



# Kentucky Legislators Retirement Plan

*Actuarial Valuation and Report*

*as of July 1, 2017*

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## Introduction

An actuarial valuation of the Kentucky Legislators Retirement Plan (“KLRP”) has been performed as of July 1, 2017. Actuarial valuations are based on the integrity of employee data, plan asset data, plan provisions and an extensive set of assumptions regarding future events. There is necessary uncertainty with any actuarial calculation based on the accuracy of the data provided, the correct interpretation of plan provisions and the realization of the assumptions made. These results were based on participant data and asset information provided by The Kentucky Judicial Form Retirement System. This information was not audited but was reviewed for reasonableness.

Detailed explanations of the actuarial assumptions and methods used in the report are contained in later sections of this report. Also included in this report is a summary of provisions of the plan as we understand them.

This report provides details on the actuarial valuation underlying the recommended contribution to the KLRP for plan years commencing in 2018 and 2019. This determination was performed pursuant to Kentucky Revised Statute (“KRS”) §21.525 for the retirement system defined in KRS §6.500 to §6.577. KRS §21.525, as well as other statutes found in KRS Chapter 21 cited hereafter, are made applicable to KLRP by KRS §6.525.

Governmental Accounting Standards Board Statement 67 (“GASB 67”), Statement 43 (“GASB 43”), and Statement 74 (“GASB 74”) establish financial reporting standards for defined benefit pension plans and other postemployment benefit (OPEB) plans sponsored by employers that are subject to governmental accounting standards. Governmental Accounting Standards Board Statement 68 (“GASB 68”), Statement 45 (“GASB 45”), and Statement (“GASB 75”) provide standards for reporting pension and OPEB expenditures and expense, and related liabilities and assets for such plans. The purpose of this report is to provide pertinent financial statement disclosure information for the fiscal year ending in 2017. Actuarial computations under Statements 67, 68, 43, 45, 74, and 75 are for purposes of fulfilling plan and employer governmental accounting requirements and may not be appropriate for other purposes. This report has been prepared on a basis consistent with our understanding of the statements and does not constitute legal, accounting, tax or investment advice.

Statements 68 and 75 sets forth a methodology for the calculation of the annual Pension Expense for the upcoming fiscal year. GASB 68 and GASB 75 provides a method for reflecting prior gains and losses from asset and plan experience, as well as other areas including plan amendments. Amounts not reflected previously or in the upcoming year are reflected in the Deferred Outflows and Inflows of Resources shown.

Statement 45 sets forth a methodology to determine annual adjustments to the Annual Required Contribution (ARC), which is the contribution recommended pursuant to the appropriate actuarial valuation, to account for differences between amounts expensed and contributions actually made. Under GASB 45, the resulting adjusted amount is referred to as the Annual OPEB Cost (AOC) and the accumulated difference between the AOC and the actual contribution is referred to as the Net OPEB Obligation (NOO).

BPS&M does not have access to and is not providing information concerning liabilities other than benefits, such as for legal or accounting fees.

BPS&M is not aware of any significant events subsequent to the current year’s measurement date that could materially affect the information contained in this report. However, we are aware that studies have been prepared suggesting substantial changes to state-wide retirement systems, including KLRP; this report does not consider any such changes.

We are not aware of any relationship between the plan or plan sponsor and BPS&M, LLC which would impair or appear to impair our objectivity.

To the best of our knowledge, all information provided in this report is complete and accurate and disclosures for GASB purposes have been determined in accordance with generally accepted accounting principles.

## Summary of Report

An actuarial valuation of the Kentucky Legislators Retirement Plan (“KLRP”) was conducted as of July 1, 2017. The purpose of the valuation is to determine the cost implications of the plan including a determination of annual funding levels for the fiscal years beginning July 1, 2018 and July 1, 2019.

In 2013 the applicable state statutes were amended to close participation in the traditional defined benefit, with all individuals first electing to participate in KLRP on or after January 1, 2014 being covered under a new hybrid cash balance tier. **This report covers only the traditional defined benefit/OPEB tier of KLRP.**

It is our understanding that this plan is a “governmental plan” as defined in Internal Revenue Code Section 414(d) and this report has been prepared on that basis.

On the basis of the valuation, it has been determined that the annual funding requirements for the State for the fiscal year beginning in 2018 for the plan, prior to adjusting with interest, as described in the Summary of Benefits section of this report, are as follows:

	Total Amount	Percent of Payroll
Annual Required Contribution	1,042,882	29.75%
Recommended Contribution	1,905,256	54.34%

The Annual Required Contribution is determined based on assumptions and methods set forth in the statute and established by the Board of Trustees. The Recommended Contribution uses assumptions and methods that we believe produce an actuarially sound approach to funding.

The Annual Required Contribution and Recommended Contribution shown above are calculated using asset and liability values as of July 1, 2017. These amounts are used to determine contributions for the fiscal years beginning July 1, 2018 and July 1, 2019.

Due to the lag period between the calculated date and the actual contributions, we have adjusted the Annual Required Contributions and Recommended Contributions for the plan years 2018-2019 and 2019-2020 with one and two years of interest, respectively, at the interest rate assumption of 6.50%.

	2018-2019 (1 year of interest)	2019-2020 (2 years of interest)
Annual Required Contribution (with interest)	1,110,669	1,182,862
Recommended Contribution (with interest)	2,029,098	2,160,989

## Summary of Selected Plan Information

	Plan Year Beginning		
	7/1/2017	7/1/2015	7/1/2013
Number of Participants			
Active	80	104	118
Terminated Vested	43	45	44
Retired	170	150	147
Beneficiaries	50	44	39
Total	343	343	348
Average Age (for actives)	58.2	57.3	55.9
Average Service (for actives)	14.5	12.8	11.8
Annual Covered Payroll	\$ 3,505,969	\$ 4,467,419	\$ 4,987,823
Average Salary	43,825	42,956	42,270
Accrued Liability	95,175,680	102,049,848	95,964,888
Actuarial Asset Value	104,918,440	86,847,256	67,269,660
Market Asset Value	110,253,979	97,264,968	78,320,971
Unfunded Accrued Liability (UAL)	(9,742,760)	15,202,592	28,695,228
Funded Ratio (AVA/AL)	110.24%	85.10%	70.10%
<b>Annual Funding Level <sup>1</sup></b>			
State Portion of Normal Cost	\$ 699,316	\$ 1,111,574	\$ 1,070,890
Expected Employee Contributions	186,231	237,828	262,993
Total Normal Cost	885,547	1,349,402	1,333,883
State Annual Required Contribution	1,042,882	2,384,575	3,366,508
Percent of Covered Payroll	29.75%	53.38%	67.49%

<sup>1</sup>In accordance with KRS 21.405 (does not recognize cost of living increases effective after the most recent valuation date) and KRS 21.525 (legally prescribed funding method)

## Reconciliation of Total Funding Requirement

	Accrued Liability (\$M)	Annual Recommended Contribution (\$M)
<b>Prior Valuation ARC Calculation</b>	<b>102.05</b>	<b>2.38</b>
+ Impact of Current Year Asset Gain/Loss		+0.02
+ Recognition of Prior Asset Gain/Loss		-0.38
+ Other Gain/Loss		-0.94
Current Year Calculation w/ Prior Assumptions	92.52	1.08
+ Updated Discount Rate Assumption, Salary Scale, Medical Trend	+2.66	-0.04
<b>Annual Required Contribution <sup>1</sup></b>	<b>95.18</b>	<b>1.04</b>
+ 25 Year Amortization of Unfunded Liability	+0.00	+0.02
Subtotal	95.18	1.06
+ Included Full COLA Assumption	+10.04	+0.85
<b>Minimum Recommended Contribution <sup>2</sup></b>	<b>105.22</b>	<b>1.91</b>

<sup>1</sup> In accordance with KRS 21.405 (does not recognize cost of living increases effective after the most recent valuation date) and KRS 21.525 (legally prescribed funding method)

<sup>2</sup> Without regards to KRS 21.405 or KRS 21.525. COLA's will not be granted until the plan is 100% funded (unless current year COLA is prefunded). If all future assumptions are met, ignoring future COLA's in the funding valuation will result in a funding percentage which is always less than 100% when future COLA's are assumed.

## Legislative Background

As stated previously, state statues were amended in 2013 such that all participants entering KLRP on or after January 1, 2014 will be covered under a hybrid cash balance/OPEB tier; those entering before that date will continue to be covered under the traditional defined benefit/OPEB tier. The legislation making this change also restricted the availability of future cost-of-living adjustments (COLA's) to plan benefits.

Statement No.43 of the Governmental Accounting Standards Board was amended by Statement No. 74 of the Governmental Accounting Standards Board. Statement No. 74 became effective for the plan's financial statements for the fiscal year beginning after June 15, 2016. Statement No. 74 establishes financial reporting standards for state and local government OPEB plans that are administered through trusts or equivalent arrangements. The objective of this statement is to improve the usefulness of the information included in pension plan reports.

The Governmental Accounting Standards Board amended Statement No. 45 with Statement No. 75; the effective date for Statement No. 75 is for the fiscal year beginning after June 15, 2017. Statement No. 45 continues to apply to the financial reporting requirement for KLRP for the year ending June 30, 2017. Statement No. 45 provides standards for reporting pension expenditures and expense, and related pension liabilities and assets, for such plans.

Statement No. 75 of the Governmental Accounting Standards Board requires the determination of the OPEB expense for the fiscal year beginning July 1, 2017. Statement No. 75 provides a new approach to calculating the pension expense which differs significantly from Statement No. 45 methodology.

## Actuarial Soundness

A plan that has adopted a reasonable funding method, that adopts reasonable assumptions and which contributes at a rate at or above the recommended contribution rate (based on these reasonable methods and assumptions), could be considered to be actuarially sound.

In order to ensure KLRP is funded in an “actuarially sound manner”, we would recommend the following:

1. Reflect a 1.5% future COLA assumption when calculating the funding requirement for KLRP, to the extent future cost-of-living increases are expected to occur, or intended to be provided.
2. Revise the actuarial funding method to amortize all past unfunded as well as new liabilities over a period not more than 30 years (we suggest shorter periods for various sources of new liability) and amortize future gains and losses over a period not more than 15 years. (Note that GASB 68 may require the expensing of liabilities at a faster pace than these amortization periods.)
3. Contribute at least the recommended contribution each year.

Deviations from these recommendations may result in an “actuarially unsound” approach to funding KLRP and may eventually result in KLRP becoming insolvent – that is, exhausting assets at which time all future benefits would be provided on a pay as you go basis.

Although the Actuarial Standards of Practice 4 “Measuring Pension Obligations” allows for plan liabilities to be calculated under a legally prescribed method, the statement goes on to say,

“If, in the actuary’s professional judgment, such an actuarial cost method or amortization method is significantly inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming that all actuarial assumptions will be realized and that the plan sponsor or other contributing entity will make contributions when due, the actuary should disclose this.”

It is our professional actuarial opinion that the current legally prescribed method, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability (per KRS 21.525) and which (per KRS 21.405) does not recognize cost of living increases effective after the most recent valuation (assuming future increases are expected), is inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming all actuarial assumptions are realized. The current method of amortizing unfunded liabilities will not result in the full amortization of those liabilities.

## Changes in Actuarial Assumptions

The following changes were made to the actuarial assumptions effective June 30, 2017:

	<b>Previous</b>	<b>Current</b>
Discount Rate	7.00%	6.50%

The discount rate change described above resulted in an increase in liabilities and annual recommended contribution.

	<b>Previous</b>	<b>Current</b>
Salary Scale	1% for the next five years beginning July 1, 2015 and 3.5% thereafter	1% for the next five years beginning July 1, 2017 and 3.5% thereafter

The salary scale change described above resulted in a decrease in liabilities and annual recommended contribution.

	<b>Previous</b>	<b>Current</b>
Medical Trend Rates	11.00% decreasing to 5.00% over 6 years beginning July 1, 2015	8.00% decreasing to 5.00% over 12 years beginning July 1, 2017

The medical trend rates change described above resulted in an increase in liabilities and annual recommended contribution.

Summaries of the plan provisions, actuarial assumptions and methods can be found in the Basis of Valuation section of this report.

## Other Significant Changes

1. In actuarial valuations prepared in prior years, prior language relating to COLA adjustments, where certain participants were eligible to receive a 4.0% annual COLA, were reflected in plan liabilities. This year, we have been informed that these 4.0% COLA's are not currently being granted and will not be granted in the future. Therefore, we have removed these COLA's from our calculation of plan liabilities effective June 30, 2017. This change resulted in a decrease of \$6,845,970 in plan liabilities.
2. As of July 1, 2017, the monthly premium rates for Medicare eligible participants in the OPEB plan are \$312.79, a significant drop from the premium rates of \$391.00 that were effective two years ago in our actuarial valuation. The post-65 OPEB liability is approximately 20% lower than it would have been if the premium rates had not changed.
3. It is our understanding that recent legislation effective for this 2017 actuarial valuation requires the preparation of additional information to be part of the biennial actuarial valuation report. This includes a 20-year projection of liability and cost, as well as disclosure of sensitivity of results to changes in significant assumptions. We have been instructed by the Board of Trustees to not prepare this information until the cost of preparation of such additional information can be appropriately budgeted.



## Actuarial Certification

The information contained in this document (including any attachments) is not intended by BPS&M to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer. The information and valuation results shown in this report are, to the best of our knowledge, complete and accurate and are based upon the following:

1. Employee census data as of July 1, 2017, submitted by The Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
2. Financial data as of June 30, 2017, submitted by The Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
3. Actuarial assumptions and methods as established either by statute or the Board. The actuarial assumptions currently adopted by the Board appear to be reasonable, both individually and in aggregate. However, exclusion of retiree cost-of-living adjustments that can be reasonably anticipated to occur in future years (or for which there is an intent to provide in future years) does not reflect our best estimate of expected experience under the plan. As such, the valuation results presented in this report do not fully reflect the potential liability for future retiree cost-of-living adjustments. For purposes of the calculation of the Recommended Contribution, full future retiree cost-of-living adjustments have been reflected.
4. For purposes of GASB 43, 45, 67, 68, 74, and 75 disclosures, assets were split between pension and retiree medical liabilities on the basis of accrued liability as of July 1, 2008 and have been brought forward each year from that date based on actual cash flows and a prorata allocation of investment return. This methodology, initiated by the prior actuary, was based on guidance from the plan's auditor.

We believe the information is sufficiently complete and reliable. This report provides actuarial advice and does not constitute legal, accounting, tax or investment advice.

The actuarial valuation summarized in this report has been performed utilizing generally accepted actuarial principles. It is my opinion that the results fully and fairly disclose the actuarial position of the plan on the valuation date. I am a consulting actuary for BPS&M, LLC, member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

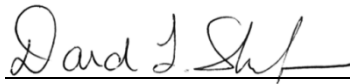
Certified by:



Alan C. Pennington, F.S.A., E.A., M.A.A.A.  
Consulting Actuary/Principal

October 9, 2017

Date



David L. Shaub, F.S.A., M.A.A.A.  
Managing Consultant

October 9, 2017

Date

Bryan, Pendleton, Swats & McAllister, LLC  
5301 Virginia Way, Suite 400  
Brentwood, TN 37027  
(615) 665-1640

## Annual Required Contribution

### Determination of Annual Required Contribution as of July 1, 2017

	<u>Pension</u>	+	<u>OPEB</u>	=	<u>Total</u>
1. Accrued Liability					
Actives					
Actives *	20,866,807		-		20,866,807
Medical Premium Supplement	-		7,777,871		7,777,871
Total Active Liability	20,866,807		7,777,871		28,644,678
Inactives					
Retired	38,610,295		-		38,610,295
Deferred Vested *	8,321,422		-		8,321,422
Beneficiaries	5,328,331		-		5,328,331
Medical Premium Supplement	-		14,270,954		14,270,954
Total Inactive Liability	52,260,048		14,270,954		66,531,002
Total Accrued Liability	73,126,855		22,048,825		95,175,680
2. Valuation Assets	64,951,359		39,967,081		104,918,440
3. Unfunded Past Service Liability	8,175,496		(17,918,256)		(9,742,760)
4. Gross Normal Cost					
Retirement Related *	615,951		-		615,951
Medical Premium Supplement Related	-		269,596		269,596
Total Normal Cost	615,951		269,596		885,547
5. Annual Covered Payroll	3,505,969		3,505,969		3,505,969
6. Estimated Employee Contributions for the Next 12 Months	186,231		-		186,231
7. Net Normal Cost (4 - 6)	429,720		269,596		699,316
8. Interest plus 1% of Unfunded Past Service Liability	613,162		(1,343,869)		n/a
9. Total Annual Required Contribution (max (0, 7 + 8))	1,042,882		-		1,042,882
10. Payment as a Percentage of Covered Payroll (9 / 5)	29.75%		0.00%		29.75%

\* includes 40% loading for non-legislative salaries

## Estimated Cost of a One-Time COLA as of July 1, 2017

It is our understanding, effective July 1, 2013, that any future COLA's must be pre-funded (either by additional contributions or by excess assets). As of July 1, 2017, the plan has no available excess assets.

### Approximate Cost of One Time 1.5% COLA

1. Liability In Payment	
a) Retired	38,610,295
b) Beneficiaries	5,328,331
Total Liability In Payment	<u>43,938,626</u>
2. Desired COLA Percentage	1.50%
3. Estimated Cost of One Time COLA for First Year (1 * 2)	659,079*
4. Estimated Cost of One Time COLA for Second Year (3 * 1.015)	668,965*

\* Cost of 1.5% COLA increase applied to all members in pay status as of the valuation date.

## Actuarial Asset Value

### Determination of Actuarial Asset Value as of July 1, 2017

	2016-17 Plan Year	2015-16 Plan Year	2014-15 Plan Year	2013-14 Plan Year
Interest Return Assumption	7.00%	7.00%	7.00%	7.00%
Market Value at Beginning of Year				
Amount	\$ 99,610,610	\$ 97,264,968	\$ 89,077,557	\$ 78,320,971
Interest to End of Year	6,972,743	6,808,548	6,235,429	5,482,468
Employer Contributions				
Amount	2,384,500	3,366,500	3,366,500	1,824,956
Interest to End of Year	83,458	117,828	117,828	63,873
Member Contributions				
Amount	277,313	310,107	216,777	273,046
Interest to End of Year	9,706	10,854	7,587	9,557
Transfers from KERS				
Amount	86,235	-	-	-
Interest to End of Year	3,018	-	-	-
Benefits Paid				
Amount	4,963,167	4,660,118	4,380,271	4,274,685
Interest to End of Year	173,711	176,696	166,085	162,082
Expected End of Year Assets	104,290,705	103,041,991	94,475,322	81,538,104
Market Value at End of Year	110,253,979	99,610,610	97,264,968	89,077,557
Investment Gain (Loss)	5,963,274	(3,431,381)	2,789,646	7,539,453
Adjustment Percentage	80%	60%	40%	20%
Actuarial Asset Value Adjustment	(4,770,619)	2,058,829	(1,115,858)	(1,507,891)
Actuarial Asset Value (Market Value plus Adjustment)	<b>\$ 104,918,440</b>			

	Retirement	Medical Supplement
Market Value at Beginning of Year	\$61,832,520	\$37,778,090
State Contributions	2,384,500	-
Member Contributions	277,313	-
Transfers In Payments	86,235	-
Distributions	4,253,555	709,612
Allocated Investment Return	7,927,393	4,931,095
Market Value at End of Year	\$68,254,406	\$41,999,573
Allocation of Actuarial Asset Value	\$64,951,359	\$39,967,081

## Summary of Benefits

*This summary is not a Summary Plan Description or a plan document. You should not rely solely on this summary in making a determination of eligibility of benefits. Liabilities and plan provisions are based on the plan data and provisions as of July 1, 2017. This report covers only the traditional defined benefit/OPEB tier of KLRP.*

### Source

Sections 6.500-6.577 of the Kentucky Revised Statutes.

### Eligibility for Membership

Members of the General Assembly may elect to make monthly contributions within 30 days after taking office, and thereby become eligible for membership in the plan. Individuals commencing participation on or after January 1, 2014 will participate in the hybrid plan.

### Employee Contributions

Members entering the plan on or after September 1, 2008 must contribute 6% of their “creditable compensation”. Members entering the plan prior to September 1, 2008 must contribute 5% of their “creditable compensation”. Once a member has earned sufficient service credit to have accrued a benefit of 100% of final average compensation, then employee contributions shall cease.

### Creditable Compensation

Creditable compensation is based on actual compensation received during each year.

### Normal Retirement

#### *Condition*

Members who have attained age 65 and completed at least 5 years of legislative service, or have additional service credit under other authorized state systems so that when added to legislative service credit equals at least 8 years of credit. However, the age 65 requirement shall be reduced by one year for each five years of service, and one year for each year served beyond the years of service needed to accrue a benefit of 100% of final average compensation, but with total reduction not to reduce the age requirement below 60. The full accrued benefit will also be payable upon completion of 27 years of service credit.

#### *Benefit*

A member will receive a retirement income at normal retirement date payable monthly for life equal to a percentage of final average compensation multiplied by years of service. In no event shall retirement income exceed 100% of final average compensation. (Final average compensation means the average monthly compensation of the member for his or her highest 36 months of State salary).

The benefit rates vary according to date of legislative service begins, as follows:

1. If a legislator was a member of the plan on July 1, 1982, and entered legislative service prior to July 1, 1978, the benefit rate is 5.00% for all legislative service prior to July 1, 1978, and for all service that continues without interruption after that date.
2. If a legislator was a member of the plan on July 1, 1982 and entered legislative service between July 1, 1978 and June 30, 1980, the benefit rate is 4.15% for all legislative service that continues without interruption thereafter.
3. If a legislator was a member of the plan on July 1, 1982 and entered legislative service between July 1, 1980 and June 30, 1982, the benefit rate is 3.50% for all legislative service that continues without interruption thereafter.
4. For all other service, the benefit rate is 2.75%.

## **Early Retirement**

A member who retires prior to normal retirement date and has met the service requirement for normal retirement has two alternatives with regard to receiving retirement income as follows:

1. Upon reaching normal retirement age, the member may be vested with the right to receive a monthly service retirement allowance computed and payable on the basis of years of service and applicable average salary, or
2. A member may elect to be paid, commencing as of the date of the election, a monthly service retirement allowance equivalent to the amount of monthly allowance that would have been paid had the member waited until reaching normal retirement age, but reduced in accordance with age at the time of election for each year under normal retirement age at the rate of 5% per year.

If the member has 27 or more years of service credit, there shall be no reduction for benefit commencement prior to normal retirement age. If the difference between the number of years of total governmental service and 27 is less than the difference between actual age and normal retirement age, the reduction shall be 5% for each year of service under 27.

## **Late Retirement**

A legislator may continue service past normal retirement age and will continue to accrue service credits, but cannot receive a benefit in excess of 100% of final average compensation.

## **Disability Benefit**

### *Condition*

No service requirement.

### *Benefit*

Upon determination of disability, a member will be eligible to receive ½ of the monthly retirement income that would have been payable commencing at normal retirement date if this member had continued service until that date and then retired. In calculating the retirement income, average salary for the 3 years preceding disability will be used. When a disabled member reaches normal retirement date, the member may apply and start receiving the full amount of retirement income that would have been payable based upon the actual number of years of service and compensation, in lieu of the disability benefit.

## **Death Benefit**

Upon the death of a member who at the time of death was receiving a retirement income (other than an actuarially reduced income), or was receiving a disability income, the surviving spouse (if married to the member at the time of retirement) is entitled to receive a monthly allowance equal to  $\frac{1}{2}$  of what the member was receiving for his/her lifetime.

If a member dies after retirement, and was at the time receiving an actuarially reduced allowance, or was not receiving an allowance, but had acquired a vested right to have received an allowance upon reaching normal retirement date, the surviving spouse (if married to the member at the time of retirement) is entitled to receive  $\frac{1}{2}$  of the monthly allowance the member would have received at normal retirement date for his/her lifetime.

If an active member dies before retirement and before reaching normal retirement age, without regard to length of service, the surviving spouse is entitled to receive a monthly allowance payable for his/her lifetime equal to  $\frac{1}{2}$  of the monthly retirement income the member would have received commencing at the member's normal retirement date as if the member had continued in service until that date and then retired, computed on the basis of final compensation at the time of death.

If a member dies before retirement and after reaching normal retirement date, the surviving spouse is entitled to receive a monthly allowance payable for his/her lifetime equal to  $\frac{1}{2}$  of the monthly allowance the member would have been entitled to on the basis of years of service, had the member retired on his date of death, computed on the basis of final compensation at the time of death.

If a member is not married at the time of death, any death benefits described above to which a surviving spouse would have been entitled will be payable to the children of the deceased member until such time as the youngest child attains age 21, or for the life of a disabled child. Also, a member may designate that survivor benefits shall go in part or in total to minor children instead of the spouse.

If cumulative payments to the member and/or beneficiary do not exceed the member's total contributions to this plan, then the excess of such contributions over cumulative plan benefits paid shall be paid as an additional death benefit.

## **Termination Benefit**

If a legislator ceases to be a member of the plan other than by death or disability prior to meeting the eligibility requirements for normal retirement, the amount of the member's accumulated contributions shall be returned to the member. If, thereafter, this individual again becomes a holder of an office qualifying for membership in this plan, this person shall not be entitled to credit for the prior period of service unless, at the time he again participates in the plan, the amount previously refunded is repaid, with interest.

## Cost-of-Living Adjustment

Ad hoc cost-of-living adjustments (COLA's) have been granted as noted below:

<u>Effective Date of Increase</u>	<u>Percentage Increase</u>	<u>Increase Applies To Benefits Based on Service Prior To</u>
7/1/1990	5%	6/30/1990
7/1/1991	5%	6/30/1991
7/1/1992	1%	6/30/1992
7/1/1993	1%	6/30/1993
7/1/1994	5%	6/30/1994
7/1/1995	5%	6/30/1995
7/1/1996	None	N/A
7/1/1997	None	N/A
8/1/1998	2.3%	N/A
7/1/1999	1.6%	N/A
7/1/2000	2.2%	N/A
7/1/2001	3.4%	N/A
7/1/2002	2.85%	N/A
7/1/2003	1.6%	N/A
7/1/2004	2.3%	N/A
7/1/2005	2.7%	N/A
7/1/2006	3.4%	N/A
7/1/2007	3.2%	N/A
7/1/2008	2.8%	N/A
7/1/2009 and later*	1.5%	N/A

\*COLA's were suspended for fiscal years beginning in 2012 and later; COLA's after 7/1/2013 are not reflected in this valuation. No further COLA's will be granted until the plan is 100% funded, unless a one-time COLA is 100% prefunded.

In addition, a provision for an on-going cost-of-living adjustment is made by statute. Effective August 1, 1998 and each July 1 thereafter, a recipient of a monthly pension shall receive a cost-of-living adjustment keyed to the Consumer Price Index. This COLA is excluded from the inviolable contract and can be repealed by the General Assembly at any time. Beginning July 1, 2009, if granted, this cost-of-living adjustment will be 1.50% for all retirees who have been retired in excess of one year and prorated for those retired less than one year.

Pursuant to statutory requirements, COLA increases are not reflected in plan liabilities until actually granted, except for any anticipated COLA adjustments under the provision as in effect prior to August 1, 1998.



## Prior Service Credit

Credit in KERS or TRS, for legislative service prior to the creation of this plan on July 1, 1980, can be (and in many instances was) transferred to and become credit in this plan, upon transfer to this plan of the accumulated contributions plus interest (member's and state's) that were made to acquire the credit.

## Medical Insurance Premium Supplement

Retired members, in addition to actual retirement benefits, will have a percentage of their (and their dependent's) medical insurance premium paid by the plan. The percentage will vary based on the numbers of years of service credit as follows:

<u>Years of Service Credit at Retirement</u>	<u>Percentage of Medical Insurance Premium Paid by the Plan</u>
20 or more	100%
19, but less than 20	95%
18, but less than 19	90%
17, but less than 18	85%
16, but less than 17	80%
15, but less than 16	75%
14, but less than 15	70%
13, but less than 14	65%
12, but less than 13	60%
11, but less than 12	55%
10, but less than 11	50%
4, but less than 10	25%
Less than 4	0%

The current premium rates in effect are:

	<u>Monthly Premium</u>
<b><i>Under age 65</i></b>	
Family coverage	\$1,738.40
Single coverage	721.14
Parent Plus coverage	1,023.04
Member and Spouse	1,564.20
<b><i>Age 65 or older</i></b>	
Medicare Advantage PPO	312.79

Premium rates are approved by the Board.

# Actuarial Assumptions

## Funding Method

Accrued liability and normal cost calculated based on Entry Age Normal funding method. The required contribution is calculated based on KRS 21.525, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability.

## Interest

6.5% per annum (7.0% per annum prior to July 1, 2017) – this rate was selected by the Board of Trustees and BPS&M and the Fund Investment Manager believe this to be a reasonable long-term rate of return assumption.

The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at the current statutory contribution rates. Based on those assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current plan members through June 30, 2068. The long-term expected rate of return on pension plan investments was applied to periods of projected benefit payments through this date, and the municipal bond rate was used for the period thereafter to determine the total pension liability. The discount used to measure the total pension liability on the second bases was 6.50% for 51 years and 3.11% thereafter. This is equivalent to an average assumed rate of return of approximately 6.45%.

## Mortality

RP-2000 Mortality Tables with white collar adjustment with Pre and Post Commencement Rates with projected mortality improvements after year 2000 under Projection Scale AA (male and female scales); i.e., full generational mortality.

## Terminations

Table T-4 from the Actuary’s Pension Handbook. Specimen rates are as follows:

<u>Age</u>	<u>Rate of Termination</u>
20	.054
25	.053
30	.051
35	.047
40	.042
45	.035
50	.025
55	.009
60	.001
65+	.000

## Salary Increases

1% for the next five years and 3.5% thereafter;

Liabilities have been adjusted to reflect the potential impact of non-legislative salaries on future pension benefits. The liabilities for members (including terminated members) who could be impacted by non-legislative salaries have been increased by 40% to recognize the potential increase in plan liability.

## Disability

None

## Retirement Age

Retirements were assumed to occur as follow:

<u>Retirement Age</u>	<u>Percentage of Active Members Retiring</u>
NRA-5	16.67%
NRA-4	20.00%
NRA-3	25.00%
NRA-2	33.33%
NRA-1	50.00%
NRA	100.00%

NRA = Normal Retirement Age

In addition to these rates, an extra 20% rate is assumed at the age a member reaches 27 years of service credit.

## Post-Retirement Death Benefit

Assumption is that 80% of the legislators would be married at retirement and the husband would be 3 years older than the wife on average.

## Pre-Retirement Death Benefit

Assumption is that 80% of the legislators would be survived by a spouse upon death prior to retirement and that the husband would be 3 years older than the wife on average.

## Cost-of-Living Adjustment

Pursuant to statutory requirements, COLA increases are not reflected in plan liabilities until actually granted. For the purposes of the calculation of the Recommended Contribution, a full 1.5% annual COLA has been reflected.

## Medical Insurance Premium Supplement

Medical premiums will increase for each year beyond the valuation date at the following rates:

Year 1	8.00%
Year 2	7.75%
Year 3	7.50%
Year 4	7.25%
Year 5	7.00%
Year 6	6.75%
Year 7	6.50%
Year 8	6.25%
Year 9	6.00%
Year 10	5.75%
Year 11	5.50%
Year 12	5.25%
Years 13+	5.00%

It was further assumed that coverage would be split among retirees as follows:

	% of Retirees	% With Spouse Coverage
<b><i>Pre-Medicare Coverage</i></b>		
Family	11%	N/A
Single	58%	N/A
Parent Plus	5%	N/A
Member and Spouse	26%	N/A
<b><i>Medicare Coverage</i></b>		
Medicare Advantage PPO	100%	75%

The assumed annual claims costs per subscriber as of July 1, 2017 are:

<u>Pre-65 Cost</u>	<u>Post-65 Cost</u>
\$ 14,848	\$ 6,569

Claims were adjusted downward 3% for each year of age reduction from age 65 to age 55.

Retirees are assumed to contribute the difference between the premium rate and the portion of the premium paid by the Plan. Premium rates and Plan contributions are described in the Summary of Benefits.

## Non-members

Legislators electing not to participate are assumed to continue as non-members in the future.

## Actuarial Methods

### Asset Valuation Method

The determination of the actuarial value of assets is as follows:

1. Investment gains/losses are determined for each year by comparing the expected value of assets based on the assumed interest assumption to actual market value. Expected value of assets in each year shall be determined by projecting the market value of assets from the prior year using the assumed interest rate, plus contributions less benefit payments and plan expenses (adjusted with interest at the assumed rate). If the expected value of plan assets is different than the actual market value of plan assets then the difference is treated as a gain or loss for that year.
2. The amount of any gain or loss as determined above shall be recognized evenly over the subsequent five years.
3. The actuarial value of assets on any valuation date shall be equal to the market value of assets on that date adjusted as follows:
  - Reduced by 80% of a gain or increased by 80% of a loss from the preceding year
  - Reduced by 60% of a gain or increased by 60% of a loss from the 2nd preceding year
  - Reduced by 40% of a gain or increased by 40% of a loss from the 3rd preceding year
  - Reduced by 20% of a gain or increased by 20% of a loss from the 4th preceding year
4. In no event will the actuarial value of assets be less than 80% or greater than 120% of the current market value of assets

This asset valuation method is used in both the determination of funding levels as well as for disclosure purposes under GASB Statement Nos. 43 and 45. The fair market value of assets is used for disclosure purposes under GASB Statement Nos. 67, 68, 74, and 75.

For purposes of GASB Statement Nos. 43, 45, 67, 68, 74, and 75, the market value of assets has been allocated between retirement related and medical premium supplement liabilities. This market value allocation is carried forward each year based on the following:

1. State and member contributions, as well as transfers for purchase of additional service, are allocated pro-rata reflecting the Annual Required Contribution for that year.
2. Benefits paid reflect actual benefits paid relative to retirement related benefits separately from medical premium supplements.
3. Preliminary assets are determined by adjusting beginning value for allocated State and member contributions and actual benefits paid.
4. Net investment return is allocated pro-rata based on the preliminary assets developed in the previous step.
5. Allocated assets as of the valuation date equal the preliminary balance plus the allocated share of investment income.

Actuarial value of assets is developed initially in total and then allocated between retirement related benefits and medical premium supplement benefits on a pro-rata basis reflecting allocated share of market value as of the valuation date.

## GASB Statement No. 67

### Statement of Changes in Fiduciary Net Position

	<u>June 30, 2017</u>
<b>Additions</b>	
Contributions:	
Employer	\$2,384,500
Employee	<u>277,313</u>
Total Contributions	2,661,813
Transfer In Payments	86,235
Investment Income	7,927,393
Other	<u>0</u>
Total Additions	10,675,441
<b>Deductions</b>	
Benefit Payments / Refunds	4,253,555
Administrative Expenses	0
Other	<u>0</u>
Total Deductions	<u>4,253,555</u>
Net Increase in Net Position	6,421,886
<b>Net Position Restricted for Pensions</b>	
Beginning of Year Market Value of Assets	<u>61,832,520</u>
End of Year Market Value of Assets	<u><u>\$68,254,406</u></u>

## Net Pension Liability

### Determination of Net Pension Liability

	June 30, 2017
Total Pension Liability (6.45%)	73,452,796
Plan Fiduciary Net Position (Market Value of Assets)	(68,254,406)
Net Pension Liability	\$5,198,390
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	92.92%

### Sensitivity of Net Pension Liability to Changes in the Discount Rate

	1% Decrease (5.45%)	Current Rate (6.45%)	1% Increase (7.45%)
Net Pension Liability	\$12,308,783	\$5,198,390	(\$856,459)

**Schedule of Changes in the Net Pension Liability and Related Ratios (Dollar amounts in millions)**

	fiscal year ending June 30									
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
<b>Total Pension Liability</b>										
Service cost	\$1.0	\$1.0	\$0.9	\$0.7						
Interest	4.9	5.1	5.2	5.3						
Changes of benefit terms	0.0	0.0	0.0	0.0						
Differences between expected and actual experience	0.0	(3.4)	0.0	(6.4)						
Changes of assumptions	3.7	(1.5)	0.0	(0.2)						
Benefit Payments / Refunds	(3.5)	(3.7)	(4.0)	(4.2)						
<b>Net Change in Total Pension Liability</b>	<b>\$6.1</b>	<b>(\$2.5)</b>	<b>2.1</b>	<b>(\$4.8)</b>						
Total Pension Liability - beginning	72.6	78.7	76.2	78.3						
<b>Total Pension Liability - ending (a)</b>	<b>\$78.7</b>	<b>\$76.2</b>	<b>78.3</b>	<b>\$73.5</b>						
<b>Plan Fiduciary Net Position (Market Value of Assets)</b>										
Contributions - employer	\$1.8	\$3.4	\$3.4	\$2.4						
Contributions - employee	0.2	0.2	0.3	0.3						
Transfer In Payments	0.0	0.0	0.0	0.1						
Net investment income	7.9	5.6	2.0	7.9						
Benefit Payments / Refunds	(3.5)	(3.7)	(4.0)	(4.2)						
Administrative expenses	0.0	0.0	0.0	0.0						
Other	0.0	0.0	0.0	0.0						
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$6.4</b>	<b>\$5.5</b>	<b>\$1.7</b>	<b>\$6.5</b>						
Plan Fiduciary Net Position - beginning	48.2	54.6	60.1	61.8						
<b>Plan Fiduciary Net Position - ending (b)</b>	<b>\$54.6</b>	<b>\$60.1</b>	<b>\$61.8</b>	<b>\$68.3</b>						
<b>Net Pension Liability - ending (a) - (b)</b>	<b>\$24.1</b>	<b>\$16.1</b>	<b>\$16.5</b>	<b>\$5.2</b>						
Plan Fiduciary Net Position as a % of the Total Pension Liability	69.4%	78.9%	78.9%	92.9%						
Covered-employee payroll	\$5.0	\$4.5	\$4.5	\$3.5						
Net Pension Liability as a % of covered-employee payroll	483.2%	357.8%	366.7%	148.6%						
Discount Rate	6.50%	6.85%	6.85%	6.45%						



## Schedule of Contributions

	fiscal year ending June 30									
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Actuarially determined contribution	\$3.2	\$3.4	\$3.4	\$2.4						
Contributions in relation to the actuarially determined contribution	1.8	3.4	3.4	2.4						
Contribution deficiency (excess)	\$1.4	\$0.0	\$0.0	\$0.0						
Covered-employee payroll	\$5.0	\$4.5	\$4.5	\$3.5						
Contributions as a percentage of covered-employee payroll	36.1%	75.6%	75.6%	68.6%						

## Additional Requirements Under GASB Statement No. 67

GASB Statement No. 67 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 67, these required pieces will need to be provided by The Kentucky Judicial Form Retirement System. BPS&M is prepared to assist the system as needed.

## GASB Statement No. 68

### Schedule of Changes in NPL, Deferrals, & Pension Expense

	Increase (Decrease)					
	Total Pension Liability (a)	Plan Net Position (Assets) (b)	Net Pension Liability (a) - (b)	Deferred Pension Outflows of Resources	Deferred Pension Inflows of Resources	Pension Expense
<b>Balances--at 06/30/16</b>	\$ 78,302,828	\$ 61,832,520	\$ 16,470,308	\$ 4,088,578	\$ 2,920,752	
<b>Changes for the Year:</b>						
Service cost	665,143		665,143			665,143
Interest expense	5,275,762		5,275,762			5,275,762
Benefit changes						
Experience losses (gains)	(6,379,845)		(6,379,845)	-	1,332,499	(5,047,346)
Changes of assumptions	(157,537)		(157,537)	-	32,903	(124,634)
Contributions--State		2,384,500	(2,384,500)			
Contributions--Members		277,313	(277,313)			(277,313)
Transfer In Payments		86,235	(86,235)			
Net investment income		7,927,393	(7,927,393)			
Expected return on plan investments						(4,268,587)
Current expense of asset gain/loss						(1,593,798)
Non expensed asset gain/loss				-	2,927,045	
Refunds of contributions	-	-	-			
Benefits paid	(4,253,555)	(4,253,555)	-			
Plan administrative expenses						
Recognition of Prior Post-measurement Contribution				(2,384,575)		
Post-measurement Contribution				2,384,575		
Other changes						
Amortization of or change in beginning balances				(426,001)	(1,288,038)	
<b>Net Changes</b>	<u>(4,850,032)</u>	<u>6,421,886</u>	<u>(11,271,918)</u>	<u>(426,001)</u>	<u>3,004,410</u>	<u>(5,370,773)</u>
<b>Balances--at 06/30/17</b>	<u>\$ 73,452,796</u>	<u>\$ 68,254,406</u>	<u>\$ 5,198,390</u>	<u>\$ 3,662,577</u>	<u>\$ 5,925,161</u>	<u>\$ (5,370,773)</u>

## Pension Expense & Deferred Outflows/Inflows of Resources

For the year ended June 30, 2018, the recognized pension expense/(income) will be (\$5,370,773). At June 30, 2018, The Kentucky Judicial Form Retirement System reported deferred outflows of resources and deferred inflows of resources in relation to pensions from the following sources:

	<u>As of June 30, 2017</u>		Recognized in Pension Expense	<u>As of June 30, 2018</u>		
	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>		<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Remaining Amort. Period</u>
Experience losses (gains)						
- 6/30/2017	-	6,379,845	(5,047,346)	-	1,332,499	0.264 years
subtotal	-	6,379,845	(5,047,346)	-	1,332,499	
Change of assumptions						
- 6/30/2017	-	157,537	(124,634)	-	32,903	0.264 years
subtotal	-	157,537	(124,634)	-	32,903	
Net difference between projected and actual earnings on investments						
- 6/30/2014	-	1,886,722	(943,361)	-	943,361	1.000 year
- 6/30/2015	-	1,034,030	(344,677)	-	689,353	2.000 years
- 6/30/2016	1,704,003	-	426,001	1,278,002	-	3.000 years
- 6/30/2017	-	3,658,806	(731,761)	-	2,927,045	4.000 years
subtotal	1,704,003	6,579,557	(1,593,798)	1,278,002	4,559,759	
<b>Total</b>	<u>\$ 1,704,003</u>	<u>\$ 13,116,939</u>	<u>\$ (6,765,778)</u>	<u>\$ 1,278,002</u>	<u>\$ 5,925,161</u>	

Actual investment earnings above (or below) projected earnings are amortized over 5 years. Plan experience and changes of assumptions are amortized over the average remaining service period of actives and inactive (0 years of future service is assumed for inactive for this calculation).

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

<b>Year ended June 30:</b>	
2019	(2,959,201)
2020	(650,437)
2021	(305,760)
2022	(731,761)
2023	-
Thereafter	-

In addition, Governmental Accounting Standards Board Statement 71 ("GASB 71") requires contributions between the measurement date (July 1, 2017) and the disclosure date (June 30, 2018) for GASB 68 be reported as a deferred outflow of resources.

## GASB Statement No. 43

### Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b - a) / c)
7/1/2007	\$ 24,289,368	\$ 22,489,737	\$ (1,799,631)	108.0%	\$ 4,763,785	-37.8%
7/1/2008	\$ 25,117,103	\$ 23,668,943	\$ (1,448,160)	106.1%	\$ 4,755,214	-30.5%
7/1/2009	\$ 24,413,467	\$ 18,481,365	\$ (5,932,102)	132.1%	\$ 4,916,770	-120.7%
7/1/2010	\$ 23,908,481	\$ 19,434,535	\$ (4,473,946)	123.0%	\$ 4,916,770	-91.0%
7/1/2011	\$ 23,337,392	\$ 20,533,088	\$ (2,804,304)	113.7%	\$ 5,192,619	-54.0%
7/1/2012	\$ 24,238,386	\$ 21,582,890	\$ (2,655,496)	112.3%	\$ 5,192,619	-51.1%
7/1/2013	\$ 25,907,629	\$ 23,363,734	\$ (2,543,895)	110.9%	\$ 4,987,823	-51.0%
7/1/2014	\$ 29,405,073	\$ 24,525,907	\$ (4,879,166)	119.9%	\$ 4,987,823	-97.8%
7/1/2015	\$ 33,194,900	\$ 26,955,434	\$ (6,239,466)	123.1%	\$ 4,467,419	-139.7%
7/1/2016	\$ 36,413,147	\$ 28,608,061	\$ (7,805,086)	127.3%	\$ 4,467,419	-174.7%
7/1/2017	\$ 39,967,081	\$ 22,048,825	\$ (17,918,256)	181.3%	\$ 3,505,969	-511.1%

## GASB Statement No. 45

### Schedule of Employer Contributions

Year Ended June 30	Net OPEB Cost	Percentage Contributed	Net OPEB Obligation
2009	\$ 59,759	100%	\$ (3)
2010	\$ 59,759	100%	\$ (6)
2011	\$ -	100%	\$ (6)
2012	\$ -	100%	\$ (6)
2013	\$ -	100%	\$ (6)
2014	\$ -	100%	\$ (6)
2015	\$ -	100%	\$ (6)
2016	\$ -	100%	\$ (6)
2017	\$ -	100%	\$ (6)

### Determination of Annual OPEB Cost

Fiscal Yr Ending	Applicable Valuation Report Used	ARC	Interest on OPEB Obligation	ARC Adjustment	Amort. Factor	Net OPEB Cost	Contribution	Change in Net OPEB Obligation	Net OPEB Obligation
6/30/2008	7/1/2005	\$ 285,476	\$ -	\$ -	12.594409	\$ 285,476	\$ 285,476	\$ -	\$ -
6/30/2009	7/1/2007	\$ 59,759	\$ -	\$ -	12.594409	\$ 59,759	\$ 59,762	\$ (3)	\$ (3)
6/30/2010	7/1/2007	\$ 59,759	\$ -	\$ -	12.409041	\$ 59,759	\$ 59,762	\$ (3)	\$ (6)
6/30/2011	7/1/2009	\$ -	\$ -	\$ -	12.409041	\$ -	\$ -	\$ -	\$ (6)
6/30/2012	7/1/2009	\$ -	\$ -	\$ -	12.409041	\$ -	\$ -	\$ -	\$ (6)
6/30/2013	7/1/2011	\$ -	\$ -	\$ -	12.409041	\$ -	\$ -	\$ -	\$ (6)
6/30/2014	7/1/2011	\$ -	\$ -	\$ -	12.409041	\$ -	\$ -	\$ -	\$ (6)
6/30/2015	7/1/2013	\$ -	\$ -	\$ -	12.409041	\$ -	\$ -	\$ -	\$ (6)
6/30/2016	7/1/2013	\$ -	\$ -	\$ -	12.409041	\$ -	\$ -	\$ -	\$ (6)
6/30/2017	7/1/2015	\$ -	\$ -	\$ -	12.409041	\$ -	\$ -	\$ -	\$ (6)

## GASB Statement No. 74

### Statement of Changes in Fiduciary Net Position

	<u>June 30, 2017</u>
<b>Additions</b>	
Contributions	
Employer	0
Employee	0
Total Contributions	<u>0</u>
Transfer In Payments	0
Investment Income	4,931,095
Other	0
Total Additions	<u>4,931,095</u>
<b>Deductions</b>	
Benefit Payments / Refunds	709,612
Administrative Expenses	0
Other	0
Total Deductions	<u>709,612</u>
Net Increase in Net Position	<u>4,221,483</u>
<b>Net Position Restricted for OPEB</b>	
Beginning of Year Market Value of Assets	<u>37,778,090</u>
End of Year Market Value of Assets	<u><u>\$41,999,573</u></u>

## Net OPEB Liability

### Determination of Net OPEB Liability

Total OPEB Liability	22,048,825
Plan Fiduciary Net Position (Market Value of Assets)	<u>(41,999,573)</u>
Net OPEB Liability	<u><u>(\$19,950,748)</u></u>

Plan Fiduciary Net Position as a Percentage of Total OPEB Liability 190.48%

### Sensitivity of Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

	1% Decrease 7% decreasing to 4% over 12 years	Current 8% decreasing to 5% over 12 years	1% Increase 9% decreasing to 6% over 12 years
Net OPEB Liability	(\$22,208,440)	(\$19,950,748)	(\$17,255,566)

### Sensitivity of Net OPEB Liability to Changes in the Discount Rate

	1% Decrease 5.50%	Current Rate 6.50%	1% Increase 7.50%
Net OPEB Liability	(\$17,230,763)	(\$19,950,748)	(\$22,208,072)



**Schedule of Changes in the Net OPEB Liability and Related Ratios (Dollar amounts in millions)**

	fiscal year ending June 30									
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
<b>Total OPEB Liability</b>										
Service cost	\$0.4									
Interest	2.0									
Changes of benefit terms	0.0									
Differences between expected and actual experience	(10.6)									
Changes of assumptions	2.3									
Benefit Payments / Refunds	(0.7)									
<b>Net Change in Total OPEB Liability</b>	(\$6.6)									
<b>Total OPEB Liability - beginning</b>	28.6									
<b>Total OPEB Liability - ending (a)</b>	\$22.0									
<b>Plan Fiduciary Net Position (Assets)</b>										
Contributions - employer	\$0.0									
Contributions - employee	0.0									
Transfer In Payments	0.0									
Net investment income	4.9									
Benefit Payments / Refunds	(0.7)									
Administrative expenses	0.0									
Other	0.0									
<b>Net Change in Plan Fiduciary Net Position</b>	\$4.2									
<b>Plan Fiduciary Net Position - beginning</b>	37.8									
<b>Plan Fiduciary Net Position - ending (b)</b>	\$42.0									
<b>Net OPEB Liability - ending (a) - (b)</b>	(\$20.0)									
<b>Plan Fiduciary Net Position as a % of the Total OPEB Liability</b>	190.9%									
<b>Covered-employee payroll</b>	\$3.5									
<b>Net OPEB Liability as a % of covered-employee payroll</b>	(571.4%)									
Discount Rate	6.50%									

## Schedule of Contributions

	fiscal year ending June 30									
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Actuarially determined contribution	\$0.0									
Contributions in relation to the actuarially determined contribution	0.0									
Contribution deficiency (excess)	\$0.0									
Covered-employee payroll	\$3.5									
Contributions as a percentage of covered-employee payroll	0.0%									

## Additional Requirements Under GASB Statement No. 74

GASB Statement No. 74 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 74, these required pieces will need to be provided by The Kentucky Judicial Form Retirement System. BPS&M is prepared to assist the system as needed.

## GASB Statement No. 75

### Statement of Changes in Net OPEB Liability

	Increase (Decrease)		
	Total OPEB Liability	Plan Net Position (Assets)	Net OPEB Liability
	(a)	(b)	(a) - (b)
<b>Balances--at 06/30/2017</b>	\$28,608,061	\$37,778,090	(\$9,170,029)
<b>Changes for the Year:</b>			
Service cost	442,364		442,364
Interest	2,010,763		2,010,763
Benefit changes	0		0
Difference between expected and actual experience	(10,575,051)		(10,575,051)
Changes of assumptions	2,272,300		2,272,300
Contributions--Employer		0	0
Contributions--Employee		0	0
Transfer In Payments		0	0
Net investment income		4,931,095	(4,931,095)
Refunds of contributions		0	0
Benefits paid	(709,612)	(709,612)	0
Administrative expenses		0	0
Other changes		0	0
<b>Net Changes</b>	<u>(6,559,236)</u>	<u>4,221,483</u>	<u>(10,780,719)</u>
<b>Balances--at 06/30/2018</b>	<u>\$22,048,825</u>	<u>\$41,999,573</u>	<u>(\$19,950,748)</u>

### OPEB Expense

	Fiscal Year Ending June 30, 2018
Service cost	\$442,364
Interest	2,010,763
Benefit changes	0
Contributions--Employee	0
Expected investment return	(2,626,627)
Recognition of Deferred Inflows/Outflows of Resources	
Recognition of economic/demographic gains or losses	(8,366,338)
Recognition of investment gains or losses	(460,894)
Recognition of assumption changes or inputs	1,797,706
Plan administrative expenses	0
<b>OPEB Expense</b>	<u>(\$7,203,026)</u>

## Deferred Outflows/Inflows of Resources

For the year ended June 30, 2018, the recognized OPEB expense will be -\$7,203,026. At June 30, 2018, the Employer reported deferred outflows of resources and deferred inflows of resources relation to benefits from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Remaining Amort. Period</u>
Experience losses (gains)			
- June 30, 2017	0	2,208,713	0.264 years
subtotal	0	2,208,713	
Asset losses (gains)			
- June 30, 2017	0	1,843,574	4.000 years
subtotal	0	1,843,574	
Changes of assumptions			
- June 30, 2017	474,594	0	0.264 years
subtotal	474,594	0	
<b>Total</b>	<u>\$474,594</u>	<u>\$4,052,287</u>	

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEBs as of June 30, 2018 will be recognized in OPEB expense as follows:

<b>Year ended June 30:</b>	
2019	(2,195,013)
2020	(460,894)
2021	(460,894)
2022	(460,892)
2023	0
Thereafter	0

GASB Statement No. 71 requires contributions between the measurement date (June 30, 2017) and the disclosure date (June 30, 2018) for Statement No. 75 to be reported as a deferred outflow of resources.

## Schedule of Changes in Deferred Outflows/Inflows

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
<b>Balances--at 06/30/2017</b>	<u>\$0</u>	<u>\$0</u>
Changes for the Year:		
Contribution (prior year expected)	0	0
Contribution (current year expected)	0	0
Experience gains/losses	0	2,208,713
Asset gains/losses	0	1,843,574
Amortization of gains/losses	474,594	0
Net Changes	<u>474,594</u>	<u>4,052,287</u>
<b>Balances--at 06/30/2018 *</b>	<u><u>\$474,594</u></u>	<u><u>\$4,052,287</u></u>

\* Deferred OPEB Outflows includes deferred losses of \$474,594 plus expected contributions of \$0.

\* Deferred OPEB Inflows includes deferred gains of \$4,052,287.

## GASB Notes

### Notes to GASB 43, 45, 67, 68, 74, and 75 Disclosures

1. The tables in this report account for liabilities and assets only for the traditional defined benefit/OPEB tier under the plan; liabilities and assets pertaining to the hybrid cash balance/OPEB tier are presented in a separate report.
2. Actuarial accrued liability is based on the projected unit credit funding method for actuarial valuations prior to July 1, 2013 and the entry age normal funding method thereafter.
3. Effective July 1, 2007, OPEB liabilities and allocated assets have been excluded from GASB 67 and 68 disclosures and established in GASB 43, 45, 74, and 75 disclosures.
4. Market value of assets as of July 1, 2007 was allocated between pension and OPEB obligations based on proportionate share of accrued liability on that date. Allocations in subsequent years are based on prior year allocated value adjusted for contributions and benefits paid during the year, with investment return (net of expenses) allocated proportionately between retirement and OPEB obligations. Actuarial value of assets is then allocated based on the market value of retirement and OPEB assets.
5. Actuarial value of assets is equal to cost value prior to 1990, 1990 through 2002 utilize market related value based on the average of the ratio of market to cost value over the prior five years applied to current cost value. 2003 and later use a 5-year asset smoothing method that is phased in from July 1, 2003 market value.
6. Information used in preparing these exhibits has been extracted from past valuation reports.
7. Covered payroll reflects payroll for all current plan members.
8. Fiscal years beginning prior to December 15, 1986 have not been included pursuant to paragraph 32 of GASB Statement No. 27.
9. Interest on OPEB Obligation is based on assumed valuation interest assumption for the prior year. The interest rates for prior years are as follows: 7% through 1999 valuation; 8% for 2001 and 2003 valuations; 7.5% beginning with 2005 valuation; 7% beginning with 2009 valuation; 6.5% beginning with 2017 valuation.
10. GASB 67 replaces GASB 25 effective for the fiscal year ending June 30, 2014. The valuation date, disclosure date, and measurement date all fall on the same date for purposes of GASB 67.
11. GASB 68 replaces GASB 27 effective for the fiscal year ending June 30, 2015. It is assumed the measurement date for GASB 68 will be 12 months before the disclosure date. For the year ending June 30, 2018, the measurement date is July 1, 2017 (the valuation date).

Note: Above statements are partially based on information furnished by the prior actuary.

## Summary of Participant Data

### Distribution of Active Participants with Average Compensation

Attained Age	Years of Credited Service										Total
	Under 1	1 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	Over 39	
Under 25											
25 – 29											
30 – 34		1	1								2
		\$47,967	\$40,933								\$44,450
35 – 39		2	1	1							4
		\$46,004	\$39,374	\$39,983							\$42,841
40 – 44		1	2								3
		\$38,652	\$39,919								\$39,496
45 – 49		3		2	3						8
		\$41,588		\$49,655	\$43,404						\$44,286
50 – 54		1	4	4	1						10
		\$36,941	\$44,169	\$41,215	\$45,178						\$42,366
55 – 59			2	2	2	3	3	2			14
			\$42,169	\$45,116	\$25,201	\$43,815	\$48,640	\$55,024			\$43,742
60 – 64		4	4	4	4	4					20
		\$29,797	\$44,310	\$50,687	\$42,714	\$49,979					\$43,497
65 – 69			1	2	2	1	4				10
			\$43,617	\$45,764	\$48,873	\$43,025	\$45,061				\$45,616
Over 69		2		4		1	1	1			9
		\$40,173		\$45,319		\$40,173	\$51,069	\$57,913			\$45,642
Total		14	15	19	12	9	8	3			80
		\$38,562	\$42,801	\$45,786	\$41,200	\$46,062	\$47,154	\$55,987			\$43,825

## Distribution of Inactive Participants with Average Annual Benefit

Attained Age	Retired and Beneficiaries	Terminated	Total
Under 50	1	7	8
	\$22,459	\$11,059	\$12,484
50 – 54	3	8	11
	\$28,327	\$8,146	\$13,650
55 – 59	5	11	16
	\$29,541	\$14,061	\$18,899
60 – 64	15	10	25
	\$24,564	\$12,152	\$19,599
65 – 69	49	3	52
	\$22,932	\$31,410	\$23,421
70 – 74	45	2	47
	\$17,055	\$13,504	\$16,904
75 – 79	46	1	47
	\$19,993	\$58,191	\$20,806
80 – 84	30		30
	\$18,534		\$18,534
85 – 89	21	1	22
	\$17,997	\$48,451	\$19,381
90 – 94	4		4
	\$24,695		\$24,695
Over 94	1		1
	\$7,113		\$7,113
Total	220	43	263
	\$20,338	\$15,038	\$19,471



## Glossary of Terms

**Amortization** – The process of systematically recognizing prior gains and losses as a component of the Pension Expense.

**Fiduciary Net Position** – The market value of assets as of a specified measurement date.

**Funded Status** – The difference between the Fiduciary Net Position and the Total Pension Liability as of the measurement date.

**Gain/Loss** – A change in the value of either the Total Pension Liability or the plan assets resulting from experience different from that assumed or from a change in an actuarial assumption.

**Interest Cost** – The amount recognized in a period determined as the increase in the Total Pension Liability due to the passage of time.

**Pension Expense** – The sum of Service Cost, Interest Cost, Expected Return on Assets and amortizations of Actuarial Gain/Loss over the average remaining service period (or the life expectancy) of plan participants expected to receive plan benefits plus a 5-year amortization of Asset Gain/Loss.

**Total Pension Liability** – The Entry Age Normal Accrued Liability.

**Service Cost** – is the actuarial present value of benefits attributed to services rendered by employees during the measurement.



# Kentucky Legislators Retirement Plan - Hybrid Tier

*Actuarial Valuation and Report*

*as of July 1, 2017*

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## Introduction

An actuarial valuation of the Kentucky Legislators Retirement Plan - Hybrid Tier ("KLRP-HT") has been performed as of July 1, 2017. Actuarial valuations are based on the integrity of employee data, plan asset data, plan provisions and an extensive set of assumptions regarding future events. There is necessary uncertainty with any actuarial calculation based on the accuracy of the data provided, the correct interpretation of plan provisions and the realization of the assumptions made. These results were based on participant data and asset information provided by The Kentucky Judicial Form Retirement System. This information was not audited but was reviewed for reasonableness.

Detailed explanations of the actuarial assumptions and methods used in the report are contained in later sections of this report. Also included in this report is a summary of provisions of the plan as we understand them.

This report provides details on the actuarial valuation underlying the recommended contribution to the KLRP-HT for plan years commencing in 2018 and 2019. This determination was performed pursuant to Kentucky Revised Statute ("KRS") §21.525 for the retirement system defined in KRS §6.500 to §6.577. KRS §21.402 and §21.525, as well as other statutes found in KRS Chapter 21 cited hereafter, are made applicable to KLRP-HT by KRS §6.525.

Governmental Accounting Standards Board Statement 67 ("GASB 67"), Statement 43 ("GASB 43"), and Statement 74 ("GASB 74") establish financial reporting standards for defined benefit pension plans and other postemployment benefit (OPEB) plans sponsored by employers that are subject to governmental accounting standards. Governmental Accounting Standards Board Statement 68 ("GASB 68"), Statement 45 ("GASB 45"), and Statement 75 ("GASB 75") provide standards for reporting pension and OPEB expenditures and expense, and related liabilities and assets for such plans. The purpose of this report is to provide pertinent financial statement disclosure information for the fiscal year ending in 2017. Actuarial computations under Statements 67, 68, 43, 45, 74, and 75 are for purposes of fulfilling plan and employer governmental accounting requirements and may not be appropriate for other purposes. This report has been prepared on a basis consistent with our understanding of the statements and does not constitute legal, accounting, tax or investment advice.

Statements 68 and 75 set forth a methodology for the calculation of the annual Pension Expense for the upcoming fiscal year. GASB 68 and GASB 75 provide a method for reflecting prior gains and losses from asset and plan experience, as well as other areas including plan amendments. Amounts not reflected previously or in the upcoming year are reflected in the Deferred Outflows and Inflows of Resources shown.

Statement 45 sets forth a methodology to determine annual adjustments to the Annual Required Contribution (ARC), which is the contribution recommended pursuant to the appropriate actuarial valuation, to account for differences between amounts expensed and contributions actually made. Under GASB 45, the resulting adjusted amount is referred to as the Annual OPEB Cost (AOC) and the accumulated difference between the AOC and the actual contribution is referred to as the Net OPEB Obligation (NOO).

BPS&M does not have access to and is not providing information concerning liabilities other than benefits, such as for legal or accounting fees.

BPS&M is not aware of any significant events subsequent to the current year's measurement date that could materially affect the information contained in this report. However, we are aware that studies have been prepared suggesting substantial changes to state-wide retirement systems, including KLRP-HT; this report does not consider any such changes.

We are not aware of any relationship between the plan or plan sponsor and BPS&M, LLC which would impair or appear to impair our objectivity.

To the best of our knowledge, all information provided in this report is complete and accurate and disclosures for GASB purposes have been determined in accordance with generally accepted accounting principles.

## Summary of Report

An actuarial valuation of the Kentucky Legislators Retirement Plan - Hybrid Tier (“KLRP-HT”) was conducted as of July 1, 2017. The purpose of the valuation is to determine the cost implications of the plan including a determination of annual funding levels for the fiscal years beginning July 1, 2018 and July 1, 2019.

In 2013 the applicable state statutes were amended to close participation in the traditional defined benefit tier, with all individuals first electing to participate in Kentucky Legislators Retirement Plan (“KLRP”) on or after January 1, 2014 being covered under a new hybrid cash balance tier. **This report covers only the hybrid cash balance/OPEB tier of KLRP.**

It is our understanding that this plan is a “governmental plan” as defined in Internal Revenue Code Section 414(d) and this report has been prepared on that basis.

On the basis of the valuation, it has been determined that the annual funding requirements for the State for the fiscal year beginning in 2018 for the plan, prior to adjusting with interest, as described in the Summary of Benefits section of this report, are as follows:

	Total Amount	Percent of Payroll
Annual Required Contribution	43,355	4.83%
Recommended Contribution	43,355	4.83%

The Annual Required Contribution is determined based on assumptions and methods set forth in the statute and established by the Board of Trustees. The Recommended Contribution is determined as the greater of the Annual Required Contribution and 4.00% of payroll.

The Annual Required Contribution and Recommended Contribution shown above are calculated using asset and liability values as of July 1, 2017. These amounts are used to determine contributions for the fiscal years beginning July 1, 2018 and July 1, 2019.

Due to the lag period between the calculated date and the actual contributions, we have adjusted the Annual Required Contributions and Recommended Contributions for the plan years 2018-2019 and 2019-2020 with one and two years of interest, respectively, at the interest rate assumption of 4.00%.

	2018-2019 (1 year of interest)	2019-2020 (2 years of interest)
Annual Required Contribution (with interest)	45,089	46,893
Recommended Contribution (with interest)	45,089	46,893

## Summary of Selected Plan Information

	Plan Year Beginning	
	7/1/2017	7/1/2015
Number of Participants		
Active	23	11
Terminated Vested	0	0
Retired	0	0
Beneficiaries	0	0
Total	23	11
Average Age (for actives)	52.5	50.8
Average Service (for actives)	1.4	0.6
Annual Covered Payroll	\$ 897,712	\$ 419,012
Average Salary	39,031	38,092
Accrued Liability	147,911	29,753
Actuarial Asset Value	141,146	24,788
Market Asset Value	145,643	24,463
Unfunded Accrued Liability (UAL)	6,765	4,965
Funded Ratio (AVA/AL)	95.43%	83.31%
<b>Annual Funding Level <sup>1</sup></b>		
State Portion of Normal Cost	\$ 43,017	\$ 20,521
Expected Employee Contributions	53,863	25,141
Total Normal Cost	96,880	45,662
Annual Required Contribution	43,355	20,918
Percent of Covered Payroll	4.83%	4.99%

<sup>1</sup>In accordance with KRS 21.525 (legally prescribed funding method).

## **Legislative Background**

As stated previously, state statutes were amended in 2013 such that all participants entering KLRP on or after January 1, 2014 will be covered under a hybrid cash balance/OPEB tier; those entering before that date will continue to be covered under the traditional defined benefit/OPEB tier. The legislation making this change also restricted the availability of future cost-of-living adjustments (COLA's) to plan benefits.

Statement No.43 of the Governmental Accounting Standards Board was amended by Statement No. 74 of the Governmental Accounting Standards Board. Statement No. 74 became effective for the plan's financial statements for the fiscal year beginning after June 15, 2016. Statement No. 74 establishes financial reporting standards for state and local government OPEB plans that are administered through trusts or equivalent arrangements. The objective of this statement is to improve the usefulness of the information included in pension plan reports.

The Governmental Accounting Standards Board amended Statement No. 45 with Statement No. 75; the effective date for Statement No. 75 is for the fiscal year beginning after June 15, 2017. Statement No. 45 continues to apply to the financial reporting requirement for KLRP-HT for the year ending June 30, 2017. Statement No. 45 provides standards for reporting pension expenditures and expense, and related pension liabilities and assets, for such plans.

Statement No. 75 of the Governmental Accounting Standards Board requires the determination of the OPEB expense for the fiscal year beginning July 1, 2017. Statement No. 75 provides a new approach to calculating the pension expense which differs significantly from Statement No. 45 methodology.

## **Actuarial Soundness**

A plan that has adopted a reasonable funding method, that adopts reasonable assumptions and which contributes at a rate at or above the recommended contribution rate (based on these reasonable methods and assumptions), could be considered to be actuarially sound.

In order to ensure KLRP-HT is funded in an "actuarially sound manner", we would recommend the following:

1. Revise the actuarial funding method to amortize all past unfunded as well as new liabilities over a period not more than 15 years and amortize future gains and losses over a period not more than 15 years. (Note that GASB 68 may require the expensing of liabilities at a faster pace than these amortization periods.)
2. Contribute at least the recommended contribution each year.

Deviations from these recommendations may result in an "actuarially unsound" approach to funding KLRP-HT and may eventually result in KLRP-HT becoming insolvent – that is, exhausting assets at which time all future benefits would be provided on a pay as you go basis.

Although the Actuarial Standards of Practice 4 "Measuring Pension Obligations" allows for plan liabilities to be calculated under a legally prescribed method, the statement goes on to say,

*"If, in the actuary's professional judgment, such an actuarial cost method or amortization method is significantly inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming that all actuarial assumptions will be realized and that the plan sponsor or other contributing entity will make contributions when due, the actuary should disclose this."*

It is our professional actuarial opinion that the current legally prescribed method, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability (per KRS 21.525), is inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming all actuarial assumptions are realized.

## Changes in Actuarial Assumptions

The following changes were made to the actuarial assumptions effective June 30, 2017:

	<u>Previous</u>	<u>Current</u>
Salary Scale	1% for the next five years beginning July 1, 2015 and 3.5% thereafter	1% for the next five years beginning July 1, 2017 and 3.5% thereafter

The salary scale change described had a negligible effect on liabilities and the annual recommended contribution.

	<u>Previous</u>	<u>Current</u>
Retirement Rates	Included an extra 20% rate at the age a member reaches 27 years of service credit	Removed extra 20% rate at the age a member reaches 27 years of service credit

The retirement rates change described above resulted in a decrease in liabilities and annual recommended contribution.

	<u>Previous</u>	<u>Current</u>
Medical Trend Rates	11.00% decreasing to 5.00% over 6 years beginning July 1, 2015	8.00% decreasing to 5.00% over 12 years beginning July 1, 2017

The medical trend rates change described above resulted in an increase in liabilities and annual recommended contribution.

Summaries of the plan provisions, actuarial assumptions and methods can be found in the Basis of Valuation section of this report.

## Other Significant Changes

1. It is our understanding that recent legislation effective for this 2017 actuarial valuation requires the preparation of additional information to be part of the biennial actuarial valuation report. This includes a 20-year projection of liability and cost, as well as disclosure of sensitivity of results to changes in significant assumptions. We have been instructed by the Board of Trustees to not prepare this information until the cost of preparation of such additional information can be appropriately budgeted.



## Actuarial Certification

The information contained in this document (including any attachments) is not intended by BPS&M to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer. The information and valuation results shown in this report are, to the best of our knowledge, complete and accurate and are based upon the following:

1. Employee census data as of July 1, 2017, submitted by The Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
2. Financial data as of June 30, 2017, submitted by The Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
3. Actuarial assumptions and methods as established either by statute or the Board. The actuarial assumptions currently adopted by the Board appear to be reasonable, both individually and in aggregate.
4. For purposes of GASB 43, 45, 67, 68, 74, and 75 disclosures, assets were split between pension and retiree medical liabilities on the basis of the employee and employer contributions allocated to each part and a prorata allocation of investment return. This methodology was based on the process used to split assets in the traditional defined benefit plan between the pension and retiree medical components.

We believe the information is sufficiently complete and reliable. This report provides actuarial advice and does not constitute legal, accounting, tax or investment advice.

The actuarial valuation summarized in this report has been performed utilizing generally accepted actuarial principles. It is my opinion that the results fully and fairly disclose the actuarial position of the plan on the valuation date. I am a consulting actuary for BPS&M, LLC, member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

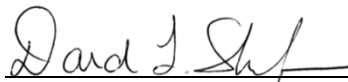
Certified by:

  
Alan C. Pennington, F.S.A.

Alan C. Pennington, F.S.A., E.A., M.A.A.A.  
Consulting Actuary/Principal

October 9, 2017

Date

  
David L. Shaub, F.S.A., M.A.A.A.

David L. Shaub, F.S.A., M.A.A.A.  
Managing Consultant

October 9, 2017

Date

Bryan, Pendleton, Swats & McAllister, LLC  
5301 Virginia Way, Suite 400  
Brentwood, TN 37027  
(615) 665-1640

## Annual Required Contribution

### Determination of Annual Required Contribution as of July 1, 2017

	<u>Pension</u>	<u>OPEB</u>	<u>Total</u>
1. Accrued Liability			
Actives			
Actives	111,954	-	111,954
Medical Premium Supplement	-	35,957	35,957
Total Active Liability	111,954	35,957	147,911
Inactives			
Retired	-	-	-
Deferred Vested	-	-	-
Beneficiaries	-	-	-
Medical Premium Supplement	-	-	-
Total Inactive Liability	-	-	-
Total Accrued Liability	111,954	35,957	147,911
2. Valuation Assets	112,365	28,781	141,146
3. Unfunded Past Service Liability	(411)	7,176	6,765
4. Gross Normal Cost			
a) Retirement Related	76,915	-	76,915
b) Medical Premium Supplement Related	-	19,965	19,965
c) Total Normal Cost	76,915	19,965	96,880
5. Annual Covered Payroll	897,712	897,712	897,712
6. Estimated Employee Contributions for the Next 12 Months			
a) Retirement Related	44,886	-	44,886
b) Medical Premium Supplement Related	-	8,977	8,977
c) Total Estimated Employee Contributions	44,886	8,977	53,863
7. Net Normal Cost			
a) Retirement Related (4a - 6a)	32,029	-	32,029
b) Medical Premium Supplement Related (4b - 6b)	-	10,988	10,988
c) Total Net Normal Cost (4c - 6c)	32,029	10,988	43,017
d) Net Normal Cost as Percent of Pay (7c / 5)	3.57%	1.22%	4.79%
8. Interest plus 1% of Unfunded Past Service Liability	(21)	359	n/a
9. Total Annual Required Contribution (max (0, 7c + 8))	32,008	11,347	43,355
10. Payment as a Percentage of Covered Payroll (9 / 5)	3.57%	1.26%	4.83%

## Actuarial Asset Value

### Determination of Actuarial Asset Value as of July 1, 2017

	2016-17 Plan Year	2015-16 Plan Year	2014-15 Plan Year	2013-14 Plan Year
Interest Return Assumption	4.00%	4.00%	4.00%	4.00%
Market Value at Beginning of Year				
Amount	\$ 74,575	\$ 24,463	\$ -	\$ -
Interest to End of Year	2,983	979	-	-
Employer Contributions				
Amount	21,000	19,682	8,796	-
Interest to End of Year	420	394	176	-
Member Contributions				
Amount	42,202	29,524	15,585	-
Interest to End of Year	844	590	312	-
Transfers from KERS				
Amount	-	-	-	-
Interest to End of Year	-	-	-	-
Benefits Paid				
Amount	2,938	-	-	-
Interest to End of Year	59	-	-	-
Expected End of Year Assets	139,027	75,632	24,869	-
Market Value at End of Year	145,643	74,575	24,463	-
Investment Gain (Loss)	6,616	(1,057)	(406)	-
Adjustment Percentage	80%	60%	40%	20%
Actuarial Asset Value Adjustment	(5,293)	634	162	-
Actuarial Asset Value (Market Value plus Adjustment)	<b>\$ 141,146</b>			

	Retirement	Medical Supplement
Market Value at Beginning of Year	59,665	14,910
State Contributions	15,444	5,556
Member Contributions	35,169	7,033
Transfers In Payments	-	-
Distributions	-	-
Refund of Contributions	2,938	-
Allocated Investment Return	8,605	2,199
Market Value at End of Year	115,945	29,698
Allocation of Actuarial Asset Value	112,365	28,781

## Summary of Benefits

*This summary is not a Summary Plan Description or a plan document. You should not rely solely on this summary in making a determination of eligibility of benefits. Liabilities and plan provisions are based on the plan data and provisions as of July 1, 2017. This report covers only the hybrid cash balance/OPEB tier of KLRP.*

### Source

Sections 6.500-6.577 of the Kentucky Revised Statutes and 2013 Senate Bill 2

### Eligibility for Membership

Members of the General Assembly may elect to make monthly contributions within 30 days after taking office, and thereby become eligible for membership in the plan. Individuals commencing participation before January 1, 2014 became participants in the KLRP.

### Hypothetical Member Account

The Hypothetical Member Account for each member is credited monthly with 9% of “creditable compensation” (including a 5% employee credit and a 4% state credit), as well as interest as described below. The Hypothetical Member Account balance on June 30 each year is equal to the sum of all prior contribution credits and all prior interest credits.

### Employee Contributions

All members contribute 5% of their “creditable compensation” to help fund their pension benefit. Additionally, all members contribute 1% of their “creditable compensation” towards the retiree medical benefit.

### State Contributions

The state contributes actuarially determined amounts to finance benefits.

### Creditable Compensation

Creditable compensation is based on actual compensation received during each year.

### Interest on Hypothetical Member Account

The Hypothetical Member Account will be credited with 4% annually. The credit will be applied on each June 30 based upon the Hypothetical Member Account balance from the preceding June 30. No interest credit is provided for contribution credits made in the current year.

Additionally, if the geometric average net investment return for the prior five years (or years since the effective date of the hybrid plan, if less) exceed 4%, members who were active and participating in the prior year will have their hypothetical accounts credited with 75% of the amount of the return over 4%. This additional interest credit is applied in the same method as the interest credit in the prior paragraph.

## Normal Retirement

### Condition

Members who have attained age 65 and completed at least 5 years of legislative service. However, for members who are at least age 57, members may retire if age plus service equals 87 years.

### Benefit

A member will receive their accumulated Hypothetical Account as either a lump sum or as one of a variety of annuity options, calculated by dividing their accumulated Hypothetical Account by an actuarial factor.

## Early Retirement

A member who retires prior to normal retirement date with at least 5 years of service is eligible for a full refund of their accumulated Hypothetical Account as a lump sum.

## Termination Benefit

If a legislator ceases to be a member of the plan prior to having 5 years of service, the amount of the member's accumulated contributions shall be returned to the member, including the member contributions and the interest applicable to this portion of the account. A member terminating with less than 5 years of service does not receive a refund of state contributions nor the interest applicable to this portion of the account.

## Death Benefit

Upon the death of a member who at the time of death was receiving a retirement income, the named beneficiary shall receive survivor benefits based upon the form of retirement benefits being received.

If a member with at least 5 years of service dies before retirement, the named beneficiary is entitled to receive a full refund of the accumulated Hypothetical Member Account. If a member with less than 5 years of service dies before retirement, the named beneficiary is entitled to receive a refund of the member's accumulated contributions, including the member contributions and the interest applicable to this portion of the account.

## Medical Insurance Premium Supplement

Retired members with at least 15 years of service, in addition to actual retirement benefits, will receive a monthly medical insurance benefit of ten dollars per year of service.

The current premium rates in effect are:

	<u>Monthly Premium</u>
<i>Under age 65</i>	
Family coverage	\$1,738.40
Single coverage	721.14
Parent Plus coverage	1,023.04
Member and Spouse	1,564.20
<i>Age 65 or older</i>	
Medicare Advantage PPO	312.79

Premium rates are approved by the Board.

## Actuarial Assumptions

### Funding Method

Accrued liability and normal cost calculated based on Entry Age Normal funding method. The required contribution is calculated based on KRS 21.525, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability.

### Interest

4% per annum – this rate was selected by the Board of Trustees and BPS&M and the Fund Investment Manager believe this to be a reasonable long-term rate of return assumption.

### Mortality

RP-2000 Mortality Tables with white collar adjustment with Pre and Post Commencement Rates with projected mortality improvements after year 2000 under Projection Scale AA (male and female scales); i.e., full generational mortality.

### Terminations

Table T-4 from the Actuary's Pension Handbook. Specimen rates are as follows:

<u>Age</u>	<u>Rate of Termination</u>
20	.054
25	.053
30	.051
35	.047
40	.042
45	.035
50	.025
55	.009
60	.001
65+	.000

### Salary Increases

1% for the next five years, and 3.5% thereafter.

### Disability

None

## Retirement Age

Retirements were assumed to occur as follow:

<u>Retirement Age *</u>	<u>Percentage of Active Members Retiring</u>
60	16.67%
61	20.00%
62	25.00%
63	33.33%
64	50.00%
65	100.00%

\* The plan also requires 5 years of service to be eligible to retire.

Prior to July 1, 2017, an extra 20% rate was assumed at the age a member reaches 27 years of service credit. No additional retirement rate is currently assumed.

## Post-Retirement Death Benefit

Assumption is that 80% of the legislators would be married at retirement and the husband would be 3 years older than the wife on average.

## Pre-Retirement Death Benefit

Assumption is that 80% of the legislators would be survived by a spouse upon death prior to retirement and that the husband would be 3 years older than the wife on average.

## Form of Benefit

All participants are assumed to receive a lump sum.

## Medical Insurance Premium Supplement

Medical premiums and claim costs will increase for each year beyond the valuation date at the following rates:

Year 1	8.00%
Year 2	7.75%
Year 3	7.50%
Year 4	7.25%
Year 5	7.00%
Year 6	6.75%
Year 7	6.50%
Year 8	6.25%
Year 9	6.00%
Year 10	5.75%
Year 11	5.50%
Year 12	5.25%
Years 13+	5.00%

An annual COLA of 1.5% is applied to the monthly insurance benefit, beginning at retirement.

100% of eligible retirees are assumed to elect the benefit. It was further assumed that coverage would be split among retirees as follows:

	% of Retirees	% With Spouse Coverage
<b><i>Pre-Medicare Coverage</i></b>		
Family	11%	N/A
Single	58%	N/A
Parent Plus	5%	N/A
Member and Spouse	26%	N/A
<b><i>Medicare Coverage</i></b>		
Medicare Advantage PPO	100%	75%

The assumed annual claims costs per subscriber as of July 1, 2017 are:

<u>Pre-65 Cost</u>	<u>Post-65 Cost</u>
\$ 14,848	\$ 6,569

Claims were adjusted downward 3% for each year of age reduction from age 65 to age 55.

Retirees are assumed to contribute the difference between the premium rate and the portion of the premium paid by the Plan. Premium rates and Plan contributions are described in the Summary of Benefits.

## Non-members

Legislators electing not to participate are assumed to continue as non-members in the future.



## Actuarial Methods

### Asset Valuation Method

The determination of the actuarial value of assets is as follows:

1. Investment gains/losses are determined for each year by comparing the expected value of assets based on the assumed interest assumption to actual market value. Expected value of assets in each year shall be determined by projecting the market value of assets from the prior year using the assumed interest rate, plus contributions less benefit payments and plan expenses (adjusted with interest at the assumed rate). If the expected value of plan assets is different than the actual market value of plan assets then the difference is treated as a gain or loss for that year.
2. The amount of any gain or loss as determined above shall be recognized evenly over the subsequent five years.
3. The actuarial value of assets on any valuation date shall be equal to the market value of assets on that date adjusted as follows:
  - Reduced by 80% of a gain or increased by 80% of a loss from the preceding year
  - Reduced by 60% of a gain or increased by 60% of a loss from the 2<sup>nd</sup> preceding year
  - Reduced by 40% of a gain or increased by 40% of a loss from the 3<sup>rd</sup> preceding year
  - Reduced by 20% of a gain or increased by 20% of a loss from the 4<sup>th</sup> preceding year
4. In no event will the actuarial value of assets be less than 80% or greater than 120% of the current market value of assets

This asset valuation method is used in both the determination of funding levels as well as for disclosure purposes under GASB Statement Nos. 43 and 45. The fair market value of assets is used for disclosure purposes under GASB Statement Nos. 67, 68, 74, and 75.

For purposes of GASB Statement Nos. 43, 45, 67, 68, 74, and 75, the market value of assets has been allocated between retirement related and medical premium supplement liabilities. This market value allocation is carried forward each year based on the following:

1. State and member contributions, are allocated pro-rata reflecting the ARC for that year.
2. Benefits paid reflect actual benefits paid relative to retirement related benefits separately from medical premium supplements.
3. Preliminary assets are determined by adjusting beginning value for allocated State and member contributions and actual benefits paid.
4. Net investment return is allocated pro-rata based on the preliminary assets developed in the previous step.
5. Allocated assets as of the valuation date equal the preliminary balance plus the allocated share of investment income.

Actuarial value of assets is developed initially in total and then allocated between retirement related benefits and medical premium supplement benefits on a pro-rata basis reflecting allocated share of market value as of the valuation date.

## GASB Statement No. 67

### Statement of Changes in Fiduciary Net Position

	<u>June 30, 2017</u>
<b>Additions</b>	
Contributions:	
Employer	\$15,444
Employee	35,169
	<hr/>
Total Contributions	50,613
Transfer In Payments	0
Investment Income	8,605
Other	0
	<hr/>
Total Additions	59,218
 <b>Deductions</b>	
Benefit Payments / Refunds	2,938
Administrative Expenses	0
Other	0
	<hr/>
Total Deductions	2,938
	<hr/>
Net Increase in Net Position	56,280
 <b>Net Position Restricted for Pensions</b>	
Beginning of Year Market Value of Assets	59,665
	<hr/>
End of Year Market Value of Assets	\$115,945
	<hr/> <hr/>

## Net Pension Liability

### Determination of Net Pension Liability

	June 30, 2017
Total Pension Liability (4.00%)	111,954
Plan Fiduciary Net Position (Market Value of Assets)	(115,945)
Net Pension Liability	(\$3,991)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	103.56%

### Sensitivity of Net Pension Liability to Changes in the Discount Rate

	1% Decrease	Current Rate	1% Increase
	(3.00%)	(4.00%)	(5.00%)
Net Pension Liability	\$2,251	(\$3,991)	(\$9,893)

**Schedule of Changes in the Net Pension Liability and Related Ratios (Dollar amounts in thousands)**

	fiscal year ending June 30									
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
<b>Total Pension Liability</b>										
Service cost	\$0.0	\$36.2	\$36.2							
Interest	0.0	2.4	3.8							
Changes of benefit terms	21.7	0.0	0.0							
Differences between expected and actual experience	0.0	0.0	17.9							
Changes of assumptions	0.0	0.0	(3.3)							
Benefit Payments / Refunds	0.0	0.0	(2.9)							
<b>Net Change in Total Pension Liability</b>	<b>\$21.7</b>	<b>\$38.6</b>	<b>\$51.7</b>							
Total Pension Liability - beginning	0.0	21.7	60.3							
<b>Total Pension Liability - ending (a)</b>	<b>\$21.7</b>	<b>\$60.3</b>	<b>\$112.0</b>							
<b>Plan Fiduciary Net Position (Market Value of Assets)</b>										
Contributions - employer	\$8.8	\$14.5	\$15.4							
Contributions - employee	11.0	24.6	35.1							
Transfer In Payments	0.0	0.0	0.0							
Net investment income	0.1	0.7	8.6							
Benefit Payments / Refunds	0.0	0.0	(2.9)							
Administrative expenses	0.0	0.0	0.0							
Other	0.0	0.0	0.0							
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$19.9</b>	<b>\$39.8</b>	<b>\$56.2</b>							
Plan Fiduciary Net Position - beginning	0.0	19.9	59.7							
<b>Plan Fiduciary Net Position - ending (b)</b>	<b>\$19.9</b>	<b>\$59.7</b>	<b>\$115.9</b>							
<b>Net Pension Liability - ending (a) - (b)</b>	<b>\$1.8</b>	<b>\$0.6</b>	<b>(\$3.9)</b>							
Plan Fiduciary Net Position as a % of the Total Pension Liability	91.7%	99.0%	103.5%							
Covered-employee payroll	\$419	\$419	\$898							
Net Pension Liability as a % of covered-employee payroll	0.4%	0.1%	-0.4%							
Discount Rate	4.00%	4.00%	4.00%							

## Schedule of Contributions

(Dollar amounts in thousands)

	fiscal year ending June 30									
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Actuarially determined contribution	\$8.8	\$14.5	\$15.4							
Contributions in relation to the actuarially determined contribution	8.8	14.5	15.4							
Contribution deficiency (excess)	\$0.0	\$0.0	\$0.0							
Covered-employee payroll	\$419	\$419	\$898							
Contributions as a percentage of covered-employee payroll	2.1%	3.5%	1.7%							

## Additional Requirements Under GASB Statement No. 67

GASB Statement No. 67 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 67, these required pieces will need to be provided by The Kentucky Judicial Form Retirement System. BPS&M is prepared to assist the system as needed.

## GASB Statement No. 68

### Schedule of Changes in NPL, Deferrals, & Pension Expense

	Increase (Decrease)					Pension Expense
	Total Pension Liability (a)	Plan Net Position (Assets) (b)	Net Pension Liability (a) - (b)	Deferred Pension Outflows of Resources	Deferred Pension Inflows of Resources	
<b>Balances--at 06/30/16</b>	\$ 60,250	\$ 59,665	\$ 585	\$ 16,256	\$ -	
<b>Changes for the Year:</b>						
Service cost	36,207		36,207			36,207
Interest expense	3,858		3,858			3,858
Benefit changes	-		-			-
Experience losses (gains)	17,914		17,914	16,417	-	1,497
Changes of assumptions	(3,337)		(3,337)	-	3,058	(279)
Contributions--State		15,444	(15,444)			
Contributions--Members		35,169	(35,169)			(35,169)
Transfer In Payments		-	-			
Net investment income		8,605	(8,605)			
Expected return on plan investments						(3,334)
Current expense of asset gain/loss						(820)
Non expensed asset gain/loss				-	4,217	
Refunds of contributions	(2,938)	(2,938)	-			
Benefits paid	-	-	-			
Plan administrative expenses						
Recognition of Prior Post-measurement Contribution				(15,384)		
Post-measurement Contribution				15,384		
Other changes						
Amortization of or change in beginning balances				(234)	-	
<b>Net Changes</b>	<b>51,704</b>	<b>56,280</b>	<b>(4,576)</b>	<b>16,183</b>	<b>7,275</b>	<b>1,960</b>
<b>Balances--at 06/30/17</b>	<b>\$ 111,954</b>	<b>\$ 115,945</b>	<b>\$ (3,991)</b>	<b>\$ 32,439</b>	<b>\$ 7,275</b>	<b>\$ 1,960</b>

## Pension Expense & Deferred Outflows/Inflows of Resources

For the year ended June 30, 2018, the recognized pension expense will be \$1,960. At June 30, 2018, The Kentucky Judicial Form Retirement System reported deferred outflows of resources and deferred inflows of resources in relation to pensions from the following sources:

	As of June 30, 2017		Recognized in Pension Expense	As of June 30, 2018		Remaining Amort. Period
	Deferred Outflows of Resources	Deferred Inflows of Resources		Deferred Outflows of Resources	Deferred Inflows of Resources	
Experience losses (gains)						
- 6/30/2017	17,914	-	1,497	16,417	-	10.970 years
subtotal	<u>17,914</u>	<u>-</u>	<u>1,497</u>	<u>16,417</u>	<u>-</u>	
Change of assumptions						
- 6/30/2017	-	3,337	(279)	-	3,058	10.970 years
subtotal	<u>-</u>	<u>3,337</u>	<u>(279)</u>	<u>-</u>	<u>3,058</u>	
Net difference between projected and actual earnings on investments						
- 6/30/2015	197	-	66	132	-	2.000 years
- 6/30/2016	674	-	169	506	-	3.000 years
- 6/30/2017	-	5,271	(1,054)	-	4,217	4.000 years
subtotal	<u>872</u>	<u>5,271</u>	<u>(820)</u>	<u>637</u>	<u>4,217</u>	
<b>Total</b>	<u>\$ 18,786</u>	<u>\$ 8,608</u>	<u>\$ 398</u>	<u>\$ 17,055</u>	<u>\$ 7,275</u>	

Actual investment earnings above (or below) projected earnings are amortized over 5 years. Plan experience and changes of assumptions are amortized over the average remaining service period of actives and inactive (0 years of future service is assumed for inactive for this calculation).

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

<b>Year ended June 30:</b>	
2019	398
2020	398
2021	332
2022	164
2023	1,218
Thereafter	7,270

In addition, Governmental Accounting Standards Board Statement 71 ("GASB 71") requires contributions between the measurement date (July 1, 2017) and the disclosure date (June 30, 2018) for GASB 68 be reported as a deferred outflow of resources.

## GASB Statement No. 43/45

### Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b - a) / c)
7/1/2015	\$ 4,666	\$ 8,027	\$ 3,361	58.1%	\$ 419,012	0.8%
7/1/2016	\$ 15,128	\$ 18,181	\$ 3,053	83.2%	\$ 419,012	0.7%
7/1/2017	\$ 28,781	\$ 35,957	\$ 7,176	80.0%	\$ 897,712	0.8%

### Schedule of Employer Contributions

Year Ended June 30	Net OPEB Cost	Percentage Contributed	Net OPEB Obligation
2015	\$ -	100%	\$ 0
2016	\$ 5,207	100%	\$ 0
2017	\$ 5,534	100%	\$ (22)

### Determination of Annual OPEB Cost

Fiscal Yr Ending	Applicable Valuation Report Used	ARC	Interest on OPEB Obligation	ARC Adjustment	Amort. Factor	Net OPEB Cost	Contribution	Change in Net OPEB Obligation	Net OPEB Obligation
6/30/2015		\$ -	\$ -	\$ -	17.292033	\$ -	\$ -	\$ -	\$ -
6/30/2016		\$ 5,207	\$ -	\$ -	17.292033	\$ 5,207	\$ 5,207	\$ -	\$ -
6/30/2017	7/1/2015	\$ 5,534	\$ -	\$ -	17.292033	\$ 5,534	\$ 5,556	\$ (22)	\$ (22)



## GASB Statement No. 74

### Statement of Changes in Fiduciary Net Position

	<u>June 30, 2017</u>
<b>Additions</b>	
Contributions	
Employer	5,556
Employee	<u>7,033</u>
Total Contributions	12,589
Transfer In Payments	0
Investment Income	2,199
Other	<u>0</u>
Total Additions	<u>14,788</u>
<b>Deductions</b>	
Benefit Payments / Refunds	0
Administrative Expenses	0
Other	<u>0</u>
Total Deductions	<u>0</u>
Net Increase in Net Position	<u>14,788</u>
<b>Net Position Restricted for OPEB</b>	
Beginning of Year Market Value of Assets	<u>14,910</u>
End of Year Market Value of Assets	<u><u>\$29,698</u></u>

## Net OPEB Liability

### Determination of Net OPEB Liability

Total OPEB Liability	35,957
Plan Fiduciary Net Position (Market Value of Assets)	<u>(29,698)</u>
Net OPEB Liability	<u><u>\$6,259</u></u>
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	82.59%

### Sensitivity of Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

	<b>1% Decrease</b>	<b>Current</b>	<b>1% Increase</b>
	7% decreasing to 4% over 12 years	8% decreasing to 5% over 12 years	9% decreasing to 6% over 12 years
Net OPEB Liability	\$6,164	\$6,259	\$6,385

### Sensitivity of Net OPEB Liability to Changes in the Discount Rate

	<b>1% Decrease</b>	<b>Current Rate</b>	<b>1% Increase</b>
	3.00%	4.00%	5.00%
Net OPEB Liability	\$13,673	\$6,259	\$262

**Schedule of Changes in the Net OPEB Liability and Related Ratios** (Dollar amounts in thousands)

	fiscal year ending June 30									
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
<b>Total OPEB Liability</b>										
Service cost	\$9.5									
Interest	1.1									
Changes of benefit terms	0.0									
Differences between expected and actual experience	7.2									
Changes of assumptions	0.0									
Benefit Payments / Refunds	0.0									
<b>Net Change in Total OPEB Liability</b>	<b>\$17.8</b>									
<b>Total OPEB Liability - beginning</b>	<b>18.2</b>									
<b>Total OPEB Liability - ending (a)</b>	<b>\$36.0</b>									
<b>Plan Fiduciary Net Position (Assets)</b>										
Contributions - employer	\$5.6									
Contributions - employee	7.0									
Transfer In Payments	0.0									
Net investment income	2.2									
Benefit Payments / Refunds	0.0									
Administrative expenses	0.0									
Other	0.0									
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$14.8</b>									
<b>Plan Fiduciary Net Position - beginning</b>	<b>14.9</b>									
<b>Plan Fiduciary Net Position - ending (b)</b>	<b>\$29.7</b>									
<b>Net OPEB Liability - ending (a) - (b)</b>	<b>\$6.3</b>									
<b>Plan Fiduciary Net Position as a % of the Total OPEB Liability</b>	<b>82.5%</b>									
<b>Covered-employee payroll</b>	<b>\$898</b>									
<b>Net OPEB Liability as a % of covered-employee payroll</b>	<b>0.7%</b>									
Discount Rate	4.00%									

## Schedule of Contributions

	fiscal year ending June 30									
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Actuarially determined contribution	\$5.5									
Contributions in relation to the actuarially determined contribution	5.6									
Contribution deficiency (excess)	(\$0.1)									
Covered-employee payroll	\$898									
Contributions as a percentage of covered-employee payroll	0.6%									

## Additional Requirements Under GASB Statement No. 74

GASB Statement No. 74 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 74, these required pieces will need to be provided by The Kentucky Judicial Form Retirement System. BPS&M is prepared to assist the system as needed.

## GASB Statement No. 75

### Statement of Changes in Net OPEB Liability

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Net Position (Assets) (b)	Net OPEB Liability (a) - (b)
<b>Balances--at 06/30/2017</b>	\$18,181	\$14,910	\$3,271
<b>Changes for the Year:</b>			
Service cost	9,455		9,455
Interest	1,105		1,105
Benefit changes	0		0
Difference between expected and actual experience	7,216		7,216
Changes of assumptions	0		0
Contributions--Employer		5,556	(5,556)
Contributions--Employee		7,033	(7,033)
Transfer In Payments		0	0
Net investment income		2,199	(2,199)
Refunds of contributions		0	0
Benefits paid	0	0	0
Administrative expenses		0	0
Other changes		0	0
<b>Net Changes</b>	<u>17,776</u>	<u>14,788</u>	<u>2,988</u>
<b>Balances--at 06/30/2018</b>	<u>\$35,957</u>	<u>\$29,698</u>	<u>\$6,259</u>

### OPEB Expense

	Fiscal Year Ending June 30, 2018
Service cost	\$9,455
Interest	1,105
Benefit changes	0
Contributions--Employee	(7,033)
Expected investment return	(854)
Recognition of Deferred Inflows/Outflows of Resources	
Recognition of economic/demographic gains or losses	603
Recognition of investment gains or losses	(269)
Recognition of assumption changes or inputs	0
Plan administrative expenses	0
<b>OPEB Expense</b>	<u>\$3,007</u>

## Deferred Outflows/Inflows of Resources

For the year ended June 30, 2018, the recognized OPEB expense will be \$3,007. At June 30, 2018, the Employer reported deferred outflows of resources and deferred inflows of resources relation to benefits from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Remaining Amort. Period</u>
Experience losses (gains)			
- June 30, 2017	6,613	0	10.97 years
subtotal	<u>6,613</u>	<u>0</u>	
Asset losses (gains)			
- June 30, 2017	0	1,076	4.000 years
subtotal	<u>0</u>	<u>1,076</u>	
Changes of assumptions			
- June 30, 2017	0	0	10.97 years
subtotal	<u>0</u>	<u>0</u>	
<b>Total</b>	<u><u>\$6,613</u></u>	<u><u>\$1,076</u></u>	

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEBs as of June 30, 2018 will be recognized in OPEB expense as follows:

<b>Year ended June 30:</b>	
2019	334
2020	334
2021	334
2022	334
2023	603
Thereafter	3,598

GASB Statement No. 71 requires contributions between the measurement date (June 30, 2017) and the disclosure date (June 30, 2018) for Statement No. 75 to be reported as a deferred outflow of resources.

## Schedule of Changes in Deferred Outflows/Inflows

	Deferred Outflows of Resources	Deferred Inflows of Resources
<b>Balances--at 06/30/2017</b>	\$0	\$0
Changes for the Year:		
Contribution (prior year expected)	0	0
Contribution (current year expected)	0	0
Experience gains/losses	6,613	0
Asset gains/losses	0	1,076
Amortization of gains/losses	0	0
Net Changes	6,613	1,076
<b>Balances--at 06/30/2018 *</b>	<b>\$6,613</b>	<b>\$1,076</b>

\* Deferred OPEB Outflows includes deferred losses of \$6,613 plus expected contributions of \$0.

\* Deferred OPEB Inflows includes deferred gains of \$1,076.

## **GASB Notes**

### **Notes to GASB 43, 45, 67, 68, 74, and 75 Disclosures**

1. The tables in this report account for liabilities and assets only for the hybrid cash balance/OPEB tier under the plan; liabilities and assets pertaining to the traditional defined benefit /OPEB tier are presented in a separate report.
2. Actuarial accrued liability is based on the entry age normal funding method.
3. OPEB liabilities and allocated assets have been excluded from GASB 67 and 68 disclosures and established in GASB 43, 45, 74, and 75 disclosures.
4. Market value of assets were split between pension and OPEB obligations based on the basis of the employee and employer contributions allocated to each part and a prorata allocation of investment return. Actuarial value of assets is then allocated based on the market value of retirement and OPEB assets.
5. Actuarial value of assets uses a 5-year asset smoothing method.
6. Covered payroll reflects payroll for all current plan members.
7. Interest on OPEB Obligation is based on assumed valuation interest assumption for the prior year, 4% beginning with 2015 valuation.
8. GASB 67 replaces GASB 25 effective for the fiscal year ending June 30, 2014. The valuation date, disclosure date, and measurement date all fall on the same date for purposes of GASB 67.
9. GASB 68 replaces GASB 27 effective for the fiscal year ending June 30, 2015. It is assumed the measurement date for GASB 68 will be 12 months before the disclosure date. For the year ending June 30, 2018, the measurement date is July 1, 2017 (the valuation date).



## Summary of Participant Data

### Distribution of Active Participants with Average Compensation

Attained Age	Years of Credited Service										Total	
	Under 1	1 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	Over 39		
Under 25												
25 – 29												
30 – 34	1											1
	\$38,456											\$38,456
35 – 39	1											1
	\$40,737											\$40,737
40 – 44		1										1
		\$40,394										\$40,394
45 – 49	3	5										8
	\$38,710	\$38,285										\$38,444
50 – 54	2	1										3
	\$39,426	\$40,584										\$39,812
55 – 59	2	1										3
	\$39,597	\$38,431										\$39,208
60 – 64	2	1										3
	\$40,439	\$34,059										\$38,312
65 – 69	2	1										3
	\$38,646	\$41,282										\$39,525
Over 69												
Total	13	10										23
	\$39,349	\$38,618										\$39,031

## Glossary of Terms

**Amortization** – The process of systematically recognizing prior gains and losses as a component of the Pension Expense.

**Fiduciary Net Position** – The market value of assets as of a specified measurement date.

**Funded Status** – The difference between the Fiduciary Net Position and the Total Pension Liability as of the measurement date.

**Gain/Loss** – A change in the value of either the Total Pension Liability or the plan assets resulting from experience different from that assumed or from a change in an actuarial assumption.

**Interest Cost** – The amount recognized in a period determined as the increase in the Total Pension Liability due to the passage of time.

**Pension Expense** – The sum of Service Cost, Interest Cost, Expected Return on Assets and amortizations of Actuarial Gain/Loss over the average remaining service period (or the life expectancy) of plan participants expected to receive plan benefits plus a 5-year amortization of Asset Gain/Loss.

**Total Pension Liability** – The Entry Age Normal Accrued Liability.

**Service Cost** – is the actuarial present value of benefits attributed to services rendered by employees during the measurement.