

# West Virginia Retiree Health Benefit Trust Fund

GASB Statement No. 74, Accounting and Financial  
Reporting for Postemployment Benefits Other Than  
Pensions

Actuarial Valuation as of June 30, 2017  
Measured as of June 30, 2019, and Applicable to  
Plan's Fiscal Year End June 30, 2019



October 7, 2019

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**Subject: GASB Statement No. 74 Actuarial Valuation as of June 30, 2017, 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);
- West Virginia State Police Retirement System (Troopers Plan B);
- Deputy Sheriffs’ Retirement System (DSRS);
- Emergency Medical Services Retirement System (EMSRS); and
- Judges’ Retirement System (JRS).

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, 2017, and measured as of June 30, 2019, was prepared for purposes of complying with the requirements of Governmental Accounting Standards Board (GASB) Statement No. 74 for the plan’s fiscal year end June 30, 2019. 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 sponsor may produce significantly different results. The actuarial valuation was based upon:

- Census information as of June 30, 2017, 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 actuarial valuation as of July 1, 2017, 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%;
- Updates to trend rates for plan years 2019 and 2020 to reflect emerging experience as of and through the issuance of the fiscal year 2019 WV-RHBT audited financial statements; and
- Entry age normal cost method and a 20-year closed level percent of pay amortization period as of June 30, 2017.

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 actuarially determined contributions were developed in accordance with the requirements of GASB Statements No. 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.

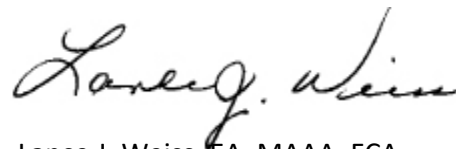
The signing actuaries are independent of the plan sponsor.

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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# SECTION A

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## EXECUTIVE SUMMARY

## Executive Summary

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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, Troopers Plan B, DSRS, EMSRS, or JRS 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 on behalf of eligible retired members. Based on the report, *WV-RHBT 2018 Financial Report for Fiscal Years 2018 to 2023*, dated October 2018, produced by Continuing Care Actuaries (CCA), the per member per month capped subsidy for plan year end June 30, 2018, is \$612.39 for non-Medicare coverage, and \$223.21 for Medicare coverage. The non-Medicare and Medicare composite capped subsidy rate is \$287.38 per member per month for plan year end June 30, 2018. The aggregate capped costs are projected to be: \$154 million for fiscal year 2019, \$160 million for fiscal year 2020, \$170 million for fiscal year 2021, \$180 million for fiscal year 2022, and \$190 million for fiscal year 2023.
- The plan sponsor has decreased the projected aggregate capped cost as of December 2018. Based on the report, *WV-RHBT 2019 Financial Report for Fiscal Years 2019 to 2023*, dated January 2019, produced by Continuing Care Actuaries (CCA), aggregate capped costs are projected to be: \$152 million for fiscal year 2019, \$140 million for fiscal year 2020, \$150 million for fiscal year 2021, \$160 million for fiscal year 2022, and \$170 million for fiscal year 2023.
- Based on CCA's RHBT Quarterly Report as of March 31, 2019, the composite capped subsidy per member per month is projected to increase from \$287.38 for plan year 2018, to \$292.64 for plan year 2019, and decrease to \$266.57 for plan year 2020. The decrease in the composite capped subsidy rate is primarily due to the favorable MAPD rate renewal. The MAPD average monthly premium rate decreased from \$230.46 for plan year 2018, to \$199.24 for plan year 2019, and \$189.93 for plan year 2020.
- Based on CCA's 2019 Financial Report, dated January 2019, the RHBT is projected to receive additional revenue from the General Revenue Transfer premium offset program of \$5 million each year for fiscal years 2019 and 2020.
- 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 claims, premiums 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

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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 benefits and invests contributions made in excess of annual expenditures. The market value of assets increased from approximately \$824.0 million at June 30, 2017, to approximately \$963.1 million at June 30, 2018, and \$1,091.7 million at June 30, 2019.
- Long-term pre-funding assets are invested with the West Virginia Investment Management Board (WVIMB). Based on the WVIMB 2019 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 No. 74. 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, 2017, as provided by WV-RHBT and reported by CCA.
- The census as of June 30, 2017, includes data for 12,766 waived annuitants who are receiving an annuity and are eligible to receive healthcare benefits but have waived healthcare coverage.
- For purposes of the actuarial valuation as of June 30, 2017, we have assumed five percent of all waived annuitants under the age of 75 will elect to participate in the retiree healthcare program in the future. As of June 30, 2017, there were 8,906 waived annuitants under age 75 who were included in the actuarial valuation.
- Based on a limited review of experience for the period from June 30, 2012, through June 30, 2016, in each year over the four-year period, approximately 70 out of approximately 12,000 waived annuitants at the beginning of the plan year have elected to participate in the retiree healthcare program by the end of the plan year.
- 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 consequently they are required to pay a greater portion of the premium. The actuarial valuation, through the participation assumption, recognizes that a portion of retirees who have used up the SAL balance may waive healthcare coverage. The actuarial valuation does not include

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an explicit lapse assumption for other retirees with healthcare coverage who may waive coverage in the future.

- For future actuarial valuations, we recommend updating assumptions by reviewing the:
  - Participation experience of waived annuitants, and
  - Lapse experience of current retired members.
- In prior actuarial valuations, we assumed PERS mortality for all WV-RHBT retired members who were receiving healthcare benefits but were not assigned a specific CPRB pension plan code. The data as of June 30, 2017, included more information which allowed a better assignment of the RHBT retired member's pension plan code. Consequently, the actuarial liability as of June 30, 2017, reflects the TRS mortality table for a greater proportion of retired members.
- 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 as of July 1, 2017, provided by CPRB. The following pension-related assumptions were updated since the last actuarial valuation:
  - Post-retirement healthy mortality, post-retirement disabled mortality, and pre-retirement mortality tables for Troopers Plan A and Troopers Plan B,
  - Service-based salary increases for Troopers Plan A and Troopers Plan B,
  - Disability rates for Troopers Plan A and Troopers Plan B, and
  - Retirement rates for Troopers Plan A.
- The retirement assumption used for the OPEB actuarial valuation is based on experience from the CPRB pension plans. However, using retirement rates derived from pension plan experience for the OPEB actuarial valuation has produced more expected retirement than actual retirements. Consequently, we reduced the retirement rates by 15% to be more consistent with observed OPEB retirement experience.
- For future actuarial valuations, we recommend that a retirement and participation study be performed, based on experience from the OPEB program, in order to improve the measurement of actuarial liabilities of OPEB program.
- 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 select and ultimate trend rates which grade:
  - From 8.00% in 2019 to an ultimate rate of 4.50% in 2026 for non-Medicare coverage, and
  - From 10.00% in 2019 to an ultimate rate of 4.50% in 2030 for Medicare coverage.
- GRS performed a limited review of available healthcare related experience including adjustments to the capped subsidy and MAPD premium rates. Based on this review, trend rates applicable to plan years 2019 and 2020 were adjusted to reflect available emerging experience as of and through the issuance of the fiscal year 2019 WV-RHBT audited financial statements. The trend rate adjustments include:
  - Decreasing trend rates for blended capped subsidies to 1.8% for plan year 2019 and -1.0% for plan year 2020.
  - Increasing trend rates for non-Medicare per capita costs to 3.1% for plan year 2019.
  - Decreasing trend rates for Medicare per capita costs to -13.5% for plan year 2019 and -4.7% for plan year 2020.



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- Decreasing trend rates for the member's share of non-Medicare premiums to 0% for plan years 2019 and 2020.
  - Decreasing trend rates for the member's share of Medicare premiums to 3.4% for plan year 2019 and 0% for plan year 2020.
- Certain healthcare-related assumptions such as the participation rate, percentage of single and family contracts, and 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, was based on the general inflation assumption of 2.75% plus 25 basis points.
- 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., 2036.
- The employer aggregate subsidy cap of \$170 million for fiscal year 2023 was assumed to increase by approximately \$10 million per year after 2023 until the plan year that the program reaches 100% funding. Projected employer contributions were assumed to equal the sum of State appropriations, the fixed annual capped paygo employer contribution, expected SAL employer contributions and expected Retiree Assistance Program contributions. 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 2036.
- The percentage of program costs paid by the retired member was assumed to increase from approximately 24% for plan year end 2018 to approximately 50% for plan year end 2029, and remain stable thereafter.

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The key actuarial valuation results as of June 30, 2016, and June 30, 2017, are summarized in the following table (\$ in thousands).

WV-RHBT Actuarial Valuation (\$ in thousands)	June 30, 2017	June 30, 2016
Actuarial Accrued Liability	\$ 3,282,900	\$ 3,168,993
Market Value of Assets	\$ 824,016	\$ 685,668
Unfunded Actuarial Accrued Liability (UAAL)	\$ 2,458,884	\$ 2,483,325
Funded Ratio	25.10%	21.64%
Employer Normal Cost	\$ 60,108	\$ 66,068
Operating Expenses <sup>a</sup>	\$ 3,056	\$ 1,846
Amortization of UAL	\$ 160,845	\$ 156,797
Actuarially Determined Contribution	\$ 224,009	\$ 224,711
Employer Contributions	\$ 205,315	\$ 204,919
Total Expected Claims and Expenses	\$ 234,457	\$ 279,457
Retiree Contributions	\$ 57,357	\$ 104,538
Percent of Claims and Expenses paid by Retired Members	24.46%	37.41%
Year Program is Projected to be 100% Funded	2036	2037
Discount Rate	7.15%	7.15%

<sup>a</sup> Beginning with the June 30, 2016, actuarial valuation, operating expenses are included in the actuarially determined contribution.

## Executive Summary

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Key observations and conclusions include:

- During the plan year end June 30, 2017, the actuarial accrued liability decreased from \$3.169 billion as of June 30, 2016, to \$3.018 billion as of June 30, 2017.
- The key reasons for the decrease in the actuarial accrued liability include: favorable healthcare claims and demographic experience, changes in healthcare-related assumptions, and a reduction to the rates of retirement. The decrease in actuarial liabilities was partially offset by: the inclusion of waived annuitants, changes in pension-related assumptions and the assignment of TRS pension codes to certain retired members.
- The MAPD premium rates decreased significantly since the last actuarial valuation which was one of the primary reasons for the decrease in actuarial liabilities due to favorable healthcare claims experience.
- Based on limited review of healthcare experience from the actuarial valuation date to the measurement date, trend rates applicable to plan years 2019 and 2020 were adjusted to reflect emerging experience. These adjustments decreased actuarial liabilities by approximately 5%.
- 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 2019 through FY 2036. 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.
- During December of 2018, the plan sponsor decreased the employer's projected capped paygo premium contributions for fiscal years 2020 through 2023 by approximately \$20 million per year. A decrease in capped paygo contributions could impact the actuarial projections including the year that the program becomes fully funded. The decreases in projected capped paygo contributions caused the full funding year to increase from 2035 to 2036.
- Appendix A shows the details of the projections. For purposes of the projections 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 FY 2036.
- 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 2036 and remain stable at about 50% of total plan costs. After the program is fully funded in 2036, 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 the retired member's share of the 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. We recommend performing a full experience study after completing the June 30, 2019, actuarial valuation.

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- 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

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## OVERVIEW

# Overview

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## Overview

The following section presents the results of the actuarial valuation as of June 30, 2017, 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 on behalf of eligible retired members. Based on the report, *WV-RHBT 2018 Financial Report for Fiscal Years 2018 to 2023*, dated October 2018, produced by Continuing Care Actuaries (CCA), the per member per month capped subsidy for plan year end June 30, 2018, is \$612.39 for non-Medicare coverage and \$223.21 for Medicare coverage. The non-Medicare and Medicare composite capped subsidy rate is \$287.38 per member per month for plan year end June 30, 2018. The aggregate capped costs are projected to be: \$154 million for fiscal year 2019, \$160 million for fiscal year 2020, \$170 million for fiscal year 2021, \$180 million for fiscal year 2022, and \$190 million for fiscal year 2023.

Based on CCA's RHBT Quarterly Report as of March 31, 2019, the composite capped subsidy per member per month is projected to increase from \$287.38 for plan year 2018, to \$292.64 for plan year 2019, and decrease to \$266.57 for plan year 2020. The decrease in the composite capped subsidy rate is primarily due to the favorable MAPD rate renewal. The MAPD average monthly premium rates decreased from \$230.46 for plan year 2018, to \$199.24 for plan year 2019 and \$189.93 for plan year 2020.

The plan sponsor has decreased the projected aggregate capped cost as of December 2018. Based on the report, *WV-RHBT 2019 Financial Report for Fiscal Years 2019 to 2023*, dated January 2019, produced by Continuing Care Actuaries (CCA), aggregate capped costs are projected to be: \$152 million for fiscal year 2019, \$140 million for fiscal year 2020, \$150 million for fiscal year 2021, \$160 million for fiscal year 2022, and \$170 million for fiscal year 2023. Based on CCA's 2019 Financial Report, dated January of 2019, the RHBT is projected to receive additional revenue from the General Revenue Transfer premium offset program of \$5 million each year for fiscal years 2019 and 2020.

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

## Overview

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 2019 premium rates for single coverage under PPB Plan A and MAPD Plan 1:

FY 2020 Monthly Premium	PPB Plan A <sup>a</sup>	MAPD Plan 1 <sup>a</sup>
Hired on or after July 1, 2010	\$1,160	\$473
5 to 9 years service	929	431
10 to 14 years service	716	317
15 to 19 years service	501	204
20 to 24 years service	375	136
25 or more years service	291	91

<sup>a</sup> 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 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 WVBTL.

The Unfunded Actuarial Accrued Liabilities (UAAL) were amortized as a level percent of active member payroll over a 20-year closed period as of June 30, 2017. 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,

## Overview

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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:

- The employer's aggregate capped subsidy of \$152 million for fiscal year 2019 and \$140 million for fiscal year 2020 will increase by approximately \$10 million per year until the program is fully funded.
- The employer's total contribution equals the sum of State appropriations, aggregate capped contributions, SAL program contributions, and Retired Employee Assistance Program contributions.
- 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 becomes fully funded, the sponsor contributes the normal cost and operating expenses up to amount needed to remain fully funded.
- Annual increases for the member's share of the plan cost increases at a higher rate when compared to annual increases of capped costs. When the program becomes fully funded, the percentage of plan cost paid by the member is assumed to remain stable resulting in stable annual increases for the member's share of plan cost.

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 2036 and the average return on invested plan assets from 2018 to 2036 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 and the required cost method for GASB Statements No. 74 and 75 financial reporting. 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 20-year closed period, as of June 30, 2017.



## Overview

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

- Reconciliation Total OPEB Liability from June 30, 2017, to June 30, 2019;
- Statements of Fiduciary Net Position as of June 30, 2019, and Statements of Changes in Fiduciary Net Position as of June 30, 2019;
- GASB Statement No. 74 financial reporting information measured as of June 30, 2019 and applicable to the plan's fiscal year end June 30, 2019;
- Summary of actuarial assumptions and methods and plan provisions; and
- Projection of program cost.

## SECTION C

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### ACTUARIAL VALUATION RESULTS

# Actuarial Valuation Results

## Actuarial Valuation Results

The following section contains:

- A reconciliation of the Total OPEB Liability from June 30, 2017, to June 30, 2019;
- Summary of actuarial valuation results as of June 30, 2017, by pension plan group;
- Summary of actuarial valuation results as of June 30, 2017, by pension plan group, with healthcare trend adjustments for plan years 2019 and 2020; and
- Comparison of actuarially determined contributions for the plan year end June 30, 2019, June 30, 2018, and June 30, 2017.

## Projection of Total OPEB Liability from June 30, 2017 to June 30, 2019

West Virginia Retiree Health Benefit Trust Fund	
GASB 74 Total OPEB Liability as of June 30, 2017, Projected to June 30, 2019	
<b>Total OPEB Liability as of June 30, 2017 <sup>a</sup></b>	<b>\$ 3,282,900,408</b>
Service Cost for Fiscal Year 2018	\$ 60,108,139
Employer Benefits and Expenses for Fiscal Year 2018	(137,700,187)
(Gain)/Loss due to Expected versus Actual Benefit Payments	(51,625,410)
Interest	232,001,350
<b>Total</b>	<b>\$ 102,783,892</b>
<b>Expected Total OPEB Liability as of June 30, 2018 <sup>a</sup></b>	<b>\$ 3,385,684,300</b>
<b>Experience (Gain)/Loss at June 30, 2017, Projected to June 30, 2018 <sup>b</sup></b>	
Demographic Experience	\$ (9,405,710)
Inclusion of Waived Retirees	\$ 17,399,713
Interest, Change in Service Cost and Other Adjustments for Plan Year End June 30, 2018	\$ 708,596
(Gain)/Loss due to Change in Expected versus Actual Benefit Payments at June 30, 2018	\$ 10,841,841
<b>Total Experience (Gain)/Loss for Plan Year End June 30, 2018</b>	<b>\$ 19,544,440</b>
<b>Change in Assumptions and Methods at June 30, 2017, Projected to June 30, 2018 <sup>b</sup></b>	
Retirement Rate Reduction of 15%	\$ (67,648,859)
Change in Pension-related Assumptions	1,581,444
Change in Healthcare-related Assumptions	(232,401,797)
Change in Methodology	25,350,883
Change in Service Cost	(3,762,534)
Interest and Other Adjustments for Plan Year End June 30, 2018	(19,796,981)
<b>Total Changes in Assumptions and Methods for Plan Year End June 30, 2018</b>	<b>\$ (296,677,844)</b>
<b>Total OPEB Liability as of June 30, 2018 <sup>b</sup></b>	<b>\$ 3,108,550,896</b>
Service Cost for Fiscal Year 2019	\$ 51,870,039
Employer Benefits and Expenses for Fiscal Year 2019	(135,061,413)
(Gain)/Loss due to Expected versus Actual Benefit Payments	(52,832,517)
Interest	219,338,640
Trend Adjustments due to Emerging Experience	(161,103,391)
<b>Total</b>	<b>\$ (77,788,642)</b>
<b>Total OPEB Liability as of June 30, 2019 <sup>b</sup></b>	<b>\$ 3,030,762,254</b>

<sup>a</sup> Based on actuarial valuation as of June 30, 2016.

<sup>b</sup> Based on actuarial valuation as of June 30, 2017.

# Actuarial Valuation Results

## Summary of Actuarial Valuation Results as of June 30, 2017

										Discount Rate	7.15%
										Ultimate Trend Pre-Medicare <sup>f</sup>	4.50%
										Ultimate Trend Post-Medicare <sup>f</sup>	4.50%
	Local Agencies	PERS	Troopers Plan A	Troopers Plan B	TRS Pre-6/30/91	TRS Post-6/30/91	Undefined Pre- 6/30/91	Undefined Post- 6/30/91	Retirees	Total	
A) Present Value of Benefits											
i) Active <sup>a</sup>	\$ 168,379,625	\$ 443,458,021	\$ 2,877,548	\$ 29,420,367	\$ 281,864,192	\$ 734,872,949	\$ 7,898,968	\$ 25,265,235	\$ -	\$ 1,694,036,905	
ii) Active SAL <sup>b</sup>	1,735	27,917,886	104,026	590,728	28,992,173	14,424,331	10,564	6,146	-	72,047,589	
iii) Retired	-	-	-	-	-	-	-	-	\$1,627,255,609	1,627,255,609	
iv) Waived Annuitants <sup>c</sup>	-	-	-	-	-	-	-	-	\$17,399,713	17,399,713	
v) Total	\$ 168,381,360	\$ 471,375,907	\$ 2,981,574	\$ 30,011,095	\$ 310,856,365	\$ 749,297,280	\$ 7,909,532	\$ 25,271,381	\$ 1,644,655,322	\$ 3,410,739,816	
B) Actuarial Accrued Liability											
i) Active <sup>a</sup>	\$ 135,267,698	\$ 359,304,993	\$ 2,659,883	\$ 22,226,772	\$ 260,324,359	\$ 502,734,967	\$ 7,327,295	\$ 18,239,250	\$ -	\$ 1,308,085,217	
ii) Active SAL <sup>b</sup>	1,594	25,570,971	96,823	515,346	27,072,370	11,762,741	10,219	5,479	-	65,035,543	
iii) Retired	-	-	-	-	-	-	-	-	\$1,627,255,609	1,627,255,609	
iv) Waived Annuitants <sup>c</sup>	-	-	-	-	-	-	-	-	\$17,399,713	17,399,713	
iii) Total	\$ 135,269,292	\$ 384,875,964	\$ 2,756,706	\$ 22,742,118	\$ 287,396,729	\$ 514,497,708	\$ 7,337,514	\$ 18,244,729	\$ 1,644,655,322	\$ 3,017,776,082	
C) Employer Normal Cost											
i) Fiscal Year Ending June 30, 2018	\$ 5,392,614	\$ 14,348,894	\$ 72,412	\$ 958,791	\$ 5,703,563	\$ 28,642,239	\$ 210,673	\$ 1,016,419	\$ -	\$ 56,345,605	
ii) Fiscal Year Ending June 30, 2019	4,896,865	13,076,625	62,468	947,215	4,810,867	27,022,152	143,733	910,114	-	51,870,039	
D) Employer Benefit Payments											
i) Fiscal Year Ending June 30, 2018	\$ 858,837	\$ 2,613,053	\$ 11,619	\$ 43,620	\$ 3,346,428	\$ 2,771,832	\$ 141,276	\$ 136,920	\$ 167,175,773	\$ 177,099,358	
ii) Fiscal Year Ending June 30, 2019	2,494,939	7,731,536	45,002	134,014	9,669,592	8,000,593	346,469	380,195	157,298,432	186,100,772	
E) Covered Members											
i) Active <sup>d</sup>	4,706	11,815	28	388	5,575	20,010	174	702	-	43,398	
ii) Retired	-	-	-	-	-	-	-	-	42,435	42,435	
iii) Waived Annuitants	-	-	-	-	-	-	-	-	8,906	8,906	
iv) Total	4,706	11,815	28	388	5,575	20,010	174	702	51,341	94,739	
F) Covered Payroll <sup>e</sup>	\$191,481,608	\$479,848,502	\$1,816,004	\$20,950,120	\$327,657,625	\$897,211,875	\$11,726,841	\$41,071,205	\$ -	\$ 1,971,763,780	

<sup>a</sup> Includes employer capped subsidy and Employee Assistance Program benefits.

<sup>b</sup> Includes employer paid premium under the Accrued Sick Annual Leave Program.

<sup>c</sup> The actuarial valuation assumes five percent of waived annuitants under the age of 75 will select retiree healthcare coverage in the future. As of June 30, 2017, there were 8,906 waived annuitants under age 75 and 3,860 waived annuitants over age 75.

<sup>d</sup> Excludes active members hired on or after July 1, 2010.

<sup>e</sup> 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. Based on updated actuarial valuation data as of June 30, 2017.

<sup>f</sup> Excess trend of 0.13% over the pre-Medicare base trend rate beginning in 2022 applied to pre-Medicare per capita claims costs to account for the Excise Tax under the Health Care Reform Act.

# Actuarial Valuation Results

## Summary of Actuarial Valuation Results as of June 30, 2017 with Updated Emerging Trends

										Discount Rate	7.15%
										Ultimate Trend Pre-Medicare <sup>f</sup>	4.50%
										Ultimate Trend Post-Medicare <sup>f</sup>	4.50%
	Local Agencies	PERS	Troopers Plan A	Troopers Plan B	TRS Pre-6/30/91	TRS Post-6/30/91	Undefined Pre- 6/30/91	Undefined Post- 6/30/91	Retirees	Total	
A) Present Value of Benefits											
i) Active <sup>a</sup>	\$ 160,213,898	\$ 421,952,844	\$ 2,738,562	\$ 27,986,219	\$ 268,383,892	\$ 699,064,488	\$ 7,528,114	\$ 24,040,681	\$ -	\$ 1,611,908,698	
ii) Active SAL <sup>b</sup>	1,612	25,779,633	96,444	547,066	26,806,324	13,317,991	9,884	5,667	-	66,564,621	
iii) Retired	-	-	-	-	-	-	-	-	\$1,559,423,019	1,559,423,019	
iv) Waived Annuitants <sup>c</sup>	-	-	-	-	-	-	-	-	\$16,637,815	16,637,815	
v) Total	\$ 160,215,510	\$ 447,732,477	\$ 2,835,006	\$ 28,533,285	\$ 295,190,216	\$ 712,382,479	\$ 7,537,998	\$ 24,046,348	\$ 1,576,060,834	\$ 3,254,534,153	
B) Actuarial Accrued Liability											
i) Active <sup>a</sup>	\$ 128,559,666	\$ 341,486,491	\$ 2,530,774	\$ 21,134,247	\$ 247,702,203	\$ 477,899,439	\$ 6,975,806	\$ 17,341,414	\$ -	\$ 1,243,630,040	
ii) Active SAL <sup>b</sup>	1,476	23,559,600	89,726	477,002	24,991,907	10,836,400	9,560	5,053	-	59,970,724	
iii) Retired	-	-	-	-	-	-	-	-	\$1,559,423,019	1,559,423,019	
iv) Waived Annuitants <sup>c</sup>	-	-	-	-	-	-	-	-	\$16,637,815	16,637,815	
iii) Total	\$ 128,561,142	\$ 365,046,091	\$ 2,620,500	\$ 21,611,249	\$ 272,694,110	\$ 488,735,839	\$ 6,985,366	\$ 17,346,467	\$ 1,576,060,834	\$ 2,879,661,598	
C) Employer Normal Cost											
i) Fiscal Year Ending June 30, 2018	\$ 5,168,220	\$ 13,749,455	\$ 69,102	\$ 913,383	\$ 5,483,621	\$ 27,343,579	\$ 204,050	\$ 972,265	\$ -	\$ 53,903,675	
ii) Fiscal Year Ending June 30, 2019	4,689,277	12,521,451	59,594	902,218	4,619,130	25,774,161	138,802	869,245	-	49,573,878	
D) Employer Benefit Payments											
i) Fiscal Year Ending June 30, 2018	\$ 853,831	\$ 2,599,978	\$ 11,556	\$ 43,378	\$ 3,330,227	\$ 2,756,829	\$ 140,454	\$ 136,121	\$ 167,076,160	\$ 176,948,534	
ii) Fiscal Year Ending June 30, 2019	2,441,264	7,560,480	43,927	131,054	9,456,936	7,826,986	339,597	372,179	155,623,775	183,796,198	
E) Covered Members											
i) Active <sup>d</sup>	4,706	11,815	28	388	5,575	20,010	174	702	-	43,398	
ii) Retired	-	-	-	-	-	-	-	-	42,435	42,435	
iii) Waived Annuitants	-	-	-	-	-	-	-	-	8,906	8,906	
iv) Total	4,706	11,815	28	388	5,575	20,010	174	702	51,341	94,739	
F) Covered Payroll <sup>e</sup>	\$191,481,608	\$479,848,502	\$1,816,004	\$20,950,120	\$327,657,625	\$897,211,875	\$11,726,841	\$41,071,205	\$ -	\$ 1,971,763,780	

<sup>a</sup> Includes employer capped subsidy and Employee Assistance Program benefits.

<sup>b</sup> Includes employer paid premium under the Accrued Sick Annual Leave Program.

<sup>c</sup> The actuarial valuation assumes five percent of waived annuitants under the age of 75 will select retiree healthcare coverage in the future. As of June 30, 2017, there were 8,906 waived annuitants under age 75 and 3,860 waived annuitants over age 75.

<sup>d</sup> Excludes active members hired on or after July 1, 2010.

<sup>e</sup> 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. Based on updated actuarial valuation data as of June 30, 2017.

<sup>f</sup> Excess trend of 0.13% over the pre-Medicare base trend rate beginning in 2022 applied to pre-Medicare per capita claims costs to account for the Excise Tax under the Health Care Reform Act.

# Actuarial Valuation Results

## Development of Actuarially Determined Contribution

Fiscal Year Ending	June 30, 2019	June 30, 2018	June 30, 2017
A) Funded Status Beginning of Fiscal Year			
i) Actuarial Accrued Liability	\$ 3,108,550,896	\$ 3,282,900,408	\$ 3,168,993,253
ii) Market Value of Assets	963,114,601	824,015,704	685,668,002
iii) Unfunded Actuarial Accrued Liability	\$ 2,145,436,295	\$ 2,458,884,705	\$ 2,483,325,251
iv) Funded Ratio	30.98%	25.10%	21.64%
B) Actuarially Determined Contribution (ADC)			
i) Employer Normal Cost	\$ 51,870,039	\$ 60,108,139	\$ 66,067,781
ii) Operating Expenses <sup>a</sup>	2,824,857	3,056,005	1,846,001
ii) Amortization of Unfunded Actuarial Accrued Liability	145,749,442	160,845,026	156,796,624
iv) Actuarially Determined Contribution	\$ 200,444,338	\$ 224,009,170	\$ 224,710,406
C) Employer Contribution	\$ 206,028,203	\$ 204,234,825	\$ 204,908,111
D) Percentage of ADC Contributed	102.79%	91.17%	91.19%

<sup>a</sup> Beginning with the June 30, 2016, actuarial valuation, operating expenses are included in the actuarially determined contribution.

# Actuarial Valuation Results

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## Market Value of Assets

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

- Statements of Fiduciary Net Position as of June 30, 2019, and June 30, 2018;
- Statements of Changes in Fiduciary Net Position for the Plan years ending June 30, 2019, and June 30, 2018;
- Market value of assets broken out by investment pool as of June 30, 2018, and June 30, 2019; and
- WVIMB asset allocation as of June 30, 2019.

# Actuarial Valuation Results

**West Virginia Retiree Health Benefit Trust Fund**  
**Statements of Fiduciary Net Position**  
**June 30, 2019 and 2018**  
**(\$ in thousands)**

	<b>2019</b>	<b>2018</b>
<b>ASSETS</b>		
Cash and cash equivalents	\$ 3,805	\$ 2,124
Equity position in investment pools	1,108,753	961,755
Contributions receivable - net of allowance for doubtful accounts of \$468 and \$468, respectively	- 1,213	1,697
Due from the State - contributions	1,383	1,411
Due from the State - State appropriation (Contribution)	-	1,250
Other receivables	8,193	22,974
<b>Total assets</b>	<b>1,123,347</b>	<b>991,211</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>		
Pension	179	269
Other Post-Employment Benefits	69	34
<b>Total deferred outflows of resources</b>	<b>248</b>	<b>303</b>
<b>LIABILITIES</b>		
Claims payable	9,290	10,613
Due to PEIA	10,532	16,537
Payables to managed care organizations	8,955	-
Other liabilities	2,883	933
<b>Total liabilities</b>	<b>31,660</b>	<b>28,083</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>		
Pension	171	239
Other Post-Employment Benefits	103	77
<b>Total deferred inflows of resources</b>	<b>274</b>	<b>316</b>
<b>NET POSITION</b>		
Net position restricted for other postemployment benefits	\$ 1,091,661	\$ 963,115



## Actuarial Valuation Results

**West Virginia Retiree Health Benefit Trust Fund**  
**Statements of Changes in Fiduciary Net Position**  
**For the Years Ended June 30, 2019 and 2018**  
**(\$ in thousands)**

	<u>2019</u>	<u>2018</u>
Additions:		
Contributions:		
Employers	\$ 115,345	\$ 121,974
State appropriation (School Aid)	55,683	47,261
State appropriation (Contribution)	30,000	5,000
State appropriation (OPEB)	5,000	30,000
	<u>206,028</u>	<u>204,235</u>
Total contributions		
	206,028	204,235
Retiree drug subsidy	882	1,572
Other revenue	24	-
Interest and dividend income	1,810	4,564
Net appreciation in fair value of investments	57,688	69,484
	<u>266,432</u>	<u>279,855</u>
Total additions		
	266,432	279,855
Deductions:		
Benefit payments, net	133,625	136,358
Administrative service fees	1,436	1,342
Other expenses	2,825	3,055
	<u>137,886</u>	<u>140,755</u>
Total deductions		
	137,886	140,755
Net increase in net position	128,546	139,100
	<u>128,546</u>	<u>139,100</u>
Net position restricted for other postemployment benefits:		
Net position, beginning of year	963,115	823,911
	<u>963,115</u>	<u>823,911</u>
Cumulative effect of adoption of accounting principle	-	104
	<u>-</u>	<u>104</u>
Net position, beginning of year, as restated	963,115	824,015
	<u>963,115</u>	<u>824,015</u>
Net position, end of year	\$ 1,091,661	\$ 963,115
	<u>\$ 1,091,661</u>	<u>\$ 963,115</u>

# Actuarial Valuation Results

**West Virginia Retiree Health Benefit Trust Fund**  
**Equity Position in Investment Management Pools**  
**June 30, 2019 and 2018**  
**(\$ in thousands)**

	June 30,	
	2019	2018
<b>West Virginia Board of Treasury Investments (WVBTI)</b>		
Money Market Pool	\$ 107,183	\$ 57,942
<b>West Virginia Investment Management Board (WVIMB)</b>		
Domestic Equity	\$ 248,998	\$ 228,115
International Equity Pool	173,189	149,920
International Non-Qualified Pool	83,843	76,159
Total Return Fixed Income Pool	88,937	87,553
Core Fixed Income Pool	38,465	38,256
Hedge Funds Pool	114,290	99,437
Private Markets	253,848	224,373
	<u>\$ 1,001,570</u>	<u>\$ 903,813</u>
Grand Total	<u><b>\$ 1,108,753</b></u>	<u><b>\$ 961,755</b></u>

## Actuarial Valuation Results

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### WVIMB Asset Allocation as of June 30, 2019

<b>Asset Class</b>	<b>Policy Target Allocation</b>	<b>Strategic Allocation</b>
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 %
<b>Total Equity</b>	<b>100.00 %</b>	<b>100.00 %</b>

## SECTION D

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### **GASB STATEMENT No. 74 INFORMATION**

Auditor's Note – This information is intended to assist in preparation of the plan sponsor's financial statements relating to 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 postemployment (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 GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB.

GASB Statements No. 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.

### **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.

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.

# **GASB Statement No. 74 Information**

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## **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 Statements No. 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.

## **GASB Statement No. 74 Information**

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- 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 assumptions.

### **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;

## **GASB Statement No. 74 Information**

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- 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
  - 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 No. 74 Information**

The actuarial valuation as of June 30, 2017, with a measurement date of June 30, 2019, was prepared for purposes of complying with the requirements of GASB Statement No. 74 for the plan's fiscal year end June 30, 2019.

A number of 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.

This section contains the following GASB Statement No. 74 information:

- GASB Statement No. 74 Executive Summary;
- GASB Statement No. 74 Changes in Net OPEB Liability for plan year end June 30, 2019, applicable to plan's fiscal year end June 30, 2019;
- GASB Statement No. 74 Sensitivity of Net OPEB Liability plan year end June 30, 2019.
- GASB Statement No. 74 Schedule of Changes in Net OPEB Liability and Related Ratios Multiyear;
- GASB Statement No. 74 Schedule of Contributions; and
- Notes to Schedule of Contributions.



# GASB Statement No. 74 Information

## Executive Summary

	2019
Actuarial Valuation Date	June 30, 2017
Measurement Date of the Net OPEB Liability	June 30, 2019
Plan's Fiscal Year End for GASB Statement No. 74	June 30, 2019
<b>Membership</b>	
Number of	
- Retirees and Beneficiaries	42,435
- Waived Annuitants <sup>a</sup>	8,906
- Active Members	43,398
- Total	94,739
Covered Payroll <sup>b</sup>	\$ 1,892,941,244
<b>Net OPEB Liability</b>	
Total OPEB Liability	\$ 3,030,762,254
Plan Fiduciary Net Position	1,091,660,803
Net OPEB Liability	\$ 1,939,101,452
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	36.02%
Net OPEB Liability as a Percentage of Covered Payroll	102.44%
<b>Development of the Single Discount Rate</b>	
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 <sup>c</sup>	3.62%
Long-Term Municipal Bond Rate End of Year <sup>c</sup>	3.13%
Year WV-RHBT is Projected to be Fully Funded	2036

<sup>a</sup> Represents eligible waived annuitants under age 75. It is assumed that 5% of these members will elect coverage.

<sup>b</sup> 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 projected to Plan year 2019 on a closed group basis.

<sup>c</sup> 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 the measurement date. 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.

## GASB Statement No. 74 Information

### Schedule of Changes in Net OPEB Liability under GASB Statement No. 74 Measured as of June 30, 2019 Applicable to Plan Sponsor's Fiscal Year End June 30, 2019

Fiscal Year Ending June 30,	2019	2018	2017
<b>Total OPEB Liability</b>			
Service Cost	\$ 51,870,039	\$ 60,108,139	\$ 66,067,781
Interest on the Total OPEB Liability	219,338,640	232,001,350	223,113,462
Changes of Benefit Terms	-	-	-
Difference between Expected and Actual Experience	(194,391,468)	(51,625,410)	(10,450,977)
Changes of Assumptions	(296,677,844)	-	-
Benefit Payments and Administrative Expenses	(135,061,413)	(137,700,187)	(164,823,111)
<b>Net Change in Total OPEB Liability</b>	<u>(354,922,046)</u>	<u>102,783,892</u>	<u>113,907,155</u>
<b>Total OPEB Liability - Beginning</b>	3,385,684,300	3,282,900,408	3,168,993,253
<b>Total OPEB Liability - Ending (a)</b>	<u>\$ 3,030,762,254</u>	<u>\$ 3,385,684,300</u>	<u>\$ 3,282,900,408</u>
<b>Plan Fiduciary Net Position</b>			
Employer Contributions	\$ 206,028,203	\$ 204,234,825	\$ 204,908,111
Net Investment Income	59,498,185	74,048,016	99,447,152
Benefit Payments and Administrative Expenses	(135,061,413)	(137,700,187)	(164,823,111)
Operating Expenses	(2,824,857)	(3,056,005)	(1,846,001)
Other	906,084	1,572,248	557,162
<b>Net Change in Plan Fiduciary Net Position</b>	<u>128,546,202</u>	<u>139,098,897</u>	<u>138,243,313</u>
<b>Plan Fiduciary Net Position - Beginning, as restated <sup>a</sup></b>	963,114,601	824,015,704	685,668,002
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>1,091,660,803</u>	<u>963,114,601</u>	<u>823,911,315</u>
<b>Net OPEB Liability - Ending (a) - (b)</b>	<u>\$ 1,939,101,452</u>	<u>\$ 2,422,569,700</u>	<u>\$ 2,458,989,094</u>
<b>Plan Fiduciary Net Position as a Percentage of Total OPEB Liability</b>	36.02%	28.45%	25.10%
<b>Covered-Employee Payroll<sup>b</sup></b>	\$ 1,892,941,244	\$ 2,286,998,500	\$ 2,199,037,019
<b>Net OPEB Liability as a Percentage of Covered-Employee Payroll</b>	102.44%	105.93%	111.82%

<sup>a</sup> Plan year end 2019 payroll based on payroll provided for the July 1, 2017, actuarial valuation projected to Plan year 2019 on a closed group basis.

## **GASB Statement No. 74 Information**

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### **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, 2019, to the Single Discount Rate Assumption**

<b>Current Single Discount</b>		
<b>1% Decrease</b>	<b>Rate Assumption</b>	<b>1% Increase</b>
<b>6.15%</b>	<b>7.15%</b>	<b>8.15%</b>
\$ 2,305,786,986	\$ 1,939,101,452	\$ 1,633,429,811

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, 2019, to the Healthcare Cost Trend Rate Assumption**

<b>Healthcare Cost</b>		
<b>1% Decrease</b>	<b>Trend Rates Assumption</b>	<b>1% Increase</b>
\$ 1,578,162,283	\$ 1,939,101,452	\$ 2,378,893,670

## GASB Statement No. 74 Information

### Schedule of Net OPEB Liability Multiyear

<b>FY Ending June 30,</b>	<b>Total OPEB Liability</b>	<b>Fiduciary Net Position</b>	<b>Net OPEB Liability</b>	<b>Fiduciary Net Position as a % of Total OPEB Liability</b>	<b>Covered Payroll<sup>a</sup></b>	<b>Net OPEB Liability as a % of Covered Payroll</b>
2017	\$ 3,282,900,408	\$ 823,911,315	\$ 2,458,989,094	25.10%	\$ 2,199,037,019	111.82%
2018	3,385,684,300	963,114,601	2,422,569,700	28.45%	2,286,998,500	105.93%
2019	3,030,762,254	1,091,660,803	1,939,101,452	36.02%	1,892,941,244	102.44%

## GASB Statement No. 74 Information

### Schedule of Contributions Multiyear

<b>FY Ending June 30,</b>	<b>Actuarially Determined Contribution</b>	<b>Actual Contribution</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll</b>	<b>Actual Contribution as a % of Covered Payroll</b>
2017	\$ 224,710,406	\$ 204,908,111	\$ 19,802,295	\$ 2,199,037,019	9.32%
2018	224,009,170	204,234,825	19,774,345	2,286,998,500	8.93%
2019	200,444,338	206,028,203	(5,583,865)	1,892,941,244	10.88%

# GASB Statement No. 74 Information

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## Notes to Schedule of Contributions

**Valuation Date** June 30, 2017

**Measurement Date** June 30, 2019

**Methods and Assumptions Used to Develop Actuarially Determined Contribution:**

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level percentage of payroll, closed
Amortization Period	20-year closed period as of June 30, 2017
Asset Valuation Method	Market value
Investment Rate of Return	7.15%, net of OPEB plan investment expense, including inflation
Inflation	2.75%
Wage Inflation	4.00%
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-2014 Healthy Annuitant Mortality Table projected with scale MP-2016 on a fully generational basis 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-2014 Employee Mortality Table projected with Scale MP-2016 on a fully generational basis for Troopers A and B.
Healthcare Cost Trend Rates	Actual trend used for fiscal year 2018. For fiscal years on and after 2019, trend starts at 8.00% and 10.00% for pre and post-Medicare, respectively, and gradually decreases to an ultimate trend of 4.50%. Trends rates for fiscal years 2019 and 2020 were updated based on emerging experience. Excess trend rate of 0.13% and 0.00% for pre and post-Medicare, respectively, is added to healthcare trend rates pertaining to per capita claims costs beginning in 2022 to account for the Excise Tax.
Aging Factors	Based on the 2013 SOA Study "Health Care Costs - From Birth to Death"
Expenses	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.

## GASB Statement No. 74 Information

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### 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:

Members or Beneficiaries Currently Receiving Benefits	42,435
Waived Annuitants <sup>a</sup>	8,906
Active Plan Members	<u>43,398</u>
Total Plan Members	94,739

<sup>a</sup> The actuarial valuation assumes five percent of eligible waived annuitants under the age of 75 will select retiree healthcare coverage in the future. As of June 30, 2017, there were 8,906 waived annuitants under the age of 75 who were included in the actuarial valuation. Also, 3,860 waived annuitants over the age 75 were excluded from the actuarial valuation.

## SECTION E

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### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS



# Summary of Actuarial Assumptions and Methods

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## 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, 2014, through June 30, 2017, 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 2019 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 Statements No. 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 operating expenses plus the amortization of the unfunded actuarial accrued liability. The actuarial valuation is based on a level-percentage-of-pay closed amortization period with 20 years remaining as of June 30, 2017.

# Summary of Actuarial Assumptions and Methods

## Actuarial Assumptions

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

<b>Actuarial Valuation Date</b>	June 30, 2017
<b>Discount Rate</b>	7.15%
<b>Return on Assets Invested with WVIMB</b>	7.50%
<b>Return on Assets Invested with WVTI</b>	3.00%
<b>Inflation <sup>a</sup></b>	2.75%
<b>Wage Inflation <sup>b</sup></b>	4.00%

## OPEB Assumptions

<u>Applied at July 1,</u>	<b>Healthcare Trend</b>	
	<b>Pre-Medicare Medical/Rx <sup>d</sup></b>	<b>Post-Medicare Medical/Rx <sup>d</sup></b>
2018 <sup>c</sup>	3.10%	-13.50%
2019	8.00%	-4.70%
2020	7.50%	9.50%
2021	7.00%	9.00%
2022	6.50%	8.50%
2023	6.00%	8.00%
2024	5.50%	7.50%
2025	5.00%	7.00%
2026	4.50%	6.50%
2027	4.50%	6.00%
2028	4.50%	5.50%
2029	4.50%	5.00%
2030+	4.50%	4.50%

<sup>a</sup> Inflation assumption used to estimate the impact of the Excise tax under Federal Healthcare Reform.

<sup>b</sup> Wage inflation used to project payroll.

<sup>c</sup> Per capita costs increased by: 3.1% for FY 2019 for non-Medicare coverage, and by -13.5% for FY 2019 and -4.7% for FY 2020 for Medicare coverage. Member premium share increased by: 0% for FY 2019 and FY 2020 for non-Medicare coverage and by 3.4% for FY 2019 and 0% for FY 2020 for Medicare coverage.

<sup>d</sup> Excess trend rate of 0.13% and 0.00% for pre- and post-Medicare, respectively, over the based healthcare trend rate beginning in 2022 applied only to per capita claim cost to account for the Excise Tax under the Health Care Reform Act.

## Summary of Actuarial Assumptions and Methods

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Our projection of capped costs was based on the following: (i) the sponsor's capped subsidy aggregate contribution limit of \$152 million for 2019 and \$140 million for 2020 would increase by \$10 million per year after 2020; (ii) the plan sponsor's contributions equals the sum of State appropriations, capped aggregate subsidy, expected employer contributions from SAL program, and expected employer contribution under the Retired Employee Assistance Program (iii) 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 (iv) 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. The composite capped subsidy trend rate was assumed to decrease to 1.8% for FY 2019 and -1.0% for FY 2020 in order to reflect emerging experience. 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 2036, the member's share of total plan costs is assumed to remain stable at approximately 50% of total plan costs. These assumptions produced per member annual capped subsidy increases of 3.0% per year from 2018 to 2024 and 4.5% per year after 2024.

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% of expected employer payments; and (iii) the Plan receives pre-funding contributions of \$30 million per year until 2037 or until the Plan is fully funded.

### 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%

## Summary of Actuarial Assumptions and Methods

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### Annual Per Capita Claims Costs for Pre-65, Non-Medicare Eligible Members

#### PPB Plans A, B and Capitated Plans

<u>Medical and Rx</u>		
<u>Age</u>	<u>Male</u>	<u>Female</u>
20	\$ 1,759	\$ 2,301
25	1,489	3,044
30	1,823	4,290
35	2,272	4,667
40	2,837	4,610
45	3,531	4,874
50	4,598	5,665
51	4,865	5,861
52	5,144	6,053
53	5,433	6,240
54	5,735	6,424
55	6,051	6,607
56	6,380	6,794
57	6,722	6,992
58	7,075	7,206
59	7,439	7,439
60	7,815	7,695
61	8,208	7,977
62	8,619	8,284
63	9,051	8,615
64	9,503	8,969

# Summary of Actuarial Assumptions and Methods

## Annual Per Capita Claims Costs for Medicare Eligible Members

### MAPD Plans 1, 2 and Special Medicare Plans

<u>Age</u>	<u>Medical and Rx</u>	
	<u>Male</u>	<u>Female</u>
65	\$ 2,426	\$ 2,288
66	2,467	2,345
67	2,509	2,400
68	2,552	2,454
69	2,597	2,507
70	2,643	2,557
71	2,688	2,606
72	2,732	2,651
73	2,771	2,694
74	2,806	2,734
75	2,839	2,770
76	2,869	2,803
77	2,899	2,835
78	2,928	2,866
79	2,956	2,897
80	2,980	2,928
81	2,999	2,956
82	3,010	2,981
83	3,013	3,004
84	3,010	3,022
85	3,002	3,037
86	2,991	3,048
87	2,978	3,056
88	2,966	3,062
89	2,955	3,066
90	2,946	3,067
91	2,938	3,063
92	2,930	3,051
93	2,923	3,029
94	2,914	2,994
95	2,905	2,944
96	2,894	2,879
97	2,881	2,798
98 +	2,867	2,699

## Summary of Actuarial Assumptions and Methods

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

Beginning in 2022, 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, the tax was delayed two years from 2018 to 2020. On January 22, 2018, the tax was delayed an additional two years from 2020 to 2022. 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
<b>Single Person Coverage</b>	\$10,200	\$11,850
<b>All Other Coverage Types</b>	27,500	30,950

These thresholds will be updated before the tax takes effect in 2022, and after 2022 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, 2017, actuarial valuation, the impact of the excise tax was estimated by:

- 1) Averaging costs separately for the PPB 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 2.75%;
- 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 0.13% and 0.00% over the base healthcare trend rate beginning in 2022 for pre- and post-Medicare per capita claims cost, respectively.

# Summary of Actuarial Assumptions and Methods

## 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:

Member Hire Date	Percentage Electing to Convert Unused Sick and Annual Leave Days into OPEB Benefits		
	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. Members retiring before June 30, 1997, pay premiums based on 25 or more years of service regardless of actual service at retirement. The following table shows the assumed participation rates for members hired before July 1, 2010:

Service at Retirement	Participation Rates		
	PERS	TRS	Troopers A and B
5 to 9 years	50.0%	60.0%	60.0%
10 to 14 years	65.0%	75.0%	70.0%
15 to 19 years	80.0%	85.0%	100.0%
20 to 24 years	90.0%	90.0%	100.0%
25 or more years	95.0%	95.0%	95.0%

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.

## Summary of Actuarial Assumptions and Methods

**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		
	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 included retirement systems for approximately 80% of retired members. All members specifically designated as belonging to Teachers' Retirement System were valued with the corresponding mortality assumptions. Remaining members were valued under the Public Employees' Retirement System post-retirement mortality assumption.

Data for 129 active members who were listed with current dates of hire after July 1, 2010, but found to have original dates of hire prior to July 1, 2010, were deemed eligible for OPEB under the RHBT program and were included in the actuarial valuation. Pay for these members was assumed to be the prior year amount (if available) increased with wage inflation. If prior year pay was not available, it was assumed that the member's pay was equal to that of the average pay of the system to which they belong.

The actuarial valuation assumes five percent of all waived annuitants under the age of 75 will select retiree healthcare coverage in the future. As of June 30, 2017, there are 8,906 waived annuitants under the age of 75. Many of these inactive and waived annuitant records did not include a gender code for the individual, thus it was assumed that approximately half were female and half were male to remain consistent with the gender distribution of the rest of the data. Healthcare benefits were assumed to commence at age 60 for waived annuitants.

Service amounts were adjusted in cases where the implicit entry age based on length of employment was unreasonable.

### Pension-Related Assumptions

The assumptions used for the most recent pension actuarial valuations as of July 1, 2017, 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.



## Summary of Actuarial Assumptions and Methods

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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

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### 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												
Age	Years of Service											
	0-1		1-2		2-3		3-4		4-5		Over 5	
	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												
Age	Years of Service											
	0-1		1-2		2-3		3-4		4-5		Over 5	
	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 at any given age.

## Summary of Actuarial Assumptions and Methods

### TRS Pension Related Assumptions

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#### ***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:***

Sample Disability Rates		
% Separating 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

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#### **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)				
Age	Teachers		Non-Teachers & State	
	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

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### **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												
Age	Years of Service											
	0-1		1-2		2-3		3-4		4-5		Over 5	
	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												
Age	Years of Service											
	0-1		1-2		2-3		3-4		4-5		Over 5	
	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

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#### ***Salary Increases:***

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

Age	Annual Increase	
	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	Male	Female
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

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#### ***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)	
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

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### TROOPERS PLAN A AND PLAN B

#### ***Post-Retirement Healthy Mortality:***

Healthy males — 103% of the RP-2014 Healthy Annuitant Mortality Table rolled back to 2006 and projected with Scale MP-2016 on a fully generational basis.

Healthy females — 100% of the RP-2014 Healthy Annuitant Mortality Table rolled back to 2006 and projected with Scale MP-2016 on a fully generational basis.

#### ***Post-Retirement Disabled Mortality:***

RP-2014 Disabled Retiree Mortality Table rolled back to 2006 and projected with Scale MP-2016 on a fully generational basis.

#### ***Pre-Retirement Mortality***

RP-2014 Total Employee Mortality Table rolled back to 2006 and projected with Scale MP-2016 on a fully generational basis. 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		
Age	Troopers A	Troopers B
	Rate	Rate
20	2.670%	5.700%
30	1.900%	4.065%
40	1.140%	1.800%
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

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#### ***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	4.00%
1	4.00%
2	4.00%
3	4.00%
4	4.00%
5	4.00%
6	4.00%
7	4.00%
8	4.00%
9	4.00%
10+	4.00%

#### ***Disability:***

Troopers A and B	
Sample Disability Rates	
Age	Rate
20	0.038%
30	0.150%
40	0.450%
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

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#### ***Retirement Troopers A:***

87.5% 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 25% 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.

## **SECTION F**

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### **SUMMARY OF PRINCIPAL PLAN PROVISIONS**

# Summary of Principal Plan Provisions

## Plan Year 2018 Benefits

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### **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 (Troopers Plan A), West Virginia State Police Retirement System (Troopers Plan B), Deputy Sheriffs' Retirement System (DSRS), Emergency Medical Services Retirement System (EMSRS), and Judges' Retirement System (JRS).

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 or 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, who have attained age 55 and the sum of age plus years of contributing service is 80 or more, are 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.

# Summary of Principal Plan Provisions

## Plan Year 2018 Benefits

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### **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.

# Summary of Principal Plan Provisions

## Plan Year 2018 Benefits

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### 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.



# Summary of Principal Plan Provisions

## Plan Year 2018 Benefits

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### **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.

## Summary of Principal Plan Provisions

### Plan Year 2018 Benefits

#### **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. Members retiring before June 30, 1997, pay premiums based on 25 or more years of service regardless of actual service at retirement.

FY 2018 Monthly PPO PPB Plan A Premium	Pre-Medicare PPB Plan A <sup>a, b</sup>		Pre/Post Medicare PPB Plan A <sup>a, b</sup>
	Single	Family	Family
Hired on or after July 1, 2010	\$1,160	\$2,760	\$1,934
5 to 9 years service	929	2,209	1,548
10 to 14 years service	716	1,665	1,153
15 to 19 years service	501	1,124	760
20 to 24 years service	375	799	526
25 or more years service	291	582	367

FY 2018 Monthly MAPD Plan 1 Premium	Post-Medicare MAPD Plan 1 <sup>a, b</sup>		Pre/Post Medicare MAPD Plan 1 <sup>a, b</sup>
	Single	Family	Family
Hired on or after July 1, 2010	\$458	\$943	\$1,533
5 to 9 years service	417	858	1,394
10 to 14 years service	307	620	1,049
15 to 19 years service	197	383	704
20 to 24 years service	132	239	496
25 or more years service	88	145	358

<sup>a</sup>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.

<sup>b</sup>Beginning 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.

## Summary of Principal Plan Provisions

### Plan Year 2018 Benefits

#### PEIA PPB Plan A – Non-Medicare Retired Policyholder

<i>Plan Feature</i>	<i>In Network</i>	<i>Out of Network <sup>1</sup></i>
Annual Deductible	\$525	Twice the in network deductible
Annual Out of Pocket Limit	\$1,500	Twice the in network out of pocket limit
<u>Covered Services</u>  -Office Visits  -Emergency Room Treatment (Emergency Services)  -Inpatient Services  -Outpatient Services -Preventive Services  -Lab/X-ray  -Other	<u>Co-insurance</u>  \$20 co-pay per visit  \$100 co-pay, then 20% after deductible  \$100 co-pay, then 20% after deductible  \$10 co-pay, then 20% after deductible 20% after deductible  20% after deductible	Not covered, unless approved in advance by HealthSmart
Prescription Drug Co-pays	Annual Deductible: \$75 individual/\$150 family Annual Out of Pocket Maximum: \$1,750 individual/\$3,500 family  Generic \$10  Formulary Brand \$25  Non-Formulary Brand 75% co-insurance <u>Maintenance Network or Mail Order Pharmacy at 90-day supply for in network claims</u>  Two months' co-pay for generic and formulary brand.	
Maximum Lifetime Benefit	Unlimited	

<sup>1</sup> Out of network claims covered only up to amounts stated in the PEIA's fee schedule.

## Summary of Principal Plan Provisions

### Plan Year 2018 Benefits

#### PEIA PPB Plan B – Non-Medicare Retired Policyholder

<i>Plan Feature</i>	<i>In Network</i>	<i>Out of Network <sup>1</sup></i>
Annual Deductible	\$925	Twice the in network deductible
Annual Out of Pocket Limit	\$3,000	Twice the in network out of pocket limit
<u>Covered Services</u>  -Office Visits  -Emergency Room Treatment (Emergency Services)  -Inpatient Services  -Outpatient Services -Preventive Services  -Lab/X-ray  -Other	<u>Co-insurance</u>  \$20 co-pay per visit  \$100 co-pay, then 20% after deductible  \$100 co-pay, then 20% after deductible  \$10 co-pay, then 20% after deductible 20% after deductible  20% after deductible	Not covered, unless approved in advance by HealthSmart
Prescription Drug Co-pays	Annual Deductible: \$150 individual/\$300 family Annual Out of Pocket Maximum: \$1,750 individual/\$3,500 family  Generic \$10  Formulary Brand \$30  Non-Formulary Brand 75% co-insurance  <u>Maintenance Network or Mail Order Pharmacy at 90-day supply for in network claims</u>  Two months' co-pay for generic and formulary brand.	
Maximum Lifetime Benefit	Unlimited	

<sup>1</sup> Out of network claims covered only up to amounts stated in the PEIA's fee schedule.

## Summary of Principal Plan Provisions

### Plan Year 2018 Benefits

#### MAPD – Plan 1 – Medicare Retired Policyholder

<i>Plan Feature</i>	
Annual Deductible	\$150 per enrollee
Out of Pocket Maximum	\$1,200 per enrollee
<u>Covered Services</u>  -Physicians Visits  -Emergency Care  -Inpatient Services  -Outpatient Services	<u>Co-insurance</u>  \$20 Co-pay, then 100%  \$50 Co-pay, then 100%  \$100 Co-pay, then 100%  \$100 Co-pay, then 100%
Prescription Drug Co-pays	After annual prescription deductible of \$75  <u>Retail at 30-day supply</u>  Generic                      \$5  Formulary Brand              \$15  Non-Formulary Brand        50% Coinsurance
Maximum Lifetime Benefit	Unlimited

## Summary of Principal Plan Provisions

### Plan Year 2018 Benefits

#### MAPD – Plan 2 – Medicare Retired Policyholder

<i>Plan Feature</i>	
Annual Deductible	\$375 per enrollee
Out of Pocket Maximum	\$1,950 per enrollee
<u>Covered Services</u>  -Physicians Visits  -Emergency Care  -Inpatient Services  -Outpatient Services	<u>Co-insurance</u>  \$20 Co-pay, then 100%  \$65 Co-pay, then 100%  \$150 Co-pay, then 100%  \$115 Co-pay, then 100%
Prescription Drug Co-pays	After annual prescription deductible of \$150  <u>Retail at 30-day supply</u>  Generic                      \$5  Formulary Brand            \$20  Non-Formulary Brand      50% Coinsurance
Maximum Lifetime Benefit	Unlimited

## **SECTION G**

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### **GLOSSARY**

## Glossary

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<b>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<b>Actuarial Accrued Liability (AAL)</b>	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."
<b>Actuarial Assumptions</b>	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.
<b>Actuarial Cost Method</b>	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.
<b>Actuarial Equivalent</b>	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.
<b>Actuarial Gain (Loss)</b>	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.
<b>Actuarial Present Value (APV)</b>	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.
<b>Actuarial Valuation</b>	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.
<b>Actuarial Valuation Date</b>	The date as of which an actuarial valuation is performed.
<b>Actuarially Determined Contribution (ADC)</b>	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.
<b>Amortization Method</b>	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

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<b>Amortization Payment</b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b>Cost-of-Living Adjustments</b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b>Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan)</b>	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.
<b>Covered-Employee Payroll</b>	The payroll of employees that are provided with benefits through the OPEB plan.
<b>Deferred Inflows and Outflows</b>	The deferred inflows and outflows of OPEB resources are amounts used under GASB Statement No. 75 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.
<b>Discount Rate</b>	<p>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:</p> <ol style="list-style-type: none"><li>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</li><li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li></ol>
<b>Entry Age Actuarial Cost Method (EAN)</b>	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.
<b>Fiduciary Net Position</b>	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
<b>GASB</b>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<b>Long-Term Expected Rate of Return</b>	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

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<b>Money-Weighted Rate of Return</b>	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.
<b>Multiple-Employer Defined Benefit OPEB Plan</b>	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.
<b>Municipal Bond Rate</b>	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.
<b>Net OPEB Liability (NOL)</b>	The NOL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan.
<b>Non-Employer Contributing Entities</b>	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.
<b>Normal Cost</b>	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.
<b>Other Postemployment Benefits (OPEB)</b>	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 postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<b>Real Rate of Return</b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b>Service Cost</b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to an actuarial valuation year.
<b>Total OPEB Expense</b>	<p>The total OPEB expense is the sum of the following items that are recognized at the end of the employer's fiscal year:</p> <ol style="list-style-type: none"><li>1. Service Cost</li><li>2. Interest on the Total OPEB Liability</li><li>3. Current-Period Benefit Changes</li><li>4. Employee Contributions (made negative for addition here)</li><li>5. Projected Earnings on Plan Investments (made negative for addition here)</li><li>6. OPEB Plan Administrative Expense</li><li>7. Other Changes in Plan Fiduciary Net Position</li><li>8. Recognition of Outflow (Inflow) of Resources due to Liabilities</li><li>9. Recognition of Outflow (Inflow) of Resources due to Assets</li></ol>

## Glossary

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<b>Total OPEB Liability (TOL)</b>	The TOL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<b>Unfunded Actuarial Accrued Liability (UAAL)</b>	The UAAL is the difference between actuarial accrued liability and actuarial valuation assets.
<b>Actuarial Valuation Assets</b>	The actuarial valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statements No. 74 and 75, the actuarial valuation assets are equal to the market value of assets.

# APPENDIX A

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# Appendix A

## WV-RHBT GASB Statements No. 74 and 75 OPEB Projections

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%											
<b>Fiscal Year Beginning (7/1)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	
Present Value of Benefits	\$ 3,410,739,816	\$ 3,471,286,355	\$ 3,526,747,227	\$ 3,577,054,325	\$ 3,622,344,363	\$ 3,663,699,019	\$ 3,701,874,577	\$ 3,737,069,347	\$ 3,766,599,260	\$ 3,790,294,049	\$ 3,808,047,771	
Actuarial Accrued Liability	3,017,776,082	3,108,550,896	3,191,774,318	3,268,136,134	3,337,849,000	3,402,102,207	3,461,788,072	3,517,233,874	3,565,842,646	3,607,522,563	3,642,277,583	
Normal Cost	56,345,605	51,876,828	48,308,080	44,931,891	41,772,383	38,849,578	36,147,254	33,616,059	31,241,609	29,048,878	26,983,797	
Expected Employer Capped Subsidy Benefit Payments	\$ 159,161,397	\$ 169,318,945	\$ 178,204,994	\$ 186,572,639	\$ 193,789,981	\$ 200,135,003	\$ 206,163,315	\$ 214,623,482	\$ 222,916,874	\$ 230,765,443	\$ 238,641,181	
Other Expected Employer Benefit Payments	17,937,961	16,875,613	16,799,279	16,753,288	16,466,087	16,048,764	15,536,978	14,980,417	14,363,829	13,891,360	13,390,424	
Total Expected Employer Benefit Payments	177,099,358	186,194,558	195,004,273	203,325,927	210,256,068	216,183,767	221,700,293	229,603,899	237,280,703	244,656,803	252,031,605	
Market Value of Assets <sup>a</sup>	\$ 824,015,000	\$ 963,115,000	\$ 1,048,362,359	\$ 1,116,946,015	\$ 1,186,873,374	\$ 1,264,655,180	\$ 1,351,829,858	\$ 1,449,458,348	\$ 1,555,779,929	\$ 1,671,568,846	\$ 1,798,005,653	
Unfunded Actuarial Accrued Liability	2,193,761,086	2,145,435,896	2,143,411,959	2,151,190,119	2,150,975,626	2,137,447,027	2,109,958,214	2,067,775,526	2,010,062,717	1,935,953,717	1,844,271,930	
Funded Ratio	27.31%	30.98%	32.85%	34.18%	35.56%	37.17%	39.05%	41.21%	43.63%	46.34%	49.36%	
<b>Projected Assets</b>												
Market Value of Assets BTI	\$ 91,191,000	\$ 68,850,000	\$ 93,097,279	\$ 97,502,137	\$ 101,662,964	\$ 105,128,034	\$ 108,091,884	\$ 110,850,147	\$ 114,801,950	\$ 118,640,352	\$ 122,328,402	
Market Value of Assets WVIMB (with accrual)	732,824,000	894,265,000	955,265,080	1,019,443,879	1,085,210,411	1,159,527,146	1,243,737,975	1,338,608,202	1,440,977,980	1,552,928,494	1,675,677,252	
Total Market Value of Assets	824,015,000	963,115,000	1,048,362,359	1,116,946,015	1,186,873,374	1,264,655,180	1,351,829,858	1,449,458,348	1,555,779,929	1,671,568,846	1,798,005,653	
Operating Expenses	\$ (3,055,000)	\$ (2,327,432)	\$ (2,437,553)	\$ (2,541,574)	\$ (2,628,201)	\$ (2,702,297)	\$ (2,771,254)	\$ (2,870,049)	\$ (2,966,009)	\$ (3,058,210)	\$ (3,150,395)	
Employer Benefit Payments and Expenses	(137,700,000)	(186,194,558)	(195,004,273)	(203,325,927)	(210,256,068)	(216,183,767)	(221,700,293)	(229,603,899)	(237,280,703)	(244,656,803)	(252,031,605)	
Employer Contributions	169,235,000	169,051,613	156,799,279	166,753,288	176,466,087	186,048,764	195,536,978	204,980,417	214,363,829	223,891,360	233,390,424	
Employer Excess Contributions	35,000,000	35,000,000	35,000,000	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	75,620,000	69,717,736	74,226,204	79,041,572	84,199,988	90,011,978	96,563,058	103,815,112	111,671,799	120,260,461	129,653,462	
Market Value of Assets end of year	\$ 963,115,000	\$ 1,048,362,359	\$ 1,116,946,015	\$ 1,186,873,374	\$ 1,264,655,180	\$ 1,351,829,858	\$ 1,449,458,348	\$ 1,555,779,929	\$ 1,671,568,846	\$ 1,798,005,653	\$ 1,935,867,539	
Average Return on Assets	8.84%	7.18%	7.10%	7.11%	7.11%	7.13%	7.14%	7.16%	7.17%	7.18%	7.19%	
<b>Annual Expenditure Sharing</b>												
Employer Benefit Payments	\$ 177,099,358	\$ 186,194,558	\$ 195,004,273	\$ 203,325,927	\$ 210,256,068	\$ 216,183,767	\$ 221,700,293	\$ 229,603,899	\$ 237,280,703	\$ 244,656,803	\$ 252,031,605	
Retired Member Contributions	57,357,482	63,474,995	84,227,278	106,694,295	129,670,397	152,549,500	174,370,644	193,017,238	209,757,357	224,925,635	239,172,115	
Total Annual Expenditures	\$ 234,456,840	\$ 249,669,553	\$ 279,231,551	\$ 310,020,222	\$ 339,926,465	\$ 368,733,267	\$ 396,070,937	\$ 422,621,137	\$ 447,038,060	\$ 469,582,438	\$ 491,203,720	
Percent of Expenditures Paid by Retired Members	24.46%	25.42%	30.16%	34.42%	38.15%	41.37%	44.03%	45.67%	46.92%	47.90%	48.69%	
Active Members	43,398	38,897	35,463	32,286	29,374	26,716	24,304	22,109	20,065	18,211	16,512	
Pre-Medicare Retirees	7,535	9,022	10,041	10,813	11,139	11,121	10,872	10,505	10,090	9,653	9,123	
Pre-Medicare Waived Annuitants <sup>b</sup>	3,669	3,690	3,141	2,674	2,336	2,063	1,852	1,695	1,553	1,433	1,303	
Post-Medicare Retirees	34,900	36,294	44,273	45,148	46,221	47,351	48,443	49,423	50,294	50,956	51,535	
Post-Medicare Waived Annuitants <sup>b</sup>	5,237	3,423	4,002	4,476	4,816	5,040	5,170	5,232	5,270	5,253	5,236	
Pre-Medicare Capped Rate Per Member Per Month	\$ 612.39	\$ 630.76	\$ 649.68	\$ 669.18	\$ 689.25	\$ 709.93	\$ 731.23	\$ 764.13	\$ 798.52	\$ 834.45	\$ 872.00	
Post-Medicare Capped Rate Per Member Per Month	\$ 223.21	\$ 229.91	\$ 236.80	\$ 243.91	\$ 251.22	\$ 258.76	\$ 266.52	\$ 278.52	\$ 291.05	\$ 304.15	\$ 317.84	
Assumed Aggregate Fixed Subsidy Contribution Limit	\$ 155,726,000	\$ 152,000,000	\$ 140,000,000	\$ 150,000,000	\$ 160,000,000	\$ 170,000,000	\$ 180,000,000	\$ 190,000,000	\$ 200,000,000	\$ 210,000,000	\$ 220,000,000	

<sup>a</sup> Market Value of Assets was restated from \$823,911,000 as of June 30, 2017, to \$824,015,000 as of July 1, 2017.

<sup>b</sup> The actuarial valuation assumes five percent of eligible waived annuitants under the age of 75 will select retiree healthcare coverage in the future. As of June 30, 2017, there are 8,906 eligible waived annuitants under age 75.

# Appendix A

## WV-RHBT GASB Statement Nos. 74 and 75 OPEB Projections

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)	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Present Value of Benefits	\$ 3,819,436,982	\$ 3,824,303,465	\$ 3,822,304,505	\$ 3,812,754,091	\$ 3,794,998,167	\$ 3,769,453,811	\$ 3,736,349,783	\$ 3,695,481,039	\$ 3,647,233,353	\$ 3,591,687,614	\$ 3,528,198,225	\$ 3,456,367,310
Actuarial Accrued Liability	3,669,746,053	3,689,789,351	3,702,103,227	3,706,003,794	3,700,857,687	3,687,125,716	3,665,054,115	3,634,425,587	3,595,609,436	3,548,653,979	3,492,855,526	3,427,778,337
Normal Cost	25,001,334	23,118,366	21,297,128	19,555,410	17,914,041	16,344,635	14,817,266	13,328,708	11,864,541	10,402,361	8,965,723	7,558,063
Expected Employer Capped Subsidy Benefit Payments	\$ 246,226,044	\$ 253,656,191	\$ 261,265,117	\$ 268,940,810	\$ 275,689,341	\$ 281,699,096	\$ 287,384,588	\$ 292,207,216	\$ 296,455,099	\$ 300,778,809	\$ 304,912,191	\$ 308,636,308
Other Expected Employer Benefit Payments	12,893,593	12,432,017	11,980,169	11,571,810	11,120,908	10,649,814	10,178,897	9,661,831	9,131,676	8,645,282	8,184,891	7,762,421
Total Expected Employer Benefit Payments	259,119,637	266,088,208	273,245,286	280,512,620	286,810,249	292,348,910	297,563,485	301,869,047	305,586,775	309,424,091	313,097,082	316,398,729
Market Value of Assets	\$ 1,935,867,539	\$ 2,086,316,915	\$ 2,250,466,362	\$ 2,429,158,146	\$ 2,623,407,999	\$ 2,835,354,803	\$ 3,067,123,971	\$ 3,320,559,882	\$ 3,595,609,436	\$ 3,548,653,979	\$ 3,492,855,526	\$ 3,427,778,337
Unfunded Actuarial Accrued Liability	1,733,878,514	1,603,472,436	1,451,636,865	1,276,845,648	1,077,449,688	851,770,913	597,930,144	313,865,705	-	-	-	-
Funded Ratio	52.75%	56.54%	60.79%	65.55%	70.89%	76.90%	83.69%	91.36%	100.00%	100.00%	100.00%	100.00%
<b>Projected Assets</b>												
Market Value of Assets BTI	\$ 126,015,803	\$ 129,559,819	\$ 133,044,104	\$ 136,622,643	\$ 140,256,310	\$ 143,405,125	\$ 146,174,455	\$ 148,781,743	\$ 150,934,524	\$ 152,793,388	\$ 154,712,046	\$ 156,548,541
Market Value of Assets WVIMB	1,809,851,736	1,956,757,096	2,117,422,258	2,292,535,503	2,483,151,689	2,691,949,679	2,920,949,516	3,171,778,139	3,444,674,913	3,395,860,592	3,338,143,481	3,271,229,796
Total Market Value of Assets	1,935,867,539	2,086,316,915	2,250,466,362	2,429,158,146	2,623,407,999	2,835,354,803	3,067,123,971	3,320,559,882	3,595,609,436	3,548,653,979	3,492,855,526	3,427,778,337
Operating Expenses	\$ (3,238,995)	\$ (3,326,103)	\$ (3,415,566)	\$ (3,506,408)	\$ (3,585,128)	\$ (3,654,361)	\$ (3,719,544)	\$ (3,773,363)	\$ (3,819,835)	\$ (3,867,801)	\$ (3,913,714)	\$ (3,954,984)
Employer Benefit Payments and Expenses	(259,119,637)	(266,088,208)	(273,245,286)	(280,512,620)	(286,810,249)	(292,348,910)	(297,563,485)	(301,869,047)	(305,586,775)	(309,424,091)	(313,097,082)	(316,398,729)
Employer Contributions	242,893,593	252,432,017	261,980,169	271,571,810	281,120,908	290,649,814	300,178,897	307,163,125	310,771,322	314,675,583	318,470,788	321,750,323
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	-	-	-	-
Investment Income	139,914,415	151,131,741	163,372,467	176,697,071	191,221,273	207,122,625	224,540,042	243,528,840	251,679,831	247,885,209	243,432,991	238,304,583
Market Value of Assets end of year	\$ 2,086,316,915	\$ 2,250,466,362	\$ 2,429,158,146	\$ 2,623,407,999	\$ 2,835,354,803	\$ 3,067,123,971	\$ 3,320,559,882	\$ 3,595,609,436	\$ 3,548,653,979	\$ 3,492,855,526	\$ 3,427,778,337	\$ 3,353,173,372
Average Return on Assets	7.21%	7.22%	7.23%	7.25%	7.26%	7.27%	7.29%	7.30%	7.30%	7.30%	7.29%	7.28%
<b>Annual Expenditure Sharing</b>												
Employer Benefit Payments	\$ 259,119,637	\$ 266,088,208	\$ 273,245,286	\$ 280,512,620	\$ 286,810,249	\$ 292,348,910	\$ 297,563,485	\$ 301,869,047	\$ 305,586,775	\$ 309,424,091	\$ 313,097,082	\$ 316,398,729
Retired Member Contributions	251,928,633	262,816,415	271,481,900	279,631,329	286,879,740	293,342,064	299,760,182	305,281,777	310,074,297	314,675,583	318,470,788	321,750,323
Total Annual Expenditures	\$ 511,048,270	\$ 528,904,623	\$ 544,727,186	\$ 560,143,949	\$ 573,689,989	\$ 585,690,974	\$ 597,323,667	\$ 607,150,824	\$ 615,661,072	\$ 624,099,674	\$ 631,567,870	\$ 638,149,052
Percent of Expenditures Paid by Retired Members	49.30%	49.69%	49.84%	49.92%	50.01%	50.08%	50.18%	50.28%	50.36%	50.42%	50.43%	50.42%
Active Members	14,934	13,472	12,114	10,842	9,669	8,595	7,593	6,654	5,784	4,956	4,182	3,465
Pre-Medicare Retirees	8,648	8,089	7,624	7,128	6,818	6,469	6,067	5,699	5,337	4,924	4,597	4,340
Pre-Medicare Waived Annuitants <sup>a</sup>	1,212	1,145	1,080	1,007	958	908	856	802	753	708	666	626
Post-Medicare Retirees	51,909	52,221	52,288	52,252	51,882	51,397	50,834	50,138	49,306	48,444	47,402	46,208
Pre-Medicare Waived Annuitants <sup>a</sup>	5,167	5,065	4,941	4,804	4,628	4,436	4,228	4,024	3,795	3,561	3,324	3,093
Pre-Medicare Capped Rate Per Member Per Month	\$ 911.24	\$ 952.25	\$ 995.10	\$ 1,039.88	\$ 1,086.67	\$ 1,135.57	\$ 1,186.67	\$ 1,240.07	\$ 1,295.88	\$ 1,354.19	\$ 1,415.13	\$ 1,478.81
Post-Medicare Capped Rate Per Member Per Month	\$ 332.14	\$ 347.08	\$ 362.70	\$ 379.02	\$ 396.08	\$ 413.90	\$ 432.53	\$ 451.99	\$ 472.33	\$ 493.59	\$ 515.80	\$ 539.01
Assumed Aggregate Fixed Subsidy Contribution Limit	\$ 243,000,000	\$ 253,000,000	\$ 261,000,000	\$ 269,000,000	\$ 276,000,000	\$ 282,000,000	\$ 287,000,000	\$ 292,000,000	\$ 11,000,000	\$ 10,000,000	\$ 9,000,000	\$ 8,000,000

<sup>a</sup> The actuarial valuation assumes five percent of eligible waived annuitants under the age of 75 will select retiree healthcare coverage in the future. As of June 30, 2017, there are 8,906 eligible waived annuitants under age 75.

## APPENDIX B

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## Appendix B

Total Lives and Average Sick/Leave Days by Age and Years of Service as of June 30, 2017 for  
Active Members Hired Before July 1, 1988, with Sick and Annual Leave Balances as of June 30, 2017

Attained Age	Completed Years of Service									Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	-	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	13	8	-	21
50-54	-	-	-	-	-	-	222	448	18	688
55-59	-	-	-	-	-	-	194	1,127	406	1,727
60-64	-	-	-	-	-	-	107	486	777	1,370
65-69	-	-	-	-	-	-	50	151	302	503
70-74	-	-	-	-	-	-	10	25	86	121
75 & Over	-	-	-	-	-	-	4	15	31	50
<i>Total Members</i>	-	-	-	-	-	-	600	2,260	1,620	4,480
<i>Average Sick/Leave Days</i>	-	-	-	-	-	-	226	238	322	267

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



## Appendix B

Total Lives and Average Sick/Leave Days by Age and Years of Service as of June 30, 2017 for  
Active Members Hired Between July 1, 1988, and June 30, 2001, with Sick and Annual Leave Balances as of June 30, 2017

Attained Age	Completed Years of Service									Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	-	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	97	1	-	-	-	98
40-44	-	-	-	-	137	34	-	-	-	136
45-49	-	-	-	-	972	201	2	-	-	1,175
50-54	-	-	-	-	125	150	151	-	-	130
55-59	-	-	-	-	1,173	1,039	223	-	-	2,435
60-64	-	-	-	-	129	171	185	-	-	152
65-69	-	-	-	-	1,008	797	977	-	-	2,782
70-74	-	-	-	-	128	167	183	-	-	159
75 & Over	-	-	-	-	1,074	821	646	-	-	2,541
Total Members	-	-	-	-	130	166	199	-	-	159
Average Sick/Leave Days	-	-	-	-	816	705	533	-	-	2,054
	-	-	-	-	142	174	211	-	-	171
	-	-	-	-	290	220	187	-	-	697
	-	-	-	-	149	193	245	-	-	189
	-	-	-	-	72	41	48	-	-	161
	-	-	-	-	154	216	254	-	-	200
	-	-	-	-	17	14	16	-	-	47
	-	-	-	-	141	126	281	-	-	184
Total Members	-	-	-	-	5,519	3,839	2,632	-	-	11,990
Average Sick/Leave Days	-	-	-	-	132	170	199	-	-	159

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

## Appendix B

### Age and Years of Service as of June 30, 2017 for Active Members Hired Before July 1, 2010

Attained Age	Years of Service									Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	
Under 20	-	-	-	-	-	-	-	-	-	-
20-24	-	-	-	1	-	-	-	-	-	1
25-29	-	1	132	3	-	-	-	-	-	136
30-34	-	2	1,530	397	2	-	-	-	-	1,931
35-39	-	2	1,552	2,122	288	3	-	-	-	3,967
40-44	-	7	1,260	1,857	1,530	256	6	-	-	4,916
45-49	-	11	1,365	1,905	1,760	1,281	314	8	-	6,644
50-54	-	14	1,147	1,765	1,602	993	1,408	543	24	7,496
55-59	-	5	1,088	1,637	1,636	1,019	1,042	1,325	505	8,257
60-64	-	6	726	1,279	1,268	912	822	631	954	6,598
65-69	-	3	311	475	505	313	322	234	413	2,576
70-74	-	-	56	136	125	68	86	50	135	656
75 & Over	-	1	16	28	34	21	31	22	67	220
<b>Total</b>	-	52	9,183	11,605	8,750	4,866	4,031	2,813	2,098	43,398

## Appendix B

### Age and Years of Service as of June 30, 2017 for Active Members Hired After July 1, 2010

Attained Age	Years of Service									Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	
Under 20	-	29	-	-	-	-	-	-	-	29
20-24	-	957	12	-	-	-	-	-	-	969
25-29	-	4,316	515	-	-	-	-	-	-	4,831
30-34	-	3,394	1,413	-	-	-	-	-	-	4,807
35-39	-	2,721	1,009	-	-	-	-	-	-	3,730
40-44	-	2,557	885	-	-	-	-	-	-	3,442
45-49	-	2,418	885	-	-	-	-	-	-	3,303
50-54	-	1,974	732	-	-	-	-	-	-	2,706
55-59	-	1,663	649	-	-	-	-	-	-	2,312
60-64	-	1,087	472	-	-	-	-	-	-	1,559
65-69	-	310	185	-	-	-	-	-	-	495
70-74	-	62	32	-	-	-	-	-	-	94
75 & Over	-	21	8	-	-	-	-	-	-	29
<b>Total</b>	<b>0</b>	<b>21,509</b>	<b>6,797</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,306</b>

## Appendix B

### Retirees and Surviving Spouses Age and Gender Distribution as of June 30, 2017

Age	Female	Male	Total
Under 20	1	-	1
20-24	2	4	6
25-29		-	-
30-34		-	-
35-39	3	1	4
40-44	11	14	25
45-49	37	52	89
50-54	128	144	272
55-59	1,164	879	2,043
60-64	4,119	2,299	6,418
65-69	6,587	3,843	10,430
70-74	5,008	3,301	8,309
75-79	3,775	2,309	6,084
80-84	2,690	1,465	4,155
85-89	2,068	871	2,939
90-94	968	342	1,310
95-99	246	72	318
100 & Over	27	5	32
<b>Total</b>	<b>26,834</b>	<b>15,601</b>	<b>42,435</b>

## Appendix B

### Waived Annuitants

#### Age and Gender Distribution as of June 30, 2017

Age	Female	Male	Total
Under 20		1	1
20-24	1	3	4
25-29	49	54	103
30-34	92	85	177
35-39	108	99	207
40-44	93	90	183
45-49	120	125	245
50-54	140	154	294
55-59	323	314	637
60-64	937	881	1,818
65-69	1,525	1,546	3,071
70-74	1,093	1,073	2,166
75-79	737	760	1,497
80-84	492	501	993
85-89	344	324	668
90-94	238	238	476
95-99	102	83	185
100 & Over	24	17	41
<b>Total</b>	<b>6,418</b>	<b>6,348</b>	<b>12,766</b>

<sup>a</sup> The actuarial valuation assumes five percent of eligible waived annuitants under the age of 75 will select retiree healthcare coverage in the future. As of June 30, 2017, there are 8,906 eligible waived annuitants under 75.