirement until mid-2014.

Other personnel related initiatives involved the recognition that the fund's investment related responsibilities necessitated the creation of a new position – the agency's first Investment Relationship Manager. Mr. Nathaniel L. Raney joined the staff in August and is tasked with supervising the investment related transactions of the fund and the various relationships with the system's money managers and investment consultant. The Board also recognized the growth in size and importance of the computer support utilized

by the agency and elevated the Office of Information Technology to a full-fledged division within the organization.

Changes were also made in the management of the fund's assets with a contract with UBS to manage large cap domestic equities terminated. The moneys managed by UBS were transferred to a passive Russell 1000 Growth fund managed by SSgA.

The last major initiative on which the Board focused was the implementation of the new Governmental Accounting Standards Board's Pronouncements 67 & 68. These new accounting standards will impact PMRS' reporting in the system's 2014 CAFR. They will then affect our enrolled plans' financial reports in 2015. The Board believes that the changes to be wrought by these pronouncements will be significant not just to PMRS, and our enrolled plans but also to the public that will be given access to the new way financial reports for pension plans are presented.

#### **PROFESSIONAL SERVICES**

The financial information in this report has been audited by the independent accounting firm of CliftonLarsonAllen LLP, which is completing year four of a five-year contract. The actuarial information was prepared with the help of K. Kent, consulting actuary from Cheiron. Cheiron has completed year two of a five-year competitively bid contract. The investment information was prepared with the cooperation of the System's independent investment consultant, R. Dahab of Dahab Associates. This firm is completing year five of a five-year contract that was competitively bid. The Board and staff sincerely appreciate the cooperation and commitment of these three advisors in providing information for the preparation of this report.

#### **INTERNAL CONTROLS**

The management of the System is responsible for and has implemented systems of internal accounting controls. These controls are designed to provide reasonable but not absolute assurances for the safeguarding of assets and the reliability of financial records. It should be recognized, however, that all internal controls have inherit limitations. These limitations exist because of several factors, including cost and the potential for controls to be overridden by management. To mitigate the risk caused by these inherent

limitations, the System monitors the adequacy and effectiveness of the System's internal control structure. We believe that the internal accounting controls currently in place are adequate to meet the purpose for which they were intended. We also believe the financial statements, supporting schedules and statistical tables to be fairly presented in all material respects. Also, our independent external auditor CliftonLarsonAllen LLP, conducts an annual audit of the financial statements in accordance with generally accepted auditing standards. Their audit includes tests and procedures designed to provide reasonable assurance that the financial statements are fairly presented.

#### **ACKNOWLEDGMENTS**

The preparation of the Comprehensive Annual Financial Report falls upon the signatories of this Letter of Transmittal and we have accepted that responsibility with the gravitas that is warranted. However, our roles are meaningless without the support of the agency's governing Board and the support staff who pull all the pieces together for us to draw upon. We are indebted to the Board who has given us the leadership and support to help us fulfill our roles. We are indebted to the staff of the Pennsylvania Municipal Retirement System for their diligence, professionalism and determination; without them the CAFR could not have been prepared.

In addition to the staff, however, we rely on several third party contractors and consultants who have the expertise, resources and knowledge to help us compile the data and to format it in the most professional way possible. We recognize first the team at Clifton-LarsonAllen LLP. The support and guidance provided is nothing less than excellent. We appreciate your efforts beyond what you can imagine. Two other firms that serve our Board and make this CAFR possible are the specialists at the actuarial firm of Cheiron, Inc. and the team at our investment-consulting firm of Dahab Associates, Inc. Their experience and contributions have been indispensable in helping us to prepare this document and in managing the agency.

This next acknowledgement is especially important to understand, and to make. It is given to my co-signer, Donna Miller, Chief of the Accounting Division at the Pennsylvania Municipal Retirement System. Ms. Miller has pulled together five of these CAFRs for me and she has done it most admirably. She has also

done it with a great deal of patience. She has been a dependable task master and has assembled a solid history of success. This document would not exist without her efforts.

As Secretary of PMRS I have been consistently committed to the development of a professional accounting of our services. We take great pride in the fact that we have earned a "Certificate of Achievement for Excellence in Financial Reporting" from the Government Finance Officers Associations for the last ten years straight. That effort reflects our Board's commitment, our staff's commitment and my personal commitment to serve our members in the most open and transparent manner possible. Without acknowledging the expectations and services our members are entitled to receive, we would fail in our vision – To be Pennsylvania local governments' pension administrator of choice.

Jame B. alla Donna L. Milles

James B. Allen Secretary Donna L. Miller Chief of Accounting



Government Finance Officers Association

# Certificate of Achievement for Excellence in Financial Reporting

Presented to

# Pennsylvania Municipal Retirement System

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

**December 31, 2012** 

Executive Director/CEO

#### Pennsylvania Municipal Retirement Board

as of December 31, 2013

#### 1 John A. Haiko Chairman\*

Represents Pennsylvania State Association of Township Supervisors

#### 2 Paul Corbin Vice-Chairman\*\*

Represents Pennsylvania State Association of County Commissioners

#### 3 Carol Aichele

Secretary of the Commonwealth

#### 4 Duane L. Filchner

Represents Pennsylvania Municipal Authorities Association

#### 5 Steven T. Heinly

Represents Active Police Officers enrolled in PMRS

#### 6 William J. Junkin III

Represents Active Fire Fighters enrolled in PMRS

#### 7 Robert M. McCord

State Treasurer (ex-officio) represented by Sandy Leopold

#### 8 George Milakovic

Represents Pennsylvania State Association of Township Commissioners

#### 9 Salvatore J. Panto, Jr.

Represents Pennsylvania Municipal League

#### 10 David Perruso

Represents Pennsylvania State Association of Boroughs

#### 11 Barry Sherman

Represents Retired Members enrolled in PMRS



\*\*Assumed Chairmanship 2/27/14























#### Staff, Consultants, & Managers

as of December 31, 2013

#### **Administrative Staff**

#### Secretary

James B. Allen

#### **Assistant Secretary**

Kristine M. Cline

#### **Accounting Division Chief**

Donna L. Miller

#### **Information Technology Division Chief**

Michael G. Mortimer

#### **Membership Services Division Chief**

Sean E. Christine

#### **Municipal Services Division Chief**

Anthony M. Pinto

#### **Operations Division Chief**

Wanita J. Campbell

#### **Investment Relationship Office**

Nathaniel Raney

#### **Professional Consultants**

#### **Actuary**

Cheiron

McLean, VA

Kenneth Kent, FSA, FCA, MAAA, EA

#### **Auditor**

CliftonLarsonAllen LLP

Timonium, MD

Owen Ward, CPA, Principal

#### Comptroller

Commonwealth of Pennsylvania

Harrisburg, PA

Joseph Natoli, Central Services

#### **Investment Consultant**

Dahab Associates, Inc.

Bay Shore, NY

Richard E. Dahab, CFA, President

#### **Legal Counsel**

Commonwealth of Pennsylvania

Harrisburg, PA

Michele Ferencz, Chief Counsel

#### **Master Custodian**

BNY Mellon

Pittsburgh, PA

Gordon Sapko, Relationship Manager

#### Investment Managers (1)

#### **BMO Global Asset Management**

Milwaukee, WI

Thomas J. Nolte, Senior Vice-President

#### **Brandywine Global Investment Management, LLC**

Philadelphia, Pa

Bill Roach, Group Product Specialist

#### DePrince, Race, & Zollo

Winter Park, FL

Katie Byrne, Portfolio Manager - Client Services

#### **Emerald Advisors, Inc.**

Leola, PA

John V. Thompson, Senior Vice-President

#### Forest Investment Associates, Inc.

Atlanta, GA

V. Scott Bond, Director of Marketing & Client Relations

#### **HGK Asset Management, Inc.**

Jersev Citv. NJ

Steven J. Gervasio, Marketing Director

#### **Johnston Asset Management**

Stamford, CT

Cassandra A. Hardman, Portfolio Manager

#### **LSV Asset Management**

Chicago, IL

Keith W. Bruch, Director of Client Portfolio Services

#### **Polen Capital Management**

Boca Raton, FL

Stan C. Moss, Chief Operating Officer

#### **Prudential Real Estate Investors**

Madison NI

Larry Teitelbaum, Principal, Marketing and Client Services

#### **State Street Global Advisors**

Boston, MA

James Thorsen, Vice-President

#### **TIAA-CREF Global Real Estate**

New York, NY

Cameron Jones, Director

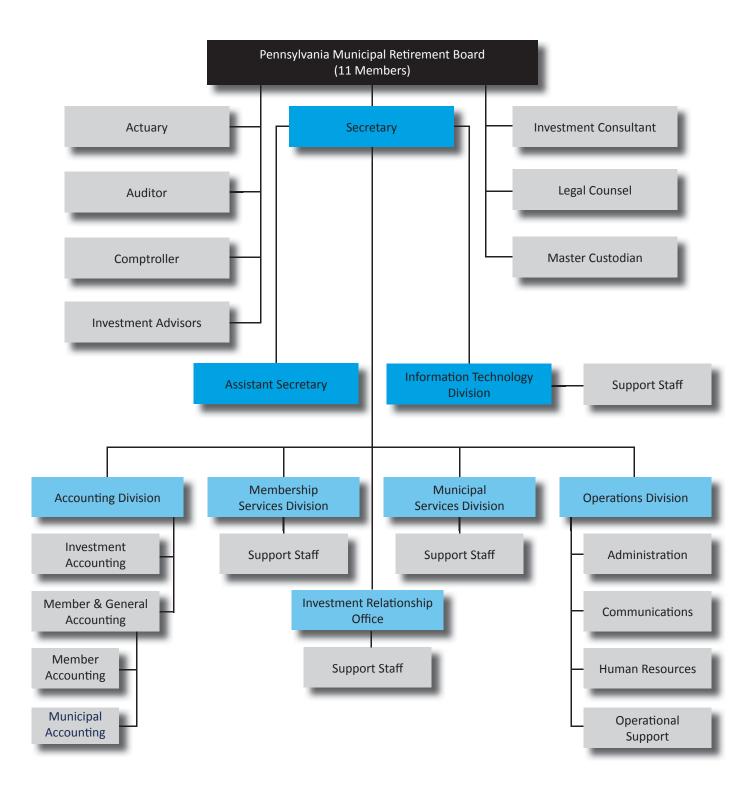
#### **WHV Investment Management**

San Francisco, CA

Brian W. Forth, Vice-President

<sup>(1)</sup> Manages the long-term portfolio of investments reported on the Statement of Plan Net Position. All information in the Investment Section pertains to the activity of these investment managers. Summary of investment expenses is on page 46.

# **Organization Chart**



#### Chairman's Report



P.O. Box 1165, Harrisburg, PA 17108-1165

June 27, 2014

Dear Members:

It is with humble pride that I share with you the Pennsylvania Municipal Retirement System's 2013 Comprehensive Annual Financial Report. The report documents the numerous transactions that have been undertaken by the trustees of the system, the Pennsylvania Municipal Retirement Board, on your behalf during the year. While I have had the privilege of serving on the Board since January of 2005 it is with sincere gratitude that I accepted the challenge to serve as the Chairman of the Board effective January 2014. The recognition of the departure from the Board of previous Chairman John Haiko on December 31, 2013 was not the only change that 2013 required the system to accommodate. The year also saw the trustees plan for a new secretary for the agency. Our existing secretary, James B. Allen, announced in early 2013 his intentions to retire after thirty years with the agency effective early in 2014. I am pleased to report that the Board has prepared for both transitions and we expect the service and commitment that our members deserve to continue for many years to come.

On the financial front, the year was a somewhat pleasant surprise for the trustees as the claw back from the financial meltdown of 2007 and 2008 that has progressively developed over the past five years exploded in 2013. We have always tried to reassure you, our members, that the Board's approach to diversification and solid investment practices allows us to shepherd your retirement assets in a prudent and secure manner. Many of the financial pundits were surprised, as were we, at how strong

the investment markets would continue to march forward in 2013. This progress has allowed PMRS to stand on solid financial underpinnings when many in the pension field have seen serious cracks in their foundations exposed.

I encourage you to read this report in full. I know its transparency will allow you to learn more about, and better yet appreciate more, the system's strengths. I believe you will, above all else, be pleased by the openness and candor with which the agency's operations are revealed. We believe that the more you know about the agency, the more you will appreciate it. I encourage you to contact us with your inquiries, comments, and suggestions. We welcome your involvement and appreciate your support. I thank you for allowing us to provide for your pension needs.

Sincerely,

Paul L. Corbin

Chairman

Phone: (717) 787-2065 (800) 622-7968 Fax: (717) 783-8363

Our Vision: To be Pennsylvania local governments' pension administrator of choice.

#### Summary of Plan Provisions (1)

#### INTRODUCTION

The System offers a variety of alternative pension plans. Municipalities may design their own pension benefit structures. Most municipalities select this option and work with the System to create a combination of benefits that meet the individual needs of the municipality and its employees. Additionally, the System has two basic benefit plans designed by the State General Assembly: one for municipal employees and one for police and firefighters.

# SUPERANNUATION AND EARLY ANNUITY ELIGIBILITY BENEFITS

Under the basic plans, the minimum normal retirement age is 65 for municipal employees and 55 for police and firefighters. A member may retire early at any age after 24 years of service. Under an optional plan design, a municipality may choose any age or service requirement permitted under its particular municipal code. Early retirement under the optional plan may also be designed to meet the needs of the municipality.

There are two approaches to accumulating retirement benefits. Under the cash balance approach, the benefit accrues based on the level of contributions and the investment earnings credited to the fund. The defined benefit approach depends upon the individual's age, years of credited service, and an actual benefit formula which usually includes a salary factor.

#### **DISABILITY ANNUITY ELIGIBILITY BENEFITS**

The majority of plans have a disability benefit that allows a member who is unable to work because of serious injury or illness to apply for a disability annuity. The application and required medical documentation will be reviewed by the Board and the System's medical examiners to determine whether the member is eligible for the disability benefit.

A disability that results directly from doing one's job is classified as a service-connected disability. A disability that is not caused by one's work is termed a non-service disability.

Conditions for disability benefits are defined in the municipality's contract. The System's basic plans provide for (1) a service connected disability annuity of 50% of the disabled individual's final average salary offset by worker's compensation, and (2) a non-service disability with a minimum of 10 years' service and a 30% final average salary annuity.

#### **VESTING ANNUITY ELIGIBILITY BENEFITS**

Conditions for vesting are defined in the municipality's contract. The basic plans have a twelve-year service requirement for vesting.

A member who terminates service before retirement may elect to leave the member's accumulated contributions in the System and defer receipt of benefits until normal retirement age. Then when the member receives the vested benefits, checks will include the member contributions and the municipal contributions.

#### **BENEFIT PAYMENT OPTIONS**

Depending on the municipality's contractual agreement, employees may elect to receive their monthly retirement allowance from a list of options. Typical options are as follows:

- ♦ Single Life Annuity: Provides a continual income throughout the annuitant's lifetime with no beneficiary benefit
- ♦ Option 1: Reduced lifetime benefit with remaining lump sum value of account to beneficiary
- ♦ Option 2: Joint and 100% survivorship annuity
- ♦ Option 3: Joint and 50% survivorship annuity

<sup>(1)</sup> Descriptions are not identical to those in the audit report. Information has been rewritten for ease of understanding.

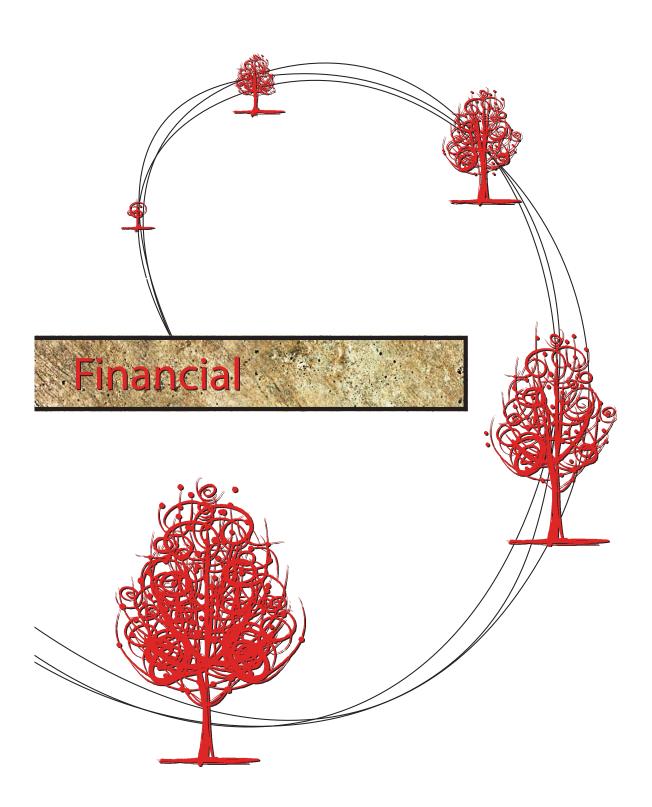
#### **DEATH BENEFIT ELIGIBILITY**

A death benefit provides some continuation of payment or presentation of benefits to a beneficiary given certain eligibility requirements of the covered individual. If an active member or vestee with minimum years of service dies, the death benefit goes into effect provided the municipality has included this feature in its plan.

#### **TERMINATION OF SERVICE**

A member always receives the accumulated deductions and interest earned at the regular interest rate which is currently at 5.5%. Depending upon the municipality's contract structure, the member might also receive excess investment monies upon withdrawal.

If a member terminates employment and goes to work for another municipality which is a member of the System, the employee may transfer the service credits unimpaired to the new municipal employer.



#### **Independent Auditors' Report**



CliftonLarsonAllen LLP www.cliftonlarsonallen.com

Pennsylvania Municipal Retirement Board Pennsylvania Municipal Retirement System Harrisburg, Pennsylvania

#### Report on the Financial Statements

We have audited the accompanying financial statements of the Pennsylvania Municipal Retirement System (the System), which comprise the statements of plan net position as of December 31, 2013 and 2012, and the related statements of changes in plan net position for the years then ended, and the related notes to the financial statements, as listed in the table of contents.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the System as of December 31, 2013 and 2012, and the respective changes in its financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

#### Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedules of funding progress, required employer contributions and actuarial methods and significant assumptions, as listed in the table of contents, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audits of the 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.

#### Other Information

Our audits were conducted for the purpose of forming an opinion on the System's financial statements. The supplementary schedules, including the schedules of administrative expenses, investment expenses, and payments to consultants, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the financial statements.

The supplementary schedules, as listed in the table of contents, is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary schedules, including the schedules of administrative expenses, investment expenses, and payments to consultants, as listed in the table of contents, is fairly stated, in all material respects, in relation to the financial statements as a whole.

The introduction, investments, actuarial and statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audits of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Harrisburg, Pennsylvania

Clifton Larson Allen LLF

June 27, 2014

#### **Management's Discussion and Analysis**

This section presents management's discussion and analysis of the Pennsylvania Municipal Retirement System's (PMRS, the System) financial performance for the fiscal years ended December 31, 2013 and 2012. It is presented as required supplementary information to the financial statements.

#### **OVERVIEW OF FINANCIAL STATEMENTS**

The System administers sound, cost-effective pension plans on a contracted basis for local government employers throughout the Commonwealth. Our services include accounting services, actuarial valuations, employee consultation and record keeping, and asset management. Any Pennsylvania county, city, town, township, borough, municipal authority, or institution supported and maintained by a municipality may participate. The Statistical Section of this report lists all participating plans as of January 1, 2013.

The Statements of Plan Net Position provide a snapshot of the financial position of PMRS at December 31, 2013, including comparative amounts for the prior year.

The Statements of Changes in Plan Net Position summarize the System's financial activities that occurred during the fiscal period from January 1, 2013 to December 31, 2013, including comparative amounts for the prior year.

The Notes to Financial Statements provide additional information that is essential to a full understanding of the financial statements. The notes are an integral part of the financial statements and include detailed information not readily evident in the basic financial statements.

The Required Supplementary Information immediately following the Notes to Financial Statements provide two schedules showing historical information concerning the funded status of PMRS and the employers' contributions.

The remaining supplementary schedules provide additional detailed information concerning the operating expenses, investment expenses, and payments to

non-investment consultants. All of this supplementary information is considered useful in understanding and evaluating the financial activities of PMRS.

#### FINANCIAL HIGHLIGHTS

- ◆ The System's plan net assets increased by \$289 million from \$1,662 million at December 31, 2012 to \$1,951 million at December 31, 2013. The System's plan net assets increased by \$172 million from \$1,490 million at December 31, 2011 to \$1,662 million at December 31, 2012 . The changes in market value are recognized as part of the net appreciation/depreciation in the fair value of investments.
- ◆ The funded ratio decreased from 103.8% at January 1, 2012 to 99.1% as of the last valuation date of January 1, 2013. In aggregate the System is in a net deficit this year primarily due to the change in the assumed rate of return which results in a higher overall Actuarial Liability. As a result the surplus last year has decreased from \$65.6 million as of January 1, 2012 to a deficit of \$16.9 million as of January 1, 2013.
- ♦ The rate of return for the year ended December 31, 2013 was a net gain of 19.4% gross of fees compared to net gain of 13.2% and net loss of 1.9% for the years ended December 31, 2012 and 2011, respectively.
- ♦ Total employee and employer contributions increased from \$59.3 million in 2012 to \$62.4 million in 2013, primarily due to an increase in employer and employee required contributions. Total employee and employer contributions decreased from \$61.2 million in 2011 to \$59.3 million in 2012.
- ◆ Total pension plan benefit payouts increased by 11.4% from \$71.8 million in 2012 to \$79.6 million in 2013. Total pension plan benefit payouts decreased by 12.0% from \$81.2 million in 2011 to \$71.8 million during 2012. The fluctuation in benefit payouts is primarily due to increased annuity payroll from 2012 to 2013 and plan withdrawals in 2011.

♦ Administrative expenses increased by \$0.30 million to \$3.72 million for 2013. Expenses increased by \$0.28 to \$3.42 million for 2012 and decreased \$0.04 million to \$3.14 million in 2011. Administrative expenses were within PMRS' budgeted amounts for all three years.

#### **FUNDED STATUS**

PMRS uses an actuarial reserve method of funding that is financed by member contributions, employer contributions, and earnings from invested assets. The System has historically chosen to have actuarial valuations performed bi-annually. The January 1, 2013 actuarial valuation was derived from actual values for the 710 defined benefit plans that are required to redetermine contribution levels bi-annually on odd years and actuarial adjustments to the January 1, 2012 liabilities for the four municipalities that are required to redetermine contribution levels bi-annually on even years. The January 1, 2012 liabilities were adjusted to reflect January 1, 2013 actual active counts to estimate the liabilities for these plans to provide an overall measure of the funded status of the System.

As part of a valuation, the progress toward funding pension obligations of the retirement system is measured by comparing the actuarial value of assets to the actuarial accrued liability. This measurement is referred to as the funded ratio or funded status. PMRS fell below 100% funded due in large measure to the reduction of the assumed rate of return. The most recent actuarial valuation reports that PMRS is 99.1% funded as of January 1, 2013. As a response to the recession and slow recovery, the Board reduced the credited interest rate from 6.0% to 5.5%. This was in part intended to help get the plan back to the pre-recession levels.

#### **INVESTMENTS**

PMRS is a long-term investor and the Board manages the Fund with long-term objectives in mind. A primary element of PMRS' investment philosophy is that diversification among various asset classes is the best way to achieve its goals. PMRS makes estimates of future long-term market returns and establishes an asset allocation plan taking into account the risk associated with each asset class as well as the financial objectives of the Fund.

For 2013, the System's rate of return on investments was a net gain of 19.4%, gross of fees, which is primarily attributable to changes in fair value gained in the domestic and international equity markets as well as real estate investments. The annualized rate of return over the past three and five years ended December 31, 2013 was 10.0% and 12.4%, respectively. The Fund's long-term actuarial investment return assumption was changed by the Board from 6.0% to 5.5% effective January 1, 2013.

#### SHORT-TERM

Short-term investments decreased by approximately \$2.0 million from December 31, 2012 to December 31, 2013 and increased by approximately \$22.8 million from December 31, 2011 to December 31, 2012. Neither the decrease for 2013, nor the increase for 2012 were intentional but rather represented the normal cash flow necessary to meet expenses and to fund managers.

#### **FIXED INCOME**

Fixed income decreased by approximately \$51.7 million from December 31, 2012 to December 31, 2013, primarily due to change in asset allocation from 20% to 15%. Fixed income increased by approximately \$25.2 million from December 31, 2011 to December 31, 2012, primarily due to changes in fair value.

#### **COMMON AND PREFERRED STOCK**

Common and preferred stock including international stock increased approximately \$291.0 million from December 31, 2012 to December 31, 2013 and increased approximately \$114.6 million from December 31, 2011 to December 31, 2012. The increases were due to gains in fair value in domestic and international markets.

#### **REAL ESTATE EQUITY**

Real estate equity increased approximately \$50.9 million from December 31, 2012 to December 31, 2013, and also increased approximately \$11.0 million from December 31, 2011 to December 31, 2012 The increases were due to gains in fair value.

CONTRIBUTIONS AND INVESTMENT INCOME

During 2013, contributions from employers and members totaled \$62.4 million compared to \$59.3 million during 2012 and \$61.3 million during 2011. Net investment gains during 2013 was \$310.2 million compared to net investment gains during 2012 of \$187.8 million and net investment loss during 2011 of \$29.1 million. Investment gains/losses were primarily attributable to appreciation/depreciation in fair values in the domestic and international equity markets. Investment expenses increased \$1.1 million from \$6.7 million during 2012 to \$7.8 million during 2013 and increased \$0.2 million from \$6.5 million during 2011 to \$6.7 million during 2012. The investment expenses are based on the fair value of the quarterly average balance of investments under management.

#### PENSION PLAN BENEFITS AND EXPENSES

The primary source of expense during 2013 was for payment of pension benefits totaling \$79.6 million, compared to \$71.8 million during 2012 and \$81.2 million during 2011. Pension benefits increased by \$7.8 million in 2013 due to an increased number of retirees. Pension benefits decreased by \$9.4 million in 2012 primarily due to plan withdrawals in 2012 and 2011 with total assets of \$18.5 thousand and \$13.4 million, respectively. Monthly payments to retirees increased in all three years. Annual annuity payments were \$67.3 million, \$61.8 million and \$57.3 million respectively. Administrative expenses totaled \$3.7 million during 2013, as compared to \$3.4 million during 2012 and \$3.14 million in 2011.

#### FINANCIAL CONTACT

The System's financial statements are designed to present users with a general overview of the System's finances and to demonstrate the trustee's accountability. If there are questions about the report or additional information is required, contact the Chief,

Accounting Division, Pennsylvania Municipal Retirement System at P. O. Box 1165, Harrisburg, PA 17108-1165.

# Summary of Plan Net Position as of December 31, 2013, 2012, and 2011

Analysis of Plan Position	2013	2012	2011
Assets		(In Thousands	)
Receivables	\$ 4,495	\$ 3,537	\$ 4,162
Investments	1,951,675	1,663,444	1,489,842
Capital assets	145	183	160
Total assets	1,956,314	1,667,164	1,494,164
Liabilities	5,067	5,238	3,995
Total plan net position	\$1,951,247	\$1,661,926	\$1,490,169

#### **Summary of Changes in Plan Net Position**

for years ended December 31, 2013, 2012, and 2011

Analysis of Plan Position	2013	2012	2011
Additions		(In Thousands)	
Contributions	\$ 62,434	\$ 59,254	\$ 61,266
Net investment gain/(loss)	310,198	187,755	(29,087)
Total additions	372,632	247,009	32,179
Deductions			
Benefit payments and terminations <sup>(1)</sup>	79,587	71,828	81,156
Administrative expenses	3,724	3,424	3,142
Total deductions	83,311	75,252	84,298
Total changes in plan net position	\$289,321	\$171,757	\$(52,119)

#### **Asset Distribution at Fair Market Value**

as of December 31, 2013, 2012, and 2011

	2013	%	2012	%	2011	%
Asset Class	(In Thousands)					
Short term (2)	\$ 54,535	2.8%	\$ 56,535	3.4%	\$ 33,751	2.3%
Fixed income	271,645	13.9	323,324	19.4	298,102	20.0
Common preferred stock	892,301	45.7	652,955	39.3	596,814	40.1
International stock	438,838	22.5	387,224	23.3	328,770	22.1
Real estate equity	294,355	15.1	243,406	14.6	232,406	15.6
Total	\$1,951,674	100.0%	\$1,663,444	100.0%	\$1,489,843	100.0%

<sup>(1)</sup> Monthly Annuity Payroll increased by \$5,831,514, \$4,468,122 and \$5,995,851 for 2013, 2012, and 2011 respectively. Average number of annuitants receiving benefits increased by 262 in 2013 (5.8% increase) and 242 in 2012 (5.7% increase). In 2012, two plans withdrew from the System with total assets of \$18,507, compared to four plans with total assets of \$13,368,163 that withdrew in 2011. No plans withdrew during 2013.

<sup>(2)</sup> Short term includes cash and equivalents held by investment managers and the Pennsylvania Treasury Department.

# **Statements of Plan Net Position**

As of December 31, 2013 and 2012

Assets	2013	3 2012
Receivables		
Plan members	\$ 1,601,534	\$ 1,965,386
Municipal employers	226,819	199,195
Accrued investment income	997,339	600,643
Investment sales receivable	1,668,900	771,985
Total receivables	4,494,592	3,537,209
Investments, at fair value		
Short-term and other investments	54,534,683	56,534,489
U.S. Government fixed income pooled funds	184,175,438	3 219,892,609
Corporate bond pooled funds	87,469,753	1 103,431,327
Equity index funds, Common and Preferred stocks	892,301,396	652,955,295
Real estate equity	294,354,993	3 243,406,273
International equities	438,838,409	387,223,332
Total investments	1,951,674,668	1,663,443,325
Capital assets (net of accumulated depreciation of \$191,765 and \$204,391 at 2013 and 2012, respectively)	145,364	183,318
Total assets	\$1,956,314,624	\$1,667,163,852
Liabilities		
Accounts payable and accrued expenses	2,316,466	5 1,852,751
Investment purchases payable	2,750,788	3,384,862
Total liabilities	5,067,254	5,237,613
Net position held in trust For pension benefits	\$1,951,247,370	\$1,661,926,239

The accompanying notes are an integral part of the financial statements.

# Statements of Changes in Plan Net Position Years Ended December 31, 2013 and 2012

Additions	2013	2012
Contributions		
Plan members	\$ 22,416,432	\$ 20,981,612
Municipal employers	39,706,080	37,974,023
Assessments	311,760	298,320
Total contributions	62,434,272	59,253,955
Investment income		
From investing activities:		
Net appreciation in fair value of investments	294,108,337	173,112,234
Short-term and other investments	92,551	122,144
Common and Preferred stocks	10,266,217	9,845,067
Real estate equity	8,407,139	7,419,644
International equities	5,088,851	3,913,027
Less investment expenses	(7,765,520)	(6,656,863)
Total investing activities income	310,197,575	187,755,253
Total additions	372,631,847	247,009,208
Deductions		
Annuity benefits	69,231,495	63,390,100
Terminations	10,355,631	8,437,610
Administrative expenses	3,723,590	3,424,363
Total deductions	83,310,716	75,252,073
Net increase	289,321,131	171,757,135
Net position held in trust for pension benefits		
Balance, beginning of year	1,661,926,239	1,490,169,104
Balance, end of year	\$1,951,247,370	\$1,661,926,239

The accompanying notes are an integral part of the financial statements.

#### **Notes to Financial Statements**

# (1) Organization and Description of the System

#### **ORGANIZATION**

The Pennsylvania Municipal Retirement System (the System) was created by the Pennsylvania General Assembly in 1974 with the passage of the Pennsylvania Municipal Retirement Law, Act of 1974, P.L. 34, No. 15 (the Act). The System is an agent multipleemployer system, and its designated purpose is to administer sound, cost-effective pensions for local government employees. Responsibility for the organization and administration of the System is vested in the eleven-member Pennsylvania Municipal Retirement Board (the Board). Under the Act, each individual municipality has authority to establish or amend its respective benefits and employee contribution rates subject to Board approval. Employer contributions are actuarially determined by the System's actuary.

Membership in the System is optional for Pennsylvania's local governments. When a municipality joins the System, its full-time employees contractually become members. Part-time, seasonal and temporary employees as well as elected officials may also become members through contractual agreement. As of January 1, 2013, there were 714 municipalities with defined benefit plans and 251 with cash balance plans. The tables (at right) reflect municipal membership and individual membership.

#### PENSION BENEFITS

The System has the broad authority of enabling a municipality to design its own retirement benefit structure. As an alternative, the System has two basic benefit structures: one for municipal employees (Article II of the Act) and one for uniformed employees (police and fire fighters) (Article III of the Act). Certain elected officials are not permitted to become System members, as outlined in individual municipal ordinances. Members are eligible for monthly retirement benefits upon reaching the age of 65 and 55, under Articles II and III, respectively, or upon accumulating 24 years of service. Under Articles II and III of the Act, vesting occurs after 12 years of service.

#### **Participating Local Government Employers**

	Defined Benefits	Cash Balance
Counties	4	0
Cities	18	0
Boroughs	146	44
Townships of the First Class	18	2
Townships of the Second Class	162	126
Authorities and Other Units	168	67
Police	189	12
Firefighters	9	0
Total*	714	251

<sup>\*</sup>Total includes plans with no active members.

#### **Individual Membership**

Active Members	
Defined Benefit Plans	
Municipal	6,730
Police	743
Firefighters	126
Total	7,599
Cash Balance Plans	
Municipal	1,120
Police	11
Firefighters	0
Total	1,131
Total active members	8,730
Retirees and Beneficiaries	
Retirees	4,160
Beneficiaries	520
Total retirees and beneficiaries	4,680
Inactive Participants with Rights to Deferred Pension (Vested)	
Defined benefit	800
Cash balance	298
Total vested	1,098
Defined benefit	51
Cash balance	0
Total non-vested	51
Total individual memberships	14,559

Such benefits under Articles II and III are generally equal to (a) the actuarial value of the members' contributions and (b) a municipal annuity that is based upon a percentage of a member's salary or compensation.

The benefit structures also provide death, disability, and early retirement benefits. These benefit provisions and all other requirements are established under Articles II and III of the Act.

Under Article IV of the Act, municipalities may provide for benefits different from those available under Articles II and III. Vesting provisions, if any, under Article IV may vary.

Automatic postretirement benefit increases are optional in plan contracts. Some member municipalities include the automatic increase; others occasionally grant an ad hoc cost-of-living (COLA) increase. The most common method of granting a postretirement benefit increase is through the System's excess interest award. (See Note 3 for an explanation of excess interest.)

Member municipalities interested in amending benefits contact the System's staff to discuss desired amendments and to obtain a cost study. Amendments are drafted by the System's staff, reviewed by the Chief Counsel's Office, adopted by the municipality, and submitted to the Board for formal approval.

## (2) Significant Accounting Policies

#### **BASIS OF ACCOUNTING**

The System's financial statements are prepared on the accrual basis of accounting. Employee and employer contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan. Expenses are recorded when the corresponding liabilities are incurred.

# USE OF ESTIMATES IN PREPARING FINANCIAL STATEMENTS

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, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of additions and deductions during the reported period. Actual results could differ from those estimates.

#### **INVESTMENTS**

Investments are reported at fair value. Fair value is the amount that a plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller; that is other than in a forced or liquidation sale. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Equity index funds are valued at the net asset value of units held based upon the value of the underlying investments as determined by quoted market prices. Fixed income pooled funds are valued at the net asset value of units held based on yields currently available on comparable securities of issuers with similar credit ratings of the underlying investments. The fair value of real estate investments are based on independent appraisals every three years. In years for which an appraisal is not performed, real estate investments and investments that do not have an established market value are reported at estimated fair values. Purchases and sales of investments are recorded on a trade-date basis. Interest income is recorded on the accrual basis and dividends are recorded on the ex-dividend date.

#### **CAPITAL ASSETS**

Capital assets, primarily office furniture and equipment, are recorded at cost. Depreciation is provided on the straight-line method over the estimated useful lives of the assets, typically eight years for software and office furniture and equipment.

#### **FEDERAL INCOME TAXES**

The System is a qualified trust fund under Section 401(a) of the Internal Revenue Code (IRC). As a result of the qualified status, the trust fund is entitled to an exemption, under Section 501(a) of the IRC, from federal income taxation on its investment earnings. Additionally, the trust fund and any benefits accruing to the members of PMRS are exempt from Pennsylvania state and municipal taxes.

It should be noted that the Internal Revenue Service (IRS) announced and initiated a renewed focus on the tax qualification of public pension funds in 2008. PMRS continues to work proactively to address this IRS initiative.

#### **NEW ACCOUNTING PRONOUNCEMENTS**

The GASB has issued Statement 63, Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position. This Statement provides financial reporting guidance for deferred outflows of resources and deferred inflows of resources. GASB 63 was implemented for the year ended December 31, 2012. However, because the System does not currently have deferred inflow or outflow transactions the implementation is reflected as a redefinition of the former term "Net Assets" to "Net Position" in the financial statements.

The GASB has issued Statement No 67, "Financial Reporting for Pension Plans; an amendment of GASB Statement No. 25." The Statement replaces the requirements of Statement No. 25 and No. 50 related to pension plans that are administered through trusts or equivalent arrangements. The requirements of this Statement are effective for financial statements for fiscal years beginning after June 15, 2013.

The GASB has issued Statement No 68, "Accounting and Financial Reporting for Pensions; an amendment of GASB Statement No. 27." The Statement replaces the requirements of Statement No. 27 and No. 50 related to pension plans that are administered through

trusts or equivalent arrangements. The requirements of this Statement are effective for financial statements for fiscal years beginning after June 15, 2014.

#### (3) Contributions and Reserves

#### CONTRIBUTIONS

Contributions to the System are made by members and municipalities. Under Articles II and III of the Act, members are required to contribute 3% to 8% of their salary. The amount a member contributes under Article IV of the Act is based upon contracted plan provisions and is principally expressed as a percent of compensation or salary. The contributions required of municipalities are based upon an actuarial valuation, using the Entry Age Normal Actuarial Cost Method, computed as a percentage of the total compensation of all active members during the period for which the amount is determined. The required contributions from municipalities for the years ended December 31, 2013 and 2012 consisted of the following:

actuarial accrued liability  Total (1)	(3,544,071) \$35,585,165	(4,838,442) \$34,062,933
Amortization of unfunded		
Municipality normal cost	\$39,129,236	\$38,901,375
	2013	2012

Total contributions to the System during 2013 amounted to \$62,434,272 of which \$22,416,432 and \$39,706,080 were made by its members and municipalities, respectively and \$311,760 was from assessments. The actual contributions are 111.5% of the required contributions.

Total contributions to the System during 2012 were \$59,253,955 of which \$20,981,612 and \$37,974,023 were made by its members and municipalities, respectively and \$298,320 was from assessments. The actual contributions are 111.6% of the required contributions.

<sup>(1)</sup> Total does not include \$20 per member assessment fee to municipalities.

The difference between the municipalities' required and actual contributions is due to various factors including plan takeovers and the municipalities transferring state aid money to the System as required under the Municipal Pension Plan Funding Standard and Recovery Act of 1984 (Act 205).

Each municipality is also charged a \$20 assessment fee per member to help cover administrative expenses incurred by the System. The remaining costs of administering the plan are financed by investment income.

#### **CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE**

The System's funding policy requires actuarially determined annual required contributions (ARC) of plan member municipalities at rates that accumulate sufficient assets to pay benefits when due. The System's actuary used the Entry Age Normal Cost Actuarial Method to determine plan liabilities and normal cost. Under this method, a normal cost is calculated that would fund each employee's benefits during the employee's career as a level percent of pay.

At each valuation date, the unfunded actuarial accrued liability is calculated as the present value of all plan benefits, less the present value of future normal cost accruals, less current assets (actuarial value).

The normal cost rate is applied to the projected payroll, and projected employee contributions are deducted. Actuarial gains (or losses) are reflected by decreases (or increases) in the unfunded actuarial accrued liability. Under Act 205, and amended under Act 44 (1), the unfunded accrued liability is amortized as a level dollar amount over the lesser of:

- a. 30 years with respect to the initial liability as of 1/1/1985 (or first valuation);
  - b. 20 years with respect to actuarial gains and losses:
  - c. 15 years with respect to changes due to actuarial assumptions;

- d. 20 years with respect to changes due to plan provisions (if state mandated);
- e. 10 years with respect to changes in benefits for currently active members and one year of retired members (if local benefit changes), or,
- 2. the average assumed working lifetime of active employees as of the date the liability was established. If there are no active employees, the unfunded liability is amortized one year after the liability was established.

Significant actuarial assumptions used to compute the actuarially determined contribution requirement include (a) a rate of return on the investment of present and future assets of 5.5% per year (net of investment and certain administrative expenses) compounded annually, (b) projected salary increases of 3.0% per year compounded annually for inflation, with an additional age-based component to reflect merit/seniority, (c) postretirement cost-of-living increases of 3.0% per year until the maximum is reached (optional in contracts), and (d) pre- and post-retirement mortality based on the RP2000 Mortality Table for males and females, and an additional set forward of 10 years for disabled lives. The investment return assumption was changed from 6.0% from the prior year valuation to 5.5% for the current year valuation.

#### **RESERVE DESCRIPTIONS**

The Act defines the following funds to be maintained by the System:

#### **Members' Reserve Account**

The Members' Reserve Account is credited with all contributions made by active members of the System. Interest is added to each member's individual account at an annual rate determined by the Board. The System's current regular interest rate is 5.5%.

Upon retirement or disability of an active member, the member's accumulated contributions plus interest are transferred to the Retired Members' Reserve Ac-

<sup>(1)</sup> Act 44 of 2009 made amendments to Act 205 which changes certain amortization periods. These changes affect the cost calculations for the System's plans as of January 1,

count for subsequent benefit payments. Withdrawals of the contributions of members not eligible for benefits are paid from this reserve.

As of December 31, 2013 and 2012, the balance in the Members' Reserve Account was \$416,472,872 and \$418,163,380, respectively. The account is 99.1% funded as of January 1, 2013.

#### **Municipal Accounts**

Separate municipal accounts are maintained for each municipality. The Municipal Reserve Account is credited with each municipality's contributions toward the superannuation retirement and death benefits of its members. Annual interest is added to each separate municipal account at the current regular interest rate of 5.5%.

As of December 31, 2013 and 2012, the balance in the Municipal Reserve Account was \$769,572,044 and \$767,942,906, respectively. The account is 99.1% funded as of January 1, 2013.

#### **Retired Members' Reserve Account**

The Retired Members' Reserve Account represents the amounts transferred from the Members' Reserve Account, the Municipal Accounts, and the Disability Reserve Account. All retirement benefits and retires' death benefits are paid from this reserve. Annual interest is credited to the Retired Members' Account at the current regular interest rate of 5.5%.

As of December 31, 2013 and 2012, the balance in the Retired Members' Reserve Account was \$782,283,327 and \$696,826,051, respectively. The account is 99.1% funded as of January 1, 2013.

#### **DROP Participant Reserve Account**

Deferred Retirement Option Program ("DROP") is an optional form of payment upon a member's retirement. The DROP Participant Reserve Account is credited with all monthly annuity payments payable to a DROP Participant. The monthly DROP interest is dependent on the monthly rate of return credited to the Liquid Asset Pool as determined by the Treasurer. The DROP Interest credited each month shall not be less than zero percent (0.0%) nor more than 0.367 percent (0.367%) per month, and shall not exceed the statutory limit of four and five tenths percent (4.5%) annually. The annualized yield of the monthly interest rate for 2013 ranged from .17% to .24% with .20% as the average for the twelve month period. The interest rate for 2012 were .23% for July through October, .22% for November, and .21% for December. The first DROP participant enrolled on July 31, 2012.

As of December 31, 2013 and 2012, the balance in the DROP Participant Reserve Account was \$368,377 and \$125,412. The account is 99.1% funded as of January 1, 2013.

#### **Disability Reserve Account**

The Disability Reserve Account is credited with the contributions made by municipalities toward the disability retirement of member employees. The disability reserves are limited to 150% of the largest value of transfers to the Retired Members' Reserve Account over the most recent three years.

As of December 31, 2013 and 2012, the balance in the Disability Reserve Account was \$165,224 and \$519,422 respectively. The account is 99.1% funded as of January 1, 2013.

#### **Undistributed Earnings Designation Account**

In addition to regular interest, the System may also award excess interest. Excess interest is investment earnings on the System's assets in excess of that required for allocation to regular interest and administrative expenses. Rates for excess interest are determined annually by the Board with advice from the System's actuary. The excess interest is distributed to the member accounts, the municipal accounts, and the retiree accounts as directed by the municipality.

The System did not distribute excess interest in 2013 or 2012. Such calculation would have been prepared in accordance with a Board approved formula and would have been based on the actuarial value (fair

value) of the System's assets as of December 31, 2012 and 2011, respectively, and the expected cash flows of the System for 2013 and 2012 if excess interest had been distributed.

As of December 31, 2013 and 2012, the Undistributed Earnings Designation Account had a balance of \$(17,614,474) and \$(221,651,382), respectively. While this balance is of concern, historical data argues that the markets' reversion to the mean will resolve the shortfall. The long term outlook of the System remains positive.

#### (4) Investments

Members of the Board are trustees of the System's assets. They have exclusive responsibility for the management of such assets and have full power to invest the System's assets, subject to the terms, conditions, limitations, and restrictions imposed by Commonwealth law upon fiduciaries.

The Board has authorized investments in U.S. Government and agency securities, foreign government bonds denominated in U.S. dollars and rated "AA," corporate bonds rated "A" or better, equity securities, direct real estate, and real estate commingled funds allowing for equity participation. The Board specifically prohibits investments in commodities, mineral rights, and options. Additionally, short-selling and margin purchase transactions are prohibited.

The Board achieves day-to-day management of the investment portfolio through the use of investment managers. Restrictions concerning diversification within each manager and among managers are provided by the adopted Investment Policy.

The System invests in the Commonwealth of Pennsylvania Treasury Department's short-term cash management fund. The fund comprises various short-term investments, including repurchase agreements. Restrictions on these repurchase agreements are outlined below.

Repurchase agreements are allowable if (a) collateralized by United States Government Obligations deemed acceptable by the Treasury Department prior to the transaction; (b) the market value of collateral equals at least 102% of the principal and accrued interest; and (c) the collateral is delivered to the Treasury's bank account. For tri-party agreements, collateral shall be delivered to the Treasury's account with an independent third party sub-custodian (either a money center bank or a nationally recognized non-bank financial institution).

#### **CUSTODIAL CREDIT RISK**

The risk of loss resulting from the failure of the custodian such that the System would not be able to recover the value of its investments or collateral securities in the possession of the custodian. Since the State Treasurer, as custodian, holds all investment in the name of the System, the System's investments are not exposed to custodial credit risk.

The System's exposure to the risk of loss of investments due to errors and omissions on behalf of its advisors is covered by the contractual obligation for the advisors to maintain errors and omissions insurance. The investment managers also must provide proof of a fidelity bond covering the advisor, the office, and its employees.

In accordance with a contract between the Treasurer of the Commonwealth of Pennsylvania and the Treasurer's custodial agent, the System may participate in a securities lending program. Under this program, the custodial agent, acting as the lending agent, lends securities (equities, fixed income, and money market instruments) to independent brokers and dealers in exchange for collateral in amounts up to 105% of the fair value of securities lent. Collateral is marked-tomarket daily. If the fair value of the collateral held falls below the minimum guidelines for securities lent, additional collateral is obtained. In lieu of securities or cash, the borrower may deliver to the lending agent irrevocable bank letters of credit, government securities, or repurchase agreements as collateral. If the collateral obtained consists in whole or in part of

cash, the lending agent may use or invest the cash in accordance with reinvestment guidelines approved by the State Treasurer.

All securities loans can be terminated on demand by either the System or the borrower. Cash collateral is invested in the lending agent's short-term investment pool. The relationship between the maturities of the investment pool and the System's loans is affected by the maturities of the securities loans made by other entities that use the lending agent's pool, which the System cannot determine. The System cannot pledge or sell collateral securities received unless the borrower defaults.

As of December 31, 2013 and 2012, the System had no credit risk exposure to borrowers because participation in the program was halted in 2008.

#### **CREDIT RISK CONCENTRATION**

The risk of loss attributed to investments (other than those issued or guaranteed by the U.S. Government) in any one organization that represented 5% or more of the plan's net assets. The System had no single issuer that exceeded 5% of total investments at December 31, 2013 and 2012. Investment in mutual funds, external investment pools and other pooled investments were excluded.

#### INTEREST RATE RISK

The risk that changes in interest rates will adversely affect the fair value of a fixed income investment. The System had no actively managed long-term fixed income investments. The fixed-income portfolio consists of the following:

#### 2013 Interest Rate Risk

Security	Quality Rating*	Modified- Adjusted Duration	Fair Value
U.S. Government fixed income pooled funds	AAA	5.5	\$ 184,175,438
Corporate bond pooled funds	AA	5.5	\$ 87,469,751
State Treasury STIF	NR	0.1	\$ 19,216,694

#### 2012 Interest Rate Risk

Security	Quality Rating*	Modified- Adjusted Duration	Fair Value
U.S. Government fixed income pooled funds	AAA	5.1	\$219,892,609
Corporate bond pooled funds	AA	5.1	\$ 103,431,327
State Treasury STIF	NR	0.1	\$ 23,516,516

Index is not rated as a security but the average rating of the securities held in the index is AA2

#### **FOREIGN CURRENCY RISK**

The risk that changes in exchange rates will adversely affect the fair value of an investment. As part of the System's program of diversification, the System invests in non-U.S. markets. At December 31, the System had the following non-U.S. currency exposure:

#### 2013 Foreign Currency Risk

Currency	Equity	Short-Term	Total
Euro Currency Unit	\$51,721,137	\$7,894	\$51,729,031
Japanese Yen	39,072,555	0	39,072,555
Pound Sterling	34,685,363	2,231	34,687,594
Swiss Franc	27,743,641	24	27,743,664
Hong Kong Dollar	7,622,910	0	7,622,910
Canadian Dollar	7,582,973	11,557	7,594,530
Swedish Krona	5,587,950	0	5,587,950
Australian Dollar	3,320,604	0	3,320,604

#### 2012 Foreign Currency Risk

Currency	Equity	Short-Term	Total
Euro Currency Unit	\$41,277,030	\$54,881	\$41,331,911
Pound Sterling	31,739,868	37,951	31,777,819
Swiss Franc	20,678,165	0	20,678,165
Japanese Yen	10,619,886	0	10,619,886
Hong Kong Dollar	7,712,461	0	7,712,461
Canadian Dollar	6,066,784	10,990	6,077,775
Swedish Krona	4,974,938	0	4,974,938
Australia Dollar	3,763,132	0	3,763,132
Singapore Dollar	2,910,733	0	2,910,733
New Turkish Lira	1,493,584	0	1,493,584

## (5) Securities Lending

Under the securities lending program, the lending agent provides indemnification to the Commonwealth if the borrowers fail to return the underlying securities (and the collateral is inadequate to replace the securities lent) or fail to pay income distributions on them. As of December 31, 2013 and 2012, the System had no securities out for loan because of a continued Board policy prohibiting participation in securities lending. The System had no cash collateral invested in the custodial agent's short-term collateral investment pool as of December 31, 2013 and 2012.

# (6) Pension Plan for Employees of the System

The System contributes to the Commonwealth's State Employees' Retirement System (SERS), a cost sharing multiple-employer defined benefit pension plan. SERS provides retirement, death, and disability benefits to plan members and beneficiaries according to Commonwealth statute. SERS issues a publicly available financial report that can be obtained by writing SERS, 30 N. Third Street, P.O. Box 1147, Harrisburg, Pennsylvania 17108-1147.

The contribution requirements of plan members and the System are mandated by Commonwealth statute. Most SERS plan members are required to contribute 5% or 6.25% of the annual covered payroll depending upon service class. The System is required to contribute at an actuarially determined rate. The rates applied to annual covered payroll were 15.12% at July 1, 2013, 10.51% at July 1, 2012, and 6.69% at July 1, 2011. The System's annual contributions to SERS for the years ending December 31, 2013 and 2012 were \$180,534 and \$114,942, respectively, which were equal to the required contributions each year.

# (7) Relationships with Other Commonwealth Agencies

Responsibility for the organization and administration of the System is vested in the eleven-member Pennsylvania Municipal Retirement Board. The State Treasurer and the Secretary of the Commonwealth serve on the Board by virtue of statute. Eight Board members are also appointed by the Governor after being nominated by their respective organizations.

One member each represents the Pennsylvania Municipal League, Pennsylvania Municipal Authorities Association, Pennsylvania State Association of Boroughs, Pennsylvania State Association of County Commissioners, Pennsylvania State Association of Township Commissioners, Pennsylvania State Association of Township Supervisors, the active police officers, and the active firefighters. In addition, one Board position is filled by a retired member of the System. Interested individuals submit an application, and then the Governor appoints someone from the list of applicants.

The System is not included as a component unit of the Commonwealth of Pennsylvania for financial reporting purposes because the System is not financially accountable to the Commonwealth as there is no imposition of will, no financial benefit/burden, nor fiscal dependency associated with the System toward the Commonwealth.

# (8) Plan Termination

Member municipalities may withdraw from the System if the conditions for withdrawal under the Act have been met. Requirements include a minimum of five years of membership, approval of a minimum of 75% of the plan's active, vested and retired members and approval of the Board. In the event of withdraw-

al, a municipality is entitled to receive a net refund of the amount then standing to the credit of the municipality in the municipal account, the member employees' account, and the retired members' reserve account. In no event shall the municipality refund exceed the pro-rata interest of the withdrawing municipality in the net assets of the entire fund based on market value of the fund investments as of the date of receipt of the application for permission to withdraw. Liability for any continuation of retirement or disability benefits being paid from the System shall attach to the withdrawing municipality.

## (9) Risk Management

Exposure of the System through Board or staff activity is covered by various means. The System acts under the cover of sovereign immunity, participation in the Employee Liability Self-Insurance Program of the Commonwealth of Pennsylvania, the Commonwealth's fidelity bond, and the State Insurance Fund. The Board also adopted a self-insurance indemnification policy in 2004. There have been no significant reductions in insurance coverage from the prior year. Settlements did not exceed insurance coverage for the past three fiscal years.

The System's implementation policy is to allow contracted external managers to decide what action to take regarding this respective portfolio's foreign currency exposures. The System has no specific policies for interest rate risk and foreign currency risk.

## (10) Commitments and Contingencies

The System leases office facilities under an operating lease that expires November 2016 with an option to extend for five years. Future minimum lease payments under this lease are \$111,000 per year.

Total rental expenses for the years ended December 31, 2013 and 2012 were \$111,711 and \$110,968, respectively.

# (11) Additional Plan Disclosures as Mandated by GASB 50

#### (a) Plan Description

The Pennsylvania Municipal Retirement System (the System) was created by the Pennsylvania General Assembly in 1974 with the passage of the Pennsylvania Municipal Retirement Law, Act of 1974, P.L. 34, No. 15 (the Act). The System is an agent multiple-employer system, and its designated purpose is to administer sound, cost-effective pensions for local government employees. Responsibility for the organization and administration of the System is vested in the eleven-member Pennsylvania Municipal Retirement Board (the Board). Under the Act, each individual municipality has authority to establish or amend its respective benefits and employee contribution rates subject to Board approval. Employer contributions are actuarially determined by the System's actuary. The System issues a publicly available financial report that includes financial statements and required supplementary information.

The System's investments are reported at fair value as discussed in Note 2, Summary of Significant Accounting Policies. The annual required contribution (ARC) is actuarially determined. The System's actuary used the Entry Age Normal Cost Actuarial Method to determine plan liabilities and normal cost. Under this method, a normal cost is calculated that would fund each employee's benefits during the employee's career as a level percent of pay.

#### (b) Funding Status and Funding Progress

As of January 1, 2013, the most recent actuarial valuation date, the plan was 99.1% funded. The actuarial accrued liability for benefits was \$1,903,572,061 and the actuarial value of assets was \$1,886,703,664 resulting in an unfunded actuarial accrued liability (UAAL) of \$16,868,397. The covered payroll (annual payroll of active employees covered by the plan) was \$420,787,345, and the ratio of the UAAL to the covered payroll was 4.01%.

The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multiyear trend information about whether the actuarial value of plan assets are increasing or decreasing over time relative to the actuarial accrued liability for benefits.

## (c) Actuarial Methods and Assumptions

In the January 1, 2013 actuarial valuation, the Entry Age Normal Actuarial Cost Method, computed as a percentage of the total compensation of all active members during the period for which the amount is determined was used. The actuarial assumptions included (a) 5.5% investment rate of return, and (b) projected salary increases ranging from 3.0 to 8.3% with an average increase of 5.0%, including a 3.0% rate of inflation. The assumptions did not include a cost-of-living adjustment. The amortization method uses level dollar for plan bases and average for Aggregate Gain/Loss, 10% of surplus is credited against aggregate cost where applicable, based on an open amortization period. The remaining amortization period at December 31, 2013 was 10-30 years.

The single amortization period is determined individually for each of our participating plans. The weighted average of the separate amortization periods is 10.19 years for the unfunded municipalities. This amount was determined by taking the sum of the individual amortization periods multiplied by the unfunded liabilities for each underfunded municipality and dividing by the sum of the unfunded liability for all of the underfunded municipalities.

## (12) Risk and Uncertainties

Investments are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investments, it is possible that changes in the values of investment securities may occur in the near term and such changes could materially affect the amounts reported in the financial statements

## **Required Supplementary Information**

**Schedule 1**Schedule of Funding Progress (1)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
1/1/2013	\$1,886,703,664	\$1,903,572,061	\$16,868,397	99.1%	\$420,787,345	4.0%
1/1/2012	1,792,809,433	1,727,217,269	(65,592,164)	103.8	408,025,850	(16.1)
1/1/2011	1,713,751,974	1,673,904,145	(39,847,829)	102.4	425,485,909	(9.4)
1/1/2010	1,620,150,779	1,560,357,536	(59,793,243)	103.8	413,065,016	(14.5)
1/1/2009	1,540,152,742	1,451,637,264	(88,515,478)	106.1	405,181,956	(21.8)
1/1/2008	1,458,148,442	1,377,201,000	(80,947,442)	105.9	395,972,321	(20.6)

See accompanying Actuarial Methods and Significant Assumptions.

Schedule 2
Schedule of Required Employer Contributions for Last Six Years

Year Ended December 31	Annual Required Contributions (ARC) (2)	Actual Employer Contribution	Percentage Contributed <sup>(3)</sup>
2013	\$35,585,165	\$39,687,756	112%
2012	34,062,933	37,974,023	112
2011	33,880,428	40,231,586	119
2010	31,561,925	40,949,360	130
2009	30,631,316	35,309,446	115
2008	29,300,378	31,532,859	108

See accompanying Actuarial Methods and Significant Assumptions.

<sup>(1)</sup> The Actuarial Value of Assets, Actuarial Accrued Liability and Unfunded AAL was provided by Cheiron. Covered payroll includes defined benefit plans and cash balance plans. The actuarial assumptions as of January 1, 2013 are shown in the assumptions and methods section. The above information was derived from the following membership data, as provided by the System, regarding:

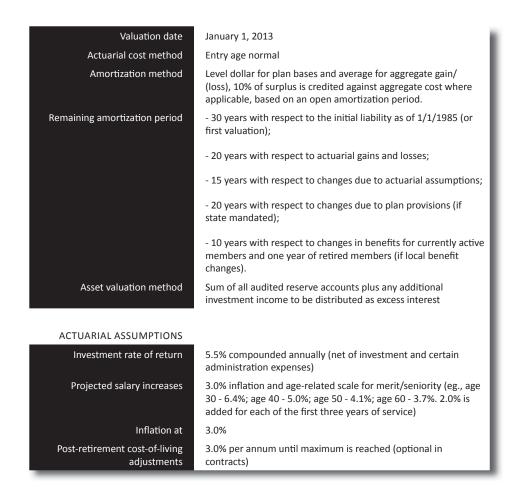
Valuation of Defined Benefit Liabilities					
Valuation Date	Explicit Valuation	Roll-Forward	Cash Balance Plans		
January 1, 2013	710	4	251		
January 1, 2012	4	705	240		
January 1, 2011	702	5	229		
January 1, 2010	5	691	202		
January 1, 2009	691	5	203		
January 1, 2008	4	688	183		

<sup>(2)</sup> The Annual Required Contribution is calculated using the actuary's determined Normal Cost percentage for each plan and the employers' anticipated payroll for each participating plan. It also may include the amortization payment calculated by the actuary or the over-funding credit required under Pennsylvania State Law, Act 205 of 1984. The composite figure is assembled by the agency's staff.

<sup>(3)</sup> The difference between the municipalities' required contributions and the percentage contributed is due to various factors including plan takeovers and the municipalities transferring state aid money to the System as required under the Municipal Pension Plan Funding Standard and Recovery Act of 1984 (Act 205).

## **Actuarial Methods and Significant Assumptions**

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows:



The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board based on the most recent review of the System's experience completed in 2010.

The rate of employer contributions to the System is composed of the normal cost, amortization of the unfunded Actuarial Liability and an allowance for administrative expenses. The normal cost is a level percentage of payroll cost which, along with member contributions, will pay for projected benefits at retirement for the average plan participant. The Actuarial Liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded Actuarial Liability. The allowance for administrative expenses is based upon the System's actual administrative expenses.

# **Supplementary Schedules** Years Ended December 31, 2013, and 2012

## Schedule 3 - Administrative Expenses Comparative Two-Year Schedule

Years Ended December 31, 2013, and 2012

	2013	2012
PERSONNEL COSTS		
Salaries and wages	\$1,433,305	\$1,416,033
Social security contributions	109,772	105,808
Retirement contributions	180,534	114,942
Insurance contributions	581,199	517,395
Other employee benefits	3,566	5,757
Total personnel costs	2,308,376	2,159,935
PROFESSIONAL COSTS		
Investment Consultant	175,000	175,000
Actuarial	336,822	234,930
Data processing	23,594	14,614
Divestiture Consultant	0	13,750
Audit	105,500	102,500
IT Consultants	34,871	69,576
Legal	231,965	159,398
Proxy Voting Services	16,100	16,045
Miscellaneous professional	55,460	52,118
Total professional costs	979,312	837,931
COMMUNICATION COSTS		
Printing	11,190	6,925
Telephone	42,210	40,838
Postage	52,822	69,448
Travel	25,660	16,300
Advertising	8,430	5,188
Total communication costs	140,312	138,699
OTHER SERVICES AND CHARGES		
Contracted EDP services	87,116	84,170
Office space rental	111,711	110,968
Equipment leasing	15,782	15,359
Supplies	29,010	25,583
Maintenance	1,865	5,433
Bonding and insurance	1,248	997
Dues and subscriptions	3,303	2,665
Total other services and charges	250,035	245,175
DEPRECIATION	45,555	42,623
Total administrative expenses	\$3,723,590	\$3,424,363

## Schedule 4 - Investment Expenses Comparative Two-Year Schedule

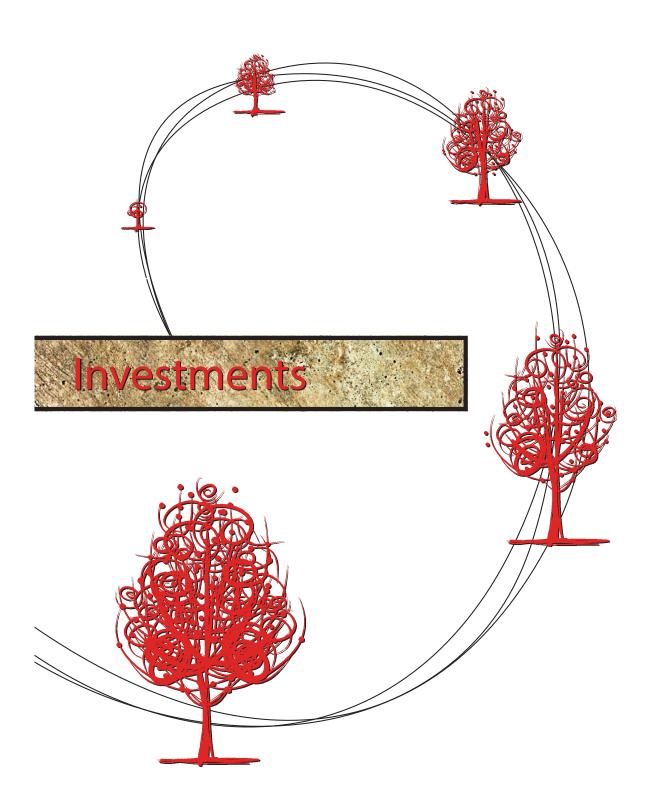
Years Ended December 31, 2013, and 2012

	2013	2012
Investment management fees	\$7,752,991	\$6,645,508
Custodial fees	12,529	11,355
Total investment expenses	\$7,765,520	\$6,656,863

## Schedule 5 - Payments to Consultants

Comparative Two-Year Schedule Years Ended December 31, 2013, and 2012

Firm Name	Nature of Service	2013	2012
Cheiron		\$336,822	\$234,930
Chellon	Actuary	3330,022	\$254,950
CliftonLarsonAllen, LLP	Auditor	105,500	102,500
Dahab Associates, Inc.	Investment Consultant	175,000	175,000
ISS	Proxy Voting Services	16,100	16,045
IW Financial	Divesture Consultant	0	13,750
Total		\$633,422	\$542,225



## **Basis of Presentation**

The Investment Section was prepared under the supervision of James B. Allen, Secretary of PMRS. The data presented in the Investment Section by the System's independent investment consultant has been prepared by using a time-weighted rate of return methodology based upon market values. The Investment Section includes only those investments under management of advisors which are under contract with the System. These investments are valued in a manner consistent with information present in the Financial Section with the exception of the recognition of unallocated cash, pending sales and purchases and cash held by real estate managers. The difference noted above represents the difference between the investment balance of \$1,951,674,668 presented in the Financial Section and the balance of \$1,946,008,094 reported in this section.

Investments are reported at fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Mortgage-backed securities are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals every three years. In years for which an appraisal is not performed, real estate investments and investments that do not have an established market value are reported at estimated fair values. Purchases and sales of investments are recorded on a trade-date basis.

Returns for actively-managed funds presented throughout the Investment Section are gross of external manager fees; returns for passively managed funds are net of external manager fees. Overdraft charges, debit interest, registration expenses and stamp duties and taxes spent on foreign securities are deducted and are not included in the calculation of returns.

In addition, the securities lending money market returns are net of custodial fees, transfer agent expenses and professional fees.

#### **INVESTMENT RETURN(1)**

On December 31st, 2013 the Pennsylvania Municipal Retirement Board's investment portfolio was valued at \$1,946,008,094<sup>(2)</sup> which was an increase of \$288,724,405 from the December 2012 ending valuation of \$1,657,283,689. During the calendar year of 2013, the System recorded aggregate net withdrawals of \$28,799,689 and a net investment return of \$317,524,097.

For the period between December 31, 2008 and December 31, 2013, the System recorded net withdrawals of \$107,333,572 and a net investment return of \$887,078,144. During that period the System has increased from \$1,166,263,502 to \$1,946,008,094. If the fund had earned an annualized compound rate of 5.5% during that period, it would have been worth \$1,402,686,512 or \$543,321,582 less than the actual value for the year.

<sup>((1)</sup> The System's investment assets reported in the Investment Section are presented on the same basis of accounting as described in Note 1 of the Notes to Financial Statements with the following exceptions: The Investment Section includes those investments under management of advisors which are under contract by the agency and does not include pending sales and purchases. The investment consultant, Dahab Associates, oversees these investments. In addition, PMRS maintains a pool for certain short-term funds that is used to fund administrative and benefits payments.

<sup>(2)</sup> Amounts in the Investment Section do not include cash held by the real estate managers.

#### INTRODUCTION

The following represents highlights from the Board's investment guidelines adopted on November 15, 2012. These guidelines, which set forth the Board's expectations, restrictions, and policy decisions, were developed to assist the System's staff and consultants in the daily management of the System's assets.

#### **BACKGROUND**

The System is currently experiencing a slight negative cash flow and does expect this trend to gradually increase in the future. The System currently meets routine benefit payments from incoming revenue as opposed to any depletion of invested assets.

The Board adopted two changes to the Investment Guidelines on November 15, 2012 to be implemented in 2013. The Board prohibits investment managers from investing any PMRS assets in any security issued by a corporation that has a contractual relationship with the manager, including where it serves the corporation's 401(k) plan(s). The Board changed the assumed rate of return from six percent (6%) to a five and five tenths (5.5%) annual rate of return net of all expenses and adopted this figure as the regular interest rate to be credited by the System starting January 1, 2013.

#### **PHILOSOPHY**

The Board considers itself a conservative fiduciary, placing the greatest emphasis on quality of investments and consistency in return. Despite this conservative posture, the Board still believes that the five-year rate of return on investments should exceed the recognized market indices for the various asset vehicles. On May 16, 2013, the Board established its allocation goals as follows:

Equities (large capitalized firms)	25%
Equities (small capitalized firms)	15%
Equities (international developed markets)	15%
Equities (emerging markets)	10%
Fixed income	15%
Real estate	12.5%
Timberland	7.5%

#### **OBJECTIVE**

The Board's investment objective is to benefit PMRS member municipalities by adding value to their assets. Recognizing that inflation can erode value, the Board's goal is to have the fund earn at least 2% more annually than the average annual inflation rate over a long period of time. While this is the System-wide goal, individual investment managers' performance measures rely on other characteristics that are specifically spelled out in the individual contractual service agreement.

#### PORTFOLIO CONSTRUCTION

### **Short-Term Considerations**

It is the Board's desire to remain as fully invested as possible. Therefore, any manager in a cash or cash equivalent position must invest in vehicles authorized by the System. The manager must utilize the System's depository relationship with the State Treasurer who, as custodian of the Fund, will invest all cash on a daily basis in a short-term fund. No management fee will be paid by the System for any portion of a manager's average assets in excess of 5% remaining in cash equivalents at Treasury after the end of any quarter.

#### **Fixed Income Considerations**

The Board seeks to bring income and stability to the overall portfolio through fixed income vehicles. The bond portfolio must be invested in quality vehicles, and it is expected to be diversified from a geographic and industrial standpoint. No single holding of an investment manager other than a U.S. Government bond is to account for more than 5% of the fair value of an investment manager's bond portfolio. The System shall not hold as assets more than 10% of any one bond issue nor more than 5% of the bonds of any one issuing agent. Corporate bonds of any given industry are not to account for more than 25% of the fair value of the bond portfolio.

## **Equity Investment Policy**

The System's equity portfolio reflects the Board's desire to include growth through market appreciation. The Board requires an equity portfolio with diversification, quality issuance, and underlying value. No single equity holding may account for more than 7.5% of the fair value of the System's equity portfolio. Generally, no single sector should account for more than 20% of the value of an individual manager's portfolio. No more than 1% of the capitalization of any company is to be held by the System. The cumulative holdings of a manager for all of that manager's clients shall account for no more than 5% of the outstanding voting common stock of a corporation.

## **Real Estate Policy**

The Board believes that diversification in investment vehicles should enhance the potential return on investments without significantly altering the overall risk of the portfolio. Investment decisions regarding the real estate portfolio shall be guided by the objectives to preserve capital, maximize cash distributions and income, achieve a total return competitive with the other asset classes, and maintain a broad diversification of assets and managers. Real estate vehicles may be both direct equity participation and participation in commingled funds that involve equity participation with consideration given to types of properties and geographic location. The investment process and specific limitations shall be detailed in each real estate manager's contract.

#### **Prohibited Transactions**

The Board prohibits (1) purchasing of commodities, mineral rights, and warrants except those previously authorized; (2) short selling and the purchasing of securities on margin; and (3) selling or buying options or future contracts on either fixed income or equity instruments. Leveraged derivatives of any nature or the use of derivatives to create leverage are strictly prohibited.

## **Execution and Operation**

The System utilizes The Bank of New York Mellon as a master custodian and the Pennsylvania State Treasury as the depository.

Investment managers are directed to execute orders on the best net execution/price basis. Transactional costs and the rate of turnover are monitored. Active equity managers are expected to execute trades on the auction market at a rate close to the execution-only cost (currently averaging three cents per share or less).

The investment managers may enter into agreements with certain brokerage houses in order to participate in a recapture program whereby a designated percentage of the System's trades handled by these brokerage firms will be returned as cash to the System and be treated as new income for the benefit of the membership. It is expected that under such an arrangement, the average execution cost of all trades will approximate the execution-only price.

The Board assumes full responsibility for exercising the voting privilege contained in proxy solicitations generated by companies domiciled in the U.S. and has adopted specific guidelines for staff guidance. These guidelines as adopted and hereafter amended are an integral part of the System's investment guidelines. Proxy solicitations by non-U.S. domiciled companies are handled by the investment manager that holds the security of that company in their portfolio.

#### **Communications**

The Board expects an open and constant line of communication between the System's staff and investment managers. Reports required of investment managers to the Board and staff include a timely confirmation of all transactions, a monthly summary of transactions, a quarterly statement of asset values at cost and fair value, any explanation of contemplated major shifts in investment strategy or manager style before implementation, and an explanation of major changes in organization or the personnel associated with the System's account. Active equity managers

are required to report on a quarterly basis the average commission price per share traded during the quarter. In addition to the written reports, the investment managers are obligated to make periodic personal appearances before the Board as specifically spelled out in the investment manager's contract.

Investment managers' fees are paid in hard dollars. The cost for each investment manager is based on the fair value of the firm's quarterly average balance in the System's portfolio.

## Monitoring

The System monitors the performance of its investment managers through direct involvement of the Board, the System's staff, and any consultant hired for this purpose by the Board.

## **Report on Investment Activity**

## RELATIVE PERFORMANCE Total Fund

The time-weighted rate of return for the System's investments during the fiscal year ended December 31, 2013 was 19.4%, ranking in the 16th percentile of the Public Fund universe. This performance level was 2.9% above the median fund's return of 16.5%. The five-year return for December 2008 through December 2013 was 12.4% on an annualized basis and ranked in the 50th percentile. For comparison the median fund's return was 12.4%.

## **Large Cap Equities**

Over the trailing twelve months, the large cap equity portfolio returned 34.8%, which was 2.4% more than the comparative benchmark S&P 500 Index's 32.4% performance and ranked in the 40th percentile. For the last five years, this component returned 18.2% per annum and ranked in the 53rd percentile. The S&P 500 returned an annualized 17.9% during the same time frame.

### **Small Cap Equities**

This component returned 42.3%, which was 3.5% more than the comparative benchmark Russell 2000 Index's 38.8% performance, ranking in the 47th percentile for the trailing twelve months. For the five year period, this component returned 21.4% annualized and ranked in the 69th percentile. For comparison, the Russell 2000 returned an annualized 20.1% over the same period.

## **Developed International Equities**

This segment's return was 25.6% over the trailing year, which was 4.2% more than the comparative benchmark S&P BMI Developed Ex-US Index's 21.4% return, ranking in the 31st percentile. For the five-year period, this component returned 15.1% on an annualized basis and ranked in the 50th percentile. For comparison, the S&P BMI Developed Ex-US Index returned an annualized 14.2% during the same time frame.

### **Emerging Markets Equities**

Over the trailing year, the emerging markets equity portfolio returned -3.3%, 2.0% below the comparative benchmark S&P BMI Emerging Markets Index's -1.3% return, ranking in the 78th percentile. For the last five year period, this component returned 14.5% on an annualized basis and ranked in the 76th percentile. For comparison, the S&P BMI Emerging Markets Index returned an annualized 15.6% during the same time period.

#### Fixed Income

Over the trailing year, this component returned -2.0%; that return was equal to the comparative benchmark Barclays Aggregate Index's -2.0% return, ranking in the 70th percentile. For the five-year period, this component returned 4.5% annualized and ranked in the 86th percentile. For comparison, the Barclays Aggregate Index also returned an annualized 4.5% over the same period.

### **Real Estate**

Over the trailing twelve-month period, this segment returned 11.3%, which was 0.3% above the comparative benchmark NCREIF Property Index's 11.0% performance. For the cumulative five-year period, this component returned 1.8% per annum, while the NCREIF Property Index returned an annualized 5.7% over the same time frame.

The table on page 44 compares rates of return for the System's total investment portfolio with standard indexes for the last year, three years, five years and ten years.

## **Asset Allocation**

The table to the right shows the allocation of assets as of December 31, 2013.

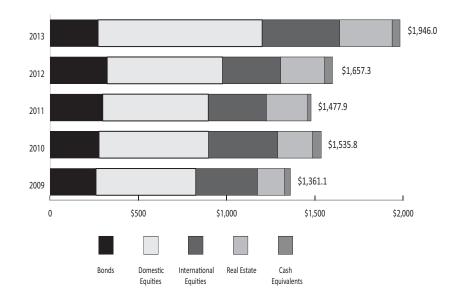
\* Numbers may not add due to rounding.

The following graph shows the System's five-year trend of investments at fair value.

Asset Allocation				
(as of 12/31/2013)				
Туре	%	Amount		
Large cap equities	28.4%	\$552,486,985		
Small cap equities	17.5%	\$340,414,252		
Int'l developed mkts	14.6%	\$284,162,296		
Int'l emerging mkts	8.0%	\$155,060,551		
Total equities	68.5%	\$1,332,124,084		
Fixed income	14.0%	\$271,645,189		
Real estate	15.3%	\$297,013.914		
Cash and equivalents (1)	2.3%	\$45,224,907		
Total portfolio	100.0%	\$1,946,008,094		

## Portfolio Distribution - Five-Year Trend (2)

(Fair Value - Amounts in Millions)



<sup>(1)</sup> Cash and equivalents includes funds held by the Pennsylvania Treasury Department.

 $<sup>^{(2)}</sup>$  Amounts in the Investment Section do not include cash held by real estate managers.

## Portfolio Rates of Return (1)

Last 10 Years as of December 31.2013

The following table compares rates of return for the System's total investment portfolio with standard indexes for the last one, three, five and ten years. The calculations of yields were prepared using a time weighted rate of return based on the market rate. The System's returns have been competitive with other professionally managed funds.

PERFORMANCE SUMMARY				
	1 Year	3 Year	5 Year	10 Year
Total Portfolio	19.4%	10.0%	12.4%	7.3%
Public Fund Rank (2)	(16)	(36)	(50)	(29)
Shadow Index (3)	18.0	9.7	12.7	7.2
Large Cap Equity	34.8	17.3	18.2	8.4
Large Cap Rank (4)	(40)	(30)	(53)	(53)
S&P 500	32.4	16.2	17.9	7.4
Small Cap Equities	42.3	16.9	21.4	8.8
Small Cap Rank (4)	(47)	(61)	(69)	(90)
Russell 2000	38.8	15.7	20.1	9.1
International Equity	25.6	9.4	15.1	8.4
International Equity Rank (5)	(31)	(40)	(50)	(65)
S&P BMI Ex-US	21.4	8.0	14.2	8.2
Emerging Markets Equity	-3.3	-2.2	14.5	
Emerging Markets Rank (6)	(78)	(72)	(76)	
S&P BMI Emerging Markets	-1.3	-2.4	15.6	11.9
Real Estate	11.3	9.6	1.8	6.8
NCREIF	11.0	11.9	5.7	8.6
Fixed Income	-2.0	3.3	4.5	4.5
Core Fixed Income Rank (7)	(70)	(90)	(86)	(86)
Barclays Aggregate	-2.0	3.3	4.5	4.6

Report prepared by DAHAB ASSOCIATES, INC.

<sup>(1)</sup> Rate of return is a mathematical measure of the rate of change in the asset value of a fund. All rates of return are based on the fair value of the assets. Rates of return reflect both realized and unrealized capital gains and losses as well as total earnings from interest and dividends received. Rates of return are gross of fees.

<sup>(2)</sup> Ranked against balanced funds.

<sup>(3)</sup> The shadow index is a customized index created by the System's investment consultant. It is constructed at the asset class level with corresponding benchmark allocations matching the portfolio on a quarterly basis. The following asset classes and corresponding benchmarks have been utilized: Large Cap Equity -- S&P 500; Fixed Income -- Barclays Aggregate Index; Cash & Equivalent -- 90-Day T Bills; Real Estate -- NCREIF Property Index; International Equity -- S&P Citigroup BMI Ex-US Index; Small Cap Equity -- Russell 2000; Emerging Market -- MSCI Emerging Markets.

<sup>(4)</sup> Ranked against equity oriented funds.

<sup>(5)</sup> Ranked against international developed markets oriented funds.

<sup>(6)</sup> Ranked against international emerging markets oriented funds. PMRS entered emerging markets equities in late 2008.

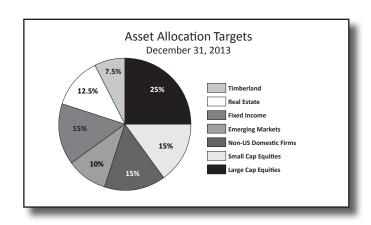
<sup>(7)</sup> Ranked against fixed income oriented funds.

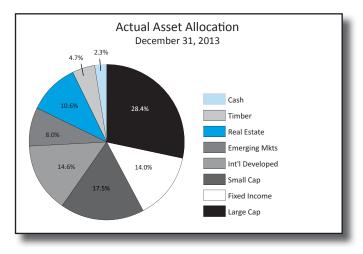
## **Asset Allocation**

On May 16, 2013, the Board established its allocation goals as follows:

Equities (large capitalized firms)	25%
Equities (small capitalized firms)	15%
Equities (international developed markets)	15%
Equities (emerging markets)	10%
Fixed Income	15%
Real Estate	12.5%
Timberland	7.5%

The System's asset allocation as of December 31, 2013, was \$892.9 million committed to domestic equities (\$552.5 large cap and \$340.4 small cap), \$439.2 million to international equities (\$284.2 international developed and \$155.1 emerging markets), \$271.6 million to bonds, \$297.0 million to real estate (includes timberland \$91.3), and \$45.2 million to cash equivalents. The percentage distribution is illustrated below.





## Asset Allocation December 31, 2013

Sector	Target Allocation	Target Dollar	Current Allocation	Current Dollar Allocation	Variance/Dollar	Variance/Percent
Fixed Income	15%	\$291,901,214	14.0%	\$271,645,189	\$(20,256,025)	-1.00%
Large Cap	25%	486,502,024	28.4%	552,486,985	65,984,962	3.40%
Small Cap	15%	291,901,214	17.5%	340,414,252	48,513,038	2.50%
Int'l Developed	15%	291,901,214	14.6%	284,162,296	(7,738,918)	-0.40%
Emerging Mkts	10%	194,600,809	8.0%	155,060,551	(39,540,258)	-2.00%
Real Estate	12.5%	243,251,012	10.6%	205,683,794	(37,567,218)	-1.93%
Timber	7.5%	145,950,607	4.7%	91,330,120	(54,620,487)	-2.81%
Cash	0.0%	0	2.3%	45,224,907	45,224,907	2.30%
TOTAL	100%	\$1,946,008,094	100%	\$1,946,008,094	0	0.00%

## **Investment Summary**

## Summary of Investment Expenses Comparative Two-Year Schedule

Comparative Two-Year Schedule Years ended December 31, 2013 and 2012

Firm Name	2013	2012
Large Cap Domestic Managers		
DePrince, Race & Zollo	420,584	329,895
LSV Asset Management	647,494	539,948
Polen Capital Management	559,076	501,078
UBS Asset Management	440,501	470,881
	2,067,655	1,841,802
Small Cap Domestic Managers		
BMO Global Asset Management	493,676	374,763
Brandywine Global Investment (1)	653,736	133,561
Denver Investment Advisors (2)	-0-	381,269
Emerald Advisers	341,673	265,804
	1,489,085	1,155,397
Passive Manager		
State Street Global Advisors	281,963	266,873
	281,963	266,873
International Managers		
Globeflex Capital (2)	-0-	53,756
HGK Asset Management	558,013	375,619
Johnston Asset Management	471,157	278,109
Mercator Asset Management (2)	-0-	70,436
WHV Investment Management	458,131	429,828
	1,487,301	1,207,748
Real Estate Managers		
Forest Investment Associates	785,139	621,034
Prudential Real Estate Investments	669,335	660,323
TIAA-CREF Global Real Estate	972,512	892,330
	2,426,986	2,173,687
Total Investment Management Fees	7,752,991	6,645,507
Custodial Fees - BNY Mellon	12,529	11,356
Total Investment Expenses	\$7,765,519	\$6,656,863

<sup>(1)</sup> Investment manager hired 4th quarter 2012.

<sup>(2)</sup> Investment manager terminated in 2012.

## Ten Largest Common Stock Holdings As of December 31, 2013 (Fair Value)

Stock	Shares	Fair Value	% of Stock Portfolio
Qualcomm Inc	165,900	\$12,318,075	0.64%
Oracle Corp.	288,752	11,047,652	0.57
Google Inc.	9,790	10,971,751	0.57
Visa Inc.	42,093	9,373,269	0.49
Abbott Laboratories	223,800	8,578,254	0.45
T. Rowe Price Group Inc.	94,713	7,934,108	0.41
Allergan Inc/United States	70,874	7,872,684	0.41
Nike Inc.	98,590	7,753,118	0.40
Exxon Mobil Corp.	72,300	7,316,760	0.38
Starbucks Corp.	90,001	7,055,178	0.37

 $\ensuremath{\mathsf{A}}$  complete list of portfolio holdings can be obtained from the System.

## Portfolio Summary As of December 31, 2013

Type of Investment	Cost Value	Fair Value	% of Total Fair Value
Corporate and government bonds			
U.S. Government bonds	\$ 163,108,194	\$ 184,175,438	9%
Corporate bonds	77,464,364	87,469,751	5
Total	240,572,558	271,645,189	14
Common stock			
Domestic	676,717,962	892,301,396	46
International	298,984,240	438,838,409	23
Total	975,702,202	1,331,139,805	68
Other investments			
Real estate equity	266,389,011	294,354,993	15
Cash equivalents	46,251,744	46,251,744	2
Total	312,640,755	340,606,737	18
Grand total	\$1,528,915,515	\$1,943,391,731	100%

Portfolio Quality
Two-Year Comparative Analysis
Years Ended December 31, 2013, and 2012

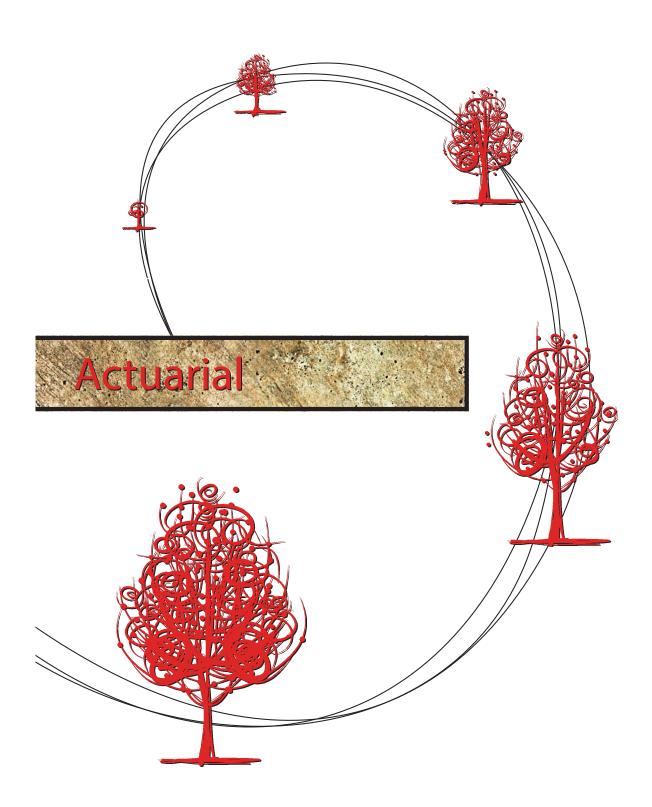
Bond Rating  December 31, 2013	Fair Value	% of Total Fair Value	% of Total Carrying Value
AAA	\$184,175,438	68%	68%
AA	87,469,751	32	32
Α	0	0	0
Total bonds	271,645,189	100%	100%
December 31, 2012			
AAA	219,892,609	68%	68%
AA	103,431,327	32	32
Α	0	0	0
Total bonds	323,323,936	100%	100%

## Summary of Commissions Paid to Brokers Year Ended December 31, 2013

Broker Name	Commissions Paid
Ancora Securities Inc, Jersey City	\$6,222
Avondale Partners LLC, Nashville	2,694
Baird, Robert W & Co Inc, Milwaukee	8,067
Barclays Capital Inc./LE, Jersey City	998
Barclays Capital LE, Jersey City	10,800
Barrington Research Associates, Brooklyn	1,514
BB&T Securities, LLC, Richmond	2,158
Bernstein Sanford C & Co, New York	15,208
Bloomberg Tradebook LLC, New York	35,538
Bloomberg Tradebook, New York	36
BNP Paribas Prime Brokerage Inc, New York	148
BNP Paribas SEC SVCS London	8,238
BNY Convergex, New York	16,357
Boenning & Scattergood, W Conshohocken	519
Brean Capital LLC, Jersey City	1,632
Brean Murray, Carret & Co, Lake Success	1,398
BTIG LLC, San Francisco	104
Buckingham Research Grp Inc, Brooklyn	1,488
Canaccord Genuity Inc. New York	14,868
Cantor Fitgerald & Co Inc, New York	5,712
Cap Instl Svcs Inc-Equities, Dallas	31,734
Capital One Southcoast Inc, New Orleans	2,788
Citation Group/BCC Clrg, New York	5,763
Citibank, Frankfurt	1,237
Citigroup GBL Mkts Inc, New York	48,426
Citigroup Gbl Mkts/Salomon, New York	2,401
Citigroup Global Markets Ltd, London	6,167
Compass Point Research &Tr, Jersey City	1,217
Cowen and Company LLC, New York	9,993
Craig Hallum, Minneapolis	4,385
Credit Suisse, New York	45,095
Credit Suisse, Zurich	3,765
Custom Equity Research DBA, Jersey City	673
Daiwa Sec SMBC Europe LTD, London	8,104
Deutsche Bk Intl Eq, London	9,761
Deutsche Bk Secs Inc, NY	19,923
Dougherty Company, Brooklyn	4,009
Dowling & Partners, Jersey City	224
Evercore Group LLC, Jersey City	2,161
Fidentis Equities SvSa, Madrid	8,829
First Southwest Co, Dallas	589
Fox River Execution Tech, LLC, Jersey City	1,221
Global Hunter Securities LTD, Jersey	1,745

Broker Name	Commissions Paid
Goldman Sachs & Co, NY	26,903
Goldman Sachs Execution & Clearing, NY	589
Goldman Sachs Intl, London	18,092
Gordon Haskett Cap Corp, NJ	4,505
Greentree Brokerage Services, Jersey City	2,930
Instinet Corp, NY	27,686
Investment Technology Group, New York	13,710
ISI Group Inc, NY	2,695
J P Morgan Secs LTD, London	5,667
J P Morgan Securities Inc, Brooklyn	19,658
J.P. Morgan Clearing Corp, New York	1,851
Janney Montgomery Scott, Philadelphia	5,727
Jefferies & Co Inc, New York	10,970
JMP Securities, San Francisco	572
Jonestrading Instl Svcs LLC, Westlake	4,075
JP Morgan Chase Bank NA, London	730
Keefe Bruyette and Woods, Jersey City	9,675
Keybank Capital Markets Inc, New York	6,955
King & Associates, Albany	2,169
Knight Equity Markets LP, Jersey City	1,902
Leerink Swann & Co, Jersey City	3,721
Liberum Capital Limited, London	1,602
Liberum Capital LTD, London	2,048
Liquidnet Inc, Brooklyn	25,416
Longbow Securities LLC, Jersey City	2,723
Merrill Lynch Intl London Equities	32,555
Merrill Lynch Pierce Fenner Smith Inc NY	12,446
Merrill Lynch Professional Clrg, Purchas	2,208
MKM Partner LLC, Greenwich	3,329
Morgan Stanley & Co Inc, NY	47,489
Morgan Stanley & Co, London	3,676
Morgan Stanley Securities LTD, London	3,303
National Finl Svcs Corp, New York	364
Needham & Co, New York	3,412
Noble Intl Investments Inc, Jersey City	70
Nomura Secs Intl, London	11,313
Northland Secs Inc, Jersey City	3,825
Oneil William & Co Inc/BCC, Los Angeles	2,958
Oppenheimer & Co Inc, New York	3,376
Pacific Crest Securities, Portland	8,181
Penson Finl Services, Inc/Ridge New York	252
Pickering Energy Partners, Houston	702
Piper Jaffray & Co, Minneapolis	7,049
Pulse Trading LLC, Boston	5,998
Raymond James & Assoc Inc, St Petersburg	15,226
RBC Capital Markets LLC, New York	3,821

Broker Name	Commissions Paid
Rosenblatt Securities LLC, Jersey City	17
Roth Capital Partners LLC, Irvine	792
Sandler O'Neill & Partners, New York	554
Sanford C Bernstein & Co Inc, London	10,049
Sanford C Bernstein & Co, White Plains	1,950
Scotia Capital (USA) Inc, New York	31
Scotia Mcleod Inc, Toronto	1,087
SG Americas Securities LLC, New York	728
Sidoti & Co LLC, New York	9,712
SMBC Nikko Capital Markets LTD, London	3,166
State Street Global Markets LLC, Boston	24
Stephens Inc, Little Rock	6,144
Sterne Agee & Leach Inc	2,753
Stifel Nicolaus	13,282
Sturdivant and Co Inc, Mount Laure	5,722
Suntrust Capital Markets Inc, Atlanta	8,391
Telsey Advisory Group LLC, Dallas	7,319
UBS Equities, London	14,271
UBS Securities LLC, Stamford	11,148
Vandham Securities Corp, New York	6,032
Wedbush Morgan Secs Inc, Los Angeles	3,582
Weeden & Co, New York	4,631
Wells Fargo Securities LLC, Charlotte	1,308
William Blair & Co, Chicago	4,228
Wunderlich Securities Inc, Memphis	3,333
Total Brokerage Commissions Paid	\$848,292



## **Actuary's Certification Letter**



#### Classic Values, Innovative Advice

June 25, 2014

Pennsylvania Municipal Retirement Board of the Pennsylvania Municipal Retirement System c/o James B. Allen, Secretary P.O. Box 1165 Harrisburg, PA 17108-1165

Dear Members of the Board:

At your request, we have conducted the annual actuarial valuation of the Pennsylvania Municipal Retirement System (the System) as of January 1, 2013. The results of the valuation are contained in our report. The funded ratio of the System as of January 1, 2013 was 99.1% funded on an actuarial asset value basis and 87.3% funded on a market value basis.

The purpose of this report is to present the annual actuarial valuation of the System. This report is for the use of the Pennsylvania Municipal Retirement Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of this report is not an intended user and is considered a third party. This report contains analyses which combine asset and liability performance and projections.

This is a multiple employer retirement system for participating municipalities and counties. Assets and liabilities are separately accounted for and reported to the Public Employee Retirement Commission of the Commonwealth of Pennsylvania. This report reflects aggregate valuation results for the System and provides statistics on employer contribution levels for the defined benefit portion of the municipal plans participating in the system as of the valuation date, the updated methods and assumptions effective January 1, 2013.

Our report contains required disclosures for the entire System and a description of the funding methods and assumptions as required by State law and covered under Act 205 which also fall within the methods as defined as acceptable under the Governmental Accounting Standards Board Statement #25.

In preparing our report, we relied without audit, on information (some oral and some written) supplied by the System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23. The report provides comments on the sources and reliability of both the data and the actuarial assumptions on which our findings are based. Those comments are the basis for our certification that this report is complete to the best of our knowledge. We rely on future System experience conforming to the underlying assumptions. To the extent that actual System experience deviates from the underlying assumptions, the results would vary accordingly.

The assumptions used in preparing the individual municipal valuation have been determined and adjusted based on actuarial experience analysis and presented to the Board for consideration and adoption. The actuarial methods were adopted effective January 1, 1985 unless otherwise indicated. The funding method applied provides for an annual normal cost as a level percent of pay and amortization of unfunded and/or surplus over a fixed period in accordance with provisions of Act 205. The complete actuarial valuation report as of January 1, 2013 is included as an attachment to his letter.

1750 Tysons Boulevard, Suite 1100, McLean, VA 22102

Tel: 703.893.1456

Fax: 703.893.2006

www.cheiron.us



The figures and data disclosed in the following schedules for the Financial and Actuarial sections were provided by Cheiron for 2008-2013.

- 1. Actuarial Liability compared with Actuarial Value for Funding Purposes to the CAFR.
- 2. Solvency Test
- 3. Funded Status of Actuarial Liabilities
- 4. Required Supplementary Information Schedule of Funding Progress
- 5. Schedule of Retirees and Beneficiaries
- 6. Schedule of Total Membership
- 7. Schedule of Total Membership Funded Status of Actuarial Liabilities
- 8. Schedule of Active Member Valuation Data
- 9. Actuarial Methods and Significant Assumptions

In addition, while Cheiron did not explicity provide the Schedule of Required Employer Contributions, it is our understanding that this schedule was determined based upon information Cheiron provides in the annual valuation reports. This includes the Normal Cost percentage for each plan and the employers' anticipated payroll for each participating plan. It may also include the amortization payment calculated by the actuary or the over-funding credit required under Pennsylvania State Law, Act 205 of 1984. The composite figure is assembled by the agency's staff and has not been reviewed by Cheiron.

To the best of our knowledge, this report and its contents, which are based on the information and data supplied by the Pennsylvania Municipal Retirement System, have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Sincerely, Cheiron

Kenneth A. Kent, FSA, FCA Principal Consulting Actuary

2006.201

Karen M. Zangara, FSA Consulting Actuary

Karen Zangara



## The Actuarial Liability Compared with the Actuarial Value of Assets for Funding Purposes Comparable two-year schedule for years January 1, 2013 and January 1, 2012

GASB No. 25 Basis	January 1, 2013	January 1, 2012
Actuarial Liabilities for retirees and beneficiaries currently receiving benefits and terminated not yet receiving benefits	\$812,668,102	\$639,260,852
2. Actuarial liabilities for current employees	1,090,883,959	<u>1,087,956,417</u>
3. Total actuarial liability (1 + 2)	\$1,903,572,061	\$1,727,217,269
4. Net final actuarial assets available for benefits	<u>1,886,703,664</u>	<u>1,792,809,433</u>
5. Unfunded/(surplus)liability (3 - 4)	\$16,868,397	\$(65,592,164)



**Solvency Test**Aggregate Accrued Liabilities for

Valuation Date January 1,	Active Member Contributions (1)	Retirees & Beneficiaries (2)	Active Member Employer Financed Contributions (3)	Actuarial Value of Reported Assets		of Accrued L I by Reporte (2)	
2013	\$418,163,830	\$812,688,102	\$672,720,129	\$1,886,703,664	100%	100%	97%
2012	407,199,633	639,260,852	680,756,784	1,792,809,433	100%	100%	110%
2011	395,048,320	655,645,661	623,210,164	1,713,751,974	100%	100%	106%
2010	348,126,106	589,362,501	622,868,929	1,620,150,779	100%	100%	110%
2009	333,142,928	538,733,517	579,760,819	1,540,152,742	100%	100%	115%
2008	321,567,969	461,965,617	593,667,414	1,458,148,442	100%	100%	114%

## **Funded Status of Actuarial Liabilities**

GASB Statement No. 25 Disclosure

Valuation Date January 1,	Actuarial Value of Assets (A)	Actuarial Liability (AL) Entry Age (B)	Unfunded AL (Surplus) (B-A)	Funded Ratio (A/B)
2013	\$1,886,703,664	\$1,903,572,061	\$16,868,397	99.1%
2012	\$1,792,809,433	\$1,727,217,269	\$(65,592,164)	103.8%
2011	1,713,751,974	1,673,904,145	(39,847,829)	102.4%
2010	1,620,150,779	1,560,357,536	(59,793,243)	103.8%
2009	1,540,152,742	1,451,637,264	(88,515,478)	106.1%
2008	1,458,148,442	1,377,201,000	(80,947,442)	105.9%

The actuarial assumptions as of January 1, 2013, are shown in the assumptions and methods section. The above information was derived from the following membership data, as provided by the System, regarding:

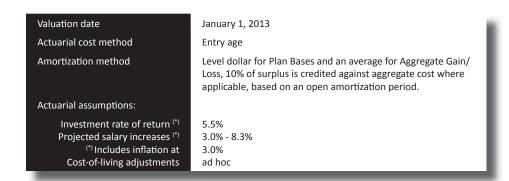
Valuation Date	Valuation of Defined Benefit Explicit Valuation	Valuation of Defined Benefit Liabilities Explicit Valuation Roll Forward			
January 1, 2013	710	4	251		
January 1, 2012	4	705	240		
January 1, 2011	702	5	229		
January 1, 2010	5	691	202		
January 1, 2009	691	5	203		
January 1, 2008	4	688	183		

<sup>(</sup>i) This includes the sum of the active member employee contribution balances, the member separate annuity account balances, the municipal for separate annuity account balances, and the excess interest allocations.



## **Note to Required Supplementary Information**

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows:



The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board based on the most recent review of the System's experience completed in 2010.

The rate of employer contributions to the System is composed of the normal cost, amortization of the unfunded actuarial liability and an allowance for administrative expenses. The normal cost is a level percent of payroll cost which, along with member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial liability. The allowance for administrative expenses is based upon the System's actual administrative expenses.

## **Schedule of Retirees and Beneficiaries**

Added to and Removed from Rolls in Last Six Years

Valuation Date January 1,	Added to Roll	Average Annual Annuities Added <sup>(1)</sup>	Deleted from Roll	Average Annual Annuities Removed <sup>(1)</sup>	Number on Roll	Annual Annuities	Percentage Increase in Annuities	Average Annual Annuities	Percentage Increase in Average Annual Annuities
2013	391	\$16,440	105	\$8,288	4,680	\$65,046,544	9.5%	\$13,899	2.8%
2012	438	16,404	228	14,252	4,394	59,411,245	7.5%	13,521	2.4%
2011	396	18,624	121	8,981	4,184	55,257,189	13.0%	13,207	5.6%
2010	296	16,030	137	9,458	3,909	48,897,954	7.7%	12,509	3.3%
2009	271	13,883	119	11,494	3,750	45,414,210	5.9%	12,110	1.6%
2008	236	12,780	97	8,921	3,598	42,895,559	7.6%	11,922	3.4%



## Schedule of Total Membership Six Year Trend

Valuation Date January 1,	Active Members Defined Benefit Plans	Active Members Cash Balance Plans	Retirees	Beneficiaries	Deferred Pensions	Inactive Members	Total
2013	7,599	1,131	4,160	520	1,098	51	14,559
2012	7,836	1,158	3,899	495	952	21	14,361
2011	8,091	1,119	3,707	477	945	42	14,381
2010	8,357	994	3,449	460	834	23	14,117
2009	8,411	978	3,289	461	847	0	13,986
2008	8,383	950	3,173	425	744	7	13,682

## **Schedule of Total Membership Funded Status of Actuarial Liabilities**

Schedule of Total Membership Over Last Six Years

			As of January 1 <sup>(1)</sup>			
	2013	2012	2011	2010	2009	2008
a. Retirees currently receiving benefits	4,160	3,899	3,707	3,449	3,289	3,173
b. Beneficiaries currently receiving benefits	520	495	477	460	461	425
c. Terminated vested employees entitled to future benefits from DB plans	800	723	711	647	650	570
d. Terminated non-vested employees entitled to contribution refunds from DB plans	51	21	42	23	0	7
e. Active employees in defined benefit plans	7,599	7,836	8,091	8,357	8,411	8,383
i. Aggregate salary <sup>(2)</sup>	\$376,296,674	\$366,882,467	\$383,802,844	\$377,960,930	\$372,370,037	\$364,865,185
ii. Vested <sup>(3)</sup>	4,885	4,964	4,992	5,025	4,952	4,913
iii. Non-vested	2,715	2,872	3,099	3,333	3,459	3,470
f. Participants in cash balance-only plans	1,429	1,387	1,353	1,181	1,175	1,124
i. Aggregate salary (2)	\$44,490,671	\$41,143,383	\$41,683,065	\$35,104,086	\$32,811,919	\$31,107,136
ii. Active	1,131	1,158	1,119	994	978	950
iii. Inactive	298	229	234	187	197	174

 $<sup>\</sup>ensuremath{^{\text{(3)}}}$  Count of vested participants estimated based on service as of valuation date.



 $<sup>^{(1)}</sup>$  Includes defined benefit non-county plans, defined benefit county plans, and cash balance-only plans.

 $<sup>^{\</sup>mbox{\scriptsize (2)}}$  Actual salary paid during the prior plan year preceding valuation date.

## **Schedule of Active Member Valuation Data**

Last Six Years

			De	efined Benefit Pla	ans			
Valuation Date 1/1	Number of Active Members	Percentage Change in Membership	Number of Participating Employers	Percentage Increase in Number of Participating Employers	Total Annual Payroll	Percentage Increase in payroll	Average Annual Salary	Percentage Increase in Average Annual Salary
2013	7,599	(3.0)%	714	0.7%	\$376,296,674	2.6%	\$49,519	5.8%
2012	7,836	(3.2)	709	0.3	366,882,467	(4.4)	46,820	(1.3)
2011	8,091	(3.2)	707	1.4	383,802,844	1.5	47,436	4.9
2010	8,357	(0.6)	697	0.1	377,960,930	1.5	45,227	2.2
2009	8,411	0.3	696	0.5	372,370,037	2.0	44,272	1.7
2008	8,383	0.8	692	1.3	364,865,000	1.7	43,524	0.9
			(	Cash Balance Plar	ns			
Valuation Date 1/1	Number of Active Members	Percentage Change in Membership	Number of Participating Employers	Percentage Increase in Number of Participating Employers	Total Annual Payroll	Percentage Increase in payroll	Average Annual Salary	Percentage Increase in Average Annual Salary
2013	1,131	(2.3)%	251	4.6%	\$44,490,671	8.1%	\$39,337	10.7%
2012	1,158	3.5	240	4.8	41,143,383	(1.3)	35,530	(4.6)
2011	1,119	12.6	229	13.4	41,683,065	18.7	37,250	5.5
2010	994	1.6	203	(.5)	35,104,086	6.9	35,316	5.3
2009	978	3.0	204	10.0	32,811,919	5.5	33,550	2.5
2008	950	3.5	183	3.4	31,107.000	10.3	32,744	6.5

## **Actuarial Assumptions and Methods**

## **Actuarial Assumptions**

The current PMRS actuarial assumptions used in this study are as follows.

## A. Healthy Life Mortality rates:

Sample rates are shown at right:

- (a) Killed in service mortality rates:
  - (i) 15% of mortality is assumed to be service related for municipal plans, and
  - (ii) 50% of mortality is assumed to be service related for uniform plans.

Healthy Life Mortality Rates						
	Acti (Males RF Females R	2000+1)	Retii (RP2000 Se			
Age	Male	Female	Male	Female		
50	0.20%	0.11%	0.21%	0.17%		
55	0.32	0.17	0.36	0.27		
60	0.59	0.27	0.67	0.51		
65	1.13	0.51	1.27	0.97		
70	1.98	0.97	2.22	1.67		
75	3.39	1.67	3.78	2.81		
80	5.79	2.81	6.43	4.59		
85	9.98	4.59	11.08	7.74		



#### **B.** Disabled Life Mortality Rates

Mortality under healthy life table for a life 10 years older.

#### C. Termination Rates Before Retirement:

For all plans for Municipal and Police, the termination rates indicated below were used:

Termination Rates before Retirement					
Current Valuation Rate (1)					
	Uniformed Number of active members in plan		Municipal Number of active members in plan		
Years of Service	<25	>25	<25	>25	
Less than 1	14%	13%	20%	20%	
1 but less than 2	14	10	20	20	
2 but less than 3	12	7	12	15	
3 but less than 4	10	7	10	12	
4 but less than 5	6	6	8	7	
5 but less than 6	4	5	6	7	
6 but less than 7	3	4	4	6	
7 but less than 8	2	3	3	5	
8 but less than 9	2	3	3	5	
9 but less than 10	1	3	2.5	5	
10 or more	1	3	2.5	3	

## **Municipal Rates**

Age	Current Valuation Rate (%)
25	0.034%
35	0.059
45	0.144
55	0.404
65	0.928

### D. Disability Incidence Rates:

Municipal - 40% of 1964 OASDI (Social Security) Experience for Males. Sample rates are to the left:

**Uniformed Rates** 

Uniformed plans - 60% of 1964 OASDI (Social Security) Experience for Males. Sample rates are shown at right:

Age	Current Valuation Rate (%)
25	0.051%
35	0.088
45	0.216
55	0.605
65	1.393

Type of disability:

- (i) 15% of disablements are assumed to be service related for municipal plans
- (ii) 50% of disablements are assumed to be service related for uniform plans.

### E. Workers Compensation:

Service related disability benefits payable from municipal plans are offset by 25% of final average salary.

### F. Salary Scale:

Three year select rates include 3.0% inflation and age-related scale for merit/seniority based on sample rates as shown at right plus 2% during the select period only then reverting to inflation and merit/seniority thereafter. Final actual salary plans assume an additional 6% at retirement.

Sample rates are:

### G. Retirement age:

The age at which unreduced benefits are available. No early retirement is assumed. Specific assumptions regarding retirement age are:

### a) Municipal Members:

Members are assumed to retire over a range of ages as shown to the right.

b) Uniformed Members: (retirement rates are reflected in the chart on page 60)

Sample Salary Rates

Age	Total Rate (%) <sup>(2)</sup> (including inflation)
25	8.3%
30	6.4
35	5.6
40	5.0
45	4.2
50	4.1
55	3.9
60	3.7
65	3.0

**Retirement Assumptions** 

Age	Current Rate of Normal Retirement <sup>(3)</sup>
Under 46	5%
46 - 54	15
55 - 59	10
60 - 61	10
62	30
63 - 64	20
65	35
66 - 74	15
75	100

Inactive vested members are assumed to retire when first eligible for unreduced benefits.

HEIRON

<sup>(1)</sup> No termination rates are applied once the employee becomes eligible for voluntary early or normal retirement.

<sup>(2)</sup> Add 2% for each of the first 3 years of service.

<sup>(3)</sup> Rates indicated are adjusted by adding 5% (and 10% for ages 60-62 under current rate assumptions) for the year in which the member is first eligible for normal retirement.

#### Retirement Rates for **Uniform Participants**

**/10** 

Rates for all

**Plans** 

∩%

H. Marital Status and Spouse's
<b>Age</b> (1): 85 percent of active
members and are assumed to
be married for retirees with the
50% J&S form of payment. Male
spouses are assumed to be three
years older than female spouses.

I.

empers and are assumed to	<49	0%
married for retirees with the	50	20
% J&S form of payment. Male	51	10
ouses are assumed to be three	52	10
ars older than female spouses.	53	10
	54	10
Social Security Projections (1):	55	20
a) The Social Security Tax-	56	25
able Wage Base will	57	25
increase by 3.5% com-	58	30
pounded annually;	59	30
b) The Consumer Price In-	60	40
dex will increase by 3.0%	61	50
compounded annually;	62	50
c) The Average Total Wages	63	60
of All Workers will	64	70
increase by 3.5% com-	65	80
pounded annually.	66+	100

## J. Post-Retirement Cost of Living Increases(1):

3.0% per year, subject to plan limitations.

#### K. Net Investment Return:

5.5% compounded annually (net of investment and certain administration expenses) for funding purposes.

#### L. Administrative Expenses:

The expense assumption is based upon the expected expenses for the current year. The non-investment related expenses of the System, net the \$20 per participant annual assessment is \$3,411,830 for 2013 compared to \$3,126,043 for 2012.

### **Actuarial Methods**

Contribution requirements are individually determined for each participating municipality, on an actuarial basis as described below, at least biannually. The frequency of actuarial valuation is determined by

applicable Commonwealth statute (Act 205 of 1984 and Act 293 of 1972). The following actuarial methods were adopted effective January 1, 1985, unless indicated otherwise.

## **ACTUARIAL VALUE OF ASSETS:**

Sum of all audited reserve accounts as of the valuation date, including Member, Municipal, Retired, and Disability Reserves, and a one-year administration expense reserve, plus the portion of any additional investment income to be distributed as "excess interest." The actuarial value can never be less than 90 percent of fair market value.

Each year, municipalities receive an excess interest allocation derived as a portion of new surplus created during the prior year. "Surplus" refers to the excess of fair market value over the actuarial value of assets. Once the preliminary actuarial asset value has been determined, a formula is used to allocate the new surplus. Generally, depending on the relative size of surplus to fair market value, between 10 percent and 90 percent of the new surplus will become excess interest.

Based on the unique legislative structure of PMRS, because assets are set equal to reserves under the System, they do not necessarily relate directly or indirectly with the current market value of assets as required under Actuarial Standard of Practice Statement No. 44 which states under section 3.3:

- "...the actuary should select an asset valuation method that is designed to produce actuarial values of assets that bear a reasonable relationship to the corresponding market values. The qualities of such an asset valuation method include the following:
- a. The asset valuation method is likely to produce actuarial values of assets that are some times greater than and sometimes less than the corresponding market values.



<sup>(1)</sup> If applicable.

- b. The asset valuation method is likely to produce actuarial values of assets that, in the actuary's professional judgment, satisfy both of the following:
  - 1. The asset values fall within a reasonable range around the corresponding market values. For example, there might be a corridor centered at market value outside of which the actuarial value of assets may not fall, in order to assure that the difference from market value is not greater than the actuary deems reasonable.
  - 2. Any differences between the actuarial value of assets and the market value are recognized within a reasonable period of time. For example, the actuary might use a method where the actuarial value of assets converges toward market value at a pace that the actuary deems reasonable, if the investment return assumption is realized in future periods.

In lieu of satisfying both (1) and (2) above, an asset valuation method could satisfy section 3.3(b) if, in the actuary's professional judgment, the asset valuation method either (i) produces values within a sufficiently narrow range around market value or (ii) recognizes differences from market value in a sufficiently short period."

On this basis, the administrative rules adopted by the PMRS Board, which are not subject to comply with Actuarial Standards of Practice (ASOP), when defining the Actuarial Value of Assets, does not necessarily meet the requirement of ASOP 44 Selection and Use of Asset Valuation Methods for Pension Valuations.

### **ACTUARIAL COST METHOD**

Entry Age Normal Actuarial Cost Method.

Entry age is defined as attained age less credited service. The normal cost rate is derived as a level percent of future compensation of current employees, on an individual basis. This rate is applied to the projected payroll and projected employee contributions are deducted. Actuarial gains (or losses), including the effect of contributions greater or lesser than the

previously determined actuarial level, are reflected by decreases (or increases) in the unfunded actuarial liability. Under Act 205 of 1984, the unfunded actuarial liability is amortized as a level dollar amount over the lesser of:

- a) i. 30 years, with respect to the initial liability as of 1/1/85 (or first valuation);
  - ii. 20 years, with respect to actuarial gains and losses;
  - iii. 15 years, with respect to changes due to actuarial assumptions;
  - iv. 10 years, with respect to changes due to plan provisions;
  - v. 1 year, with respect to changes in benefits for currently retired members,
  - vi. 20 years, with respect to state mandated benefit changes; or
- b) the average assumed working lifetime of active employees as of the date the liability was established<sup>(1)</sup>.

With the two exceptions which follow, the funding method is applied individually with respect to each municipality:

- 1) Retired and disabled members are paid monthly benefits from the System's Retired Reserve account, which at the time of retirement receives a transfer from the municipal and member accounts in an amount actuarially determined to be sufficient to pay all future benefits for the member (and, if applicable, a surviving beneficiary). Thus, post-retirement experience is pooled with the System. (However, this procedure does not apply to the legislated ad-hoc adjustments effective January 1, 1989.)
- 2) A disabled member's pension is met in part from the amount that can be provided by the value of that portion of the member's accrued benefit attributable to municipal contributions,

<sup>(1)</sup> If there are no active employees, the unfunded liability is amortized one year after the liability was established.



with the balance of the pension being provided by the appropriate transfer from the Disability Reserve Account. The amount of annual transfer from the accumulated municipal contributions to the Disability Reserve Account is determined on the one year term cost basis, i.e. the expected cost of disabilities in the coming year.

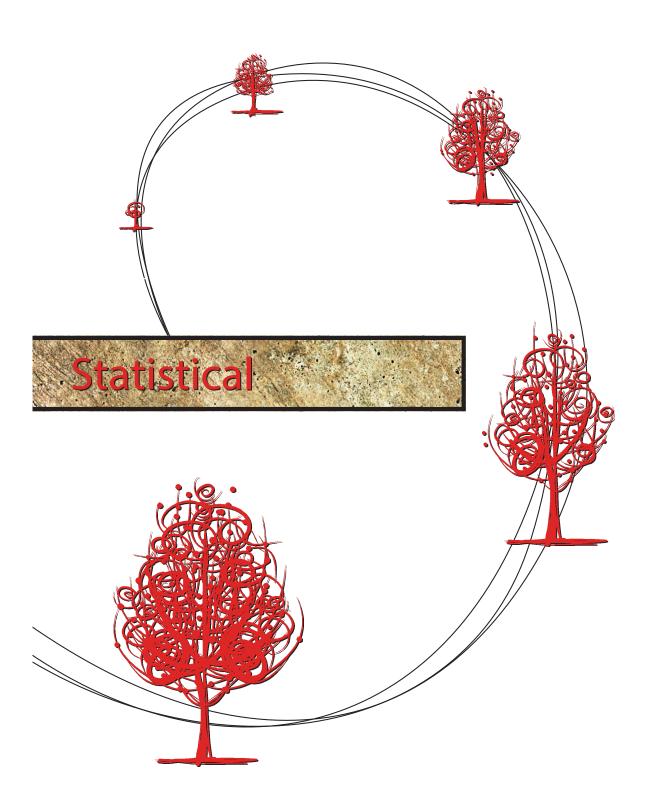
## CHANGES IN ACTUARIAL ASSUMPTIONS AND METHODS:

The investment return assumption was changed from 6.0% from the prior year to 5.5% for the current year.

# Notes to Actuarial Section ASSUMPTION ANALYSIS

The System does not conduct an extensive experience study by individual plan because the magnitude of any change in plans of average size becomes misleading and irrelevant. An actuarial experience study covering the period 1/1/2005 to 12/31/2008 was used by the Board as the basis to adopt (with the actuary's recommendation) several changes in assumptions that were implemented with the January 1, 2011 actuarial valuation.





### Part I - Financial

## Introduction

The objectives of the statistical section are to provide additional historical perspective, context, and relevant details to assist readers in using information in the financial statements, notes to the financial statements, and required supplementary information in order to understand and assess the System's overall financial condition. In support of these objectives, the System has implemented GASB Statement No. 44, Economic Condition Reporting: The Statistical Section. This statement establishes standardized reporting requirements relative to the supplementary information provided in this section.

The schedules beginning on page 65 compare the revenues versus expenses of the System and include total investments of the System for the past ten years. The schedules also show operating information. The operating information is intended to provide contextual information about the System's operations to assist in assessing the System's economic condition. These schedules provide detailed information about the trends of key sources of additions and deductions to the System's assets, which assist in providing a context framing how the System's financial position has changed over time.

The schedules beginning on page 68 provide information relative to membership. The schedules and graphs reflect changes in active and retired members of the System. The information is intended to provide contextual information about the System's membership and framework for the ratio of funding versus obligations. The schedules beginning on page 71 provide information relative to pension payments and pensions awarded. The information is intended to provide contextual information about payment trends of the System.

All non-accounting data is derived from the System's internal sources.

### **Number of Members Per Plan**

(Plans with 100 or more members)

Plan	Members	%
Allentown City	798	5.33
Adams County	765	5.11
Bethlehem City	632	4.22
Harrisburg City - Plan B	326	2.18
Jefferson County	264	1.76
Harrisburg City Fire - Plan B	200	1.34
Easton City	182	1.21
Monroeville Municipality	180	1.20
Lehigh County Authority	159	1.06
Bucks County Water & Sewer Authority	153	1.02
Pottstown Borough	138	0.92
Tredyffrin Township	118	0.79
Upper Moreland Township	108	0.72
Whitehall Township	100	0.67

## Changes in Net Position Last Ten Years

Fiscal Year	Contributions	Investment Income	Benefit Expenses	Administrative Expenses	Change in Net Position
2013	\$62,434,272	\$310,197,575	\$79,587,126	\$3,723,590	\$289,321,131
2012	59,253,955	187,755,253	71,827,710	3,424,363	171,257,135
2011	61,265,501	(29,086,613)	81,155,883	3,142,004	(52,118,999)
2010	61,930,391	180,338,425	63,383,838	3,183,253	175,701,725
2009	54,933,975	210,272,809	66,048,632	3,203,478	195,954,674
2008	49,693,605	(387,077,602)	53,771,225	2,986,656	(394,141,878)
2007	46,833,548	114,838,806	49,905,064	2,862,482	108,904,808
2006	37,749,106	161,140,029	62,491,362	2,920,868	133,476,905
2005	36,215,118	100,261,568	48,537,912	3,108,239	84,830,535
2004	33,126,179	140,070,192	45,048,440	3,127,096	125,020,835

## Revenues by Source Last Ten Years

Revenues by Source							
Fiscal Year	Member Contributions	Municipal Contributions (1)	Municipal Assessments (2)	Investment Income	Total Revenue		
2013	\$22,416,432 \$39,706,080		\$311,760	\$310,197,575	\$372,631,847		
2012	20,981,612	37,974,023	298,320	187,755,253	247,009,208		
2011	20,732,344	40,231,586	301,571	(29,086,613)	32,178,888		
2010	20,684,591	40,949,360	296,660	180,338,425	242,268,816		
2009	19,331,869	35,309,446	292,660	210,272,809	265,206,784		
2008	17,870,426	31,532,859	290,320	(387,077,602)	(337,383,997)		
2007	17,491,672	29,059,248	282,628	114,838,806	161,672,354		
2006	16,316,197	21,148,089	284,820	161,140,029	198,889,135		
2005	16,046,984	19,890,494	277,640	100,261,568	136,476,686		
2004	15,821,360	17,041,418	263,401	140,070,192	173,196,371		

 $<sup>^{(1)}</sup>$  Contributions were made in accordance with actuarially determined contribution requirements.

<sup>(2)</sup> Municipal assessments are receipts but not assets of the plans.

## Expenses by Type Last Ten Years

	Benefit	Expenses	Administrative	Total	
Fiscal Year	Annuity	Termination	Expenses	Expenses	
2013	\$69,231,495	\$10,355,631	\$3,723,590	\$83,310,716	
2012	63,390,100	8,437,610	3,424,363	75,252,073	
2011	63,105,165	18,050,718	3,142,004	84,297,887	
2010	54,771,528	8,612,310	3,183,373	66,567,211	
2009	52,267,003	13,781,629	3,203,478	69,252,110	
2008	46,173,544	7,597,681	2,986,656	56,757,881	
2007	42,898,882	7,006,182	2,862,482	52,767,546	
2006	44,136,795	18,354,567	2,920,868	65,412,230	
2005	38,206,205	10,331,707	3,108,239	51,646,151	
2004	34,730,243	10,318,197	3,127,096	48, 175,536	

## Schedule of Benefit Deductions from Plan Net Assets by Type $_{\rm Last\ Seven\ Years\ ^{(1)}}$

Expenses by Type								
Fiscal Year	Normal	Early	Disability	Survivor	Death	DROP <sup>(2)</sup>	Transfer and Other	Total Annuity
2013	\$52,393,818	\$8,156,170	\$1,722,313	\$5,243,882	\$1,637,485	\$68,795	\$9,032	\$69,231,495
2012	47,951,194	7,545,724	1,347,255	4,848,070	1,678,836	0	19,021	63,390,100
2011	44,166,996	6,161,604	1,257,354	4,497,860	2,241,312	0	4,780,038	63,105,165
2010	38,721,068	4,263,362	1,392,815	4,376,019	2,653,312	0	3,364,952	54,771,528
2009	36,648,826	3,780,903	2,462,766	4,284,030	3,523,786	0	1,566,692	52,267,003
2008	34,911,175	4,549,688	1,351,900	3,897,639	1,397,947	0	65,195	46,173,544
2007	31,560,201	4,397,101	1,318,921	3,975,518	1,085,900	0	561,242	42,898,882

## Schedule of Refund Deductions from Plan Net Assets by Type Last Seven Years (1)

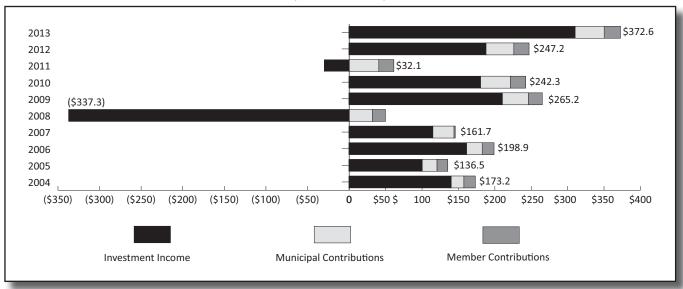
Expenses by Type							
Fiscal Year	Terminations	Lump Sum	Total Refunds				
2013	\$3,461,400	\$6,894,231	\$10,355,631				
2012	3,908,772	4,528,838	8,437,610				
2011	12,421,382	5,629,336	18,050,719				
2010	5,657,499	2,954,811	8,612,310				
2009	11,189,048	2,592,581	13,781,629				
2008	6,675,755	921,926	7,597,681				
2007	4,262,309	2,743,873	7,006,182				

<sup>&</sup>lt;sup>(1)</sup> Information prior to 2007 is not available.

 $<sup>^{\</sup>rm (2)}$  First DROP participant to terminate was on January 1, 2013.

## Revenues by Source - Ten-Year Trend

(Amounts in Millions)

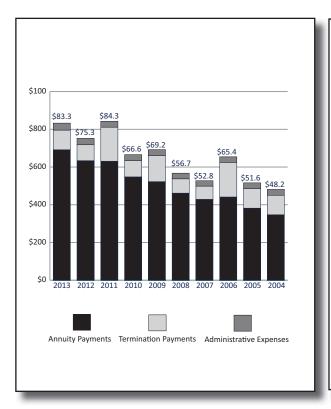


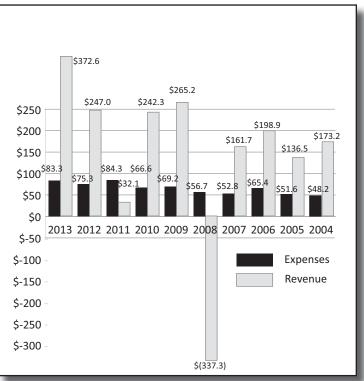
## **Expenses by Type**

Ten-Year Trend (Amounts in Millions)

## Revenues vs. Expenses

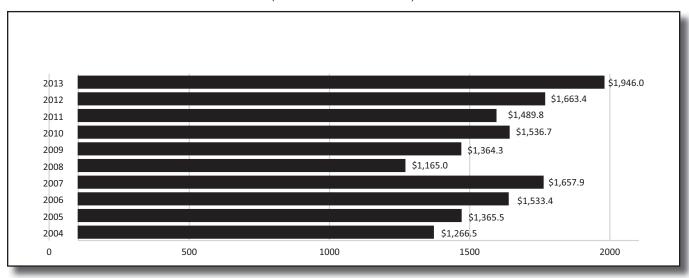
Ten-Year Trend (Amounts in Millions)



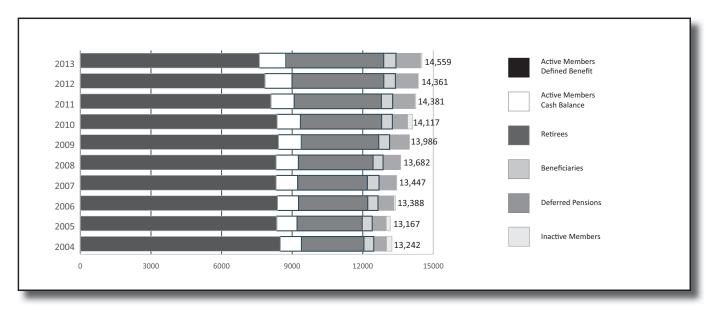


## **Total Investments - Ten Year Trend**

(Fair Value - Amounts in Millions)



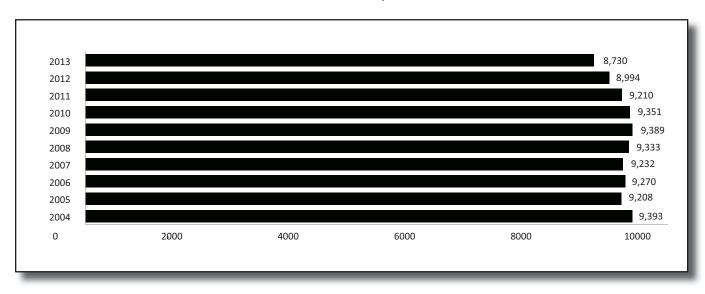
## Total Membership - Ten-Year Trend Valuation Date 1/1



## Part II - Membership

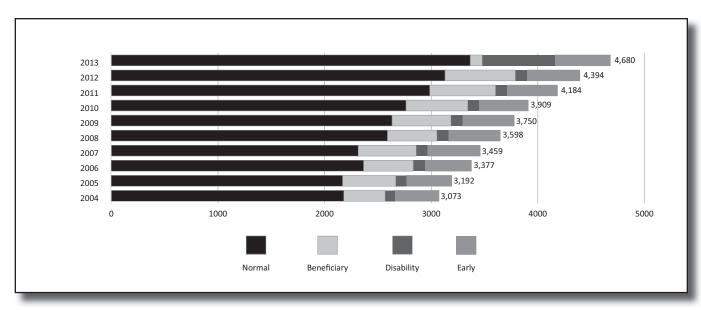
## **Active Members - Ten-Year Trend**

Valuation Date 1/1



## **Retired Members - Ten-Year Trend**

Valuation Date 1/1



## **Distribution of Active Members** by Age and Service as of January 1, 2013

	Counts by Age/Service										
Age	1 year or less	1 to 2	2 to 3	3 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 & up	Total
Under 20	7	0	0	0	0	0	0	0	0	0	7
20 -24	83	37	19	23	6	0	0	0	0	0	168
25 - 29	93	66	74	106	111	4	0	0	0	0	454
30 - 34	73	52	56	99	246	96	1	0	0	0	623
35 - 39	69	40	46	108	230	198	52	1	0	0	744
40 - 44	68	56	52	112	246	280	166	89	5	0	1,074
45 - 49	66	55	53	95	293	269	204	203	79	11	1,328
50 - 54	67	48	52	91	265	262	211	238	163	163	1,560
55 - 59	40	47	48	86	250	252	212	193	142	272	1,542
60 - 64	17	21	22	47	137	128	111	141	92	160	876
65 & up	10	6	6	17	58	74	48	59	27	49	354
Total	593	428	428	784	1,842	1,563	1,005	924	508	655	8,730

## **Distribution of Active Members**

by Age/Service and Annual Salary as of January 1, 2013

	Average Salary by Age/Service										
Age	1 year or less	1 to 2	2 to 3	3 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 & up	Total
Under 20	\$32,597	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,597
20 -24	32,642	33,991	39,110	39,640	33,866	0	0	0	0	0	\$34,672
25 - 29	36,224	39,035	40,687	44,165	47,175	49,201	0	0	0	0	\$42,006
30 - 34	36,441	40,529	42,269	44,838	51,101	53,674	67,602	0	0	0	\$47,135
35 - 39	37,587	40,958	39,870	44,797	51,643	56,219	54,105	64,770	0	0	\$49,451
40 - 44	33,570	40,991	43,967	43,332	49,244	53,325	57,691	59,446	57,305	0	\$50,202
45 - 49	40,100	36,905	37,681	43,864	45,487	49,030	53,478	59,227	59,072	49,053	\$49,319
50 - 54	38,032	37,817	41,404	45,384	45,029	48,071	50,855	54,402	59,894	54,573	\$49,686
55 - 59	36,706	44,262	40,905	41,757	43,174	47,044	47,974	50,772	53,541	55,409	\$48,246
60 - 64	40,136	40,993	37,446	44,618	45,930	43,361	48,457	51,434	55,906	59,629	\$49,796
65 & up	26,731	58,051	53,199	27,062	34,822	40,514	41,970	40,498	46,770	50,783	\$41,152
Average	\$36,181	\$39,742	\$40,883	\$43,583	\$46,888	\$49,647	\$51,404	\$53,860	\$56,545	\$55,779	\$48,200

# Pensions in Payment Status on January 1, 2013 by Type and by Monthly Amount

	Type of Pension								
Monthly amount	Total	Normal	Involuntary early	Voluntary early	Service disability	Non-service disability			
Total	4,680	3,885	241	441	35	78			
Under \$100	232	199	23	8	1	1			
\$100 - \$199	291	235	40	15	1	0			
200 - 299	285	218	42	24	1	0			
300 - 399	302	246	24	29	0	3			
400 - 499	270	221	17	30	2	0			
500 - 599	296	244	17	27	1	7			
600 - 699	235	193	11	25	1	5			
700 - 799	242	185	13	35	0	9			
800 - 899	220	171	8	27	1	13			
900 - 999	206	157	11	25	3	10			
1,000 - 1,199	395	318	12	46	7	12			
1,200 - 1,399	301	243	7	40	4	7			
1,400 - 1,599	244	203	6	25	7	3			
1,600 - 1,799	187	165	3	17	2	0			
1,800 - 1,999	173	150	4	16	0	3			
2,000 - 2,199	144	126	1	15	1	1			
2,200 - 2,399	109	101	0	8	0	0			
2,400 - 2,599	95	86	0	7	1	1			
2,600 - 2,799	83	72	2	6	1	2			
2,800 - 2,999	62	60	0	1	0	1			
3,000 - 3,499	131	123	0	7	1	0			
3,500 - 3,999	93	88	0	5	0	0			
4,000 and over	84	81	0	3	0	0			

## Pensions Awarded Each of the Last Ten Years

by Type and Amount

	Type of Pension									
	To	tal	Noi	rmal	Volunta	ry early	Involunt	ary early	Disal	oility
Valuation Date 1/1	Count	AMA (1)	Sum	AMA	Sum	AMA	Sum	AMA	Sum <sup>(2)</sup>	AMA
2013	391	1,370	341	1,421	22	1,614	20	520	7(2)	709
2012	438	1,367	352	1,496	40	1,180	37	459	9(3)	888
2011	396	1,552	341	1,632	37	1,250	13	364	5(0)	1,407
2010	296	1,336	249	1,412	26	1,300	17	339	4(0)	1,067
2009	271	1,157	223	1,150	36	1,259	7	843	5(3)	1,162
2008	236	1,065	227	1,056	0	0	6	1,259	3(0)	1,350
2007	252	1,069	192	1,082	32	1,196	19	572	9(2)	1,373
2006	264	1,270	217	1,290	11	639	23	1,257	13(4)	1,493
2005	247	1,126	189	1,185	13	653	35	994	10(1)	1,100
2004	214	1,199	171	1,226	8	609	26	1,206	9(4)	1,199

## Schedule of Total Membership - Ten Year Trend

Valuation Date 1/1	Active Members Defined Benefit Plans	Active Members Cash Balance Plans	Retirees	Beneficiaries	Deferred Pensions <sup>(3)</sup>	Inactive Members <sup>(4)</sup>	Total
2013	7,599	1,131	4,160	520	1,098	51	14,559
2012	7,836	1,158	3,899	495	952	21	14,361
2011	8,091	1,119	3,707	477	945	42	14,381
2010	8,357	994	3,449	460	834	23	14,117
2009	8,411	978	3,289	461	847	0	13,986
2008	8,383	950	3,173	425	744	7	13,682
2007	8,314	918	2,965	494	723	33	13,447
2006	8,374	896	2,941	436	675	66	13,388
2005	8,341	867	2,768	424	602	165	13,167
2004	8,491	902	2,657	416	546	230	13,242

<sup>(1)</sup> Average Monthly Amount

 $<sup>\</sup>ensuremath{^{(2)}}$  Number of service-related disability pensions are shown in parentheses.

 $<sup>^{</sup>m (3)}$  Inactive participants with rights to deferred pension (vested)

<sup>(4)</sup> Inactive participants with rights to return of contributions (non-vested)

## **Schedule of Active Member Valuation Data**

Last Ten Years

	Defined Benefit Plans							
Valuation Date 1/1	Number of Active Members	Percentage Change in Membership	Number of Participating Employers	Percentage Increase in Number of Participating Employers	Total Annual Payroll	Percentage Increase in payroll	Average Annual Salary	Percentage Increase in Average Annual Salary
2013	7,599	(3.0)%	714	0.7%	\$376,296,674	2.6%	\$49,519	5.8%
2012	7,836	(3.2)	709	0.3	366,882,467	(4.4)	46,820	1.3
2011	8,091	(3.2)	707	1.4	383,802,844	1.6	47,436	4.9
2010	8,357	(0.6)	697	0.1	377,960,930	1.5	\$45,227	2.2
2009	8,411	0.3	696	0.6	372,370,037	2.0	44,272	1.7
2008	8,383	0.8	692	1.3	364,865,000	1.7	43,524	0.9
2007	8,314	(0.7)	683	0.0	358,691,000	7.6	43,143	8.4
2006	8,374	0.4	683	0.9	333,300,000	4.5	39,807	4.1
2005	8,341	(1.8)	678	2.4	319,005,000	0.7	38,245	2.5
2004	8,491	4.3	662	1.0	316,703,000	7.9	37,299	3.5
			(	Cash Balance Plan	s			
Valuation Date 1/1	Number of Active Members	Percentage Change in Membership	Number of Participating Employers	Percentage Increase in Number of Participating Employers	Total Annual Payroll	Percentage Increase in payroll	Average Annual Salary	Percentage Increase in Average Annual Salary
2013	1,131	(2.3)%	251	4.6%	\$44,490,671	8.1%	\$39,337	10.7%
2012	1158	3.5	240	4.8	41,143,383	(1.3)	35,530	(4.6)
2011	1119	12.6	229	13.4	41,683,065	18.8	37,250	5.5
2010	944	1.6	203	(0.5)	35,104,086	6.9	35,316	5.3
2009	978	3.0	204	11.0	32,811,919	5.5	33,550	2.5
2008	950	3.5	183	3.4	31,107,000	10.3	32,744	6.5
2007	918	2.5	177	2.9	28,213,000	1.0	30,734	(1.6)
2006	896	3.3	172	1.8	27,970,000	4.3	31,218	1.0
2005	867	(3.8)	169	(3.4)	26,808,000	6.0	30,920	10.3
2004	902	13.2	175	7.4	25,291,000	17.9	28,038	4.1

Schedule of Average New Monthly Benefit Payments from Defined Benefit Plans (1)
Nine Years Ended January 1, 2013

			Years	Credited Service			
Retirement Effective Dates	< 5	5-10	10-15	15-20	20-25	25-30	30+
Period 1/2/12 to 1/1/2013							
Average monthly benefit	\$419	\$388	\$702	\$1,196	\$1,460	\$2,093	\$3,079
Average final average salary	\$48,636	\$35,733	\$36,715	\$42,421	\$44,420	\$46,997	\$53,016
Number of retired members	13	37	61	39	44	36	76
Period 1/2/11 to 1/1/12							
Average monthly benefit	\$256	410	673	1,059	1,476	2,083	3,203
Average final average salary	\$48,402	36,620	42,759	40,426	44,336	49,368	55,249
Number of retired members	12	31	42	50	54	30	61
Period 1/2/10 to 1/1/11							
Average monthly benefit	\$244	544	813	1,209	1,588	2,394	3,336
Average final average salary	\$50,215	39,201	39,197	43,014	43,653	54,686	58,242
Number of retired members	7	31	53	44	70	40	97
Period 1/2/09 to 1/1/10							
Average monthly benefit	\$151	392	729	1,294	1,653	2,247	3,020
Average final average salary	\$30,418	36,819	36,047	42,001	47,445	48,018	53,737
Number of retired members	17	30	26	39	47	40	65
Period 1/2/08 to 1/1/09							
Average monthly benefit	\$237	431	455	1,004	1,051	1,999	2,118
Average final average salary	\$29,979	35,106	32,921	45,862	35,792	50,659	50,249
Number of retired members	17	32	42	55	25	38	58
Period 1/2/07 to 1/1/08							
Average monthly benefit	\$179	374	685	999	1,338	1,739	2,530
Average final average salary	\$34,031	32,597	35,004	35,358	35,290	45,102	51,424
Number of retired members	11	34	45	43	33	32	38
Period 1/2/06 to 1/1/07							
Average monthly benefit	\$376	458	707	928	1,331	1,864	2,443
Average final average salary	\$38,487	38,257	31,807	43,304	40,141	45,548	50,429
Number of retired members	11	27	35	45	39	36	30
Period 1/2/05 to 1/1/06							
Average monthly benefit	\$686	386	661	1,052	1,330	1,912	2,292
Average final average salary	\$38,368	27,580	33,166	37.380	37,914	46,427	45,614
Number of retired members	11	27	37	44	36	44	60
Period 1/2/04 to 1/1/05							
Average monthly benefit	\$90	401	640	926	1.364	1,740	2,050
Average final average salary	\$27,628	35,862	27,960	36,563	37,558	41,400	40,845
Number of retired members	8	16	30	51	42	42	45

<sup>(1)</sup> Includes Normal Retirement, Early Retirement and Disability Benefits for new retirees in the years listed (excluding new retirees in Cash Balance plans).

# Schedule of Participating Pension Plans (1)(2) as of January 1, 2013

COUNTIES	Big Beaver Borough	East Stroudsburg Borough (CB)
Adams County	Biglerville Borough	East Washington Borough
Forest County	Biglerville Borough (CB)	Emlenton Borough
Jefferson County	Bloomfield Borough	Emporium Borough
Sullivan County	Bowmanstown Borough	Etna Borough
	Brackenridge Borough	Everett Borough
CITIES	Bridgeville Borough	Factoryville Borough
Allentown City	Bridgewater Borough	Falls Creek Borough
Bethlehem City	Brockway Borough	Ferndale Borough
Clairton City	Brookville Borough	Forest City Borough
Connellsville City	California Borough	Fountain Hill Borough
Easton City	Cambridge Springs Borough	Franklin Borough
Farrell City	Camp Hill Borough	Franklintown Borough
Greensburg City	Carnegie Borough	Freeburg Borough
Harrisburg City	Carroll Valley Borough	Freedom Borough
Hermitage City	Carrolltown Borough	Freeland Borough
Jeannette City	Centerville Borough	Freeport Borough
Latrobe City	Central City Borough	Greenville Borough
Lebanon City	Charleroi Borough	Hollidaysburg Borough
Lower Burrell City	Claysville Borough	Homer City Borough
Nanticoke City	Clymer Borough	Honey Brook Borough
New Kensington City	Coaldale Borough	Hughestown Borough
Sharon City	Cochranton Borough	Hummelstown Borough
Sunbury City	Collegeville Borough	Huntingdon Borough
Uniontown City	Collingdale Borough	Hyndman Borough
	Conneautville Borough	Jim Thorpe Borough
BOROUGHS	Conshohocken Borough	Johnsonburg Borough
Adamstown Borough	Conway Borough	Kenhorst Borough
Apollo Borough	Cressona Borough	Kennett Square Borough
Ashland Borough	Dalton Borough	Kittanning Borough
Atglen Borough	Deemston Borough	Knox Borough
Atglen Borough (CB)	Delmont Borough	Kulpmont Borough
Avonmore Borough	Derry Borough	Kutztown Borough
Bally Borough	Dravosburg Borough	Lehighton Borough
Bangor Borough	Dublin Borough	Lewistown Borough
Bedford Borough	Duboistown Borough	Liberty Borough
Bellefonte Borough	Duncannon Borough	Linesville Borough
Bellefonte Borough (CB)	Duncansville Borough	Lykens Borough
Bellwood Borough	East Berlin Borough	Marcus Hook Borough
Bentleyville Borough	East Greenville Borough	Mars Borough
Berlin Borough	East Rochester Borough	Martinsburg Borough
Berlin Borough (CB)	East Stroudsburg Borough	Marysville Borough

<sup>(1)</sup> County names are in parentheses.

 $<sup>^{(2)}\,</sup>$  The abbreviation CB designates a Cash Balance plan. NU denotes a Non-uniformed plan.

Minersville Borough

Matamoras BoroughRidley Park BoroughWindsor BoroughMayfield BoroughRoaring Spring BoroughYardley BoroughMercer BoroughRochester BoroughYoe Borough

Meyersdale Borough Rouseville Borough York Springs Borough
Middleburg Borough Rural Valley Borough

Millersburg Borough Salisbury Borough

Millersburg Borough
Millerstown Borough
Sandy Lake Borough
TOWNSHIPS OF THE FIRST CLASS

Saxton Borough

Monaca BoroughSchuylkill Haven BoroughCaln TownshipMonroeville MunicipalitySelinsgrove BoroughCollier TownshipMont Alto BoroughSellersville BoroughCrescent TownshipMontrose BoroughSeven Fields BoroughEast Deer Township

Moosic Borough Seven Fields Borough (CB) Elizabeth Township (Allegheny County)

**Bristol Township** 

Moosic Borough (CB) Shamokin Dam Borough Harrison Township

Morrisville Borough Sharpsburg Borough Hopewell Township (Beaver County)

Moscow Borough North Huntingdon Township

Mount Jewett Borough

Shenandoah Borough

North Versailles Township

Mount Pleasant BoroughShippingport BoroughRidley TownshipMount Union BoroughSlippery Rock BoroughRochester TownshipMt. Gretna BoroughSmithton BoroughSalisbury TownshipNanty Glo BoroughSouth Waverly BoroughSpringdale TownshipNarberth BoroughSouthmont BoroughSwatara Township

Nesquehoning Borough Springdale Borough Upper Moreland Township

New Eagle BoroughStewartstown BoroughVanport TownshipNew Florence BoroughSummit Hill BoroughWest Pottsgrove TownshipNew Stanton BoroughTarentum BoroughWhitehall Township

Newport Borough

Telford Borough

Newtown Borough

Topton Borough

Wilkins Township

Norristown Borough Trainer Borough TownsHIPS OF THE SECOND CLASS

North East Borough Allegheny Township (Westmoreland County)

North Wales BoroughTurtle Creek BoroughAntrim TownshipNorthumberland BoroughVerona BoroughAthens TownshipOrwigsburg BoroughVersailles BoroughBald Eagle TownshipPalmerton BoroughWaterford BoroughBedminster Township

Palmyra Borough Waynesburg Borough **Bell Township** Pen Argyl Borough West Grove Borough **Bethel Township** West Middlesex Borough Pennsburg Borough Birmingham Township Perkasie Borough West Newton Borough Black Creek Township Pine Grove Borough Wheatland Borough Blair Township Portage Borough White Haven Borough **Bloomfield Township** Pottstown Borough Williamstown Borough **Blooming Grove Township** 

Pottstown Borough Williamstown Borough Blooming Grove Township

Pringle Borough Wilmerding Borough Boggs Township (Centre County)

Prospect Park Borough Wilson Borough Boggs Township (Clearfield County)

Brecknock Township Dickinson Township Greenfield Township (Erie County)

Briar Creek Township Greenfield Township (Lackawanna County)

 Brighton Township
 Donegal Township (Butler County)
 Hamilton Township

 Broad Top Township
 Donegal Township (Washington County)
 Hamiltonban Township

Brokenstraw Township Donegal Township (Westmoreland County) Hanover Township (Beaver County)

Brothersvalley Township Dorrance Township Hanover Township (Lehigh County)

Brown TownshipDouglass Township (Montgomery County)Haycock TownshipBuckingham TownshipDrumore TownshipHemlock TownshipBuffalo TownshipEast Allen TownshipHenderson TownshipBurnside TownshipEast Carroll TownshipHilltown Township

 Burrell Township
 East Coventry Township
 Hopewell Township (Cumberland County)

 Caernarvon Township
 East Fallowfield Township
 Hopewell Township (Washington County)

 Cambria Township
 East Finley Township
 Hopewell Township (York County)

Cambridge Township East Hanover Township Horsham Township
Canal Township East Huntingdon Township Howe Township
Canton Township East Manchester Township Hunlock Township
Cass Township East Marlborough Township Huntington Township
Center Township (Greene County) East Rockhill Township Huston Township

Center Township (Indiana County)

Eldred Township (Jefferson County)

Jackson Township (Greene County)

Eldred Township (Monroe County)

Jackson Township (Lebanon County)

Centre Township (Berks County)

Eldred Township (Warren County)

Jackson Township (Luzerne County)

Centre Township (Perry County)

Elizabeth Township (Lancaster County)

Jackson Township (Snyder County)

Cherrytree Township

Elk Creek Township

Jackson Township (Susquehanna County)

 Clarion Township
 Elk Township
 Jefferson Township (Washington County)

 Clay Township
 Fairfield Township
 Jenks Township

 Clearfield Township
 Fairview Township
 Jenner Township

Columbus TownshipFalls TownshipJones TownshipConcord TownshipFarmington TownshipKeating TownshipConemaugh TownshipForks TownshipKennett Township

 Conewago Township
 Forward Township
 Lancaster Township (Butler County)

 Cook Township
 Foster Township
 Lancaster Township (Lancaster County)

Coolspring TownshipFranklin Township (Beaver County)Latimore TownshipCornplanter TownshipFranklin Township (Butler County)LeBoeuf TownshipCorydon TownshipFranklin Township (Carbon County)Lehman TownshipCovington TownshipFranklin Township (Greene County)Liberty Township

Cranberry Township Frazer Township Limestone Township (Lycoming County)
Cross Creek Township Freedom Township Limestone Township (Union County)

**Darlington Township** Freehold Township Lincoln Township Frenchcreek Township **Delaware Township** Liverpool Township **Girard Township** Derry Township (Dauphin County) London Britain Township Derry Township (Dauphin County) (CB) Glade Township London Grove Township Derry Township (Mifflin County) Greene Township Lower Mahanoy Township Derry Township (Westmoreland County) Greenfield Township (Blair County) Lower Towamensing Township Lower Yoder Township Pine Grove Township (Warren County) South Manheim Township South Middleton Township Loyalhanna Township Pittsfield Township Loyalhanna Township (CB) Pleasant Township South Pymatuning Township **Mahoning Township** Plumcreek Township South Strabane Township Manchester Township Plumstead Township Southampton Township Plymouth Township Manchester Township (CB) Southwest Township McKean Township Pocopson Township Spring Creek Township Mead Township Point Township Springfield Township Middle Smithfield Township Portage Township Stonycreek Township Middlesex Township Porter Township Sugar Grove Township Milford Township (Bucks County) **Preston Township** Sullivan Township Milford Township (Pike County) Price Township **Summit Township** Millcreek Township **Providence Township** Tinicum Township Monongahela Township Pulaski Township **Towamensing Township** Monroe Township (Snyder County) **Pymatuning Township** Tredyffrin Township Monroe Township (Wyoming County) Raccoon Township Tunkhannock Township Union Township (Berks County) Morris Township (Greene County) Rice Township Morris Township (Tioga County) Richhill Township Union Township (Lebanon County) Morris Township (Washington County) Richland Township Union Township (Snyder County) Mount Joy Township Richland Township (CB) Union Township (Washington County) Mount Pleasant Township Richland Township (Venango County) **Unity Township** Muncy Creek Township Ridgway Township **Upper Burrell Township** Upper Nazareth Township New Garden Township Rome Township **New Sewickley Township** Rose Township Wallace Township Nockamixon Township Ross Township Warrington Township **Rutland Township** North Buffalo Township Warsaw Township North Coventry Township Rye Township Warwick Township North Franklin Township Scott Township Washington Township (Berks County) North Strabane Township Sewickley Township Washington Township (Cambria County) North Strabane Township (CB) Shade Township Washington Township (Dauphin County) **Nottingham Township** Sheffield Township Washington Township (Erie County) Oakland Township Shippensburg Township Washington Township (Fayette County) Oil Creek Township (Venango County) **Shrewsbury Township** Washington Township (Greene County) Oil Creek Township (Crawford County) Slippery Rock Township Washington Township (Jefferson County) Old Lycoming Township Snake Spring Township Washington Township (Northampton County) Oliver Township Solebury Township Washington Township (Schuylkill County) Paint Township Solebury Township (CB) Washington Township (Westmoreland County) Paradise Township South Abington Township Washington Township (Wyoming County) Pennsbury Township South Beaver Township Wayne Township Perry Township South Bend Township West Bradford Township South Franklin Township West Brunswick Township Pike Township South Hanover Township West Caln Township Pine Creek Township

South Huntingdon Township

Pine Grove Township (Schuylkill County)

West Carroll Township

West Fallowfield Township Clairton Police Gilpin Township Police West Lampeter Township Clymer Borough Police **Greenfield Township Police** West Pennsboro Township Cochranton Borough Police Greenville Borough Police Colebrookdale Township Police West Rockhill Township Hamiltonban Township Police West Salem Township Conneaut Lake Regional Police Harveys Lake Borough Police West Wheatfield Township Covington Township Police Heidelberg Township Police Westtown Township **Crescent Township Police** Hellam Township Police Wetmore Township Danville Borough Police Hemlock Township Police Whiteley Township **Darlington Township Police** Hilltown Township Police Wiconisco Township **Decatur Township Police** Honey Brook Borough Police Williams Township **Delmont Borough Police Hummelstown Borough Police** Windsor Township Donegal Township Police (Washington County) Hyndman Borough Police Woodward Township Douglass Township Police (Berks County) Independence Township Police Wright Township **Douglass Township Police (Montgomery** Jackson Township Police (Luzerne County) County) Wrightstown Township Johnsonburg Borough Police Zerbe Township **Dublin Borough Police Knox Borough Police Duboistown Borough Police** Lancaster Township Police (Butler County) **POLICE Dunbar Borough Police** Larksville Borough Police Apollo Borough Police **Duncannon Borough Police** Lewistown Borough Police **Duncansville Borough Police** Liberty Borough Police Ashley Borough Police **Bally Borough Police** East Bangor Borough Police Linesville Borough Police East Berlin Borough Police **Barrett Township Police** Locust Township Police East Coventry Township Police Lower Windsor Township Police **Bedminster Township Police** Lower Yoder Township Police Bellwood Borough Police East Deer Township Police Bentleyville Borough Police East Fallowfield Township Police Lykens Borough Police East Marlborough Township Police Mahoning Township Police (Lawrence County) Bentleyville Borough Police (CB) Berks-Lehigh Regional Police East Pennsboro Twp Police Mahoning Township Police (Montour County) Big Beaver Borough Police East Washington Borough Police Manor Borough Police Biglerville Borough Police Elizabeth Township Police (Allegheny County) Mars Borough Police **Emlenton Borough Police** Martinsburg Borough Police Birmingham Township Police Blair Township Police **Emporium Borough Police** Marysville Borough Police **Brecknock Township Police Everett Borough Police** Mayfield Borough Police Factoryville Borough Police Mead Township Police Briar Creek Township Police Fairview Township Police Bridgewater Borough Police Mercer Borough Police Falls Creek Borough Police Middleburg Borough Police **Buckingham Township Police** California Borough Police Farrell City Police Middlesex Township Police Forest City Borough Police Millcreek Township Police Cambria Township Police Cambridge Springs Borough Police Forward Township Police Millersburg Borough Police Camp Hill Borough Police Franklin Borough Police Millville Borough Police Franklin Township Police (Beaver County) Carroll Township Police Montour Township Police Carroll Valley Borough Police Frazer Township Police Moore Township Police Freedom Borough Police (Beaver County) Carrolltown Borough Police Moosic Borough Police Freedom Township Police Morrisville Borough Police Central City Borough Police Freeland Borough Police

Moscow Borough Police

Centre Township Police (Berks County)

### Schedule of Participating Pension Plans (continued)

Mount Jewett Borough Police

Mount Pleasant Borough Police

Mount Pleasant Township Police (Washington

County)

Mount Union Borough Police New Castle Township Police

New Garden Township Police

New Wilmington Borough Police

Newport Borough Police

Newtown Borough Police

Nockamixon Township Police

North Coventry Township Police

North Huntingdon Township Police

North Middleton Township Police

North Sewickley Township Police

Northeastern Regional Police Department

Northumberland Borough Police

Ohio Township Police

Old Lycoming Township Police

Orangeville Area Police Board

Orwigsburg Borough Police

Palmyra Borough Police

Paxtang Borough Police

Penbrook Borough Police

Pennridge Regional Police Dept

Perkasie Borough Police

Pine Grove Borough Police

Point Township Police

Polk Borough Police

Pulaski Township Police

Pymatuning Township Police

Quarryville Borough Police

Red Lion Police

Redstone Township Police

Richland Township Police

Roaring Brook Township Police

Roaring Spring Borough Police

Rochester Township Police

Rye Township Police

Sandy Lake Borough Police

Saxton Borough Police

Schwenksville Borough Police

Scott Township Police

Scottdale Borough Police

Selinsgrove Borough Police

Shade Township Police

Shamokin Dam Borough Police

Sheffield Township Police

Shippingport Borough Police

Shiremanstown Borough Police

Sinking Spring Borough Police

South Beaver Township Police

South Centre Township Police

South Pymatuning Township Police South Waverly Borough Police

South Williamsport Borough Police

Southern Police Commission

Springdale Township Police

Stewartstown Borough Police

Summit Hill Borough Police

Telford Borough Police

Tinicum Township Police

Tulpehocken Township Police

Tunkhannock Township Police

Upper Burrell Township Police

Upper Macungie Township Police

Vanport Township Police

Versailles Borough Police

Washington Township Police (Fayette County)

Waverly Township Police

West Caln Township Police

West Fallowfield Township Police

West Grove Borough Police

West Lampeter Township Police

West Middlesex Borough Police

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West Pikeland Township Police

West Pottsgrove Township Police

West Sadsbury Township Police

West Vincent Township Police

Westfield Borough Police

Wheatland Borough Police

White Haven Borough Police

Wiconisco Township Police

Williamstown Borough Police

Windsor Borough Police

Windsor Township Police

Wrightstown Township Police Yardley Borough Police

Youngwood Borough Police

#### **FIREFIGHTERS**

Clairton City

Farrell City

Greenville Borough

Harrisburg City

Larksville Borough

Manchester Twp

South Strabane Township

Upper Moreland Township

Wilson Borough

#### **AUTHORITIES & OTHER UNITS**

Allegheny Valley Joint Sewer Authority

Ambridge Borough Municipal Authority

**Armstrong Conservation District** 

Avonmore Borough Municipal Authority

B.A.R.T.A.

Bath Borough Authority

Bedford Borough Water Authority

Bedford Township Municipal Authority

Belle Vernon Municipal Authority

Berks-Lehigh Regional Police NU

Bethlehem Authority

Bethlehem City Redevelopment Authority

Bethlehem Parking Authority

Bloomfield Township Sewer Authority Bradford City Water Authority Bradford Regional Airport Authority Brighton Township Municipal Authority

Brighton Township Sewer Authority
Brockway Area Sewage Authority
Brockway Borough Municipal Authority
Brodhead Creek Regional Authority
Brookville Municipal Authority

Bucks County Redevelopment Authority Bucks County Water & Sewer Authority Burrell Township Sewage Authority

**Butler Area Public Library** 

Cambria County Conservation & Recreation Authority

Cambria Township Sewer Authority
Cambria Township Water Authority
Carbon County Conservation District
Carmichaels-Cumberland Joint Sewer

Carroll Township Authority

Catawissa Borough Municipal Water Authority Centerville Borough Sanitary Authority

Central Carbon Municipal Authority

Central Indiana County Joint Sanitary Authority
Centre County Library & Historical Museum

Clarion County Housing Authority
Clarion County Housing Authority (CB)

Coaldale-Lansford-Summit Hill Sewer Authority

Columbia County Conservation District

Connellsville Municipal Authority

Connellsville Redevelopment Authority

Conshohocken Borough Authority

Coplay-Whitehall Sewer Authority Cressona Borough Authority Creswell Heights Joint Authority

Cumberland-Franklin Joint Municipal Authority

Curwensville Municipal Authority

Delaware Valley Municipal Management Association

Derry Township Municipal Authority

Derry Township Sanitary Sewer Authority

**DuBois City Redevelopment Authority** 

**DuFAST Authority** 

East Berlin Area Joint Authority

East Norriton-Plymouth-Whitpain Joint Sewer Authority

Eastern Snyder County Regional Authority Economy Borough Municipal Authority Elizabeth Borough Municipal Authority Elizabeth Township Sanitary Authority

Elizabethville Area Authority

Emlenton Area Municipal Authority
Erie County Housing Authority
Everett Area Municipal Authority
Fairfield Municipal Authority
Fawn Township Sewage Authority
Fawn-Frazer Joint Water Authority
Fayette County Conservation District

Forward Township Municipal Authority
Frackville Area Municipal Authority

Franklin City Housing Authority

Franklin Township Municipal Sanitary Authority

Franklin Township Sewer Authority Frazer Transportation Authority

Fredericksburg Sewer & Water Authority
Freeland Borough Municipal Authority
Greater Lebanon Refuse Authority
Greenville Municipal Authority
Guilford Township Authority
Guilford Water Authority

Harrison Township Water Authority

Hawley Area Authority

Hazleton Transit Authority

Hellertown Borough Authority

Hilltown Township Water & Sewer Authority

Horsham Township Sewer Authority

Indiana County Conservation District

Hughesville-Wolf Township Joint Municipal Authority

Indiana County Solid Waste Authority
Jackson Township Water Authority
Jeannette Municipal Authority
Jefferson Conservation District
Jenner Area Joint Sewer Authority
Johnsonburg Municipal Authority
Juniata County Conservation District

### Schedule of Participating Pension Plans (continued)

Kiskiminetas Township Municipal Authority Mount Pocono Municipal Authority

Kittanning Suburban Joint Water Authority Mt. Jewett Borough Authority

Kittanning Suburban Joint Water Authority Mt. Jewett Borough Authority

Kulpmont-Marion Heights JMA Mt. Lebanon Parking Authority

Lancaster City Parking Authority Municipal Authority of the Borough of Matamoras

Lansford - Coaldale Joint Water Authority Municipal Authority of the Borough of Morrissville

Lebanon City Authority Municipal Authority of the Borough of Portage Water Department
Lebanon Community Library Myerstown Community Library Association

Leetsdale Borough Municipal Authority

Myerstown Water Authority

Lehigh County Authority

Nanty Glo Sanitary Sewer Authority

Lehighton Water Authority

Nanty Glo Water Authority

Linesville Pine Joint Municipal Authority

Nesquehoning Borough Authority

London Grove Township Municipal Authority

New Kensington Municipal Sanitary Authority

Lower Bucks County Joint Municipal Authority

New Kensington Redevelopment Authority

Lower Bucks County Joint Municipal Authority Supervisors

Newport Borough Water Authority

Lower Indiana County Municipal Authority

Norristown Municipal Waste Authority

Lower MahanoyTownship Municipal Authority

North & South Shenango Joint Municipal Authority

Lower Providence Township Sewer Authority

North Coventry Municipal Authority

Luzerne Conservation District North Huntingdon Township Municipal Authority

Lycoming Sanitary Committee North Middleton Authority

Mahanoy Township Authority North Strabane Township Municipal Authority

Mahoning Township Authority

Maidencreek Township Authority

Northampton Borough Municipal Authority (CB)

Manheim Borough Authority

Northeastern Regional Police (NU)

Manor Township Joint Municipal Authority

Northern Lancaster County Authority

Mary Meuser Memorial Library

Northern York County Regional Police (NU)

McKean County Solid Waste Authority

Northumberland Sewer Authority

Mercer County Regional Planning Commission

Northwest Regional Lancaster County Police (NU)

Mid Mon Valley Water Authority

Oil City Housing Authority

Middlesex Township Municipal Authority

Middletown Township Sewer Authority

Mifflin County Regional Police NU

Mifflintown Municipal Authority

Penn Township Sewage Authority

Mifflintown Municipal Authority

Pennridge Regional Police (NU)

Milford Water Authority Pennridge Waste Treatment Authority

Millcreek - Richland Joint Authority

Millersburg Area Authority

Mon Valley Sewage Authority

Monroe County Control Center

Perkasie Borough Authority

Peters Creek Sanitary Authority

Peters Township Municipal Authority

Portage Area Sewer Authority

Monroe County Redevelopment Authority

Montgomery County Sewer Authority

Montour County Conservation District

Possum Valley Municipal Authority

Reynoldsville Water Authority

Riverview Sanitary Authority

Montrose Municipal Authority

Moon Township Municipal Authority

Mount Joy Township Authority

Robester Area Joint Sewer Authority

Mount Pleasant Township Municipal Authority Rostraver Township Sewer Authority

Saxton Borough Municipal Authority

Seward/St. Clair Township Sanitary Authority

Shade-Central City Joint Authority

Shamokin City Redevelopment Authority

Shannock Valley General Services Authority

**Sharon Sanitary Authority** 

Sheffield Township Municipal Authority

Slippery Rock Municipal Authority

Smithton Borough Municipal Authority

**Snake Spring Township Authority** 

Somerset Conservation District

South Fayette Township Municipal Authority

South Middleton Township Municipal Authority

Southern Police Commission NU

Southwest Regional Dispatch Center

Southwestern Pa Water Authority

Southwestern Regional Police NU

St. Marys Area Water Authority

Sunbury Municipal Authority

Susquehanna Township Authority

Swatara Township Authority

Tower City Borough Authority

Township of Falls Authority

Tri-County COG IBC

Tri-County Joint Municipal Authority

Twin Boroughs Sanitary Authority

Upper Allegheny Joint Sanitary Authority

Upper Montgomery Joint Authority

Upper Southampton Municipal Authority

Vanport Township Municipal Authority

Vernon Township Sanitary Authority

Vernon Township Water Authority

Warren County Housing Authority

Warren County Solid Waste Authority

Warwick Township Municipal Authority

Washington Area COG

Washington Township Municipal Authority (Berks County)

Washington Township Municipal Authority (Fayette County)

Waterford Borough Municipal Authority

Wayne County Redevelopment Authority

Wayne Library Authority

Wernersville Municipal Authority

West Carroll Township Water & Sewer Authority

Western Butler County Authority

Western Clinton County Municipal Authority

Western Westmoreland Municipal Authority

Westmoreland-Fayette Municipal San Authority

White Run Regional Municipal Authority

Whitehall Township Authority

Williamstown Borough Authority

Womelsdorf-Robesonia Joint Authority

York County Planning Commission



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2013 **PMRS** Comprehensive Annual Financial Report