



# Wyoming State Treasurer

## Mark Gordon

December 1, 2016

Joint Appropriations Committee  
State Capitol Building  
Cheyenne, WY 82002

**Patricia O'Brien Arp**  
Deputy State Treasurer

RE: Workers Compensation Fund

Dear Members of the Joint Appropriations Committee,

In accordance with W.S. 27-14-701(g), the State Treasurer, in consultation with the Director of the Worker's Compensation Division, is to report to the Joint Appropriations Committee on the status of the worker's compensation account by December 1, 2016 and every five years thereafter.

Attached you will find the June 30, 2016 FYE report on the Workers Compensation Fund and actuarial reports by Oliver Wyman. The Fund is in good standing currently as described by the actuarial. Below is an excerpt with the highlights from Oliver Wyman's report:

Oliver Wyman Actuarial Consulting, Inc. (Oliver Wyman) has completed the actuarial study of the loss and loss adjustment expense (LAE) reserves as of June 30, 2016 for Wyoming's Department of Workforce Services (the Division). The unpaid loss and LAE estimates as of June 30, 2016 are based on data evaluated as of June 30, 2016 and additional information provided to us through August 21, 2016. This letter and its attachments constitute our report.

The following table summarizes the Divisions funding position as of June 30, 2016. On a nominal basis available funding is roughly \$21M below the estimated liability, while on a discounted basis available funding exceeds the liability estimate by \$629M. No explicit contingency reserve is included in the unpaid loss and LAE liability.

	Undiscounted (\$000s)	Discounted (3.5%) (\$000s)
Total Unpaid Loss and ALAE	1,862,209	1,212,084
Available Funding	1,840,767	1,840,767
Funding Position	(21,442)	628,682
PFAD	-1.2%	51.9%

The funding position on a discounted basis allows for a 52% provision for adverse deviation (PFAD), or in other words the \$629M difference is 52% of the discounted liability of \$1.212B. One way to view the PFAD is to consider that the discounted liabilities could runoff adversely by as much as 52% and the Division would still have adequate resources to meet all injured worker claim costs. As noted in the report, liability estimates will change over time, and the uncertainty is great enough that large shifts in future claim costs are possible. The prior report indicated a PFAD level of \$603M, or 51%, as of June 30, 2015.

If you or any member of the Committee has questions concerning this report, please feel free to contact me.

Sincerely,

Mark Gordon  
State Treasurer

cc: John Cox, Director, Department of Workforce Services  
John Ysebaert, Administrator, Department of Workforce Services

### Mailing Address

Capitol Building  
200 West 24<sup>th</sup> Street  
Cheyenne, WY 82002

### Office Location

2020 Carey Avenue – 4th Floor  
Unclaimed Property – 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

### Administration

307-777-7408  
treasurer@wyo.gov

### Financial Division

307-777-6309  
stodeposits@wyo.gov

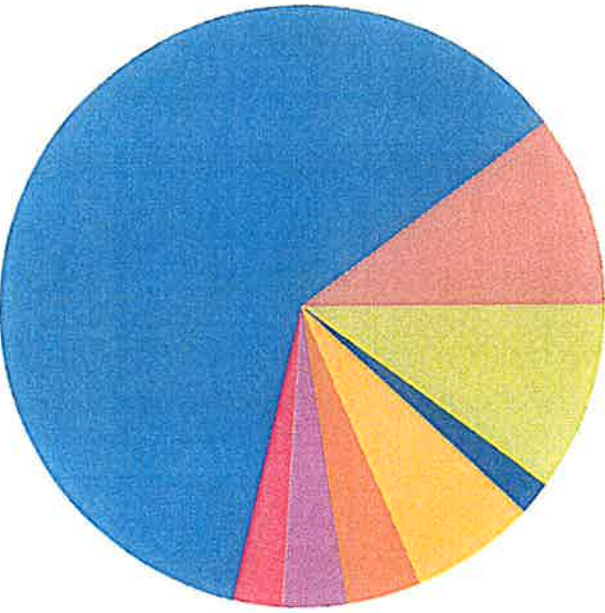
### Investment Division

307-777-6704  
sto-investment-team@wyo.gov

### Unclaimed Property Division

307-777-5590  
wyomingup@wyo.gov

Asset Allocation by Asset Class  
June 30, 2016 : \$1,876,698,222



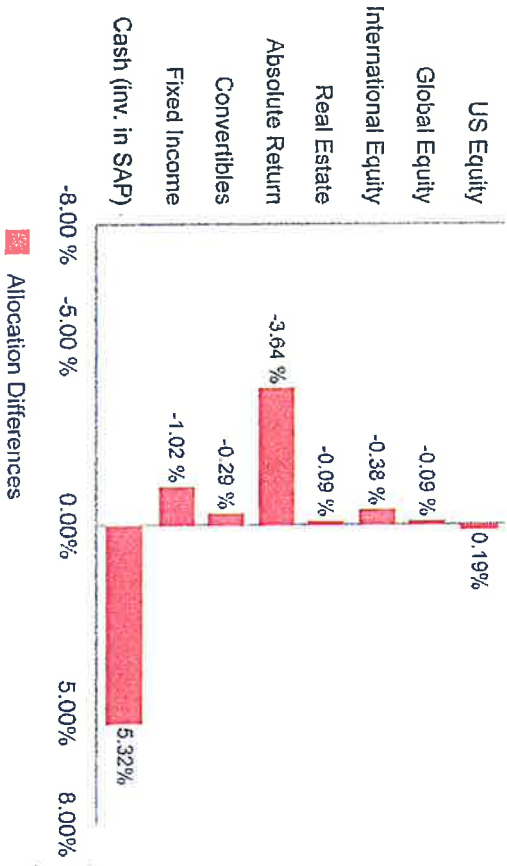
Asset Class	Market Value (\$)	Allocation (%)
US Equity	191,297,268	10.19
Global Equity	33,946,376	1.81
International Equity	126,047,707	6.72
Real Estate	73,400,821	3.91
Absolute Return	63,107,601	3.36
Convertibles	50,766,744	2.71
Fixed Income	1,144,483,919	60.98
Cash (Inv. in SAP)	193,647,787	10.32

Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation

Asset Class	Market Value (\$)	Allocation (%)	Target (%)
US Equity	191,297,268	10.19	10.00
Global Equity	33,946,376	1.81	1.90
International Equity	126,047,707	6.72	7.10
Real Estate	73,400,821	3.91	4.00
Absolute Return	63,107,601	3.36	7.00
Convertibles	50,766,744	2.71	3.00
Fixed Income	1,144,483,919	60.98	62.00
Cash (Inv. in SAP)	193,647,787	10.32	5.00
Total Fund	1,876,698,222	100.00	100.00

Asset Allocation vs. Target Allocation Differences



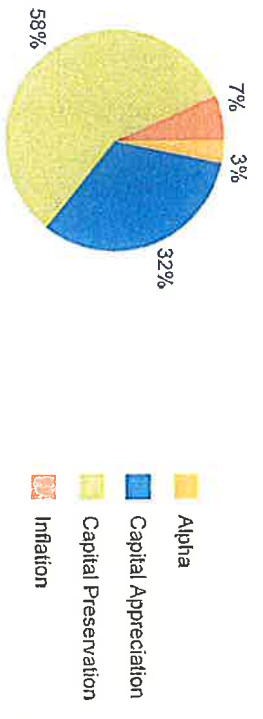
**Wyoming State Treasurer's Office**  
**Workers Compensation Fund**  
**Total Fund Characteristics**

As of June 30, 2016

**Investment Pool Profile**

**Fund Type:** Permanent Fund  
**Main Objective:** To be invested for the very long-term to produce a situation in which the fund is self funding or nearly self-funding in order to substantially reduce or eliminate the need for employer contributions  
**Primary Investment Goal:** Safety of capital, yield, and capital appreciation  
**Long-Term Return Expectation:** CPI + 3%  
**Funding Source:** Employer premiums  
**Liquidity Constraints:** The Fund must be managed for long-term return with cash flow necessary only in the case of a disaster  
**Maximum Equity Allocation:** 45%  
**Current Target Equity Allocation:** 30%

**Asset Allocation by Theme**



**MPT Stats**

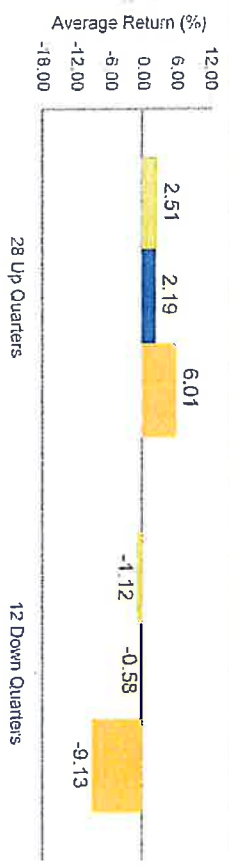
	5 Years	10 Years
Maximum Return	4.06	7.93
Minimum Return	-3.34	-3.64
Standard Deviation	3.80	4.81
vs. S&P 500 Index (Cap Wtd)		
Beta	0.24	0.23
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.14	0.94

Performance shown is gross of fees. Calculations are based on quarterly periodicity.

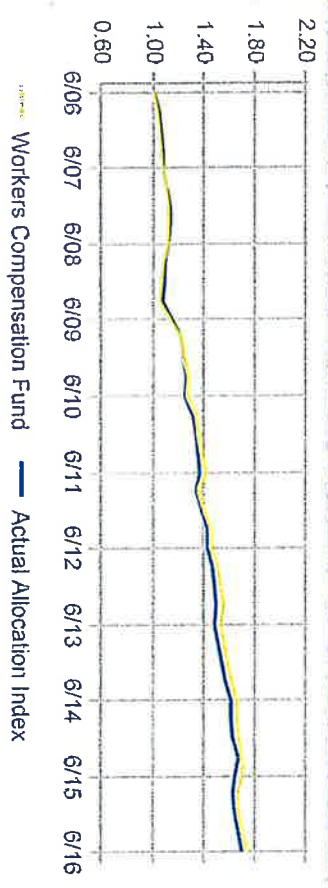
**Asset Allocation vs. Target Allocation**

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Workers Compensation Fund	1,876,698	100.00		100.00	
US Equity	191,297	10.19	7.75	10.00	12.25
Global Equity	33,946	1.81	1.40	1.90	2.40
International Equity	126,048	6.72	5.60	7.10	8.60
Real Estate	73,401	3.91	2.25	4.00	5.75
Absolute Return	63,108	3.36	4.00	7.00	10.00
Convertibles	50,767	2.71	1.75	3.00	4.25
Fixed Income	1,144,484	60.98	56.00	62.00	68.00
Cash (Inv. in SAP)	193,648	10.32	0.00	5.00	10.00

**Up/Down Markets - 10 Years**



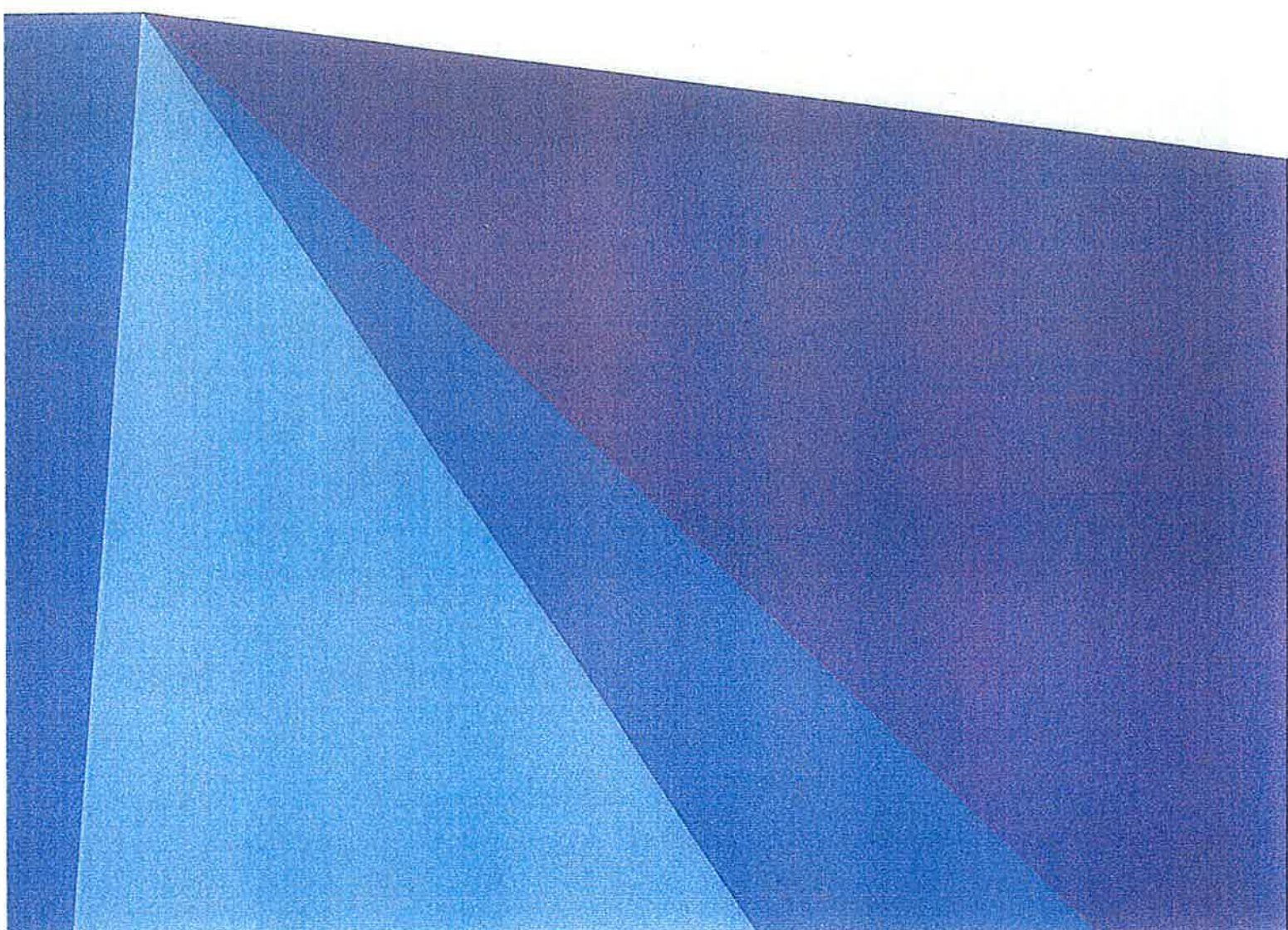
**Growth of \$1 - 10 Years**



# UNPAID LOSS AND LOSS ADJUSTMENT EXPENSE ANALYSIS

WYOMING DEPARTMENT OF WORKFORCE  
SERVICES

OCTOBER 4, 2016



Mr. John Ysebaert  
Administrator, Compliance & Standards  
Wyoming Department of Workforce Services  
1510 E. Pershing Blvd  
Cheyenne, WY 82002

October 4, 2016

**Subject:** June 30, 2016 Unpaid Loss and Loss Adjustment Expense Analysis

Dear Mr. Ysebaert:

Oliver Wyman Actuarial Consulting, Inc. (Oliver Wyman) has completed the actuarial study of the loss and loss adjustment expense (LAE) reserves as of June 30, 2016 for Wyoming's Department of Workforce Services (the Division). The unpaid loss and LAE estimates as of June 30, 2016 are based on data evaluated as of June 30, 2016 and additional information provided to us through August 21, 2016. This letter and its attachments constitute our report.

The following table summarizes the Divisions funding position as of June 30, 2016. On a nominal basis available funding is roughly \$21M below the estimated liability, while on a discounted basis available funding exceeds the liability estimate by \$629M. No explicit contingency reserve is included in the unpaid loss and LAE liability.

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Mr. John Ysebaert  
Wyoming Department of Workforce Services

Maintaining a provision for adverse deviation is important because there are a number of risk factors associated with the Division's insurance and investment exposure. As noted above, there is uncertainty associated with the liability estimates, where injury claims remain open over several decades. Likewise the fund is exposed to potential catastrophes or increases in high severity claims, which could cause collected premiums to be inadequate to cover all claim costs. Finally, the asset portfolio is subject to market risk and credit risk, where a decline in asset values or investment returns could result in a funding shortfall. With the potential exposures to loss assumed by the Division, the PFAD provides a contingency fund to support the investment and insurance risk factors.

We estimate the unpaid loss and LAE as of June 30, 2016 to be approximately \$1.212 billion on a discounted basis, assuming an annual interest rate of 3.5%, and \$1.862 billion on an undiscounted basis. The estimated discounted unpaid loss and LAE in last year's report was \$1.170 billion, and the estimated undiscounted value was \$1.794 billion. The increase in unpaid loss liabilities relative to last year is primarily coming from an increase in PTD indemnity reserve estimates, and an increase in the medical on indemnity reserve estimate. Case reserves increased again this year by \$74 million for all accident years.

Ultimate loss and LAE estimates by accident year are discounted at a 3.5% rate as selected by the Division. Wyoming earned investment returns were 2.2% in the latest year, however the longer run historical asset returns have been above 4.0%. American Academy of Actuaries Actuarial Standard of Practice No. 20, Discounting of Property and Casualty Loss and Loss Adjustment Expense Reserves, indicates that a discounted unpaid loss and allocated loss adjustment expense (ALAE) is not an adequate estimate of economic value unless a risk margin is included. I express no opinion on the appropriateness of the interest rate used. Computation of a risk margin is outside the scope of our review, therefore, we have not estimated an explicit provision for adverse deviation on the discounted unpaid loss and ALAE. We note that using a lower interest rate for liability discounting would increase the unpaid claim liability.

The estimates in this report were developed in accordance with the principles of the Casualty Actuarial Society and the applicable standards of the American Academy of Actuaries.

The "expected value" estimates presented in this report are intended to represent actuarial central estimates which, consistent with the applicable actuarial standard of practice, we define as the expected value over the range of reasonably possible (as opposed to all conceivable) outcomes. It should be understood that our conclusions are based on the available data and on informed judgment. Insurance liabilities are subject to many inherent uncertainties concerning future events. Macroeconomic events such as unanticipated changes in inflation, judicial decisions,

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Mr. John Ysebaert  
Wyoming Department of Workforce Services

legislation, claim consciousness, claim management, and mass torts may significantly alter the conclusions. Actual results may therefore vary significantly from our estimates.

All data is considered to be net of recoveries for salvage and subrogation. However, no evaluation has been performed on the collectability of such recovery amounts due to the Division.

We have enjoyed working with the Division on this assignment and look forward to working with you in the future. Please let us know if we can be of further assistance.

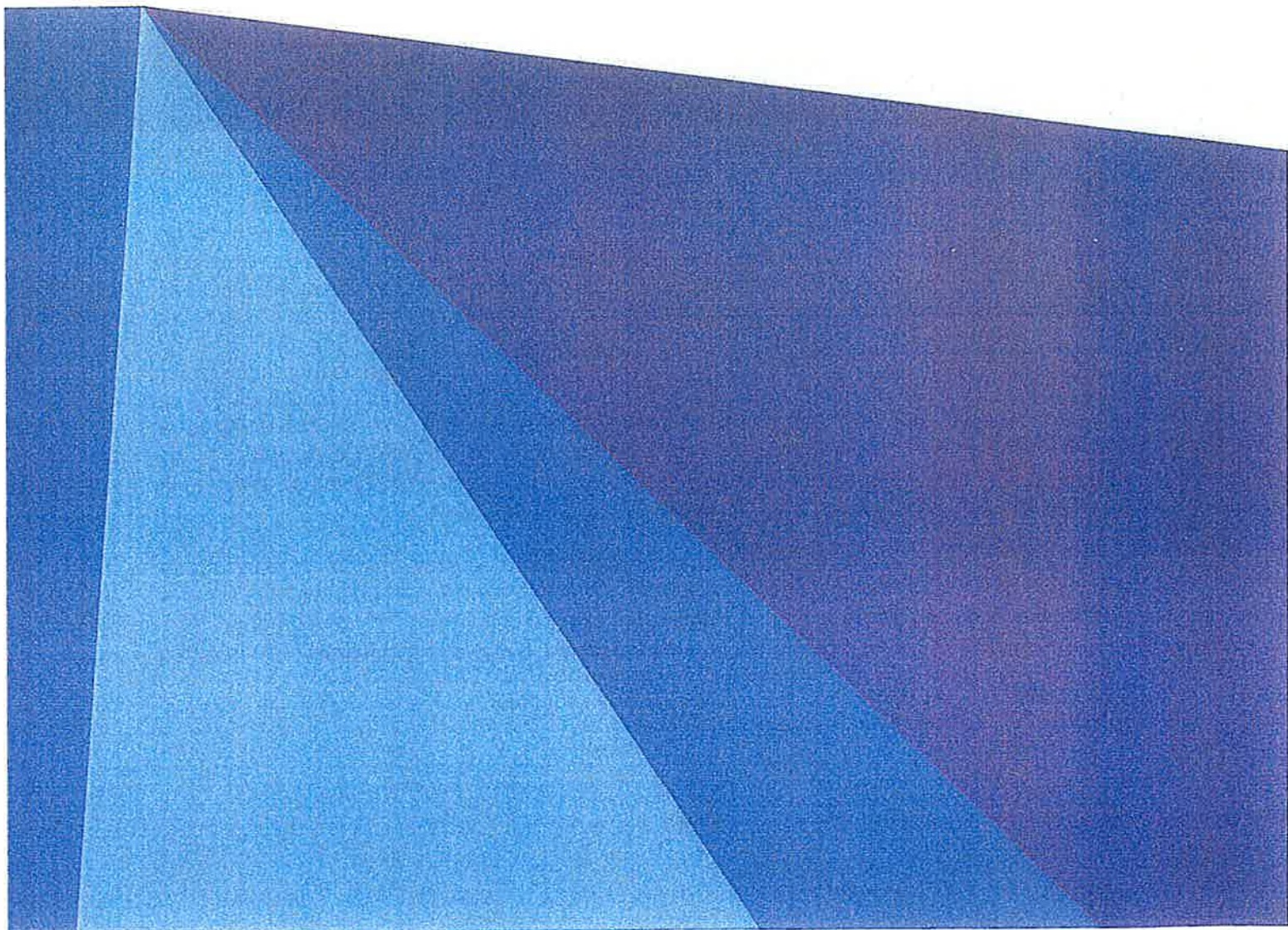
Sincerely,



William D. Hansen, FCAS, MAAA

Enclosure

**CALENDAR YEAR 2017 WORKERS'  
COMPENSATION RATE LEVEL INDICATION  
AND CLASS RATES**  
WYOMING DEPARTMENT OF WORKFORCE  
SERVICES  
OCTOBER 4, 2016





Mr. John Ysebaert  
Administrator, Compliance & Standards  
Wyoming Workforce Services  
1510 E. Pershing Blvd  
Cheyenne, WY 82002

October 4, 2016

**Subject:** Calendar Year 2017 Rate Level Indications and Class Relativities

Dear Mr. Ysebaert:

Oliver Wyman Actuarial Consulting, Inc. (Oliver Wyman) has completed the actuarial study of the calendar year 2017 rate level indication and class rate relativities for the Wyoming Department of Workforce Services, Division of Workers' Compensation (the Division). The rate level indication and class relativities were based on data evaluated as of June 30, 2016 and additional information provided to us through September 22, 2016. This letter and its attachments constitute our report.

The overall rate level indication for the 2017 policy year, on a fully discounted basis, is -6.1%. The selected overall rate change is -5.0%, with individual class rates allowed to vary from +14.0% to -24.0%. Based on current split plan estimates with capping we expected the average experience rating factor (Emod) to increase by roughly 3.3% compared to the 2016 policy year, which would increase the average premium paid by employers.

Additional Emod capping measures were adopted for the purpose of smoothing the transition to the new split plan. With the new Emod capping method the estimated change in average Emod is a decrease of 0.5% compared to last year, rather than an increase of 3.3%. There are also rate level implications, as the new Emod caps were installed after the final base rates went to production. The estimate rate level impact now moves from -5.0% to -8.5% when considering the new, lower average Emod in combination with the base rate decrease.

The interest rate selected by the Division for loss discounting is 3.5%. As noted in the report, the original selected rate change of -5.0% allowed for a small implicit risk margin within the proposed rate level, however with the new Emod capping impact there is no risk margin in the rates. The proposed rate level is within a reasonable range of the rate indications, but below the actuarial central estimate. The actuarial estimates have uncertainty in the timing of loss payments, uncertainty in the size of loss payments, and uncertainty in the investment earnings, all of which must be accounted for within the proposed rate level.

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Mr. John Ysebaert  
Wyoming Department of Workforce Services

We have provided the Division with a complete set of exhibits in 'Adobe PDF' electronic format which contain all of the supporting exhibits.

We have relied on the data which the Division provided to us. If the data is inaccurate or incomplete, our projections may need to be revised.

The estimates in this report were developed in accordance with the principles of the Casualty Actuarial Society and the applicable standards of the American Academy of Actuaries.

The "expected value" estimates presented in this report are intended to represent actuarial central estimates which, consistent with the applicable actuarial standard of practice, we define as the expected value over the range of reasonably possible (as opposed to all conceivable) outcomes. All data is considered to be gross of recoveries for salvage, subrogation, and the net data are net of reinsurance. However, no evaluation has been performed on the collectability of such recovery amounts due to the Division.

It should be understood that our conclusions are based on the available data and on informed judgment. Insurance liabilities are subject to many inherent uncertainties concerning future events. Macroeconomic events such as unanticipated changes in inflation, judicial decisions, legislation, claim consciousness, claim management, and mass torts may significantly alter the conclusions. Actual results may therefore vary significantly from our estimates.

We have enjoyed working with the Division on this assignment and look forward to working with you in the future. Please let us know if we can be of further assistance.

Sincerely,



William D. Hansen, FCAS, MAAA

Enclosure

**Wyoming Department of Workforce Services**  
**Unpaid Benefits Duration Analysis as of 6/30/2016**  
 (\$000's)

(1) Payment Year Ending 6/30	(2) Total Estimated Payment (\$)	(3) Payment (%)	(4) Year	(5) Discounted	(6) Weighted
2017	144,511	8.21%	0.5	0.0811	0.0405
2018	102,683	5.83%	1.5	0.0562	0.0843
2019	85,657	4.86%	2.5	0.0457	0.1143
2020	77,075	4.38%	3.5	0.0401	0.1405
2021	70,735	4.02%	4.5	0.0359	0.1618
2022	66,453	3.77%	5.5	0.0329	0.1812
2023	63,666	3.62%	6.5	0.0308	0.2002
2024	60,820	3.45%	7.5	0.0287	0.2152
2025	58,094	3.30%	8.5	0.0267	0.2273
2026	56,134	3.19%	9.5	0.0252	0.2395
2027	53,622	3.05%	10.5	0.0235	0.2467
2028	51,286	2.91%	11.5	0.0219	0.2521
2029	50,425	2.86%	12.5	0.0210	0.2629
2030	48,186	2.74%	13.5	0.0196	0.2647
2031	46,373	2.63%	14.5	0.0184	0.2669
2032	45,005	2.56%	15.5	0.0174	0.2702
2033	43,279	2.46%	16.5	0.0164	0.2698
2034	41,743	2.37%	17.5	0.0154	0.2693
2035	40,296	2.29%	18.5	0.0145	0.2681
2036	38,671	2.20%	19.5	0.0136	0.2646
2037	37,255	2.12%	20.5	0.0128	0.2614
2038	36,066	2.05%	21.5	0.0120	0.2590
2039	34,484	1.96%	22.5	0.0112	0.2528
2040	33,115	1.88%	23.5	0.0105	0.2474
2041	32,145	1.83%	24.5	0.0100	0.2442
2042	30,922	1.76%	25.5	0.0094	0.2386
2043	29,498	1.68%	26.5	0.0087	0.2307
2044	28,169	1.60%	27.5	0.0081	0.2231
2045	27,009	1.53%	28.5	0.0076	0.2163
2046	25,729	1.46%	29.5	0.0071	0.2080
2047	24,583	1.40%	30.5	0.0066	0.2005
2048	23,474	1.33%	31.5	0.0061	0.1929
2049	22,049	1.25%	32.5	0.0056	0.1834
2050	20,950	1.19%	33.5	0.0052	0.1743
2051	19,738	1.12%	34.5	0.0048	0.1650
2052	18,628	1.06%	35.5	0.0044	0.1563
2053	15,026	0.85%	36.5	0.0035	0.1265
2054	12,279	0.70%	37.5	0.0028	0.1036
2055	9,977	0.57%	38.5	0.0022	0.0843
2056	8,079	0.46%	39.5	0.0017	0.0683
2057	6,429	0.37%	40.5	0.0013	0.0544
2058	5,066	0.29%	41.5	0.0010	0.0428
2059	4,157	0.24%	42.5	0.0008	0.0351
2060	3,372	0.19%	43.5	0.0007	0.0285
2061	2,662	0.15%	44.5	0.0005	0.0224
2062	2,219	0.13%	45.5	0.0004	0.0186
2063	1,751	0.10%	46.5	0.0003	0.0147
2064	1,373	0.08%	47.5	0.0002	0.0115
2065	0	0.00%	48.5	0.0000	0.0000
2066	0	0.00%	49.5	0.0000	0.0000
2067	0	0.00%	50.5	0.0000	0.0000
2068	0	0.00%	51.5	0.0000	0.0000
2069	0	0.00%	52.5	0.0000	0.0000
2070	0	0.00%	53.5	0.0000	0.0000
2071	0	0.00%	54.5	0.0000	0.0000
2072	0	0.00%	55.5	0.0000	0.0000
2073	0	0.00%	56.5	0.0000	0.0000
Total by Column:	1,760,916	1.0000		0.7307	8.3037

Duration in Years @ interest rate: 3.50%	10.4
Duration in Years @ interest rate: 2.50%	11.4
Duration in Years @ interest rate: 1.50%	12.4

**Note:**  
 - Col(2) & Col(3) are calculated using data @ 6/30/16.  
 - Col(5) = Col(3)/(1+i)^Col(4).  
 - Col(6) = Col(4) \* Col(5).  
 - Duration = Total Col. (6) / Total Col. (5).  
 - This exhibit shows calculation of duration for 2.50%.