



June 1, 2022

Mr. David Swindell
Executive Director
Wyoming Retirement System
6101 Yellowstone Road, Suite 500
Cheyenne, WY 82009

Subject: Actuarial Projections for the Wyoming Retirement System

Dear Dave:

We are providing 30-year projections for each plan in the Wyoming Retirement System (“WRS”) as of January 1, 2022 estimating the future Funded Ratio for each plan based upon statutory funding.

Analysis

The 30-year baseline projections for each plan incorporate data as of January 1, 2022. Contributions based on the plan’s individual funding source, if applicable, are assumed to be made annually. Please note that these projections are estimates only and are based upon the new set of actuarial assumptions as adopted by the WRS Board of Trustees effective November 17, 2021 and February 17, 2022 and were first utilized with the January 1, 2022 valuation report.

The results of these future projections are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ as actual future experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods.

Summary and Conclusions

The 30-year projected funded ratios increased for all plans. All plans experienced gains from greater than expected investment returns in 2021 on both a market value and actuarial value basis.

- 1) The 30-year projected funded ratio for the Public Employee plan increased from 115.0% to 130.3%.
- 2) Fire A is on a sustainable path now as a result of Enrolled Act No. 6.
- 3) Wardens: The plan is projected to be 123.1% funded in 30 years (last year the projection showed 116.3% in 30 years).
- 4) Fire B: This plan is projected to be 135.9% funded in 30 years (last year the projection showed 121.7% in 30 years).

- 5) Law Enforcement: The plan is projected to be 90.9% funded in 30 years (last year the projection showed 104.3% in 30 years). We will be exploring various options to improve the funding of this plan.
- 6) The three plans of Judges, Guard Fire and the Vol Fire Plans are projected to be well above 100% funded in 30 years.

A summary of the results is as follows for each WRS plan:

Plan	Funded Ratio (Based on AVA)	
	2022	2052
Public Employee	77.0%	130.3%
Judges	98.2%	118.0%
Law Enforcement	84.7%	90.9%
Wardens	81.3%	123.1%
Guard Fire	82.1%	140.3%
Fire B	97.1%	135.9%
Fire A	43.4%	174.60%
Vol Fire, EMT & SR	81.3%	120.3%

Assumptions and Methods

- All calculations incorporate data, provisions, and assumptions used in the January 1, 2022 actuarial valuations, including:
 - Future investment returns are assumed to equal the discount rate of 6.80% each year;
 - A second tier of benefits for participants who are hired after September 1, 2012 for the Public Employee plan;
 - No post-retirement cost-of-living adjustment (“COLA”) is reflected, with the exception of the Volunteer Fire, EMT, and Search and Rescue plan;
- The Guard Fire plan faces an uncertain future regarding its funding from Federal sources which are assumed to continue in these projections.

The calculations are based upon assumptions regarding future events, which may or may not materialize. Please bear in mind that actual results could deviate significantly from our projections which will move the projected “fully funded” year up in time if actual future experience is favorable or back in time if actual future experience is not favorable. In addition, note that these results show projections based upon a limited set of assumptions and contribution scenarios and are to be viewed as rough estimates only.

Closing

In preparing our analysis, we relied on information supplied by WRS. This information includes, but is not limited to, the plan provisions, employee data, and financial information. The data and assumptions from the January 1, 2022 actuarial valuation were used. This letter is subject to all disclosures contained in the January 1, 2022 valuation reports.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

All of the work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuaries submitting this statement 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 contained herein. In addition, the undersigned are experienced in performing actuarial valuations for other large public retirement systems.

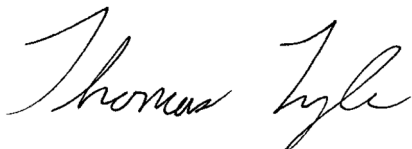
If you require any additional or clarifying information, please do not hesitate to contact the undersigned.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Paul Wood, ASA, FCA, MAAA
Consultant



Thomas Lyle, FSA, FCA, EA, MAAA
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Wyoming Retirement System - Public Employees' Pension Plan
Projection Results Based on January 1, 2022 Actuarial Valuation
 Discount Rate: 6.80%

Valuation as of January 1, (1)	Market Return for FY Beginning on Valuation Date (2)	Contribution Rate for Fiscal Year Following Valuation Date		Total Normal Cost as a Percent of Payroll (5)	Actuarial Accrued Liability (AAL, in Millions) (6)	Actuarial Value of Assets (AVA, in Millions) (7)	Unfunded Actuarial Accrued Liability (UAAL, in Millions) (8)	Funded Ratio (9)	Market Value of Assets (MVA, in Millions) (10)	Funded Ratio based on MVA (11)	Projected Payroll for Fiscal Year Following Valuation Date (in Millions) (12)	Employee Contributions for Fiscal Year Following Valuation Date (in Millions) (13)	Employer Contributions for Fiscal Year Following Valuation Date (in Millions) (14)	Expenses for Fiscal Year Following Valuation Date (in Millions) (15)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Millions) (16)
		Employee (3)	Employer (4)												
2022	6.80%	9.250%	9.370%	11.380%	\$10,890	\$8,389	\$2,501	77.0%	\$9,390	86.2%	\$1,851	\$171	\$173	(\$8)	(\$683)
2023	6.80%	9.250%	9.370%	11.281%	11,140	8,899	2,242	79.9%	9,671	86.8%	1,894	175	177	(8)	(703)
2024	6.80%	9.250%	9.370%	11.191%	11,390	9,566	1,824	84.0%	9,959	87.4%	1,938	179	182	(8)	(723)
2025	6.80%	9.250%	9.370%	11.108%	11,640	10,084	1,555	86.6%	10,253	88.1%	1,983	183	186	(8)	(740)
2026	6.80%	9.250%	9.370%	11.032%	11,892	10,559	1,333	88.8%	10,559	88.8%	2,029	188	190	(9)	(762)
2027	6.80%	9.250%	9.370%	10.964%	12,142	10,871	1,271	89.5%	10,871	89.5%	2,075	192	194	(9)	(783)
2028	6.80%	9.250%	9.370%	10.901%	12,392	11,192	1,200	90.3%	11,192	90.3%	2,123	196	199	(9)	(803)
2029	6.80%	9.250%	9.370%	10.842%	12,641	11,522	1,119	91.1%	11,522	91.1%	2,171	201	203	(9)	(824)
2030	6.80%	9.250%	9.370%	10.786%	12,890	11,862	1,028	92.0%	11,862	92.0%	2,221	205	208	(9)	(845)
2031	6.80%	9.250%	9.370%	10.734%	13,138	12,213	925	93.0%	12,213	93.0%	2,270	210	213	(10)	(866)
2032	6.80%	9.250%	9.370%	10.686%	13,385	12,575	810	93.9%	12,575	93.9%	2,321	215	218	(10)	(876)
2033	6.80%	9.250%	9.370%	10.641%	13,644	12,962	683	95.0%	12,962	95.0%	2,373	220	222	(10)	(896)
2034	6.80%	9.250%	9.370%	10.599%	13,905	13,364	541	96.1%	13,364	96.1%	2,425	224	227	(10)	(917)
2035	6.80%	9.250%	9.370%	10.560%	14,166	13,781	385	97.3%	13,781	97.3%	2,479	229	232	(10)	(938)
2036	6.80%	9.250%	9.370%	10.525%	14,428	14,215	213	98.5%	14,215	98.5%	2,533	234	237	(11)	(959)
2037	6.80%	9.250%	9.370%	10.494%	14,691	14,668	24	99.8%	14,668	99.8%	2,590	240	243	(11)	(979)
2038	6.80%	9.250%	9.370%	10.466%	14,956	15,140	(184)	101.2%	15,140	101.2%	2,648	245	248	(11)	(999)
2039	6.80%	9.250%	9.370%	10.441%	15,224	15,635	(411)	102.7%	15,635	102.7%	2,708	250	254	(11)	(1,019)
2040	6.80%	9.250%	9.370%	10.419%	15,496	16,154	(658)	104.2%	16,154	104.2%	2,770	256	260	(12)	(1,038)
2041	6.80%	9.250%	9.370%	10.400%	15,773	16,702	(929)	105.9%	16,702	105.9%	2,834	262	266	(12)	(1,055)
2042	6.80%	9.250%	9.370%	10.383%	16,057	17,280	(1,223)	107.6%	17,280	107.6%	2,900	268	272	(12)	(1,072)
2043	6.80%	9.250%	9.370%	10.368%	16,349	17,892	(1,543)	109.4%	17,892	109.4%	2,968	275	278	(12)	(1,088)
2044	6.80%	9.250%	9.370%	10.356%	16,651	18,542	(1,891)	111.4%	18,542	111.4%	3,039	281	285	(13)	(1,103)
2045	6.80%	9.250%	9.370%	10.344%	16,965	19,234	(2,269)	113.4%	19,234	113.4%	3,112	288	292	(13)	(1,118)
2046	6.80%	9.250%	9.370%	10.334%	17,293	19,972	(2,679)	115.5%	19,972	115.5%	3,187	295	299	(13)	(1,131)
2047	6.80%	9.250%	9.370%	10.325%	17,637	20,761	(3,124)	117.7%	20,761	117.7%	3,266	302	306	(14)	(1,144)
2048	6.80%	9.250%	9.370%	10.317%	17,999	21,604	(3,605)	120.0%	21,604	120.0%	3,346	310	314	(14)	(1,157)
2049	6.80%	9.250%	9.370%	10.309%	18,382	22,508	(4,126)	122.4%	22,508	122.4%	3,429	317	321	(14)	(1,169)
2050	6.80%	9.250%	9.370%	10.302%	18,785	23,475	(4,690)	125.0%	23,475	125.0%	3,515	325	329	(15)	(1,182)
2051	6.80%	9.250%	9.370%	10.296%	19,211	24,510	(5,299)	127.6%	24,510	127.6%	3,603	333	338	(15)	(1,196)
2052	6.80%	9.250%	9.370%	10.291%	19,662	25,619	(5,958)	130.3%	25,619	130.3%	3,693	342	346	(16)	(1,210)



Wyoming Retirement System - Judicial Retirement System ("Judges")
Projection Results Based on January 1, 2022 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Total Normal Cost as a Percent of Payroll	Actuarial Accrued Liability (AAL, in Millions)	Actuarial Value of Assets (AVA, in Millions)	Unfunded Actuarial Accrued Liability (UAAL, in Millions)	Funded Ratio	Market Value of Assets (MVA, in Millions)	Funded Ratio based on MVA	Projected Payroll for Fiscal Year Following Valuation Date (in Millions)	Employee Contributions for Fiscal Year Following Valuation Date (in Millions)	Employer Contributions for Fiscal Year Following Valuation Date (in Millions)	Expenses for Fiscal Year Following Valuation Date (in Millions)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Millions)
		Employee	Employer												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
2022	6.80%	9.220%	14.500%	24.820%	\$40	\$39	\$1	98.2%	\$44	109.2%	\$9	\$1	\$1	(\$0)	(\$2)
2023	6.80%	9.220%	14.500%	24.605%	43	43	(0)	101.1%	46	109.1%	9	1	1	(0)	(3)
2024	6.80%	9.220%	14.500%	24.601%	45	47	(2)	105.0%	49	108.9%	9	1	1	(0)	(3)
2025	6.80%	9.220%	14.500%	24.470%	48	51	(3)	107.2%	52	108.8%	9	1	1	(0)	(3)
2026	6.80%	9.220%	14.500%	24.210%	50	54	(4)	108.8%	54	108.8%	10	1	1	(0)	(3)
2027	6.80%	9.220%	14.500%	23.982%	52	57	(5)	108.8%	57	108.8%	10	1	1	(0)	(3)
2028	6.80%	9.220%	14.500%	23.793%	55	60	(5)	108.9%	60	108.9%	10	1	2	(0)	(4)
2029	6.80%	9.220%	14.500%	23.610%	57	63	(5)	109.0%	63	109.0%	11	1	2	(0)	(4)
2030	6.80%	9.220%	14.500%	23.361%	60	66	(6)	109.2%	66	109.2%	11	1	2	(0)	(4)
2031	6.80%	9.220%	14.500%	23.184%	63	69	(6)	109.4%	69	109.4%	11	1	2	(0)	(4)
2032	6.80%	9.220%	14.500%	23.080%	66	72	(6)	109.7%	72	109.7%	12	1	2	(0)	(4)
2033	6.80%	9.220%	14.500%	23.002%	69	75	(7)	109.9%	75	109.9%	12	1	2	(0)	(4)
2034	6.80%	9.220%	14.500%	22.943%	72	79	(7)	110.2%	79	110.2%	13	1	2	(0)	(4)
2035	6.80%	9.220%	14.500%	22.903%	75	83	(8)	110.5%	83	110.5%	13	1	2	(0)	(5)
2036	6.80%	9.220%	14.500%	22.883%	78	87	(9)	110.9%	87	110.9%	14	1	2	(0)	(5)
2037	6.80%	9.220%	14.500%	22.837%	82	91	(9)	111.2%	91	111.2%	14	1	2	(0)	(5)
2038	6.80%	9.220%	14.500%	22.818%	86	96	(10)	111.5%	96	111.5%	15	1	2	(0)	(5)
2039	6.80%	9.220%	14.500%	22.824%	90	100	(11)	111.9%	100	111.9%	15	1	2	(0)	(6)
2040	6.80%	9.220%	14.500%	22.869%	93	105	(11)	112.3%	105	112.3%	16	1	2	(0)	(6)
2041	6.80%	9.220%	14.500%	22.873%	97	110	(12)	112.7%	110	112.7%	16	2	2	(0)	(6)
2042	6.80%	9.220%	14.500%	22.913%	101	115	(13)	113.1%	115	113.1%	17	2	2	(0)	(6)
2043	6.80%	9.220%	14.500%	22.952%	106	120	(14)	113.5%	120	113.5%	17	2	3	(0)	(7)
2044	6.80%	9.220%	14.500%	22.975%	110	125	(15)	114.0%	125	114.0%	18	2	3	(0)	(7)
2045	6.80%	9.220%	14.500%	23.039%	114	131	(16)	114.4%	131	114.4%	19	2	3	(0)	(8)
2046	6.80%	9.220%	14.500%	23.050%	119	136	(18)	114.9%	136	114.9%	20	2	3	(0)	(8)
2047	6.80%	9.220%	14.500%	23.099%	123	142	(19)	115.4%	142	115.4%	20	2	3	(0)	(8)
2048	6.80%	9.220%	14.500%	23.118%	128	148	(20)	115.9%	148	115.9%	21	2	3	(0)	(9)
2049	6.80%	9.220%	14.500%	23.120%	133	155	(22)	116.4%	155	116.4%	22	2	3	(0)	(9)
2050	6.80%	9.220%	14.500%	23.109%	138	161	(23)	116.9%	161	116.9%	23	2	3	(0)	(9)
2051	6.80%	9.220%	14.500%	23.122%	143	168	(25)	117.4%	168	117.4%	23	2	3	(0)	(10)
2052	6.80%	9.220%	14.500%	23.137%	149	175	(27)	118.0%	175	118.0%	24	2	4	(0)	(10)



Wyoming Retirement System - Law Enforcement Retirement Fund ("Law Enforcement")
Projection Results Based on January 1, 2022 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1, (1)	Market Return for FY Beginning on Valuation Date (2)	Contribution Rate for Fiscal Year Following Valuation Date		Total Normal Cost as a Percent of Payroll (5)	Actuarial Accrued Liability (AAL, in Millions) (6)	Actuarial Value of Assets (AVA, in Millions) (7)	Unfunded Actuarial Accrued Liability (UAAL, in Millions) (8)	Funded Ratio (9)	Market Value of Assets (MVA, in Millions) (10)	Funded Ratio based on MVA (11)	Projected Payroll for Fiscal Year Following Valuation Date (in Millions) (12)	Employee Contributions for Fiscal Year Following Valuation Date (in Millions) (13)	Employer Contributions for Fiscal Year Following Valuation Date (in Millions) (14)	Expenses for Fiscal Year Following Valuation Date (in Millions) (15)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Millions) (16)
		Employee (3)	Employer (4)												
2022	6.80%	8.600%	8.600%	16.380%	\$933	\$790	\$143	84.7%	\$882	94.6%	\$165	\$14	\$14	(\$1)	(\$46)
2023	6.80%	8.600%	8.600%	16.314%	976	852	124	87.3%	923	94.6%	171	15	15	(1)	(49)
2024	6.80%	8.600%	8.600%	16.260%	1,021	928	93	90.9%	965	94.5%	176	15	15	(1)	(51)
2025	6.80%	8.600%	8.600%	16.216%	1,067	992	75	93.0%	1,008	94.4%	181	16	16	(1)	(54)
2026	6.80%	8.600%	8.600%	16.181%	1,114	1,052	63	94.4%	1,052	94.4%	187	16	16	(1)	(57)
2027	6.80%	8.600%	8.600%	16.152%	1,162	1,097	66	94.3%	1,097	94.3%	192	17	17	(1)	(60)
2028	6.80%	8.600%	8.600%	16.127%	1,211	1,142	69	94.3%	1,142	94.3%	197	17	17	(1)	(64)
2029	6.80%	8.600%	8.600%	16.103%	1,261	1,188	73	94.2%	1,188	94.2%	203	17	17	(1)	(67)
2030	6.80%	8.600%	8.600%	16.082%	1,311	1,234	77	94.1%	1,234	94.1%	208	18	18	(1)	(71)
2031	6.80%	8.600%	8.600%	16.064%	1,361	1,280	81	94.1%	1,280	94.1%	214	18	18	(1)	(75)
2032	6.80%	8.600%	8.600%	16.048%	1,412	1,327	85	94.0%	1,327	94.0%	219	19	19	(1)	(78)
2033	6.80%	8.600%	8.600%	16.032%	1,463	1,374	89	93.9%	1,374	93.9%	225	19	19	(1)	(82)
2034	6.80%	8.600%	8.600%	16.018%	1,515	1,422	94	93.8%	1,422	93.8%	231	20	20	(1)	(86)
2035	6.80%	8.600%	8.600%	16.004%	1,568	1,469	99	93.7%	1,469	93.7%	237	20	20	(1)	(90)
2036	6.80%	8.600%	8.600%	15.992%	1,621	1,517	104	93.6%	1,517	93.6%	243	21	21	(1)	(94)
2037	6.80%	8.600%	8.600%	15.979%	1,675	1,566	109	93.5%	1,566	93.5%	250	21	21	(1)	(98)
2038	6.80%	8.600%	8.600%	15.967%	1,729	1,614	115	93.4%	1,614	93.4%	256	22	22	(1)	(102)
2039	6.80%	8.600%	8.600%	15.955%	1,784	1,663	121	93.2%	1,663	93.2%	263	23	23	(1)	(106)
2040	6.80%	8.600%	8.600%	15.943%	1,840	1,713	127	93.1%	1,713	93.1%	270	23	23	(1)	(109)
2041	6.80%	8.600%	8.600%	15.931%	1,897	1,763	134	93.0%	1,763	93.0%	277	24	24	(1)	(113)
2042	6.80%	8.600%	8.600%	15.921%	1,955	1,814	141	92.8%	1,814	92.8%	285	24	24	(1)	(117)
2043	6.80%	8.600%	8.600%	15.911%	2,014	1,866	148	92.7%	1,866	92.7%	292	25	25	(1)	(121)
2044	6.80%	8.600%	8.600%	15.903%	2,074	1,919	156	92.5%	1,919	92.5%	300	26	26	(1)	(124)
2045	6.80%	8.600%	8.600%	15.896%	2,136	1,972	164	92.3%	1,972	92.3%	308	26	26	(1)	(128)
2046	6.80%	8.600%	8.600%	15.890%	2,200	2,027	173	92.1%	2,027	92.1%	316	27	27	(1)	(133)
2047	6.80%	8.600%	8.600%	15.885%	2,264	2,082	182	92.0%	2,082	92.0%	324	28	28	(2)	(137)
2048	6.80%	8.600%	8.600%	15.881%	2,331	2,139	192	91.8%	2,139	91.8%	332	29	29	(2)	(141)
2049	6.80%	8.600%	8.600%	15.878%	2,398	2,196	202	91.6%	2,196	91.6%	341	29	29	(2)	(145)
2050	6.80%	8.600%	8.600%	15.875%	2,467	2,254	213	91.4%	2,254	91.4%	349	30	30	(2)	(150)
2051	6.80%	8.600%	8.600%	15.873%	2,538	2,313	225	91.1%	2,313	91.1%	358	31	31	(2)	(154)
2052	6.80%	8.600%	8.600%	15.872%	2,610	2,373	237	90.9%	2,373	90.9%	367	32	32	(2)	(159)

Wyoming Retirement System - State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund ("Wardens")
Projection Results Based on January 1, 2022 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1, (1)	Market Return for FY Beginning on Valuation Date (2)	Contribution Rate for Fiscal Year Following Valuation Date			Total Normal Cost as a Percent of Payroll (6)	Actuarial Accrued Liability (AAL, in Millions) (7)	Actuarial Value of Assets (AVA, in Millions) (8)	Unfunded Actuarial Accrued Liability (UAAL, in Millions) (9)	Funded Ratio (10)	Market Value of Assets (MVA, in Millions) (11)	Funded Ratio based on MVA (12)	Projected Payroll for Fiscal Year Following Valuation Date (in Millions) (13)	Employee Contributions for Fiscal Year Following Valuation Date (in Millions) (14)	Employer Contributions for Fiscal Year Following Valuation Date (in Millions) (15)	Expenses for Fiscal Year Following Valuation Date (in Millions) (16)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Millions) (17)
		Employee (3)	Employer (4)	HP Game & Fish Commission (5)												
2022	6.80%	14.560%	14.880%	0.110%	21.060%	\$209	\$170	\$39	81.3%	\$190	90.9%	\$24	\$4	\$4	(\$0)	(\$13)
2023	6.80%	14.560%	14.880%	0.100%	20.948%	216	182	34	84.3%	197	91.5%	25	4	4	(0)	(13)
2024	6.80%	14.560%	14.880%	0.080%	20.863%	222	197	26	88.5%	205	92.0%	25	4	4	(0)	(13)
2025	6.80%	14.560%	14.880%	0.070%	20.784%	229	209	20	91.2%	212	92.7%	26	4	4	(0)	(14)
2026	6.80%	14.560%	14.880%	0.050%	20.718%	236	220	16	93.3%	220	93.3%	27	4	4	(0)	(14)
2027	6.80%	14.560%	14.880%	0.040%	20.654%	243	228	15	93.9%	228	93.9%	27	4	4	(0)	(15)
2028	6.80%	14.560%	14.880%	0.040%	20.593%	250	236	13	94.6%	236	94.6%	28	4	4	(0)	(15)
2029	6.80%	14.560%	14.880%	0.030%	20.536%	257	245	12	95.4%	245	95.4%	29	4	4	(0)	(16)
2030	6.80%	14.560%	14.880%	0.020%	20.482%	265	254	10	96.1%	254	96.1%	30	4	4	(0)	(16)
2031	6.80%	14.560%	14.880%	0.020%	20.424%	272	264	9	96.9%	264	96.9%	30	4	5	(0)	(17)
2032	6.80%	14.560%	14.880%	0.010%	20.372%	280	273	6	97.7%	273	97.7%	31	5	5	(0)	(17)
2033	6.80%	14.560%	14.880%	0.010%	20.331%	287	283	4	98.5%	283	98.5%	32	5	5	(0)	(18)
2034	6.80%	14.560%	14.880%	0.010%	20.301%	295	294	2	99.4%	294	99.4%	33	5	5	(0)	(18)
2035	6.80%	14.560%	14.880%	0.010%	20.279%	304	304	(1)	100.3%	304	100.3%	34	5	5	(0)	(19)
2036	6.80%	14.560%	14.880%	0.010%	20.261%	312	316	(4)	101.3%	316	101.3%	35	5	5	(0)	(19)
2037	6.80%	14.560%	14.880%	0.000%	20.241%	320	327	(7)	102.3%	327	102.3%	36	5	5	(0)	(20)
2038	6.80%	14.560%	14.880%	0.000%	20.220%	329	339	(11)	103.3%	339	103.3%	37	5	5	(0)	(21)
2039	6.80%	14.560%	14.880%	0.000%	20.201%	337	352	(15)	104.4%	352	104.4%	38	5	6	(0)	(21)
2040	6.80%	14.560%	14.880%	0.000%	20.187%	346	365	(19)	105.5%	365	105.5%	39	6	6	(0)	(22)
2041	6.80%	14.560%	14.880%	0.000%	20.174%	356	379	(24)	106.7%	379	106.7%	40	6	6	(0)	(22)
2042	6.80%	14.560%	14.880%	0.000%	20.159%	365	394	(29)	107.9%	394	107.9%	41	6	6	(0)	(23)
2043	6.80%	14.560%	14.880%	0.000%	20.144%	375	409	(34)	109.2%	409	109.2%	42	6	6	(0)	(23)
2044	6.80%	14.560%	14.880%	0.000%	20.131%	385	425	(40)	110.5%	425	110.5%	43	6	6	(0)	(24)
2045	6.80%	14.560%	14.880%	0.000%	20.119%	395	442	(47)	111.9%	442	111.9%	44	6	7	(0)	(25)
2046	6.80%	14.560%	14.880%	0.000%	20.107%	406	460	(54)	113.3%	460	113.3%	45	7	7	(0)	(25)
2047	6.80%	14.560%	14.880%	0.000%	20.098%	417	478	(62)	114.8%	478	114.8%	46	7	7	(0)	(26)
2048	6.80%	14.560%	14.880%	0.000%	20.090%	428	498	(70)	116.3%	498	116.3%	47	7	7	(0)	(27)
2049	6.80%	14.560%	14.880%	0.000%	20.082%	439	518	(79)	117.9%	518	117.9%	49	7	7	(0)	(27)
2050	6.80%	14.560%	14.880%	0.000%	20.076%	451	540	(88)	119.6%	540	119.6%	50	7	7	(0)	(28)
2051	6.80%	14.560%	14.880%	0.000%	20.071%	464	562	(99)	121.3%	562	121.3%	51	7	8	(0)	(29)
2052	6.80%	14.560%	14.880%	0.000%	20.069%	476	586	(110)	123.1%	586	123.1%	52	8	8	(0)	(29)



Wyoming Retirement System - Air Guard Firefighters Retirement System ("Guard Fire")
Projection Results Based on January 1, 2022 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1, (1)	Market Return for FY Beginning on Valuation Date (2)	Contribution Rate for Fiscal Year Following Valuation Date		Total Normal Cost as a Percent of Payroll (5)	Actuarial Accrued Liability (AAL, in Millions) (6)	Actuarial Value of Assets (AVA, in Millions) (7)	Unfunded Actuarial Accrued Liability (UAAL, in Millions) (8)	Funded Ratio (9)	Market Value of Assets (MVA, in Millions) (10)	Funded Ratio based on MVA (11)	Projected Payroll for Fiscal Year Following Valuation Date (in Millions) (12)	Employee Contributions for Fiscal Year Following Valuation Date (in Millions) (13)	Employer Contributions for Fiscal Year Following Valuation Date (in Millions) (14)	Expenses for Fiscal Year Following Valuation Date (in Millions) (15)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Millions) (16)
		Employee (3)	Employer (4)												
2022	6.80%	16.650%	7.120%	15.530%	\$12	\$10	\$2	82.1%	\$11	91.4%	\$2	\$0	\$0	(\$0)	(\$1)
2023	6.80%	16.650%	7.120%	15.394%	12	10	2	85.7%	11	92.6%	2	0	0	(0)	(1)
2024	6.80%	16.650%	7.120%	15.285%	12	11	1	90.4%	12	93.9%	2	0	0	(0)	(1)
2025	6.80%	16.650%	7.120%	15.206%	13	12	1	93.8%	12	95.2%	2	0	0	(0)	(1)
2026	6.80%	16.650%	7.120%	15.143%	13	13	0	96.6%	13	96.6%	2	0	0	(0)	(1)
2027	6.80%	16.650%	7.120%	15.089%	14	14	0	98.1%	14	98.1%	3	0	0	(0)	(1)
2028	6.80%	16.650%	7.120%	15.043%	15	14	0	99.5%	14	99.5%	3	0	0	(0)	(1)
2029	6.80%	16.650%	7.120%	14.999%	15	15	(0)	101.0%	15	101.0%	3	0	0	(0)	(1)
2030	6.80%	16.650%	7.120%	14.948%	16	16	(0)	102.5%	16	102.5%	3	0	0	(0)	(1)
2031	6.80%	16.650%	7.120%	14.892%	16	17	(1)	104.1%	17	104.1%	3	0	0	(0)	(1)
2032	6.80%	16.650%	7.120%	14.844%	17	18	(1)	105.6%	18	105.6%	3	0	0	(0)	(1)
2033	6.80%	16.650%	7.120%	14.802%	18	19	(1)	107.2%	19	107.2%	3	0	0	(0)	(1)
2034	6.80%	16.650%	7.120%	14.764%	19	20	(2)	108.7%	20	108.7%	3	1	0	(0)	(1)
2035	6.80%	16.650%	7.120%	14.729%	20	22	(2)	110.3%	22	110.3%	3	1	0	(0)	(1)
2036	6.80%	16.650%	7.120%	14.697%	20	23	(2)	111.9%	23	111.9%	3	1	0	(0)	(1)
2037	6.80%	16.650%	7.120%	14.664%	21	24	(3)	113.5%	24	113.5%	3	1	0	(0)	(1)
2038	6.80%	16.650%	7.120%	14.631%	22	26	(3)	115.1%	26	115.1%	3	1	0	(0)	(1)
2039	6.80%	16.650%	7.120%	14.602%	23	27	(4)	116.7%	27	116.7%	3	1	0	(0)	(1)
2040	6.80%	16.650%	7.120%	14.576%	25	29	(4)	118.3%	29	118.3%	4	1	0	(0)	(1)
2041	6.80%	16.650%	7.120%	14.548%	26	31	(5)	119.9%	31	119.9%	4	1	0	(0)	(1)
2042	6.80%	16.650%	7.120%	14.518%	27	33	(6)	121.6%	33	121.6%	4	1	0	(0)	(1)
2043	6.80%	16.650%	7.120%	14.490%	28	35	(7)	123.3%	35	123.3%	4	1	0	(0)	(1)
2044	6.80%	16.650%	7.120%	14.463%	29	37	(7)	125.0%	37	125.0%	4	1	0	(0)	(1)
2045	6.80%	16.650%	7.120%	14.437%	31	39	(8)	126.7%	39	126.7%	4	1	0	(0)	(1)
2046	6.80%	16.650%	7.120%	14.413%	32	41	(9)	128.4%	41	128.4%	4	1	0	(0)	(1)
2047	6.80%	16.650%	7.120%	14.393%	33	43	(10)	130.3%	43	130.3%	4	1	0	(0)	(1)
2048	6.80%	16.650%	7.120%	14.374%	35	46	(11)	132.1%	46	132.1%	4	1	0	(0)	(2)
2049	6.80%	16.650%	7.120%	14.357%	36	49	(12)	134.1%	49	134.1%	4	1	0	(0)	(2)
2050	6.80%	16.650%	7.120%	14.341%	38	51	(14)	136.1%	51	136.1%	4	1	0	(0)	(2)
2051	6.80%	16.650%	7.120%	14.327%	39	54	(15)	138.1%	54	138.1%	5	1	0	(0)	(2)
2052	6.80%	16.650%	7.120%	14.315%	41	57	(16)	140.3%	57	140.3%	5	1	0	(0)	(2)



Wyoming Retirement System - Paid Firemen's Retirement Fund Plan B ("Fire B")
Projection Results based on January 1, 2022 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Total Normal Cost as a Percent of Payroll	Actuarial Accrued Liability (AAL, in Millions)	Actuarial Value of Assets (AVA, in Millions)	Unfunded Actuarial Accrued Liability (UAAL, in Millions)	Funded Ratio	Market Value of Assets (MVA, in Millions)	Funded Ratio based on MVA	Projected Payroll for Fiscal Year Following Valuation Date (in Millions)	Employee Contributions for Fiscal Year Following Valuation Date (in Millions)	Employer Contributions for Fiscal Year Following Valuation Date (in Millions)	Expenses for Fiscal Year Following Valuation Date (in Millions)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Millions)
		Employee	Employer												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
2022	6.80%	10.995%	15.500%	23.320%	\$202	\$196	\$6	97.1%	\$219	108.1%	\$32	\$4	\$5	(\$0)	(\$8)
2023	6.80%	11.245%	16.000%	23.212%	216	217	(1)	100.5%	234	108.5%	33	4	5	(0)	(9)
2024	6.80%	11.245%	16.000%	23.169%	229	241	(12)	105.1%	250	109.0%	34	4	5	(0)	(9)
2025	6.80%	11.245%	16.000%	23.116%	243	263	(19)	107.9%	267	109.5%	35	4	6	(0)	(10)
2026	6.80%	11.245%	16.000%	23.075%	258	284	(26)	110.0%	284	110.0%	36	4	6	(0)	(11)
2027	6.80%	11.245%	16.000%	23.048%	273	302	(29)	110.6%	302	110.6%	37	4	6	(0)	(12)
2028	6.80%	11.245%	16.000%	23.035%	288	320	(32)	111.2%	320	111.2%	38	4	6	(0)	(13)
2029	6.80%	11.245%	16.000%	23.031%	303	339	(36)	111.8%	339	111.8%	39	4	6	(0)	(14)
2030	6.80%	11.245%	16.000%	23.041%	319	359	(40)	112.4%	359	112.4%	40	5	6	(0)	(15)
2031	6.80%	11.245%	16.000%	23.048%	335	378	(44)	113.0%	378	113.0%	41	5	7	(0)	(16)
2032	6.80%	11.245%	16.000%	23.050%	350	398	(48)	113.7%	398	113.7%	42	5	7	(0)	(18)
2033	6.80%	11.245%	16.000%	23.069%	366	419	(53)	114.4%	419	114.4%	43	5	7	(0)	(19)
2034	6.80%	11.245%	16.000%	23.102%	382	440	(58)	115.2%	440	115.2%	44	5	7	(0)	(20)
2035	6.80%	11.245%	16.000%	23.139%	398	462	(63)	115.9%	462	115.9%	45	5	7	(0)	(21)
2036	6.80%	11.245%	16.000%	23.173%	415	484	(69)	116.7%	484	116.7%	46	5	7	(0)	(22)
2037	6.80%	11.245%	16.000%	23.197%	431	506	(76)	117.5%	506	117.5%	48	5	8	(0)	(24)
2038	6.80%	11.245%	16.000%	23.213%	447	529	(82)	118.4%	529	118.4%	49	5	8	(0)	(25)
2039	6.80%	11.245%	16.000%	23.229%	464	553	(90)	119.3%	553	119.3%	50	6	8	(0)	(26)
2040	6.80%	11.245%	16.000%	23.255%	480	577	(97)	120.3%	577	120.3%	51	6	8	(0)	(28)
2041	6.80%	11.245%	16.000%	23.276%	497	602	(106)	121.3%	602	121.3%	52	6	8	(0)	(29)
2042	6.80%	11.245%	16.000%	23.289%	513	628	(115)	122.3%	628	122.3%	54	6	9	(0)	(30)
2043	6.80%	11.245%	16.000%	23.289%	530	654	(124)	123.4%	654	123.4%	55	6	9	(0)	(31)
2044	6.80%	11.245%	16.000%	23.288%	547	682	(134)	124.6%	682	124.6%	56	6	9	(0)	(33)
2045	6.80%	11.245%	16.000%	23.287%	564	710	(145)	125.8%	710	125.8%	58	7	9	(0)	(34)
2046	6.80%	11.245%	16.000%	23.286%	582	739	(157)	127.0%	739	127.0%	59	7	10	(0)	(35)
2047	6.80%	11.245%	16.000%	23.288%	600	769	(170)	128.3%	769	128.3%	61	7	10	(0)	(36)
2048	6.80%	11.245%	16.000%	23.290%	617	801	(183)	129.7%	801	129.7%	63	7	10	(0)	(38)
2049	6.80%	11.245%	16.000%	23.290%	636	834	(198)	131.1%	834	131.1%	64	7	10	(0)	(39)
2050	6.80%	11.245%	16.000%	23.288%	654	867	(214)	132.7%	867	132.7%	66	7	11	(0)	(40)
2051	6.80%	11.245%	16.000%	23.285%	673	903	(230)	134.2%	903	134.2%	68	8	11	(0)	(42)
2052	6.80%	11.245%	16.000%	23.283%	692	940	(248)	135.9%	940	135.9%	69	8	11	(0)	(43)



Wyoming Paid Firemen's Retirement Fund Plan A ("Fire A")
Projection Results Based on January 1, 2022 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1, (1)	Market Return for FY Beginning on Valuation Date (2)	Contribution for Fiscal Year Following Valuation Date (in Thousands)				Actuarial Accrued Liability (AAL, in Thousands) (7)	Market Value of Assets (MVA, in Thousands) (8)	Unfunded Actuarial Accrued Liability (UAAL, in Thousands) (9)	Funded Ratio (10)	Assumed Expenses (in Thousands) (11)	Benefit Payments (in Thousands) (12)
		Employer Amortization Pmt. (3)	Employer - Treasury Loan (4)	Premium Tax Allocation (5)	State (6)						
2022	6.80%	\$0	\$20,000	\$1,041	\$55,000	\$169,135	\$73,444	\$95,692	43.4%	\$104	\$16,112
2023	6.80%	0	0	2,130	0	163,985	140,263	23,722	85.5%	101	15,957
2024	6.80%	0	0	2,178	0	158,645	135,407	23,238	85.4%	98	15,771
2025	6.80%	0	0	2,227	0	153,135	130,466	22,669	85.2%	94	15,557
2026	6.80%	0	0	2,277	0	147,471	125,464	22,007	85.1%	91	15,311
2027	6.80%	0	0	2,328	0	141,677	120,432	21,245	85.0%	87	15,035
2028	6.80%	0	0	2,380	0	135,773	115,400	20,373	85.0%	84	14,736
2029	6.80%	0	0	2,434	0	129,778	110,392	19,385	85.1%	80	14,410
2030	6.80%	0	0	2,489	0	123,711	105,440	18,271	85.2%	76	14,061
2031	6.80%	0	0	2,545	0	117,591	100,571	17,020	85.5%	72	13,692
2032	6.80%	0	0	2,602	0	111,438	95,815	15,623	86.0%	69	13,300
2033	6.80%	0	0	2,660	0	105,271	91,204	14,067	86.6%	65	12,887
2034	6.80%	0	0	2,720	0	99,112	86,770	12,341	87.5%	61	12,452
2035	6.80%	0	0	2,781	0	92,983	82,551	10,432	88.8%	57	11,996
2036	6.80%	0	0	2,844	0	86,908	78,582	8,326	90.4%	53	11,518
2037	6.80%	0	0	2,908	0	80,915	74,907	6,009	92.6%	50	11,018
2038	6.80%	0	0	2,973	0	75,031	71,567	3,463	95.4%	46	10,501
2039	6.80%	0	0	3,040	0	69,280	68,606	674	99.0%	43	9,969
2040	6.80%	0	0	3,109	0	63,689	66,067	(2,378)	103.7%	39	9,428
2041	6.80%	0	0	0	0	58,277	63,989	(5,712)	109.8%	36	8,877
2042	6.80%	0	0	0	0	53,065	59,129	(6,064)	111.4%	33	8,322
2043	6.80%	0	0	0	0	48,074	54,516	(6,442)	113.4%	30	7,763
2044	6.80%	0	0	0	0	43,320	50,170	(6,850)	115.8%	27	7,204
2045	6.80%	0	0	0	0	38,821	46,109	(7,288)	118.8%	24	6,649
2046	6.80%	0	0	0	0	34,590	42,349	(7,759)	122.4%	21	6,099
2047	6.80%	0	0	0	0	30,639	38,904	(8,264)	127.0%	19	5,559
2048	6.80%	0	0	0	0	26,978	35,784	(8,807)	132.6%	17	5,033
2049	6.80%	0	0	0	0	23,611	32,999	(9,389)	139.8%	15	4,524
2050	6.80%	0	0	0	0	20,542	30,554	(10,012)	148.7%	13	4,036
2051	6.80%	0	0	0	0	17,768	28,448	(10,680)	160.1%	11	3,573
2052	6.80%	0	0	0	0	15,284	26,678	(11,395)	174.6%	9	3,139

Wyoming Retirement System - Volunteer Firefighter, EMT, and Search and Rescue Pension Plan
Projection Results Based on January 1, 2022 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1, (1)	Market Return for FY Beginning on Valuation Date (2)	Contribution for Fiscal Year Following Valuation Date (in Thousands)		COLA (Only granted when Funded Ratio would remain above 107%) (5)	Actuarial Accrued Liability (AAL, in Thousands) (6)	Actuarial Value of Assets (AVA, in Thousands) (7)	Unfunded Liability (UAL, in Thousands) (8)	Funded Ratio (9)	Market Value of Assets (MVA, in Thousands) (10)	Funded Ratio based on MVA (11)	Employee Contributions for Fiscal Year Following Valuation Date (in Thousands) (12)	Employer Contributions for Fiscal Year Following Valuation Date (in Thousands) (13)	Expenses for Fiscal Year Following Valuation Date (in Thousands) (14)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Thousands) (15)
		Employee (3)	Employer (4)											
2022	6.80%	\$553	\$4,166	0.0%	\$120,546	\$98,000	\$22,547	81.3%	\$108,687	90.2%	\$553	\$4,166	(\$98)	(\$7,531)
2023	6.80%	553	3,194	0.0%	122,639	104,779	17,861	85.4%	113,070	92.2%	553	3,194	(99)	(7,804)
2024	6.80%	553	3,266	0.0%	124,571	112,252	12,319	90.1%	116,464	93.5%	553	3,266	(100)	(8,060)
2025	6.80%	553	3,340	0.0%	126,353	118,071	8,282	93.4%	119,898	94.9%	553	3,340	(101)	(8,336)
2026	6.80%	553	3,415	0.0%	127,954	123,354	4,600	96.4%	123,354	96.4%	553	3,415	(102)	(8,592)
2027	6.80%	553	3,492	0.0%	129,381	126,857	2,524	98.0%	126,857	98.0%	553	3,492	(103)	(8,799)
2028	6.80%	553	3,570	0.0%	130,842	130,463	379	99.7%	130,463	99.7%	553	3,570	(104)	(8,979)
2029	6.80%	553	3,651	0.0%	132,205	134,208	(2,003)	101.5%	134,208	101.5%	553	3,651	(106)	(9,165)
2030	6.80%	553	3,733	0.0%	133,461	138,097	(4,637)	103.5%	138,097	103.5%	553	3,733	(107)	(9,330)
2031	6.80%	553	3,817	0.0%	134,624	142,164	(7,540)	105.6%	142,164	105.6%	553	3,817	(108)	(9,492)
2032	6.80%	553	3,903	3.0%	135,692	146,426	(10,733)	107.9%	146,426	107.9%	553	3,903	(109)	(9,645)
2033	6.80%	553	3,991	3.0%	139,501	150,906	(11,405)	108.2%	150,906	108.2%	553	3,991	(110)	(10,033)
2034	6.80%	553	4,080	3.0%	143,254	155,380	(12,126)	108.5%	155,380	108.5%	553	4,080	(112)	(10,416)
2035	6.80%	553	4,172	3.0%	146,963	159,854	(12,891)	108.8%	159,854	108.8%	553	4,172	(113)	(10,774)
2036	6.80%	553	4,266	3.0%	150,637	164,356	(13,719)	109.1%	164,356	109.1%	553	4,266	(114)	(11,122)
2037	6.80%	553	4,362	3.0%	154,283	168,900	(14,617)	109.5%	168,900	109.5%	553	4,362	(116)	(11,506)
2038	6.80%	553	4,460	3.0%	157,861	173,454	(15,592)	109.9%	173,454	109.9%	553	4,460	(117)	(11,892)
2039	6.80%	553	4,561	3.0%	161,388	178,018	(16,630)	110.3%	178,018	110.3%	553	4,561	(118)	(12,267)
2040	6.80%	553	4,663	3.0%	164,854	182,608	(17,755)	110.8%	182,608	110.8%	553	4,663	(119)	(12,628)
2041	6.80%	553	4,768	3.0%	168,277	187,242	(18,965)	111.3%	187,242	111.3%	553	4,768	(121)	(13,004)
2042	6.80%	553	4,875	3.0%	171,629	191,909	(20,280)	111.8%	191,909	111.8%	553	4,875	(122)	(13,401)
2043	6.80%	553	4,985	3.0%	174,899	196,592	(21,693)	112.4%	196,592	112.4%	553	4,985	(124)	(13,799)
2044	6.80%	553	5,097	3.0%	178,084	201,295	(23,212)	113.0%	201,295	113.0%	553	5,097	(125)	(14,173)
2045	6.80%	553	5,212	3.0%	181,203	206,047	(24,844)	113.7%	206,047	113.7%	553	5,212	(126)	(14,519)
2046	6.80%	553	5,329	3.0%	184,265	210,880	(26,616)	114.4%	210,880	114.4%	553	5,329	(128)	(14,863)
2047	6.80%	553	5,449	3.0%	187,272	215,806	(28,534)	115.2%	215,806	115.2%	553	5,449	(129)	(15,186)
2048	6.80%	553	5,572	3.0%	190,239	220,857	(30,617)	116.1%	220,857	116.1%	553	5,572	(131)	(15,497)
2049	6.80%	553	5,697	3.0%	193,165	226,054	(32,889)	117.0%	226,054	117.0%	553	5,697	(132)	(15,823)
2050	6.80%	553	5,825	3.0%	196,040	231,396	(35,356)	118.0%	231,396	118.0%	553	5,825	(134)	(16,128)
2051	6.80%	553	5,956	3.0%	198,883	236,916	(38,034)	119.1%	236,916	119.1%	553	5,956	(135)	(16,413)
2052	6.80%	553	6,090	3.0%	201,697	242,652	(40,955)	120.3%	242,652	120.3%	553	6,090	(137)	(16,710)

