West Virginia Retiree Health Benefit Trust Fund

GASB Statement Nos. 74 and 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions
June 30, 2016





December 21, 2017

Mr. Jason A. Haught Chief Financial Officer West Virginia Public Employees Insurance Agency 601 57th Street, SE, Suite 2 Charleston, West Virginia 25304

Subject: GASB Statement Nos. 74 and 75 Actuarial Valuation as of June 30, 2016, for WV-RHBT

Submitted in this report are the results of the actuarial valuation of the liabilities associated with the employer financed postemployment benefits provided through the West Virginia Retiree Health Benefit Trust Fund (WV-RHBT). This program provides postretirement healthcare benefits to eligible retired members receiving pension benefits under the following retirement systems ("Retirement Systems") as administered by the West Virginia Consolidated Public Retirement Board (CPRB):

- Public Employees' Retirement System (PERS);
- Teachers' Retirement System (TRS);
- Teachers' Defined Contribution Retirement System (TDCRS);
- Teachers' Insurance and Annuity Association and College Retirement Equities Fund (TIAA-CREF);
- Great West (Plan G);
- West Virginia Death, Disability and Retirement Fund (Troopers Plan A); and
- West Virginia State Police Retirement System (Troopers Plan B).

This report was prepared at the request of WV-RHBT and is intended for use by WV-RHBT and those designated or approved by WV-RHBT. This report may be provided to other parties only in its entirety and only with the permission of WV-RHBT.

The actuarial valuation as of June 30, 2016, was prepared for purposes of complying with the requirements of Governmental Accounting Standards Board (GASB) Statement Nos. 74 and 75 for the plan year end June 30, 2017, and the plan sponsor's fiscal year end June 30, 2018. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the financial reporting requirements of the plan and the plan sponsor may produce significantly different results. The actuarial valuation was based upon:

- Census information as of June 30, 2016, provided by WV-RHBT and CPRB;
- Healthcare claims, premium and enrollment data provided by WV-RHBT;
- Substantive plan information provided by WV-RHBT;
- Retirement eligibility conditions for each respective retirement system found in CPRB actuarial valuation reports;

- Demographic and other pension-related assumptions based on the most recent actuarial valuation for each respective retirement system;
- Economic assumptions and other healthcare-related assumptions recommended by Gabriel, Roeder, Smith & Company and approved by the WV-RHBT including a discount rate of 7.15% and an ultimate trend rate assumption of 4.50%; and
- Entry age normal cost method and a 21-year closed level percent of pay amortization period as of June 30, 2016.

We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by WV-RHBT or CPRB. Authorization of the assumptions and methods applicable to this actuarial valuation was granted by WV-RHBT, and they are disclosed in the assumptions and methods section of this report.

The actuarial liabilities and annual required contributions were developed in accordance with the requirements of GASB Statement Nos. 74 and 75, and are applicable only for financial reporting purposes. The unfunded actuarial accrued liability and actuarially determined contributions (ADC) disclosed in this report should not be used to assess the level of plan assets needed to settle the plan's benefit obligations.

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, healthcare or demographic assumptions; changes in economic, healthcare or demographic assumptions; and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

The signing actuaries are independent of the plan sponsor.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of WV-RHBT as of the actuarial valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes. Alex Rivera and Lance J. Weiss are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Sincerely,

Alex Rivera, FSA, EA, MAAA, FCA

Senior Consultant

Lance J. Weiss, EA, MAAA, FCA

Senior Consultant



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EXECUTIVE SUMMARY

WV-RHBT administers and provides medical and prescription drug benefits to certain retired members receiving pension benefits under the PERS, TRS, TDCRS, TIAA-CREF, Plan G, Troopers Plan A or Troopers Plan B pension systems, as administered by the CPRB. Healthcare benefits are administered by the West Virginia Public Employees Insurance Agency (PEIA). The key features of the postretirement healthcare benefit program include:

- The plan sponsor provides a capped pay-as-you-go subsidy to each covered retired member. Based on the report, WV-RHBT 2016 Financial Report for Fiscal Years 2017 to 2021, dated December 2016, produced by Continuing Care Actuaries (CCA), aggregate capped costs are projected to equal \$150 million for plan year June 30, 2017, and are projected to increase by \$10 million each plan year from 2018, through 2021. The per member per month capped subsidy for plan year end June 30, 2017, is \$523.51 for non-Medicare coverage and \$240.31 for Medicare coverage.
- WV-RHBT also administers a fully insured retiree life insurance program. We understand the
 retiree premium rates are self-supporting and the retiree pays 100% of the premium resulting in
 no plan sponsor subsidy.
- Retiree contributions are set each year by the WV-RHBT and approved by the WV-PEIA Finance Board. Retiree contributions are based on the experience of the plan including claim, premium and investment performance. Increases to retiree contributions may reflect healthcare inflation, claim experience and premium increases above the plan sponsor capped pay-as-you-go subsidy.
- Retiree contributions depend on date of hire and years of service at retirement. Members hired on or after July 1, 2010, pay retiree healthcare contributions with no sponsor provided implicit or explicit subsidy. Members hired before July 1, 2010, pay retiree healthcare contributions that are reduced by a sponsor subsidy which depends on the member's years of service at retirement.
- The Sick and Annual Leave Program (SAL) allows members hired prior to July 1, 2001, to convert accrued sick leave and accrued annual leave balances at retirement into either retiree healthcare benefits or pension benefits. Members hired before July 1, 1988, may convert accrued sick or leave days into 100% of the required retiree healthcare contribution. Members hired from July 1, 1988, to June 30, 2001, may convert accrued sick or leave days into 50% of the required retiree healthcare contribution. The conversion rate is two days of unused sick and annual leave days per month for single healthcare coverage and three days of unused sick and annual leave days per month for family healthcare coverage.
- Under the Retired Employee Assistance Program, the sponsor provides premium subsidies to certain retirees if their income falls below 250% of the federal poverty level.
- WV-RHBT has established a qualified trust which receives contributions, pays benefit and invests contributions made in excess of annual expenditures. As of June 30, 2016, the market value of assets is approximately \$685.7 million, and increased to approximately \$823.9 million as of June 30, 2017. Long-term pre-funding assets are invested with the West Virginia Investment Management Board (WVIMB). Based on the WVIMB 2016 Annual Report, the investment objective is to earn 7.50% per year net of investment expenses. The strategic asset allocation consists of 55% equity, 15% fixed income, 10% private equity, 10% hedge fund and 10% real estate invested. Short-term assets used to pay current year benefits and expenses are invested with the West Virginia Board of Treasury Investment (WVBTI). Based on the amount of assets held in the BTI account and expected benefit payments, and solely for projection purposes, GRS has assumed that approximately six to nine months of benefits and expenses are held in reserve with the



- WVBTI. We also understand that, if needed, the plan sponsor may use assets held with the WVIMB to pay current benefits and expenses.
- Based on Senate Bill 419: "For fiscal years beginning on and after July 1, 2016, an annual amount
 of \$30 million from annual collections of the tax imposed by this article shall be dedicated for
 payment of the unfunded liability of the West Virginia Retiree Health Benefit Trust Fund." The \$30
 million annual prefunding contribution is provided through fiscal year 2037, or if earlier, the year
 the employer's benefit obligation is fully funded.

GRS performed an actuarial valuation of the retiree healthcare for purposes of financial reporting under the requirements of GASB Statement Nos. 74 and 75. The basis of the actuarial valuation is outlined below:

- The actuarial valuation was based on census, claims, premium data, capped per member per month subsidies, aggregated projected capped subsidies and applicable accrued sick leave balances as of June 30, 2016, as provided by WV-RHBT and reported by CCA.
- The data excluded information for about 2,400 active members hired before July 1, 2010, who may be eligible for OPEBs under the RHBT program. Costs for active members were increased by approximately five percent to reflect the missing data. The number of active members and payroll were also increased by five percent. Costs for retired members were decreased by one percent to reflect updated MAPD premium information.
- As of June 30, 2016, approximately 12,300 annuitants, receiving pension benefits under one of the systems administered by CPRB, may be eligible for retiree healthcare benefits administered by the WV-RHBT but have elected not to participate in the retiree healthcare program. Based on a limited review of experience for the period June 30, 2012, through June 30, 2016, each year over the four-year period, approximately 70 annuitants who had waived healthcare coverage at the beginning of the plan year have elected to re-enter the retiree healthcare program by the end of the plan year. The actuarial valuation does not include an explicit provision for waived annuitants expected to re-enter the retiree healthcare program.
- During the same four-year period, approximately 300 retirees per year with healthcare coverage at the beginning of the year have waived coverage by the end of the year. We expect that many of these members have waived healthcare coverage because the SAL balance has been used up and are required to pay a greater portion of the premium. The actuarial valuation, through the participation assumption, recognizes a portion of retirees who have used up the SAL balance may waive healthcare coverage. The actuarial valuation does not include an explicit lapse assumption for other retirees with healthcare coverage who may waive coverage in the future.
- We expect that excluding a re-entry assumption for the 12,300 waived annuitants and a lapse
 assumption for current retirees with healthcare coverage are two offsetting and simplifying
 assumptions that produce a reasonable estimate of the actuarial liability. Such assumption
 exclusions overall are not expected to materially impact the estimated net OPEB liability. For
 future actuarial valuations, we recommend a more detailed review of the re-entry and lapse
 experience to evaluate if re-entry and lapse assumptions should be included in the actuarial
 valuation.
- The substantive healthcare plan provisions were found in WV-PEIA's Summary Plan Description and Shopper Guide used for the annual enrollment process.
- The retirement eligibility conditions were found in annual reports and actuarial valuation reports provided by CPRB.



- Pension related assumptions such as rates of termination, retirement and mortality were based on the actuarial valuation reports provided by CPRB.
- Healthcare-related assumptions including the discount rate, healthcare trend rates, per capita claim costs and participation assumptions were recommended by GRS and approved by WV-RHBT.
 GRS recommended a discount rate of 7.15% and a select and ultimate trend rate which grades from approximately 8.50% in 2018 to an ultimate rate of 4.50% in 2026.
- Certain healthcare-related assumptions such as the participation rate, percentage of single and family contracts, percentage of members that convert SAL benefits to OPEB benefits were based on an Experience Study performed by GRS based on experience data for the five year period ending June 30, 2015.
- An expected long-term rate of return of 7.50% for long-term assets invested with WVIMB, was based on WVIMB's investment policy and the long-term strategic asset allocation.
- An expected short-term rate of return of 3.00% for assets invested with WVBTI.
- In the future, short-term assets invested with WVBTI are assumed to be approximately equal to six months of self-insured claims, fully-insured premiums and administrative expenses. The remaining assets are invested in the long-term WVIMB account.
- Assets in the WVIMB account are assumed to be used to pay benefits and expenses only after the program is fully funded.
- The discount rate assumption of 7.15% used to develop the actuarial accrued liability and normal cost, was based on the average expected return on invested plan assets during the period that the program is projected to reach full funding; i.e., 2037.
- The employer aggregate subsidy cap of \$150 million for plan year 2017 was assumed to increase by \$10 million per year until the plan year that the program is 100% funded. After the program is fully funded, we assumed the plan sponsor would pay the normal cost and administrative expenses, up to the amount needed to remain 100% funded after 2037.
- The percentage of program costs paid by the retired member was assumed to increase from approximately 37% for plan year end 2017 to approximately 61% for plan year end 2037, and remain stable thereafter.



The key actuarial valuation results as of June 30, 2015, and June 30, 2016, are summarized in the following table.

WV-RHBT Actuarial Valuation (\$ in thousands)	June 30, 2016	June 30, 2015
Actuarial Accrued Liability	\$ 3,168,993	\$ 3,416,620
Market Value of Assets	\$ 685,668	\$ 704,592
Unfunded Actuarial Accrued Liability (UAAL)	\$ 2,483,325	\$ 2,712,028
Funded Ratio	21.64%	20.62%
Employer Normal Cost	\$ 66,068	\$ 76,802
Operating Expenses ^a	\$ 2,035	\$ -
Amortization of UAL	\$ 156,797	\$ 159,229
Actuarially Determined Contribution	\$ 224,899	\$ 236,031
Expected Employer Contributions	\$ 204,919	\$ 203,560
Expected Claims and Expenses	\$ 279,457	\$ 307,185
Retiree Contributions	\$ 104,538	\$ 103,625
Percent of Claims and Expenses paid by Retired Members	37.41%	34.00%
Year Program is Projected to be 100% Funded	2037	2034
Discount Rate	7.15%	6.70%

^aBeginning with the June 30, 2016, actuarial valuation, operating expenses are included in the actuarially determined contribution.



Key observations and conclusions include:

- During the plan year end June 30, 2016, the actuarial accrued liability decreased from \$3.417 billion as of June 30, 2015, to \$3.169 billion as of June 30, 2016. The key reasons for the decrease in actuarial accrued liability include:
 - Increasing the discount rate from 6.70% at June 30, 2015, to 7.15% at June 30, 2016;
 - o Favorable healthcare claims, premium, demographic and capped subsidy experience;
 - Changes in OPEB and pension-related assumptions; and
 - Changes in the capped subsidy projection methodology.

A detailed gain/loss analysis showing the decrease in the actuarial liability can be found on page C-1.

- The discount rate of 7.15% depends on the excess contribution of \$30 million per year projected to be made by the State from FY 2017 through FY 2037. Our actuarial valuation assumes the State will make these contributions. If the State deviates from the funding policy or if the program experiences significant losses, we may not be able to support the 7.15% discount rate assumption and may need to change the projection assumptions and methodology.
- Appendix A shows the details of the projections. For purposes of the projection we assumed
 investment income would be used to pay employer benefits and expenses only after the program
 is fully funded. Based on this assumption the employer's benefit obligation is projected to be
 fully funded by 2037.
- Another key observation is the relationship of projected retiree contributions to projected claims and expenses. Because claims and fully insured premiums are expected to increase by the healthcare trend assumption while the employer's aggregate capped subsidy is projected to increase by no more than \$10 million per year, the member's cost could increase by a rate higher than the healthcare trend assumption. In our projection model, we have assumed the percentage of total costs paid by the plan member would level off after the program is fully funded in 2037 and remain stable at 61%. After the program is fully funded in 2037, we have assumed the sponsor would pay normal cost and administrative expenses up to the amount needed to remain 100% funded.
- As the retired members' share of the total contributions increases, the future retired member
 participation may decrease. We recommend monitoring the participation experience especially
 during periods of significant increases in member premium. We also recommend monitoring the
 retirement experience relative to the retirement rates provided in the CPRB pension actuarial
 reports and adjusting the retirement rates in future OPEB actuarial valuations to be consistent
 with observed OPEB experience.
- Members hired on or after July 1, 2010, are required to pay 100% of expected cost of coverage, resulting in no implicit or explicit cost to the employer. Consequently, these members were excluded from the actuarial valuation.

The details of the actuarial valuation and supporting documentation are provided in the following sections.



SECTION B

OVERVIEW

Overview

The following section presents the results of the actuarial valuation as of June 30, 2016, of the WV-RHBT Retiree Healthcare Benefit Program. The actuarial valuation reflects the liability for benefits paid by the plan sponsor including: capped subsidies, percentage of retiree premiums under the Sick and Annual Leave Program, and premiums under the Retired Employee Assistance Program. The actuarial valuation assumes self-insured claims, fully-insured premiums and administrative costs in excess of sponsor paid benefits, including explicit and implicit subsidies, will be paid by the retired member.

The plan sponsor provides a capped pay-as-you-go subsidy to each covered retired member. Based on the report, WV-RHBT 2016 Financial Report for Fiscal Years 2017 to 2021, dated December 2016, produced by Continuing Care Actuaries (CCA), aggregate capped costs are equal to \$150 million for plan year June 30, 2017, and are projected to increase by \$10 million each plan year from 2018, through 2021. The per member per month capped subsidy for plan year end June 30, 2017, is \$523.51 for non-Medicare coverage and \$240.31 for Medicare coverage.

The Sick and Annual Leave Program (SAL) allows members hired prior to July 1, 2001, to convert accrued sick leave and accrued annual leave balances at retirement into either retiree healthcare benefits or pension benefits. Members hired before July 1, 1988, may convert accrued sick or leave days into 100% of the required retiree healthcare contribution. Members hired from July 1, 1988, to June 30, 2001, may convert accrued sick or leave days into 50% of the required retiree healthcare contribution. The conversion rate is two days of unused sick and annual leave days per month for single healthcare coverage and three days of unused sick and annual leave days per month for family healthcare coverage.

Under the Retired Employee Assistance Program, the sponsor provides premium subsidies to certain retirees if their income falls below 250% of the federal poverty level.

Most retired members are receiving benefits under the self-insured PPB Plan A for non-Medicare coverage and the fully-insured MAPD Plan 1 for Medicare coverage. The retired member's share of the premium depends on the date of hire and years of service at retirement. Members hired on or after July 1, 2010, pay 100% of the premium, resulting in no explicit or implicit subsidy to the plan sponsor. The following table shows representative plan year 2017 premium rates for single coverage under PPB Plan A and MAPD Plan 1:

FY 2017 Monthly Premium	PPB Plan A ^a	MAPD Plan 1 ^a
Hired on or after July 1, 2010	\$1,115	\$437
5 to 9 years service	893	398
10 to 14 years service	689	293
15 to 19 years service	482	188
20 to 24 years service	360	126
25 or more years service	280	84

^a Premium rates are standard rates. Retirees receive a monthly discount of \$25 per tobacco-free covered member. It is assumed that 50% of future retirees and dependents are eligible for the preferred rates. The living will discount of \$4 was discontinued effective July 1, 2016.



Overview

The WV-RHBT established a qualified trust to pre-fund sponsor benefit obligations. Future pre-funding contributions include a \$30 million annual contribution made by the State from 2017 through 2037, or if earlier, the year the employer benefit obligations are fully funded.

Long-term pre-funding assets are invested with the WVIMB. The strategic asset allocation consists of 55% equity, 15% fixed income, 10% private equity, 10% hedge fund and 10% real estate invested. Short-term assets used to pay current year benefits and expenses are invested with the WVBTI.

The Unfunded Actuarial Accrued Liabilities (UAAL) were amortized as a level percent of active member payroll over a 21-year closed period as of June 30, 2016. Unlike a level-dollar amortization which pays principal and interest each year, a level percent-of-pay (or increasing-payment) amortization may not finance principal for a period of time depending on the amortization period.

The UAAL represents the portion of the total actuarial present value of all future employer-provided benefits which is attributable to prior years, minus any actuarial valuation assets. It represents a measure of the unfunded liability allocable to past service. The cost and liabilities shown on the following pages are employer costs and liabilities, relating to the capped premium subsidy, the accrued sick and annual leave SAL program and the retiree assistance program.

Actuarial Assumptions

In any long-term actuarial valuation (such as for Pensions and OPEBs), certain demographic, economic and behavioral assumptions are made concerning the population, the investment discount rates and the benefits provided. These actuarial assumptions form the basis for the actuarial model which is used to project the future population, the future benefits provided and the future contributions collected. The discount rate assumption is used to discount projected net OPEB benefits to a present value. This and other related present values are used to calculate the Actuarial Accrued Liability, Normal Cost and Actuarially Determined Contribution.

This actuarial valuation of WV-RHBT is similar to the actuarial valuation performed for the pension plan systems administered by CPRB. The demographic assumptions (rates of retirement, termination, disability and mortality) used in this OPEB actuarial valuation were consistent with those used in the most recent actuarial valuations performed for the pension plan systems administered by CPRB.

Certain economic and behavioral assumptions are unique to healthcare benefits. These assumptions include the healthcare trend, per capita claim costs, the likelihood that a member selects healthcare coverage and the likelihood that a retiree selects one-person, two-person or family coverage. These assumptions were updated based on a recent experience study performed by GRS using five-year experience data through June 30, 2015.

The interest rate used to discount expected future benefit payments was based on the expected return on current assets and pre-funding contributions that are expected to accumulate and fully fund the projected actuarial accrued liability. For pre-funded assets invested in the long-term WVIMB account, an investment return of 7.50% was assumed. For assets invested in the short-term WVBTI account, an investment return of 3.00% was assumed. The discount rate used to develop the actuarial liability and normal costs was based on the average return on invested plan assets during the period that the plan reaches full funding. The key basis of the projection includes:



Overview

- The employer's aggregate capped subsidy of \$150 million for plan year end June 30, 2017, will increase by \$10 million per year until the program is fully funded.
- Approximately six months of self-insured claims, fully-insured premiums and administrative expenses will be held in the WVBTI account.
- Investment earnings and principal from the WVIMB will be used to pay sponsor benefits only after the sponsor's benefit obligations are fully funded.
- After the program reaches full funding, the sponsor contributes the normal cost and operating expenses up to amount needed to remain fully funded.
- The member's share of the plan cost will increase at a higher rate than the rate of the capped costs. When the program reaches full funding, the percentage of plan cost paid by the member will remain stable.

Appendix A of the report contains a projection supporting the Single Discount Rate assumption. Appendix A shows that the program is projected to be fully funded by 2037 and the average return on invested plan assets from 2017 to 2037 is approximately 7.15%.

Actuarial Cost Method

WV-RHBT has selected the entry age normal cost method for this actuarial valuation which is an acceptable method. This cost method spreads cost on a level percent of pay basis. The amortization of the Unfunded Actuarial Accrued Liability was calculated using a level percent of pay over a 21-year closed period, as of June 30, 2016.

The remainder of the report is an integral component of the actuarial valuation and includes:

- Actuarial valuation results, including financial disclosures;
- Plan assets;
- Plan financial reporting under GASB Statement No. 74;
- Plan sponsor expense development under GASB Statement No. 75;
- Summary of actuarial assumptions and methods and plan provisions; and
- Projection of program cost.





ACTUARIAL VALUATION RESULTS

Actuarial Valuation Results

The following section contains:

- A reconciliation of the actuarial accrued liability from June 30, 2015, to June 30, 2016, by source of (gain)/loss;
- Summary of actuarial valuation results as of June 30, 2015, by pension plan group;
- Summary of actuarial valuation results as of June 30, 2016, by pension plan group; and
- Comparison of actuarially determine contributions for the plan year end June 30, 2017, and June 30, 2016.

(Gain)/Loss Analysis as of June 30, 2016

West Virginia Retiree Health Benefit Trust Fund									
OPEB Actuarial Valuation Results as of June 30, 2016									
Actuarial Accrued Liability as of July 1, 2015 \$ 3,416,620,400									
Normal Cost for Fiscal Year 2016	76,802,300								
Expected Employer Benefits for Fiscal Year 2016	(203,559,700)								
Interest	224,736,261								
Expected Actuarial Accrued Liability as of June 30, 2016	\$ 3,514,599,261								
(Gain)/Loss Items									
Healthcare Claims Experience and Design Changes	\$ (9,272,114)								
Capped Subsidy Experience	(54,810,403)								
Demographic Experience	(60,531,635)								
Change in Healthcare Related Assumptions	(19,391,306)								
Change in Pension Related Assumptions	12,850,909								
Change in Subsidy Projection Methodology	(49,490,857)								
Change in Discount Rate	(164,960,602)								
Total	(345,606,008)								
Actuarial Accrued Liability as of June 30, 2016	\$ 3,168,993,253								



Summary of Actuarial Valuation Results as of June 30, 2015

Discount Rate 6.70%
Ultimate Trend Pre-Medicare 4.50%
Ultimate Trend Post-Medicare 4.50%

		Lo	ocal Agencies	PERS	Troopers Plan A	Troopers Plan B	TR	S Pre-6/30/91	TR	S Post-6/30/91	Un	idefined Pre- 6/30/91	Un	defined Post- 6/30/91	Retirees		Total
A)	Present Value of Benefits i) Active ^a ii) Active SAL ^b iii) Retired	\$	175,925,700 600 -	\$ 541,217,000 69,549,700 -	\$ 3,876,700 1,447,400	\$ 30,427,900 6,826,200 -	\$	491,193,700 78,219,400 -	\$	791,394,500 46,176,800 -	\$	3,626,900 72,800 -	\$	10,347,500 7,000 -	\$ - 1,584,835,800		2,048,009,900 202,299,900 1,584,835,800
	iv) Total	\$	175,926,300	\$ 610,766,700	\$ 5,324,100	\$ 37,254,100	\$	569,413,100	\$	837,571,300	\$	3,699,700	\$	10,354,500	\$ 1,584,835,800	\$ 3	3,835,145,600
B)	Actuarial Accrued Liability i) Active ^a ii) Active SAL ^b ii) Retired iii) Total	\$	142,596,700 500 - 142,597,200	\$ 442,923,000 63,183,000 - 506,106,000	3,458,800 1,307,400 - 4,766,200	\$ 24,868,900 6,408,500 - 31,277,400	\$	475,120,100 76,126,200 - 551,246,300	\$	545,769,000 39,089,000 - 584,858,000	\$	3,438,600 71,500 - 3,510,100		7,417,800 5,600 - 7,423,400	\$ - 1,584,835,800 \$ 1,584,835,800		1,645,592,900 186,191,700 1,584,835,800 3,416,620,400
C)	Employer Normal Cost	\$	7,066,000	\$ 22,451,000	\$ 135,400	\$ 1,201,900	\$	8,867,700	\$	36,526,900	\$	80,000	\$	473,400	\$ -	\$	76,802,300
D)	Employer Benefit Payments	\$	1,788,700	\$ 7,425,700	\$ 17,400	\$ 358,100	\$	19,573,100	\$	8,651,100	\$	100,900	\$	94,400	\$ 165,550,300	\$	203,559,700
E)	Covered Members i) Active ^c ii) Retired iii) Total		4,519 - 4,519	13,311 - 13,311	49 - 49	397 - 397		8,107 - 8,107		21,480 - 21,480		59 - 59		281 - 281	41,083 41,083		48,203 41,083 89,286
F)	Covered Payroll ^d	\$	164,148,661	\$ 525,975,444	\$ 3,060,198	\$ 20,943,429	\$	457,263,525	\$	910,814,948	\$	2,963,229	\$	11,072,115	\$ -	\$ 2	2,096,241,549

 $^{^{\}it a}$ Includes employer capped subsidy and Employee Assistance Program benefits.



^b Includes employer paid premium under the Accrued Sick Annual Leave Program.

^c Excludes active members hired on or after July 1, 2010.

^dCovered payroll excludes members hired on or after July 1, 2010, and is based on the payroll data provided as of the actuarial valuation date.

Summary of Actuarial Valuation Results as of June 30, 2016

Discount Rate 7.15%

Ultimate Trend Pre-Medicare 4.50%

Ultimate Trend Post-Medicare 4.50%

		Lo	ocal Agencies	PERS	Troopers Plan A		Troopers Plan B	TR:	S Pre-6/30/91	TRS	5 Post-6/30/91	Un	defined Pre- 6/30/91	Und	defined Post- 6/30/91	Retirees		Total
A)	Present Value of Benefits i) Active ^a ii) Active SAL ^b iii) Retired iv) Total	\$	172,868,149 \$623 - 172,868,771	\$ 525,062,757 37,421,604 - 562,484,362	 3,759,000 145,215 - 3,904,215	•	26,495,915 625,070 - 27,120,986	\$	318,089,533 31,153,254 - 349,242,787	\$	825,404,600 14,651,824 - 840,056,424		6,535,426 - - - 6,535,426		8,728,029 17,428 - 8,745,457	\$ - 1,642,227,381 \$ 1,642,227,381	1,	886,943,409 84,015,018 642,227,381 613,185,808
В)	Actuarial Accrued Liability i) Active ^a ii) Active SAL ^b ii) Retired iii) Total	\$	140,203,548 \$519 - 140,204,067	\$ 429,591,890 34,473,732 - 464,065,622	\$ 3,424,974 133,098 - 3,558,072	•	19,978,731 545,218 - 20,523,949	\$	295,247,196 29,193,093 - 324,440,290	\$	549,105,264 12,093,905 - 561,199,169		6,051,868 - - - 6,051,868		6,708,967 13,869 - 6,722,836	\$ - 1,642,227,381 \$ 1,642,227,381	1,	450,312,438 76,453,435 642,227,381 168,993,253
C)	Employer Normal Cost	\$	5,628,559	\$ 16,986,869	\$ 94,159	\$	897,725	\$	6,475,513	\$	35,433,903	\$	168,538	\$	382,517	\$ -	\$	66,067,781
D)	Employer Benefit Payments	\$	886,628	\$ 3,185,566	\$ 7,094	\$	15,601	\$	3,791,594	\$	3,069,256	\$	117,519	\$	66,537	\$ 163,779,583	\$	174,919,378
E)	Covered Members i) Active ^c ii) Retired iii) Total		4,574 - 4,574	13,377 - 13,377	42 - 42		407 - 407		6,070 - 6,070		21,615 - 21,615		125 - 125		219 - 219	41,838 41,838		46,430 41,838 88,268
F)	Covered Payroll ^d		\$176,074,698	\$537,516,457	\$2,660,956		\$21,854,312		\$368,571,002		\$990,777,424		\$7,013,849		\$9,989,974	\$ -	\$ 2,	114,458,672

^a Includes employer capped subsidy and Employee Assistance Program benefits.



 $^{^{\}it b}$ Includes employer paid premium under the Accrued Sick Annual Leave Program.

^cExcludes active members hired on or after July 1, 2010.

d Covered payroll excludes members hired on or after July 1, 2010, and is based on the payroll data provided as of the actuarial valuation date.

e Excess trend rate of 0.14% over the base healthcare trend rate beginning in 2020 applied to pre and post-Medicare per capita claims costs to account for the Excise Tax under the Health Care Reform Act.

Development of Actuarially Determined Contribution

Fiscal Year Ending	 June 30, 2017	 June 30, 2016
A) Funded Status Beginning of Fiscal Year		
i) Actuarial Accrued Liability	\$ 3,168,993,253	\$ 3,416,620,400
ii) Market Value of Assets	 685,668,002	 704,592,263
iii) Unfunded Actuarial Accrued Liability	\$ 2,483,325,251	\$ 2,712,028,137
iv) Funded Ratio	21.64%	20.62%
B) Actuarially Determined Contribution (ADC)		
i) Net Normal Cost	\$ 66,067,781	\$ 76,802,300
ii) Operating Expenses ^a	2,034,942	-
ii) Amortization of Unfunded Actuarial Accrued Liability	 156,796,624	 159,228,758
iv) Actuarially Determined Contribution	\$ 224,899,347	\$ 236,031,058
C) Estimated Employer Contribution	\$ 162,426,667	\$ 127,105,795
D) Percentage of ADC Contributed	72.22%	53.85%

^aBeginning with the June 30, 2016, actuarial valuation, operating expenses are included in the actuarially determined contribution.



Market Value of Assets

This section contains the following information relating to the market value of plan assets:

- Statement of changes in plan net position for plan years ending June 30, 2016, and June 30, 2017;
- Statement of plan net position as of June 30, 2016, and June 30, 2017;
- Market value of assets broken out by investment pool as of June 30, 2016, and June 30, 2017; and
- WVIMB asset allocation as of June 30, 2016.



Statement of Changes in Plan Net Position

	Actual		Actual
	2017		2016
Additions			_
Employer Premium Contributions	\$ 127,426,667	\$	127,105,795
General Revenue Transfer - OPEB ^a	30,000,000		-
General Revenue Transfer - Premium	5,000,000		-
Premium Stabilization Transfer	-		-
Total Employer Contributions	\$ 162,426,667	\$	127,105,795
Interest and Dividend Income	\$ 6,928,761	\$	3,159,000
Net Appreciation in Market Value of Assets	92,518,391	-	(3,002,272)
Total Investment Income	\$ 99,447,152	\$	156,728
Retiree Drug Subsidy	\$ 557,162	\$	803,604
Total Additions	\$ 262,430,981	\$	128,066,127
Deductions			
Payments to Managed Care Organizations	\$ 135,428,367	\$	149,961,715
Healthcare Claims Expenses	91,885,979		95,983,018
Life Insurance Expenses	22,544,246		23,383,374
Healthcare Administration Expenses	1,447,273		1,769,575
Retiree Share of Healthcare Premiums	(106,201,129)		(103,029,338)
Retiree Share of Life Insurance Premiums	 (22,952,010)		(23,691,338)
Net Benefit Payments	\$ 122,152,726	\$	144,377,006
Operating Expenses	\$ 2,034,942	\$	2,613,382
Total Deductions	\$ 124,187,668	\$	146,990,388
Change in Market Value of Assets	\$ 138,243,313	\$	(18,924,261)
Market Value of Assets			
Beginning of Period	\$ 685,668,002	\$	704,592,263
End of Period	\$ 823,911,315	\$	685,668,002

^aEmployer's additional contribution as required by Senate Bill 419.



Statement of Plan Net Position

	Actual	Actual
	2017	2016
Assets		
Cash and Cash Equivalents	\$ 591,814	\$ 758,002
Equity Position in Internal Investment Pools	827,007,493	694,561,000
Contributions Receivable - Net	1,222,000	1,813,000
Due from the State	1,071,726	-
Due from PEIA	-	7,025,000
Other Receivables	19,680,141	3,948,000
Total Assets	849,573,174	708,105,002
Deferred Outflows of Resources Related to Pension	339,453	241,000
Total Deferred Outflows of Resources	339,453	241,000
Liabilities		
Claims Payable	9,670,000	11,950,000
Due to State	· · ·	6,222,000
Due to PEIA	1,448,838	-
Payables to MCO	11,387,000	-
Other Liabilities	3,470,529	4,310,000
Total Liabilities	25,976,367	22,482,000
Deferred Inflows of Resources Related to Pension	24,945	196,000
Total Deferred Inflows of Resources	24,945	196,000
Net Position Restricted for Other Postemployment Benefits	\$ 823,911,315	\$ 685,668,002



Investment Pool Disclosure

Investment Pool	_	ir Value as of une 30, 2017	 ir Value as of une 30, 2016
West Virginia Board of Treasury Investments (BTI)			_
BTI Money Market Pool	\$	91,190,883	\$ 87,470,000
West Virginia Investment Management Board (WVIMB)			
WVIMB Investment Pool:			
Short-term Fixed Income	\$	-	\$ 67,000
Core - Fixed Income		32,438,136	25,400,000
Large Cap Domestic		154,776,907	130,999,000
Non-large Cap Domestic		31,037,542	31,019,000
International Non-qualified		65,924,984	48,963,000
Hedge		68,094,484	66,295,000
Private Equity		76,825,278	63,161,000
Real Estate		74,041,335	64,582,000
Total Return Fixed Income		76,384,843	55,439,000
Opportunistic Debt		14,394,421	3,053,000
International Equity		141,898,680	 118,113,000
WVIMB Investment Pool Total	\$	735,816,610	\$ 607,091,000
Investment Pool Grand Total	\$	827,007,493	\$ 694,561,000



WVIMB Asset Allocation as of June 30, 2016

Asset Class	Policy Target Allocation	Strategic Allocation
Domestic Equity	30.00 %	27.50 %
International Equity	30.00 %	27.50 %
Private Equity	0.00 %	10.00 %
Fixed Income	40.00 %	15.00 %
Hedge Funds	0.00 %	10.00 %
Real Estate	0.00 %	10.00 %
Total Equity	100.00 %	100.00 %



SECTION D

GASB STATEMENT NOS. 74 AND 75 INFORMATION

Auditor's Note – This information is intended to assist in preparation of the financial statements of the West Virginia Retiree Health Benefit Trust Fund. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Discussion

Accounting Standard

For post-employment (OPEB) benefit plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 74, "Financial Reporting for Postemployment Benefit Plans other than Pension Plans," replaces the requirements of GASB Statement No. 43, "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans." GASB Statement No. 74 establishes standards of financial reporting for separately issued financial reports of state and local government OPEB plans.

GASB Statement No. 75 replaces the requirements of Statements No. 45, Accounting and Financial Reporting by Employers for Postemployments Benefits Other Than Pensions, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB.

GASB Statement Nos. 74 and 75 are effective for fiscal years beginning after June 15, 2016 and June 15, 2017, respectively.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain non-actuarial information, such as notes regarding accounting policies and investments, is not included in this report. As a result, the plan sponsor will be responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

Plan Financial Statements

GASB Statement No. 74 requires defined benefit OPEB plans which are administered as trusts or equivalent arrangements to present two financial statements: a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the assets and liabilities of the OPEB plan at the end of the OPEB plan's reporting period. The statement of changes in fiduciary net position presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expense, and net increase or decrease in the fiduciary net position.

GASB Statement No. 75 requires state and local government employers to recognize the net OPEB liability and the OPEB expense on their financial statements, along with the related deferred outflows and inflows of resources. The net OPEB liability is the difference between the total OPEB liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets.

The OPEB expense recognized each fiscal year is equal to the change in the net OPEB liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

The GASB Statement No. 74 information contained in this report is based on an actuarial valuation date of June 30, 2016, and a measurement date of June 30, 2017.



For GASB Statement No. 75 reporting purposes, the plan sponsor's fiscal year end June 30, 2018, financial reporting will be based on a measurement date of June 30, 2017.

The information contained in this report does not incorporate any employer contributions made subsequent to the measurement date of June 30, 2017.

GASB Statement No. 75 requires that employer contributions made to the OPEB plan subsequent to the measurement date and before the end of the employer's reporting period should be reported as a deferred outflow of resources.

Notes to Financial Statements

GASB Statement No. 75 requires the notes of the employer's financial statements to disclose the total OPEB expense, the OPEB plan's liabilities and assets, and deferred outflows of resources and inflows of resources related to OPEB.

GASB Statement Nos. 74 and 75 require the notes of the financial statements for the Plan and Plan Sponsor to include certain additional information. The list of disclosure items should include:

- The name of the OPEB plan, the administrator of the OPEB plan and the identification of whether the OPEB plan is a single-employer, agent or cost-sharing OPEB plan;
- A description of the benefits provided by the plan;
- A brief description of changes in benefit terms or assumptions that affected the measurement of the total OPEB liability since the prior measurement date;
- The number of plan members by category and if the plan is closed;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The OPEB plan's investment policies;
- The OPEB plan's fiduciary net position and the net OPEB liability;
- The net OPEB liability using +/- 1% change on the discount rate;
- The net OPEB liability using +/- 1% change on the healthcare trend rate;
- Significant assumptions and methods used to calculate the total OPEB liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

OPEB plans that are administered through trusts or equivalent arrangements are required to disclose additional information in accordance with GASB Statement No. 74. This information includes:

- The composition of the OPEB plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.



Required Supplementary Information

GASB Statement No. 74 requires a 10-year fiscal history of:

- Sources of changes in the net OPEB liability.
- Information about the components of the net OPEB liability and related ratios, including the OPEB plan's fiduciary net position as a percentage of the total OPEB liability, and the net OPEB liability as a percent of covered-employee payroll.
- Comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.
- For plans with an actuarially determined contribution, the schedule covering each of the 10 most recent fiscal years of the actuarially determined contribution, contributions to the OPEB plan and related ratios.

Frequency and Timing of the Actuarial Valuation

An actuarial valuation to determine the total OPEB liability is required to be performed at least every two years. For the employer's financial reporting purposes, the net OPEB liability and OPEB expense should be measured as of the employer's "measurement date," which may not be earlier than the employer's prior fiscal year end-date. If the actuarial valuation used to determine the total OPEB liability is not calculated as of the measurement date, the total OPEB liability is required to be rolled forward from the actuarial valuation date to the measurement date.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits), and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

Since the RHBT is projected to be fully funded by fiscal year end June 30, 2036, and plan assets are available to pay benefits and expenses in all future years, we have assumed a rate of 7.15% for the long-term expected return on plan assets and the discounting of future plan obligations. Please see Appendix A for a projection supporting the 7.15% long-term return and discount rate.

Actuarial Assumptions

The actuarial assumptions used to value the liabilities are outlined in detail in Section E. The assumptions include details on the healthcare trend assumption, the aging factors, as well as the cost method used to develop the OPEB expense.

The pension-related assumptions were based on experience studies conducted by the pension system's actuary as approved by the pension system. The OPEB-related assumptions were based on a recent experience study conducted by GRS and approved by WV-RHBT.



Future Uncertainty or Risk

Future results may differ from those anticipated in this actuarial valuation. Reasons include, but are not limited to:

- Claims experience differing from expected;
- Medical trend experience differing from expected;
- Changes in the healthcare plan designs offered to active and retired members;
- Changes in healthcare related costs due to recent experience; and
- Participant behavior differing from expected; e.g.,
 - Elections at retirement;
 - One-person versus two-person coverage elections; and
 - o Timing of retirement or termination.

Benefits Valued

The benefit provisions that were valued are described in Section F. The actuarial valuation is required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits.

GASB Statement Nos. 74 and 75 Information

This section contains the following GASB Statement Nos. 74 and 75 information:

- GASB Statement Nos. 74 and 75 Executive Summary;
- GASB Statement No. 74 Changes in Net OPEB Liability for plan year end June 30, 2017;
- GASB Statement No. 74 Multiyear Net OPEB Liability;
- GASB Statement No. 74 Schedule of Contributions;
- Notes to Schedule of Contributions;
- GASB Statement No. 74 Sensitivity of Net OPEB Liability plan year end June 30, 2017;
- GASB Statement No. 75 Changes in Net OPEB Liability for plan year end June 30, 2017, applicable to sponsor's fiscal year end June 30, 2018;
- GASB Statement No. 75 Expense measured as of plan year end June 30, 2017, and applicable to sponsor's fiscal year end June 30, 2018; and
- GASB Statement No. 75 Development of Inflows and Outflows as of June 30, 2017.



Executive Summary

	 2017
Actuarial Valuation Date	June 30, 2016
Measurement Date of the Net OPEB Liability	June 30, 2017
Plan Year End for GASB Statement No. 74	June 30, 2017
Employer's Fiscal Year End for GASB Statement No. 75	June 30, 2018
Membership	
Number of	
- Retirees and Beneficiaries	41,838
- Inactive, Nonretired Members ^a	12,242
- Active Members	46,430
- Total	 100,510
Covered Payroll ^b	\$ 2,199,037,019
Net OPEB Liability	
Total OPEB Liability	\$ 3,282,900,408
Plan Fiduciary Net Position	823,911,315
Net OPEB Liability	\$ 2,458,989,093
Plan Fiduciary Net Position as a Percentage	
of Total OPEB Liability	25.10%
Net OPEB Liability as a Percentage	
of Covered Payroll	111.82%
Development of the Single Discount Rate	
Single Discount Rate Beginning of Year	7.15%
Single Discount Rate End of Year	7.15%
Long-Term Expected Rate of Investment Return	7.15%
WVIMB Long-Term Expected Rate of Investment Return	7.50%
WVBTI Short-Term Expected Rate of Investment Return	3.00%
Long-Term Municipal Bond Rate Beginning of Year ^c	2.92%
Long-Term Municipal Bond Rate End of Year ^c	3.56%
Year WV-RHBT is Projected to be Fully Funded	2037
Total OPEB Expense for Fiscal Year End June 30, 2017, Applicable to Fiscal Year End June 30, 2018	\$ 220,371,231

Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future OPEB Expenses as of June 30, 2018

	Deferred (of Reso	Deferred (Inflows) of Resources		
Difference Between Expected and Actual Experience	\$	-	\$	(43,033,626)
Changes in Assumptions		-		-
Net Difference Between projected and Actual Earnings				
on OPEB Plan Investments		-		(39,247,096)
Total	\$	-	\$	(82,280,722)

^a Number of inactive nonretired members provided by RHBT.

^c Based on fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2017. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.



^b Covered payroll excludes members hired on or after July 1, 2010, and is based on the payroll data provided as of the actuarial valuation date increased with one year of wage inflation.

Schedule of Changes in Net OPEB Liability and Related Ratios Multiyear

Fiscal Year Ending June 30,	2017
Total OPEB Liabililty	
Service Cost	\$ 66,067,781
Interest on the Total OPEB Liability	224,612,594
Changes of Benefit Terms	-
Difference between Expected and Actual Experience	(54,620,494)
Changes of Assumptions	-
Benefit Payments	(122,152,726)
Net Change in Total OPEB Liability	113,907,155
Total OPEB Liability - Beginning	3,168,993,253
Total OPEB Liability - Ending (a)	\$ 3,282,900,408
Plan Fiduciary Net Position	
Employer Contributions	\$ 162,426,667
Net Investment Income	99,447,152
Benefit Payments	(122,152,726)
Operating Expenses	(2,034,942)
Other	557,162
Net Change in Plan Fiduciary Net Position	138,243,313
Plan Fiduciary Net Position - Beginning	685,668,002
Plan Fiduciary Net Position - Ending (b)	823,911,315
Net OPEB Liability - Ending (a) - (b)	\$ 2,458,989,093
Plan Fiduciary Net Position as a Percentage	
of Total OPEB Liability	25.10%
Covered-Employee Payroll ^a	\$ 2,199,037,019
Net OPEB Liability as a Percentage	
of Covered-Employee Payroll	111.82%

^aPlan year end 2017 payroll based on plan year end 2016 payroll increased with wage inflation assumption of 4.0 percent.



Schedule of Net OPEB Liability Multiyear

		Fiduciary							
Total				Net Position					
FY Ending June 30,	OPEB Liability	Fiduciary Net Position	Net OPEB Liability	as a % of Total OPEB Liability	Covered Payroll ^a	as a % of Covered Payroll			
2016	\$ 3,168,993,253	\$ 685,668,002	\$ 2,483,325,251	21.64%	\$ 2,114,458,672	117.44%			
2017	3,282,900,408	823,911,315	2,458,989,093	25.10%	2,199,037,019	111.82%			



Schedule of Contributions Multiyear

	Actuarially		Contribution	Actual Contribution	
FY Ending June 30,	Determined Contribution	Actual Contribution	Deficiency (Excess)	Covered Payroll	as a % of Covered Payroll
2016	\$ 236,031,058	\$ 127,105,795	\$ 108,925,263	\$ 2,114,458,672	6.01%
2017	224,899,347	162,426,667	62,472,680	2,199,037,019	7.39%



Notes to Schedule of Contributions

Valuation Date June 30, 2016 Measurement Date June 30, 2017

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method Entry Age Normal

Amortization Method Level percentage of payroll, closed
Amortization Period 21 year closed period as of June 30, 2016

Asset Valuation Method Market value

Investment Rate of Return 7.15%, net of OPEB plan investment expense, including inflation

Inflation 2.75%

Salary Increases Dependent upon pension system. Ranging from 3.00% to 6.5%, including

inflation

Retirement Age Experience-based table of rates that are specific to the type of eligibility

condition. Last updated for the June 30, 2016, actuarial valuation.

Mortality Post-Retirement: RP-2000 Healthy Annuitant Mortality Table projected

with Scale AA on a fully generational basis for PERS and TRS. RP-2000 Healthy Annuitant Mortality Table projected to 2025 with scale BB for Troopers A and B. Pre-Retirement: RP-2000 Non-Annuitant Mortality Table projected with Scale AA on a fully generational basis for PERS and TRS. RP-2000 Non-Annuitant Mortality Table projected to 2020 with Scale

BB for Troopers A and B

Healthcare Cost Trend Rates Actual trend used for fiscal year 2017. For fiscal years on and after 2018,

trend starts at 8.50% and 9.75% for pre and post-Medicare, respectively, and gradually decreases to an ultimate trend of 4.50%. Excess trend rate of 0.14% and 0.29% for pre and post-Medicare, respectively, is added to healthcare trend rates pertaining to per capita claims costs beginning in

2020 to account for the Excise Tax.

Aging Factors Based on the 2013 SOA Study "Health Care Costs - From Birth to Death"

Health administrative expenses are included in the development of the per capita claims costs. Operating expenses are included as a component

of the annual expense.



Expenses

Single Discount Rate

A Single Discount Rate of 7.15% was used to measure the total OPEB liability. This Single Discount Rate was based on the expected rate of return on OPEB plan investments of 7.15%. The projection of cash flows used to determine this Single Discount Rate assumed that employer contributions will be made in accordance with the prefunding and investment policies. See Appendix A for a projection supporting the development of the Single Discount Rate. Based on these assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Summary of Membership Information

The following table provides a summary of the number of participants in the plan:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	41,838
Inactive Plan Members Entitled to But Not Yet Receiving Benefits ^a	12,242
Active Plan Members	46,430
Total Plan Members	100,510

^aNumber of Plan Members Entitled to But Not Yet Receiving Benefits provided by RHBT.



Sensitivity of Net OPEB Liability

Regarding the sensitivity of the net OPEB liability to changes in the Single Discount Rate, the following presents the plan's net OPEB liability, calculated using a Single Discount Rate of 7.15%, as well as what the plan's net OPEB liability would be if it were calculated using a Single Discount Rate that is one percentage point higher or lower:

Sensitivity of Net OPEB Liability as of June 30, 2017, to the **Single Discount Rate Assumption**

Current Single Discount					
	1% Decrease		Rate Assumption		1% Increase
	6.15%		7.15%		8.15%
\$	2,863,210,522	\$	2,458,989,093	\$	2,122,968,119

Regarding the sensitivity of the net OPEB liability to changes in the healthcare cost trend rates, the following presents the plan's net OPEB liability, calculated using the assumed trend rates as well as what the plan's net OPEB liability would be if it were calculated using a trend rate that is one percentage point higher or lower:

Sensitivity of Net OPEB Liability as of June 30, 2017, to the **Healthcare Cost Trend Rate Assumption**

Healthcare Cost					
	1% Decrease	Trer	nd Rates Assumption		1% Increase
\$	2,065,585,627	\$	2,458,989,093	\$	2,940,143,149



Schedule of Changes in Net OPEB Liability under GASB Statement No. 75 Measured as of June 30, 2017 Applicable to Plan Sponsor's Fiscal Year End June 30, 2018

Fiscal Year Ending June 30,		2017
A. Total OPEB Liability		
1. Service Cost	\$	66,067,781
2. Interest on the Total OPEB Liability		224,612,594
3. Changes of Benefit Terms		-
4. Difference Between Expected and Actual Experience		(54,620,494)
5. Changes of Assumptions		-
6. Benefit Payments		(122,152,726)
7. Net Change in Total OPEB Liability	\$	113,907,155
8. Total OPEB Liability – Beginning		3,168,993,253
9. Total OPEB Liability – Ending	\$	3,282,900,408
B. Plan Fiduciary Net Position		
1. Employer Contributions	\$	162,426,667
2. Net Investment Income	•	99,447,152
3. Benefit Payments		(122,152,726)
4. Operating Expenses		(2,034,942)
5. Other		557,162
6. Net Change in Plan Fiduciary Net Position	\$	138,243,313
7. Plan Fiduciary Net Position – Beginning		685,668,002
8. Plan Fiduciary Net Position – Ending	\$	823,911,315
C. Net OPEB Liability	\$	2,458,989,093
D. Plan Fiduciary Net Position as a Percentage		
of the Total OPEB Liability		25.10%
E. Covered-Employee Payroll ^a	\$	2,199,037,019
F. Net OPEB Liability as a Percentage		
of Covered-Employee Payroll		111.82%

^aPlan year end 2017 payroll based on plan year end 2016 payroll increased with wage inflation assumption of 4.0 percent.



Statement of OPEB Expense under GASB Statement No. 75 Measured as of June 30, 2017 Applicable to Plan Sponsor's Fiscal Year End June 30, 2018

A. Expense

1. Service Cost	\$ 66,067,781
2. Interest on the Total OPEB Liability	224,612,594
3. Current-Period Benefit Changes	-
4. Employee Contributions	-
5. Projected Earnings on Plan Investments	(50,388,282)
6. OPEB Plan Operating Expenses	2,034,942
7. Other Changes in Plan Fiduciary Net Position	(557,162)
8. Recognition of Outflow/(Inflow) of Resources due to Liabilities	(11,586,868)
9. Recognition of Outflow/(Inflow) of Resources due to Assumption Changes	-
10. Recognition of Outflow/(Inflow) of Resources due to Assets	 (9,811,774)
11. Total OPEB Expense	\$ 220,371,231

B. Reconciliation of Net OPEB Liability

1. Net OPEB Liability Beginning of Year	\$ 2,483,325,251
2. OPEB Expense	220,371,231
3. Employer Contributions	(162,426,667)
4. Change in Liability Experience Outflows/(Inflows) Recognized in Current Liabilities	(43,033,626)
5. Change in Assumption Changes Experience Outflows/(Inflows) Recognized in Current Liabilities	-
6. Change in Investment Experience Outflows/(Inflows) Recognized in Current Assets	(39,247,096)
7. Net OPEB Liability End of Year	\$ 2,458,989,093



Recognition of Deferred Outflows and Inflows of Resources

Differences between expected and actual experience and changes in assumptions are recognized in OPEB expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with OPEB through the OPEB plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active members expected to receive a plan benefit was approximately 416,095 years. Additionally, the total number of plan members expected to receive a plan benefit as of the actuarial valuation date was 88,268. As a result, the average of the expected remaining service lives for plan members expected to receive a plan benefit for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 4.7140 years.

Additionally, differences between projected and actual earnings on OPEB plan investments should be recognized in OPEB expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the OPEB expense as a level dollar amount over the closed period identified above.



Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Measured as of June 30, 2017, Applicable to Plan Sponsor's Fiscal Year End June 30, 2018

A. Outflows and (Inflows) of Resources Recognized in Current and Future OPEB Expenses as of Plan Year End June 30, 2017

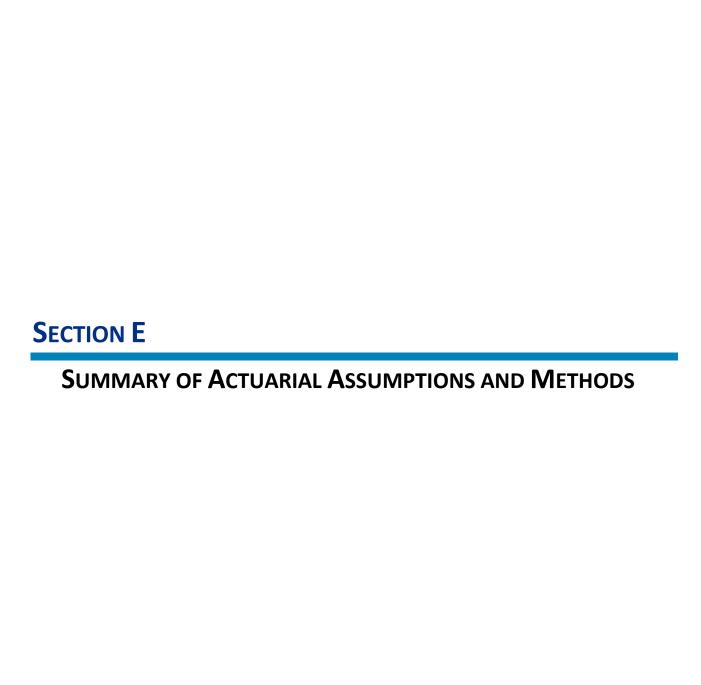
Experience (Gain)/Loss	Ori	iginal Balance	Date Established	Original Recognition Period/ Amortization Factor	Recognized in EB Expenses	nt Recognized in nt OPEB Expense	to be	erred (Inflows) e Recognized in e OPEB Expenses	to be Rec	Outflows ognized in EB Expenses
 Differences Between Expected and Actual Non-Investment Experience 	\$	(54,620,494) (54,620,494)	June 30, 2017	4.7140 4.7140	\$ <u>-</u>	\$ (11,586,868)	\$	(43,033,626) (43,033,626)	\$	-
2. Assumption Changes	\$		June 30, 2017	<u>4.7140</u> 4.7140	\$ <u>-</u>	\$ 	\$	-	\$	<u>-</u>
Difference Between Expected and Actual Investment Earnings	\$	(49,058,870) (49,058,870)	June 30, 2017	<u>5.0000</u> 5.0000	\$ -	\$ (9,811,774) (9,811,774)	\$	(39,247,096) (39,247,096)	\$	<u>-</u>
4. Total	\$	(103,679,364)			\$ -	\$ (21,398,642)	\$	(82,280,722)	\$	-

B. Deferred Outflows and Deferred (Inflows) of Resources by Year to be Recognized in Future OPEB Expenses

Year Ending June 30	Expe No	rences Between cted and Actual n-Investment Experience	 Assumption Changes		Expe	rences Between cted and Actual ment Experience	Year Ending June 30	 ed Outflows esources	erred (Inflows) f Resources	ferred Outflows/ ws) of Resources
2017	\$	(11,586,868)	\$	-	\$	(9,811,774)	2017	\$ -	\$ (21,398,642)	\$ (21,398,642)
2018		(11,586,868)		-		(9,811,774)	2018	-	(21,398,642)	(21,398,642)
2019		(11,586,868)		-		(9,811,774)	2019	-	(21,398,642)	(21,398,642)
2020		(8,273,023)		-		(9,811,774)	2020	-	(18,084,797)	(18,084,797)
2021		-		-		-	2021	-	-	-
Thereafter		-				<u>-</u>	Thereafter		-	
Total	\$	(43,033,626)	\$	-	\$	(39,247,096)	Total	\$ -	\$ (82,280,722)	\$ (82,280,722)

Numbers may not add due to rounding.





Development of Per Capita Claim Costs

The per capita claims for the self-insured PPB plans used in the actuarial valuation were based on claims, administrative expense and enrollment data for the period July 1, 2013, through June 30, 2016, as provided by the WV-RHBT. The per capita claims for the fully-insured MAPD plans used in the actuarial valuation were based on plan year 2017 weighted premium rates, as provided by WV-RHBT. The average per member costs were adjusted at each respective retirement age by the morbidity factors disclosed in the assumption section of the report.

Cost Method and Expense Calculations for Retiree Healthcare Benefits

The retiree healthcare actuarial valuation was based on the entry age normal cost method. Under this method, each participant's projected benefit is allocated on a level percent of pay basis from entry age to assumed exit age. Under GASB Statement Nos. 74 and 75, the entry age normal method is the required cost method.

The Actuarial Accrued Liability is the portion of the present value associated with pay prior to the actuarial valuation date. The Normal Cost is the portion of the present value associated with pay during the current plan year.

The Actuarially Determined Contribution equals the normal cost plus the amortization of the unfunded actuarial accrued liability. The actuarial valuation is based on a level-percentage-of-pay closed amortization period with 21 years remaining as of June 30, 2016.



Actuarial Assumptions

The actuarial assumptions used in our actuarial valuation are outlined on the following pages.

Actuarial Valuation Date	June 30, 2016
Discount Rate	7.15%
Return on Assets Invested with WVIMB	7.50%
Return on Assets Invested with WVBTI	3.00%
Inflation ^a	2.75%
Wage Inflation ^b	4.00%

OPEB Assumptions

Healthcare Trend

	Pre-Medicare	Post-Medicare
Applied at July 1,	Medical/Rx ^d	Medical/Rx ^d
2017 ^c	2.30%	4.80%
2018	8.50%	9.75%
2019	8.00%	9.25%
2020	7.50%	8.75%
2021	7.00%	8.25%
2022	6.50%	7.75%
2023	6.00%	7.25%
2024	5.50%	6.75%
2025	5.00%	6.25%
2026	4.50%	5.75%
2027+	4.50%	4.50%

^aInflation assumption used to estimate the impact of the Excise tax under Federal Healthcare Reform.



^bWage inflation used to project payroll.

^cActual trend of 2.30% and 4.80% applied July 1, 2017, for pre and post-Medicare per capita claims and premiums, respectively.

^dExcess trend rate of 0.14% and 0.29% for pre and post-Medicare, respectively, over the based healthcare trend rate beginning in 2020 applied only to per capita claim cost to account for the Excise Tax under the Health Care Reform Act.

Our projection of capped costs was based on the following: (i) The sponsor's capped subsidy aggregate contribution limit of \$150 million for 2017 would increase by \$10 million per year on and after 2018; (ii) The per member subsidy would increase by at least 3.0% per year but no more than the healthcare trend inflation assumption such that the product of the projected subsidy and projected members is less than the projected aggregated capped costs; and (iii) The member's share of plan costs would remain stable as a percentage of total costs following the year that the program is fully funded. After 2036, the program is projected to be fully funded and the sponsor is assumed to contribute the residual portion of normal cost and operational expenses needed to maintain a funded ratio of 100% in future years. In addition, after 2035, the member's share of total plan costs is assumed to remain stable at approximately 61% of total plan costs. These assumptions produced per member annual capped subsidy increases of 3.0% per year from 2018 to 2023 and 4.5% per year after 2023.

Our projections also assume (i) the plan sponsor contributes one percent of expected costs towards the Retired Employee Assistance Program, (ii) the sponsor's operating expenses are approximately 1.25 percent of expected employer payments; and (iii) the Plan receives pre-funding contributions of \$30 million per year until 2036.

Average Morbidity Factor

<u>Age</u>	<u>Male</u>	<u>Female</u>
20 to 24	-3.24%	5.77%
25 to 29	4.14%	7.11%
30 to 34	4.50%	1.71%
35 to 39	4.54%	-0.25%
40 to 44	4.48%	1.12%
45 to 49	5.42%	3.05%
50 to 54	5.64%	3.12%
55 to 59	5.25%	3.10%
60 to 64	4.68%	3.78%
65 to 69	1.73%	2.25%
70 to 74	1.44%	1.61%
75 to 79	0.98%	1.12%
80 to 84	0.15%	0.73%
85 to 89	-0.37%	0.20%
90 to 94	-0.28%	-0.81%



Annual Per Capita Claims Costs for Pre-65, Non-Medicare Eligible Members PPB Plans A, B and Capitated Plans

Medical and Rx

				 ,
<u>Age</u>	<u>r</u>	<u> Male</u>	Fe	male
20	\$	1,724	\$	2,256
25		1,460		2,984
30		1,787		4,206
35		2,227		4,576
40		2,781		4,519
45		3,462		4,778
50		4,508		5,553
51		4,770		5,746
52		5,043		5,934
53		5,326		6,118
54		5,623		6,297
55		5,932		6,477
56		6,254		6,661
57		6,590		6,855
58		6,936		7,064
59		7,293		7,293
60		7,662		7,544
61		8,046		7,820
62		8,450		8,121
63		8,873		8,446
64		9,317		8,792



Annual Per Capita Claims Costs for Medicare Eligible Members MAPD Plans 1, 2 and Special Medicare Plans

Medical and Rx

<u>Age</u>	<u>Male</u>	<u>Female</u>
65	\$ 3,269	\$ 3,083
66	3,324	3,159
67	3,380	3,233
68	3,439	3,306
69	3,499	3,377
70	3,561	3,446
71	3,622	3,511
72	3,680	3,572
73	3,733	3,630
74	3,781	3,683
75	3,825	3,732
76	3,865	3,777
77	3,905	3,820
78	3,945	3,862
79	3,982	3,904
80	4,015	3,945
81	4,040	3,983
82	4,055	4,017
83	4,060	4,047
84	4,055	4,072
85	4,044	4,092
86	4,029	4,107
87	4,013	4,117
88	3,997	4,126
89	3,982	4,131
90	3,969	4,133
91	3,958	4,127
92	3,948	4,111
93	3,938	4,080
94	3,927	4,033
95	3,914	3,967
96	3,899	3,879
97	3,882	3,769
98 +	3,862	3,636



Adjustments Due to the Estimate Impact of Excise Tax under Healthcare Reform

Beginning in 2020, the Patient Protection and Affordable Care Act (PPACA) imposes a 40% excise tax on healthcare plan costs over certain statutory limits. On December 18, 2015, this was delayed two years from 2018 to 2020. The annual statutory limits for 2018 depend on the age and coverage tier as shown below:

	Age Less Than 55 or Greater Than 64	Age Greater Than 54 and Less Than 65
Single Person Coverage	\$10,200	\$11,850
All Other Coverage Types	27,500	30,950

These thresholds will be updated before the tax takes effect in 2020, and after 2020 the statutory limits are increased by the Consumer Price Index for all Urban Consumers (CPI-U) rate. The statutory limits don't recognize differences due to region, health status of the group or plan design. Healthcare plan costs may be blended among active members, pre-Medicare retirees and Medicare retirees if members are covered by the same plan, and similar benefits are provided. Healthcare plan costs subject to the excise tax include: medical, prescription and employer Health Savings Accounts and Health Reimbursement Accounts.

For the June 30, 2016, actuarial valuation, the impact of the excise tax was estimated by:

- 1) Averaging costs separately for the PPO plans and HMO plans;
- 2) Projecting average plan costs based on the assumed actuarial valuation trend rate;
- 3) Projecting the statutory limits assuming a CPI-U rate of 3.0%;
- 4) Estimating the projected excise tax based on the projected average costs and statutory limits;
- 5) Developing an adjusted trend rate, applied to the explicit costs, to approximate the impact of the additional excise tax costs.

As a result of this analysis, the impact of the excise tax was estimated to be 0.14% and 0.29% over the base healthcare trend rate beginning in 2020 for pre and post-Medicare per capita claims cost, respectively.



Participation and Other OPEB Assumptions

Sick and Annual Leave Program: Members hired before July 1, 2001, with unused sick and annual leave credits at retirement, may convert such credits into either OPEB or pension benefits. The following table shows the conversion of unused sick and leave credits to OPEB benefits, and the percentage of members that are assumed to elect to convert credits into OPEB benefits:

Marchael Par Bata	Percentage Electing to Convert Unused Sick and Annual Leave Days into OPEB Benefits						
Member Hire Date	PERS	TRS	Troopers A and B				
Before July 1, 1988	65.0%	40.0%	15.0%				
From July 1, 1988, to June 30, 2001	50.0%	35.0%	10.0%				

For each individual member, future sick and leave days were assumed to accrue at the same rate as in prior years.

Participation Assumption: Participation in the health benefits program was based on the percentage of premium paid by the retired member. Members hired on or after July 1, 2010, pay the full premium, including explicit and implicit subsidies, resulting in no costs to the plan sponsor. Members hired before July 1, 2010, pay retiree premiums that depend on service at retirement. The following table shows the assumed participation rates for members hired before July 1, 2010:

Service at Retirement	Participation Rates					
Service at Retirement	PERS	TRS	Troopers A and B			
5 to 9 years	55.0%	65.0%	60.0%			
10 to 14 years	70.0%	80.0%	70.0%			
15 to 19 years	90.0%	90.0%	100.0%			
20 to 24 years	95.0%	95.0%	100.0%			
25 or more years	95.0%	98.0%	100.0%			

Members eligible for sponsor provided subsidies under the Sick and Annual Leave Program are assumed to participate at a slightly higher rate. For such members, hired before July 1, 2001, with a sick accrued leave balance of at least 100 days, we have assumed the above participation rates are increased by five percentage points not to exceed the maximum participation rate in total.



Coverage and Continuance Assumption: The percentage of members that elect spousal healthcare coverage is shown below. Of the members electing two-person coverage, it is assumed that 100% of the surviving spouses would continue coverage after the death of the retiree.

Coverage Type	Coverage Type Rate					
Coverage Type	PERS	TRS	Troopers A and B			
Single	47.0%	35.0%	25.0%			
Two-Person/Family	53.0%	65.0%	75.0%			

Retired Employee Assistance Program: The liability for the Retiree Employee Assistance program was assumed to equal one percent of the present value of future self-insured claims and fully-insured premiums.

Data: Members hired on or after July 1, 2010, pay 100% of the costs of providing retiree healthcare benefits, resulting in no implicit or explicit subsidies from the plan sponsor, and have been excluded from the actuarial valuation.

The data provided for retirees did not provide the retiree's pension system. Therefore, all retirees were valued under the Public Employees' Retirement System post-retirement mortality assumption.

The data excluded information for about 2,400 active members hired before July 1, 2010, who may be eligible for OPEBs under the RHBT program. Costs for active members were increased by approximately five percent to reflect the missing data. The number of active members and payroll was also increased by five percent. Costs for retired members were decreased by one percent to reflect updated MAPD premium information.

Pension-related Assumptions:

The assumptions used for the most recent pension actuarial valuations of TRS, PERS, Plan A and Plan B were applied to the WV-RHBT OPEB actuarial valuation.

Local Agencies used the pension-related assumptions that pertained to PERS and the Undefined Groups used the pension-related assumptions that pertained to TRS.

Furthermore, all Local Agency/PERS members and TRS/Undefined Group members were assumed to use state and teacher pension-related assumptions, respectively.



Summary of Actuarial Assumptions and Methods TRS Pension Related Assumptions

TEACHERS' RETIREMENT SYSTEM

Post-Retirement Healthy Mortality:

Healthy males — 97% of RP-2000 Healthy Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Healthy females — 94% of RP-2000 Healthy Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Post-Retirement Disabled Mortality:

Disabled males — 96% of RP-2000 Disabled Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Disabled females — 101% of RP-2000 Disabled Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Pre-Retirement Mortality:

RP-2000 Non-Annuitant Mortality Table, projected with Scale AA on a fully generational basis.



Summary of Actuarial Assumptions and Methods TRS Pension Related Assumptions

Termination:

Illustrative rates of withdrawal from the plan are as follows:

	Sample Select and Ultimate Representative Rates - Teachers											
						Years of	Service					
	0	-1	1	-2	2	-3	3	-4	4	-5	Ov	er 5
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
20	15.000%	15.000%	13.860%	11.000%	10.000%	10.000%	8.000%	8.000%	6.000%	6.000%	3.200%	3.200%
30	19.571%	19.571%	12.978%	10.314%	6.850%	7.400%	6.000%	5.133%	4.930%	5.400%	2.400%	2.400%
40	25.286%	25.286%	11.875%	9.457%	6.500%	5.400%	4.000%	5.000%	4.030%	3.401%	1.904%	1.600%
50	31.000%	31.000%	10.772%	8.600%	6.500%	5.000%	3.000%	5.000%	3.130%	2.250%	1.200%	0.800%
60	35.000%	35.000%	10.000%	8.000%	6.500%	5.000%	3.000%	5.000%	2.500%	2.250%	1.600%	1.200%

	Sample Select and Ultimate Representative Rates - Non-Teachers and State											
		Years of Service										
	0	-1	1	-2	2.	-3	3	-4	4	-5	Ov	er 5
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
20	18.000%	24.750%	13.000%	17.550%	12.000%	11.200%	8.000%	9.000%	4.500%	6.750%	4.000%	2.800%
30	15.600%	21.450%	11.000%	11.988%	9.440%	9.520%	6.000%	6.732%	3.750%	5.625%	3.507%	3.122%
40	13.200%	18.150%	8.000%	7.200%	6.240%	6.160%	5.000%	3.600%	3.450%	3.375%	2.363%	1.750%
50	10.800%	14.850%	6.000%	5.400%	4.000%	4.480%	5.000%	3.510%	3.450%	2.250%	1.688%	1.316%
60	8.400%	11.550%	5.000%	4.500%	4.000%	4.480%	5.000%	4.050%	3.450%	1.688%	1.500%	1.400%

It is assumed that terminated employees will not be rehired. The rates apply only to employees who have not fulfilled the service requirement necessary for retirement an any given age.



Summary of Actuarial Assumptions and Methods TRS Pension Related Assumptions

Salary Increases:

Illustrative rates of salary increase per individual employee per annum, compounded annually:

	Annual Increase					
Age	Teachers	Non-Teachers and State				
20	6.000%	6.500%				
30	5.571%	5.579%				
40	4.714%	4.842%				
50	3.857%	4.105%				
60	3.353%	3.368%				
70	3.000%	3.000%				

Disability:

S	Sample Disability Rates					
% Se	parating Within	Next Year				
Age	Male	Female				
20	0.008%	0.006%				
30	0.080%	0.064%				
40	0.200%	0.160%				
50	0.407%	0.301%				
60	0.560%	0.704%				



Summary of Actuarial Assumptions and Methods TRS Pension Related Assumptions

Retirement:

Employees are assumed to retire in accordance with the rates shown below. The rates apply to employees who have fulfilled the service requirement necessary for retirement at any given age.

Sample Normal Retirement Rates % Separating Within Next Year (Age-Based)							
	Teac	hers	Non-Teachers & State				
Age	Male	Female	Male	Female			
54	0.00%	0.00%	0.00%	0.00%			
55	25.00%	27.50%	30.00%	20.00%			
56	17.50%	17.50%	20.00%	17.50%			
57	17.50%	20.00%	17.50%	15.00%			
58	20.00%	20.00%	15.00%	15.00%			
59	20.00%	20.00%	15.00%	17.50%			
60	20.00%	25.00%	15.00%	17.50%			
61	25.00%	20.00%	15.00%	17.50%			
62	35.00%	27.50%	35.00%	25.00%			
63	25.00%	25.00%	25.00%	20.00%			
64	25.00%	25.00%	17.50%	20.00%			
65	40.00%	30.00%	30.00%	30.00%			
66	30.00%	35.00%	22.50%	25.00%			
67	25.00%	30.00%	22.50%	22.50%			
68	25.00%	30.00%	22.50%	22.50%			
69	25.00%	30.00%	22.50%	22.50%			
70+	100.00%	100.00%	100.00%	100.00%			

Spouse Age Assumption:

The female spouse is assumed to be three years younger than the male spouse, if no data is available.

Accrual of Future Service:

All active members will accrue 1.00 year of service for each future year of employment.



Summary of Actuarial Assumptions and Methods PERS Pension Related Assumptions

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Post-Retirement Healthy Mortality:

Healthy males — 110% of RP-2000 Healthy Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Healthy females — 101% of RP-2000 Healthy Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Post-Retirement Disabled Mortality:

Disabled males — 96% of RP-2000 Disabled Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Disabled females — 107% of RP-2000 Disabled Annuitant Mortality table, projected with Scale AA on a fully generational basis.

Pre-Retirement Mortality:

RP-2000 Non-Annuitant Mortality Table, projected with Scale AA on a fully generational basis.



Summary of Actuarial Assumptions and Methods PERS Pension Related Assumptions

Termination:

Illustrative rates of withdrawal from the plan are as follows:

	Sample Select and Ultimate Representative Rates - State											
						Years of	Service					
	0	-1	1	-2	2	-3	3	-4	4	-5	Ove	er 5
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
20	35.100%	32.500%	29.400%	27.000%	24.700%	20.000%	20.800%	17.640%	18.200%	13.500%	14.400%	12.100%
30	26.975%	25.415%	23.100%	22.000%	18.200%	17.500%	15.600%	15.120%	12.600%	11.250%	8.400%	8.800%
40	20.930%	20.020%	16.800%	15.000%	13.000%	12.500%	10.400%	10.080%	10.500%	8.750%	4.800%	4.500%
50	16.380%	17.160%	12.375%	12.500%	8.800%	12.500%	7.800%	8.820%	7.000%	7.188%	3.120%	3.500%
60	15.015%	14.300%	11.250%	11.250%	6.600%	9.375%	5.200%	6.300%	3.500%	5.000%	2.400%	1.750%

	Sample Select and Ultimate Representative Rates - Non-State											
						Years of	Service					
	0.	-1	1	-2	2.	-3	3.	-4	4	-5	Ov	er 5
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
20	35.880%	28.750%	30.240%	24.150%	25.000%	19.855%	20.900%	18.000%	16.320%	19.380%	14.850%	14.400%
30	30.360%	25.070%	24.480%	21.850%	17.600%	17.765%	16.940%	15.500%	12.000%	14.820%	8.910%	9.000%
40	24.840%	21.850%	18.720%	18.975%	12.650%	13.300%	11.000%	13.000%	10.800%	10.260%	5.400%	5.850%
50	19.320%	17.250%	13.200%	13.000%	9.000%	10.925%	8.800%	10.000%	7.920%	7.980%	4.000%	3.500%
60	15.180%	13.800%	12.000%	11.000%	8.000%	9.025%	6.600%	8.000%	5.040%	5.700%	2.000%	2.000%

It is assumed that terminated employees will not be rehired. The rates apply only to employees who have not fulfilled the service requirement necessary for retirement at any given age.



Summary of Actuarial Assumptions and Methods PERS Pension Related Assumptions

Salary Increases:

Illustrative rates of increase per individual employee per annum, compounded annually:

	Annual Increase						
Age	State	Nonstate					
20	4.600%	6.000%					
30	4.100%	4.600%					
40	3.600%	4.100%					
50	3.100%	3.850%					
60	3.000%	3.350%					
70	3.000%	3.350%					

Disability:

Sample Disability Rates % Separating Within Next Year							
Age							
20	0.007%	0.005%					
30	0.027%	0.039%					
40	0.102%	0.073%					
50	0.439%	0.225%					
60	0.675%	0.488%					



Summary of Actuarial Assumptions and Methods PERS Pension Related Assumptions

Retirement:

Employees are assumed to retire in accordance with the rates shown below. The rates apply to employees who have fulfilled the service requirement necessary for retirement at any given age.

Sample	Sample Normal Retirement Rates					
% Separating Within Next Year (Age-Based)						
Age	Rate					
55	25.00%					
56	15.00%					
57	15.00%					
58	15.00%					
59	15.00%					
60	12.00%					
61	15.00%					
62	25.00%					
63	18.00%					
64	18.00%					
65	22.00%					
66	20.00%					
67	20.00%					
68	20.00%					
69	20.00%					
70+	100.00%					

Spouse Age Assumptions:

The female spouse is assumed to be three years younger than the male spouse, if no data is available.

Accrual of Future Service:

All active members will accrue 1.00 year of service for each future year of employment.



Summary of Actuarial Assumptions and Methods Troopers Pension Related Assumptions

TROOPERS PLAN A AND PLAN B

Post-Retirement Healthy Mortality:

RP-2000 Healthy Annuitant Mortality Table projected to 2025 using Scale BB.

Post-Retirement Disabled Mortality:

RP-2000 Healthy Annuitant Mortality Table projected to 2025 using Scale BB, set forward one year.

Pre-Retirement Mortality

RP-2000 Non-Annuitant Mortality Table projected to 2020 using Scale BB. 70% of deaths of members in service are assumed to be duty-related.

Termination:

Illustrative rates of withdrawal from the plan are as follows:

Age Based Withdrawal		
	Troopers A	Troopers B
Age	Rate	Rate
20	2.670%	7.600%
30	1.900%	5.420%
40	1.140%	2.400%
50	0.380%	1.140%
60	0.080%	0.230%

It is assumed that terminated employees will not be rehired. The rates apply only to employees who have not fulfilled the service requirement necessary for retirement at any given age.



Summary of Actuarial Assumptions and Methods Troopers Pension Related Assumptions

Salary Increases:

Illustrative rates of increase per individual employee per annum, compounded annually for Troopers A and Troopers B:

Troopers A and B		
Service Based Salary		
Service (Beginning		
of Year)	Rate	
0	5.00%	
1	5.00%	
2	4.50%	
3	4.50%	
4	4.50%	
5	4.00%	
6	4.00%	
7	4.00%	
8	4.00%	
9	4.00%	
10+	3.25%	

Disability:

Troopers A and B Sample Disability Rates		
Age Rate		
20	0.050%	
30	0.200%	
40	0.600%	
50	0.400%	
60	0.400%	

25% of disabilities are assumed to be duty-related full, 60% duty-related partial and 15% non-duty-related.



Summary of Actuarial Assumptions and Methods Troopers Pension Related Assumptions

Retirement Troopers A:

70% of members are assumed to retire when first eligible for unreduced benefits at the earlier of age 50 and 20 years of service or any age and 25 years of service. An active member who has already attained eligibility for normal retirement has a 20% probability of retiring each year thereafter with 100% retiring on or after attainment of age 55.

Retirement Troopers B:

70% of members are assumed to retire when first eligible for unreduced benefits at the earlier of age 50 and 25 years of service or age 52 and 20 years of service. An active member who has already attained eligibility for normal retirement has a 20% probability of retiring each year thereafter with 100% retiring on or after attainment age of 55.

Spouse Age Assumptions:

The female spouse is assumed to be three years younger than the male spouse, if no data is available.

Accrual of Future Service:

All active members will accrue 1.00 year of service for each future year of employment.





SUMMARY OF PRINCIPAL PLAN PROVISIONS

PLAN MEMBERS

Members receiving retirement benefits from certain pension systems administered by CPRB are eligible to receive postretirement healthcare benefits. The retirement systems include: Public Employees' Retirement System (PERS), Teachers' Retirement System (TRS), Teachers' Defined Contribution Retirement System (TDCRS), Teachers' Insurance and Annuity Association and College Retirement System (TIAA-CREF), Great West (Plan G), West Virginia Death, Disability and Retirement Fund (Plan A) and West Virginia State Police Retirement System (Plan B).

Following are the retirement eligibility provisions for pension benefits for Tier 1 members (Hired prior to July 1, 2015). Members hired on or after July 1, 2010 (Including Tier 2 members), pay 100% of the costs of providing retiree healthcare benefits, resulting in no implicit or explicit subsidies from the plan sponsor, and have been excluded from the actuarial valuation. The following retirement eligibility requirements are based on information contained in the most recent pension actuarial valuation report.

PENSION ELIGIBILITY PROVISIONS

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Normal Retirement

Members who have reached attained age 60 and earned 5 or more years of contributing service are eligible for a normal retirement benefit.

Early Retirement

Members with at least 3 years of contributing service, attained age 55 and with the sum of age plus years of contributing service equal to or greater than 80 are able eligible for an unreduced early retirement benefit. Terminating members with at least 3 years of contributing service who either (i) have attained age 55 and completed 10 years of credited service, or (ii) have completed 20 years of credited service, are eligible for a reduced early retirement benefit beginning at age 55. Terminating members with 30 years of credited service, which includes at least 3 years of contributing service, may also retire at any age for a reduced early retirement benefit.



Disability Retirement

Members who have completed 10 years of credited service, including 3 years of contributing service, who are found to be totally and permanently disabled are eligible for a disability benefit. Members with less than 10 years of credited service, or less than 3 years of contributing service, who incur service-connected total and permanent disability and are receiving worker's compensation for this disability are eligible for a disability benefit.

TEACHERS' RETIREMENT SYSTEM

Normal Retirement

Members with 35 years credited service or age 60 and 5 years credited service may retire with an unreduced pension.

Early Retirement

Members with 30 years of credited service may retire at any age, with the pension reduced for members retiring before age 55.

Disability Retirement

Members with 10 years of credited service may be eligible to receive a disability retirement benefit if disabled for 6 months, unable to perform his or her regular occupation and the Retirement Board expects the disability to be permanent.

DEPARTMENT OF PUBLIC SAFETY DEATH, DISABILITY AND RETIREMENT FUND (PLAN A)

Normal Retirement

Members having attained age 50 and 20 or more years of contributory service, or are any age and have earned 25 or more years of contributory and military service, are eligible for a normal retirement benefit.

Duty-Related Disability Retirement

Members disabled in the line of duty and are rendered unable to perform their duties are eligible for a duty-related disability retirement. The member is partially disabled if he can hold other employment and totally disabled if he cannot.

Nonduty-Related Disability Retirement

Members disabled other than in the line of duty and rendered unable to perform their duties as a member of the Department are eligible for disability retirement.



STATE POLICE RETIREMENT SYSTEM (PLAN B)

Normal Retirement

Members who have attained age 50 and earned 25 or more years of contributory service, or have attained age 52 and earned 20 or more years of contributory service, are eligible for a normal retirement benefit.

Early Retirement

Members with 20 or more years of contributory service may retire early at any age.

Disability Retirement

Members disabled in the line of duty and are rendered unable to perform their duties are eligible for a duty-related disability retirement. The member is partially disabled if he can hold other employment and totally disabled if he cannot.

Non-Duty-Related Disability Retirement

Members disabled other than in the line of duty and rendered unable to perform their duties as a member of the Department are eligible for disability retirement.



DEPENDENTS ELIGIBLE FOR COVERAGE

If a plan member enrolls in PEIA, he or she may enroll the following dependents: legal spouse; biological children, adopted children or stepchildren under the age of 26, or other children for whom the member is the court-appointed guardian up to the age of 18.

ENROLLMENT TIMING

Members not previously enrolled in a PEIA Plan are eligible to enroll at the time of retirement provided the last employer immediately prior to retirement is a participating employer in the PEIA Plan and State retirement system or a PEIA approved retirement system.

SURVIVING SPOUSE COVERAGE

Spouses of employees/retirees who die and were insured as a spouse or dependent under the policyholder's coverage by PEIA at the time of death are eligible to continue health coverage as a policyholder in their own right under their health plan. Coverage is terminated if the surviving spouse remarries.

Dependents of employees/retirees who die and were insured as a dependent under the policyholder's coverage by PEIA at the time of death are eligible to continue health coverage as a policyholder in their own right under their health plan. Dependent children are subject to the same age restrictions as other dependent children in the PEIA plan. A married surviving dependent child may not enroll his or her spouse for PEIA coverage.

Beginning July 1, 2015, surviving spouses/dependents enrolling in the PEIA plan pay premiums based on the years of service earned by the deceased policyholder. Current surviving spouses/dependents, and those who were enrolled before July 1, 2015, were grandfathered under the previous benefit and continue to pay premiums based on 25 or more years of service.

MEDICARE

Coverage through PEIA becomes secondary to Medicare after Medicare eligibility has been reached. When eligible for Medicare, members must enroll in Medicare Parts A and B in order to be eligible for PEIA's Medicare Advantage Plan or the Special Medicare Plan.



OPEB PROGRAMS

Following are the premium rates assumed for future pre-Medicare and post-Medicare retirees. Premiums rates for current pre-Medicare and post-Medicare retirees were provided by WV-RHBT and are based on the plan elected by the member. Premiums are assumed to increase by the trend assumption.

	Pre-Medicare		Pre/Post Medicare
FY 2017 Monthly PPO PPB Plan A Premium	PPB Plan A ^{a, b}		PPB Plan A ^{a, b}
	Single	Family	Family
Hired on or after July 1, 2010	\$1,115	\$2,654	\$1,860
5 to 9 years service	893	2,124	1,489
10 to 14 years service	689	1,601	1,109
15 to 19 years service	482	1,081	731
20 to 24 years service	360	768	506
25 or more years service	280	559	353

FY 2017 Monthly MAPD Plan 1 Premium	Post-Medicare MAPD Plan 1 ^{a, b}		Pre/Post Medicare MAPD Plan 1 ^{a, b}
	Single	Family	Family
Hired on or after July 1, 2010	\$437	\$900	\$1,464
5 to 9 years service	398	819	1,331
10 to 14 years service	293	592	1,002
15 to 19 years service	188	365	672
20 to 24 years service	126	228	474
25 or more years service	84	139	342

^aPremium rates are standard rates. Retirees receive a monthly discount of \$25 per tobacco-free covered member. It is assumed that 50% of future retirees and dependents are eligible for the preferred rates. The living will discount of \$4 was discontinued effective July 1, 2016.



^bBeginning July 1, 2015, surviving dependents enrolling in the PEIA plan pay premiums based on the years of service earned by the deceased policyholder. Current surviving dependents, and those who enrolled prior to July 1, 2015, will be grandfathered under the previous benefit and continue to pay premiums based on 25 or more years of service.

PEIA PPB Plan A - Non-Medicare Retired Policyholder

Plan Feature	In Network	Out of Network ¹	
Annual Deductible	\$425	Twice the in network deductible	
Annual Out of Pocket Limit	\$1,500	Twice the in network out of pocket limit	
<u>Covered Services</u>	<u>Co-insurance</u>		
-Office Visits	\$20 co-pay per visit		
-Emergency Room Treatment (Emergency Services)	\$100 co-pay, then 20% after deductible	Not covered, unless approved	
-Inpatient Services			
-Outpatient Services -Preventive Services	\$10 co-pay, then 20% after deductible		
-Lab/X-ray	20% after deductible		
-Other	20% after deductible		
	Annual Deductible: \$75 individual/\$150 family Annual Out of Pocket Maximum: \$1,750 individual/\$3,500 family		
Baranialia Bara Caran	Generic	\$10	
Prescription Drug Co-pays	Formulary Brand	\$25	
	Non-Formulary Brand	75% co-insurance	
	Maintenance Network or Mail Order Pharmacy at 90-day supply for in network claims		
	Two months' co-pay for generic and formulary brand.		
Maximum Lifetime Benefit	Unlimited		

Out of network claims covered only up to amounts stated in the PEIA's fee schedule.



PEIA PPB Plan B - Non-Medicare Retired Policyholder

Plan Feature	In Network	Out of Network ¹	
Annual Deductible	\$825	Twice the in network deductible	
Annual Out of Pocket Limit	\$3,000	Twice the in network out of pocket limit	
Covered Services	<u>Co-insurance</u>		
-Office Visits	\$20 co-pay per visit		
-Emergency Room Treatment (Emergency Services)	\$100 co-pay, then 20% after deductible	Not covered, unless approved	
-Inpatient Services	\$100 co-pay, then 32% after deductible	in advance by HealthSmart	
-Outpatient Services -Preventive Services	\$10 co-pay, then 20% after deductible		
-Lab/X-ray	20% after deductible		
-Other	20% after deductible		
	Annual Deductible: \$150 individual/\$300 family Annual Out of Pocket Maximum: \$1,750 individual/\$3,500 family		
	Generic	\$10	
Prescription Drug Co-pays	Formulary Brand	\$30	
	Non-Formulary Brand	75% co-insurance	
	Maintenance Network or Mail Order Pharmacy at 90-day supply for in network claims		
	Two months' co-pay for generic and formulary brand.		
Maximum Lifetime Benefit	Unlimited		

Out of network claims covered only up to amounts stated in the PEIA's fee schedule.



MAPD - Plan 1 - Medicare Retired Policyholder

Plan Feature		
Annual Deductible	\$100 per enrollee	
Out of Pocket Maximum	\$750 per enrollee	
Covered Services	<u>Co-insurance</u>	
-Physicians Visits	\$20 Co-pay, then 100%	
-Emergency Care	\$50 Co-pay, then 100%	
-Inpatient Services	\$100 Co-pay, then 100%	
-Outpatient Services	\$100 Co-pay, then 100%	
	After annual prescription deductible of \$75	
	Retail at 30-day supply	
Prescription Drug Co-pays	Generic \$5	
	Formulary \$15 Brand	
	Non- Formulary \$50 Brand	
Maximum Lifetime Benefit	Unlimited	



MAPD - Plan 2 - Medicare Retired Policyholder

Plan Feature		
Annual Deductible	\$325 per enrollee	
Out of Pocket Maximum	\$1,500 per enrollee	
Covered Services	<u>Co-insurance</u>	
-Physicians Visits	\$20 Co-pay, then 100%	
-Emergency Care	\$65 Co-pay, then 100%	
-Inpatient Services	\$150 Co-pay, then 100%	
-Outpatient Services	\$115 Co-pay, then 100%	
	After annual prescription deductible of \$150	
	Retail at 30-day supply	
Prescription Drug Co-pays	Generic \$5	
	Formulary \$20 Brand	
	Non- Formulary \$85 Brand	
Maximum Lifetime Benefit	Unlimited	



SECTION G

GLOSSARY

Glossary

Accrued Service

Service credited under the system that was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability (AAL)

The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."

Actuarial Assumptions

These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.

Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the OPEB trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.

Actuarial Equivalent

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

Actuarial Gain (Loss)

The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.

Actuarial Present Value (APV)

The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.

Actuarial Valuation

The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total OPEB liability, and related actuarial present value of projected benefit payments for OPEB.

Actuarial Valuation Date

The date as of which an actuarial valuation is performed.

Actuarially Determined Contribution (ADC)

A calculated contribution into an OPEB plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Amortization Method

The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year).



Glossary

Amortization Payment

The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

Cost-of-Living Adjustments

Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan) A multiple-employer defined benefit OPEB plan in which the OPEB obligations to the employees of more than one employer are pooled and OPEB plan assets can be used to pay the benefits of the employees of any employer that provides benefits through the OPEB plan.

Covered-Employee Payroll

The payroll of employees that are provided with benefits through the OPEB plan.

Deferred Inflows and Outflows

The deferred inflows and outflows of OPEB resources are amounts used under GASB Statement No. 74 in developing the annual OPEB expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in the OPEB expense should be included in the deferred inflows or outflows of resources.

Discount Rate

For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:

- 1. The benefit payments to be made while the OPEB plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and
- 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Entry Age Actuarial Cost Method (EAN)

The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to an actuarial valuation year is the normal cost. The portion of this actuarial present value not provided for at an actuarial valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Fiduciary Net Position

The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.



Glossary

Money-Weighted Rate of Return

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 74, the money-weighted rate of return is calculated as the internal rate of return on OPEB plan investments, net of OPEB plan investment expense.

Multiple-Employer Defined Benefit OPEB Plan

A multiple-employer plan is a defined benefit OPEB plan that is used to provide OPEB payments to the employees of more than one employer.

Municipal Bond Rate

The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

Net OPEB Liability (NOL)

The NOL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan.

Non-Employer Contributing Entities

Non-employer contributing entities are entities that make contributions to an OPEB plan that is used to provide OPEB payments to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

Normal Cost

The portion of the actuarial present value allocated to an actuarial valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.

Other Postemployment Benefits (OPEB)

All postemployment benefits other than retirement income (such as death benefits, life insurance, disability and long-term care) that are provided separately from a pension plan, as well as post-employment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.

Real Rate of Return

The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.

Service Cost

The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to an actuarial valuation year.

Total OPEB Expense

The total OPEB expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

- 1. Service Cost
- 2. Interest on the Total OPEB Liability
- 3. Current-Period Benefit Changes
- 4. Employee Contributions (made negative for addition here)
- 5. Projected Earnings on Plan Investments (made negative for addition here)
- 6. OPEB Plan Administrative Expense
- 7. Other Changes in Plan Fiduciary Net Position
- 8. Recognition of Outflow (Inflow) of Resources due to Liabilities
- 9. Recognition of Outflow (Inflow) of Resources due to Assets



Glossary

Total OPEB Liability (TOL)The TOL is the portion of the actuarial present value of projected benefit

payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued

Liability (UAAL)

The UAAL is the difference between actuarial accrued liability and actuarial valuation assets.

Actuarial Valuation Assets The actuarial valuation assets are the assets used in determining the unfunded

liability of the plan. For purposes of GASB Statement Nos. 74 and 75, the

actuarial valuation assets are equal to the market value of assets.





Appendix A

WV-RHBT GASB Statement Nos. 74 and 75 OPEB Projection	ons										
Discount Rate	7.15%										
General Inflation	2.75%										
WVIMB Long-Term Investment Return Assumption	7.50%										
WVBTI Short-Term Investment Return Assumption	3.00%										
Percent of Annual Expenditures Invested in Short-Term											
Account	50.00%										
Fixed Excess Contribution	\$ 30,000,000										
Operating Expenses (% of Employer Benefits)	1.25%										
Fiscal Year Beginning (7/1)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Present Value of Benefits	\$ 3,613,185,808	\$ 3,690,463,796	\$ 3,760,175,083	\$ 3,823,236,107	\$ 3,880,247,608	\$ 3,932,099,425	\$ 3,979,902,490	\$ 4,024,307,088	\$ 4,063,014,543	\$ 4,095,417,808	\$ 4,121,685,354
Actuarial Accrued Liability	3,168,993,253	3,282,900,408	3,385,684,300	3,479,324,603	3,564,642,254	3,642,716,264	3,714,925,690	3,782,142,169	3,842,221,031	3,894,676,355	3,939,782,394
Normal Cost	66,067,781	60,108,139	55,408,688	51,100,495	47,132,065	43,566,606	40,340,414	37,373,136	34,622,372	32,064,933	29,713,087
Expected Employer Capped Subsidy Benefit Payments	\$ 156,193,153	\$ 169,195,729	\$ 180,195,824	\$ 190,321,083	\$ 199,254,505	\$ 207,071,146	\$ 214,213,719	\$ 223,357,182	\$ 232,783,023	\$ 241,705,152	\$ 250,291,619
Other Expected Employer Benefit Payments	18,726,225	18,371,369	18,611,004	18,685,770	18,674,876	18,351,140	17,793,600	17,221,083	16,559,113	15,802,652	15,155,561
Total Expected Employer Benefit Payments	174,919,378	187,567,098	198,806,828	209,006,853	217,929,381	225,422,286	232,007,319	240,578,265	249,342,136	257,507,804	265,447,180
Market Value of Asset	\$ 685,668,002	\$ 761,819,593	\$ 843,712,866	\$ 931,317,795	\$ 1,025,107,918	\$ 1,125,587,086	\$ 1,233,304,262	\$ 1,348,846,235	\$ 1,472,794,538	\$ 1,605,732,462	\$ 1,748,337,644
Unfunded Actuarial Accrued Liability	2,483,325,251	2,521,080,815	2,541,971,434	2,548,006,808	2,539,534,336	2,517,129,178	2,481,621,428	2,433,295,934	2,369,426,493	2,288,943,893	2,191,444,750
Funded Ratio	21.64%	23.21%	24.92%	26.77%	28.76%	30.90%	33.20%	35.66%	38.33%	41.23%	44.38%
Projected Assets											
Market Value of Assets BTI	\$ 87,470,002	\$ 87,459,689	\$ 93,783,549	\$ 99,403,414	\$ 104,503,427	\$ 108,964,691	\$ 112,711,143	\$ 116,003,660	\$ 120,289,133	\$ 124,671,068	\$ 128,753,902
Market Value of Assets WVIMB	598,198,000	674,359,904	749,929,317	831,914,381	920,604,492	1,016,622,396	1,120,593,119	1,232,842,575	1,352,505,406	1,481,061,394	1,619,583,742
Total Market Value of Assets	685,668,002	761,819,593	843,712,866	931,317,795	1,025,107,918	1,125,587,086	1,233,304,262	1,348,846,235	1,472,794,538	1,605,732,462	1,748,337,644
Operating Expenses	\$ (2,373,358)	\$ (2,344,589)	\$ (2,485,085)	\$ (2,612,586)	\$ (2,724,117)	\$ (2,817,779)	\$ (2,900,091)	\$ (3,007,228)	\$ (3,116,777)	\$ (3,218,848)	\$ (3,318,090)
Employer Benefit Payments	(174,919,378)		(198,806,828)	(209,006,853)	(217,929,381)	(225,422,286)	(232,007,319)	(240,578,265)	(249,342,136)	(257,507,804)	(265,447,180)
Employer Contributions	174,919,378	187,567,098	198,806,828	209,006,853	217,929,381	225,422,286	232,007,319	240,578,265	249,342,136	257,507,804	265,447,180
Employer Excess Contributions	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000
Investment Income	48,524,949	54,237,861	60,090,015	66,402,709	73,203,285	80,534,954	88,442,065	96,955,532	106,054,700	115,824,030	126,331,969
Market Value of Assets end of year	\$ 761,819,593	\$ 843,712,866	\$ 931,317,795	\$ 1,025,107,918	\$ 1,125,587,086	\$ 1,233,304,262	\$ 1,348,846,235	\$ 1,472,794,538	\$ 1,605,732,462	\$ 1,748,337,644	\$ 1,901,351,524
Average Return on Assets	6.94%	6.99%	7.01%	7.03%	7.05%	7.07%	7.09%	7.12%	7.14%	7.15%	7.17%
Annual Expenditure Sharing											
Employer Benefit Payments	\$ 174,919,378						\$ 232,007,319			\$ 257,507,804	
Retired Member Contributions	104,537,650	120,718,078	150,139,994	181,461,090	214,273,799	247,348,768	279,112,592	306,991,582	333,410,206	357,685,043	379,190,247
Total Annual Expenditures	\$ 279,457,028		\$ 348,946,822	\$ 390,467,943	\$ 432,203,180		\$ 511,119,911	\$ 547,569,847			\$ 644,637,427
Percent of Expenditures Paid by Retired Members	37.41%	39.16%	43.03%	46.47%	49.58%	52.32%	54.61%	56.06%	57.21%	58.14%	58.82%
Active Members	46,430	41,285	37,345	33,791	30,571	27,685	25,103	22,779	20,670	18,722	16,959
Pre-Medicare Retirees	7,757	10,623	11,987	12,805	13,255	13,180	12,822	12,291	11,665	11,062	10,456
Post-Medicare Retirees	34,081	34,803	35,829	37,051	38,335	39,822	41,295	42,686	43,956	45,040	45,932
Pre-Medicare Capped Rate Per Member Per Month	\$ 535.21									\$ 729.28	
Post-Medicare Capped Rate Per Member Per Month	\$ 240.05	\$ 247.25	\$ 254.67	\$ 262.31	\$ 270.18	\$ 278.28	\$ 286.63	\$ 299.53	\$ 313.01	\$ 327.10	\$ 341.81
Assumed Aggregate Fixed Subsidy Contribution Limit	\$ 150,000,000	\$ 160,000,000	\$ 170,000,000	\$ 180,000,000	\$ 190,000,000	\$ 200,000,000	\$ 210,000,000	\$ 220,000,000	\$ 230,000,000	\$ 240,000,000	\$ 250,000,000



Appendix A

WV-RHBT GASB Statement Nos. 74 and 75 OPEB Projection	ins											
Discount Rate	7.15%											
General Inflation	2.75%											
WVIMB Long-Term Investment Return Assumption	7.50%											
WVBTI Short-Term Investment Return Assumption	3.00%											
Percent of Annual Expenditures Invested in Short-Term												
Account	50.00%											
Fixed Excess Contribution	\$ 30,000,000											
Operating Expenses (% of Employer Benefits)	1.25%											
Fiscal Year Beginning (7/1)	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Present Value of Benefits	\$ 4,141,612,719	\$ 4,155,072,232	\$ 4,161,650,089	\$ 4,160,942,773	\$ 4,152,401,138	\$ 4,135,546,444	\$ 4,110,549,577	\$ 4,077,664,444	\$ 4,036,745,897	\$ 3,987,856,900	\$ 3,930,823,621	\$ 3,864,869,946
Actuarial Accrued Liability	3,977,460,734	4,007,645,752	4,029,960,791	4,044,029,878	4,049,336,763	4,045,423,382	4,032,518,918	4,010,909,716	3,980,443,230	3,941,143,066	3,892,761,996	3,834,422,050
Normal Cost	27,496,305	25,386,239	23,371,051	21,454,005	19,621,027	17,907,031	16,283,008	14,708,235	13,152,347	11,585,183	9,984,314	8,395,080
Expected Employer Capped Subsidy Benefit Payments	\$ 258,641,249	\$ 266,890,938	\$ 274,933,653	\$ 282,974,872	\$ 290,928,052	\$ 298,136,409	\$ 304,559,755	\$ 310,568,107	\$ 315,961,023	\$ 320,964,259	\$ 326,096,284	\$ 331,079,513
Other Expected Employer Benefit Payments	14,430,710	13,758,801	13,208,352	12,686,694	12,174,425	11,667,685	11,138,257	10,619,179	10,099,815	9,587,519	9,133,656	8,719,797
Total Expected Employer Benefit Payments	273,071,959	280,649,739	288,142,005	295,661,566	303,102,477	309,804,094	315,698,012	321,187,286	326,060,838	330,551,778	335,229,940	339,799,310
Market Value of Asset	\$ 1,901,351,524	\$ 2,065,563,925	\$ 2,241,822,424	\$ 2.431.032.645	\$ 2.634.167.537	\$ 2.852.271.857	\$ 3,086,479,668	\$ 3.338.025.843	\$ 3.608.234.178	\$ 3,898,521,426	\$ 3.892.761.996	\$ 3.834.422.050
Unfunded Actuarial Accrued Liability	2,076,109,210	1,942,081,827	1,788,138,367	1,612,997,233	1,415,169,226	1,193,151,525	946,039,250	672,883,873	372,209,052	42,621,640	-	
Funded Ratio	47.80%	51.54%	55.63%	60.11%	65.05%	70.51%	76.54%	83.22%	90.65%	98.92%	100.00%	100.00%
Projected Assets												
Market Value of Assets BTI	\$ 132,723,590	\$ 136,535,980	\$ 140.324.870	\$ 144,071,003	\$ 147,830,783	\$ 151,551,239	\$ 154,902,047	\$ 157,849,006	\$ 160,593,643	\$ 163,030,419	\$ 165,275,889	\$ 167,614,970
Market Value of Assets WVIMB	1,768,627,934	1,929,027,945	2,101,497,554	2,286,961,642	2,486,336,754	2,700,720,618	2,931,577,621	3,180,176,837	3,447,640,535	3,735,491,007	3,727,486,107	3,666,807,080
Total Market Value of Assets	1,901,351,524	2,065,563,925	2,241,822,424	2,431,032,645	2,634,167,537	2,852,271,857	3,086,479,668	3,338,025,843	3,608,234,178	3,898,521,426	3,892,761,996	3,834,422,050
Operating Expenses	\$ (3,413,399)	\$ (3,508,122)	\$ (3,601,775)	\$ (3,695,770)	\$ (3,788,781)	\$ (3,872,551)	\$ (3,946,225)	\$ (4,014,841)	\$ (4,075,760)	\$ (4,131,897)	\$ (4,190,374)	\$ (4,247,491)
Employer Benefit Payments	(273,071,959)	(280,649,739)	(288,142,005)	(295,661,566)	(303,102,477)	(309,804,094)	(315,698,012)	(321,187,286)	(326,060,838)	(330,551,778)	(335,229,940)	(339,799,310)
Employer Contributions	273,071,959	280,649,739	288,142,005	295,661,566	303,102,477	309,804,094	315,698,012	321,187,286	326,060,838	24,382,790	8,953,152	7,733,349
Employer Excess Contributions	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	0,555,152	1,733,343
Investment Income	137,625,800	149,766,621	162,811,996	176,830,662	191,893,101	208,080,363	225,492,400	244,223,176	264,363,008	274,541,455	272,127,216	267,427,226
Market Value of Assets end of year	\$ 2,065,563,925	\$ 2,241,822,424	\$ 2,431,032,645	\$ 2,634,167,537	\$ 2,852,271,857	\$ 3,086,479,668	, ,	\$ 3,608,234,178		\$ 3,892,761,996	\$ 3,834,422,050	\$ 3,765,535,823
Average Return on Assets	7.19%	7.20%	7.22%	7.23%	7.25%	7.26%	7.28%	7.29%	7.30%	7.30%	7.30%	7.29%
Annual Expenditure Sharing												
Employer Benefit Payments	\$ 273,071,959	\$ 280,649,739	\$ 288,142,005	\$ 295,661,566	\$ 303,102,477	\$ 309,804,094	\$ 315,698,012	\$ 321,187,286	\$ 326,060,838	\$ 330,551,778	\$ 335,229,940	\$ 339,799,310
Retired Member Contributions	395,843,900	411,904,150	427,444,918	442,355,496	456,922,185	470,450,187	482,861,133	494,873,636	505,943,758	516,215,231	526,397,001	535,794,868
Total Annual Expenditures	\$ 668,915,859	\$ 692,553,889	\$ 715,586,923	\$ 738,017,062		\$ 780,254,281	\$ 798,559,145	- ,,	,,	\$ 846,767,009	\$ 861,626,941	, . ,
Percent of Expenditures Paid by Retired Members	59.18%	59.48%	59.73%	59.94%	60.12%	60.29%	60.47%	60.64%	60.81%	60.96%	61.09%	61.19%
Active Members	15,346	13,848	12,462	11,179	9,980	8,877	7,867	6,934	6,049	5,217	4,409	3,646
Pre-Medicare Retirees	9,713	9,061	8,419	7,895	7,357	6,996	6,600	6,179	5,778	5,410	5,003	4,695
Post-Medicare Retirees	46,795	47,435	47,929	48,176	48,321	48,158	47,897	47,543	47,081	46,492	45,878	45,083
Pre-Medicare Capped Rate Per Member Per Month	\$ 796.40	\$ 832.23	\$ 869.68	\$ 908.82	\$ 949.72	\$ 992.45	\$ 1,037.11	\$ 1,083.78	\$ 1,132.56	\$ 1,183.52	\$ 1,236.78	\$ 1,292.43
Post-Medicare Capped Rate Per Member Per Month	\$ 357.20	-							. ,			. ,
Assumed Aggregate Fixed Subsidy Contribution Limit	\$ 259,000,000	\$ 267,000,000	\$ 275,000,000	\$ 283,000,000	\$ 291,000,000	\$ 298,000,000	\$ 305,000,000	\$ 311,000,000	\$ 316,000,000	\$ 25,000,000	\$ 9,000,000	\$ 8,000,000



APPENDIX B

Total Lives and Average Sick/Leave Days by Age and Years of Service as of June 30, 2016 for Active Members Hired Before July 1, 1988, with Sick and Annual Leave Balances as of June 30, 2016

		Completed Years of Service										
Attained									35 & -	_		
Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	Over	Tot		
Under 20	-	-	-	-	-	-	-	-	-			
	-	-	-	-	-	-	-	-	-			
20-24	-	-	-	-	-	-	-	-	-			
	-	-	-	-	-	-	-	-	-			
25-29	-	-	-	-	-	-	-	-	-			
	-	-	-	-	-	-	-	-	-			
30-34	-	-	-	-	-	-	-	-	-			
	-	-	-	-	-	-	-	-	-			
35-39	-	-	-	-	-	-	-	-	-			
	-	-	-	-	-	-	-	-	-			
40-44	-	-	-	-	-	-	-	-	-			
	-	-	-	-	-	-	-	-	-			
45-49	-	-	-	-	-	-	35	6	-			
	-	-	-	-	-	-	220	202	-			
50-54	-	-	-	-	-	-	440	502	30			
	-	-	-	-	-	-	190	226	334			
55-59	-	-	-	-	-	-	389	940	563	1		
	-	-	-	-	-	-	200	226	274			
60-64	-	-	-	-	-	-	219	478	872	1		
	-	-	-	-	-	-	227	236	309			
65-69	-	-	-	-	-	-	84	144	296			
	-	-	-	-	-	-	261	262	371			
70-74	-	-	-	-	-	-	23	32	85			
	-	-	-	-	-	-	251	291	403			
75 & Over	-	-	-	-	-	-	6	7	32			
	-	-	-	-	-	-	319	364	463			
I Members	-	-	-	-	-	-	1,196	2,109	1,878	5,		
age Sick/Leave Days	-	-	-	-	-	-	208	232	315	ŕ		

Italics represents total members and bold represents average sick/leave days.



Total Lives and Average Sick/Leave Days by Age and Years of Service as of June 30, 2016 for Active Members Hired Between July 1, 1988, and June 30, 2001, with Sick and Annual Leave Balances as of June 30, 2016

				Complet	ed Years of Servi	ce				
Attained	Under 1	1.4	5-9	10-14	15 10	20-24	25-29	30-34	35 & Over	Tot
Age		1-4			15-19					
Under 20	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-	
20-24	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	<u>-</u>	<u>-</u>	-	
25-29	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-	
30-34	-	-	-	-	4	-	-	-	-	
	-	-	-	-	69	-	-	-	-	
35-39	-	-	-	-	214	5	-	-	-	
	-	-	-	-	121	91	-	-	-	
40-44	-	-	-	-	1,118	204	4	-	-	1
	-	-	-	_	128	176	115	-	-	
45-49	-	-	-	-	1,190	970	230	-	-	2
	-	-	-	_	123	176	178	-	-	
50-54	-	-	-	-	1,055	854	724	-	-	2
	_	_	_	_	121	160	184	_	_	
 55-59	_	_	_	-	1,139	874	528	_	-	2
33 33	_	_	_	_	122	165	197	_	_	_
60-64					922	718	405			
00 04		_			132	175	1 97	_		
	<u>-</u>	<u> </u>	<u>-</u>	<u>-</u>	267	222	128	<u> </u>	<u>-</u>	
65-69			-	-				-	-	
	-	-	-	-	142	190	239	-	-	
70-74	-	-	-	-	68	47	30	-	-	
	-	-	-	-	152	208	209	-	-	
75 & Over	-	-	-	-	19	12	13	-	-	
	-	-	-	-	171	99	284	-	-	
l Members	-	-	-	-	5,996	3,906	2,062	-	-	11,
rage Sick/Leave Days	-	-	-	-	126	171	194	-	-	

Italics represents total members and bold represents average sick/leave days.



Age and Years of Service as of June 30, 2016 for Active Members Hired Before July 1, 2010

Attained	Years of Service									
Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
Under 20	_	_	_	-	_	_	_	_	_	_
20-24	_	_	1	-	_	_	_	-	_	1
25-29	-	-	239	5	_	_	_	-	_	244
30-34	-	-	1,944	443	4	-	-	-	-	2,391
35-39	-	-	2,003	1,784	287	5	-	-	-	4,079
40-44	-	-	1,723	1,643	1,308	271	5	-	-	4,950
45-49	-	-	1,928	1,801	1,389	1,119	330	8	1	6,576
50-54	-	-	1,690	1,665	1,289	1,022	1,350	600	38	7,654
55-59	-	-	1,477	1,546	1,355	1,098	1,141	1,162	697	8,476
60-64	-	-	1,002	1,121	1,127	889	841	635	1,076	6,691
65-69	-	-	330	453	376	296	310	209	409	2,383
70-74	-	-	59	96	103	72	71	50	131	582
75 & Over		-	12	27	29	22	27	15	60	192
Total	-	-	12,408	10,584	7,267	4,794	4,075	2,679	2,412	44,219



Age and Years of Service as of June 30, 2016 for Active Members Hired After July 1, 2010

Attained	Years of Service									_
Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
Under 20	-	23	_	_	_	_	_	_	_	23
20-24	-	1,084	13	-	-	-	-	_	_	1,097
25-29	-	4,525	465	-	-	-	-	-	-	4,990
30-34	-	3,632	920	-	-	-	-	-	-	4,552
35-39	-	3,191	622	-	-	-	-	-	-	3,813
40-44	-	2,868	606	-	-	-	-	-	-	3,474
45-49	-	2,876	536	-	-	-	-	-	-	3,412
50-54	-	2,315	452	-	-	-	-	-	-	2,767
55-59	-	1,963	386	-	-	-	-	-	-	2,349
60-64	-	1,305	269	-	-	-	-	-	-	1,574
65-69	-	470	92	-	-	-	-	-	-	562
70-74	-	112	23	-	-	-	-	-	-	135
75 & Over		40	4	-	-	-	-	-	-	44
Гotal	0	24,404	4,388	0	0	0	0	0	0	28,792



Retirees and Surviving Spouses Age and Gender Distribution as of June 30, 2016

Age	Female	Male	Total
Under 20	-	1	1
20-24	4	1	5
25-29	-	1	1
30-34	-	-	-
35-39	1	2	3
40-44	15	11	26
45-49	57	44	101
50-54	137	119	256
55-59	816	1,086	1,902
60-64	2,268	3,954	6,222
65-69	3,780	6,523	10,303
70-74	3,196	4,688	7,884
75-79	2,287	3,675	5,962
80-84	1,513	2,767	4,280
85-89	909	2,167	3,076
90-94	351	1,040	1,391
95-99	96	285	381
100 & Over	8	36	44
Total	15,438	26,400	41,838

