Gabriel Roeder Smith & Company
Consultants & Actuaries

MUNICIPAL POLICEMEN'S AND FIREMEN'S PENSION AND RELIEF FUNDS OF WEST VIRGINIA

CONSOLIDATED ACTUARIAL VALUATION REPORT
FOR THE YEAR BEGINNING JULY 1, 2013

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GRS

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November 6, 2014

Mr. Blair Taylor
Executive Director
West Virginia Municipal Pensions Oversight Board
1700 MacCorkle Avenue, SE – 3rd Floor
Charleston, West Virginia 25314

Subject: Consolidated Actuarial Valuation Report for the Year Beginning July 1, 2013

Dear Mr. Taylor:

Upon the request of the Municipal Pensions Oversight Board, we have performed an actuarial valuation as of July 1, 2013, of the Municipal Policemen's and Firemen's Pension and Relief Funds ("the Funds") in the State of West Virginia. This valuation has been performed in accordance with the West Virginia Code Chapter 8, Article 22, Sections 16 through 28, inclusive.

The primary purpose of the actuarial valuation is to assess the adequacy of the funding policy currently in use by each participating Fund as defined in West Virginia Code §8-22-20 which states the "minimum standard for actuarial soundness." The assessment of the adequacy of the current funding policy was based on individual actuarial valuations as of July 1, 2013, for each participating Fund and the valuations performed in ten prior plan years. The four statutory funding policies currently available to Plan Sponsors include the Standard Funding Policy as defined in West Virginia Code §8-22-20(c)(1), the Alternative Funding Policy as defined in West Virginia Code §8-22-20(c)(1), the Optional Funding Policy as defined in West Virginia Code §8-22-20(e), and the Conservation Funding Policy as defined in West Virginia Code §8-22-20(f).

The individual valuations were performed using a consistent and uniform set of actuarial assumptions and methods in order to establish a basis for comparing the actuarial soundness of the Funds. The assumptions and methods were recommended by the actuary, in the report *Actuarial Assumptions and Experience Review for the Period July 1, 2002, through July 1, 2009,* and approved by the Municipal Pensions Oversight Board.

This report also reviews, for Plan Sponsors currently using the Standard Funding Policy, the impact of switching to the Optional Funding Policy and for Plan Sponsors currently using the Alternative Funding Policy, the impact of switching to either the Optional Funding Policy or the Conservation Funding Policy.

We did not review the investment policy or the administrative practices of the individual Funds.

Each valuation is based upon:

Asset Values – Reconciliation of the market value of assets during the plan year ending June 30, 2013, and the market value of assets held as of June 30, 2013, by investment category, as provided by the sponsor of each participating Fund. The valuations recognize the extraordinary contributions made by the State to the Plans in July of 2013, in the total amount of $3,631,847. The extraordinary contributions were recognized as a receivable contribution as of June 30, 2013.

Plan Provisions – A summary of the key plan provisions valued is set forth in Section VII of the report: Summary of Principal Funding Policies and Plan Provisions.

Actuarial Methods – Fund liabilities were measured using the Entry-Age Normal Actuarial Cost Method. The actuarial valuations were based on the market value of assets. The actuarial methods used in the valuation are set forth in Section VI of the report: Actuarial Assumptions and Methods.

Actuarial Assumptions – The actuarial assumptions used in the valuations are set forth in Section VI of the report: Actuarial Assumptions and Methods.

The actuarial valuation results disclosed in this report are based on (1) plan membership data and asset values provided by each of the individual plan sponsors, (2) actuarial assumptions and actuarial methods described in Section VI of this report, and (3) the provisions of the Funds as defined in the West Virginia Code Chapter 8, Article 22, Sections 16 through 28, inclusive. Based on these items, we certify these results to be true and correct.

To the best of our knowledge, this actuarial statement is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practices.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan’s funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

Alex Rivera and Lance Weiss are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully yours,

Alex Rivera

Lance J. Weiss

Alex Rivera, FSA, EA, MAAA, FCA
Senior Consultant

Lance Weiss, EA, MAAA, FCA
Senior Consultant

SECTION I

EXECUTIVE SUMMARY

Executive Summary

Upon the request of the Municipal Pensions Oversight Board ("MPOB"), we have performed an actuarial study as of July 1, 2013, of the Municipal Policemen's and Firemen's Pension and Relief Funds ("the Funds") of West Virginia. The primary objective of the study is to perform individual actuarial valuations for each Fund in order to provide each plan sponsor information on:

- The funding requirements for fiscal year ending June 30, 2015,
- The Fund's eligibility to receive an allocation of the premium tax for fiscal year ending June 30, 2015,
- The Fund's eligibility to provide Supplemental Benefits for the plan year beginning July 1, 2015, and,
- The advantages and disadvantages of switching to one of the available funding policy options, including the Optional Funding Policy and Conservation Funding Policy as defined in West Virginia Code §8-22-20.

The individual actuarial valuation reports have been delivered to each plan sponsor. Appendix II contains a summary of the key valuation results for each Fund.

Another objective of the study is to review the overall adequacy of the current and available funding policies. For this purpose, we reviewed the actuarial valuations as July 1, 2013, actuarial projections of the current and available funding policy options, and historical valuation results.

The four funding policies available to plan sponsors are summarized below:

- West Virginia Code §8-22-20(c)(1) defines the Standard Funding Policy. Under this policy, employer contributions equal the net employer normal cost, plus an amortization of the unfunded actuarial liability, and less the State premium tax allocation applicable to the plan year. The amortization is based a 40-year closed period from July 1, 1991, using a level dollar amortization (18 years as of July 1, 2013). The Standard Funding Policy is consistent with generally accepted actuarial standards of practice.

- West Virginia Code §8-22-20(c)(1) defines the Alternative Funding Policy. Under this policy, employer contributions equal 107% of the prior year's employer contribution. The Alternative Funding Policy is not consistent with generally accepted actuarial standards of practice because the policy does not reflect emerging experience gains and losses, and may not produce an actuarially sound pattern of contributions or funded ratio.

- West Virginia Code §8-22-20(e)(1) defines the Optional Funding Policy, which allows plan sponsors, using either the Standard Funding Policy or Alternative Funding Policy, to close the current local Plan, and finance obligations on an actuarially determined basis as follows: The actuarially determined employer contribution is equal to the net employer normal cost, plus an amortization of the unfunded actuarial liability, less the State premium tax allocation applicable to the plan year. The closed amortization period as of July 1, 2013, is 18 years for sponsors who previously used the Standard Funding Policy and 36.5 years for sponsors who previously used the Alternative Funding Policy. Members hired after the adoption date of the Optional Funding Policy are covered in the recently established statewide pension plan – The Municipal Police Officers and Firefighters Retirement System.

- West Virginia Code §8-22-20(f)(1) defines the Conservation Funding Policy, which allows plan sponsors using the Alternative Funding Policy, to close the current local Plan, and finance obligations on a pay-as-you-go basis. Sponsors using the Conservation Funding Policy are required to assign a portion of the State premium tax allocation and member contributions to an accumulation account that is projected to grow to 100% of the remaining actuarial liabilities at the end of a 35-year projection period. Members hired after the adoption date of the Conservation Funding Policy are covered in the recently established statewide pension plan – the Municipal Police Officers and Firefighters Retirement System.

The details of the Standard, Alternative, Optional, and Conservation funding policies are presented in Section VII of the report.

The key findings of the actuarial study include:

- Standard plans (eight plans as of July 1, 2013) or former Standard plans that selected the Optional policy (seven plans as of July 1, 2013) are projected to be fully funded by the end of the 18-year projection period. This contribution policy is consistent with generally accepted actuarial standards of practice.

- As of July 1, 2013, five former Alternative plans have selected the Optional policy. These plans are projected to be fully funded as of 2050. This group includes two very large severely underfunded plans.

- As of July 1, 2013, two former Alternative plans have selected the Conservation policy. This policy may provide near-term contribution relief; however, because the contributions are based on pay-as-you-go funding, the contributions could be more volatile.

- In general, the Alternative Funding Policy produces contributions that grow at an annual rate of 7%, which is three percentage points higher than the assumed wage inflation assumption of 4%. This policy produces an ever increasing contribution pattern for which it may be difficult to budget. As of July 1, 2013, 31 of the 53 plans are financed using the Alternative Funding Policy.

- At the end of 30 years, only 16 out of 31 Alternative plans are projected to have contribution rates that are less than 40% of pay, and only two alternative plans are projected to never have a contribution rate exceeding 40% of pay. Also after 30 years, only 18 out of 31 Alternative plans are projected to have funded ratios that exceed 80%.

- One key concern of the Alternative Funding Policy is the level of required annual contributions relative to the net employer normal cost and amortization of the unfunded actuarial liability. A sound funding policy generally finances, on an annual basis, the normal cost plus a portion, generally 5% to 8%, of the unfunded actuarial liability.

The following table shows a distribution of FY 2015 and projected FY 2035 Alternative Funding Policy contributions, made by the sponsor and State, expressed in terms of the net normal cost plus a percentage of the unfunded actuarial liability.

Employer Contributions Plus State Premium Tax Allocation	Number of Alternative Plans Satisfying Conditions in	
	FY 2015	FY 2035
100% of Net Normal Cost plus 0% to 2% of Unfunded Actuarial Liability	14	4
100% of Net Normal Cost plus 2% to 4% of Unfunded Actuarial Liability	8	7
100% of Net Normal Cost plus 4% to 6% of Unfunded Actuarial Liability	5	3
100% of Net Normal Cost plus 6% or more of Unfunded Actuarial Liability (Sound Policy)	4	17

- Only nine of the 31 Alternative plans in Fiscal Year 2015 are expected to be contributing at a level that approximates a sound funding basis. This increases to 20 out of the 31 Alternative plans when we look at projected contributions in Fiscal Year 2035. (However, that takes into account 20 years of 7 percent increases in the annual contribution requirement.)

- For purposes of evaluating the Optional and Conservation funding policies, we performed open group projections for Standard and Alternative plans, and assumed the sponsor would select either the Optional or Conservation Funding Policy in the year that employer contributions are lower. Based on this rule, all Standard Plans would experience a reduction in employer contribution if the Optional Funding Policy was adopted in FY 2015. This occurs because the net employer normal cost rate for the local plan is higher than the statutory contribution rate of 8.5% to 10.5% of pay under the Municipal Police Officers and Firefighters Retirement System.

- For the Alternative Plans, the year that Optional or Conservation policy contributions are lower was not as apparent. The following table shows the year when contributions under the Optional or Conservation policy are expected to be lower than contributions under the Alternative policy:

	Number of Alternative Plans	
Year Municipality Contributions are lower	**If Optional Policy is selected**	**If Conservation Policy is selected**
2015	3	8
2016 to 2019	4	1
2020 to 2029	5	11
2030 to 2039	6	9
After 2040	13	2

- This table shows that only three Alternative plans are projected to receive immediate contribution relief if the Optional policy is selected. This table also shows that eight Alternative plans are projected to receive immediate contribution relief if the Conservation policy is selected.

- The Optional Funding Policy is based on sound actuarial principles and is projected to produce a reasonable pattern of contributions and funded ratios. The Conservation Funding Policy depends on the level of actual retirements and benefit payments made during the year, and could produce significant contribution volatility for the sponsor. The volatility is even greater for smaller plans that have fewer active members. That is, one or two unexpected retirements could significantly impact the sponsor's budget.

- The Optional and Conservation Funding policies may not be viable options for many of the Alternative Plans. In addition, we strongly encourage the plan sponsor to consider not only the affordability of the funding policy but also the projected patterns of contributions and funded ratios in future years.

- Sponsors using the Alternative Funding Policy may want to consider making additional contributions in excess of the statutory minimum to ensure a reasonable pattern of growth in the funded ratio.

Other observations include:

- Our valuation assumes the sponsor is required to contribute at least the normal cost in order to receive the State premium tax allocation. Two plans with a funded ratio in excess of 100% as of July 1, 2013, are projected to experience an increasing funded ratio. At some point, the sponsor may no longer need additional contributions. For example, a plan that is at least 125% funded on a present value of future benefit basis, may have a sufficient cushion for future adverse experience.

- One of the key factors used to set the discount rate is the percentage of assets allocated to equities. If available, we used the target equity asset allocation contained in the Plan's investment policy. Otherwise, we used the percentage of assets invested in equities as of the valuation date. Our preference is to use the target allocation in the investment policy.

- The discount rate was increased for 15 plans and decreased for two plans. The change in discount rate reduced the actuarial liabilities by approximately $14.4 million, or approximately 1.2% of actuarial liabilities as of the beginning of the plan year. Factors that contributed towards the increase in the discount rate include: favorable investment returns, extraordinary State contributions, favorable actuarial experience, and changes in the equity allocation.

- The valuations recognize the extraordinary contributions made by the State to the Plans in July of 2013, in the total amount of $3,631,847.

- GASB No. 67 is replacing GASB No. 25 for pension plan financial reporting requirements (effective in fiscal year ending June 30, 2014) and GASB No. 68 is replacing GASB No. 27 for employer financial reporting (effective in fiscal year ending June 30, 2015). For plans that are projected to have zero assets in the future, on a closed group basis, the discount rate used for GASB Nos. 67 and 68 financial reporting purposes will be based on a blended rate of the long-term investment return rate and a 20-year tax-exempt municipal bond index rate. Under the new accounting standards, the unfunded actuarial liability will need to be recognized on the plan sponsor's balance sheet. The new accounting standards will not impact the current contribution policies. GRS will be providing a separate GASB No. 67 report to each plan sponsor.

The remainder of the report provides additional details supporting the preceding findings and observations.

SECTION II

VALUATION RESULTS

Actuarial Valuation Results as of July 1, 2013

Valuation Methodology

- Individual actuarial valuations as of July 1, 2013, were performed for each Fund that participated in the study. We received usable census and asset information for all 53 Funds in the State. The table on page 13 shows a summary of the key valuation results as of July 1, 2013, for the participating Funds. The results are broken out among Funds that have elected the Standard, Alternative, Optional or Conservation Funding Policy.

- The actuarial valuations were based on assumptions and methods recommended by GRS, in the report *Actuarial Assumptions and Experience Review for the Period July 1, 2002, through July 1, 2009*, and approved by the Municipal Pensions Oversight Board.

- A gain/loss analysis of changes in assets and liabilities from the previous valuation was performed. In addition, the actuarial projections from the current valuation were analyzed and trends were reviewed.

- Actuarial projections (40-year open group) were performed assuming the employer would make contributions under the funding policy selected by the Plan sponsor – either the Standard Funding Policy, the Alternative Funding Policy, the Optional Funding Policy or the Conservation Funding Policy.

- The key indicators used to assess the funding adequacy were the funded ratio and the employer contribution expressed as a percentage of payroll. The funded ratio is defined as the market value of assets divided by the actuarial accrued liability. In our opinion, a Fund that has a funded ratio of less than 70% or a required contribution rate in excess of 30% of payroll could be at financial risk of not being sustainable at some point in the future – i.e., not being able to pay the promised benefits, or of having a contribution requirement that is too large to be affordable.

Key findings for Plans using the Standard Funding Policy

- Eight plans, (or about 15.1% of all 53 participating Funds), covering only 2.6% of plan participants, and 1.7% of total liabilities are financed using the Standard Funding Policy. Most Funds using this funding policy are Class III municipalities (seven in Class III and one in Class II).

- For Funds using the Standard Funding Policy, the funded ratios as of July 1, 2013, range from 31% to 80%. The contribution rates range from 16% to 57% of payroll for FY 2014 and 17% to 57% of payroll for FY 2015

- The average employer contribution rate is 47% of payroll for FY 2014 and 38% of payroll for FY 2015.

- The average funded ratio for all Standard plans is 55%. The unfunded actuarial accrued liability for Funds using the Standard policy is approximately $9.7 million or 1.0% of the total unfunded liabilities for all Funds.

- On a projected basis, the funded ratio for all Funds using the Standard Funding Policy increases steadily and approaches 100% by 2031 (as required by State Statutes). In addition, the projected contribution rates are generally level or decline steadily. These relationships are a direct consequence of the funding method and are consistent with the historical valuation results.

Key findings for Plans using the Alternative Funding Policy

- Thirty-one plans (or about 58.5% of all 53 participating Funds), covering 61% of plan participants, are financed using the Alternative Funding Policy.

- The average employer contribution rate is 36% of payroll for FY 2014 and 36% of payroll for FY 2015.

- The average funded ratio is only 25%. The unfunded actuarial accrued liability for Funds using the Alternative policy is approximately $538 million or 54.5% of the total unfunded liabilities for all Funds.

- After 30 years only 18 out of 31 Alternative Plans are projected to be at least 80% funded.

Key findings for Plans that switched from the Alternative Funding Policy to the Optional Funding Policy

- Five plans that were previously using the Alternative Funding Policy (or about 9.4% of all 53 participating Funds), covering 14.7% of plan participants, are now financed using the Optional Funding Policy.

- The average employer contribution rate is 101% of payroll for FY 2014 and 98% of payroll for FY 2015.

- The average funded ratio is only 23%. The unfunded actuarial accrued liability for these Funds is approximately $156.0 million or 15.8% of the total unfunded liabilities for all Funds.

- Under the Optional Funding Policy, all plans that switched from Alternative Funding Policy are by definition projected to be 100% funded by the end of the amortization period in 40 years. However, the funded ratios will increase at a very slow rate for many years and leave the plans vulnerable if there is another significant market downturn.

- Contributions to the closed local plans are projected to decrease in future years as new hires enter the Municipal Police Officers and Firefighters Retirement System.

Key findings for Plans that switched from the Standard Funding Policy to the Optional Funding Policy

- Seven plans, (or about 13.2% of all 53 participating Funds), covering only 2.0% of plan participants, and 1.4% of total liabilities are financed using the Optional Funding Policy that switched from the Standard Funding Policy. All of the Funds using this funding policy are Class III municipalities.

- The average employer contribution rate is 44% of payroll for FY 2014 and 41% of payroll for FY 2015.

- The average funded ratio for these seven plans is 70% and the unfunded actuarial accrued liability is approximately $5.1 million or 0.5% of the total unfunded liabilities for all Funds.

- On a projected basis, the funded ratio for these Funds increases steadily and approaches 100% by 2031 (as required by State Statutes). In addition, the projected contribution rates are generally level or decline steadily. These relationships are a direct consequence of the funding method and are consistent with the historical valuation results.

Key Findings for Plans using the Conservation Funding Policy

- Two plans (or about 3.8% of all 53 participating Funds), covering 19.8% of plan participants, are financed using the Conservation Funding Policy. These two plans are both Class I municipalities.

- The average employer contribution rate is 53% of payroll for FY 2014 and 66% of payroll for FY 2015.

- The average funded ratio is only 8.2%. The unfunded actuarial accrued liability for Funds using the Conservation policy is approximately $277.6 million or 28.1% of the total unfunded liabilities for all Funds.

- Employer contributions will be used directly to pay benefits not covered by member contributions or the premium tax allocation. As such, employer contributions for sponsors currently using the Conservation policy plans are projected to increase each year for the next 21 years as projected benefit payments increase.

- The Conservation Funding Policy defers contributions and produces virtually no significant growth in the funded ratio until the last 10 years of the projection period. This policy is not consistent with generally accepted actuarial principles.

Historical Comparison of Funded Ratios and Contribution Rates by Funding Policy

Funds using the Alternative Funding Policy, in general, have much lower funded ratios, when compared to Funds using the Standard Funding Policy. The following tables compare the historical averages of funded ratios and contributions rates at each respective valuation date:

Funded Ratio As of July 1	Standard Policy Plans		Alternative Policy Plans		Optional Policy Plans From Standard		Optional Policy Plans From Alternative		Conservation Policy Plans	
	Number	Average	Number	Average	Number	Average	Number	Average	Number	Average
2013	8	55%	31	25%	7	70%	5	23%	2	8%
2012	8	47%	31	23%	7	63%	5	20%	2	7%
2011	9	50%	31	24%	6	62%	5	18%	2	7%
2010	14	44%	32	22%	1	57%	4	12%	2	7%
2009	14	52%	37	19%	NA	NA	NA	NA	NA	NA

As of the July 1, 2013 valuation, seven Standard plans selected the Optional Funding Policy, five Alternative plans selected the Optional Funding Policy, and two Alternative plans selected the Conservation Funding Policy.

Employer Contribution Rate [2] For FY Beginning July 1	Standard Policy Plans		Alternative Policy Plans		Optional Policy Plans From Standard		Optional Policy Plans From Alternative		Conservation Policy Plans	
	Number	Average[1]	Number	Average	Number	Average	Number	Average	Number	Average
2014	7	38%	31	36%	7	41%	5	98%	2	66%
2013	7	47%	31	36%	7	44%	5	101%	2	53%
2012	7	42%	31	33%	7	36%	5	95%	2	50%
2011	8	51%	31	32%	6	47%	5	97%	2	49%
2010	13	33%	32	30%	1	45%	4	103%	2	31%
2009	13	34%	37	39%	NA	NA	NA	NA	NA	NA

[1] One outlying Standard Policy Fund, excluded from this table, is closed to new employees, has six retired members, no active members, and no payroll.
[2] As a percentage of payroll.

- Sponsors using the Standard Funding Policy and former Standard plans that selected the Optional Funding Policy are required to contribute the net normal cost plus a 18-year (from July 1, 2013) closed level dollar amortization of the unfunded actuarial liability. By definition, these Funding Policies produce a projected funded ratio of 100% at the end of 18 years and are consistent with generally accepted actuarial standards of practice.

- Because the net employer normal cost rate for Standard plans (generally around 22% of pay) is higher than the statutory contribution rate of 8.5% to 10.5% of pay under the Municipal Police Officers and Firefighters Retirement System, all Standard plans would experience a reduction in employer contributions if the Optional Funding policy was adopted, with no significant impact to the funded ratio. In fact, seven Standard plans recognized this relationship and converted from the Standard Funding Policy to the Optional Funding Policy prior to the July 1, 2013 actuarial valuation.

- Sponsors using the Alternative Funding Policy are required to contribute 107% of the prior year's contribution. The Alternative Funding Policy is not consistent with generally accepted actuarial standards of practice because the policy does not reflect emerging gains and losses and may not produce an actuarially sound pattern of contributions and funded ratio. As a direct result of this funding policy, Alternative plans are on average half as well funded as Standard plans.

- Unlike Standard plans, Alternative plans are generally not expected to receive immediate contribution relief from switching to the Optional policy because the Alternative policy contributions in many cases are considerably lower than the actuarially based contributions defined under the Optional policy. However, plan sponsors currently using the Alternative Funding Policy may find it more affordable in the long run to switch to the Optional Funding Policy even if it means an increase in the employer contributions in the short term.

- As an alternative to switching to the Optional Funding Policy, sponsors of Alternative plans may want to consider making additional contributions in excess of the statutory minimum to ensure a reasonable pattern of growth in the funded ratio.

- Standard plans and former Standard plans that have selected the Optional Policy are projected to be 100% funded by the end of the 18 year amortization period in 2031. Under the Alternative Funding Policy, only 19% of plans are projected to be fully funded by 2031.

- The following table compares the percentage of funds that are projected to be fully funded by 2031 for each historical valuation:

Valuation As of July 1	Percentage of Plans that are Projected to be Fully Funded by 2031				
	Standard	Alternative	Optional from Standard	Optional from Alternative [a]	Conservation
2013	100%	19%	100%	0%	0%
2012	100%	10%	100%	0%	0%
2011	100%	10%	100%	20%	0%
2010	100%	9% [b]	100%	0%	0%
2009	100%	32%	NA	NA	NA

[a] Former Alternative plans that selected the Optional policy are projected to be fully funded by 2050.

[b] The significant decrease from 32% in 2009 to 9% in 2010 for Alternative Plans is primarily the result of the changes in assumptions.

Comparison of Historical Valuation Results

The following table compares basic historical data for plans that have participated in the actuarial valuation studies. Adjusting for the net impact of non-participating plans in each respective valuation cycle, pay has historically increased by approximately 3% to 6% per year, and total benefits paid have increased by 3% to 4% per year.

($ in Millions)	2013	2012	2011	2010	2009
Participating Plans	53	53	53	53	51
Payroll	$78.6	$80.1	$78.1	$77.1	$75.2
Benefits Paid	$57.9	$56.1	$53.9	$51.8	$50.2

The following table compares historical actuarial information. The key observation is that the funded ratio has remained relatively flat over the last five-year period. The change in assumptions in 2010 increased the actuarial liability and normal cost.

($ in Millions as of July 1)	2013	2012	2011	2010	2009
Assets	$272.3	$245.6	$236.1	$205.5	$186.9
Liability	$1,258.9	$1,243.9	$1,188.8	$1,181.7	$941.6
Funded Ratio	22%	20%	20%	17%	20%
Net Employer Normal Cost % of Pay	29%	30%	31%	32%	22%

The following table compares historical contributions. The employer contribution rates have increased primarily because contributions under the Alternative Funding Policy increase at an annual rate of 7% while payroll has increased by 3% to 6% annually. The State contributions depend on the premium volume for property casualty insurance.

(Plan year beginning July 1) ($ in Millions)	2014	2013	2012	2011	2010
Net Employer Contributions	$40.0	$39.6	$36.6	$36.1	$30.6
(% of Pay)	50%	50%	46%	46%	40%
State Premium Tax Allocation	$16.5	$15.9	$17.0	$16.2	$16.9
(% of Pay)	21%	20%	21%	21%	22%

The following tables compare the funded ratio and the employer contribution rate under the various funding policies. In general, the funded ratios increased due to favorable investment and demographic experience. The change in funded ratios and contribution rates was also impacted by plans that switched from either the Alternative or Standard policy to the Optional policy. During the plan year ended June 30, 2013, no Standard plans and no Alternative plans switched to the Optional policy.

Funded Ratio as of July 1	**2014**	**2013**	**2012**	**2011**	**2010**
($ in Millions)					
- Standard Plans	NA	55%	47%	50%	44%
- Alternative Plans	NA	25%	23%	24%	22%
- Optional from Standard	NA	70%	63%	62%	57%
- Optional from Alternative	NA	23%	20%	18%	12%
- Conservation Plans	NA	8%	7%	7%	7%
Contributions Rates % of Pay					
(Plan year beginning July 1)					
- Standard Plans	38%	47%	42%	51%	33%
- Alternative Plans	36%	36%	33%	32%	30%
- Optional from Standard	41%	44%	36%	47%	45%
- Optional from Alternative	98%	101%	95%	97%	103%
- Conservation Plans	66%	53%	50%	49%	31%

The details of the historical actuarial valuations are shown on pages 13 and 14 and Appendix I in Section VIII. A gain/loss analysis, reconciling the unfunded liability from June 30, 2012 to June 30, 2013, is shown on pages 15 and 16. During the plan year ending June 30, 2013, the Funds in the aggregate experienced an investment return on the market value of assets of approximately 7.7%.

	Standard Policy	**Alternative Policy**	**Optional Policy From Standard**	**Optional Policy From Alternative**	**Conservation Policy**	**All Plans [a]**
Participating Plans	8	31	7	5	2	53
FYE 2014 Contributions						
Employer Contributions [a]	$1,104,761	$17,193,356	$733,460	$10,421,437	$10,111,068	$39,564,082
State Premium Tax Allocation	$467,888	$9,762,331	$289,615	$2,315,398	$3,073,334	$15,908,566
Employee Contributions	$173,655	$3,704,059	$124,801	$723,643	$1,290,413	$6,016,571
FYE 2015 Contributions						
Employer Contributions [a]	$915,791	$17,891,406	$666,145	$9,959,644	$10,533,831	$39,966,817
State Premium Tax Allocation	$497,271	$10,074,744	$264,403	$2,456,478	$3,166,977	$16,459,873
Employee Contributions	$180,470	$3,845,662	$121,703	$717,075	$1,277,993	$6,142,903

[a] For plans under the Alternative Funding Policy, includes any additional contributions required to satisfy both 15-year solvency tests.

Summary of Key Valuation Results as of July 1, 2013

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans [a]
Participating Plans	8	31	7	5	2	53
Plan Membership						
(a) Actives	57	1,059	42	206	300	1,664
(b) Annuitants	41	1,240	31	347	451	2,110
(c) Inactives	0	18	2	6	2	28
(d) Total	98	2,317	75	559	753	3,802
Payroll	$2,366,284	$48,160,983	$1,656,835	$10,293,663	$16,130,158	$78,607,923
Expected Benefit Payments	$992,913	$32,755,672	$675,134	$10,064,167	$13,389,613	$57,877,499
Actuarial Accrued Liabilities						
(a) Actives	$10,140,817	$246,239,521	$6,536,368	$62,961,733	$95,208,771	$421,087,210
(b) Annuitants	$11,590,197	$461,136,585	$9,912,901	$135,637,037	$205,951,922	$824,228,642
(c) Inactives	$0	$8,471,096	$577,942	$3,363,678	$1,146,560	$13,559,276
(d) Total Liabilities	$21,731,014	$715,847,202	$17,027,211	$201,962,448	$302,307,253	$1,258,875,128
Market Value of Assets	$12,026,120	$177,689,488	$11,909,170	$45,980,538	$24,711,384	$272,316,700
Unfunded Liability	$9,704,894	$538,157,714	$5,118,041	$155,981,910	$277,595,869	$986,558,428
Funded Ratio	55%	25%	70%	23%	8%	22%
Net Employer Normal Cost	$518,843	$13,693,709	$400,773	$2,982,759	$5,224,684	$22,820,768
(% of Payroll)	22%	28%	24%	29%	32%	29%
FYE 2014 Contributions						
Employer Contributions [b]	$1,104,761	$17,193,356	$733,460	$10,421,437	$10,111,068	$39,564,082
(% of Payroll)	47%	36%	44%	101%	53%	50%
State Premium Tax Allocation	$467,888	$9,762,331	$289,615	$2,315,398	$3,073,334	$15,908,566
(% of Payroll)	20%	20%	17%	22%	16%	20%
Employee Contributions	$173,655	$3,704,059	$124,801	$723,643	$1,290,413	$6,016,571
(% of Payroll)	7.3%	7.7%	7.5%	7.0%	8.0%	7.7%
FYE 2015 Contributions						
Employer Contributions [b]	$915,791	$17,891,406	$666,145	$9,959,644	$10,533,831	$39,966,817
(% of Payroll)	38%	36%	41%	98%	66%	50%
State Premium Tax Allocation	$497,271	$10,074,744	$264,403	$2,456,478	$3,166,977	$16,459,873
(% of Payroll)	21%	20%	16%	24%	20%	21%
Employee Contributions	$180,470	$3,845,662	$121,703	$717,075	$1,277,993	$6,142,903
(% of Payroll)	7.5%	7.8%	7.6%	7.0%	8.0%	7.7%
Additional 2015 Solvency Cont.						
- To Receive State Allocation	NA	$8,000	NA	NA	NA	$8,000
- And to provide COLA Benefits	NA	$294,300	NA	NA	NA	$294,300

[a] All Funds participating in the Study.
[b] For plans under the Alternative Funding Policy, includes any additional contributions required to satisfy both 15-year solvency tests.

Summary of Key Valuation Results as of July 1, 2012

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans [a]
Participating Plans	8	31	7	5	2	53
Plan Membership						
(a) Actives	54	1,047	47	214	328	1,690
(b) Annuitants	41	1,235	30	349	435	2,090
(c) Inactives	2	14	2	5	2	25
(d) Total	97	2,296	79	568	765	3,805
Payroll	$2,257,353	$47,188,291	$1,822,891	$10,829,347	$18,016,906	$80,114,788
Expected Benefit Payments	$962,258	$31,799,022	$652,237	$9,841,302	$12,811,676	$56,066,495
Actuarial Accrued Liabilities						
(a) Actives	$9,425,810	$244,054,976	$6,354,597	$62,959,294	$102,052,640	$424,847,317
(b) Annuitants	$11,910,495	$459,265,394	$9,554,856	$134,315,553	$192,252,521	$807,298,819
(c) Inactives	$754,460	$6,855,334	$542,148	$2,488,472	$1,099,482	$11,739,896
(d) Total Liabilities	$22,090,765	$710,175,704	$16,451,601	$199,763,319	$295,404,643	$1,243,886,032
Market Value of Assets	$10,286,118	$164,540,590	$10,407,930	$39,234,716	$21,095,390	$245,564,744
Unfunded Liability	$11,804,647	$545,635,114	$6,043,671	$160,528,603	$274,309,253	$998,321,288
Funded Ratio	47%	23%	63%	20%	7%	20%
Net Employer Normal Cost	$543,077	$14,189,885	$439,871	$3,111,036	$5,795,971	$24,079,840
(% of Payroll)	24%	30%	24%	29%	32%	30%
FYE 2013 Contributions						
Employer Contributions [b]	$948,695	$15,748,962	$649,913	$10,268,139	$9,006,949	$36,622,658
(% of Payroll)	42%	33%	36%	95%	50%	46%
State Premium Tax Allocation	$500,600	$10,364,023	$318,378	$2,476,210	$3,387,287	$17,046,498
(% of Payroll)	22%	22%	17%	23%	19%	21%
Employee Contributions	$162,967	$3,561,950	$137,055	$760,692	$1,441,353	$6,064,017
(% of Payroll)	7.2%	7.5%	7.5%	7.0%	8.0%	7.6%
FYE 2014 Contributions						
Employer Contributions [b]	$1,104,761	$17,193,356	$733,460	$10,421,437	$10,111,068	$39,564,082
(% of Payroll)	47%	36%	44%	101%	53%	50%
State Premium Tax Allocation	$467,888	$9,762,331	$289,615	$2,315,398	$3,073,334	$15,908,566
(% of Payroll)	20%	20%	17%	22%	16%	20%
Employee Contributions	$173,655	$3,704,059	$124,801	$723,643	$1,290,413	$6,016,571
(% of Payroll)	7.3%	7.7%	7.5%	7.0%	8.0%	7.7%
Additional 2014 Solvency Cont.						
- To Receive State Allocation	NA	$26,100	NA	NA	NA	$26,100
- And to provide COLA Benefits	NA	$342,400	NA	NA	NA	$342,400

[a] All Funds participating in the Study.

[b] For plans under the Alternative Funding Policy, includes any additional contributions required to satisfy both 15-year solvency tests.

(Gain) / Loss Analysis

The Funds experienced an aggregate actuarial gain of $14,056,098 during the plan year ending June 30, 2013. The key factors contributing to the experience gain included:

- **Asset Performance:** The Funds, in the aggregate, experienced an investment return of 7.7% on the market value of assets during the plan year ending June 30, 2013, which compares to the average expected annual return of 5.5%. The difference in actual versus expected return produced an asset gain of $5,389,570.

- **Demographic Experience:** An actuarial valuation is based on the expectation of certain events such as salary increases, retirement, disability, mortality, and termination. Demographic or liability experience gains and losses are generated when the actual occurrence of such events are different from the expectation. Between June 30, 2012 and June 30, 2013, the Funds experienced an aggregate net liability gain of $8,666,528. The net liability gain of $8,666,528 (or 0.7% of expected liabilities) is within the range of reasonable variation and is primarily the result of the following factors:

  - Salary growth rates during the plan year July 1, 2012 to June 30, 2013 that were less than the assumed rate of 5%; and
  - Cost-of-living adjustments during the plan year July 1, 2012 to June 30, 2013 that were less than the assumed rate of 3%.

(Gain) / Loss Analysis

Experience (gain) loss for plan year ending June 30, 2013

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans
Participating Plans:	8	31	7	5	2	53
1. (a) Liability as of 7/1/2012	$22,090,765	$710,175,704	$16,451,601	$199,763,319	$295,404,643	$1,243,886,032
(b) Normal Cost due 7/1/2012	683,527	17,590,335	559,457	3,795,008	7,204,340	29,832,667
(c) Interest on (a) and (b) to 6/30/2013 [a]	1,379,700	37,444,430	1,038,316	10,724,524	14,950,341	65,537,311
(d) Benefit Payments with interest to 6/30/2013 [a]	972,829	32,350,268	664,296	10,025,325	13,286,250	57,298,968
(e) Effect of Assumption Changes on Unfunded AAL at 6/30/2013	(684,500)	(13,758,929)	40,213	(12,170)	0	(14,415,386)
(f) Expected Liability at 7/1/2013 [(a) + (b) + (c) - (d) + (e)]	22,496,663	719,101,272	17,425,291	204,245,356	304,273,074	1,267,541,656
(g) Actual Liability at 7/1/2013	$21,731,014	$715,847,202	$17,027,211	$201,962,448	$302,307,253	$1,258,875,128
(h) Liability (Gain)/Loss [(g) - (f)]	**($765,649)**	**($3,254,070)**	**($398,080)**	**($2,282,908)**	**($1,965,821)**	**($8,666,528)**
2. (a) Market Value of Assets as of 7/1/2012	$10,286,118	$164,540,590	$10,407,930	$39,234,716	$21,095,390	$245,564,744
(b) Adjustment to Market Value of Assets at Beginning of Year [b]	25,154	(415,133)	(5,935)	(5,339)	0	(401,253)
(c) Interest on (a) and (b) to 6/30/2013 [a]	647,532	8,768,494	667,853	2,004,859	1,040,758	13,129,496
(d) Contributions with interest to 6/30/2013 [a]	1,902,926	33,307,183	1,483,741	14,096,937	15,142,324	65,933,111
(e) Benefit Payments with interest to 6/30/2013 [a]	972,829	32,350,268	664,296	10,025,325	13,286,250	57,298,968
(f) Expected Assets at 6/30/2013 [(a) + (b) + (c) + (d) - (e)]	11,888,901	173,850,866	11,889,293	45,305,848	23,992,222	266,927,130
(g) Actual Assets at 7/1/2013	$12,026,120	$177,689,488	$11,909,170	$45,980,538	$24,711,384	$272,316,700
(h) Asset (Gain)/Loss [(f) - (g)]	**($137,219)**	**($3,838,622)**	**($19,877)**	**($674,690)**	**($719,162)**	**($5,389,570)**
3. Total (Gain)/Loss [1(h) + 2(h)]	**($902,868)**	**($7,092,692)**	**($417,957)**	**($2,957,598)**	**($2,684,983)**	**($14,056,098)**

[a] *Interest based on assumptions used for each specific plan as of June 30, 2012.*
[b] *Nine plans restated their Market Value of Assets as of June 30, 2012.*

Valuation Data as of July 1, 2013

Summary of Participant Activity – All Plans Combined

	Actives	Retirees	Disabled	Deferred Vested	Spouses and Beneficiaries	Totals
Total Participants July 1, 2012:	**1,690**	**1,298**	**286**	**25**	**506**	**3,805**
New Actives:	81					**81**
Returned to Actives Status:	1			(1)		**0**
Data Corrections/Other Changes:		1			2	**3**
Vested Terminations:	(10)			10		**0**
Non-Vested Terminations:	(44)					**(44)**
Disabled:	(11)		11			**0**
Retirements:	(41)	48	(2)	(5)		**0**
Deaths with Beneficiary:	(1)	(19)	(5)	(1)	26	**0**
Deaths w/o Beneficiary:	(1)	(12)	(3)		(24)	**(40)**
Expired Annuity or Stop Payment:					(3)	**(3)**
Net Changes:	(26)	18	1	3	1	**(3)**
Total Participants June 30, 2013:	**1,664**	**1,316**	**287**	**28**	**507**	**3,802**

Distribution of Active Employees by Age and Length of Service – All Plans Combined

Attained Age	Less than 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35	Totals	Valuation Payroll
	Years of Service to Valuation Date										
Under 20											$ 0
20-24	22	53	1							**76**	**2,855,744**
25-29	27	116	85	2						**230**	**9,389,721**
30-34	7	78	169	41	1					**296**	**13,174,508**
35-39	1	38	96	131	41	1				**308**	**14,243,633**
40-44	1	13	47	128	160	33				**382**	**19,257,028**
45-49		1	5	39	79	106	23			**253**	**13,307,974**
50-54			3	4	28	35	16	4		**90**	**4,767,236**
55-59					4	9	1	9	3	**26**	**1,437,572**
60-64									3	**3**	**174,507**
65-69											**0**
Over 70											**0**
Totals	**58**	**299**	**406**	**345**	**313**	**184**	**40**	**13**	**6**	**1,664**	**$ 78,607,923**

Averages

Age:	38.5	years
Service:	11.4	years
Annual Pay:	$47,240	

Participants Summary

Active Participants	July 1, 2012	July 1, 2013
Number of Actives	1,690	1,664
Total Annual Pay	$80,114,788	$78,607,923
Average Age	38.3	38.5
Average Service	11.1	11.4

Inactive Participants	July 1, 2012		July 1, 2013	
Type	No.	Annual Benefit	No.	Annual Benefit
Retirees	1,298	$41,998,514	1,316	$43,603,538
Surviving Spouses	506	$6,258,819	507	$6,542,886
Disabled Members	286	$6,032,005	287	$6,285,115
Deferred Vested Members	25	$651,525	28	$773,488

SECTION III

ACTUARIAL PROJECTIONS –
CURRENT FUNDING POLICY

Actuarial Projections – Current Funding Policy – Distribution of Plans

The tables below show a distribution of the number of Plans, by funding policy selected, that are projected to have an employer contribution rate or funded ratio that falls within a certain range. The projections are based on the actuarial valuation as of July 1, 2013. For purposes of comparing the relationship of the projected distributions, we have selected five representative years in the 40-year projection period: 2013, 2023, 2033, 2043, and 2053.

Funded Ratio Comparison

The table below summarizes the distribution of the projected funded ratios for all Funds.

Projection Period	Target Funded Ratio	2013 Valuation Number of Plans				
		Standard Plans	Alternative Plans	Optional From Standard	Optional From Alternative	Conservation Plans
	Greater Than:					
2013	20%	8	20	7	4	0
2023	40%	8	12	7	3	0
2033	60%	8	13	7	2	0
2043	80%	8	18	7	2	0
2053	100%	8	24	7	5	2
Of Total Number of Plans:		**8**	**31**	**7**	**5**	**2**

Standard Plans or former Standard Plans that switched to the Optional Policy

Based on the 2013 valuation results, 100% of Standard Plans or former Standard Plans that switched to the Optional Funding Policy, have a funded ratio greater than 20% as of June 30, 2013, and are projected to be fully funded by 2031. Factors that may cause the projected funded ratio to increase at a slower rate include:

- Emerging actuarial losses in the future, including decreases in assets and increases in liabilities at a rate higher than expected, and
- Actual contributions less than projected contributions.

Alternative Plans

Based on the 2013 valuation, 65% of the Alternative plans had a funded ratio of at least 20% as of June 30, 2013.

The projected funded ratios for Alternative plans are expected to increase at a much slower rate than Standard plans. By 2033, approximately only 42% of the Alternative plans are expected to be funded at over 60% compared to 100% for the Standard plans.

Our projections assume sponsors will elect the Standard policy if the funded ratio exceeds 80% and the Standard policy contribution is lower than the Alternative policy contribution. Switching to the Standard policy tends to stabilize the growth of the funded ratio. We project that by 2043, 18 of the 31 remaining Alternative policy plans, or 58%, will have switched to the Standard policy.

Former Alternative Plans that switched to the Optional Policy

Former Alternative Plans that switched to the Optional Policy are projected to be fully funded by 2050. Five former Alternative Plans, some being very large and severely underfunded, have selected the Optional Policy. The Optional Policy is similar to the Standard Policy with the exception of the amortization period.

Conservation Plans

Plans using the Conservation Funding Policy are projected to experience a very slow growth in the funded ratio. This policy effectively defers the contributions needed to produce a sustainable growth in the funded ratio.

Contribution Rate Comparison

The table below summarizes the distribution of the projected contribution rates for all Funds. For comparison purposes, we have assumed a target contribution rate of less than 40% for all projection years.

		2013 Valuation Number of Plans				
Projection Period	**Target Contribution Rate**	**Standard Plans**	**Alternative Plans**	**Optional From Standard**	**Optional From Alternative**	**Conservatio n Plans**
	Less Than:					
2013	**40%**	3	21	4	2	0
2023	**40%**	6	15	4	2	0
2033	**40%**	8	12	7	3	0
2043	**40%**	8	16	7	5	0
2053	**40%**	8	24	7	5	2
Of Total Number of Plans:		**8**	**31**	**7**	**5**	**2**

Under the Optional Policy and Conservation Policy, contributions are based on total payroll and includes the contributions made to the Municipal Police Officers and Firefighters Retirement System.

Standard Plans or former Standard Plans that switched to the Optional Policy

The percentage of Standard plans and former Standard plans that have switched to the Optional Policy with a 2013 contribution rate less than 40% of payroll is 47%. In the long-term, we would expect the contribution rate to decrease as plans become fully funded. Once the plans become fully funded, the contribution rate should approach the normal cost rate of approximately 25% to 35%.

Alternative Plans

Based on the 2013 valuation, 68% of the Alternative plans had a contribution rate for 2013 of less than 40%.

In the short-term, the percentage of Alternative plans with a 2013 contribution rate less than 40% is comparable to the percentage for Standard plans. However, by 2033, only 39% of Alternative plans compared to 100% of Standard plans are projected to have a contribution rate of less than 40%. The Alternative plans with a projected contribution rate of less than 40% generally have reached a funded ratio of 80% and have triggered the Standard Funding Policy, following a period in which employer contributions rates were very high.

Former Alternative Plans that switched to the Optional Policy

The Optional plans will eventually produce contribution rates that are less than 40%, as the unfunded actuarial liability decreases.

Conservation Plans

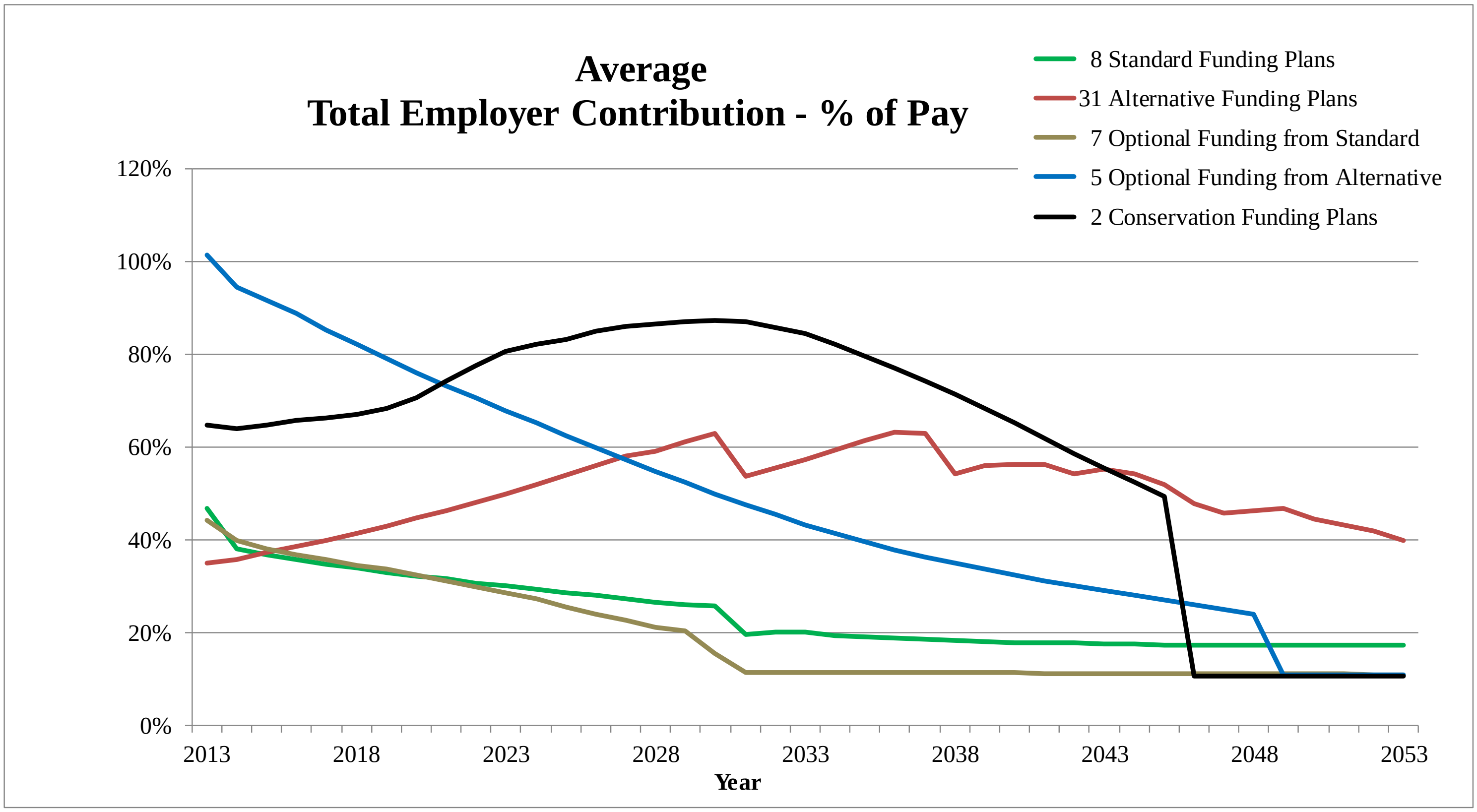
The Conservation plans are projected to experience an increase in contributions as the number of retired members increases. Eventually, plan obligations will decrease as the number of retirees decreases. However, this is not projected to occur until close to the end of the 40-year projection period.

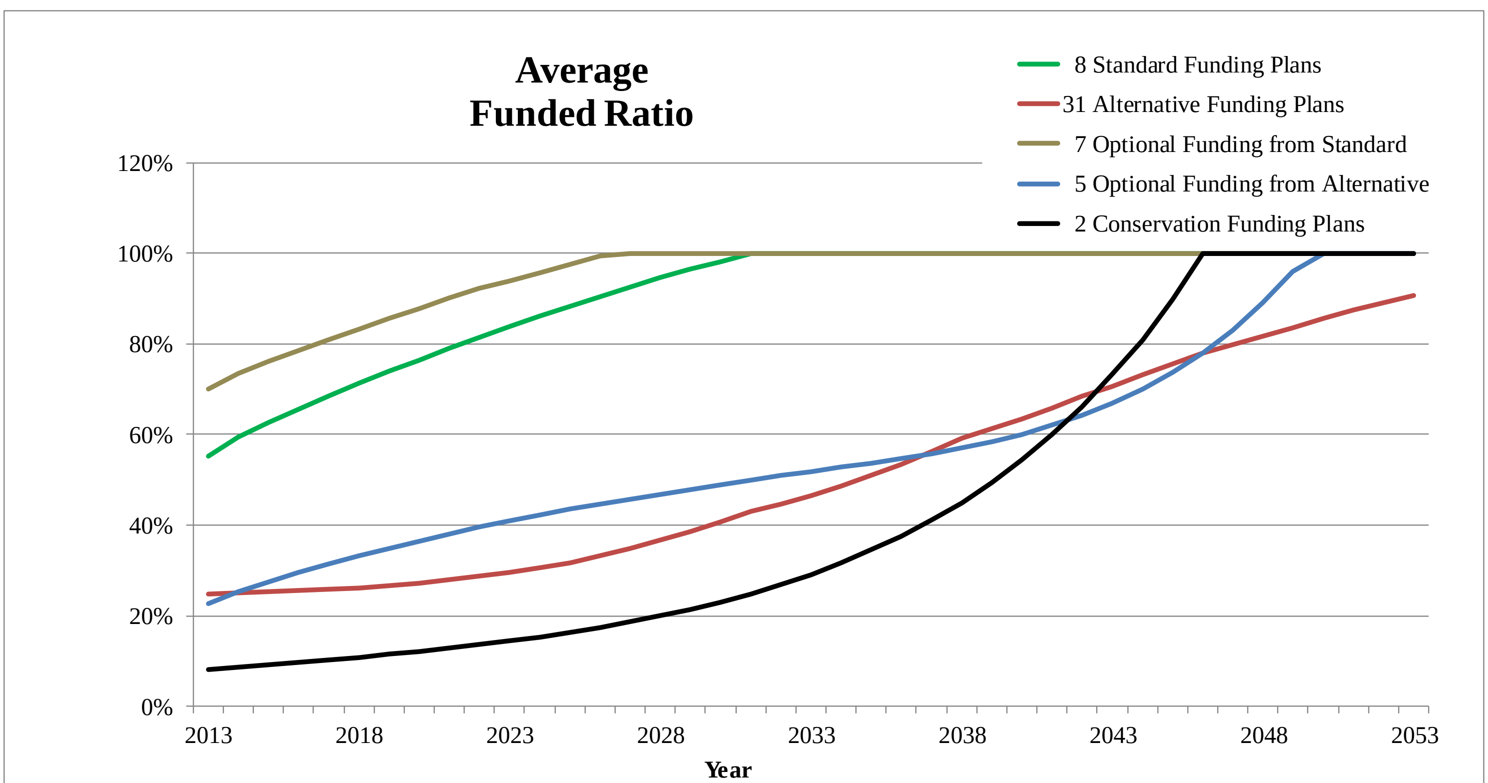
Key Observations

The projections indicate that Funds using the Standard policy are expected to have stable contribution rates that will produce increasing funded ratios, which ultimately approach 100% by 2031. Funds using the Alternative policy will generally have lower initial contribution rates that increase exponentially and will generally produce funded ratios that increase at a slower rate when compared to the Standard policy. However, several Alternative plans are projected to switch to the Standard policy after the funded ratio approaches 80% resulting in a more stable funded ratio and contribution pattern.

Optional policy plans are projected to experience a steady but slow growth in the funded ratio. Conservation policy plans are projected to experience very slow growth in the funded ratio, and contributions are effectively deferred.

The following graphs illustrate the differences in average employer contribution, as a percentage of pay, and the average funded ratio between all the funding policies over the next 40 years.





SECTION IV

ACTUARIAL PROJECTIONS –
FUNDING POLICY CHOICES

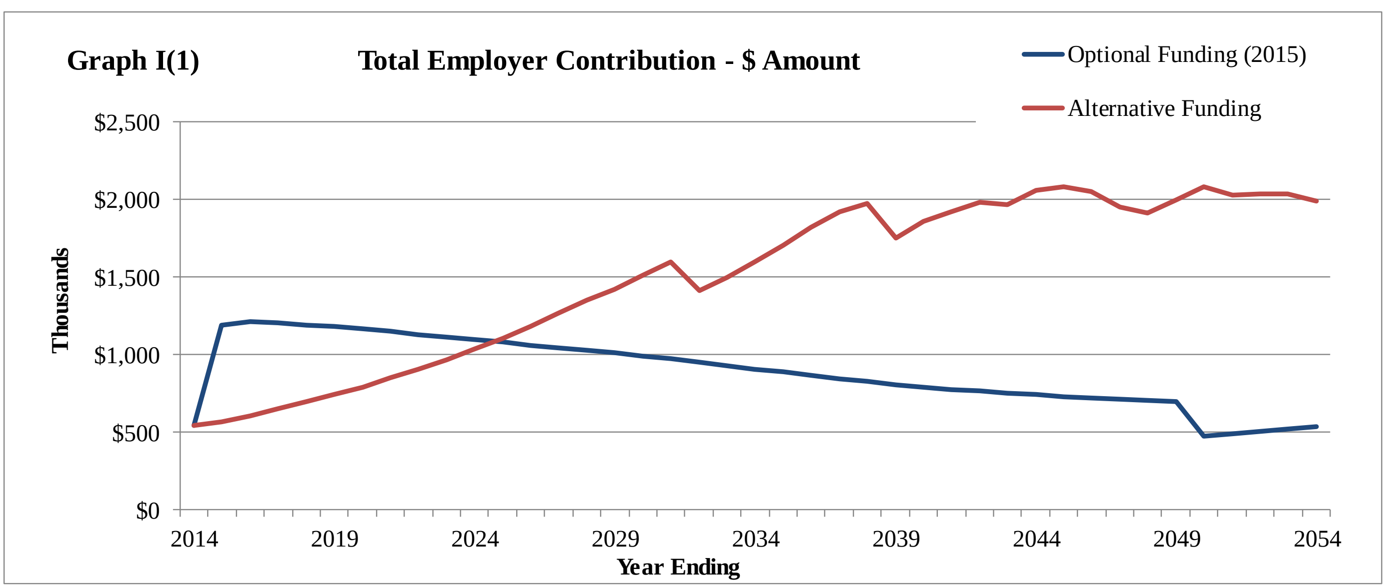
Impact of Optional Funding Policy under West Virginia Code §8-22-20(e)(1)

West Virginia Code §8-22-20(e)(1) allows Plan Sponsors using either the Standard or Alternative Funding Policy to close their current local police officers and firefighters pension Fund, and provide benefits to future members through the recently established statewide cost sharing plan—the Municipal Police Officers and Firefighters Retirement System. The employer's contributions under the Municipal Police Officers and Firefighters Retirement System are fixed at 10.5% of pay, which is considerably less than the employer's normal cost rate. The key impact of West Virginia Code §8-22-20(e)(1) with respect to plan funding for Funds financing benefits under the Standard and Alternative policies is as follows:

- Sponsors financing benefits under the Standard policy are expected to receive immediate contribution relief by switching to the Optional policy with no significant impact to the projected funded ratio. This occurs because employer contributions for new entrants under the Municipal Police Officers and Firefighters Retirement System are fixed at 10.5% of pay, whereas the expected employer contributions for new entrants under the local plan are approximately equal to the higher net employer normal cost rate of pay.

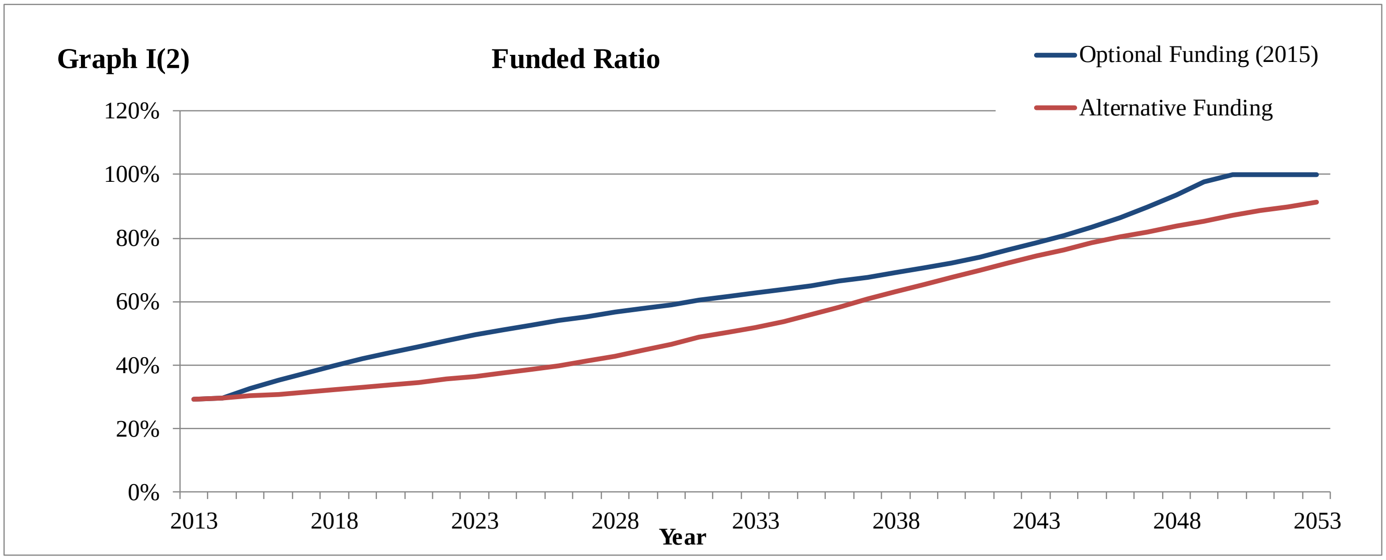
- Sponsors currently financing benefits under the Alternative policy are generally not expected to receive immediate contribution relief from switching to the Optional policy because the Alternative policy contributions in many cases are considerably lower than the actuarially based contributions defined under the Optional policy.

- Plan sponsors currently using the Alternative Funding Policy may find it more affordable in the long run to switch to the Optional Funding Policy even if it means an increase in the employer contributions in the short term. The following graph, for the average alternative plan, shows the difference in employer contributions between the two funding policies over the next 40 years:



As the above graph illustrates, contributing more under the Optional policy for the next 11 years produces significant cost reductions in the following 29 years.

The following graph for the average alternative plan shows the impact on the funded ratio between the two funding policies over the next 40 years:



The preceding graphs show: (i) Optional contributions are greater during the first 11 years but lower after the 11th year, and (ii) the Optional funding policy produces higher projected funding ratios when compared to the Alternative funding policy.

<u>Impact of Conservation Funding Policy under West Virginia §8-22-20 (f)(1)</u>

West Virginia Code §8-22-20(f)(1) allows Plan Sponsors using the Alternative Funding Policy to close their current local police officers and firefighters pension Fund, and provide benefits to future members through the statewide cost sharing plan – the Municipal Police Officers and Firefighters Retirement System. The key impact of West Virginia Code §8-22-20(f)(1) with respect to plan funding for Funds currently financing benefits under the Alternative policy follows:

- Sponsors currently financing benefits under the Alternative policy are generally not expected to receive immediate contribution relief by switching to the Conservation policy because the Alternative policy contributions in many cases are considerably lower than the benefit payments (net of member contributions or the premium tax allocation) defined under the Conservation policy.

SECTION V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions and Recommendations

Based on the results of July 1, 2013 valuation and projections, we have the following general conclusions:

- Most Funds using the Standard policy, or former Standard plans that elected the Optional policy, are using a funding policy which is consistent with actuarial standards and is expected to provide a reasonable level of funding in a reasonable period of time. We recommend that these Funds continue to make contributions based on these policies.

- The other three funding policies available to Plan Sponsors (including the Alternative, Optional from Alternative, and Conservation Funding Policies) were designed to provide and offer Plan Sponsors additional contribution flexibility and/or affordability. As such, each of these funding policies has some disadvantages as compared to the Standard Funding Policy.

- Under the Alternative Funding Policy, contributions are a function of the 1990 contribution (or five-year average since 1984 if greater) increased by 7% each year since 1990. This method of funding does not directly reflect any emerging experience gains or losses. For example, most Funds experienced investment losses in plan years ending June 30, 2008, and June 30, 2009, and investment gains in the plan years ended June 30, 2011, and June 30, 2013. The Alternative Funding Policy does not recognize any of these losses or gains.

- The sponsor's initial Alternative contribution effective for plan year 1991 is the greater of 107% of the amount contributed for the plan year ending June 30, 1990, or the five-year average of contributions made since 1984. In many cases, this starting point contribution was so low that the current year's contributions, even with many years of 7.0% increases, is still significantly less than the normal cost. This means that switching to the Optional Funding Policy will likely require a large increase in annual contributions.

- One key funding objective for public pension plans is to ensure the funding policy produces inter-generational equity among taxpayers. The Alternative Funding Policy generally defers the funding of plan costs into the future, creating a financial burden for future taxpayers.

- The Alternative Funding Policy assumes employer contributions will increase at a rate of 7%. In order to produce a level contribution rate, this funding method would require a 7% increase in payroll. In general, based on historical experience, we would expect annual payroll increases in the 3% to 6% range. Consequently, the Alternative Funding Policy can eventually produce contribution rates that exceed 100% of payroll.

- Many of the Funds using the Alternative Funding Policy are very poorly funded and will require a significantly higher level of contributions in the near future in order to bring the funded ratio to a more secure level. We recommend that these Funds consider immediately increasing their level of annual contributions. However, we recognize that affordability is a key concern for these Funds.

Conclusions and Recommendations (Continued)

- Under the Optional Funding Policy, contributions to the closed local plan are projected to decrease in future years as new hires enter the Municipal Police Officers and Firefighters Retirement System. At the same time, all Funds under the Optional Funding Policy by definition are projected to be 100% funded by the end of the amortization period in 40 years. However, the funded ratio for those Funds that are currently very poorly funded will increase at a very slow rate for many years and leave the Fund vulnerable if there is another significant market downturn.

- The Conservation funding method is basically a "pay-as-you-go" funding method. In other words, employer contributions are based on actual retirements and disabilities. This method does not directly reflect any emerging experience gains or losses. For example, most Funds experienced investment losses in plan years ending June 30, 2008, and June 30, 2009 and investment gains in the plan years ended June 30, 2011 and June 30, 2013. The Conservation method does not recognize any of these losses or gains.

- Employer contributions under the Conservation funding method are based on actual retirements and disabilities which could vary significantly from year to year based on actual plan experience. There is no mechanism under the Conservation method to smooth out annual fluctuations in contribution requirements.

- Our valuations assume the sponsor is required to contribute at least the normal cost in order to receive the State premium tax allocation. Two plans with funded ratios in excess of 100% as of July 1, 2013, are projected to experience an increasing funded ratio. At some point, the sponsor may no longer need additional contributions. For example, a plan that is at least 125% funded on a present value of future benefit basis, may have a sufficient cushion for future adverse experience.

- Because the discount rate depends on the equity allocation, we recommend that the sponsor provide a copy of the fund's investment policy. If the investment policy is not currently available, we recommend that the sponsor provide documentation on the fund's asset allocation.

- GASB No. 67 is replacing GASB No. 25 for pension plan financial reporting requirements (effective in fiscal year ending June 30, 2014) and GASB No. 68 is replacing GASB No. 27 for employer financial reporting (effective in fiscal year ending June 30, 2015). For plans that are projected to have zero assets in the future, on a closed group basis, the discount rate used for GASB Nos. 67 and 68 financial reporting purposes will be based on a blended rate of the long-term investment return rate and a 20-year tax-exempt municipal bond index rate. Under the new accounting standards, the unfunded actuarial liability will need to be recognized on the plan sponsor's balance sheet. The new accounting standards will not impact the current contribution policies. GRS will be providing a separate GASB No. 67 report to each plan sponsor.

SECTION VI

ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions and Methods

Discount Rate

The following table outlines the factors used to determine the discount rate:

Funded Ratio as of Valuation Date [1]	Liquidity Ratio [2]	Equity Exposure [3]	Projected Funded Ratio after 15 Years [1]	Proposed Discount Rate	Number of Plans Satisfying Conditions
60% or more	10	50% or more	70% or more	7.0%	6
40% or more	8	40% or more	60% or more	6.5%	9
30% or more	6	30% or more	50% or more	6.0%	7
15% or more	4	n/a	40% or more	5.5%	11
Less than 15%	n/a	n/a	Less than 40%	5.0%	20

[1] Funded ratios based on a 6.5% investment return assumption for plans using an actuarially sound policy (Standard or Optional) and a 6.0% investment return assumption for other plans (Alternative or Conservation).

[2] Liquidity ratio equals assets as of the valuation date divided by expected benefits for the year.

[3] Based on investment policy.

Discount Rate	5.0% – 7.0%

Actuarial Assumptions and Methods (CONT'D)

The premium tax allocation is projected using the following methodology:

(1) The Base Allocation for all Pension and Relief Funds is a fixed amount equal to $8,709,689 in all future years. This amount is allocated to each individual Pension and Relief Fund in proportion to the number of eligible members, which includes active members covered in either the Pension and Relief Fund or the statewide plan, Municipal Police Officers and Firefighters Retirement System ("MPFRS").

(2) The Excess Allocation is equal to the excess of the current year premium tax assigned to all Pension and Relief Funds over the total Base Allocation. This amount is allocated to each individual Pension and Relief Fund in proportion to the number of eligible active and retired members covered in either the Pension and Relief Fund or the MPFRS.

(3) We have assumed all Pension and Relief Funds will make the minimum statutory contribution requirement and will receive 100% of both the Base Allocation and the Excess Allocation assigned to the individual plan, until they are 100% funded, even if the premium tax allocation exceeds the amortization of the unfunded liability. Consequently, the projections do not include any reallocation of Expired Premium Tax Allocation for plan years beginning on and after July 1, 2015.

(4) The total available premium tax allocation, net of expenses, as of September 1, 2014, includes a Base Allocation of $8,709,689, an Excess Allocation of $7,672,865, and an Expired Premium Tax Allocation of $230,453.

(5) Based on the average number of plan participants for the 12 month period ending June 30, 2014, all Pension and Relief Funds reported a total of 1,703 eligible active members, and 2,134 eligible retired members.

(6) The total premium tax allocation was assumed to increase by 2% in calendar year ending 2015, and increase by 3% in calendar years ending on and after 2016.

Actuarial Assumptions and Methods (CONT'D)

General Inflation	3.00%
Expected Salary Increase	General Inflation: 3.00% *plus* Wage Inflation: 1.00% *plus* Service Based Increase: Years of Service — Increase 1 — 9.0% 2 — 4.5% 3 - 4 — 2.0% after 4 years of service — 1.0%
Post-retirement COLA	3.00% on first $15,000 of Annual Benefit and on the accumulated supplemental pension amounts for prior years.
Increase in State Insurance Premium Tax Allocation	2% for year 1 3% on and after year 2
Cost Method	Entry–Age–Normal Level–Percentage–of–Pay
Amortization Policies:	
Alternative Plans and former Alternative Plans that selected the Conservation Policy	For GASB 25/27 Accounting: 30–Year Closed Level-Percentage-of-Pay Amortization (from July 1, 2010).
Standard Plans and former Standard Plans that selected the Optional Policy	For funding and GASB 25/27 Accounting: 40 – Year Closed Level-Dollar Amortization (from July 1, 1991).
Former Alternative Plans that selected the Optional Policy	For funding: 40–Year Closed Level-Dollar Amortization (from January 1, 2010). For GASB 25/27 Accounting: 30–Year Closed Level-Percentage-of-Pay Amortization (from July 1, 2010).
Asset Method	Market Value

Actuarial Assumptions and Methods (CONT'D)

Turnover	Sample Rates – Age / Rates 25 / 10% 35 / 4% 45 / 2% 50 / 0%
Retirement	Age / Rates 50-51 / 45% 52-54 / 30% 55 / 45% 56 / 35% 57 / 55% 58 / 100%
Mortality	Active: 85 percent of 1994 Group Annuity Mortality Post-Retirement: 1994 Group Annuity Mortality Disabled: 1994 Group Annuity Mortality set forward 4 years
Disability	Sample Rates – Age / Rates[a] 30 / 0.27% 40 / 0.57% 50 / 0.87% [a] Assumes 40% duty related and 60% non-duty related.
Percent Married	90%
Spouse Age	Females 3 years younger than males

SECTION VII

SUMMARY OF PRINCIPAL FUNDING POLICIES AND PLAN PROVISIONS

Summary of Funding Policies

According to the West Virginia Code §8-22-20, Funds may satisfy the minimum standard for actuarial soundness by using one of the following policies:

Standard Funding Policy

Contributions under the Standard Funding Policy include:

- The employer contribution equals the normal cost, net of employee contributions, plus a 40-year amortization of the unfunded actuarial liability less the allocable portion of the State premium tax fund for municipal pension and relief funds. The amortization is based on a 40-year closed period commencing on July 1, 1991. As of June 30, 2013, there are 18 years left in the amortization period. The employer contribution cannot be less than the normal cost.

- The employee contributions equal 7.0% of pay for members hired before January 1, 2010, and 9.5% of pay if hired after January 1, 2010. However, if elected by the Board of trustees of the Plan, member contributions may be increased up to 9.5% of pay.

- The State provides a premium tax allocation to the Fund based on the number of plan members and a demonstration that the actuarially determined contributions have been made on a timely basis.

Alternative Funding Policy

Contributions under the Alternative Policy are determined as follows:

- The sponsor's initial Alternative contribution effective for plan year 1991 is the greater of 107% of the amount contributed for the plan year ending June 30, 1990, or the five-year average of contributions made since 1984.

- Sponsor contributions made in subsequent years cannot be less than 107% of the contribution made in the prior fiscal year.

- The actuary must certify in writing that the Fund is projected to be solvent under the Alternative contribution method for the next consecutive 15-year period. A plan is deemed to be solvent if projected assets are greater than zero over the 15-year projection period.

- Beginning September 1, 2003, any municipality which elected the Alternative funding method has the option of reverting to the Standard funding method if the plan's funded ratio is greater than 80%. In this case, the standard minimum contribution equals the normal cost plus the amortization of the unfunded liability over a period of not more than 40 years commencing from July 1, 1991, less the allocable portion of the state premium tax fund for municipal pension and relief funds.

- Plan members hired before January 1, 2010, contribute 7.0% of pay; however, if elected by the Board of trustees of the Plan, member contributions may be increased up to 9.5% of pay. Employees hired after January 1, 2010, contribute 9.5% of pay.
- The State provides a premium tax allocation to the Fund based on the number of plan members and a demonstration that the employer's statutory contributions have been made on a timely basis.

Optional Funding Policy

The Optional Funding Policy is defined in West Virginia Code §8-22-20(e)(1), and is effective for plan years beginning after January 1, 2010. The Optional Funding Policy is available to plan sponsors using either the Standard Funding Method or Alternative Funding Method. The key features of the Optional Method are summarized below:

The existing local Plan is closed, and new employees are covered in the Municipal Police Officers and Firefighters Retirement System. Contributions to the Municipal Police Officers and Firefighters Retirement System include:

- Employer contributions from 8.5% to 10.5% of pay. Currently, Employers contribute 8.5% of pay.
- Employee contributions of 8.5% of pay.

Contributions to the closed local Plan include:

- Employer contributions equal to the normal cost, net of employee contributions, plus a closed period amortization, on a level dollar basis, of the unfunded actuarial liability net of premium tax allocation applicable to the plan year. The closed amortization period, from July 1, 2013, equals 18 years for Standard Plans and 36.5 years for the Alternative Plans.
- Employee contributions of 7.0% of pay if hired before January 1, 2010, which may be increased by up to 2.5% of pay if elected by the Board of trustees of the Plan. Employees hired after January 1, 2010, contribute 9.5% of pay.
- The premium tax allocation assigned to the Fund for the plan year.

Conservation Funding Policy

The Conservation Funding Policy is defined in West Virginia Code §8-22-20(f)(1), and is effective for plan years beginning after April 1, 2011. The Conservation Funding Policy is available to plan sponsors using the Alternative Funding Method. The key features of the Conservation Method are summarized on the following page:

The existing local Plan is closed, and new employees are covered in the multiple employer statewide plan - Municipal Police Officers and Firefighters Retirement System. Contributions to the Municipal Police Officers and Firefighters Retirement System include:

- Employer contributions from 8.5% to 10.5% of pay. Currently, Employers contribute 8.5% of pay.

- Employee contributions of 8.5% of pay.

Contributions to the closed local Plan are made to two asset accounts as follows:

- The first asset account (Benefit Payment Account) is used to finance benefits and expenses for the fiscal year on a pay-as-you-go basis. Sources to pay current year benefits and expenses include minimum employee contributions of 6.5% of pay, a portion of the premium tax allocation not assigned to the accumulation account as defined below, and employer contributions (typically made from the City's general assets).

- The second account (Accumulation Account) cannot be used to pay benefits and expenses until assets exceed actuarial liabilities (i.e., the funded ratio exceeds 100%). Contributions to the accumulation account include employee contributions of 1.5% of pay and a percentage of premium tax allocation. The percentage of premium tax allocation is based on the amounts needed to produce 100% funding of liabilities in 35 years, from adoption, considering assets from both the benefit payment account and the accumulation account. This account also includes the Fund's assets prior to the adoption of Conservation Funding Policy.

Summary of Principal Plan Provisions

Employee Eligibility — All compensated employees of the Police and Fire Departments hired before July 1, 2013 are eligible to participate in the Policemen's or Firemen's Pension and Relief Funds respectively.

Average Annual Compensation — The average of any three twelve-consecutive-month periods of employment which produces the highest average annual compensation.

Each twelve-consecutive-month annual compensation is limited to 120% of the *Average Adjusted Salary* received by the member in the two consecutive twelve-consecutive-month periods immediately preceding the twelve-consecutive-month period used in determining benefits.

The *Average Adjusted Salary* is base salary (exclusive of all overtime and other pay) of the year used in determining benefits multiplied by the ratio of total salary (includes all overtime and other pay) to base salary from the respective preceding twelve-consecutive-month period.

Determining Years of Service Credit (Credited Service**)** — The number of years that the member has contributed to the employees retirement and benefit fund.

Prior Military Service — A city may provide that members who have been honorably discharged from the military shall receive up to two years prior service credit for military service prior to their employment with the city.

Current Military Service — Any current member who has been on qualified military service in the armed forces of the United States with an honorable discharge may, within six months from his or her date of discharge, be given credit for continuous service in the paid police or fire department.

Any member who has served in active duty with the armed forces of the United States, whether prior to or subsequent to becoming a member of a paid police or fire department, shall receive one additional percent for each year so served in active military duty, up to a maximum of four additional percent.

Absence from the service because of sickness or injury for a period of two years or less shall not be construed as time out of service.

Contributions — Participating employees contribute from 7.0% to 9.5% of compensation. Participating employees hired on or after January 1, 2010 contribute 9.5% of pay.

Normal Retirement — Members are eligible at the earlier of age 50 with 20 years of credited service or age 65.

Benefit Commencement — Annual retirement pension benefits commence upon retirement or upon the member attaining age fifty, whichever is later, payable in twelve monthly installments.

Accrued Benefit — The annual retirement benefit equals 60% of average annual compensation, not less than $6,000, plus an additional percentage of average annual compensation for service over 20 years equal to 2% for each year of service between 20 and 25 and 1% for each year of service between 25 and 30 years. Employees serving in the military are eligible for an additional 1% of average annual compensation for each year of military service up to four years. The maximum benefit is limited to 75% of average annual compensation. Benefits continue for life.

Disability Retirement — Members are eligible after earning five years of service. No service requirement if disability is service related.

The monthly disability benefit equals the greater of 60% of monthly salary at disability or $500. Employees serving in the military are eligible for an additional benefit of 1% of monthly salary at disability for each year of military service up to four years. Disability benefits, when aggregated with monthly state workers compensation benefits, shall not exceed 100% of the member's monthly compensation at the time of disability. Benefits continue for life or until recovery.

Death Benefits — Members are eligible after earning five years of service. No service requirement if death is service related. Retirees and terminated vested participants are also eligible.

The benefit is equal to 60% of the participant's benefit, but not less than $300 per month, payable to the spouse until death or remarriage. Other dependents (children, parents, brothers, and sisters) are also eligible for death benefits. To each dependent child, twenty percent of the participant's benefit until the child attains eighteen or marries; to each dependent orphaned child, twenty-five percent of the participant's benefit until the child attains eighteen or marries; to each dependent parent, ten percent of the participant's benefit for life, and to each dependent brother or sister, the sum of fifty dollars per month (but a total not to exceed $100 per month) until such individual attains the age of eighteen years or marries.

In no case shall the payments to the surviving spouse and children be reduced below sixty-five percent of the total amount paid to all dependents.

Supplemental Pension Benefits — All retirees, surviving beneficiaries and disability pensioners are eligible for automatic cost-of-living benefits commencing on the first day of July following two years of retirement. The benefits equal the percentage increase in the Consumer Price Index, limited to 4% (2% for some disability retirees), multiplied by the sum of the allowable amount which is the first $15,000 of the total annual benefits paid and the accumulated supplemental pension amounts for prior years.

Termination Benefits — Any member who terminates employment prior to retirement will be entitled to a refund of contributions without interest.

Refunds — Any member who terminates from their department without receiving a retirement pension shall be refunded all deductions made from his salary, without interest. Any member who receives such a refund and subsequently wishes to reenter the department must repay to the pension fund all sums refunded with interest at the rate of eight percent annual.

SECTION VIII

APPENDIX I – SUMMARY OF HISTORICAL VALUATION RESULTS

Summary of Key Valuation Results as of July 1, 2011

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans [a]
Participating Plans	9	31	6	5	2	53
Plan Membership						
(a) Actives	60	1,043	41	228	342	1,714
(b) Annuitants	45	1,222	26	345	436	2,074
(c) Inactives	2	17	2	2	2	25
(d) Total	107	2,282	69	575	780	3,813
Payroll	$2,372,552	$45,188,591	$1,454,996	$11,013,903	$18,088,004	$78,118,046
Expected Benefit Payments	$1,008,409	$30,440,731	$535,144	$9,510,954	$12,360,288	$53,855,526
Actuarial Accrued Liabilities						
(a) Actives	$9,454,191	$232,770,392	$5,017,183	$60,477,604	$95,875,431	$403,594,801
(b) Annuitants	$13,051,284	$437,117,870	$8,016,378	$131,061,049	$185,353,388	$774,599,969
(c) Inactives	$680,468	$7,550,252	$487,265	$840,177	$1,046,188	$10,604,350
(d) Total Liabilities	$23,185,943	$677,438,514	$13,520,826	$192,378,830	$282,275,007	$1,188,799,120
Market Value of Assets	$11,572,237	$161,461,617	$8,437,958	$34,697,287	$19,913,060	$236,082,159
Unfunded Liability	$11,613,706	$515,976,897	$5,082,868	$157,681,543	$262,361,947	$952,716,961
Funded Ratio	50%	24%	62%	18%	7%	20%
Net Employer Normal Cost	$582,261	$13,940,854	$348,714	$3,351,670	$5,931,071	$24,154,570
(% of Payroll)	25%	31%	24%	30%	33%	31%
Employer Contributions [b]	$1,210,963	$14,653,455	$688,184	$10,697,857	$8,826,759	$36,077,218
(% of Payroll)	51%	32%	47%	97%	49%	46%
Additional Solvency Cont.						
- To Receive State Allocation	NA	$49,700	NA	NA	NA	$49,700
- To Provide COLA Benefits	NA	$412,800	NA	NA	NA	$412,800
Employee Contributions	$168,613	$3,340,093	$105,842	$771,798	$1,447,041	$5,833,387
(% of Payroll)	7%	7%	7%	7%	8%	7%
State Premium Tax Allocation	$465,857	$9,589,663	$302,959	$2,485,488	$3,325,087	$16,169,054
(% of Payroll)	20%	21%	21%	23%	18%	21%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2010

	Standard Policy	Alternative Policy	Optional Policy From Standard	Optional Policy From Alternative	Conservation Policy	All Plans [a]
Participating Plans	14	32	1	4	2	53
Plan Membership						
(a) Actives	102	1,060	3	221	373	1,759
(b) Annuitants	67	1,213	5	336	430	2,051
(c) Inactives	3	17	0	2	3	25
(d) Total	172	2,290	8	559	806	3,835
Payroll	$3,795,035	$45,071,900	$92,237	$9,461,141	$18,682,917	$77,103,230
Expected Benefit Payments	$1,406,298	$29,407,920	$144,227	$9,054,976	$11,825,294	$51,838,715
Actuarial Accrued Liabilities						
(a) Actives	$15,361,788	$239,608,193	$108,201	$59,901,808	$99,195,128	$414,175,118
(b) Annuitants	$20,567,424	$428,940,757	$2,147,331	$128,583,898	$175,826,505	$756,065,915
(c) Inactives	$1,006,182	$8,196,343	$0	$470,098	$1,744,672	$11,417,295
(d) Total	$36,935,394	$676,745,293	$2,255,532	$188,955,804	$276,766,305	$1,181,658,328
Market Value of Assets	$16,397,598	$147,483,305	$1,295,724	$22,135,392	$18,158,879	$205,470,898
Unfunded Liability	$20,537,796	$529,261,988	$959,808	$166,820,412	$258,607,426	$976,187,430
Funded Ratio	44%	22%	57%	12%	7%	17%
Net Employer Normal Cost	$1,059,028	$14,032,690	$28,397	$3,351,223	$5,976,689	$24,448,027
(% of Payroll)	28%	31%	31%	35%	32%	32%
Employer Contributions [b]	$1,247,458	$13,702,790	$41,485	$9,779,829	$5,819,568	$30,591,130
(% of Payroll)	33%	30%	45%	103%	31%	40%
Additional Solvency Cont.	$0	$103,700	$0	$0	$0	$103,700
(% of Payroll)	0%	0%	0%	0%	0%	0%
Employee Contributions	$267,404	$3,276,495	$6,957	$743,384	$1,494,634	$5,788,874
(% of Payroll)	7%	7%	8%	8%	8%	8%
State Premium Allocation	$770,495	$10,085,334	$34,660	$2,490,451	$3,559,970	$16,940,910
(% of Payroll)	20%	22%	38%	26%	19%	22%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2009

	Standard Policy	Alternative Policy	All Plans [a]
Participating Plans	14	37	51
Plan Membership			
(a) Actives	101	1,641	1,742
(b) Annuitants	67	1,978	2,045
(c) Inactives	3	15	18
(d) Total	171	3,634	3,805
Payroll	$3,573,526	$71,580,258	$75,153,784
Expected Benefit Payments	$1,390,383	$48,832,891	$50,223,275
Actuarial Accrued Liabilities			
(a) Actives	$11,789,127	$301,411,654	$313,200,781
(b) Annuitants	$17,477,678	$604,165,298	$621,642,976
(c) Inactives	$788,784	$6,014,992	$6,803,776
(d) Total	$30,055,589	$911,591,944	$941,647,533
Market Value of Assets	$15,693,437	$171,175,902	$186,869,340
Unfunded Liability	$14,362,152	$740,416,042	$754,778,193
Funded Ratio	52%	19%	20%
Net Employer Normal Cost	$762,890	$16,133,448	$16,896,338
(% of Payroll)	21%	23%	22%
Employer Contributions [b]	$1,224,637	$27,967,262	$29,191,899
(% of Payroll)	34%	39%	39%
Additional Solvency Contributions	$0	$474,000	$474,000
(% of Payroll)	0%	1%	1%
Employee Contributions	$250,146	$5,263,059	$5,513,205
(% of Payroll)	7%	7%	7%
STO Contributions	$792,755	$16,126,389	$16,919,144
(% of Payroll)	22%	23%	23%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2007

	Standard Policy	Alternative Policy	All Plans [a]
Participating Plans	13	34	47
Plan Membership			
(a) Actives	98	1,520	1,618
(b) Annuitants	61	1,793	1,854
(c) Inactives	2	12	14
(d) Total	161	3,325	3,486
Payroll	$3,251,345	$63,275,523	$66,526,868
Expected Benefit Payments	$1,202,195	$42,095,395	$43,297,589
Actuarial Accrued Liabilities			
(a) Actives	$10,063,087	$267,421,335	$277,484,422
(b) Annuitants	$14,875,664	$530,001,592	$544,877,256
(c) Inactives	$810,110	$4,661,022	$5,471,132
(d) Total	$25,748,861	$802,083,949	$827,832,810
Market Value of Assets	$15,313,492	$176,162,897	$191,476,389
Unfunded Liability	$10,435,369	$625,921,052	$636,356,421
Funded Ratio	59%	22%	23%
Net Employer Normal Cost	$702,981	$14,351,782	$15,054,763
(% of Payroll)	22%	23%	23%
Employer Contributions [b]	$963,272	$23,142,236	$24,105,508
(% of Payroll)	30%	37%	36%
Additional Solvency Contributions	$0	$122,200	$122,200
(% of Payroll)	0%	0%	0%
Employee Contributions	$227,596	$4,658,652	$4,886,248
(% of Payroll)	7%	7%	7%
STO Contributions	$723,782	$15,609,895	$16,333,677
(% of Payroll)	22%	25%	25%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2006

	Standard Policy	Alternative Policy	All Plans [a]
Participating Plans	13	36	49
Plan Membership			
(a) Actives	98	1,576	1,674
(b) Annuitants	59	1,870	1,929
(c) Inactives	3	16	19
(d) Total	160	3,462	3,622
Payroll	$3,172,617	$64,238,581	$67,411,198
Expected Benefit Payments	$1,130,221	$42,330,567	$43,460,788
Actuarial Accrued Liabilities			
(a) Actives	$9,855,624	$273,763,730	$283,619,354
(b) Annuitants	$14,153,641	$537,519,952	$551,673,593
(c) Inactives	$1,140,177	$6,521,924	$7,662,101
(d) Total	$25,149,442	$817,805,606	$842,955,048
Market Value of Assets	$13,949,937	$169,437,715	$183,387,652
Unfunded Liability	$11,199,505	$648,367,891	$659,567,396
Funded Ratio	55%	21%	22%
Net Employer Normal Cost	$687,676	$14,784,563	$15,472,239
(% of Payroll)	22%	23%	23%
Employer Contributions [b]	$959,122	$22,286,154	$23,245,276
(% of Payroll)	30%	35%	34%
Additional Solvency Contributions	$0	$318,400	$318,400
(% of Payroll)	0%	0%	0%
Employee Contributions	$222,084	$4,518,957	$4,741,041
(% of Payroll)	7%	7%	7%
STO Contributions	$719,852	$15,722,898	$16,442,750
(% of Payroll)	23%	24%	24%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2005

	Standard Policy	Alternative Policy	All Plans [a]
Participating Plans	13	36	49
Plan Membership			
(a) Actives	98	1,538	1,636
(b) Annuitants	56	1,843	1,899
(c) Inactives	3	16	19
(d) Total	157	3,397	3,554
Payroll	$3,090,873	$60,575,277	$63,666,150
Expected Benefit Payments	$1,000,615	$38,986,489	$39,987,104
Actuarial Accrued Liabilities			
(a) Actives	$9,572,481	$259,044,462	$268,616,943
(b) Annuitants	$13,194,282	$495,728,632	$508,922,914
(c) Inactives	$1,152,250	$6,702,706	$7,854,956
(d) Total	$23,919,013	$761,475,800	$785,394,813
Market Value of Assets	$13,274,806	$160,330,681	$173,605,487
Unfunded Liability	$10,644,207	$601,145,119	$611,789,326
Funded Ratio	55%	21%	22%
Net Employer Normal Cost	$734,723	$15,521,855	$16,256,578
(% of Payroll)	24%	26%	26%
Employer Contributions [b]	$966,163	$21,855,312	$22,821,475
(% of Payroll)	31%	36%	36%
Additional Solvency Contributions	$0	$148,100	$148,100
(% of Payroll)	0%	0%	0%
Employee Contributions	$216,362	$4,240,270	$4,456,632
(% of Payroll)	7%	7%	7%
STO Contributions	$684,373	$14,788,263	$15,472,636
(% of Payroll)	22%	24%	24%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2004

	Standard Policy	Alternative Policy	All Plans [a]
Participating Plans	11	38	49
Plan Membership			
(a) Actives	82	1,556	1,638
(b) Annuitants	44	1,838	1,882
(c) Inactives	4	19	23
(d) Total	130	3,413	3,543
Payroll	$2,645,345	$58,164,328	$60,809,673
Expected Benefit Payments	$817,375	$37,232,629	$38,050,004
Actuarial Accrued Liabilities			
(a) Actives	$8,715,444	$247,124,232	$255,839,676
(b) Annuitants	$9,906,433	$479,290,042	$489,196,475
(c) Inactives	$1,735,383	$8,214,836	$9,950,219
(d) Total	$20,357,260	$734,629,110	$754,986,370
Market Value of Assets	$11,337,047	$153,631,629	$164,968,676
Unfunded Liability	$9,020,213	$580,997,481	$590,017,694
Funded Ratio	56%	21%	22%
Net Employer Normal Cost	$634,768	$14,888,690	$15,523,458
(% of Payroll)	24%	26%	26%
Employer Contributions [b]	$863,889	$21,083,233	$21,947,122
(% of Payroll)	33%	36%	36%
Additional Solvency Contributions	$0	$297,800	$297,800
(% of Payroll)	0%	1%	0%
Employee Contributions	$185,175	$4,071,500	$4,256,675
(% of Payroll)	7%	7%	7%
STO Contributions	$554,688	$12,630,939	$13,185,627
(% of Payroll)	21%	22%	22%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2003

	Standard Policy	Alternative Policy	All Plans [a]
Participating Plans	13	38	51
Plan Membership			
(a) Actives	90	1,574	1,664
(b) Annuitants	54	1,803	1,857
(c) Inactives	4	20	24
(d) Total	148	3,397	3,545
Payroll	$2,622,810	$57,048,004	$59,670,814
Expected Benefit Payments	$930,283	$34,850,467	$35,780,750
Actuarial Accrued Liabilities			
(a) Actives	$8,240,132	$238,615,771	$246,855,903
(b) Annuitants	$11,489,270	$432,861,565	$444,350,835
(c) Inactives	$1,234,644	$7,621,597	$8,856,241
(d) Total	$20,964,046	$679,098,933	$700,062,979
Market Value of Assets	$11,821,357	$141,967,245	$153,788,602
Unfunded Liability	$9,142,689	$537,131,688	$546,274,377
Funded Ratio	56%	21%	22%
Net Employer Normal Cost	$609,926	$14,087,362	$14,697,288
(% of Payroll)	23%	25%	25%
Employer Contributions [b]	$869,831	$19,551,652	$20,421,483
(% of Payroll)	33%	34%	34%
Additional Solvency Contributions	$0	$523,600	$523,600
(% of Payroll)	0%	1%	1%
Employee Contributions	$183,597	$3,993,360	$4,176,957
(% of Payroll)	7%	7%	7%
STO Contributions	$549,204	$10,028,187	$10,577,391
(% of Payroll)	21%	18%	18%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

Summary of Key Valuation Results as of July 1, 2002

	Standard Policy	Alternative Policy	All Plans [a]
Participating Plans	11	38	49
Plan Membership			
(a) Actives	81	1,608	1,689
(b) Annuitants	47	1,768	1,815
(c) Inactives	3	11	14
(d) Total	131	3,387	3,518
Payroll	$2,298,860	$55,330,792	$57,629,652
Expected Benefit Payments	$762,622	$32,488,541	$33,251,164
Actuarial Accrued Liabilities			
(a) Actives	$7,695,680	$229,543,573	$237,239,253
(b) Annuitants	$9,205,427	$408,061,797	$417,267,224
(c) Inactives	$589,689	$4,514,105	$5,103,794
(d) Total	$17,490,796	$642,119,475	$659,610,271
Market Value of Assets	$10,560,331	$137,697,562	$148,257,893
Unfunded Liability	$6,930,465	$504,421,913	$511,352,378
Funded Ratio	60%	21%	22%
Net Employer Normal Cost	$519,401	$13,793,772	$14,313,173
(% of Payroll)			
Employer Contributions [b]	$656,205	$17,520,877	$18,177,082
(% of Payroll)	29%	32%	32%
Additional Solvency Contributions	$0	$476,400	$476,400
(% of Payroll)	0%	1%	1%
Employee Contributions	$160,922	$3,873,158	$4,034,080
(% of Payroll)	7%	7%	7%
STO Contributions	$490,542	$9,443,944	$9,934,487
(% of Payroll)	21%	17%	17%

[a] All Funds participating in the Study.
[b] Includes additional contributions required to satisfy the 15-year solvency test.

SECTION IX

APPENDICES II THROUGH VII – PROJECTION DATA

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities
Actuarial Valuation
As of July 01, 2013

Class I

Summary of Valuation Results

Municipality	Charleston		Huntington		Morgantown		Parkersburg		Wheeling	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Plan Membership										
-Actives	144	156	86	90	64	48	61	57	86	92
-Annuitants	225	226	128	180	59	53	71	103	112	122
-Inactives	1	1	1	3	1	1	1	0	2	1
Total	370	383	215	273	124	102	133	160	200	215
Payroll	$8,257,284	$7,872,874	$4,955,880	$4,063,878	$3,514,416	$2,453,296	$2,694,700	$2,562,710	$3,657,618	$4,003,316
Expected Benefit Payments	$6,597,102	$6,792,511	$3,962,137	$5,201,769	$1,937,671	$1,512,476	$1,927,600	$2,599,638	$2,730,322	$2,958,302
Actuarial Accrued Liabilities										
-Actives	$45,182,566	$50,026,205	$31,412,495	$26,481,994	$17,514,492	$14,423,610	$15,501,619	$14,018,061	$14,668,315	$25,251,892
-Annuitants	$102,719,463	$103,232,459	$52,461,995	$71,324,952	$29,359,722	$21,953,623	$29,870,127	$36,487,544	$33,133,640	$37,151,744
-Inactives	$542,070	$604,490	$793,642	$1,932,146	$589,706	$602,610	$429,676	$0	$787,162	$328,955
Total	$148,444,099	$153,863,154	$84,668,132	$99,739,092	$47,463,920	$36,979,843	$45,801,422	$50,505,605	$48,589,117	$62,732,591
Market Value of Assets	$13,439,815	$11,271,569	$22,413,615	$13,522,855	$13,464,676	$10,580,988	$9,541,490	$10,389,150	$16,270,894	$14,874,436
Unfunded Actuarial Accrued Liability	$135,004,284	$142,591,585	$62,254,517	$86,216,237	$33,999,244	$26,398,855	$36,259,932	$40,116,455	$32,318,223	$47,858,155
Funded Ratio	9%	7%	26%	14%	28%	29%	21%	21%	33%	24%
Net Employer Normal Cost	$2,644,056	$2,580,628	$1,337,843	$1,338,898	$1,058,489	$780,945	$884,784	$752,158	$776,180	$1,092,896
Contributions FYE 2014										
Employer Contribution [a]	$4,919,728	$5,191,340	$4,354,066	$5,500,010	$673,623	$546,859	$950,885	$2,096,853	$1,818,998	$1,771,237
(% of Payroll)	51%	56%	88%	135%	19%	22%	35%	82%	50%	44%
State Premium Tax Allocation	$1,528,828	$1,544,507	$960,453	$1,036,722	$563,104	$435,044	$560,890	$598,317	$783,864	$876,650
Employee Contribution	$660,583	$629,830	$346,912	$284,471	$257,437	$183,228	$195,099	$186,664	$277,712	$286,357
Contributions FYE 2015										
Employer Contribution [a]	$5,168,385	$5,365,446	$4,187,288	$5,296,868	$720,777	$585,139	$1,017,447	$2,243,633	$1,946,328	$1,895,224
(% of Payroll)	63%	69%	86%	131%	20%	23%	37%	85%	52%	48%
State Premium Tax Allocation	$1,580,088	$1,586,890	$1,034,332	$1,101,445	$578,714	$451,492	$597,021	$610,944	$789,613	$895,690
Employee Contribution	$657,053	$620,940	$340,738	$283,701	$271,439	$190,050	$202,933	$195,827	$289,346	$294,555
Additional 2015 Solvency Contribution [b]										
- To Receive State Tax Premium Allocation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
- And to provide Supplemental COLA Benefits	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest Rate	5.0%	5.0%	5.5%	5.0%	5.0%	5.0%	5.0%	5.5%	6.0%	5.5%
Funding Policy	Conservation	Conservation	Optional from Alternative	Optional from Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative

[a] *Includes additional solvency contributions.*
[b] *Additional contributions needed in 2015 to satisfy the 15-year solvency test.*

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities
Actuarial Valuation **Class II**
As of July 01, 2013

Summary of Valuation Results

Municipality	Beckley		Bluefield		Clarksburg		Fairmont		Martinsburg	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Plan Membership										
-Actives	48	40	22	18	42	42	35	41	46	36
-Annuitants	51	53	24	35	44	58	44	62	40	34
-Inactives	1	0	0	2	4	0	0	0	1	0
Total	100	93	46	55	90	100	79	103	87	70
Payroll	$2,076,451	$1,957,138	$837,491	$672,836	$1,958,067	$1,812,840	$1,639,170	$1,825,200	$2,435,214	$1,880,224
Expected Benefit Payments	$1,488,419	$1,761,851	$525,387	$670,013	$1,028,476	$1,317,539	$1,072,080	$1,645,981	$1,121,815	$1,175,051
Actuarial Accrued Liabilities										
-Actives	$7,099,988	$11,806,331	$3,775,326	$3,861,589	$8,911,658	$11,301,077	$9,392,800	$10,968,236	$10,377,575	$8,848,800
-Annuitants	$20,121,495	$22,823,514	$7,274,608	$10,618,629	$13,450,296	$18,475,298	$16,170,454	$23,350,570	$17,749,686	$17,835,050
-Inactives	$647,948	$0	$0	$868,159	$1,769,117	$0	$0	$0	$771,139	$0
Total	$27,869,431	$34,629,845	$11,049,934	$15,348,377	$24,131,071	$29,776,375	$25,563,254	$34,318,806	$28,898,400	$26,683,850
Market Value of Assets	$17,924,627	$15,640,308	$4,118,466	$3,503,156	$4,092,485	$4,213,181	$4,215,651	$1,619,365	$6,899,904	$2,342,171
Unfunded Actuarial Accrued Liability	$9,944,804	$18,989,537	$6,931,468	$11,845,221	$20,038,586	$25,563,194	$21,347,603	$32,699,441	$21,998,496	$24,341,679
Funded Ratio	64%	45%	37%	23%	17%	14%	16%	5%	24%	9%
Net Employer Normal Cost	$415,869	$556,547	$199,364	$206,734	$530,971	$607,631	$490,437	$584,775	$754,392	$550,063
Contributions FYE 2014										
Employer Contribution [a]	$392,154	$513,828	$257,518	$317,430	$767,557	$774,872	$630,379	$852,909	$550,918	$679,168
(% of Payroll)	19%	26%	31%	47%	39%	43%	38%	47%	23%	36%
State Premium Tax Allocation	$442,695	$374,006	$190,232	$194,123	$392,380	$407,276	$323,707	$403,859	$417,919	$315,188
Employee Contribution	$156,572	$142,586	$63,350	$51,313	$145,584	$131,558	$120,495	$156,478	$200,773	$153,533
Contributions FYE 2015										
Employer Contribution [a]	$419,605	$549,796	$275,544	$339,650	$821,286	$829,113	$624,089	$916,596	$478,121	$579,938
(% of Payroll)	19%	29%	31%	49%	41%	45%	37%	50%	19%	30%
State Premium Tax Allocation	$450,841	$394,051	$206,773	$204,901	$400,623	$421,288	$326,196	$416,791	$420,921	$328,336
Employee Contribution	$165,197	$144,071	$67,285	$53,465	$150,761	$135,745	$126,862	$159,677	$207,458	$160,027
Additional 2015 Solvency Contribution [b]										
- To Receive State Tax Premium Allocation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
- And to provide Supplemental COLA Benefits	$0	$0	$0	$0	$0	$0	$0	$54,400	$0	$0
Interest Rate	6.5%	5.5%	6.0%	5.0%	5.5%	5.0%	5.0%	5.0%	5.0%	5.0%
Funding Policy	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative

[a] *Includes additional solvency contributions.*
[b] *Additional contributions needed in 2015 to satisfy the 15-year solvency test.*

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities
Actuarial Valuation
As of July 01, 2013

Summary of Valuation Results

	Class II									Class III	
Municipality	**Moundsville**		**South Charleston**		**St. Albans**		**Vienna**	**Weirton**		**Belle**	**Charles Town**
	Police	**Fire**	**Police**	**Fire**	**Police**	**Fire**	**Police**	**Police**	**Fire**	**Police**	**Police**
Plan Membership											
-Actives	13	5	38	41	24	23	16	36	23	2	0
-Annuitants	13	15	34	40	12	23	13	45	18	5	6
-Inactives	2	0	0	1	1	0	0	1	0	0	0
Total	28	20	72	82	37	46	29	82	41	7	6
Payroll	$546,778	$186,129	$1,660,565	$1,671,950	$1,137,415	$1,044,492	$746,829	$1,622,175	$983,475	$85,647	$0
Expected Benefit Payments	$271,910	$320,961	$922,517	$1,089,078	$404,639	$564,469	$399,564	$1,348,609	$581,268	$137,950	$105,590
Actuarial Accrued Liabilities											
-Actives	$2,139,483	$803,438	$7,502,397	$8,886,004	$5,079,214	$6,400,602	$3,220,068	$9,346,524	$4,579,692	$185,243	$0
-Annuitants	$3,325,498	$4,123,163	$14,090,772	$16,930,063	$5,204,745	$8,020,629	$4,717,451	$19,062,878	$6,593,393	$1,901,698	$1,435,975
-Inactives	$637,890	$0	$0	$486,076	$534,253	$0	$0	$258,521	$0	$0	$0
Total	$6,102,871	$4,926,601	$21,593,169	$26,302,143	$10,818,212	$14,421,231	$7,937,519	$28,667,923	$11,173,085	$2,086,941	$1,435,975
Market Value of Assets	$4,052,360	$1,066,409	$2,296,060	$1,317,893	$5,486,617	$2,396,164	$5,263,517	$4,238,177	$7,625,895	$1,289,794	$448,345
Unfunded Actuarial Accrued Liability	$2,050,511	$3,860,192	$19,297,109	$24,984,250	$5,331,595	$12,025,067	$2,674,002	$24,429,746	$3,547,190	$797,147	$987,630
Funded Ratio	66%	22%	11%	5%	51%	17%	66%	15%	68%	62%	31%
Net Employer Normal Cost	$111,068	$75,812	$541,133	$574,496	$214,598	$309,695	$132,353	$514,856	$210,871	$25,792	$1,246
Contributions FYE 2014											
Employer Contribution [a]	$189,528	$254,353	$313,167	$562,938	$231,307	$238,863	$339,825	$514,687	$215,978	$66,416	$100,766
(% of Payroll)	35%	137%	19%	34%	20%	23%	46%	32%	22%	78%	95%
State Premium Tax Allocation	$140,958	$65,589	$314,227	$358,008	$193,802	$199,935	$143,899	$340,726	$198,015	$30,564	$11,464
Employee Contribution	$38,274	$13,029	$124,510	$124,437	$108,054	$99,227	$53,266	$147,136	$73,468	$6,954	$0
Contributions FYE 2015											
Employer Contribution [a]	$117,492	$235,561	$413,789	$630,444	$247,498	$217,308	$237,190	$619,714	$231,096	$62,977	$74,384
(% of Payroll)	21%	125%	24%	36%	21%	20%	31%	39%	23%	74%	70%
State Premium Tax Allocation	$145,165	$66,778	$360,124	$375,730	$195,694	$206,423	$152,150	$339,332	$200,118	$31,825	$12,362
Employee Contribution	$38,847	$13,185	$130,664	$131,054	$112,642	$101,487	$55,643	$145,749	$75,497	$6,886	$0
Additional 2015 Solvency Contribution [b]											
- To Receive State Tax Premium Allocation	$0	$0	$0	$0	$0	$0	$0	$8,000	$0	$0	$0
- And to provide Supplemental COLA Benefits	$0	$0	$78,700	$28,100	$0	$7,200	$0	$125,900	$0	$0	$0
Interest Rate	7.0%	5.0%	5.0%	5.0%	6.5%	5.0%	7.0%	5.0%	7.0%	5.5%	5.5%
Funding Policy	Optional from Alternative	Optional from Alternative	Alternative	Alternative	Alternative	Alternative	Standard	Alternative	Alternative	Optional from Standard	Standard

[a] *Includes additional solvency contributions.*
[b] *Additional contributions needed in 2015 to satisfy the 15-year solvency test.*

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities
Actuarial Valuation
As of July 01, 2013

Class III

Summary of Valuation Results

Municipality	Chester	Dunbar		Elkins		Grafton		Logan		Nitro	
	Police	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Plan Membership											
-Actives	7	12	14	10	3	6	4	7	8	16	14
-Annuitants	2	11	21	9	4	5	4	1	2	12	10
-Inactives	0	0	0	0	0	0	1	0	0	0	0
Total	9	23	35	19	7	11	9	8	10	28	24
Payroll	$269,771	$540,998	$592,912	$479,174	$164,553	$225,206	$107,846	$233,900	$279,887	$821,707	$693,436
Expected Benefit Payments	$55,656	$307,390	$552,845	$259,006	$70,158	$62,539	$95,561	$20,540	$29,785	$259,167	$260,073
Actuarial Accrued Liabilities											
-Actives	$1,332,451	$2,124,323	$2,443,574	$1,895,133	$720,212	$837,280	$578,872	$1,255,910	$804,476	$2,860,021	$3,672,947
-Annuitants	$503,261	$4,401,429	$8,532,746	$3,008,792	$651,039	$788,617	$1,362,870	$228,085	$322,526	$4,328,455	$3,582,852
-Inactives	$0	$0	$0	$0	$0	$0	$280,598	$0	$0	$0	$0
Total	$1,835,712	$6,525,752	$10,976,320	$4,903,925	$1,371,251	$1,625,897	$2,222,340	$1,483,995	$1,127,002	$7,188,476	$7,255,799
Market Value of Assets	$1,471,422	$4,925,299	$470,754	$2,083,143	$1,007,370	$978,494	$1,371,754	$523,380	$482,503	$2,651,192	$708,023
Unfunded Actuarial Accrued Liability	$364,290	$1,600,453	$10,505,566	$2,820,782	$363,881	$647,403	$850,586	$960,615	$644,499	$4,537,284	$6,547,776
Funded Ratio	80%	75%	4%	42%	73%	60%	62%	35%	43%	37%	10%
Net Employer Normal Cost	$45,139	$119,138	$194,885	$111,474	$41,973	$66,062	$23,525	$74,373	$61,211	$191,931	$195,427
Contributions FYE 2014											
Employer Contribution [a]	$42,455	$123,480	$338,857	$272,399	$64,316	$86,745	$90,845	$105,110	$86,951	$135,664	$126,402
(% of Payroll)	16%	23%	57%	57%	39%	39%	84%	45%	31%	17%	18%
State Premium Tax Allocation	$43,531	$111,676	$135,386	$86,671	$30,087	$51,575	$35,657	$51,832	$58,932	$131,573	$112,299
Employee Contribution	$20,111	$40,957	$48,522	$36,724	$11,519	$17,458	$7,975	$17,107	$20,314	$68,089	$52,319
Contributions FYE 2015											
Employer Contribution [a]	$45,139	$122,435	$362,577	$273,251	$46,007	$72,008	$70,621	$105,739	$61,211	$145,160	$135,250
(% of Payroll)	17%	23%	59%	57%	27%	31%	77%	45%	21%	17%	19%
State Premium Tax Allocation	$43,847	$108,758	$143,711	$91,260	$29,765	$52,129	$31,909	$51,795	$60,908	$139,517	$121,208
Employee Contribution	$20,371	$40,604	$50,934	$37,963	$12,071	$17,844	$6,806	$17,742	$21,383	$71,462	$54,529
Additional 2015 Solvency Contribution [b]											
- To Receive State Tax Premium Allocation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
- And to provide Supplemental COLA Benefits	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest Rate	7.0%	6.5%	5.0%	6.0%	6.5%	6.0%	6.5%	5.5%	6.5%	6.0%	5.0%
Funding Policy	Standard	Optional from Alternative	Alternative	Standard	Standard	Optional from Standard	Optional from Standard	Standard	Standard	Alternative	Alternative

[a] *Includes additional solvency contributions.*
[b] *Additional contributions needed in 2015 to satisfy the 15-year solvency test.*

Policemen's and Firemen's
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Class III

Summary of Valuation Results

Municipality	Oak Hill	Point Pleasant	Princeton		Star City	Welch	Weston		Westover	Williamson	
	Police	Police	Police	Fire	Police	Police	Police	Fire	Police	Police	Fire
Plan Membership											
-Actives	10	8	18	13	5	6	6	2	6	6	8
-Annuitants	5	6	20	14	5	2	4	3	4	6	12
-Inactives	0	0	0	1	0	1	0	0	0	0	0
Total	15	14	38	28	10	9	10	5	10	12	20
Payroll	$397,507	$293,930	$730,141	$517,349	$195,304	$285,193	$192,170	$65,815	$261,506	$194,249	$249,311
Expected Benefit Payments	$128,518	$117,694	$480,417	$330,874	$86,446	$52,477	$52,614	$60,896	$80,396	$89,399	$252,354
Actuarial Accrued Liabilities											
-Actives	$1,404,665	$1,759,593	$2,048,597	$3,051,150	$373,321	$910,143	$912,567	$275,058	$860,572	$1,226,053	$772,998
-Annuitants	$1,723,701	$1,971,337	$7,175,845	$4,968,158	$1,247,225	$595,743	$723,068	$1,032,341	$1,568,935	$1,197,362	$3,343,121
-Inactives	$0	$0	$0	$397,774	$0	$297,344	$0	$0	$0	$0	$0
Total	$3,128,366	$3,730,930	$9,224,442	$8,417,082	$1,620,546	$1,803,230	$1,635,635	$1,307,399	$2,429,507	$2,423,415	$4,116,119
Market Value of Assets	$3,682,148	$795,169	$3,645,268	$2,708,635	$1,228,252	$1,896,301	$746,440	$653,485	$1,895,510	$1,020,768	$1,551,357
Unfunded Actuarial Accrued Liability	($553,782)	$2,935,761	$5,579,174	$5,708,447	$392,294	($93,071)	$889,195	$653,914	$533,997	$1,402,647	$2,564,762
Funded Ratio	118%	21%	40%	32%	76%	105%	46%	50%	78%	42%	38%
Net Employer Normal Cost	$70,147	$92,257	$160,127	$173,616	$32,617	$60,184	$51,074	$19,490	$62,806	$63,924	$53,808
Contributions FYE 2014											
Employer Contribution [a]	$69,381	$269,280	$162,176	$82,154	$42,359	$64,987	$92,939	$75,278	$85,806	$121,218	$120,820
(% of Payroll)	17%	92%	22%	16%	22%	23%	48%	114%	33%	62%	48%
State Premium Tax Allocation	$0	$65,247	$164,761	$117,236	$41,350	$51,255	$41,470	$32,880	$55,317	$60,254	$82,626
Employee Contribution	$29,613	$20,575	$57,890	$37,095	$15,321	$21,916	$14,614	$6,148	$20,310	$14,345	$18,759
Contributions FYE 2015											
Employer Contribution [a]	$70,147	$267,402	$173,528	$87,905	$45,324	$60,184	$72,870	$80,547	$62,806	$129,703	$129,277
(% of Payroll)	18%	90%	23%	16%	22%	25%	37%	117%	24%	66%	53%
State Premium Tax Allocation	$0	$79,007	$180,537	$121,807	$46,175	$0	$55,183	$26,485	$69,532	$44,316	$79,374
Employee Contribution	$29,848	$20,822	$61,541	$38,878	$16,306	$18,816	$15,297	$6,456	$20,681	$14,767	$18,998
Additional 2015 Solvency Contribution [b]											
- To Receive State Tax Premium Allocation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
- And to provide Supplemental COLA Benefits	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest Rate	7.0%	5.5%	6.0%	5.0%	7.0%	6.5%	5.5%	6.5%	6.5%	5.5%	6.0%
Funding Policy	Optional from Standard	Optional from Standard	Alternative	Alternative	Alternative	Optional from Standard	Standard	Alternative	Optional from Standard	Alternative	Alternative

[a] *Includes additional solvency contributions.*
[b] *Additional contributions needed in 2015 to satisfy the 15-year solvency test.*

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Alternative Plans

Optional Funding - Year of Crossover [a]

Plan Name	Year of Crossover FYE	Funded Ratio	Current Funds, Open: Projected Employer Contribution Amount	Current Funds, Open: Projected Employer Contribution % of Pay	Current Funds, Closed: Projected Employer Contribution Amount	Current Funds, Closed: Projected Employer Contribution % of Pay	New Cost Sharing Fund: Projected Employer Contribution Amount	New Cost Sharing Fund: Projected Employer Contribution % of Pay	Total to Current closed Fund and New Cost Sharing Fund: Projected Employer Contribution Amount	Total to Current closed Fund and New Cost Sharing Fund: Projected Employer Contribution % of Pay	Decrease Amount	Decrease % of Pay
Beckley Police	2026	72%	$ 883,204	29%	$ 857,375	29%	$ 13,988	10.5%	$ 871,363	28%	$ 11,841	0.4%
Beckley Fire	2042	63%	3,416,363	81%	3,296,705	90%	56,968	10.5%	3,353,673	79%	62,690	1.5%
Bluefield Police	2025	51%	542,037	47%	536,749	48%	4,239	10.5%	540,988	47%	1,049	0.1%
Bluefield Fire	2032	37%	1,072,892	91%	1,024,606	92%	6,918	10.5%	1,031,524	87%	41,368	3.5%
Clarksburg Police	2027	41%	1,849,694	63%	1,795,010	66%	21,352	10.5%	1,816,363	62%	33,331	1.1%
Clarksburg Fire	2032	37%	2,619,013	88%	2,529,925	92%	23,394	10.5%	2,553,319	86%	65,694	2.2%
Dunbar Fire	2030	27%	1,000,359	96%	967,641	95%	3,147	10.5%	970,788	93%	29,571	2.8%
Fairmont Police	2036	45%	2,584,074	82%	2,493,686	81%	7,872	10.5%	2,501,558	80%	82,516	2.6%
Fairmont Fire	2040	38%	4,679,512	124%	4,417,883	125%	26,022	10.5%	4,443,905	117%	235,607	6.2%
Nitro Police	2047	87%	1,265,109	55%	1,203,341	53%	3,252	10.5%	1,206,593	52%	58,516	2.5%
Parkersburg Police	2038	49%	4,823,237	90%	4,671,293	92%	30,776	10.5%	4,702,068	88%	121,169	2.3%
Parkersburg Fire	2019	29%	2,940,944	98%	2,758,462	96%	14,399	10.5%	2,772,860	92%	168,084	5.6%
Princeton Police	2035	64%	671,499	43%	625,674	42%	7,915	10.5%	633,589	40%	37,910	2.4%
St. Albans Police	2025	65%	486,866	32%	472,586	32%	5,845	10.5%	478,432	31%	8,434	0.5%
Star City Police	2015	78%	45,324	22%	32,617	17%	993	10.5%	33,610	16%	11,714	5.7%
Weirton Fire	2018	72%	283,103	27%	271,461	28%	8,717	10.5%	280,178	27%	2,925	0.3%
Weston Fire	2015	55%	80,547	117%	32,394	49%	246	10.5%	32,640	48%	47,907	69.9%
Wheeling Police	2017	38%	2,228,351	56%	2,185,088	59%	32,083	10.5%	2,217,170	55%	11,181	0.3%
Wheeling Fire	2027	39%	4,268,407	77%	4,044,807	83%	67,133	10.5%	4,111,939	75%	156,468	2.8%
Williamson Police	2015	47%	129,703	66%	91,175	50%	1,343	10.5%	92,518	47%	37,185	19.0%
Williamson Fire	2018	41%	158,370	57%	153,548	61%	2,846	10.5%	156,394	56%	1,976	0.7%

Plans that are projected to remain alternative [b]

Plan Name	Year of Crossover FYE	Funded Ratio	Current Funds, Open: Projected Employer Contribution Amount	Current Funds, Open: Projected Employer Contribution % of Pay
Martinsburg Police	2051	55%	$ 5,462,011	73%
Martinsburg Fire	2051	88%	6,625,178	117%
Morgantown Police	2051	55%	8,234,099	78%
Morgantown Fire	2051	65%	6,684,594	94%
Nitro Fire	2051	56%	1,545,092	74%
Princeton Fire	2051	34%	1,004,225	68%
South Charleston Police	2051	33%	3,828,037	75%
South Charleston Fire	2051	100%	1,409,216	28%
St. Albans Fire	2051	38%	2,400,261	80%
Weirton Police	2051	74%	6,215,988	133%

[a] Year of crossover means year sponsor contributions are lower if the sponsor decide to cover new entrants under the statewidecost sharing plan (West Virginia Municipal Police Officers and Firefighters Retirement System).
[b] Alternative contributions are lower during the entire 40-year projection period from 1/1/2013.

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Alternative Plans

Conservation Funding - Year of Crossover [a]

Plan Name	Year of Crossover FYE	Funded Ratio	Current Funds, Open		Current Funds, Closed		New Cost Sharing Fund		Total to Current closed Fund and New Cost Sharing Fund		Decrease Amount	Decrease % of Pay
			Projected Employer Contribution Amount	Projected Employer Contribution % of Pay	Projected Employer Contribution Amount	Projected Employer Contribution % of Pay	Projected Employer Contribution Amount	Projected Employer Contribution % of Pay	Projected Employer Contribution Amount	Projected Employer Contribution % of Pay		
Beckley Fire	2035	42%	$ 2,127,539	62%	$ 2,006,401	67%	$ 48,593	10.5%	$ 2,054,994	60%	$ 72,545	2.1%
Bluefield Police	2025	51%	542,037	47%	532,286	48%	4,239	10.5%	536,525	46%	5,512	0.5%
Bluefield Fire	2026	25%	714,914	75%	670,531	74%	5,323	10.5%	675,854	71%	39,060	4.1%
Clarksburg Police	2015	18%	821,286	41%	615,897	33%	13,745	10.5%	629,641	32%	191,645	9.6%
Clarksburg Fire	2020	16%	1,162,875	56%	1,129,016	58%	14,566	10.5%	1,143,583	55%	19,292	0.9%
Dunbar Fire	2018	5%	444,172	64%	440,896	66%	3,130	10.5%	444,026	64%	146	0.0%
Fairmont Police	2023	19%	1,072,299	51%	1,046,025	52%	8,011	10.5%	1,054,036	50%	18,263	0.9%
Fairmont Fire	2028	3%	2,077,760	81%	2,028,137	87%	24,488	10.5%	2,052,625	80%	25,135	1.0%
Martinsburg Police	2039	28%	2,425,197	47%	2,293,255	47%	27,595	10.5%	2,320,850	45%	104,347	2.0%
Martinsburg Fire	2027	7%	1,306,133	46%	1,293,069	48%	12,157	10.5%	1,305,225	46%	908	0.0%
Morgantown Police	2037	23%	3,193,326	46%	3,064,681	45%	23,596	10.5%	3,088,277	44%	105,049	1.5%
Morgantown Fire	2036	22%	2,422,804	53%	2,305,922	54%	29,309	10.5%	2,335,231	51%	87,573	1.9%
Nitro Police	2015	38%	145,160	17%	73,514	9%	3,678	10.5%	77,192	9%	67,968	7.9%
Nitro Fire	2032	17%	427,231	36%	405,067	38%	11,219	10.5%	416,286	35%	10,945	0.9%
Parkersburg Police	2028	25%	2,451,889	63%	2,328,644	64%	23,850	10.5%	2,352,494	61%	99,395	2.6%
Parkersburg Fire	2015	22%	2,243,633	85%	1,928,808	76%	12,216	10.5%	1,941,024	73%	302,609	11.4%
Princeton Police	2027	48%	390,819	33%	381,243	33%	6,301	10.5%	387,544	32%	3,275	0.3%
Princeton Fire	2042	19%	546,232	48%	517,770	47%	3,432	10.5%	521,201	46%	25,031	2.2%
South Charleston Police	2036	6%	1,387,456	42%	1,369,836	43%	17,390	10.5%	1,387,226	42%	230	0.0%
South Charleston Fire	2029	7%	1,553,166	61%	1,488,083	61%	10,692	10.5%	1,498,776	59%	54,390	2.1%
St. Albans Police	2015	52%	247,498	21%	186,850	17%	5,683	10.5%	192,533	16%	54,965	4.6%
St. Albans Fire	2038	9%	996,023	50%	962,299	51%	10,836	10.5%	973,135	49%	22,888	1.1%
Star City Police	2015	78%	45,324	22%	31,527	16%	993	10.5%	32,520	16%	12,804	6.2%
Weirton Police	2033	1%	1,839,087	66%	1,698,814	68%	33,917	10.5%	1,732,731	62%	106,356	3.8%
Weirton Fire	2031	98%	439,319	29%	407,982	29%	15,665	10.5%	423,647	28%	15,672	1.0%
Weston Fire	2015	55%	80,547	117%	31,920	48%	246	10.5%	32,166	47%	48,381	70.5%
Wheeling Police	2015	35%	1,946,328	52%	1,875,726	55%	34,428	10.5%	1,910,155	51%	36,173	1.0%
Wheeling Fire	2020	27%	2,658,150	58%	2,594,288	61%	40,022	10.5%	2,634,309	57%	23,841	0.5%
Williamson Police	2015	47%	129,703	66%	47,451	26%	1,343	10.5%	48,794	25%	80,909	41.3%
Williamson Fire	2020	45%	181,318	60%	176,328	65%	3,258	10.5%	179,586	59%	1,732	0.6%
Plans that are projected to remain alternative [b]												
Beckley Police	2053	100%	$ 1,028,837	15%								

[a] Year of crossover means year sponsor contributions are lower if the sponsor decide to cover new entrants under the statewidecost sharing plan (West Virginia Municipal Police Officers and Firefighters Retirement System).
[b] Alternative contributions are lower during the entire 40-year projection period from 7/1/2013.

Policemen's and Firemen's
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Standard Plans

			Optional Funding - Year of Crossover [a]									
			Current Funds, Open		Current Funds, Closed		New Cost Sharing Fund		Total to Current closed Fund and New Cost Sharing Fund			
Plan Name	Year of Crossover FYE	Funded Ratio	Projected Employer Contribution Amount	Projected Employer Contribution % of Pay	Projected Employer Contribution Amount	Projected Employer Contribution % of Pay	Projected Employer Contribution Amount	Projected Employer Contribution % of Pay	Projected Employer Contribution Amount	Projected Employer Contribution % of Pay	Decrease Amount	Decrease % of Pay
Charles Town Police [1]	2015	34%	NA	NA	$ 72,050	NA	NA	NA	$ 72,050	NA	NA	NA
Chester Police	2015	82%	$ 41,954	16%	37,273	16%	$ 3,414	10.5%	40,687	15%	$ 1,267	0.5%
Elkins Police	2015	46%	280,046	59%	264,590	65%	7,579	10.5%	272,169	57%	7,877	1.7%
Elkins Fire	2015	77%	45,655	27%	44,801	27%	454	10.5%	45,255	26%	400	0.2%
Logan Police	2015	43%	106,955	45%	102,096	46%	1,774	10.5%	103,870	44%	3,085	1.3%
Logan Fire	2015	52%	63,643	22%	62,018	22%	955	10.5%	62,973	22%	670	0.2%
Vienna Police	2015	70%	230,391	30%	225,773	31%	3,377	10.5%	229,150	30%	1,241	0.2%
Weston Police	2015	51%	72,577	37%	68,993	38%	1,631	10.5%	70,624	36%	1,953	1.0%

[a] Year of crossover means year sponsor contributions are lower if the sponsor decide to cover new entrants under the statewidecost sharing plan (West Virginia Municipal Police Officers and Firefighters Retirement System).

[1] One plan, Charles Town Police is closed to new entrants.

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Class I

Comparison of Employer Contribution Rates

Municipality	Charleston		Huntington		Morgantown		Parkersburg		Wheeling	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Funding Policy	Conservation	Conservation	Optional from Alternative	Optional from Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative
Current Funding Policy										
2013	51%	56%	88%	135%	19%	22%	35%	82%	50%	44%
2023	74%	87%	59%	92%	27%	33%	54%	122%	70%	69%
2033	83%	86%	38%	59%	40%	50%	77%	26%	20%	101%
2043	55%	56%	25%	39%	59%	72%	113%	23%	17%	23%
2053	11%	11%	11%	11%	87%	106%	27%	23%	18%	23%
Optional Funding Policy										
2013	NA	NA	88%	135%	19%	22%	35%	82%	50%	44%
2023	NA	NA	59%	92%	27%	33%	54%	80%	40%	69%
2033	NA	NA	38%	59%	40%	50%	77%	50%	27%	55%
2043	NA	NA	25%	39%	59%	72%	68%	30%	15%	33%
2053	NA	NA	11%	11%	87%	106%	13%	11%	11%	11%
Conservation Funding Policy										
2013	61%	69%	NA	NA	19%	22%	35%	82%	50%	44%
2023	74%	87%	NA	NA	27%	33%	54%	84%	50%	64%
2033	83%	86%	NA	NA	40%	50%	58%	80%	48%	67%
2043	55%	56%	NA	NA	46%	51%	56%	11%	11%	11%
2053	11%	11%	NA	NA	50%	55%	11%	11%	11%	11%

**Policemen's and Firemen's
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Class II

Comparison of Employer Contribution Rates

Municipality	Beckley		Bluefield		Clarksburg		Fairmont		Martinsburg	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Funding Policy	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative
Current Funding Policy										
2013	19%	26%	31%	47%	39%	43%	38%	47%	23%	36%
2023	26%	42%	45%	70%	57%	66%	53%	67%	26%	42%
2033	40%	60%	64%	99%	82%	95%	76%	100%	39%	62%
2043	16%	88%	18%	25%	22%	27%	114%	143%	57%	90%
2053	15%	25%	17%	25%	22%	27%	24%	27%	82%	24%
Optional Funding Policy										
2013	19%	26%	31%	47%	39%	43%	38%	47%	23%	36%
2023	26%	42%	45%	70%	57%	66%	53%	67%	26%	42%
2033	21%	60%	30%	80%	47%	79%	76%	100%	39%	62%
2043	13%	72%	17%	53%	29%	49%	56%	101%	57%	90%
2053	11%	14%	11%	13%	11%	11%	12%	13%	82%	24%
Conservation Funding Policy										
2013	19%	26%	31%	47%	39%	43%	38%	47%	23%	36%
2023	26%	42%	45%	70%	45%	62%	50%	67%	26%	42%
2033	40%	60%	47%	63%	50%	60%	54%	74%	39%	57%
2043	16%	56%	12%	55%	42%	55%	51%	64%	44%	59%
2053	15%	11%	11%	11%	11%	11%	11%	46%	47%	51%

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Comparison of Employer Contribution Rates

Municipality	Moundsville (Class II)		South Charleston		St. Albans		Vienna	Weirton		Belle (Class III)	Charles Town
	Police	Fire	Police	Fire	Police	Fire	Police	Police	Fire	Police	Police[1]
Funding Policy	Optional from Alternative	Optional from Alternative	Alternative	Alternative	Alternative	Alternative	Standard	Alternative	Alternative	Optional from Standard	Standard
Current Funding Policy											
2013	35%	137%	19%	34%	20%	23%	46%	32%	22%	78%	95%
2023	15%	83%	27%	50%	31%	28%	21%	45%	33%	49%	69%
2033	12%	48%	38%	72%	43%	43%	14%	67%	19%	14%	1%
2043	11%	34%	58%	105%	15%	62%	12%	101%	17%	12%	1%
2053	11%	11%	84%	29%	16%	90%	12%	29%	17%	11%	1%
Optional Funding Policy											
2013	35%	137%	19%	34%	20%	23%	46%	32%	22%	78%	NA
2023	15%	83%	27%	50%	31%	28%	18%	45%	17%	49%	NA
2033	12%	48%	38%	72%	19%	43%	11%	67%	13%	14%	NA
2043	11%	34%	58%	105%	12%	62%	10%	101%	11%	12%	NA
2053	11%	11%	84%	29%	11%	90%	10%	29%	11%	11%	NA
Conservation Funding Policy											
2013	NA	NA	19%	34%	20%	23%	NA	32%	22%	NA	NA
2023	NA	NA	27%	50%	48%	28%	NA	45%	33%	NA	NA
2033	NA	NA	38%	57%	12%	43%	NA	60%	16%	NA	NA
2043	NA	NA	52%	58%	11%	49%	NA	63%	13%	NA	NA
2053	NA	NA	48%	48%	11%	50%	NA	55%	11%	NA	NA

[1] **Contributions as a percentage of expected benefit payments.**

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Class III

Comparison of Employer Contribution Rates

Municipality	Chester	Dunbar		Elkins		Grafton		Logan		Nitro	
	Police	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Funding Policy	Standard	Optional from Alternative	Alternative	Standard	Standard	Optional from Standard	Optional from Standard	Standard	Standard	Alternative	Alternative
Current Funding Policy											
2013	16%	23%	57%	57%	39%	39%	84%	45%	31%	17%	18%
2023	15%	18%	80%	45%	23%	22%	42%	37%	21%	23%	26%
2033	16%	12%	116%	22%	22%	12%	15%	29%	19%	35%	39%
2043	12%	11%	28%	21%	18%	11%	13%	28%	18%	49%	57%
2053	14%	11%	27%	21%	19%	11%	12%	27%	15%	19%	83%
Optional Funding Policy											
2013	16%	23%	57%	57%	39%	39%	84%	45%	31%	17%	18%
2023	13%	18%	80%	38%	19%	22%	42%	29%	19%	23%	26%
2033	12%	12%	86%	13%	12%	12%	15%	12%	11%	35%	39%
2043	11%	11%	60%	11%	11%	11%	13%	11%	10%	49%	57%
2053	11%	11%	11%	11%	11%	11%	12%	11%	10%	19%	83%
Conservation Funding Policy											
2013	NA	NA	57%	NA	NA	NA	NA	NA	NA	17%	18%
2023	NA	NA	69%	NA	NA	NA	NA	NA	NA	28%	26%
2033	NA	NA	67%	NA	NA	NA	NA	NA	NA	55%	35%
2043	NA	NA	63%	NA	NA	NA	NA	NA	NA	11%	44%
2053	NA	NA	11%	NA	NA	NA	NA	NA	NA	11%	47%

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Class III

Comparison of Employer Contribution Rates

Municipality	Oak Hill	Point Pleasant	Princeton		Star City	Welch	Weston		Westover	Williamson	
	Police	Police	Police	Fire	Police	Police	Police	Fire	Police	Police	Fire
Funding Policy	Optional from Standard	Optional from Standard	Alternative	Alternative	Alternative	Optional from Standard	Standard	Alternative	Optional from Standard	Alternative	Alternative
Current Funding Policy											
2013	17%	92%	22%	16%	22%	23%	48%	114%	33%	62%	48%
2023	15%	61%	30%	22%	16%	20%	29%	28%	18%	40%	67%
2033	9%	12%	41%	35%	15%	11%	25%	27%	11%	30%	21%
2043	11%	11%	17%	52%	13%	11%	24%	25%	11%	27%	19%
2053	11%	11%	18%	76%	12%	11%	23%	25%	11%	27%	19%
Optional Funding Policy											
2013	17%	92%	22%	16%	22%	23%	48%	114%	33%	62%	48%
2023	15%	61%	30%	22%	15%	20%	23%	24%	18%	29%	42%
2033	9%	12%	41%	35%	12%	11%	12%	13%	11%	14%	30%
2043	11%	11%	26%	52%	11%	11%	11%	12%	11%	12%	12%
2053	11%	11%	11%	76%	11%	11%	10%	11%	11%	11%	11%
Conservation Funding Policy											
2013	NA	NA	22%	16%	22%	NA	NA	114%	NA	62%	48%
2023	NA	NA	30%	22%	15%	NA	NA	76%	NA	45%	49%
2033	NA	NA	35%	35%	12%	NA	NA	12%	NA	13%	45%
2043	NA	NA	41%	44%	11%	NA	NA	12%	NA	11%	12%
2053	NA	NA	10%	48%	11%	NA	NA	11%	NA	11%	11%

Policemen's and Firemen's
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Class I

Comparison of Funded Ratios

Municipality	Charleston		Huntington		Morgantown		Parkersburg		Wheeling	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Funding Policy	Conservation	Conservation	Optional from Alternative	Optional from Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative
Current Funding Policy										
2013	9%	7%	26%	14%	28%	29%	21%	21%	33%	24%
2023	15%	14%	46%	30%	23%	23%	22%	45%	59%	33%
2033	30%	28%	55%	40%	22%	21%	35%	100%	100%	66%
2043	74%	73%	69%	58%	33%	37%	81%	100%	100%	100%
2053	100%	100%	100%	100%	68%	82%	100%	100%	100%	100%
Optional Funding Policy										
2013	NA	NA	26%	14%	28%	29%	21%	21%	33%	24%
2023	NA	NA	46%	30%	23%	23%	22%	39%	50%	33%
2033	NA	NA	55%	40%	22%	21%	35%	53%	65%	55%
2043	NA	NA	69%	58%	33%	37%	73%	70%	81%	78%
2053	NA	NA	100%	100%	68%	82%	100%	100%	100%	100%
Conservation Funding Policy										
2013	9%	7%	NA	NA	28%	29%	21%	21%	33%	24%
2023	15%	14%	NA	NA	23%	23%	22%	32%	52%	32%
2033	30%	28%	NA	NA	22%	21%	31%	60%	86%	53%
2043	74%	73%	NA	NA	29%	29%	50%	100%	100%	100%
2053	100%	100%	NA	NA	43%	46%	99%	100%	100%	100%

Policemen's and Firemen's
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Class II

Comparison of Funded Ratios

Municipality	Beckley		Bluefield		Clarksburg		Fairmont		Martinsburg	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Funding Policy	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative
Current Funding Policy										
2013	64%	45%	37%	23%	17%	14%	16%	5%	24%	9%
2023	70%	38%	49%	23%	33%	20%	20%	2%	23%	6%
2033	86%	41%	79%	44%	69%	45%	38%	12%	26%	14%
2043	100%	73%	100%	100%	100%	100%	90%	67%	35%	44%
2053	100%	100%	100%	100%	100%	100%	100%	100%	67%	100%
Optional Funding Policy										
2013	64%	45%	37%	23%	17%	14%	16%	5%	24%	9%
2023	70%	38%	49%	23%	33%	20%	20%	2%	23%	6%
2033	81%	41%	67%	43%	59%	44%	38%	12%	26%	14%
2043	93%	72%	84%	74%	82%	76%	75%	61%	35%	44%
2053	100%	100%	100%	100%	100%	100%	100%	100%	67%	100%
Conservation Funding Policy										
2013	64%	45%	37%	23%	17%	14%	16%	5%	24%	9%
2023	70%	38%	49%	23%	25%	19%	20%	2%	23%	6%
2033	86%	41%	74%	35%	39%	29%	29%	7%	26%	12%
2043	100%	62%	100%	57%	81%	57%	50%	18%	32%	23%
2053	100%	100%	100%	100%	100%	100%	100%	45%	46%	49%

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Comparison of Funded Ratios

	Class II									Class III	
Municipality	**Moundsville**		**South Charleston**		**St. Albans**		**Vienna**	**Weirton**		**Belle**	**Charles Town**
	Police	**Fire**	**Police**	**Fire**	**Police**	**Fire**	**Police**	**Police**	**Fire**	**Police**	**Police**
Funding Policy	**Optional from Alternative**	**Optional from Alternative**	**Alternative**	**Alternative**	**Alternative**	**Alternative**	**Standard**	**Alternative**	**Alternative**	**Optional from Standard**	**Standard**
Current Funding Policy											
2013	66%	22%	11%	5%	51%	17%	66%	15%	68%	62%	31%
2023	82%	30%	5%	5%	64%	11%	87%	4%	81%	79%	48%
2033	100%	37%	4%	13%	87%	8%	100%	2%	100%	100%	100%
2043	100%	54%	15%	49%	100%	17%	100%	30%	100%	100%	100%
2053	100%	100%	46%	100%	100%	51%	100%	100%	100%	100%	100%
Optional Funding Policy											
2013	66%	22%	11%	5%	51%	17%	66%	15%	68%	62%	NA
2023	82%	30%	5%	5%	64%	11%	87%	4%	77%	79%	NA
2033	100%	37%	4%	13%	78%	8%	100%	2%	86%	100%	NA
2043	100%	54%	15%	49%	90%	17%	100%	30%	100%	100%	NA
2053	100%	100%	46%	100%	100%	51%	100%	100%	100%	100%	NA
Conservation Funding Policy											
2013	NA	NA	11%	5%	51%	17%	NA	15%	68%	NA	NA
2023	NA	NA	5%	5%	70%	11%	NA	4%	81%	NA	NA
2033	NA	NA	4%	10%	100%	8%	NA	2%	100%	NA	NA
2043	NA	NA	12%	20%	100%	13%	NA	10%	100%	NA	NA
2053	NA	NA	26%	43%	100%	23%	NA	26%	100%	NA	NA

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Class III

Comparison of Funded Ratios

Municipality	Chester	Dunbar		Elkins		Grafton		Logan		Nitro	
	Police	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
Funding Policy	Standard	Optional from Alternative	Alternative	Standard	Standard	Optional from Standard	Optional from Standard	Standard	Standard	Alternative	Alternative
Current Funding Policy											
2013	80%	75%	4%	42%	73%	60%	62%	35%	43%	37%	10%
2023	99%	85%	10%	75%	91%	89%	82%	83%	90%	48%	13%
2033	100%	99%	45%	100%	100%	100%	100%	100%	100%	56%	18%
2043	100%	100%	100%	100%	100%	100%	100%	100%	100%	76%	34%
2053	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	70%
Optional Funding Policy											
2013	80%	75%	4%	42%	73%	60%	62%	35%	43%	37%	10%
2023	100%	85%	10%	73%	92%	89%	82%	82%	90%	48%	13%
2033	100%	99%	42%	100%	100%	100%	100%	100%	100%	56%	18%
2043	100%	100%	75%	100%	100%	100%	100%	100%	100%	76%	34%
2053	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	70%
Conservation Funding Policy											
2013	NA	NA	4%	NA	NA	NA	NA	NA	NA	37%	10%
2023	NA	NA	8%	NA	NA	NA	NA	NA	NA	40%	13%
2033	NA	NA	17%	NA	NA	NA	NA	NA	NA	64%	18%
2043	NA	NA	39%	NA	NA	NA	NA	NA	NA	100%	24%
2053	NA	NA	100%	NA	NA	NA	NA	NA	NA	100%	39%

**Policemen's and Firemen's
Pension and Relief Funds
of West Virginia Municipalities
Actuarial Valuation
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Class III

Comparison of Funded Ratios

Municipality	Oak Hill	Point Pleasant	Princeton		Star City	Welch	Weston		Westover	Williamson	
	Police	Police	Police	Fire	Police	Police	Police	Fire	Police	Police	Fire
Funding Policy	Optional from Standard	Optional from Standard	Alternative	Alternative	Alternative	Optional from Standard	Standard	Alternative	Optional from Standard	Alternative	Alternative
Current Funding Policy											
2013	118%	21%	40%	32%	76%	105%	46%	50%	78%	42%	38%
2023	122%	70%	44%	27%	98%	100%	81%	91%	100%	84%	56%
2033	136%	100%	61%	19%	100%	100%	100%	100%	100%	100%	100%
2043	180%	100%	99%	21%	100%	100%	100%	100%	100%	100%	100%
2053	332%	100%	100%	44%	100%	100%	100%	100%	100%	100%	100%
Optional Funding Policy											
2013	118%	21%	40%	32%	76%	105%	46%	50%	78%	42%	38%
2023	122%	70%	44%	27%	97%	100%	81%	66%	100%	63%	50%
2033	136%	100%	61%	19%	100%	100%	100%	75%	100%	73%	68%
2043	180%	100%	85%	21%	100%	100%	100%	100%	100%	91%	83%
2053	332%	100%	100%	44%	100%	100%	100%	100%	100%	100%	100%
Conservation Funding Policy											
2013	NA	NA	40%	32%	76%	NA	NA	50%	NA	42%	38%
2023	NA	NA	44%	27%	99%	NA	NA	83%	NA	61%	53%
2033	NA	NA	59%	19%	100%	NA	NA	100%	NA	100%	78%
2043	NA	NA	88%	20%	100%	NA	NA	100%	NA	100%	100%
2053	NA	NA	100%	29%	100%	NA	NA	100%	NA	100%	100%

Policemen's and Firemen's
Pension and Relief Funds
of West Virginia Municipalities
Actuarial Valuation as of July 01, 2013

Reconciliation of Assets 6/30/2013

Class I

Municipality	Charleston		Huntington		Morgantown		Parkersburg		Wheeling	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
A. Market Value of Assets as of July 1, 2012	$11,781,046	$9,314,344	$19,238,866	$10,946,214	$12,832,944	$10,141,193	$9,073,126	$9,638,823	$14,310,524	$13,168,535
Adjustment to Market Value of Assets at Beginning of Year	$0	$0	($3,072)	($2,267)	$0	$0	$0	$0	$0	$0
Market Value of Assets Beginning of Year	$11,781,046	$9,314,344	$19,235,794	$10,943,947	$12,832,944	$10,141,193	$9,073,126	$9,638,823	$14,310,524	$13,168,535
1. Revenue During Fiscal Year										
(a) Employee Contribution	$697,135	$644,474	$394,311	$299,323	$246,225	$183,888	$208,919	$184,519	$291,385	$303,686
(b) Governmental Contribution										
(i) From Local Government	$4,597,313	$4,935,630	$4,316,854	$5,453,915	$629,555	$540,495	$888,678	$1,959,672	$1,947,398	$1,902,760
(ii) From State Government	$1,654,567	$1,732,720	$1,026,327	$1,108,964	$577,834	$460,168	$618,740	$622,008	$857,488	$936,589
(iii) Reallocation from State Government	$291,300	$225,633	$0	$0	$243,952	$4,034	$145,086	$0	$0	$0
(iv) Total	$6,543,180	$6,893,983	$5,343,181	$6,562,879	$1,451,341	$1,004,697	$1,652,504	$2,581,680	$2,804,886	$2,839,349
(c) Earnings on Investments										
(i) Net Appreciation (Depreciation)	$262,967	$958,969	$650,540	$367,808	$120,364	$123,500	$339,670	$351,060	$1,553,598	$1,409,870
(ii) Bond Interest	$140,180	$33,598	$333,393	$159,264	$155,134	$119,012	$114,992	$124,939	$0	$0
(iii) Dividends	$139,553	$139,261	$312,138	$383,597	$142,166	$113,146	$88,043	$72,467	$0	$0
(iv) Net Realized Gain (Loss) on Sale or Exchange	$383,378	$0	$0	$0	$501,657	$388,853	$0	$0	$0	$0
(v) Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(vi) Investment Expense	($190,277)	($47,611)	$0	$0	($115,608)	($91,979)	$0	$0	($50,974)	($59,122)
(vii) Total	$735,801	$1,084,217	$1,296,071	$910,669	$803,713	$652,532	$542,705	$548,466	$1,502,624	$1,350,748
(d) Other Revenue	$0	$0	$0	$0	$0	$0	$84	$0	$644	$853
(e) Receivable Contribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(f) Total Revenue (sum of (a) through (e))	$7,976,116	$8,622,674	$7,033,563	$7,772,871	$2,501,279	$1,841,117	$2,404,212	$3,314,665	$4,599,539	$4,494,636
2. Expenditures During Fiscal Year										
(a) Benefits Paid	$6,303,363	$6,565,775	$3,749,518	$5,084,480	$1,862,074	$1,399,672	$1,886,086	$2,564,188	$2,637,241	$2,787,414
(b) Withdrawals	$4,787	$88,270	$0	$28,804	$5,776	$0	$49,610	$0	$0	$0
(c) Administrative Expenses	$9,197	$11,404	$106,224	$80,679	$1,697	$1,650	$152	$150	$1,928	$1,321
(d) Total Expenditures (sum of (a) through (c))	$6,317,347	$6,665,449	$3,855,742	$5,193,963	$1,869,547	$1,401,322	$1,935,848	$2,564,338	$2,639,169	$2,788,735
B. Market Value of Assets as of June 30, 2013 [A + 1(f) - 2(d)]	$13,439,815	$11,271,569	$22,413,615	$13,522,855	$13,464,676	$10,580,988	$9,541,490	$10,389,150	$16,270,894	$14,874,436
C. Return on Assets	6.0%	11.2%	6.3%	8.3%	6.5%	6.6%	6.1%	5.6%	10.3%	10.1%

[a] Receivable contributions for plan year ending June 30, 2013.

Policemen's and Firemen's
Pension and Relief Funds
of West Virginia Municipalities
Actuarial Valuation as of July 01, 2013

Reconciliation of Assets 6/30/2013

Class II

Municipality	Beckley		Bluefield		Clarksburg		Fairmont		Martinsburg	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
A. Market Value of Assets as of July 1, 2012	$16,893,829	$15,010,624	$3,963,892	$3,283,518	$3,459,949	$3,733,393	$3,872,522	$1,734,688	$6,040,104	$1,973,857
Adjustment to Market Value of Assets at Beginning of Year	$0	$0	$0	$0	($29,146)	($33,189)	$0	$0	$0	$0
Market Value of Assets Beginning of Year	$16,893,829	$15,010,624	$3,963,892	$3,283,518	$3,430,803	$3,700,204	$3,872,522	$1,734,688	$6,040,104	$1,973,857
1. Revenue During Fiscal Year										
(a) Employee Contribution	$161,156	$145,246	$57,925	$46,064	$158,481	$136,170	$120,200	$155,592	$213,283	$153,868
(b) Governmental Contribution										
(i) From Local Government	$366,500	$480,216	$239,360	$296,663	$737,643	$743,702	$545,104	$753,076	$488,619	$600,590
(ii) From State Government	$438,924	$401,933	$199,023	$210,734	$470,168	$473,392	$342,568	$432,491	$438,716	$330,780
(iii) Reallocation from State Government	$263,827	$42,618	$68,113	$0	$55,814	$0	$0	$0	$346,620	$228,016
(iv) Total	$1,069,251	$924,767	$506,496	$507,397	$1,263,625	$1,217,094	$887,672	$1,185,567	$1,273,955	$1,159,386
(c) Earnings on Investments										
(i) Net Appreciation (Depreciation)	($23,239)	($18,335)	$44,361	$186,206	($345,283)	$286,291	$0	$0	($379,532)	$136,851
(ii) Bond Interest	$163,763	$149,076	$60,617	$70,090	$6,113	$20,901	$12,914	$41,092	$807,868	$48,575
(iii) Dividends	$279,147	$266,090	$16,250	$75,713	$36,958	$52,617	$100,668	$20,778	$0	$0
(iv) Net Realized Gain (Loss) on Sale or Exchange	$895,218	$870,635	($6,991)	($35,576)	$587,174	$77,591	$264,194	$50,257	$0	$0
(v) Other	$0	$0	$0	$0	$18	$5,591	$363	$32	$0	$0
(vi) Investment Expense	$0	$0	$0	$0	($5,021)	($14,948)	$0	($2,833)	($36,813)	($17,465)
(vii) Total	$1,314,889	$1,267,466	$114,237	$296,433	$279,959	$428,043	$378,139	$109,326	$391,523	$167,961
(d) Other Revenue	$0	$0	$0	$0	$0	$0	$32,103	$32,103	$0	$0
(e) Receivable Contribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(f) Total Revenue (sum of (a) through (e))	$2,545,296	$2,337,479	$678,658	$849,894	$1,702,065	$1,781,307	$1,418,114	$1,482,588	$1,878,761	$1,481,215
2. Expenditures During Fiscal Year										
(a) Benefits Paid	$1,450,230	$1,655,243	$520,259	$630,256	$969,688	$1,262,330	$1,033,923	$1,589,878	$964,833	$1,111,901
(b) Withdrawals	$5,024	$0	$0	$0	$64,695	$0	$39,077	$5,233	$51,628	$0
(c) Administrative Expenses	$59,244	$52,552	$3,825	$0	$6,000	$6,000	$1,985	$2,800	$2,500	$1,000
(d) Total Expenditures (sum of (a) through (c))	$1,514,498	$1,707,795	$524,084	$630,256	$1,040,383	$1,268,330	$1,074,985	$1,597,911	$1,018,961	$1,112,901
B. Market Value of Assets as of June 30, 2013 [A + 1(f) - 2(d)]	$17,924,627	$15,640,308	$4,118,466	$3,503,156	$4,092,485	$4,213,181	$4,215,651	$1,619,365	$6,899,904	$2,342,171
C. Return on Assets	7.7%	8.5%	2.8%	9.1%	7.6%	11.3%	9.8%	6.6%	6.4%	8.5%

[a] Receivable contributions for plan year ending June 30, 2013.

Policemen's and Firemen's
Pension and Relief Funds
of West Virginia Municipalities
Actuarial Valuation as of July 01, 2013

Reconciliation of Assets 6/30/2013

	Class II									Class III	
Municipality	**Moundsville**		**South Charleston**		**St. Albans**		**Vienna**	**Weirton**		**Belle**	**Charles Town**
	Police	**Fire**	**Police**	**Fire**	**Police**	**Fire**	**Police**	**Police**	**Fire**	**Police**	**Police**
A. Market Value of Assets as of July 1, 2012	$3,479,592	$973,857	$2,236,511	$1,592,824	$4,898,647	$2,248,835	$4,631,966	$4,022,752	$6,906,215	$1,299,823	$433,362
Adjustment to Market Value of Assets at Beginning of Year	$0	$0	$0	($332,498)	$0	($20,300)	($90,045)	$0	$0	$0	$0
Market Value of Assets Beginning of Year	$3,479,592	$973,857	$2,236,511	$1,260,326	$4,898,647	$2,228,535	$4,541,921	$4,022,752	$6,906,215	$1,299,823	$433,362
1. Revenue During Fiscal Year											
(a) Employee Contribution	$37,272	$12,681	$122,681	$112,836	$95,957	$92,146	$55,944	$150,235	$73,792	$6,945	$0
(b) Governmental Contribution											
(i) From Local Government	$236,235	$245,657	$292,679	$481,277	$226,175	$238,516	$291,909	$546,064	$201,850	$60,427	$110,655
(ii) From State Government	$137,459	$74,262	$332,426	$332,426	$180,588	$191,580	$213,895	$363,021	$206,660	$30,564	$15,148
(iii) Reallocation from State Government	$64,051	$0	$91,857	$75,792	$184,363	$21,373	$140,734	$21,277	$149,830	$10,924	$0
(iv) Total	$437,745	$319,919	$716,962	$889,495	$591,126	$451,469	$646,538	$930,362	$558,340	$101,915	$125,803
(c) Earnings on Investments											
(i) Net Appreciation (Depreciation)	$211,148	$84,203	$85,955	$85,995	$68,776	$54,296	$0	$0	$0	($7,572)	$0
(ii) Bond Interest	$50,998	$7,914	$2,824	$2,824	$66,546	$28,054	$0	$53,947	$88,036	$0	$1,401
(iii) Dividends	$57,204	$12,777	$14,584	$14,584	$53,953	$23,425	$152,826	$51,820	$96,626	$26,325	$5,003
(iv) Net Realized Gain (Loss) on Sale or Exchange	$34,174	$0	$23,867	$23,867	$145,203	$73,204	$244,883	$322,288	$514,885	$0	($1,982)
(v) Other	$9,186	$427	$0	$0	$0	$0	$75	$0	$0	$0	$0
(vi) Investment Expense	$0	($8,333)	($4,922)	($4,922)	($52,376)	($22,858)	$0	($17,887)	($25,726)	$0	$0
(vii) Total	$362,710	$96,988	$122,308	$122,348	$282,102	$156,121	$397,784	$410,168	$673,821	$18,753	$4,422
(d) Other Revenue	$0	$0	$97	$95	$0	$0	$0	$0	$0	$58	$4,895
(e) Receivable Contribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(f) Total Revenue (sum of (a) through (e))	$837,727	$429,588	$962,048	$1,124,774	$969,185	$699,736	$1,100,266	$1,490,765	$1,305,953	$127,671	$135,120
2. Expenditures During Fiscal Year											
(a) Benefits Paid	$264,458	$336,862	$888,126	$1,026,527	$377,530	$530,617	$349,866	$1,263,103	$571,327	$137,476	$115,025
(b) Withdrawals	$0	$0	$11,373	$37,680	$2,975	$0	$0	$10,946	$0	$0	$0
(c) Administrative Expenses	$501	$174	$3,000	$3,000	$710	$1,490	$28,804	$1,291	$14,946	$224	$5,112
(d) Total Expenditures (sum of (a) through (c))	$264,959	$337,036	$902,499	$1,067,207	$381,215	$532,107	$378,670	$1,275,340	$586,273	$137,700	$120,137
B. Market Value of Assets as of June 30, 2013 [A + 1(f) - 2(d)]	$4,052,360	$1,066,409	$2,296,060	$1,317,893	$5,486,617	$2,396,164	$5,263,517	$4,238,177	$7,625,895	$1,289,794	$448,345
C. Return on Assets	10.2%	10.0%	5.5%	10.0%	5.7%	7.1%	7.9%	10.4%	9.6%	1.5%	(0.2)%

[a] **Receivable contributions for plan year ending June 30, 2013.**

Policemen's and Firemen's
Pension and Relief Funds
of West Virginia Municipalities
Actuarial Valuation as of July 01, 2013

Reconciliation of Assets 6/30/2013

Class III

Municipality	Chester	Dunbar		Elkins		Grafton		Logan		Nitro	
	Police	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
A. Market Value of Assets as of July 1, 2012	$1,196,589	$4,596,187	$602,242	$1,872,918	$890,979	$851,833	$1,147,610	$415,152	$334,410	$2,179,114	$605,189
Adjustment to Market Value of Assets at Beginning of Year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Market Value of Assets Beginning of Year	$1,196,589	$4,596,187	$602,242	$1,872,918	$890,979	$851,833	$1,147,610	$415,152	$334,410	$2,179,114	$605,189
1. Revenue During Fiscal Year											
(a) Employee Contribution	$18,491	$44,063	$73,880	$36,789	$11,519	$17,458	$7,944	$16,180	$24,635	$58,380	$50,329
(b) Governmental Contribution											
(i) From Local Government	$98,159	$135,000	$316,689	$153,086	$63,000	$74,800	$72,700	$49,187	$51,078	$117,143	$111,848
(ii) From State Government	$29,183	$17,159	$11,700	$76,378	$32,992	$54,088	$41,779	$47,187	$49,277	$136,634	$114,829
(iii) Reallocation from State Government	$58,787	$111,023	$0	$9,042	$0	$12,284	$55,380	$405	$35,597	$147,084	$0
(iv) Total	$186,129	$263,182	$328,389	$238,506	$95,992	$141,172	$169,859	$96,779	$135,952	$400,861	$226,677
(c) Earnings on Investments											
(i) Net Appreciation (Depreciation)	$80,890	$92,249	$8,426	$0	$0	$27,090	$126,604	($15,714)	$8,456	$256,272	$49,050
(ii) Bond Interest	$6,276	$70,515	$4,256	$33,692	$10,544	$0	$0	$12,567	$9,274	$6,725	$1,653
(iii) Dividends	$13,553	$83,733	$15,761	$6,462	$4,616	$0	$0	$11,360	$8,489	$28,463	$6,729
(iv) Net Realized Gain (Loss) on Sale or Exchange	$1,233	$112,291	$4,512	$146,379	$75,513	$0	$0	$0	$0	$0	$0
(v) Other	$10,392	$9	$103	$0	$0	$1,051	$4	$0	$0	$0	$0
(vi) Investment Expense	$0	$0	$0	$0	$0	$0	$0	$0	$0	($6,287)	($2,317)
(vii) Total	$112,344	$358,797	$33,058	$186,533	$90,673	$28,141	$126,608	$8,213	$26,219	$285,173	$55,115
(d) Other Revenue	$0	$0	$0	$0	$0	$1,100	$1,329	$0	$0	$0	$0
(e) Receivable Contribution	$0	$0	($26,392)	$0	$0	$0	$0	$0	$0	$0	$0
(f) Total Revenue (sum of (a) through (e))	$316,964	$666,042	$408,935	$461,828	$198,184	$187,871	$305,740	$121,172	$186,806	$744,414	$332,121
2. Expenditures During Fiscal Year											
(a) Benefits Paid	$39,707	$301,977	$533,351	$228,009	$79,908	$58,860	$80,298	$12,817	$24,243	$270,136	$229,213
(b) Withdrawals	$0	$672	$3,253	$23,246	$0	$0	$0	$127	$14,470	$0	$0
(c) Administrative Expenses	$2,424	$34,281	$3,819	$348	$1,885	$2,350	$1,298	$0	$0	$2,200	$74
(d) Total Expenditures (sum of (a) through (c))	$42,131	$336,930	$540,423	$251,603	$81,793	$61,210	$81,596	$12,944	$38,713	$272,336	$229,287
B. Market Value of Assets as of June 30, 2013 [A + 1(f) - 2(d)]	$1,471,422	$4,925,299	$470,754	$2,083,143	$1,007,370	$978,494	$1,371,754	$523,380	$482,503	$2,651,192	$708,023
C. Return on Assets	8.8%	7.1%	5.6%	9.9%	9.8%	2.9%	10.7%	1.8%	6.9%	12.9%	8.7%

[a] Receivable contributions for plan year ending June 30, 2013.

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities
Actuarial Valuation as of July 01, 2013

Reconciliation of Assets 6/30/2013

Class III

Municipality	Oak Hill	Point Pleasant	Princeton		Star City	Welch	Weston		Westover	Williamson	
	Police	Police	Police	Fire	Police	Police	Police	Fire	Police	Police	Fire
A. Market Value of Assets as of July 1, 2012	$3,231,709	$817,387	$3,420,869	$2,572,330	$1,177,473	$1,544,399	$510,742	$555,140	$1,515,169	$903,677	$1,487,251
Adjustment to Market Value of Assets at Beginning of Year	($5,935)	$0	$0	$0	$0	$0	$115,199	$0	$0	$0	$0
Market Value of Assets Beginning of Year	$3,225,774	$817,387	$3,420,869	$2,572,330	$1,177,473	$1,544,399	$625,941	$555,140	$1,515,169	$903,677	$1,487,251
1. Revenue During Fiscal Year											
(a) Employee Contribution	$29,612	$23,548	$61,812	$36,857	$14,089	$22,779	$12,391	$8,913	$26,233	$21,799	$18,760
(b) Governmental Contribution											
(i) From Local Government	$89,762	$24,945	$201,565	$126,780	$58,272	$54,007	$57,200	$74,019	$133,723	$113,288	$112,916
(ii) From State Government	$0	$8,915	$169,853	$126,113	$41,391	$42,753	$71,576	$50,348	$52,218	$67,267	$91,766
(iii) Reallocation from State Government	$192,516	$3,078	$40,251	$26,601	$18,288	$114,423	$18,674	$1,441	$111,759	$0	$0
(iv) Total	$282,278	$36,938	$411,669	$279,494	$117,951	$211,183	$147,450	$125,808	$297,700	$180,555	$204,682
(c) Earnings on Investments											
(i) Net Appreciation (Depreciation)	$176,588	$28,615	$105,273	$72,272	($31,676)	$71,764	$1,135	$8,423	$62,184	$0	$17,570
(ii) Bond Interest	$47,100	$0	$40,704	$34,194	$9,553	$17,448	$8,848	$8,580	$38,183	$3,531	$18,090
(iii) Dividends	$63,129	$5,266	$33,639	$25,112	$24,297	$55,355	$8,334	$7,685	$0	$0	$16,149
(iv) Net Realized Gain (Loss) on Sale or Exchange	$0	$0	$29,304	$23,331	$10,278	$10,263	$3,375	$9,100	$0	$0	$51,614
(v) Other	$1,806	$0	$0	$0	($39)	$0	$1,225	$1,057	$0	$0	$0
(vi) Investment Expense	($23,996)	$0	($29,339)	($21,783)	($10,981)	($3,579)	$0	$0	($17,512)	$0	($15,175)
(vii) Total	$264,627	$33,881	$179,581	$133,126	$1,432	$151,251	$22,917	$34,845	$82,855	$3,531	$88,248
(d) Other Revenue	$5,703	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(e) Receivable Contribution	$0	$0	$0	$0	$0	$0	$0	$0	$71,884	$0	$0
(f) Total Revenue (sum of (a) through (e))	$582,220	$94,367	$653,062	$449,477	$133,472	$385,213	$182,758	$169,566	$478,672	$205,885	$311,690
2. Expenditures During Fiscal Year											
(a) Benefits Paid	$120,121	$112,226	$400,814	$312,893	$82,445	$31,936	$56,566	$65,050	$74,119	$88,697	$247,057
(b) Withdrawals	$5,590	$0	$27,200	$0	$248	$0	$0	$0	$23,712	$0	$0
(c) Administrative Expenses	$135	$4,359	$649	$279	$0	$1,375	$5,693	$6,171	$500	$97	$527
(d) Total Expenditures (sum of (a) through (c))	$125,846	$116,585	$428,663	$313,172	$82,693	$33,311	$62,259	$71,221	$98,331	$88,794	$247,584
B. Market Value of Assets as of June 30, 2013 [A + 1(f) - 2(d)]	$3,682,148	$795,169	$3,645,268	$2,708,635	$1,228,252	$1,896,301	$746,440	$653,485	$1,895,510	$1,020,768	$1,551,357
C. Return on Assets	8.2%	3.7%	5.2%	5.2%	0.1%	9.4%	2.6%	4.9%	5.2%	0.4%	5.9%

[a] Receivable contributions for plan year ending June 30, 2013.

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Assets Held by Category as of 6/30/2013

Class I

Municipality	Charleston		Huntington		Morgantown		Parkersburg		Wheeling	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
1. Cash and Short-term Investments	$1,109,208	$640,451	$2,149,643	$1,690,226	$440,859	$341,156	$408,254	$1,280,647	$1,862,542	$1,696,592
2. Government Securities										
(a) Treasury Notes and Bonds	$2,210,402	$3,632,574	$3,011,250	$1,470,011	$2,025,745	$1,599,689	$1,565,861	$2,696,967	$1,963,316	$1,798,701
(b) State and Municipal Bonds	$0	$0	$1,993,909	$46,590	$0	$0	$0	$0	$108,167	$78,683
(c) Total Government Securities	$2,210,402	$3,632,574	$5,005,159	$1,516,601	$2,025,745	$1,599,689	$1,565,861	$2,696,967	$2,071,483	$1,877,384
3. Corporate Bonds										
(a) Bonds	$3,207,727	$0	$2,024,735	$0	$3,253,187	$2,555,493	$2,398,008	$2,122,621	$2,851,434	$2,627,740
(b) Mortgage Backed Securities	$0	$0	$0	$715,474	$0	$0	$0	$131,671	$0	$0
(c) Debentures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(d) Mutual Fund Shares (Bonds)	$0	$0	$3,359,519	$2,272,651	$0	$0	$0	$0	$0	$0
(e) Total Corporate Bonds	$3,207,727	$0	$5,384,254	$2,988,125	$3,253,187	$2,555,493	$2,398,008	$2,254,292	$2,851,434	$2,627,740
4. Corporate Stocks										
(a) Stocks	$6,578,640	$6,771,735	$1,835,502	$5,155,384	$6,880,675	$5,587,317	$0	$4,043,202	$9,483,528	$8,677,032
(b) Mutual Fund Shares (Stocks)	$0	$0	$6,889,249	$493,961	$0	$0	$4,993,100	$80,243	$0	$0
(c) Total Corporate Stocks	$6,578,640	$6,771,735	$8,724,751	$5,649,345	$6,880,675	$5,587,317	$4,993,100	$4,123,445	$9,483,528	$8,677,032
5. Other	$42,538	$1,176	-$3,537	-$10,642	$42,424	$33,131	$31,181	$33,799	$1,907	-$4,312
6. Receivable Contribution [a]	$0	$0	$1,153,345	$1,689,200	$577,834	$460,168	$0	$0	$0	$0
7. Receivable State Reallocation	$291,300	$225,633	$0	$0	$243,952	$4,034	$145,086	$0	$0	$0
Market Value of Assets as of June 30, 2013 [sum of (1) through (6)]	$13,439,815	$11,271,569	$22,413,615	$13,522,855	$13,464,676	$10,580,988	$9,541,490	$10,389,150	$16,270,894	$14,874,436

[a] Receivable contributions for plan year ending June 30, 2013.

Policemen's and Firemen's
Pension and Relief Funds
of West Virginia Municipalities
Actuarial Valuation
As of July 01, 2013

Assets Held by Category as of 6/30/2013

Class II

Municipality	Beckley		Bluefield		Clarksburg		Fairmont		Martinsburg	
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
1. Cash and Short-term Investments	$468,721	$147,995	$176,610	$404,368	$453,360	$235,228	$373,613	$184,199	$1,010,096	$250,152
2. Government Securities										
(a) Treasury Notes and Bonds	$2,561,101	$1,874,082	$873,565	$0	$847,297	$76,754	$0	$1,520	$1,144,310	$812,570
(b) State and Municipal Bonds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(c) Total Government Securities	$2,561,101	$1,874,082	$873,565	$0	$847,297	$76,754	$0	$1,520	$1,144,310	$812,570
3. Corporate Bonds										
(a) Bonds	$3,669,493	$3,118,531	$1,711,049	$553,599	$0	$748,005	$0	$345,866	$0	$0
(b) Mortgage Backed Securities	$0	$0	$0	$0	$0	$630,815	$0	$0	$0	$0
(c) Debentures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(d) Mutual Fund Shares (Bonds)	$0	$0	$0	$958,185	$139,543	$0	$1,652,519	$192,660	$2,134,433	$0
(e) Total Corporate Bonds	$3,669,493	$3,118,531	$1,711,049	$1,511,784	$139,543	$1,378,820	$1,652,519	$538,526	$2,134,433	$0
4. Corporate Stocks										
(a) Stocks	$5,685,007	$2,184,007	$1,267,304	$1,587,004	$0	$2,522,379	$0	$181,320	$1,736,009	$227,967
(b) Mutual Fund Shares (Stocks)	$4,837,554	$7,871,142	$21,825	$0	$2,596,471	$0	$2,184,462	$706,087	$528,666	$823,466
(c) Total Corporate Stocks	$10,522,561	$10,055,149	$1,289,129	$1,587,004	$2,596,471	$2,522,379	$2,184,462	$887,407	$2,264,675	$1,051,433
5. Other	$0	$0	$0	$0	$0	$0	$0	$0	-$230	$0
6. Receivable Contribution [a]	$438,924	$401,933	$0	$0	$0	$0	$5,057	$7,713	$0	$0
7. Receivable State Reallocation	$263,827	$42,618	$68,113	$0	$55,814	$0	$0	$0	$346,620	$228,016
Market Value of Assets as of June 30, 2013 [sum of (1) through (6)]	$17,924,627	$15,640,308	$4,118,466	$3,503,156	$4,092,485	$4,213,181	$4,215,651	$1,619,365	$6,899,904	$2,342,171

[a] Receivable contributions for plan year ending

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Assets Held by Category as of 6/30/2013

	Class II									Class III	
Municipality	**Moundsville**		**South Charleston**		**St. Albans**		**Vienna**	**Weirton**		**Belle**	**Charles Town**
	Police	**Fire**	**Police**	**Fire**	**Police**	**Fire**	**Police**	**Police**	**Fire**	**Police**	**Police**
1. Cash and Short-term Investments	$236,824	$73,639	$80,476	$411,721	$318,022	$138,569	-$10,077	$106,659	$97,572	$711,551	$304,436
2. Government Securities											
(a) Treasury Notes and Bonds	$0	$219,740	$0	$0	$902,254	$359,731	$649,371	$122,348	$195,095	$525,166	$28,290
(b) State and Municipal Bonds	$1,432,558	$0	$0	$0	$0	$0	$47,761	$102,395	$102,396	$11,589	$0
(c) Total Government Securities	$1,432,558	$219,740	$0	$0	$902,254	$359,731	$697,132	$224,743	$297,491	$536,755	$28,290
3. Corporate Bonds											
(a) Bonds	$0	$233,064	$0	$192,772	$1,376,486	$605,256	$695,296	$1,257,712	$1,636,001	$0	$59,453
(b) Mortgage Backed Securities	$0	$0	$0	$0	$0	$0	$2,901	$0	$0	$0	$0
(c) Debentures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(d) Mutual Fund Shares (Bonds)	$0	$0	$1,074,787	$0	$0	$0	$867,286	$0	$968,601	$0	$0
(e) Total Corporate Bonds	$0	$233,064	$1,074,787	$192,772	$1,376,486	$605,256	$1,565,483	$1,257,712	$2,604,602	$0	$59,453
4. Corporate Stocks											
(a) Stocks	$0	$0	$0	$637,608	$2,705,492	$1,159,486	$523,808	$2,530,371	$4,476,400	$0	$45,220
(b) Mutual Fund Shares (Stocks)	$2,318,927	$599,167	$1,026,442	$0	$0	$0	$2,346,437	$97,415	$0	$0	$0
(c) Total Corporate Stocks	$2,318,927	$599,167	$1,026,442	$637,608	$2,705,492	$1,159,486	$2,870,245	$2,627,786	$4,476,400	$0	$45,220
5. Other	$0	-$59,201	$22,498	$0	$0	$0	$0	$0	$0	$0	$0
6. Receivable Contribution [a]	$0	$0	$0	$0	$0	$111,749	$0	$0	$0	$30,564	$10,946
7. Receivable State Reallocation	$64,051	$0	$91,857	$75,792	$184,363	$21,373	$140,734	$21,277	$149,830	$10,924	$0
Market Value of Assets as of June 30, 2013 [sum of (1) through (6)]	$4,052,360	$1,066,409	$2,296,060	$1,317,893	$5,486,617	$2,396,164	$5,263,517	$4,238,177	$7,625,895	$1,289,794	$448,345

[a] **Receivable contributions for plan year ending**

Policemen's and Firemen's
Pension and Relief Funds
of West Virginia Municipalities
Actuarial Valuation
As of July 01, 2013

Assets Held by Category as of 6/30/2013

Class III

Municipality	Chester	Dunbar		Elkins		Grafton		Logan		Nitro	
	Police	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Police	Fire
1. Cash and Short-term Investments	$369,177	$127,229	$42,190	$83,171	$44,526	$149,233	$35,930	$19,557	$47,645	$191,799	$144,955
2. Government Securities											
(a) Treasury Notes and Bonds	$76,238	$2,121,208	$0	$92,601	$0	$255,910	$0	$0	$0	$789,364	$0
(b) State and Municipal Bonds	$0	$215,822	$144,305	$0	$0	$0	$0	$0	$0	$0	$0
(c) Total Government Securities	$76,238	$2,337,030	$144,305	$92,601	$0	$255,910	$0	$0	$0	$789,364	$0
3. Corporate Bonds											
(a) Bonds	$0	$0	$0	$0	$0	$228,215	$703,717	$333,025	$102,360	$0	$196,887
(b) Mortgage Backed Securities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(c) Debentures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(d) Mutual Fund Shares (Bonds)	$32,456	$546,306	$118,294	$1,092,748	$469,233	$0	$0	$59,139	$0	$0	$0
(e) Total Corporate Bonds	$32,456	$546,306	$118,294	$1,092,748	$469,233	$228,215	$703,717	$392,164	$102,360	$0	$196,887
4. Corporate Stocks											
(a) Stocks	$391,521	$1,598,506	$0	$0	$0	$332,852	$0	$111,254	$296,901	$1,522,945	$0
(b) Mutual Fund Shares (Stocks)	$543,243	$205,205	$165,965	$805,581	$493,611	$0	$575,769	$0	$0	$0	$366,181
(c) Total Corporate Stocks	$934,764	$1,803,711	$165,965	$805,581	$493,611	$332,852	$575,769	$111,254	$296,901	$1,522,945	$366,181
5. Other	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6. Receivable Contribution [a]	$0	$0	$0	$0	$0	$0	$958	$0	$0	$0	$0
7. Receivable State Reallocation	$58,787	$111,023	$0	$9,042	$0	$12,284	$55,380	$405	$35,597	$147,084	$0
Market Value of Assets as of June 30, 2013 [sum of (1) through (6)]	$1,471,422	$4,925,299	$470,754	$2,083,143	$1,007,370	$978,494	$1,371,754	$523,380	$482,503	$2,651,192	$708,023

[a] Receivable contributions for plan year ending

Policemen's and Firemen's Pension and Relief Funds of West Virginia Municipalities Actuarial Valuation As of July 01, 2013

Assets Held by Category as of 6/30/2013

Class III

Municipality	Oak Hill	Point Pleasant	Princeton		Star City	Welch	Weston		Westover	Williamson	
	Police	Police	Police	Fire	Police	Police	Police	Fire	Police	Police	Fire
1. Cash and Short-term Investments	$91,709	$43,281	$132,360	$100,477	$27,122	$38,918	$84,553	$83,595	$74,268	$578,546	$124,317
2. Government Securities											
(a) Treasury Notes and Bonds	$621,970	$291,897	$552,008	$416,658	$0	$0	$19,810	$39,859	$330,736	$0	$239,070
(b) State and Municipal Bonds	$195,248	$0	$0	$0	$0	$110,423	$50,032	$0	$0	$0	$0
(c) Total Government Securities	$817,218	$291,897	$552,008	$416,658	$0	$110,423	$69,842	$39,859	$330,736	$0	$239,070
3. Corporate Bonds											
(a) Bonds	$611,991	$0	$945,763	$711,372	$470,702	$278,548	$0	$0	$490,386	$0	$380,816
(b) Mortgage Backed Securities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$442,222	$0
(c) Debentures	$247	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(d) Mutual Fund Shares (Bonds)	$265,620	$121,796	$0	$0	$0	$501,574	$177,221	$154,035	$0	$0	$0
(e) Total Corporate Bonds	$877,858	$121,796	$945,763	$711,372	$470,702	$780,122	$177,221	$154,035	$490,386	$442,222	$380,816
4. Corporate Stocks											
(a) Stocks	$1,210,006	$335,117	$1,974,886	$1,453,527	$0	$734,777	$0	$0	$816,477	$0	$807,154
(b) Mutual Fund Shares (Stocks)	$498,911	$0	$0	$0	$628,428	$117,638	$178,220	$298,759	$0	$0	$0
(c) Total Corporate Stocks	$1,708,917	$335,117	$1,974,886	$1,453,527	$628,428	$852,415	$178,220	$298,759	$816,477	$0	$807,154
5. Other	-$6,070	$0	$0	$0	$0	$0	$217,930	$75,796	$0	$0	$0
6. Receivable Contribution [a]	$0	$0	$0	$0	$83,712	$0	$0	$0	$71,884	$0	$0
7. Receivable State Reallocation	$192,516	$3,078	$40,251	$26,601	$18,288	$114,423	$18,674	$1,441	$111,759	$0	$0
Market Value of Assets as of June 30, 2013 [sum of (1) through (6)]	$3,682,148	$795,169	$3,645,268	$2,708,635	$1,228,252	$1,896,301	$746,440	$653,485	$1,895,510	$1,020,768	$1,551,357

[a] Receivable contributions for plan year ending