



June 20, 2023

Mr. David Swindell
Executive Director
Wyoming Retirement System
2515 Warren Avenue, Suite 450
Cheyenne, WY 82002

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, 2023 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, 2023. 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 set of actuarial assumptions as adopted by the WRS Board of Trustees effective November 17, 2021 and February 17, 2022 and 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 decreased for all plans except Fire A and Vol Plans. All plans experienced losses from lower than expected investment returns in 2022 on a market value basis. However, due to continued recognition of deferred gains, investment returns on an actuarial bases were greater than expected for all plans except Fire A.

- 1) Public Employee: The plan is projected to be 87.5% funded in 30 years (last year the projection showed 130.3% in 30 years).
- 2) Fire A is on a sustainable path as a result of Enrolled Act No. 6 and is projected to be well above 100% funded in 30 years.
- 3) Wardens: The plan is projected to be 76.9% funded in 30 years (last year the projection showed 123.1% in 30 years).
- 4) Fire B: This plan is projected to be 104.6% funded in 30 years (last year the projection showed 135.9% in 30 years).

- 5) Law Enforcement: The plan is projected to be 57.0% funded in 30 years (last year the projection showed 90.9% in 30 years). We will be exploring various options to improve the funding of this plan.
- 6) Judges: The plan is projected to be at 91.6% funded in 30 years (last year the projection showed 118.0% in 30 years).
- 7) Both the Guard Fire Plan and Vol Fire Plans are projected to be above 100% funded in 30 years.

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

Plan	Funded Ratio (Based on AVA)	
	2023	2053
Public Employee	77.2%	87.5%
Judges	99.1%	91.6%
Law Enforcement	84.3%	57.0%
Wardens	80.6%	76.9%
Guard Fire	82.4%	116.2%
Fire B	96.9%	104.6%
Fire A	83.9%	268.8%
Vol Fire, EMT & SR	82.9%	140.4%

Assumptions and Methods

- All calculations incorporate data, provisions, and assumptions used in the January 1, 2023 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, 2023 actuarial valuation were used. This letter is subject to all disclosures contained in the January 1, 2023 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.

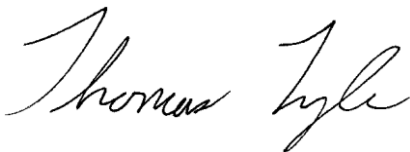
If you require any additional or clarifying information, please do not hesitate to contact the undersigned.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Paul Wood, ASA, FCA, MAAA
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Wyoming Retirement System - Public Employees' Pension Plan
Projection Results Based on January 1, 2023 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 - \$	Employer - %												
		(3)	(4)	(5)												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2023	6.80%	9.250%	-	9.370%	11.330%	\$11,200	\$8,652	\$2,548	77.2%	\$8,407	75.1%	\$1,925	\$178	\$180	(\$8)	(\$705)
2024	6.80%	9.250%	-	9.370%	11.232%	11,456	8,983	2,473	78.4%	8,612	75.2%	1,972	182	185	(8)	(726)
2025	6.80%	9.250%	-	9.370%	11.147%	11,711	9,158	2,553	78.2%	8,818	75.3%	2,020	187	189	(8)	(745)
2026	6.80%	9.250%	-	9.370%	11.069%	11,968	9,282	2,686	77.6%	9,028	75.4%	2,069	191	194	(9)	(762)
2027	6.80%	9.250%	-	9.370%	11.000%	12,229	9,243	2,985	75.6%	9,243	75.6%	2,118	196	198	(9)	(784)
2028	6.80%	9.250%	-	9.370%	10.938%	12,489	9,460	3,029	75.8%	9,460	75.8%	2,168	201	203	(9)	(805)
2029	6.80%	9.250%	-	9.370%	10.880%	12,749	9,680	3,069	75.9%	9,680	75.9%	2,219	205	208	(9)	(826)
2030	6.80%	9.250%	-	9.370%	10.826%	13,009	9,901	3,108	76.1%	9,901	76.1%	2,271	210	213	(10)	(848)
2031	6.80%	9.250%	-	9.370%	10.776%	13,269	10,126	3,144	76.3%	10,126	76.3%	2,323	215	218	(10)	(869)
2032	6.80%	9.250%	-	9.370%	10.728%	13,530	10,353	3,177	76.5%	10,353	76.5%	2,377	220	223	(10)	(890)
2033	6.80%	9.250%	-	9.370%	10.684%	13,791	10,585	3,207	76.7%	10,585	76.7%	2,431	225	228	(10)	(900)
2034	6.80%	9.250%	-	9.370%	10.642%	14,065	10,832	3,233	77.0%	10,832	77.0%	2,485	230	233	(10)	(921)
2035	6.80%	9.250%	-	9.370%	10.604%	14,340	11,083	3,257	77.3%	11,083	77.3%	2,540	235	238	(11)	(943)
2036	6.80%	9.250%	-	9.370%	10.568%	14,616	11,340	3,276	77.6%	11,340	77.6%	2,597	240	243	(11)	(965)
2037	6.80%	9.250%	-	9.370%	10.536%	14,894	11,603	3,291	77.9%	11,603	77.9%	2,654	246	249	(11)	(987)
2038	6.80%	9.250%	-	9.370%	10.508%	15,173	11,871	3,302	78.2%	11,871	78.2%	2,714	251	254	(11)	(1,008)
2039	6.80%	9.250%	-	9.370%	10.482%	15,455	12,148	3,308	78.6%	12,148	78.6%	2,775	257	260	(12)	(1,029)
2040	6.80%	9.250%	-	9.370%	10.460%	15,741	12,433	3,308	79.0%	12,433	79.0%	2,839	263	266	(12)	(1,049)
2041	6.80%	9.250%	-	9.370%	10.440%	16,032	12,728	3,304	79.4%	12,728	79.4%	2,904	269	272	(12)	(1,068)
2042	6.80%	9.250%	-	9.370%	10.423%	16,328	13,036	3,292	79.8%	13,036	79.8%	2,971	275	278	(12)	(1,087)
2043	6.80%	9.250%	-	9.370%	10.408%	16,633	13,358	3,274	80.3%	13,358	80.3%	3,041	281	285	(13)	(1,104)
2044	6.80%	9.250%	-	9.370%	10.394%	16,947	13,697	3,249	80.8%	13,697	80.8%	3,114	288	292	(13)	(1,121)
2045	6.80%	9.250%	-	9.370%	10.383%	17,272	14,056	3,216	81.4%	14,056	81.4%	3,188	295	299	(13)	(1,137)
2046	6.80%	9.250%	-	9.370%	10.372%	17,611	14,437	3,174	82.0%	14,437	82.0%	3,266	302	306	(14)	(1,151)
2047	6.80%	9.250%	-	9.370%	10.363%	17,966	14,843	3,122	82.6%	14,843	82.6%	3,346	309	314	(14)	(1,165)
2048	6.80%	9.250%	-	9.370%	10.354%	18,338	15,278	3,060	83.3%	15,278	83.3%	3,428	317	321	(14)	(1,179)
2049	6.80%	9.250%	-	9.370%	10.346%	18,730	15,743	2,987	84.1%	15,743	84.1%	3,514	325	329	(15)	(1,193)
2050	6.80%	9.250%	-	9.370%	10.338%	19,143	16,242	2,901	84.8%	16,242	84.8%	3,601	333	337	(15)	(1,206)
2051	6.80%	9.250%	-	9.370%	10.332%	19,580	16,777	2,802	85.7%	16,777	85.7%	3,691	341	346	(16)	(1,220)
2052	6.80%	9.250%	-	9.370%	10.326%	20,040	17,351	2,689	86.6%	17,351	86.6%	3,784	350	355	(16)	(1,236)
2053	6.80%	9.250%	-	9.370%	10.320%	20,526	17,966	2,560	87.5%	17,966	87.5%	3,879	359	363	(16)	(1,253)



Wyoming Retirement System - Judicial Retirement System ("Judges")
Projection Results Based on January 1, 2023 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 - \$	Employer - %												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2023	6.80%	9.220%	-	14.500%	24.920%	\$42	\$42	\$0	99.1%	\$ 40	95.9%	\$9	\$1	\$1	(\$0)	(\$2)
2024	6.80%	9.220%	-	14.500%	24.837%	45	44	0	99.7%	43	95.6%	9	1	1	(0)	(3)
2025	6.80%	9.220%	-	14.500%	24.682%	47	46	1	98.8%	45	95.4%	9	1	1	(0)	(3)
2026	6.80%	9.220%	-	14.500%	24.401%	49	48	1	97.5%	47	95.1%	10	1	1	(0)	(3)
2027	6.80%	9.220%	-	14.500%	24.175%	52	49	3	94.8%	49	94.8%	10	1	1	(0)	(3)
2028	6.80%	9.220%	-	14.500%	23.994%	54	51	3	94.6%	51	94.6%	10	1	1	(0)	(4)
2029	6.80%	9.220%	-	14.500%	23.837%	57	54	3	94.4%	54	94.4%	11	1	2	(0)	(4)
2030	6.80%	9.220%	-	14.500%	23.615%	60	56	3	94.3%	56	94.3%	11	1	2	(0)	(4)
2031	6.80%	9.220%	-	14.500%	23.455%	62	59	4	94.1%	59	94.1%	11	1	2	(0)	(4)
2032	6.80%	9.220%	-	14.500%	23.350%	65	61	4	94.0%	61	94.0%	12	1	2	(0)	(4)
2033	6.80%	9.220%	-	14.500%	23.257%	68	64	4	93.9%	64	93.9%	12	1	2	(0)	(4)
2034	6.80%	9.220%	-	14.500%	23.197%	71	67	4	93.8%	67	93.8%	13	1	2	(0)	(4)
2035	6.80%	9.220%	-	14.500%	23.155%	75	70	5	93.7%	70	93.7%	13	1	2	(0)	(5)
2036	6.80%	9.220%	-	14.500%	23.104%	78	73	5	93.7%	73	93.7%	14	1	2	(0)	(5)
2037	6.80%	9.220%	-	14.500%	23.023%	82	76	5	93.6%	76	93.6%	14	1	2	(0)	(5)
2038	6.80%	9.220%	-	14.500%	22.967%	86	80	6	93.6%	80	93.6%	15	1	2	(0)	(5)
2039	6.80%	9.220%	-	14.500%	22.972%	89	84	6	93.5%	84	93.5%	15	1	2	(0)	(6)
2040	6.80%	9.220%	-	14.500%	23.029%	93	87	6	93.5%	87	93.5%	16	1	2	(0)	(6)
2041	6.80%	9.220%	-	14.500%	23.021%	97	91	6	93.4%	91	93.4%	16	1	2	(0)	(6)
2042	6.80%	9.220%	-	14.500%	23.052%	101	94	7	93.3%	94	93.3%	17	2	2	(0)	(6)
2043	6.80%	9.220%	-	14.500%	23.094%	105	98	7	93.2%	98	93.2%	17	2	3	(0)	(7)
2044	6.80%	9.220%	-	14.500%	23.121%	110	102	8	93.1%	102	93.1%	18	2	3	(0)	(7)
2045	6.80%	9.220%	-	14.500%	23.193%	114	106	8	93.0%	106	93.0%	19	2	3	(0)	(7)
2046	6.80%	9.220%	-	14.500%	23.211%	118	110	8	92.9%	110	92.9%	19	2	3	(0)	(8)
2047	6.80%	9.220%	-	14.500%	23.275%	123	114	9	92.7%	114	92.7%	20	2	3	(0)	(8)
2048	6.80%	9.220%	-	14.500%	23.297%	128	118	10	92.5%	118	92.5%	21	2	3	(0)	(8)
2049	6.80%	9.220%	-	14.500%	23.314%	133	122	10	92.4%	122	92.4%	21	2	3	(0)	(9)
2050	6.80%	9.220%	-	14.500%	23.300%	138	127	11	92.2%	127	92.2%	22	2	3	(0)	(9)
2051	6.80%	9.220%	-	14.500%	23.314%	143	131	11	92.0%	131	92.0%	23	2	3	(0)	(9)
2052	6.80%	9.220%	-	14.500%	23.354%	148	136	12	91.8%	136	91.8%	24	2	3	(0)	(10)
2053	6.80%	9.220%	-	14.500%	23.365%	154	141	13	91.6%	141	91.6%	25	2	4	(0)	(10)



Wyoming Retirement System - Law Enforcement Retirement Fund ("Law Enforcement")
Projection Results Based on January 1, 2023 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)	Employer - % (5)												
2023	6.80%	8.600%	-	8.600%	16.410%	\$986	\$831	\$155	84.3%	\$806	81.8%	\$171	\$15	\$15	(\$1)	(\$49)
2024	6.80%	8.600%	-	8.600%	16.333%	1,032	875	156	84.9%	840	81.4%	177	15	15	(1)	(52)
2025	6.80%	8.600%	-	8.600%	16.276%	1,078	906	172	84.0%	874	81.0%	182	16	16	(1)	(55)
2026	6.80%	8.600%	-	8.600%	16.230%	1,126	932	194	82.8%	908	80.7%	188	16	16	(1)	(57)
2027	6.80%	8.600%	-	8.600%	16.192%	1,175	943	232	80.3%	943	80.3%	194	17	17	(1)	(61)
2028	6.80%	8.600%	-	8.600%	16.160%	1,225	978	247	79.9%	978	79.9%	199	17	17	(1)	(64)
2029	6.80%	8.600%	-	8.600%	16.133%	1,275	1,013	262	79.4%	1,013	79.4%	205	18	18	(1)	(68)
2030	6.80%	8.600%	-	8.600%	16.109%	1,326	1,047	279	79.0%	1,047	79.0%	211	18	18	(1)	(72)
2031	6.80%	8.600%	-	8.600%	16.088%	1,377	1,080	297	78.4%	1,080	78.4%	217	19	19	(1)	(76)
2032	6.80%	8.600%	-	8.600%	16.068%	1,429	1,113	316	77.9%	1,113	77.9%	222	19	19	(1)	(80)
2033	6.80%	8.600%	-	8.600%	16.050%	1,480	1,144	336	77.3%	1,144	77.3%	228	20	20	(1)	(83)
2034	6.80%	8.600%	-	8.600%	16.034%	1,534	1,176	358	76.7%	1,176	76.7%	235	20	20	(1)	(87)
2035	6.80%	8.600%	-	8.600%	16.018%	1,587	1,207	380	76.0%	1,207	76.0%	241	21	21	(1)	(91)
2036	6.80%	8.600%	-	8.600%	16.003%	1,642	1,237	405	75.4%	1,237	75.4%	247	21	21	(1)	(95)
2037	6.80%	8.600%	-	8.600%	15.988%	1,697	1,266	431	74.6%	1,266	74.6%	254	22	22	(1)	(99)
2038	6.80%	8.600%	-	8.600%	15.973%	1,752	1,294	458	73.8%	1,294	73.8%	261	22	22	(1)	(103)
2039	6.80%	8.600%	-	8.600%	15.959%	1,808	1,321	488	73.0%	1,321	73.0%	267	23	23	(1)	(107)
2040	6.80%	8.600%	-	8.600%	15.945%	1,865	1,346	519	72.2%	1,346	72.2%	274	24	24	(1)	(111)
2041	6.80%	8.600%	-	8.600%	15.931%	1,923	1,371	552	71.3%	1,371	71.3%	282	24	24	(1)	(114)
2042	6.80%	8.600%	-	8.600%	15.918%	1,982	1,394	588	70.4%	1,394	70.4%	289	25	25	(1)	(118)
2043	6.80%	8.600%	-	8.600%	15.905%	2,043	1,417	626	69.4%	1,417	69.4%	297	26	26	(1)	(122)
2044	6.80%	8.600%	-	8.600%	15.894%	2,104	1,438	666	68.4%	1,438	68.4%	305	26	26	(2)	(126)
2045	6.80%	8.600%	-	8.600%	15.886%	2,168	1,459	709	67.3%	1,459	67.3%	313	27	27	(2)	(130)
2046	6.80%	8.600%	-	8.600%	15.878%	2,232	1,478	755	66.2%	1,478	66.2%	322	28	28	(2)	(134)
2047	6.80%	8.600%	-	8.600%	15.872%	2,299	1,495	803	65.0%	1,495	65.0%	330	28	28	(2)	(138)
2048	6.80%	8.600%	-	8.600%	15.867%	2,366	1,511	855	63.8%	1,511	63.8%	339	29	29	(2)	(143)
2049	6.80%	8.600%	-	8.600%	15.863%	2,436	1,525	911	62.6%	1,525	62.6%	347	30	30	(2)	(147)
2050	6.80%	8.600%	-	8.600%	15.859%	2,506	1,536	970	61.3%	1,536	61.3%	356	31	31	(2)	(152)
2051	6.80%	8.600%	-	8.600%	15.857%	2,579	1,546	1,033	59.9%	1,546	59.9%	365	31	31	(2)	(156)
2052	6.80%	8.600%	-	8.600%	15.854%	2,653	1,552	1,101	58.5%	1,552	58.5%	374	32	32	(2)	(161)
2053	6.80%	8.600%	-	8.600%	15.853%	2,729	1,556	1,172	57.0%	1,556	57.0%	384	33	33	(2)	(166)



Wyoming Retirement System - State Highway Patrol, Game & Fish Warden and Criminal Investigator Retirement Fund ("Wardens")
Projection Results Based on January 1, 2023 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 (7)	Actuarial Accrued Liability (AAL, in Millions) (8)	Actuarial Value of Assets (AVA, in Millions) (9)	Unfunded Actuarial Liability (UAAL, in Millions) (10)	Funded Ratio (11)	Market Value of Assets (MVA, in Millions) (12)	Funded Ratio based on MVA (13)	Projected Payroll for Fiscal Year Following Valuation Date (in Millions) (14)	Employee Contributions for Fiscal Year Following Valuation Date (in Millions) (15)	Employer Contributions for Fiscal Year Following Valuation Date (in Millions) (16)	Expenses for Fiscal Year Following Valuation Date (in Millions) (17)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Millions) (18)
		Employee (3)	Employer - \$ (4)	Employer - % (5)	HP Game & Fish Commission (6)												
2023	6.80%	14.560%	-	14.880%	0.100%	21.130%	\$219	\$177	\$43	80.6%	\$171	78.2%	\$23	\$3	\$4	(\$0)	(\$13)
2024	6.80%	14.560%	-	14.880%	0.090%	21.018%	225	184	42	81.6%	176	78.2%	24	3	4	(0)	(14)
2025	6.80%	14.560%	-	14.880%	0.070%	20.928%	231	188	44	81.1%	181	78.1%	25	4	4	(0)	(14)
2026	6.80%	14.560%	-	14.880%	0.060%	20.860%	238	191	47	80.3%	186	78.1%	25	4	4	(0)	(15)
2027	6.80%	14.560%	-	14.880%	0.050%	20.792%	244	190	54	78.0%	190	78.0%	26	4	4	(0)	(15)
2028	6.80%	14.560%	-	14.880%	0.040%	20.719%	250	195	55	78.0%	195	78.0%	27	4	4	(0)	(15)
2029	6.80%	14.560%	-	14.880%	0.030%	20.651%	257	201	57	78.0%	201	78.0%	27	4	4	(0)	(16)
2030	6.80%	14.560%	-	14.880%	0.030%	20.587%	264	206	58	77.9%	206	77.9%	28	4	4	(0)	(16)
2031	6.80%	14.560%	-	14.880%	0.020%	20.524%	271	211	60	77.9%	211	77.9%	29	4	4	(0)	(17)
2032	6.80%	14.560%	-	14.880%	0.020%	20.471%	278	216	62	77.8%	216	77.8%	29	4	4	(0)	(17)
2033	6.80%	14.560%	-	14.880%	0.010%	20.427%	285	222	63	77.8%	222	77.8%	30	4	5	(0)	(18)
2034	6.80%	14.560%	-	14.880%	0.010%	20.399%	293	227	65	77.8%	227	77.8%	31	5	5	(0)	(18)
2035	6.80%	14.560%	-	14.880%	0.010%	20.380%	300	233	67	77.7%	233	77.7%	32	5	5	(0)	(19)
2036	6.80%	14.560%	-	14.880%	0.010%	20.364%	307	239	69	77.7%	239	77.7%	33	5	5	(0)	(20)
2037	6.80%	14.560%	-	14.880%	0.000%	20.347%	315	244	71	77.6%	244	77.6%	34	5	5	(0)	(20)
2038	6.80%	14.560%	-	14.880%	0.000%	20.328%	323	250	73	77.5%	250	77.5%	34	5	5	(0)	(21)
2039	6.80%	14.560%	-	14.880%	0.000%	20.310%	330	256	74	77.5%	256	77.5%	35	5	5	(0)	(21)
2040	6.80%	14.560%	-	14.880%	0.000%	20.299%	339	262	77	77.4%	262	77.4%	36	5	5	(0)	(22)
2041	6.80%	14.560%	-	14.880%	0.000%	20.288%	347	268	79	77.3%	268	77.3%	37	5	6	(0)	(22)
2042	6.80%	14.560%	-	14.880%	0.000%	20.275%	355	274	81	77.3%	274	77.3%	38	6	6	(0)	(23)
2043	6.80%	14.560%	-	14.880%	0.000%	20.260%	364	281	83	77.2%	281	77.2%	39	6	6	(0)	(23)
2044	6.80%	14.560%	-	14.880%	0.000%	20.245%	373	288	85	77.2%	288	77.2%	40	6	6	(0)	(24)
2045	6.80%	14.560%	-	14.880%	0.000%	20.229%	382	295	87	77.1%	295	77.1%	41	6	6	(0)	(24)
2046	6.80%	14.560%	-	14.880%	0.000%	20.213%	392	302	90	77.1%	302	77.1%	43	6	6	(0)	(25)
2047	6.80%	14.560%	-	14.880%	0.000%	20.202%	402	310	92	77.0%	310	77.0%	44	6	6	(0)	(25)
2048	6.80%	14.560%	-	14.880%	0.000%	20.192%	412	317	95	77.0%	317	77.0%	45	7	7	(0)	(26)
2049	6.80%	14.560%	-	14.880%	0.000%	20.183%	423	325	97	77.0%	325	77.0%	46	7	7	(0)	(27)
2050	6.80%	14.560%	-	14.880%	0.000%	20.176%	433	334	100	76.9%	334	76.9%	47	7	7	(0)	(27)
2051	6.80%	14.560%	-	14.880%	0.000%	20.170%	445	342	103	76.9%	342	76.9%	48	7	7	(0)	(28)
2052	6.80%	14.560%	-	14.880%	0.000%	20.166%	456	351	105	76.9%	351	76.9%	49	7	7	(0)	(29)
2053	6.80%	14.560%	-	14.880%	0.000%	20.163%	468	360	108	76.9%	360	76.9%	51	7	8	(0)	(29)



Wyoming Retirement System - Air Guard Firefighters Retirement System ("Guard Fire")
Projection Results Based on January 1, 2023 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	Employer - \$	Employer - %												
		(3)	(4)	(5)												
2023	6.80%	16.650%	-	7.120%	15.260%	\$12	\$10	\$2	82.4%	\$ 10	79.9%	\$2	\$0	\$0	(\$0)	(\$1)
2024	6.80%	16.650%	-	7.120%	15.205%	12	10	2	84.2%	10	80.8%	2	0	0	(0)	(1)
2025	6.80%	16.650%	-	7.120%	15.158%	13	11	2	84.7%	11	81.7%	2	0	0	(0)	(1)
2026	6.80%	16.650%	-	7.120%	15.117%	13	11	2	84.9%	11	82.8%	3	0	0	(0)	(1)
2027	6.80%	16.650%	-	7.120%	15.079%	14	12	2	83.8%	12	83.8%	3	0	0	(0)	(1)
2028	6.80%	16.650%	-	7.120%	15.046%	14	12	2	85.0%	12	85.0%	3	0	0	(0)	(1)
2029	6.80%	16.650%	-	7.120%	15.013%	15	13	2	86.1%	13	86.1%	3	0	0	(0)	(1)
2030	6.80%	16.650%	-	7.120%	14.970%	16	14	2	87.2%	14	87.2%	3	0	0	(0)	(1)
2031	6.80%	16.650%	-	7.120%	14.916%	16	14	2	88.4%	14	88.4%	3	0	0	(0)	(1)
2032	6.80%	16.650%	-	7.120%	14.869%	17	15	2	89.6%	15	89.6%	3	0	0	(0)	(1)
2033	6.80%	16.650%	-	7.120%	14.828%	18	16	2	90.8%	16	90.8%	3	0	0	(0)	(1)
2034	6.80%	16.650%	-	7.120%	14.790%	19	17	1	92.0%	17	92.0%	3	1	0	(0)	(1)
2035	6.80%	16.650%	-	7.120%	14.754%	19	18	1	93.2%	18	93.2%	3	1	0	(0)	(1)
2036	6.80%	16.650%	-	7.120%	14.723%	20	19	1	94.4%	19	94.4%	3	1	0	(0)	(1)
2037	6.80%	16.650%	-	7.120%	14.693%	21	20	1	95.6%	20	95.6%	3	1	0	(0)	(1)
2038	6.80%	16.650%	-	7.120%	14.661%	22	22	1	96.8%	22	96.8%	3	1	0	(0)	(1)
2039	6.80%	16.650%	-	7.120%	14.631%	23	23	0	98.0%	23	98.0%	3	1	0	(0)	(1)
2040	6.80%	16.650%	-	7.120%	14.603%	24	24	0	99.2%	24	99.2%	3	1	0	(0)	(1)
2041	6.80%	16.650%	-	7.120%	14.572%	25	26	(0)	100.5%	26	100.5%	4	1	0	(0)	(1)
2042	6.80%	16.650%	-	7.120%	14.540%	27	27	(0)	101.7%	27	101.7%	4	1	0	(0)	(1)
2043	6.80%	16.650%	-	7.120%	14.509%	28	29	(1)	102.9%	29	102.9%	4	1	0	(0)	(1)
2044	6.80%	16.650%	-	7.120%	14.481%	29	30	(1)	104.1%	30	104.1%	4	1	0	(0)	(1)
2045	6.80%	16.650%	-	7.120%	14.454%	30	32	(2)	105.4%	32	105.4%	4	1	0	(0)	(1)
2046	6.80%	16.650%	-	7.120%	14.429%	32	34	(2)	106.6%	34	106.6%	4	1	0	(0)	(1)
2047	6.80%	16.650%	-	7.120%	14.408%	33	36	(3)	107.9%	36	107.9%	4	1	0	(0)	(1)
2048	6.80%	16.650%	-	7.120%	14.388%	34	38	(3)	109.2%	38	109.2%	4	1	0	(0)	(2)
2049	6.80%	16.650%	-	7.120%	14.369%	36	40	(4)	110.5%	40	110.5%	4	1	0	(0)	(2)
2050	6.80%	16.650%	-	7.120%	14.351%	37	42	(4)	111.9%	42	111.9%	4	1	0	(0)	(2)
2051	6.80%	16.650%	-	7.120%	14.336%	39	44	(5)	113.3%	44	113.3%	4	1	0	(0)	(2)
2052	6.80%	16.650%	-	7.120%	14.323%	40	46	(6)	114.7%	46	114.7%	5	1	0	(0)	(2)
2053	6.80%	16.650%	-	7.120%	14.311%	42	48	(7)	116.2%	48	116.2%	5	1	0	(0)	(2)



Wyoming Retirement System - Paid Firemen's Retirement Fund Plan B ("Fire B")
Projection Results Based on January 1, 2023 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	Employer - \$	Employer - %												
		(3)	(4)	(5)												
2023	6.80%	11.245%	-	16.000%	23.370%	\$218	\$212	\$7	96.9%	\$205	93.8%	\$34	\$4	\$5	(\$0)	(\$8)
2024	6.80%	11.245%	-	16.000%	23.294%	233	229	4	98.2%	220	94.3%	35	4	6	(0)	(9)
2025	6.80%	11.245%	-	16.000%	23.234%	248	243	5	98.0%	235	94.7%	36	4	6	(0)	(10)
2026	6.80%	11.245%	-	16.000%	23.196%	263	256	7	97.4%	250	95.1%	37	4	6	(0)	(11)
2027	6.80%	11.245%	-	16.000%	23.183%	278	266	12	95.5%	266	95.5%	38	4	6	(0)	(12)
2028	6.80%	11.245%	-	16.000%	23.183%	294	282	12	95.9%	282	95.9%	39	4	6	(0)	(13)
2029	6.80%	11.245%	-	16.000%	23.189%	310	299	12	96.3%	299	96.3%	40	5	6	(0)	(14)
2030	6.80%	11.245%	-	16.000%	23.207%	327	316	11	96.6%	316	96.6%	41	5	7	(0)	(15)
2031	6.80%	11.245%	-	16.000%	23.222%	343	333	10	97.0%	333	97.0%	42	5	7	(0)	(17)
2032	6.80%	11.245%	-	16.000%	23.230%	360	350	10	97.3%	350	97.3%	44	5	7	(0)	(18)
2033	6.80%	11.245%	-	16.000%	23.252%	376	367	9	97.6%	367	97.6%	45	5	7	(0)	(19)
2034	6.80%	11.245%	-	16.000%	23.289%	393	385	8	98.0%	385	98.0%	46	5	7	(0)	(20)
2035	6.80%	11.245%	-	16.000%	23.330%	410	403	7	98.3%	403	98.3%	47	5	7	(0)	(22)
2036	6.80%	11.245%	-	16.000%	23.367%	427	421	6	98.6%	421	98.6%	48	5	8	(0)	(23)
2037	6.80%	11.245%	-	16.000%	23.397%	444	439	5	98.9%	439	98.9%	49	6	8	(0)	(24)
2038	6.80%	11.245%	-	16.000%	23.415%	461	457	4	99.2%	457	99.2%	50	6	8	(0)	(26)
2039	6.80%	11.245%	-	16.000%	23.432%	478	475	2	99.5%	475	99.5%	51	6	8	(0)	(27)
2040	6.80%	11.245%	-	16.000%	23.456%	495	494	1	99.8%	494	99.8%	53	6	8	(0)	(28)
2041	6.80%	11.245%	-	16.000%	23.477%	512	513	(1)	100.1%	513	100.1%	54	6	9	(0)	(30)
2042	6.80%	11.245%	-	16.000%	23.493%	529	532	(2)	100.4%	532	100.4%	55	6	9	(0)	(31)
2043	6.80%	11.245%	-	16.000%	23.496%	547	551	(4)	100.7%	551	100.7%	56	6	9	(0)	(32)
2044	6.80%	11.245%	-	16.000%	23.493%	565	571	(6)	101.1%	571	101.1%	58	7	9	(0)	(34)
2045	6.80%	11.245%	-	16.000%	23.488%	582	591	(8)	101.4%	591	101.4%	59	7	10	(0)	(35)
2046	6.80%	11.245%	-	16.000%	23.485%	600	611	(11)	101.8%	611	101.8%	61	7	10	(0)	(36)
2047	6.80%	11.245%	-	16.000%	23.488%	619	632	(13)	102.1%	632	102.1%	62	7	10	(0)	(38)
2048	6.80%	11.245%	-	16.000%	23.494%	637	653	(16)	102.5%	653	102.5%	64	7	10	(0)	(39)
2049	6.80%	11.245%	-	16.000%	23.495%	656	675	(19)	102.9%	675	102.9%	66	7	10	(0)	(41)
2050	6.80%	11.245%	-	16.000%	23.491%	675	697	(22)	103.3%	697	103.3%	67	8	11	(0)	(42)
2051	6.80%	11.245%	-	16.000%	23.484%	694	719	(26)	103.7%	719	103.7%	69	8	11	(0)	(43)
2052	6.80%	11.245%	-	16.000%	23.482%	713	743	(29)	104.1%	743	104.1%	71	8	11	(0)	(45)
2053	6.80%	11.245%	-	16.000%	23.483%	733	766	(34)	104.6%	766	104.6%	72	8	12	(0)	(46)



Wyoming Paid Firemen's Retirement Fund Plan A ("Fire A")
Projection Results Based on January 1, 2023 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)	Actuarial Value of Assets (AVA, 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)						
2023	6.80%	\$0	\$0	\$2,277	\$0	\$151,702	\$127,302	\$24,400	83.9%	\$88	\$15,414
2024	6.80%	0	0	2,328	0	146,089	122,291	23,798	83.7%	85	15,177
2025	6.80%	0	0	2,380	0	140,338	117,240	23,098	83.5%	82	14,908
2026	6.80%	0	0	2,434	0	134,474	112,181	22,293	83.4%	78	14,606
2027	6.80%	0	0	2,489	0	128,524	107,149	21,374	83.4%	75	14,278
2028	6.80%	0	0	2,545	0	122,508	102,175	20,333	83.4%	71	13,924
2029	6.80%	0	0	2,602	0	116,449	97,289	19,159	83.5%	68	13,545
2030	6.80%	0	0	2,661	0	110,369	92,526	17,843	83.8%	64	13,146
2031	6.80%	0	0	2,720	0	104,289	87,916	16,373	84.3%	61	12,725
2032	6.80%	0	0	2,782	0	98,230	83,492	14,738	85.0%	57	12,285
2033	6.80%	0	0	2,844	0	92,214	79,290	12,924	86.0%	54	11,828
2034	6.80%	0	0	2,908	0	86,261	75,342	10,919	87.3%	50	11,356
2035	6.80%	0	0	2,974	0	80,391	71,682	8,708	89.2%	47	10,871
2036	6.80%	0	0	3,041	0	74,623	68,347	6,276	91.6%	43	10,375
2037	6.80%	0	0	3,109	0	68,975	65,370	3,605	94.8%	40	9,870
2038	6.80%	0	0	3,179	0	63,465	62,786	679	98.9%	37	9,359
2039	6.80%	0	0	3,250	0	58,109	60,631	(2,522)	104.3%	34	8,840
2040	6.80%	0	0	0	0	52,925	58,942	(6,018)	111.4%	31	8,315
2041	6.80%	0	0	0	0	47,930	54,325	(6,395)	113.3%	28	7,784
2042	6.80%	0	0	0	0	43,146	49,947	(6,801)	115.8%	25	7,248
2043	6.80%	0	0	0	0	38,589	45,827	(7,238)	118.8%	22	6,711
2044	6.80%	0	0	0	0	34,278	41,985	(7,707)	122.5%	20	6,174
2045	6.80%	0	0	0	0	30,228	38,438	(8,210)	127.2%	18	5,642
2046	6.80%	0	0	0	0	26,452	35,203	(8,750)	133.1%	15	5,118
2047	6.80%	0	0	0	0	22,962	32,292	(9,329)	140.6%	13	4,604
2048	6.80%	0	0	0	0	19,765	29,716	(9,950)	150.3%	11	4,107
2049	6.80%	0	0	0	0	16,865	27,480	(10,615)	162.9%	10	3,629
2050	6.80%	0	0	0	0	14,262	25,588	(11,326)	179.4%	8	3,175
2051	6.80%	0	0	0	0	11,950	24,038	(12,088)	201.2%	7	2,750
2052	6.80%	0	0	0	0	9,921	22,824	(12,903)	230.1%	6	2,356
2053	6.80%	0	0	0	0	8,162	21,936	(13,774)	268.8%	5	1,996



Wyoming Retirement System - Volunteer Firefighter, EMT, and Search and Rescue Pension Plan
Projection Results Based on January 1, 2023 Actuarial Valuation
Discount Rate: 6.80%

Valuation as of January 1,	Market Return for FY Beginning on Valuation Date	Contribution for Fiscal Year Following Valuation Date (in Thousands)			COLA (Only granted when Funded Ratio would remain above 107%)	Actuarial Accrued Liability (AAL, in Thousands)	Actuarial Value of Assets (AVA, in Thousands)	Unfunded Actuarial Accrued Liability (UAAL, in Thousands)	Funded Ratio	Market Value of Assets (MVA, in Thousands)	Funded Ratio based on MVA	Employee Contributions for Fiscal Year Following Valuation Date (in Thousands)	Employer Contributions for Fiscal Year Following Valuation Date (in Thousands)	Expenses for Fiscal Year Following Valuation Date (in Thousands)	Benefit Payments and Refunds for Fiscal Year Following Valuation Date (in Thousands)
		Employee	(4)	Employer											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(14)	(15)	(16)	(17)
2023	6.80%	\$544	-	\$3,415	0.0%	\$122,744	\$101,758	\$20,987	82.9%	\$98,455	80.2%	\$544	\$3,415	(\$110)	(\$7,716)
2024	6.80%	544	9,000	3,492	0.0%	124,782	105,637	19,145	84.7%	101,153	81.1%	544	12,492	(111)	(8,000)
2025	6.80%	544	-	3,571	0.0%	126,640	117,091	9,549	92.5%	113,121	89.3%	544	3,571	(113)	(8,291)
2026	6.80%	544	-	3,651	0.0%	128,302	119,278	9,024	93.0%	116,380	90.7%	544	3,651	(114)	(8,560)
2027	6.80%	544	-	3,733	0.0%	129,780	119,665	10,114	92.2%	119,665	92.2%	544	3,733	(115)	(8,782)
2028	6.80%	544	-	3,817	0.0%	131,108	123,027	8,081	93.8%	123,027	93.8%	544	3,817	(117)	(8,982)
2029	6.80%	544	-	3,903	0.0%	132,475	126,497	5,978	95.5%	126,497	95.5%	544	3,903	(118)	(9,174)
2030	6.80%	544	-	3,991	0.0%	133,727	130,092	3,635	97.3%	130,092	97.3%	544	3,991	(119)	(9,347)
2031	6.80%	544	-	4,081	0.0%	134,877	133,842	1,036	99.2%	133,842	99.2%	544	4,081	(121)	(9,518)
2032	6.80%	544	-	4,172	0.0%	135,921	137,761	(1,840)	101.4%	137,761	101.4%	544	4,172	(122)	(9,678)
2033	6.80%	544	-	4,266	0.0%	136,866	141,875	(5,009)	103.7%	141,875	103.7%	544	4,266	(123)	(9,813)
2034	6.80%	544	-	4,362	0.0%	140,589	146,225	(5,636)	104.0%	146,225	104.0%	544	4,362	(125)	(9,938)
2035	6.80%	544	-	4,460	0.0%	144,263	150,839	(6,576)	104.6%	150,839	104.6%	544	4,460	(126)	(10,034)
2036	6.80%	544	-	4,561	0.0%	147,898	155,768	(7,870)	105.3%	155,768	105.3%	544	4,561	(127)	(10,112)
2037	6.80%	544	-	4,663	0.0%	151,503	161,054	(9,550)	106.3%	161,054	106.3%	544	4,663	(129)	(10,218)
2038	6.80%	544	-	4,768	3.0%	155,038	166,694	(11,656)	107.5%	166,694	107.5%	544	4,768	(130)	(10,323)
2039	6.80%	544	-	4,876	3.0%	158,519	172,716	(14,198)	109.0%	172,716	109.0%	544	4,876	(132)	(10,671)
2040	6.80%	544	-	4,985	3.0%	161,937	178,897	(16,961)	110.5%	178,897	110.5%	544	4,985	(133)	(11,014)
2041	6.80%	544	-	5,097	3.0%	165,301	185,256	(19,955)	112.1%	185,256	112.1%	544	5,097	(135)	(11,373)
2042	6.80%	544	-	5,212	3.0%	168,589	191,790	(23,201)	113.8%	191,790	113.8%	544	5,212	(136)	(11,746)
2043	6.80%	544	-	5,329	3.0%	171,796	198,501	(26,704)	115.5%	198,501	115.5%	544	5,329	(138)	(12,129)
2044	6.80%	544	-	5,449	3.0%	174,908	205,391	(30,483)	117.4%	205,391	117.4%	544	5,449	(139)	(12,491)
2045	6.80%	544	-	5,572	3.0%	177,949	212,498	(34,550)	119.4%	212,498	119.4%	544	5,572	(141)	(12,828)
2046	6.80%	544	-	5,697	3.0%	180,924	219,866	(38,941)	121.5%	219,866	121.5%	544	5,697	(143)	(13,163)
2047	6.80%	544	-	5,826	3.0%	183,841	227,516	(43,675)	123.8%	227,516	123.8%	544	5,826	(144)	(13,479)
2048	6.80%	544	-	5,957	3.0%	186,712	235,491	(48,779)	126.1%	235,491	126.1%	544	5,957	(146)	(13,785)
2049	6.80%	544	-	6,091	3.0%	189,538	243,826	(54,288)	128.6%	243,826	128.6%	544	6,091	(147)	(14,102)
2050	6.80%	544	-	6,228	3.0%	192,315	252,536	(60,222)	131.3%	252,536	131.3%	544	6,228	(149)	(14,406)
2051	6.80%	544	-	6,368	3.0%	195,054	261,665	(66,611)	134.2%	261,665	134.2%	544	6,368	(151)	(14,695)
2052	6.80%	544	-	6,511	3.0%	197,761	271,259	(73,498)	137.2%	271,259	137.2%	544	6,511	(152)	(14,990)
2053	6.80%	544	-	6,658	3.0%	200,433	281,346	(80,913)	140.4%	281,346	140.4%	544	6,658	(154)	(15,289)

