



Game Wardens' and Peace Officers' Retirement System of the State of Montana

**GASB 67 and 68 Report
as of June 30, 2015**

Produced by Cheiron

December 2015

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BOARD SUMMARY

The purpose of this report is to provide accounting and financial disclosure information under Government Accounting Standards Board Statements 67 and 68 for the Game Wardens' and Peace Officers' Retirement System, participating employers, and the State of Montana. This information includes:

- Determination of the discount rate,
- Projection of the Total Pension Liability from the actuarial valuation date to the measurement date,
- Changes in the Net Pension Liability from the beginning to the end of the measurement period,
- Calculation of the Net Pension Liability at the discount rate as well as discount rates 1% higher and lower than the discount rate,
- Schedule of Changes in Net Pension Liability and Related Ratios,
- Schedule of Employer Contributions,
- Schedule of Deferred Inflows and Outflows of Resources,
- Calculation of Pension Expense,
- Calculation of Expected Return on Assets, and
- Calculation of Employer Proportionate Shares and Reporting Amounts.

Highlights

The reporting date for the State of Montana Game Wardens' and Peace Officers' Retirement System (GWPORS) is June 30, 2015. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2015 and the Total Pension Liability as of an actuarial valuation date of June 30, 2014 updated to June 30, 2015. There were no significant events between the valuation date and the measurement date so the update procedures only included the addition of Service Cost and interest cost offset by actual benefit payments.

The table on the next page provides a summary of the key collective results during this reporting period.

BOARD SUMMARY

	Measurement Date	
	6/30/2015	6/30/2014
Total Pension Liability	\$ 169,649,246	\$ 153,863,911
Plan Fiduciary Net Position	<u>148,637,767</u>	<u>138,743,106</u>
Net Pension Liability	\$ 21,011,479	\$ 15,120,805
Deferred Outflows	(626,415)	0
Deferred Inflows	<u>3,030,979</u>	<u>8,787,209</u>
Net Impact on Statement of Net Position	\$ 23,416,043	\$ 23,908,014
Pension Expense (\$ Amount)	\$ 3,596,146	\$ 3,525,767
Pension Expense (% of Pensionable Payroll)	8.01%	8.47%
Discount Rate	7.75%	7.75%

* Throughout this report, pensionable payroll will be used rather than Covered-Employee Payroll as defined by GASB, and described in Appendix A.

As of the end of the reporting year, the employers would report a total Net Pension Liability of \$21,011,479, Deferred Outflows of \$626,415 and Deferred Inflows of \$3,030,979. Consequently, the collective net impact on the employers' Statement of Net Position would be \$23,416,043 at the end of the reporting year. In addition, any contributions between the measurement date and the reporting date by each employer would be reported as deferred outflows to match the cash outflow reported.

For the measurement year ending June 30, 2015, the collective Pension Expense is \$3,596,146 or 8.01% of pensionable payroll. This amount is not expected to be the same as the employers' contribution to the Plan (\$4,088,117), but instead represents the change in the net impact on the employers' Statement of Net Position plus employer contributions [\$23,416,043 - \$23,908,014 + \$4,088,117]. A breakdown of the collective Pension Expense is shown later in this report.

CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under GASB 67 and 68 for the State of Montana Game Wardens' and Peace Officers' Retirement System (GWPORS). This report is for the use of GWPORS, the State of Montana, participating employers, and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for GWPORS.

In preparing our report, we relied on information (some oral and some written) supplied by Montana Public Employee Retirement Administration (MPERA). This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The membership data, actuarial assumptions, and plan provisions are the same as were described in the June 30, 2014 Actuarial Valuation Report for GWPORS. Rationale for the actuarial assumptions can be found in the June 30, 2015 Actuarial Valuation Report.

Future reporting requirements may differ significantly from the current reporting requirements presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions, changes in assumptions, and, changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for GWPORS for the purposes described herein and for the use by the Plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely,
Cheiron



Stephen T. McElhaney, FSA, FCA, MAAA
Principal Consulting Actuary



Margaret Tempkin, FSA, MAAA
Principal Consulting Actuary

DETERMINATION OF DISCOUNT RATE

The discount rate as of June 30, 2015 is 7.75% which is the assumed long-term expected rate of return on System investments. Projections of the System's fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current Plan members following the procedures described in paragraphs 39 - 45 of GASB Statement 67. The results of these projections are included within this report in Appendix B.

PROJECTION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) at the end of the measurement year, June 30, 2015, is measured as of a valuation date of June 30, 2014 and projected to June 30, 2015. There were no significant events during the projection period of which we are aware. Because the TPL shown in the prior report was measured as of June 30, 2013 and projected to June 30, 2014, it will not match the amounts measured as of June 30, 2014 that are shown in this exhibit.

The table below shows the projection of the TPL at discount rates equal to the rate used for disclosure along with plus and minus one percent from the rate used for disclosure. TPL and Service Cost have been determined using the Entry Age Actuarial Cost Method as described in paragraph 46 of GASB Statement 67.

Table 2			
Projection of Total Pension Liability from Valuation to Measurement Date			
Discount Rate	6.75%	7.75%	8.75%
Valuation Total Pension Liability, 6/30/2014			
Actives	\$ 113,544,517	\$ 96,079,028	\$ 81,863,979
Deferred Vested	9,850,280	8,453,403	7,339,917
Retirees	<u>55,010,150</u>	<u>50,062,298</u>	<u>45,862,621</u>
Total	\$ 178,404,947	\$ 154,594,729	\$ 135,066,517
Service Cost, Beginning of Year			
Service Cost Rate	22.73%	18.58%	15.38%
Expected Payroll During Year	\$ 43,100,942	\$ 43,100,942	\$ 43,100,942
Service Cost	\$ 9,796,844	\$ 8,008,155	\$ 6,628,925
Benefit Payments	\$ (5,351,847)	\$ (5,351,847)	\$ (5,351,847)
Interest	\$ 12,525,945	\$ 12,398,209	\$ 12,169,117
Change in Benefits	\$ 0	\$ 0	\$ 0
Change in Assumptions	\$ 0	\$ 0	\$ 0
Other Significant Events	\$ 0	\$ 0	\$ 0
Total Pension Liability, 6/30/2015	\$ 195,375,889	\$ 169,649,246	\$ 148,512,712

NOTE DISCLOSURES

The table below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position (i.e., fair value of System assets), and the Net Pension Liability during the measurement year.

Table 3			
Change in Net Pension Liability			
	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) - (b)
Balances at 6/30/2014	\$ 153,863,911	\$ 138,743,106	\$ 15,120,805
Changes for the year:			
Service Cost	8,008,155		8,008,155
Interest	12,398,209		12,398,209
Changes of Benefits	0		0
Differences between Expected and Actual Experience	730,818		730,818
Changes of Assumptions	0		0
Contributions - Employer		4,088,117	(4,088,117)
Contributions - Non-Employer		0	0
Contributions - Member		4,924,265	(4,924,265)
Net Investment Income		6,434,871	(6,434,871)
Benefit Payments	(5,351,847)	(5,351,847)	0
Administrative Expense		(200,745)	200,745
Net Changes	15,785,335	9,894,661	5,890,674
Balances at 6/30/2015	\$ 169,649,246	\$ 148,637,767	\$ 21,011,479

There were no changes in benefits or changes in assumptions during the year. There was an actuarial experience loss during the year of approximately \$0.7 million.

The Service Cost, interest cost, and administrative expenses along with adverse plan experience exceeded the total contributions and investment income, resulting in an increase in the collective Net Pension Liability (NPL) of \$5,890,674. The collective NPL remaining as of June 30, 2015 is \$21,011,479.

NOTE DISCLOSURES

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table below shows the sensitivity of the collective NPL to the discount rate.

Table 4			
Sensitivity of Net Pension Liability to Changes in Discount Rate			
As of June 30, 2015			
	1% Decrease 6.75%	Discount Rate 7.75%	1% Increase 8.75%
Total Pension Liability	\$ 195,375,889	\$ 169,649,246	\$ 148,512,712
Plan Fiduciary Net Position	<u>148,637,767</u>	<u>148,637,767</u>	<u>148,637,767</u>
Net Pension Liability	<u>\$ 46,738,122</u>	<u>\$ 21,011,479</u>	<u>\$ (125,055)</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	76.1%	87.6%	100.1%

A one percent decrease in the discount rate increases the TPL by approximately 15.2% and increases the collective NPL by approximately 122.4%. A one percent increase in the discount rate decreases the TPL by approximately 12.5% and decreases the collective NPL by approximately 100.6%.

REQUIRED SUPPLEMENTARY INFORMATION

The schedules of Required Supplementary Information generally start with information as of the implementation of GASB 67, and eventually will build up to 10 years of information. The schedule below shows the changes in collective NPL and related ratios required by GASB for the two years since implementation.

Table 5		
Schedule of Changes in Net Pension Liability and Related Ratios		
	FYE 2015	FYE 2014
<u>Total Pension Liability</u>		
Service Cost - beginning of year	\$ 8,008,155	\$ 7,849,828
Interest (includes interest on service cost)	12,398,209	11,258,354
Changes of Benefit Terms	0	0
Differences between Expected and Actual Experience	730,818	0
Changes of Assumptions	0	0
Benefit Payments, including Refunds of Member Contributions	<u>(5,351,847)</u>	<u>(5,229,489)</u>
Net Change in Total Pension Liability	\$ 15,785,335	\$ 13,878,693
Total Pension Liability - beginning	<u>153,863,911</u>	<u>139,985,218</u>
Total Pension Liability - ending	<u>\$ 169,649,246</u>	<u>\$ 153,863,911</u>
<u>Plan Fiduciary Net Position</u>		
Contributions - Employer	\$ 4,088,117	\$ 3,762,217
Contributions - Non-Employer	0	0
Contributions - Member	4,924,265	4,461,889
Net Investment Income	6,434,871	20,069,398
Benefit Payments, including Refunds of Member Contributions	(5,351,847)	(5,229,489)
Administrative Expense	<u>(200,745)</u>	<u>(161,663)</u>
Net Change in Plan Fiduciary Net Position	\$ 9,894,661	\$ 22,902,352
Plan Fiduciary Net Position - beginning	<u>138,743,106</u>	<u>115,840,754</u>
Plan Fiduciary Net Position - ending	<u>\$ 148,637,767</u>	<u>\$ 138,743,106</u>
Net Pension Liability - ending	<u>\$ 21,011,479</u>	<u>\$ 15,120,805</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	87.61%	90.17%
Pensionable Payroll	\$ 44,884,739	\$ 41,636,566
Net Pension Liability as a Percentage of Pensionable Payroll	46.81%	36.32%

REQUIRED SUPPLEMENTARY INFORMATION

If an Actuarially Determined Contribution is calculated, the following schedule is required. An Actuarially Determined Contribution is a contribution amount determined in accordance with Actuarial Standards of Practice.

Table 6			
Schedule of Employer Contributions			
<i>Amounts in Thousands</i>			
	FYE 2015	FYE 2014	
Actuarially Determined Contribution	\$ 5,256	\$ 4,976	
Contributions in Relation to the Actuarially Determined Contribution			
Employer Contributions	\$ 4,088	\$ 3,762	
Non-Employer Contributions	<u>0</u>	<u>0</u>	
Total Contributions	<u>\$ 4,088</u>	<u>\$ 3,762</u>	
Contribution Deficiency/(Excess)	<u>\$ 1,168</u>	<u>\$ 1,214</u>	
Pensionable Payroll	\$ 44,885	\$ 41,637	
Contributions as a Percentage of Pensionable Payroll	9.11%	9.04%	

The following notes summarize the key methods and assumptions used to determine the Actuarially Determined Contribution for FYE 2015.

Valuation Date:	June 30, 2014
Timing:	Actuarially determined contribution rates are calculated based on the actuarial valuation just prior to the beginning of the plan year
Actuarial cost method:	Entry Age
Amortization method:	Level percentage of payroll, open
Remaining amortization period:	30 years
Amortization growth rate:	4.00%
Asset valuation method:	4-year smoothed market
Inflation:	3.00%
Salary increases:	4.00% plus merit/seniority increases where applicable
Investment rate of return:	7.75%, net of investment expenses
Mortality (healthy):	Sex distinct RP-2000 Combined Mortality projected to 2015 using Scale AA

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2015 can be found in the June 30, 2014 actuarial valuation report.

EMPLOYER REPORTING AMOUNTS

The participating employers are required to implement GASB 68 for their reporting date of June 30, 2015. The amounts reported as of their fiscal year end (their reporting date) must be based on a measurement date up to 12 months prior to their reporting date. For employers with a reporting date of June 30, their 2015 disclosures can be based on either a June 30, 2014 or June 30, 2015 measurement date. We understand the employers have elected to use the 2014 measurement date for their 2015 reporting date. As a result, the schedules in this section will be used by the employers for their 2016 reporting.

Because GWPORS is a cost-sharing multiple-employer pension plan, each employer participating in GWPORS must reflect a portion of the collective Net Pension Liability, Pension Expense and Deferred Outflows and Inflows in their financial statements. This section develops the collective amounts that are allocated to participating employers.

The impact of experience gains or losses and assumption changes on the TPL are recognized in the collective Pension Expense over the average expected remaining service life of all active and inactive members of the Plan, determined as of the beginning of the measurement period. As of June 30, 2014, this average was 6.56 years¹, which was rounded to 7.00 years for recognition purposes. During the measurement year, there were no assumption changes. There was an experience loss of approximately \$0.7 million with approximately \$0.1 million of that was recognized in the current year and will be recognized in each of the next six years.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment loss of approximately \$4.4 million. Approximately \$0.9 million of that was recognized in the current year and will be recognized in each of the next four years. Unrecognized investment gains from prior periods were approximately \$8.8 million of which \$2.2 million was recognized as a reduction in the collective Pension Expense in the current year.

The combination of unrecognized investment and experience losses this year along with unrecognized net investment gains from prior periods results in a collective Deferred Outflow of Resources as of June 30, 2015 of approximately \$0.6 million and a collective Deferred Inflow of Resources of approximately \$3.0 million. The table on the following page summarizes the current balances of collective Deferred Outflows and Deferred Inflows of Resources along with the net recognition over future years.

¹ The average expected future working lifetime for 955 active members was 9.75 years.

EMPLOYER REPORTING AMOUNTS

Table 7
Schedule of Deferred Inflows and Outflows of Resources
As of June 30, 2015

	Deferred Outflows of Resources	Deferred Inflows of Resources												
Differences between Expected and Actual Experience	\$ 626,415	\$ 0												
Changes in Assumptions	0	0												
Net Difference between Projected and Actual Earnings on Pension Plan Investments	0	3,030,979												
Total	<u>\$ 626,415</u>	<u>\$ 3,030,979</u>												
<p>Amounts reported as Deferred Outflows and (Deferred Inflows) of Resources will be recognized in Pension Expense as follows:</p> <p style="text-align: center;">Measurement year ended June 30:</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">2016</td> <td style="text-align: right;">\$ (1,202,542)</td> </tr> <tr> <td style="text-align: right;">2017</td> <td style="text-align: right;">(1,202,542)</td> </tr> <tr> <td style="text-align: right;">2018</td> <td style="text-align: right;">(1,202,543)</td> </tr> <tr> <td style="text-align: right;">2019</td> <td style="text-align: right;">994,260</td> </tr> <tr> <td style="text-align: right;">2020</td> <td style="text-align: right;">104,403</td> </tr> <tr> <td style="text-align: right;">Future Year Deferrals</td> <td style="text-align: right;">104,400</td> </tr> </table>			2016	\$ (1,202,542)	2017	(1,202,542)	2018	(1,202,543)	2019	994,260	2020	104,403	Future Year Deferrals	104,400
2016	\$ (1,202,542)													
2017	(1,202,542)													
2018	(1,202,543)													
2019	994,260													
2020	104,403													
Future Year Deferrals	104,400													

EMPLOYER REPORTING AMOUNTS

The collective Pension Expense recognized in aggregate by the participating employers of the Plan can be calculated two different ways. First, it is the change in the amounts reported on the employers' Statement of Net Position that relate to the Plan and are not attributable to employer contributions. That is, it is the change in collective NPL plus the changes in collective deferred outflows and inflows plus employer and non-employer contributions. Alternatively, the collective Pension Expense can be calculated by its individual components.

While GASB does not require or suggest the organization of the individual components shown in the table below, we believe it helps to understand the level and volatility of collective Pension Expense.

Table 8		
Calculation of Pension Expense		
	Measurement Year Ending	
	2015	2014
Change in Net Pension Liability	\$ 5,890,674	\$ (9,023,659)
Change in Deferred Outflows	(626,415)	0
Change in Deferred Inflows	(5,756,230)	8,787,209
Non-Employer Contributions	0	0
Employer Contributions	<u>4,088,117</u>	<u>3,762,217</u>
Pension Expense	\$ 3,596,146	\$ 3,525,767
Pension Expense as % of Pensionable Payroll	8.01%	8.47%
Operating Expenses		
Service Cost	\$ 8,008,155	\$ 7,849,828
Employee Contributions	(4,924,265)	(4,461,889)
Administrative Expenses	<u>200,745</u>	<u>161,663</u>
Total	\$ 3,284,635	\$ 3,549,602
Financing Expenses		
Interest Cost	\$ 12,398,209	\$ 11,258,354
Expected Return on Assets	<u>(10,884,156)</u>	<u>(9,085,387)</u>
Total	\$ 1,514,053	\$ 2,172,967
Changes		
Benefit Changes	\$ 0	\$ 0
Recognition of Assumption Changes	0	0
Recognition of Liability (Gains)/Losses	104,403	0
Recognition of Investment (Gains)/Losses	<u>(1,306,945)</u>	<u>(2,196,802)</u>
Total	\$ (1,202,542)	\$ (2,196,802)
Pension Expense	\$ 3,596,146	\$ 3,525,767

EMPLOYER REPORTING AMOUNTS

First, there are components that we refer to as operating expenses. These items are directly attributable to the operation of the Plan during the measurement year. Service Cost less employee contributions represents the increase in the employer-provided benefits attributable to the year, and administrative expenses are the cost of operating the Plan for the year.

Second, there are the financing expenses: the interest on the Total Pension Liability less the expected return on assets. Since the discount rate is equal to the long-term expected return on assets, the financing expense is the interest on the Net Pension Liability, Service Cost, contributions, and administrative expenses. The calculation of the expected return on assets is detailed below.

Table 9 Calculation of Expected Return on Assets For the Fiscal Year Ending June 30, 2015		
Market Value of Assets - beginning of year	\$	138,743,106
Expected Return on Market Value	\$	10,752,591
Employee Contributions	\$	4,924,265
Non-Employer Contributions		0
Employer Contributions		4,088,117
Benefit Payments		(5,351,847)
Administrative Expenses		(200,745)
Net Cash Flow - during year	\$	3,459,790
Expected Return on Cash Flow Items	\$	131,565
Expected Return on Assets	\$	10,884,156

The final category is changes. This category will drive most of the volatility in Pension Expense from year to year. It includes any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

EMPLOYER REPORTING AMOUNTS

Proportionate Shares

Because the System is a Cost-Sharing Pension Plan, each employer participating in the Plan must reflect a portion of the collective Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows of Resources in their financial statements. GASB 68 requires that the Proportionate Share for each employer be determined based on the “employer’s projected long-term contribution effort to the pension plan...as compared to the total projected long-term contribution effort by all employers...”.

The schedule provided in Appendix C includes the Proportionate Shares for each employer, reflecting a methodology that allocates the NPL, Pension Expense, and Deferred Outflows and Inflows based on the proportion of the total contribution made by each employer during the preceding plan year. The following information is presented:

- Contribution rates and actual contributions paid for the year ended June 30, 2015
- Proportionate Shares of Net Pension Liability as of June 30, 2014 for each employer
- Proportionate Shares of Net Pension Liability as of June 30, 2015 for each employer
- Employer Pension Expense for the measurement year ending June 30, 2015
- Allocation of Deferred Outflows and Deferred Inflows as of June 30, 2015
- Recognition of Deferred Outflows and Deferred Inflows for future fiscal years
- Sensitivity of Net Pension Liability for discount rates 1% below and 1% above the assumed discount rate of 7.75%, shown for each employer
- Schedule of each employer’s Proportionate Share of the Net Pension Liability as a percentage of its pensionable payroll
- Schedule of employer contributions

It is expected that the information provided for each employer, together with information about the System as a whole from the June 30, 2015 Comprehensive Annual Financial Report of the Public Employees Retirement Board, will be sufficient for employers to prepare disclosures for their financial reports.

**APPENDIX A
GLOSSARY OF TERMS**

1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

3. Cost-Sharing Pension Plan

A multiple-employer plan in which the pension obligations to the employers of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

4. Covered-Employee Payroll

The payroll of employees that are provided with pensions through the pension plan.²

5. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

6. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability or investment losses that are recognized in future reporting periods.

² This payroll includes all pay to employees, whether or not included in pensionable pay. MPERA has advised that Covered-Employee Payroll is not available. Therefore, pensionable payroll has been used throughout this report.

APPENDIX A
GLOSSARY OF TERMS

7. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

8. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the Plan.

9. Net Pension Liability

The liability of employers and non-employer contributing entities for employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

10. Pension Expense

The economic cost of pensions that an entity recognizes during a reporting period.

11. Plan Fiduciary Net Position

The fair or market value of assets.

12. Proportionate Share

The portion of the Net Pension Liability, Deferred Inflows and Deferred Outflows allocated to each employer in a Cost-Sharing Pension Plan, based on the employer's share of the projected long-term contribution effort.

13. Reporting Date

The last day of the Plan or employer's fiscal year.

APPENDIX A
GLOSSARY OF TERMS

14. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The Service Cost is the normal cost calculated under the entry age actuarial cost method.

15. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the actuarial liability calculated under the Entry Age Actuarial Cost Method.

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX B
DEVELOPMENT OF DISCOUNT RATE

Table 1 - Projection of Contributions
Amounts in Thousands, Projections Commence June 30, 2014, Actual Amounts Shown for Year 1 (except Payroll)
* Total pensionable payroll increases 4.00% per year

Year	Projected Pensionable Payroll			Projected Rates			Projected Contributions			
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll * (c) = (a) + (b)	Employee Rate (d)	Employer Rate (e)	Rate Available for Amortization (f)	Member Contributions for Current Employees (g) = (a) x (d)	Employer Contributions for Current Employees (h) = (a) x (e)	Contributions Related to Payroll of Future Employees (i) = (b) x (f)	Total Contributions (j) = (g) + (h) + (i)
1	\$ 43,101	\$ 0	\$ 43,101				\$ 4,924	\$ 4,088	\$ 0	\$ 9,012
2	40,608	4,217	44,825	10.6%	9.0%	2.7%	4,288	3,655	113	8,056
3	38,787	7,831	46,618	10.6%	9.0%	2.7%	4,096	3,491	210	7,797
4	37,502	10,981	48,483	10.6%	9.0%	2.7%	3,960	3,375	294	7,630
5	36,219	14,203	50,422	10.6%	9.0%	2.7%	3,825	3,260	381	7,465
6	35,080	17,359	52,439	10.6%	9.0%	2.7%	3,704	3,157	465	7,327
7	33,995	20,542	54,536	10.6%	9.0%	2.7%	3,590	3,060	551	7,200
8	32,723	23,995	56,718	10.6%	9.0%	2.7%	3,456	2,945	643	7,044
9	31,457	27,530	58,987	10.6%	9.0%	2.7%	3,322	2,831	738	6,891
10	30,083	31,263	61,346	10.6%	9.0%	2.7%	3,177	2,707	838	6,722
11	28,708	35,092	63,800	10.6%	9.0%	2.7%	3,032	2,584	940	6,556
12	27,370	38,982	66,352	10.6%	9.0%	2.7%	2,890	2,463	1,045	6,398
13	26,069	42,937	69,006	10.6%	9.0%	2.7%	2,753	2,346	1,151	6,250
14	24,516	47,250	71,766	10.6%	9.0%	2.7%	2,589	2,206	1,266	6,062
15	22,942	51,695	74,637	10.6%	9.0%	2.7%	2,423	2,065	1,385	5,873
16	21,531	56,092	77,622	10.6%	9.0%	2.7%	2,274	1,938	1,503	5,715
17	19,953	60,774	80,727	10.6%	9.0%	2.7%	2,107	1,796	1,629	5,532
18	18,467	65,489	83,956	10.6%	9.0%	2.7%	1,950	1,662	1,755	5,367
19	17,033	70,282	87,315	10.6%	9.0%	2.7%	1,799	1,533	1,884	5,215
20	15,490	75,317	90,807	10.6%	9.0%	2.7%	1,636	1,394	2,019	5,048
21	13,806	80,633	94,439	10.6%	9.0%	2.7%	1,458	1,243	2,161	4,861
22	12,091	86,126	98,217	10.6%	9.0%	2.7%	1,277	1,088	2,308	4,673
23	10,595	91,550	102,146	10.6%	9.0%	2.7%	1,119	954	2,454	4,526
24	9,190	97,042	106,232	10.6%	9.0%	2.7%	970	827	2,601	4,398
25	7,969	102,511	110,481	10.6%	9.0%	2.7%	842	717	2,747	4,306
26	6,794	108,106	114,900	10.6%	9.0%	2.7%	717	611	2,897	4,226
27	5,715	113,781	119,496	10.6%	9.0%	2.7%	604	514	3,049	4,167
28	4,782	119,494	124,276	10.6%	9.0%	2.7%	505	430	3,202	4,138
29	3,943	125,304	129,247	10.6%	9.0%	2.7%	416	355	3,358	4,129
30	3,128	131,288	134,417	10.6%	9.0%	2.7%	330	282	3,519	4,130
31	2,494	137,299	139,793	10.6%	9.0%	2.7%	263	224	3,680	4,167
32	1,984	143,401	145,385	10.6%	9.0%	2.7%	209	179	3,843	4,231
33	1,553	149,647	151,201	10.6%	9.0%	2.7%	164	140	4,011	4,314
34	1,184	156,064	157,249	10.6%	9.0%	2.7%	125	107	4,183	4,414
35	893	162,645	163,539	10.6%	9.0%	2.7%	94	80	4,359	4,534
36	670	169,411	170,080	10.6%	9.0%	2.7%	71	60	4,540	4,671
37	493	176,391	176,883	10.6%	9.0%	2.7%	52	44	4,727	4,824
38	362	183,597	183,959	10.6%	9.0%	2.7%	38	33	4,920	4,991
39	258	191,060	191,317	10.6%	9.0%	2.7%	27	23	5,120	5,171
40	180	198,789	198,970	10.6%	9.0%	2.7%	19	16	5,328	5,363
41	112	206,816	206,929	10.6%	9.0%	2.7%	12	10	5,543	5,565
42	62	215,144	215,206	10.6%	9.0%	2.7%	7	6	5,766	5,778
43	38	223,776	223,814	10.6%	9.0%	2.7%	4	3	5,997	6,005
44	18	232,749	232,766	10.6%	9.0%	2.7%	2	2	6,238	6,241
45	2	242,075	242,077	10.6%	9.0%	2.7%	0	0	6,488	6,488
46	0	251,760	251,760			2.7%	0	0	6,747	6,747
47	0	261,831	261,831			2.7%	0	0	7,017	7,017
48	0	272,304	272,304			2.7%	0	0	7,298	7,298
49	0	283,196	283,196			2.7%	0	0	7,590	7,590
50	0	294,524	294,524			2.7%	0	0	7,893	7,893
51	0	306,305	306,305			2.7%	0	0	8,209	8,209
52	0	318,557	318,557			2.7%	0	0	8,537	8,537
53	0	331,299	331,299			2.7%	0	0	8,879	8,879
54	0	344,551	344,551			2.7%	0	0	9,234	9,234
55	0	358,333	358,333			2.7%	0	0	9,603	9,603
56	0	372,667	372,667			2.7%	0	0	9,987	9,987
57	0	387,573	387,573			2.7%	0	0	10,387	10,387
58	0	403,076	403,076			2.7%	0	0	10,802	10,802
59	0	419,199	419,199			2.7%	0	0	11,235	11,235

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**APPENDIX B
DEVELOPMENT OF DISCOUNT RATE**

Table 1 - Projection of Contributions Continued

Amounts in Thousands, Projections Commence June 30, 2014, Actual Amounts Shown for Year 1 (except Payroll)

* Total pensionable payroll increases 4.00% per year

Year	Projected Pensionable Payroll			Projected Rates			Projected Contributions			
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll * (c) = (a) + (b)	Employee Rate (d)	Employer Rate (e)	Rate Available for Amortization (f)	Member Contributions for Current Employees (g) = (a) x (d)	Employer Contributions for Current Employees (h) = (a) x (e)	Contributions Related to Payroll of Future Employees (i) = (b) x (f)	Total Contributions (j) = (g) + (h) + (i)
60	\$ 0	\$ 435,967	\$ 435,967			2.7%	\$ 0	\$ 0	\$ 11,684	\$ 11,684
61	0	453,406	453,406			2.7%	0	0	12,151	12,151
62	0	471,542	471,542			2.7%	0	0	12,637	12,637
63	0	490,404	490,404			2.7%	0	0	13,143	13,143
64	0	510,020	510,020			2.7%	0	0	13,669	13,669
65	0	530,421	530,421			2.7%	0	0	14,215	14,215
66	0	551,638	551,638			2.7%	0	0	14,784	14,784
67	0	573,703	573,703			2.7%	0	0	15,375	15,375
68	0	596,651	596,651			2.7%	0	0	15,990	15,990
69	0	620,517	620,517			2.7%	0	0	16,630	16,630
70	0	645,338	645,338			2.7%	0	0	17,295	17,295
71	0	671,151	671,151			2.7%	0	0	17,987	17,987
72	0	697,997	697,997			2.7%	0	0	18,706	18,706
73	0	725,917	725,917			2.7%	0	0	19,455	19,455
74	0	754,954	754,954			2.7%	0	0	20,233	20,233
75	0	785,152	785,152			2.7%	0	0	21,042	21,042
76	0	816,558	816,558			2.7%	0	0	21,884	21,884
77	0	849,221	849,221			2.7%	0	0	22,759	22,759
78	0	883,189	883,189			2.7%	0	0	23,669	23,669
79	0	918,517	918,517			2.7%	0	0	24,616	24,616
80	0	955,258	955,258			2.7%	0	0	25,601	25,601
81	0	993,468	993,468			2.7%	0	0	26,625	26,625
82	0	1,033,207	1,033,207			2.7%	0	0	27,690	27,690
83	0	1,074,535	1,074,535			2.7%	0	0	28,798	28,798
84	0	1,117,516	1,117,516			2.7%	0	0	29,949	29,949
85	0	1,162,217	1,162,217			2.7%	0	0	31,147	31,147
86	0	1,208,706	1,208,706			2.7%	0	0	32,393	32,393
87	0	1,257,054	1,257,054			2.7%	0	0	33,689	33,689
88	0	1,307,336	1,307,336			2.7%	0	0	35,037	35,037
89	0	1,359,630	1,359,630			2.7%	0	0	36,438	36,438
90	0	1,414,015	1,414,015			2.7%	0	0	37,896	37,896
91	0	1,470,575	1,470,575			2.7%	0	0	39,411	39,411
92	0	1,529,398	1,529,398			2.7%	0	0	40,988	40,988
93	0	1,590,574	1,590,574			2.7%	0	0	42,627	42,627
94	0	1,654,197	1,654,197			2.7%	0	0	44,332	44,332
95	0	1,720,365	1,720,365			2.7%	0	0	46,106	46,106
96	0	1,789,180	1,789,180			2.7%	0	0	47,950	47,950
97	0	1,860,747	1,860,747			2.7%	0	0	49,868	49,868
98	0	1,935,177	1,935,177			2.7%	0	0	51,863	51,863
99	0	2,012,584	2,012,584			2.7%	0	0	53,937	53,937
100	0	2,093,087	2,093,087			2.7%	0	0	56,095	56,095
101	0	2,176,811	2,176,811			2.7%	0	0	58,339	58,339
102	0	2,263,883	2,263,883			2.7%	0	0	60,672	60,672
103	0	2,354,439	2,354,439			2.7%	0	0	63,099	63,099
104	0	2,448,616	2,448,616			2.7%	0	0	65,623	65,623
105	0	2,546,561	2,546,561			2.7%	0	0	68,248	68,248
106	0	2,648,423	2,648,423			2.7%	0	0	70,978	70,978
107	0	2,754,360	2,754,360			2.7%	0	0	73,817	73,817
108	0	2,864,535	2,864,535			2.7%	0	0	76,770	76,770
109	0	2,979,116	2,979,116			2.7%	0	0	79,840	79,840

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
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APPENDIX B
DEVELOPMENT OF DISCOUNT RATE

Table 2 - Projection of the Pension Plan's Fiduciary Net Position
Amounts in Thousands, Projections Commence June 30, 2014, Actual Amounts Shown for Year 1
* From Table 1 - Projection of Contributions, column (j)

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions* (b)	Projected Benefit Payments (c)	Projected Administrative Expense (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
1	\$ 138,743	\$ 9,012	\$ 5,352	\$ 201	\$ 6,435	\$ 148,638
2	148,638	8,056	5,906	76	11,598	162,310
3	162,310	7,797	6,463	79	12,627	176,191
4	176,191	7,630	7,061	82	13,673	190,351
5	190,351	7,465	7,733	86	14,739	204,736
6	204,736	7,327	8,566	89	15,817	219,224
7	219,224	7,200	9,556	93	16,897	233,672
8	233,672	7,044	10,544	96	17,973	248,048
9	248,048	6,891	11,638	100	19,039	262,240
10	262,240	6,722	12,854	104	20,086	276,090
11	276,090	6,556	14,104	108	21,106	289,539
12	289,539	6,398	15,429	113	22,092	302,487
13	302,487	6,250	16,893	117	23,034	314,760
14	314,760	6,062	18,395	122	23,920	326,225
15	326,225	5,873	19,818	127	24,747	336,900
16	336,900	5,715	21,302	132	25,512	346,693
17	346,693	5,532	22,745	137	26,209	355,551
18	355,551	5,367	24,164	143	26,835	363,446
19	363,446	5,215	25,648	148	27,384	370,250
20	370,250	5,048	27,144	154	27,848	375,848
21	375,848	4,861	28,700	161	28,216	380,064
22	380,064	4,673	30,018	167	28,485	383,037
23	383,037	4,526	31,399	174	28,657	384,647
24	384,647	4,398	32,505	180	28,735	385,095
25	385,095	4,306	33,685	186	28,721	384,251
26	384,251	4,226	34,540	191	28,619	382,365
27	382,365	4,167	35,363	196	28,440	379,414
28	379,414	4,138	36,043	199	28,184	375,494
29	375,494	4,129	36,627	203	27,857	370,651
30	370,651	4,130	37,021	205	27,467	365,023
31	365,023	4,167	37,229	206	27,024	358,779
32	358,779	4,231	37,267	206	26,541	352,078
33	352,078	4,314	37,163	206	26,029	345,053
34	345,053	4,414	36,904	204	25,498	337,858
35	337,858	4,534	36,475	202	24,962	330,677
36	330,677	4,671	35,912	199	24,432	323,669
37	323,669	4,824	35,219	195	23,921	317,000
38	317,000	4,991	34,424	190	23,441	310,818
39	310,818	5,171	33,528	185	23,003	305,278
40	305,278	5,363	32,544	180	22,619	300,535
41	300,535	5,565	31,477	174	22,299	296,748
42	296,748	5,778	30,325	168	22,058	294,091
43	294,091	6,005	29,113	161	21,907	292,729
44	292,729	6,241	27,849	154	21,859	292,827
45	292,827	6,488	26,529	147	21,926	294,565
46	294,565	6,747	25,175	139	22,123	298,121
47	298,121	7,017	23,793	132	22,461	303,675
48	303,675	7,298	22,393	124	22,956	311,412
49	311,412	7,590	20,984	116	23,621	321,522
50	321,522	7,893	19,573	108	24,470	334,204
51	334,204	8,209	18,168	100	25,518	349,662
52	349,662	8,537	16,779	93	26,782	368,109
53	368,109	8,879	15,413	85	28,277	389,767
54	389,767	9,234	14,077	78	30,020	414,866
55	414,866	9,603	12,780	71	32,029	443,647
56	443,647	9,987	11,529	64	34,322	476,362
57	476,362	10,387	10,330	57	36,918	513,280
58	513,280	10,802	9,190	51	39,839	554,680
59	554,680	11,235	8,114	45	43,105	600,860

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APPENDIX B
DEVELOPMENT OF DISCOUNT RATE

Table 2 - Projection of the Pension Plan's Fiduciary Net Position Continued
Amounts in Thousands, Projections Commence June 30, 2014, Actual Amounts Shown for Year 1
* From Table 1 - Projection of Contributions, column (j)

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions* (b)	Projected Benefit Payments (c)	Projected Administrative Expense (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
60	600,860	11,684	7,107	39	46,739	652,137
61	652,137	12,151	6,172	34	50,767	708,848
62	708,848	12,637	5,311	29	55,213	771,358
63	771,358	13,143	4,527	25	60,107	840,056
64	840,056	13,669	3,818	21	65,478	915,363
65	915,363	14,215	3,186	18	71,359	997,734
66	997,734	14,784	2,629	15	77,786	1,087,660
67	1,087,660	15,375	2,143	12	84,796	1,185,677
68	1,185,677	15,990	1,726	10	92,432	1,292,364
69	1,292,364	16,630	1,372	8	100,738	1,408,352
70	1,408,352	17,295	1,077	6	109,764	1,534,328
71	1,534,328	17,987	834	5	119,563	1,671,039
72	1,671,039	18,706	637	4	130,193	1,819,298
73	1,819,298	19,455	480	3	141,717	1,979,986
74	1,979,986	20,233	357	2	154,205	2,154,064
75	2,154,064	21,042	262	1	167,730	2,342,573
76	2,342,573	21,884	190	1	182,374	2,546,639
77	2,546,639	22,759	136	1	198,225	2,767,486
78	2,767,486	23,669	96	1	215,377	3,006,436
79	3,006,436	24,616	67	0	233,932	3,264,916
80	3,264,916	25,601	47	0	254,003	3,544,473
81	3,544,473	26,625	32	0	275,708	3,846,774
82	3,846,774	27,690	21	0	299,177	4,173,620
83	4,173,620	28,798	14	0	324,550	4,526,953
84	4,526,953	29,949	9	0	351,977	4,908,871
85	4,908,871	31,147	6	0	381,622	5,321,634
86	5,321,634	32,393	4	0	413,658	5,767,681
87	5,767,681	33,689	2	0	448,276	6,249,644
88	6,249,644	35,037	2	0	485,680	6,770,359
89	6,770,359	36,438	1	0	526,088	7,332,884
90	7,332,884	37,896	1	0	569,740	7,940,519
91	7,940,519	39,411	0	0	616,889	8,596,819
92	8,596,819	40,988	0	0	667,812	9,305,618
93	9,305,618	42,627	0	0	722,806	10,071,052
94	10,071,052	44,332	0	0	782,192	10,897,577
95	10,897,577	46,106	0	0	846,315	11,789,998
96	11,789,998	47,950	0	0	915,548	12,753,496
97	12,753,496	49,868	0	0	990,292	13,793,657
98	13,793,657	51,863	0	0	1,070,981	14,916,500
99	14,916,500	53,937	0	0	1,158,080	16,128,517
100	16,128,517	56,095	0	0	1,252,093	17,436,705
101	17,436,705	58,339	0	0	1,353,563	18,848,607
102	18,848,607	60,672	0	0	1,463,074	20,372,353
103	20,372,353	63,099	0	0	1,581,257	22,016,709
104	22,016,709	65,623	0	0	1,708,790	23,791,122
105	23,791,122	68,248	0	0	1,846,407	25,705,777
106	25,705,777	70,978	0	0	1,994,897	27,771,652
107	27,771,652	73,817	0	0	2,155,110	30,000,578
108	30,000,578	76,770	0	0	2,327,964	32,405,312
109	32,405,312	79,840	0	0	2,514,448	34,999,600

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APPENDIX B
DEVELOPMENT OF DISCOUNT RATE

Table 3 - Actuarial Present Values of Projected Benefit Payments

Amounts in Thousands, Projections Commence June 30, 2014, Actual Amounts Shown for Year 1

* From Table 2 - Projection of the Pension Plan's Fiduciary Net Position, column (a)

** From Table 2 - Projection of the Pension Plan's Fiduciary Net Position, column (c)

Year	Projected Beginning Fiduciary Net Position *	Projected Benefit Payments for current plan participants **	"Funded" Portion of Benefit Payments (d) = (c) if (b) >= (c)	"Unfunded" Portion of Benefit Payments (e) = (c) - (d)	Present Value of "Funded" Benefit Payments (f) = (d) / (1+ 7.75%)^(a)	Present Value of "Unfunded" Benefit Payments (g) = (e) / (1+3.80%)^(a)	Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) / (1+ 7.75%)^(a)
(a)	(b)	(c)	(d) = (c) if (b) >= (c)	(e) = (c) - (d)	(f) = (d) / (1+ 7.75%)^(a)	(g) = (e) / (1+3.80%)^(a)	(h) = (c) / (1+ 7.75%)^(a)
1	\$ 138,743	\$ 5,352	\$ 5,352	\$ 0	\$ 4,967	\$ 0	\$ 4,967
2	148,638	5,906	5,906	0	5,087	0	5,087
3	162,310	6,463	6,463	0	5,166	0	5,166
4	176,191	7,061	7,061	0	5,238	0	5,238
5	190,351	7,733	7,733	0	5,324	0	5,324
6	204,736	8,566	8,566	0	5,473	0	5,473
7	219,224	9,556	9,556	0	5,667	0	5,667
8	233,672	10,544	10,544	0	5,803	0	5,803
9	248,048	11,638	11,638	0	5,944	0	5,944
10	262,240	12,854	12,854	0	6,093	0	6,093
11	276,090	14,104	14,104	0	6,205	0	6,205
12	289,539	15,429	15,429	0	6,300	0	6,300
13	302,487	16,893	16,893	0	6,402	0	6,402
14	314,760	18,395	18,395	0	6,469	0	6,469
15	326,225	19,818	19,818	0	6,469	0	6,469
16	336,900	21,302	21,302	0	6,453	0	6,453
17	346,693	22,745	22,745	0	6,394	0	6,394
18	355,551	24,164	24,164	0	6,305	0	6,305
19	363,446	25,648	25,648	0	6,210	0	6,210
20	370,250	27,144	27,144	0	6,100	0	6,100
21	375,848	28,700	28,700	0	5,986	0	5,986
22	380,064	30,018	30,018	0	5,810	0	5,810
23	383,037	31,399	31,399	0	5,641	0	5,641
24	384,647	32,505	32,505	0	5,419	0	5,419
25	385,095	33,685	33,685	0	5,212	0	5,212
26	384,251	34,540	34,540	0	4,960	0	4,960
27	382,365	35,363	35,363	0	4,713	0	4,713
28	379,414	36,043	36,043	0	4,458	0	4,458
29	375,494	36,627	36,627	0	4,204	0	4,204
30	370,651	37,021	37,021	0	3,944	0	3,944
31	365,023	37,229	37,229	0	3,681	0	3,681
32	358,779	37,267	37,267	0	3,420	0	3,420
33	352,078	37,163	37,163	0	3,165	0	3,165
34	345,053	36,904	36,904	0	2,917	0	2,917
35	337,858	36,475	36,475	0	2,675	0	2,675
36	330,677	35,912	35,912	0	2,445	0	2,445
37	323,669	35,219	35,219	0	2,225	0	2,225
38	317,000	34,424	34,424	0	2,018	0	2,018
39	310,818	33,528	33,528	0	1,824	0	1,824
40	305,278	32,544	32,544	0	1,644	0	1,644
41	300,535	31,477	31,477	0	1,475	0	1,475
42	296,748	30,325	30,325	0	1,319	0	1,319
43	294,091	29,113	29,113	0	1,175	0	1,175
44	292,729	27,849	27,849	0	1,043	0	1,043
45	292,827	26,529	26,529	0	922	0	922
46	294,565	25,175	25,175	0	812	0	812
47	298,121	23,793	23,793	0	713	0	713
48	303,675	22,393	22,393	0	622	0	622
49	311,412	20,984	20,984	0	541	0	541
50	321,522	19,573	19,573	0	469	0	469
51	334,204	18,168	18,168	0	404	0	404
52	349,662	16,779	16,779	0	346	0	346
53	368,109	15,413	15,413	0	295	0	295
54	389,767	14,077	14,077	0	250	0	250
55	414,866	12,780	12,780	0	211	0	211
56	443,647	11,529	11,529	0	176	0	176
57	476,362	10,330	10,330	0	147	0	147
58	513,280	9,190	9,190	0	121	0	121
59	554,680	8,114	8,114	0	99	0	99

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
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APPENDIX B
DEVELOPMENT OF DISCOUNT RATE

Table 3 - Actuarial Present Values of Projected Benefit Payments Continued
Amounts in Thousands, Projections Commence June 30, 2014, Actual Amounts Shown for Year 1
* From Table 2 - Projection of the Pension Plan's Fiduciary Net Position, column (a)
** From Table 2 - Projection of the Pension Plan's Fiduciary Net Position, column (c)

Year (a)	Projected Beginning Fiduciary Net Position * (b)	Projected Benefit Payments for current plan participants ** (c)	"Funded" Portion of Benefit Payments (d) = (c) if (b) >= (c)	"Unfunded" Portion of Benefit Payments (e) = (c) - (d)	Present Value of "Funded" Benefit Payments (f) = (d) / (1+ 7.75%)^(a)	Present Value of "Unfunded" Benefit Payments (g) = (e) / (1+3.80%)^(a)	Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) / (1+ 7.75%)^(a)
60	\$ 600,860	\$ 7,107	\$ 7,107	\$ 0	\$ 81	\$ 0	\$ 81
61	652,137	6,172	6,172	0	65	0	65
62	708,848	5,311	5,311	0	52	0	52
63	771,358	4,527	4,527	0	41	0	41
64	840,056	3,818	3,818	0	32	0	32
65	915,363	3,186	3,186	0	25	0	25
66	997,734	2,629	2,629	0	19	0	19
67	1,087,660	2,143	2,143	0	14	0	14
68	1,185,677	1,726	1,726	0	11	0	11
69	1,292,364	1,372	1,372	0	8	0	8
70	1,408,352	1,077	1,077	0	6	0	6
71	1,534,328	834	834	0	4	0	4
72	1,671,039	637	637	0	3	0	3
73	1,819,298	480	480	0	2	0	2
74	1,979,986	357	357	0	1	0	1
75	2,154,064	262	262	0	1	0	1
76	2,342,573	190	190	0	1	0	1
77	2,546,639	136	136	0	0	0	0
78	2,767,486	96	96	0	0	0	0
79	3,006,436	67	67	0	0	0	0
80	3,264,916	47	47	0	0	0	0
81	3,544,473	32	32	0	0	0	0
82	3,846,774	21	21	0	0	0	0
83	4,173,620	14	14	0	0	0	0
84	4,526,953	9	9	0	0	0	0
85	4,908,871	6	6	0	0	0	0
86	5,321,634	4	4	0	0	0	0
87	5,767,681	2	2	0	0	0	0
88	6,249,644	2	2	0	0	0	0
89	6,770,359	1	1	0	0	0	0
90	7,332,884	1	1	0	0	0	0
91	7,940,519	0	0	0	0	0	0
92	8,596,819	0	0	0	0	0	0
93	9,305,618	0	0	0	0	0	0
94	10,071,052	0	0	0	0	0	0
95	10,897,577	0	0	0	0	0	0
96	11,789,998	0	0	0	0	0	0
97	12,753,496	0	0	0	0	0	0
98	13,793,657	0	0	0	0	0	0
99	14,916,500	0	0	0	0	0	0
100	16,128,517	0	0	0	0	0	0
101	17,436,705	0	0	0	0	0	0
102	18,848,607	0	0	0	0	0	0
103	20,372,353	0	0	0	0	0	0
104	22,016,709	0	0	0	0	0	0
105	23,791,122	0	0	0	0	0	0
106	25,705,777	0	0	0	0	0	0
107	27,771,652	0	0	0	0	0	0
108	30,000,578	0	0	0	0	0	0
109	32,405,312	0	0	0	0	0	0
					\$ 205,940	\$ 0	\$ 205,940

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
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APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

<i>GWPORS - Cost Sharing Plan</i>				Contributions		
				for Fiscal Year Ending June 30, 2015		
				Member Rate	Employer Rate	Employer Contribution
Total Before Working Retiree Contributions and Adjustments						\$ 4,039,626.49
Due to Adjustments						\$ 48,490.52
Total						\$ 4,088,117.01
Employers						
	UNIVERSITY OF MONTANA - GW5103	-	GW9103	10.560%	9.000%	\$ 85,233.67
	MONTANA STATE UNIVERSITY - GW5104			10.560%	9.000%	\$ 105,322.60
	MONTANA STATE UNIVERSITY - GW5106			10.560%	9.000%	\$ 35,504.47
	DEPARTMENT OF FISH WILDL - GW5201			10.560%	9.000%	\$ 518,675.29
	DEPARTMENT OF TRANSPORTAT - GW5401			10.560%	9.000%	\$ 357,900.41
	DEPARTMENT OF LIVESTOCK - GW5603			10.560%	9.000%	\$ 101,643.61
	DEPARTMENT OF CORRECTIONS - GW6401			10.560%	9.000%	\$ 2,883,836.96

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
 GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

GWPORS - Cost Sharing Plan				Net Pension Liability as of June 30, 2014	
				Net Pension Liability - Employer	Employer Proportion based on Employer Contributions
Total Before Working Retiree Contributions and Adjustments				\$ 15,120,805.00	100.000001%
Due to Adjustments					
Total				\$ 15,120,805.00	100.000001%
Employers					
UNIVERSITY OF MONTANA	- GW5103	- GW9103		\$ 309,719.32	2.048299%
MONTANA STATE UNIVERSITY	- GW5104			\$ 413,198.95	2.732652%
MONTANA STATE UNIVERSITY	- GW5106			\$ 135,697.94	0.897425%
DEPARTMENT OF FISH WILDL	- GW5201			\$ 1,980,422.43	13.097335%
DEPARTMENT OF TRANSPORTAT	- GW5401			\$ 1,336,708.01	8.840191%
DEPARTMENT OF LIVESTOCK	- GW5603			\$ 412,675.14	2.729188%
DEPARTMENT OF CORRECTIONS	- GW6401			\$ 10,532,383.21	69.654911%

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
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APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

<i>GWPORS - Cost Sharing Plan</i>				Net Pension Liability as of June 30, 2015	
				Net Pension Liability - Employer	Employer Proportion based on Employer Contributions
Total Before Working Retiree Contributions and Adjustments				\$ 21,011,479.00	100.000002%
Due to Adjustments					
Total				\$ 21,011,479.00	100.000002%
Employers					
UNIVERSITY OF MONTANA	- GW5103	- GW9103		\$ 438,070.99	2.084913%
MONTANA STATE UNIVERSITY	- GW5104			\$ 541,321.00	2.576311%
MONTANA STATE UNIVERSITY	- GW5106			\$ 182,480.45	0.868480%
DEPARTMENT OF FISH WILDL	- GW5201			\$ 2,665,807.98	12.687389%
DEPARTMENT OF TRANSPORTAT	- GW5401			\$ 1,839,481.83	8.754652%
DEPARTMENT OF LIVESTOCK	- GW5603			\$ 522,412.29	2.486319%
DEPARTMENT OF CORRECTIONS	- GW6401			\$ 14,821,904.46	70.541938%

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
 GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

<i>GWPORS - Cost Sharing Plan</i>				Pension Expense for Fiscal Year Ending June 30, 2015	
				Employer Pension Expense	
Total Before Working Retiree Contributions and Adjustments				\$	3,596,145.99
Due to Adjustments					
Total				\$	3,596,145.99
Employers					
UNIVERSITY OF MONTANA	- GW5103	- GW9103		\$	76,227.01
MONTANA STATE UNIVERSITY	- GW5104			\$	87,308.18
MONTANA STATE UNIVERSITY	- GW5106			\$	30,243.18
DEPARTMENT OF FISH WILDL	- GW5201			\$	442,255.59
DEPARTMENT OF TRANSPORTAT	- GW5401			\$	311,908.54
DEPARTMENT OF LIVESTOCK	- GW5603			\$	81,116.62
DEPARTMENT OF CORRECTIONS	- GW6401			\$	2,567,086.87

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

GWPORS - Cost Sharing Plan				Deferred Outflows					
				Actual vs. Expected Experience	Changes of Assumptions	Actual vs. Expected Investment Earnings	Total Collective Deferred Outflows	Changes in Proportionate Shares	Employer contributions subsequent to the measurement date - # to be inserted by each employer
Total Before Working Retiree Contributions and Adjustments				\$ 626,415.00	-	-	\$ 626,415.00	\$ 189,277.84	
Due to Adjustments									
Total				\$ 626,415.00	-	-	\$ 626,415.00	\$ 189,277.84	
Employers									
UNIVERSITY OF MONTANA	- GW5103	- GW9103		\$ 13,060.21	-	-	\$ 13,060.21	\$ 7,503.05	#
MONTANA STATE UNIVERSITY	- GW5104			\$ 16,138.40	-	-	\$ 16,138.40	-	#
MONTANA STATE UNIVERSITY	- GW5106			\$ 5,440.29	-	-	\$ 5,440.29	-	#
DEPARTMENT OF FISH WILDL	- GW5201			\$ 79,475.71	-	-	\$ 79,475.71	-	#
DEPARTMENT OF TRANSPORTAT	- GW5401			\$ 54,840.45	-	-	\$ 54,840.45	-	#
DEPARTMENT OF LIVESTOCK	- GW5603			\$ 15,574.67	-	-	\$ 15,574.67	-	#
DEPARTMENT OF CORRECTIONS	- GW6401			\$ 441,885.28	-	-	\$ 441,885.28	\$ 181,774.79	#

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

**APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS**

<i>GWPORS - Cost Sharing Plan</i>									
				Deferred Inflows					
				Actual vs. Expected Experience	Changes of Assumptions	Actual vs. Expected Investment Earnings	Total Collective Deferred Inflows	Changes in Proportionate Shares	Employer contributions subsequent to the measurement date
Total Before Working Retiree Contributions and Adjustments				\$ -	\$ -	\$ 3,030,979.00	\$ 3,030,979.00	\$ 189,277.84	\$ -
Due to Adjustments									
Total				\$ -	\$ -	\$ 3,030,979.00	\$ 3,030,979.00	\$ 189,277.84	\$ -
Employers									
	UNIVERSITY OF MONTANA	- GW5103	- GW9103	\$ -	\$ -	\$ 63,193.27	\$ 63,193.27	\$ -	\$ -
	MONTANA STATE UNIVERSITY	- GW5104		\$ -	\$ -	\$ 78,087.44	\$ 78,087.44	\$ 32,038.31	\$ -
	MONTANA STATE UNIVERSITY	- GW5106		\$ -	\$ -	\$ 26,323.44	\$ 26,323.44	\$ 5,931.70	\$ -
	DEPARTMENT OF FISH WILDL	- GW5201		\$ -	\$ -	\$ 384,552.08	\$ 384,552.08	\$ 84,008.54	\$ -
	DEPARTMENT OF TRANSPORTAT	- GW5401		\$ -	\$ -	\$ 265,351.66	\$ 265,351.66	\$ 17,529.14	\$ -
	DEPARTMENT OF LIVESTOCK	- GW5603		\$ -	\$ -	\$ 75,359.79	\$ 75,359.79	\$ 49,770.15	\$ -
	DEPARTMENT OF CORRECTIONS	- GW6401		\$ -	\$ -	\$ 2,138,111.32	\$ 2,138,111.32	\$ -	\$ -

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

<i>GWPORS - Cost Sharing Plan</i>				Recognition of Deferred Outflows and (Deferred Inflows) for Fiscal Year Ending June 30,					
				<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Future Year Deferrals</u>
Total Before Working Retiree Contributions and Adjustments				\$ (1,202,542.00)	\$ (1,202,542.00)	\$ (1,202,543.33)	\$ 994,260.01	\$ 104,403.01	\$ 104,400.00
Due to Adjustments									
Total				\$ (1,202,542.00)	\$ (1,202,542.00)	\$ (1,202,543.33)	\$ 994,260.01	\$ 104,403.01	\$ 104,400.00
Employers									
	UNIVERSITY OF MONTANA - GW5103	-	GW9103	\$ (23,821.44)	\$ (23,821.44)	\$ (23,821.47)	\$ 21,979.96	\$ 3,427.22	\$ 3,427.16
	MONTANA STATE UNIVERSITY - GW5104			\$ (36,320.94)	\$ (36,320.94)	\$ (36,320.97)	\$ 20,275.51	\$ (2,649.97)	\$ (2,650.05)
	MONTANA STATE UNIVERSITY - GW5106			\$ (11,432.45)	\$ (11,432.45)	\$ (11,432.46)	\$ 7,646.33	\$ (81.90)	\$ (81.92)
	DEPARTMENT OF FISH WILDL - GW5201			\$ (166,572.60)	\$ (166,572.60)	\$ (166,572.77)	\$ 112,144.21	\$ (755.41)	\$ (755.79)
	DEPARTMENT OF TRANSPORTAT - GW5401			\$ (108,199.89)	\$ (108,199.89)	\$ (108,200.01)	\$ 84,122.48	\$ 6,218.60	\$ 6,218.33
	DEPARTMENT OF LIVESTOCK - GW5603			\$ (38,194.05)	\$ (38,194.05)	\$ (38,194.08)	\$ 16,425.45	\$ (5,699.23)	\$ (5,699.31)
	DEPARTMENT OF CORRECTIONS - GW6401			\$ (818,000.63)	\$ (818,000.63)	\$ (818,001.57)	\$ 731,666.07	\$ 103,943.70	\$ 103,941.58

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
 GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

GWPORS - Cost Sharing Plan				Sensitivity of Employer's Proportionate Share of the Net Pension Liability as of June 30, 2015		
				1% Decrease 6.75%	Discount Rate 7.75%	1% Increase 8.75%
Total Before Working Retiree Contributions and Adjustments				\$ 46,738,122.00	\$ 21,011,479.00	\$ (125,055.01)
Due to Adjustments						
Total				\$ 46,738,122.00	\$ 21,011,479.00	\$ (125,055.01)
Employers						
	UNIVERSITY OF MONTANA - GW5103	-	GW9103	\$ 974,449.03	\$ 438,070.99	\$ (2,607.29)
	MONTANA STATE UNIVERSITY - GW5104			\$ 1,204,119.28	\$ 541,321.00	\$ (3,221.81)
	MONTANA STATE UNIVERSITY - GW5106			\$ 405,911.14	\$ 182,480.45	\$ (1,086.08)
	DEPARTMENT OF FISH WILDL - GW5201			\$ 5,929,847.15	\$ 2,665,807.98	\$ (15,866.21)
	DEPARTMENT OF TRANSPORTAT - GW5401			\$ 4,091,759.85	\$ 1,839,481.83	\$ (10,948.13)
	DEPARTMENT OF LIVESTOCK - GW5603			\$ 1,162,058.58	\$ 522,412.29	\$ (3,109.27)
	DEPARTMENT OF CORRECTIONS - GW6401			\$ 32,969,976.97	\$ 14,821,904.46	\$ (88,216.22)

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
 GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

<i>GWPORS - Cost Sharing Plan</i>				Schedule of Employer's Proportionate Share of the Net Pension Liability as of June 30, 2015			
				Net Pension Liability - Employer	Employer's Pensionable Payroll	Employer's Proportionate Share as % Pensionable Payroll	Plan Fiduciary Net Position as a % of Total Pension Liability
Total Before Working Retiree Contributions and Adjustments				\$ 21,011,479.00	\$ 44,884,738.77		
Due to Adjustments							
Total				\$ 21,011,479.00	\$ 44,884,738.77		
Employers							
	UNIVERSITY OF MONTANA	- GW5103	- GW9103	\$ 438,070.99	\$ 935,807.63	46.812%	87.6%
	MONTANA STATE UNIVERSITY	- GW5104		\$ 541,321.00	\$ 1,156,370.37	46.812%	87.6%
	MONTANA STATE UNIVERSITY	- GW5106		\$ 182,480.45	\$ 389,814.86	46.812%	87.6%
	DEPARTMENT OF FISH WILDL	- GW5201		\$ 2,665,807.98	\$ 5,694,701.19	46.812%	87.6%
	DEPARTMENT OF TRANSPORTAT	- GW5401		\$ 1,839,481.83	\$ 3,929,502.61	46.812%	87.6%
	DEPARTMENT OF LIVESTOCK	- GW5603		\$ 522,412.29	\$ 1,115,977.55	46.812%	87.6%
	DEPARTMENT OF CORRECTIONS	- GW6401		\$ 14,821,904.46	\$ 31,662,564.56	46.812%	87.6%

GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
 GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE

APPENDIX C
EMPLOYER PROPORTIONATE SHARE ALLOCATIONS

<i>GWPORS - Cost Sharing Plan</i>				Schedule of Employer Contributions as of June 30, 2015				
				Contractually Required Contribution	Contributions in Relation to the Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Pensionable Payroll	Contributions as % Pensionable Payroll
Total Before Working Retiree Contributions and Adjustments				\$ 4,039,626.49	\$ 4,039,626.49	\$ -	\$ 44,884,738.77	
Due to Adjustments				\$ 48,490.52	\$ 48,490.52	\$ -		
Total				\$ 4,088,117.01	\$ 4,088,117.01	\$ -	\$ 44,884,738.77	
Employers								
UNIVERSITY OF MONTANA	- GW5103	- GW9103		\$ 85,233.67	\$ 85,233.67	\$ -	\$ 935,807.63	9.108%
MONTANA STATE UNIVERSITY	- GW5104			\$ 105,322.60	\$ 105,322.60	\$ -	\$ 1,156,370.37	9.108%
MONTANA STATE UNIVERSITY	- GW5106			\$ 35,504.47	\$ 35,504.47	\$ -	\$ 389,814.86	9.108%
DEPARTMENT OF FISH WILDL	- GW5201			\$ 518,675.29	\$ 518,675.29	\$ -	\$ 5,694,701.19	9.108%
DEPARTMENT OF TRANSPORTAT	- GW5401			\$ 357,900.41	\$ 357,900.41	\$ -	\$ 3,929,502.61	9.108%
DEPARTMENT OF LIVESTOCK	- GW5603			\$ 101,643.61	\$ 101,643.61	\$ -	\$ 1,115,977.55	9.108%
DEPARTMENT OF CORRECTIONS	- GW6401			\$ 2,883,836.96	\$ 2,883,836.96	\$ -	\$ 31,662,564.56	9.108%