

Actuarial Analysis Summary

AA Statement 1 and 2 of 2

BR or Bill Ref.	HB 349	Actuarial Analysis Conducted For:
Date:	2/9/2024	<input type="checkbox"/> KERS NH <input checked="" type="checkbox"/> KERS Haz <input checked="" type="checkbox"/> SPRS <input type="checkbox"/> TRS
Actuary:	GRS	<input type="checkbox"/> CERS NH <input checked="" type="checkbox"/> CERS Haz <input type="checkbox"/> LRP <input type="checkbox"/> JRP

Section I: Executive Summary

In the opinion of the actuary, this bill would make the affected state-administered retirement system(s) actuarially:

MORE SOUND LESS SOUND NO IMPACT

If actuarially MORE SOUND OR LESS SOUND, please summarize the factors leading to the actuary's opinion:

The actuarially determined contribution rates increase by 0.52% of pay and 0.59% of pay for the CERS hazardous and SPRS funds, respectively, due to the proposed legislation. As long as employer contribution requirements are increased accordingly, we do not believe this benefit change will impact the current actuarial soundness of the funds.

Does this bill increase or decrease employer costs? INCREASE DECREASE NO IMPACT
 Does this bill increase or decrease benefits? INCREASE DECREASE NO IMPACT
 Does this bill increase or decrease benefit participation? INCREASE DECREASE NO IMPACT

If the bill impacts employer costs, benefits, or benefit participation, please explain and estimate the impact in Sections II and VI.

Section II: Financial Projections

	Combined Pension and Retiree Health Plan					
	CERS Hazardous		KERS Hazardous		SPRS	
	Current	Proposed	Current	Proposed	Current	Proposed
Projected Employer Cost* (\$ in Millions)						
30-Yr Nominal \$	\$8,745	\$8,900	\$1,372	\$1,372	\$1,340	\$1,358
30-Yr Net Present Value \$	\$3,896	\$3,956	\$672	\$672	\$693	\$698
Proj. Normal Cost for New Hire	8.25% of pay	7.17% of pay	6.66% of pay	6.74% of pay	17.84% of pay	18.46% of pay

*Projected costs are for all employers and all fund sources for entire 30-year period.
 Proj. normal cost is the normal cost for new hires after subtracting employee contributions.

	Pension Plan					
	CERS Hazardous		KERS Hazardous		SPRS	
	Current	Proposed	Current	Proposed	Current	Proposed
Projected UAL (\$ in Millions)						
Baseline (Year 1)	\$2,842	\$2,842	\$472	\$472	\$502	\$502
5 Years	\$2,735	\$2,735	\$424	\$424	\$462	\$462
10 Years	\$2,560	\$2,560	\$337	\$337	\$424	\$424
20 Years	\$1,614	\$1,614	\$232	\$232	\$312	\$312
30 Years	\$0	\$0	\$0	\$0	\$0	\$0
Projected Funding Ratio (%)						
Baseline (Year 1)	51%	51%	65%	65%	54%	54%
5 Years	58%	58%	72%	72%	59%	59%
10 Years	65%	65%	77%	77%	62%	62%
20 Years	82%	82%	89%	89%	73%	73%
30 Years	100%	100%	100%	100%	100%	100%

	Retiree Health Plan					
	CERS Hazardous		KERS Hazardous		SPRS	
	Current	Proposed	Current	Proposed	Current	Proposed
Projected UAL (\$ in Millions)						
Baseline (Year 1)	(\$11)	(\$4)	\$(256)	\$(256)	\$(1)	\$0
5 Years	(\$10)	\$0	\$(320)	\$(319)	\$(8)	(\$7)
10 Years	\$42	\$52	\$(422)	\$(420)	\$0	\$2
20 Years	\$229	\$235	\$(763)	\$(755)	\$21	\$30
30 Years	\$0	\$0	\$(1,406)	\$(1,391)	\$0	\$0
Projected Funding Ratio (%)						
Baseline (Year 1)	101%	100%	170%	170%	100%	100%
5 Years	101%	100%	185%	184%	103%	103%
10 Years	97%	97%	214%	213%	100%	99%
20 Years	85%	86%	305%	301%	89%	85%
30 Years	100%	100%	424%	418%	100%	100%

Section III: Brief Summary of Bill

The proposed legislation provides increased insurance benefits for members who receive a satisfactory determination of a hazardous disability that is a direct result of an act in line of duty. Under the proposed legislation, the premium for the member, the member's spouse, and the member's dependents will be paid in full by the system.

Section IV: Statement of Assumptions and Methods

Did the analysis rely solely upon the same assumptions & methods previously established and utilized by the actuary in the retirement system's most recent actuarial valuation?

YES **NO**

If NO, please describe each new assumption or method utilized, the basis for selecting the revised assumption or method, and whether each new assumption or method increased or decreased projected employer costs:

N/A

Section V: Comment from Actuary

N/A

Section VI: Detailed Actuarial Analysis and Projections *(May be attached as Appendix)*

Please see attached.



February 9, 2024

Mr. David Eager
Executive Director
Kentucky Public Pensions Authority
1260 Louisville Road
Frankfort, KY 40601

Re: Actuarial Analysis of Proposed Legislation HB 349 (24 RS BR 1498) and its Financial Impact on the Systems Maintained by KPPA

Dear Mr. Eager:

We have reviewed the proposed legislation HB 349 (24 RS BR 1498), and the purpose of this letter is to communicate the actuarial analysis of this legislation in regards to the five Systems administered by the Kentucky Public Pensions Authority (KPPA).

Summary of Provisions of Proposed Legislation and Fiscal Impact

The proposed legislation provides increased insurance benefits for members who receive a satisfactory determination of a hazardous disability that is a direct result of an act in line of duty. Under the proposed legislation, the premium for the member, the member’s spouse, and the member’s dependents will be paid in full by the system.

The impact of the proposed legislation on the unfunded actuarial accrued liability and the employer contribution requirements calculated as of June 30, 2023 are shown in the table below.

Increase in Unfunded Liability and Actuarially Determined Contribution Requirements

Plan	Increase in the Unfunded Liability	Increase in the Contribution Rate	Increase in Annual Contribution ¹
CERS Hazardous	\$ 6,914,000	0.52%	\$ 3,596,000
KERS Hazardous	243,000	0.00% ²	0
SPRS	849,000	0.59%	389,000

¹ Based on projected payroll based on the June 30, 2023 valuation. Future annual increases in contributions will depend on payroll experience.

² The proposed legislation increases the actuarially determined contribution for the KERS hazardous insurance fund by 0.08% of pay; however, the actuarially determined contribution is still less than 0% of pay so the net impact is 0% of pay.

Comments on the Proposed Legislation

Hazardous members participating in the system prior to July 1, 2003 who become disabled as a direct result of an act in the line of duty are currently eligible to receive 100% of their monthly insurance premium, so the proposed legislation is extending the coverage to spouses and dependents. Non-hazardous members who become disabled as a result of a duty-related injury (as well as hazardous members who become totally and permanently disabled as a direct result of an act in the line of duty) are already eligible under current statutes, so the proposed legislation only affects the hazardous funds.

Members participating in the system on or after July 1, 2003 who become disabled as a direct result of an act in the line of duty are currently entitled to the insurance dollar benefit payable as though the member had twenty (20) years of service in a hazardous position. These members will also have their premium, their spouse's premium, and their dependent's premium paid in full by the system under the proposed legislation.

Basis of Calculations

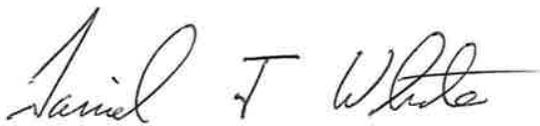
Except where noted, the calculations are based on the methods, assumptions, and plan provisions documented in the actuarial valuation as of June 30, 2023. Our calculations are based upon assumptions regarding future events, which may or may not materialize. Depending on actual plan experience, actual results could deviate significantly.

We are not attorneys, and we cannot provide a legal opinion regarding the changes in this proposed legislation. Nothing in this letter should be construed as providing legal, investment or tax advice.

All three of the undersigned are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, all three are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

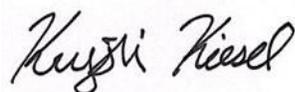
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Actuarial Analysis of HB 349
Section 1.
Comparison of Fiscal Impact
Current Plan vs. Proposed Changes

Kentucky Public Pensions Authority
Exhibit 1-1
CERS Hazardous Insurance Fund
Actuarial Analysis of HB 349
Comparison of Current Plan and Proposed Legislation
(\$ in Millions)

Fiscal Year Beginning July 1,	Unfunded Actuarial Accrued Liability			Funded Ratio			Employer Contributions			Employer Contribution Rate		
	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2023	\$ (11)	\$ (4)	\$ 7	101%	100%	-1%	\$ 17	\$ 17	\$ -	2.6%	2.6%	0.0%
2024	(17)	(6)	11	101%	100%	-1%	15	18	3	2.1%	2.6%	0.5%
2025	(38)	(27)	11	102%	102%	0%	12	15	3	1.7%	2.2%	0.5%
2026	(7)	3	10	100%	100%	0%	8	12	4	1.1%	1.6%	0.5%
2027	(10)	-	10	101%	100%	-1%	8	12	4	1.1%	1.7%	0.6%
2028	(3)	7	10	100%	100%	0%	6	10	4	0.8%	1.4%	0.6%
2029	7	17	10	100%	99%	-1%	5	9	4	0.6%	1.2%	0.6%
2030	17	28	11	99%	98%	-1%	4	8	4	0.5%	1.1%	0.6%
2031	29	39	10	98%	98%	0%	3	8	5	0.4%	1.0%	0.6%
2032	42	52	10	97%	97%	0%	2	7	5	0.3%	0.9%	0.6%
2033	56	66	10	96%	96%	0%	2	7	5	0.2%	0.8%	0.6%
2034	72	82	10	95%	95%	0%	1	7	6	0.2%	0.8%	0.6%
2035	89	99	10	94%	94%	0%	1	6	5	0.1%	0.7%	0.6%
2036	108	116	8	93%	93%	0%	1	6	5	0.1%	0.7%	0.6%
2037	127	136	9	92%	91%	-1%	-	6	6	0.0%	0.7%	0.7%
2038	149	158	9	90%	90%	0%	-	6	6	0.0%	0.7%	0.7%
2039	172	180	8	89%	89%	0%	-	6	6	0.0%	0.6%	0.6%
2040	197	205	8	87%	87%	0%	5	11	6	0.5%	1.2%	0.7%
2041	219	225	6	86%	86%	0%	17	24	7	1.8%	2.5%	0.7%
2042	229	235	6	85%	86%	1%	52	58	6	5.3%	6.0%	0.7%
2043	203	209	6	87%	87%	0%	51	56	5	5.1%	5.6%	0.5%
2044	179	185	6	89%	89%	0%	53	58	5	5.2%	5.7%	0.5%
2045	150	157	7	91%	91%	0%	57	62	5	5.5%	6.0%	0.5%
2046	115	122	7	93%	93%	0%	55	61	6	5.2%	5.7%	0.5%
2047	80	88	8	95%	95%	0%	57	63	6	5.3%	5.8%	0.5%
2048	40	48	8	98%	97%	-1%	58	64	6	5.3%	5.8%	0.5%
2049	-	-	-	100%	100%	0%	13	20	7	1.2%	1.7%	0.5%
2050	-	-	-	100%	100%	0%	13	20	7	1.2%	1.7%	0.5%
2051	-	-	-	100%	100%	0%	13	20	7	1.2%	1.7%	0.5%
2052	-	-	-	100%	100%	0%	13	20	7	1.1%	1.7%	0.6%



Kentucky Public Pensions Authority
Exhibit 1-2
KERS Hazardous Insurance Fund
Actuarial Analysis of HB 349
Comparison of Current Plan and Proposed Legislation
(\$ in Millions)

Fiscal Year Beginning July 1,	Unfunded Actuarial Accrued Liability			Funded Ratio			Employer Contributions			Employer Contribution Rate		
	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2023	\$ (256)	\$ (256)	\$ -	170%	170%	0%	\$ -	\$ -	\$ -	0.0%	0.0%	0.0%
2024	(271)	(271)	-	173%	173%	0%	-	-	-	0.0%	0.0%	0.0%
2025	(295)	(294)	1	179%	178%	-1%	-	-	-	0.0%	0.0%	0.0%
2026	(299)	(299)	-	179%	179%	0%	-	-	-	0.0%	0.0%	0.0%
2027	(320)	(319)	1	185%	184%	-1%	-	-	-	0.0%	0.0%	0.0%
2028	(337)	(336)	1	189%	189%	0%	-	-	-	0.0%	0.0%	0.0%
2029	(356)	(355)	1	195%	194%	-1%	-	-	-	0.0%	0.0%	0.0%
2030	(377)	(375)	2	201%	200%	-1%	-	-	-	0.0%	0.0%	0.0%
2031	(398)	(397)	1	207%	206%	-1%	-	-	-	0.0%	0.0%	0.0%
2032	(422)	(420)	2	214%	213%	-1%	-	-	-	0.0%	0.0%	0.0%
2033	(447)	(444)	3	222%	220%	-2%	-	-	-	0.0%	0.0%	0.0%
2034	(473)	(471)	2	230%	228%	-2%	-	-	-	0.0%	0.0%	0.0%
2035	(502)	(499)	3	238%	237%	-1%	-	-	-	0.0%	0.0%	0.0%
2036	(532)	(529)	3	247%	245%	-2%	-	-	-	0.0%	0.0%	0.0%
2037	(565)	(562)	3	257%	255%	-2%	-	-	-	0.0%	0.0%	0.0%
2038	(600)	(595)	5	266%	264%	-2%	-	-	-	0.0%	0.0%	0.0%
2039	(636)	(632)	4	275%	273%	-2%	-	-	-	0.0%	0.0%	0.0%
2040	(676)	(670)	6	285%	282%	-3%	-	-	-	0.0%	0.0%	0.0%
2041	(718)	(712)	6	295%	292%	-3%	-	-	-	0.0%	0.0%	0.0%
2042	(763)	(755)	8	305%	301%	-4%	-	-	-	0.0%	0.0%	0.0%
2043	(810)	(803)	7	314%	311%	-3%	-	-	-	0.0%	0.0%	0.0%
2044	(860)	(853)	7	324%	320%	-4%	-	-	-	0.0%	0.0%	0.0%
2045	(915)	(906)	9	335%	330%	-5%	-	-	-	0.0%	0.0%	0.0%
2046	(972)	(963)	9	345%	341%	-4%	-	-	-	0.0%	0.0%	0.0%
2047	(1,033)	(1,024)	9	356%	352%	-4%	-	-	-	0.0%	0.0%	0.0%
2048	(1,099)	(1,088)	11	368%	363%	-5%	-	-	-	0.0%	0.0%	0.0%
2049	(1,169)	(1,156)	13	380%	375%	-5%	-	-	-	0.0%	0.0%	0.0%
2050	(1,243)	(1,230)	13	394%	388%	-6%	-	-	-	0.0%	0.0%	0.0%
2051	(1,321)	(1,308)	13	408%	403%	-5%	-	-	-	0.0%	0.0%	0.0%
2052	(1,406)	(1,391)	15	424%	418%	-6%	-	-	-	0.0%	0.0%	0.0%



Kentucky Public Pensions Authority
Exhibit 1-3
SPRS Insurance Fund
Actuarial Analysis of HB 349
Comparison of Current Plan and Proposed Legislation
(\$ in Millions)

Fiscal Year Beginning July 1,	Unfunded Actuarial Accrued Liability			Funded Ratio			Employer Contributions			Employer Contribution Rate		
	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference	Current	Proposed	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2023	\$ (1)	\$ -	\$ 1	100%	100%	0%	\$ 9	\$ 9	\$ -	14.1%	14.1%	0.0%
2024	(10)	(8)	2	104%	103%	-1%	2	2	-	2.3%	2.9%	0.6%
2025	(13)	(11)	2	105%	104%	-1%	2	2	-	2.3%	2.9%	0.6%
2026	(8)	(7)	1	103%	103%	0%	-	1	1	0.1%	1.0%	0.9%
2027	(8)	(7)	1	103%	103%	0%	-	1	1	0.1%	1.0%	0.9%
2028	(6)	(5)	1	103%	102%	-1%	-	-	-	0.0%	0.5%	0.5%
2029	(5)	(4)	1	102%	102%	0%	-	-	-	0.0%	0.5%	0.5%
2030	(4)	(2)	2	102%	101%	-1%	-	-	-	0.0%	0.1%	0.1%
2031	(2)	-	2	101%	100%	-1%	-	-	-	0.0%	0.1%	0.1%
2032	-	2	2	100%	99%	-1%	-	-	-	0.0%	0.0%	0.0%
2033	1	4	3	100%	98%	-2%	-	-	-	0.0%	0.0%	0.0%
2034	3	7	4	99%	97%	-2%	-	-	-	0.0%	0.0%	0.0%
2035	5	9	4	98%	96%	-2%	-	-	-	0.0%	0.0%	0.0%
2036	7	12	5	97%	94%	-3%	-	-	-	0.0%	0.0%	0.0%
2037	9	14	5	96%	93%	-3%	-	-	-	0.0%	0.0%	0.0%
2038	11	17	6	94%	92%	-2%	-	-	-	0.0%	0.0%	0.0%
2039	14	20	6	93%	90%	-3%	-	-	-	0.0%	0.0%	0.0%
2040	16	24	8	92%	88%	-4%	-	-	-	0.0%	0.2%	0.2%
2041	19	27	8	90%	86%	-4%	-	-	-	0.0%	0.2%	0.2%
2042	21	30	9	89%	85%	-4%	5	7	2	8.0%	10.3%	2.3%
2043	18	28	10	90%	86%	-4%	5	7	2	8.0%	10.3%	2.3%
2044	15	24	9	92%	88%	-4%	6	7	1	8.8%	10.9%	2.1%
2045	12	20	8	94%	90%	-4%	6	7	1	8.8%	10.9%	2.1%
2046	9	16	7	95%	92%	-3%	6	7	1	8.9%	11.0%	2.1%
2047	4	12	8	98%	94%	-4%	6	7	1	8.9%	11.0%	2.1%
2048	1	6	5	100%	97%	-3%	6	7	1	9.2%	11.3%	2.1%
2049	-	-	-	100%	100%	0%	-	2	2	0.7%	2.7%	2.0%
2050	-	-	-	100%	100%	0%	-	2	2	0.7%	2.7%	2.0%
2051	-	-	-	100%	100%	0%	-	2	2	0.7%	2.7%	2.0%
2052	-	-	-	100%	100%	0%	1	2	1	0.8%	2.6%	1.8%



Actuarial Analysis of HB 349
Section 2.
Projected Cost of the Retirement and Insurance
Current Plan

Kentucky Public Pensions Authority
Exhibit 2-1
CERS Hazardous Insurance Fund
Actuarial Analysis of HB 349
Current Plan
(\$ in Millions)

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2023	\$ 1,604	\$ 1,615	\$ (11)	101%	\$ 17	\$ 4	\$ 674	2.58%	2.58%
2024	1,628	1,645	(17)	101%	15	5	687	2.12%	2.12%
2025	1,640	1,678	(38)	102%	12	5	701	1.67%	1.67%
2026	1,645	1,652	(7)	100%	8	5	715	1.09%	1.09%
2027	1,642	1,652	(10)	101%	8	6	729	1.13%	1.13%
2028	1,635	1,638	(3)	100%	6	6	744	0.79%	0.79%
2029	1,626	1,619	7	100%	5	7	759	0.62%	0.62%
2030	1,613	1,596	17	99%	4	7	774	0.49%	0.49%
2031	1,597	1,568	29	98%	3	7	789	0.37%	0.37%
2032	1,579	1,537	42	97%	2	8	805	0.29%	0.29%
2033	1,560	1,504	56	96%	2	8	821	0.21%	0.21%
2034	1,542	1,470	72	95%	1	8	838	0.16%	0.16%
2035	1,525	1,436	89	94%	1	8	855	0.12%	0.12%
2036	1,512	1,404	108	93%	1	9	872	0.07%	0.07%
2037	1,503	1,376	127	92%	-	9	889	0.04%	0.04%
2038	1,499	1,350	149	90%	-	9	907	0.02%	0.02%
2039	1,500	1,328	172	89%	-	9	925	0.00%	0.00%
2040	1,507	1,310	197	87%	5	9	943	0.53%	0.53%
2041	1,519	1,300	219	86%	17	10	962	1.80%	1.80%
2042	1,535	1,306	229	85%	52	10	982	5.30%	5.30%
2043	1,557	1,354	203	87%	51	10	1,001	5.05%	5.05%
2044	1,585	1,406	179	89%	53	10	1,021	5.16%	5.16%
2045	1,616	1,466	150	91%	57	10	1,042	5.45%	5.45%
2046	1,648	1,533	115	93%	55	11	1,062	5.15%	5.15%
2047	1,683	1,603	80	95%	57	11	1,084	5.27%	5.27%
2048	1,719	1,679	40	98%	58	11	1,105	5.25%	5.25%
2049	1,756	1,756	-	100%	13	11	1,128	1.19%	1.19%
2050	1,793	1,793	-	100%	13	12	1,150	1.16%	1.16%
2051	1,830	1,830	-	100%	13	12	1,173	1.15%	1.15%
2052	1,867	1,867	-	100%	13	12	1,197	1.12%	1.12%

Notes and assumptions:

The projection is based on the results of the June 30, 2023 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.50%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to remain level throughout the entire projection.

Covered payroll is assumed to increase 2% each year throughout the entire projection.

The Board certified contribution rate paid by employers is assumed to be equal to the full actuarially determined contribution rate, except as allowed by

House Bill 362 (passed during the 2018 legislative session), which limits the certified contribution rate to a 12% increase over the prior year rate for the period of July 1, 2018 to June 30, 2028.



Kentucky Public Pensions Authority
Exhibit 2-2
KERS Hazardous Insurance Fund
Actuarial Analysis of HB 349
Current Plan
(\$ in Millions)

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2023	\$ 364	\$ 620	\$ (256)	170%	\$ -	\$ 2	\$ 210	0.00%	0.00%
2024	370	641	(271)	173%	-	2	210	0.00%	0.00%
2025	374	669	(295)	179%	-	2	210	0.00%	0.00%
2026	377	676	(299)	179%	-	2	210	0.00%	0.00%
2027	377	697	(320)	185%	-	2	210	0.00%	0.00%
2028	377	714	(337)	189%	-	2	210	0.00%	0.00%
2029	376	732	(356)	195%	-	2	210	0.00%	0.00%
2030	374	751	(377)	201%	-	2	210	0.00%	0.00%
2031	372	770	(398)	207%	-	2	210	0.00%	0.00%
2032	369	791	(422)	214%	-	2	210	0.00%	0.00%
2033	367	814	(447)	222%	-	2	210	0.00%	0.00%
2034	365	838	(473)	230%	-	2	210	0.00%	0.00%
2035	363	865	(502)	238%	-	2	210	0.00%	0.00%
2036	362	894	(532)	247%	-	2	210	0.00%	0.00%
2037	361	926	(565)	257%	-	2	210	0.00%	0.00%
2038	361	961	(600)	266%	-	2	210	0.00%	0.00%
2039	363	999	(636)	275%	-	2	210	0.00%	0.00%
2040	365	1,041	(676)	285%	-	2	210	0.00%	0.00%
2041	368	1,086	(718)	295%	-	2	210	0.00%	0.00%
2042	372	1,135	(763)	305%	-	2	210	0.00%	0.00%
2043	378	1,188	(810)	314%	-	2	210	0.00%	0.00%
2044	384	1,244	(860)	324%	-	2	210	0.00%	0.00%
2045	390	1,305	(915)	335%	-	2	210	0.00%	0.00%
2046	397	1,369	(972)	345%	-	2	210	0.00%	0.00%
2047	404	1,437	(1,033)	356%	-	2	210	0.00%	0.00%
2048	410	1,509	(1,099)	368%	-	2	210	0.00%	0.00%
2049	417	1,586	(1,169)	380%	-	2	210	0.00%	0.00%
2050	423	1,666	(1,243)	394%	-	2	210	0.00%	0.00%
2051	429	1,750	(1,321)	408%	-	2	210	0.00%	0.00%
2052	434	1,840	(1,406)	424%	-	2	210	0.00%	0.00%

Notes and assumptions:

The projection is based on the results of the June 30, 2023 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.50%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the full actuarially determined contribution rate.



Kentucky Public Pensions Authority
Exhibit 2-3
SPRS Insurance Fund
Actuarial Analysis of HB 349
Current Plan
(\$ in Millions)

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2023	\$ 244	\$ 245	\$ (1)	100%	\$ 9	\$ -	\$ 66	14.11%	3.68%
2024	247	257	(10)	104%	2	-	66	2.31%	2.31%
2025	248	261	(13)	105%	2	-	66	2.31%	1.31%
2026	248	256	(8)	103%	-	-	66	0.13%	0.13%
2027	246	254	(8)	103%	-	1	66	0.13%	0.33%
2028	244	250	(6)	103%	-	1	66	0.00%	0.00%
2029	240	245	(5)	102%	-	1	66	0.00%	0.00%
2030	236	240	(4)	102%	-	1	66	0.00%	0.00%
2031	232	234	(2)	101%	-	1	66	0.00%	0.00%
2032	227	227	-	100%	-	1	66	0.00%	0.00%
2033	221	220	1	100%	-	1	66	0.00%	0.00%
2034	216	213	3	99%	-	1	66	0.00%	0.00%
2035	210	205	5	98%	-	1	66	0.00%	0.00%
2036	205	198	7	97%	-	1	66	0.00%	0.00%
2037	200	191	9	96%	-	1	66	0.00%	0.00%
2038	196	185	11	94%	-	1	66	0.00%	0.00%
2039	193	179	14	93%	-	1	66	0.00%	0.00%
2040	190	174	16	92%	-	1	66	0.00%	0.00%
2041	188	169	19	90%	-	1	66	0.00%	0.80%
2042	186	165	21	89%	5	1	66	7.98%	7.98%
2043	185	167	18	90%	5	1	66	7.98%	8.43%
2044	185	170	15	92%	6	1	66	8.76%	8.76%
2045	186	174	12	94%	6	1	66	8.76%	9.45%
2046	187	178	9	95%	6	1	66	8.94%	8.94%
2047	188	184	4	98%	6	1	66	8.94%	9.15%
2048	190	189	1	100%	6	1	66	9.19%	9.19%
2049	191	191	-	100%	-	1	66	0.66%	0.66%
2050	193	193	-	100%	-	1	66	0.69%	0.69%
2051	194	194	-	100%	-	1	66	0.74%	0.74%
2052	195	195	-	100%	1	1	66	0.80%	0.80%

Notes and assumptions:

The projection is based on the results of the June 30, 2023 actuarial valuation and assumes that all actuarial assumptions are realized, including the assumed annual asset return of 6.50%.

New active members are assumed to be hired as current active members are assumed to terminate employment or retire.

The total active population is assumed to decrease 2% each year for each of the next 30 years.

Covered payroll is assumed to remain level throughout the entire projection.

The contribution rate established in the Commonwealth's biennium budget is assumed to be equal to the full actuarially determined contribution rate.



Actuarial Analysis of HB 349
Section 3.
Projected Cost of the Retirement and Insurance
Proposed Legislation

Kentucky Public Pensions Authority
Exhibit 3-1
CERS Hazardous Insurance Fund
Actuarial Analysis of HB 349
Proposed Legislation
(\$ in Millions)

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2023	\$ 1,611	\$ 1,615	\$ (4)	100%	\$ 17	\$ 4	\$ 674	2.58%	2.58%
2024	1,638	1,644	(6)	100%	18	5	687	2.64%	2.64%
2025	1,654	1,681	(27)	102%	15	5	701	2.19%	2.19%
2026	1,662	1,659	3	100%	12	5	715	1.63%	1.63%
2027	1,663	1,663	-	100%	12	6	729	1.70%	1.70%
2028	1,660	1,653	7	100%	10	6	744	1.37%	1.37%
2029	1,655	1,638	17	99%	9	7	759	1.21%	1.21%
2030	1,647	1,619	28	98%	8	7	774	1.09%	1.09%
2031	1,635	1,596	39	98%	8	7	789	0.98%	0.98%
2032	1,622	1,570	52	97%	7	8	805	0.90%	0.90%
2033	1,608	1,542	66	96%	7	8	821	0.82%	0.82%
2034	1,595	1,513	82	95%	7	8	838	0.78%	0.78%
2035	1,583	1,484	99	94%	6	8	855	0.74%	0.74%
2036	1,574	1,458	116	93%	6	9	872	0.70%	0.70%
2037	1,570	1,434	136	91%	6	9	889	0.68%	0.68%
2038	1,572	1,414	158	90%	6	9	907	0.66%	0.66%
2039	1,577	1,397	180	89%	6	9	925	0.64%	0.64%
2040	1,589	1,384	205	87%	11	9	943	1.18%	1.18%
2041	1,605	1,380	225	86%	24	10	962	2.46%	2.46%
2042	1,626	1,391	235	86%	58	10	982	5.95%	5.95%
2043	1,653	1,444	209	87%	56	10	1,001	5.60%	5.60%
2044	1,685	1,500	185	89%	58	10	1,021	5.72%	5.72%
2045	1,720	1,563	157	91%	62	10	1,042	6.00%	6.00%
2046	1,756	1,634	122	93%	61	11	1,062	5.70%	5.70%
2047	1,795	1,707	88	95%	63	11	1,084	5.82%	5.82%
2048	1,834	1,786	48	97%	64	11	1,105	5.81%	5.81%
2049	1,874	1,874	-	100%	20	11	1,128	1.73%	1.73%
2050	1,914	1,914	-	100%	20	12	1,150	1.71%	1.71%
2051	1,955	1,955	-	100%	20	12	1,173	1.70%	1.70%
2052	1,995	1,995	-	100%	20	12	1,197	1.67%	1.67%

Notes and assumptions:

The analysis above is based on the same methods, assumptions, and benefit provisions as the analysis under the Current Plan, except for the proposed changes in HB 349.



Kentucky Public Pensions Authority
Exhibit 3-2
KERS Hazardous Insurance Fund
Actuarial Analysis of HB 349
Proposed Legislation
(\$ in Millions)

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2023	\$ 364	\$ 620	\$ (256)	170%	\$ -	\$ 2	\$ 210	0.00%	0.00%
2024	370	641	(271)	173%	-	2	210	0.00%	0.00%
2025	375	669	(294)	178%	-	2	210	0.00%	0.00%
2026	377	676	(299)	179%	-	2	210	0.00%	0.00%
2027	378	697	(319)	184%	-	2	210	0.00%	0.00%
2028	378	714	(336)	189%	-	2	210	0.00%	0.00%
2029	377	732	(355)	194%	-	2	210	0.00%	0.00%
2030	375	750	(375)	200%	-	2	210	0.00%	0.00%
2031	373	770	(397)	206%	-	2	210	0.00%	0.00%
2032	371	791	(420)	213%	-	2	210	0.00%	0.00%
2033	369	813	(444)	220%	-	2	210	0.00%	0.00%
2034	367	838	(471)	228%	-	2	210	0.00%	0.00%
2035	365	864	(499)	237%	-	2	210	0.00%	0.00%
2036	364	893	(529)	245%	-	2	210	0.00%	0.00%
2037	363	925	(562)	255%	-	2	210	0.00%	0.00%
2038	364	959	(595)	264%	-	2	210	0.00%	0.00%
2039	365	997	(632)	273%	-	2	210	0.00%	0.00%
2040	368	1,038	(670)	282%	-	2	210	0.00%	0.00%
2041	371	1,083	(712)	292%	-	2	210	0.00%	0.00%
2042	376	1,131	(755)	301%	-	2	210	0.00%	0.00%
2043	381	1,184	(803)	311%	-	2	210	0.00%	0.00%
2044	387	1,240	(853)	320%	-	2	210	0.00%	0.00%
2045	394	1,300	(906)	330%	-	2	210	0.00%	0.00%
2046	400	1,363	(963)	341%	-	2	210	0.00%	0.00%
2047	407	1,431	(1,024)	352%	-	2	210	0.00%	0.00%
2048	414	1,502	(1,088)	363%	-	2	210	0.00%	0.00%
2049	421	1,577	(1,156)	375%	-	2	210	0.00%	0.00%
2050	427	1,657	(1,230)	388%	-	2	210	0.00%	0.00%
2051	432	1,740	(1,308)	403%	-	2	210	0.00%	0.00%
2052	438	1,829	(1,391)	418%	-	2	210	0.00%	0.00%

Notes and assumptions:

The analysis above is based on the same methods, assumptions, and benefit provisions as the analysis under the Current Plan, except for the proposed changes in HB 349.



Kentucky Public Pensions Authority
Exhibit 3-3
SPRS Insurance Fund
Actuarial Analysis of HB 349
Proposed Legislation
(\$ in Millions)

Fiscal Year Beginning July 1, (1)	Actuarial Accrued Liability (2)	Actuarial Value of Assets (3)	Unfunded Actuarial Accrued Liability (4)	Funded Ratio (3) / (2) (5)	Employer Contribution (6)	Member Contribution (7)	Covered Payroll (8)	Employer Contribution as % of Covered Payroll (9)	Employer Actuarially Determined Contribution (10)
2023	\$ 245	\$ 245	\$ -	100%	\$ 9	\$ -	\$ 66	14.11%	3.68%
2024	249	257	(8)	103%	2	-	66	2.90%	2.90%
2025	250	261	(11)	104%	2	-	66	2.90%	1.95%
2026	250	257	(7)	103%	1	-	66	1.01%	0.81%
2027	249	256	(7)	103%	1	1	66	1.01%	1.02%
2028	247	252	(5)	102%	-	1	66	0.52%	0.52%
2029	244	248	(4)	102%	-	1	66	0.52%	0.29%
2030	240	242	(2)	101%	-	1	66	0.09%	0.09%
2031	236	236	-	100%	-	1	66	0.09%	0.00%
2032	232	230	2	99%	-	1	66	0.00%	0.00%
2033	227	223	4	98%	-	1	66	0.00%	0.00%
2034	222	215	7	97%	-	1	66	0.00%	0.00%
2035	217	208	9	96%	-	1	66	0.00%	0.00%
2036	212	200	12	94%	-	1	66	0.00%	0.00%
2037	208	194	14	93%	-	1	66	0.00%	0.00%
2038	204	187	17	92%	-	1	66	0.00%	0.00%
2039	201	181	20	90%	-	1	66	0.00%	0.00%
2040	199	175	24	88%	-	1	66	0.19%	0.19%
2041	197	170	27	86%	-	1	66	0.19%	2.88%
2042	196	166	30	85%	7	1	66	10.25%	10.25%
2043	196	168	28	86%	7	1	66	10.25%	10.52%
2044	196	172	24	88%	7	1	66	10.85%	10.85%
2045	197	177	20	90%	7	1	66	10.85%	11.53%
2046	198	182	16	92%	7	1	66	11.04%	11.04%
2047	200	188	12	94%	7	1	66	11.04%	11.27%
2048	201	195	6	97%	7	1	66	11.27%	11.27%
2049	203	203	-	100%	2	1	66	2.73%	2.73%
2050	205	205	-	100%	2	1	66	2.69%	2.69%
2051	206	206	-	100%	2	1	66	2.66%	2.66%
2052	207	207	-	100%	2	1	66	2.63%	2.63%

Notes and assumptions:

The analysis above is based on the same methods, assumptions, and benefit provisions as the analysis under the Current Plan, except for the proposed changes in HB 349.

