



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

**GASB 67 Report
as of
June 30, 2014**

Produced by [Cheiron](#)

November 2014

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**GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
GASB 67 REPORTING FOR JUNE 30, 2014 MEASUREMENT DATE**

BOARD SUMMARY

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

- Projection of the Total Pension Liability from the valuation date to the measurement date,
- Calculation of the Net Pension Liability at the discount rate as well as discount rates 1% higher and lower than the discount rate,
- Changes in the Net Pension Liability, and
- Schedule of Employer Contributions.

Highlights

This report is the first report under GASB 67. The reporting date for the State of Montana Game Wardens' and Peace Officers' Retirement System (GWORS) is June 30, 2014. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2014 and the Total Pension Liability as the valuation date of June 30, 2013, updated to June 30, 2014. 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.

Beginning of year measurements are also based on the actuarial valuation as of June 30, 2013. Because the beginning and ending values are based on the same actuarial valuation and there were no significant events, no liability gains or losses due to experience are reported this year. In future years, liability gains and losses will be reported reflecting the liability gains and losses between actuarial valuation dates as well as any significant events during the update period.

The table below provides a summary of the key results during this reporting period.

Table 1			
Summary of Results			
		Measurement Date	
		6/30/14	6/30/2013
Total Pension Liability	\$	153,863,911	\$ 139,985,218
Plan Fiduciary Net Position		<u>138,743,106</u>	<u>115,840,754</u>
Net Pension Liability	\$	<u>15,120,805</u>	<u>\$ 24,144,464</u>
Discount Rate		7.75%	7.75%

CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under GASB 67 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 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 GWPORS. 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, 2013 Actuarial Valuation Report for GWPORS, except that it has been assumed that the rate of investment return is net only of investment expenses, rather than net of both investment and administrative expenses. The administrative expense rate is assumed to be 0.17% of active member payroll.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic 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. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

Sincerely,
Cheiron



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



Margaret Tempkin, FSA,EA, MAAA
Principal Consulting Actuary

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DETERMINATION OF DISCOUNT RATE

The discount rate at June 30, 2014 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 as Appendix B.

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PROJECTION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) at the beginning of the measurement year is measured as of a valuation date of June 30, 2013. The TPL at June 30, 2013 is the same as was reported for actuarial valuation purposes as of June 30, 2013. The TPL at the end of the measurement year, June 30, 2014, is measured as a valuation date of June 30, 2013 and projected to June 30, 2014. In future years, both the beginning and end of year TPL will be measured as of a valuation date one year prior and projected to the appropriate date. There were no significant events during the projection period of which we are aware. The table below shows the projection of the TPL at discount rates equal to the rate used for disclosure and 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			
Discount Rate	6.75%	7.75%	8.75%
Total Pension Liability, 6/30/2013			
Actives	\$ 107,165,599	\$ 90,543,254	\$ 77,030,827
Deferred Vested	7,024,060	5,943,881	5,093,961
Retirees	<u>47,747,507</u>	<u>43,498,083</u>	<u>39,884,705</u>
Total	\$ 161,937,166	\$ 139,985,218	\$ 122,009,493
Service Cost, Beginning of Year			
Service Cost Rate	23.01%	18.82%	15.59%
Expected Payroll During Year	41,710,030	41,710,030	41,710,030
Service Cost	\$ 9,597,478	\$ 7,849,828	\$ 6,502,594
Benefit Payments	\$ 5,229,489	\$ 5,229,489	\$ 5,229,489
Interest	\$ 11,404,975	\$ 11,258,354	\$ 11,020,815
Change in Benefits	0	0	0
Change in Assumptions	0	0	0
Other Significant Events	0	0	0
Total Pension Liability, 6/30/2014	\$ 177,710,130	\$ 153,863,911	\$ 134,303,412

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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 6/30/2013	\$ 139,985,218	\$ 115,840,754	\$ 24,144,464
Changes for the year:			
Service cost	7,849,828		7,849,828
Interest	11,258,354		11,258,354
Changes of benefits	0		0
Changes of assumptions	0		0
Differences between expected and actual experience	0		0
Contributions - employer		3,762,217	(3,762,217)
Contributions - non-employer		0	0
Contributions - member		4,461,889	(4,461,889)
Net investment income		20,069,398	(20,069,398)
Benefit payments	(5,229,489)	(5,229,489)	0
Administrative expense		(161,663)	161,663
Net changes	<u>13,878,693</u>	<u>22,902,352</u>	<u>(9,023,659)</u>
Balances at 6/30/2014	<u>\$ 153,863,911</u>	<u>\$ 138,743,106</u>	<u>\$ 15,120,805</u>

There were no changes in benefits or changes in assumptions during the year. Because the beginning and end of year TPL are both based on the same actuarial valuation, there are no differences between expected and actual experience reported this year.

Total contributions and investment income exceeded the service cost, interest cost and administrative expenses, resulting in a decrease in the Net Pension Liability (NPL) of \$9,023,659. The NPL remaining as of June 30, 2014, is \$15,120,805.

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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 NPL to the discount rate.

Table 4			
Sensitivity of Net Pension Liability to Changes in Discount Rate			
	1% Decrease 6.75%	Discount Rate 7.75%	1% Increase 8.75%
Total Pension Liability	\$ 177,710,130	\$ 153,863,911	\$ 134,303,412
Plan Fiduciary Net Position	<u>138,743,106</u>	<u>138,743,106</u>	<u>138,743,106</u>
Net Pension Liability	<u>\$ 38,967,024</u>	<u>\$ 15,120,805</u>	<u>\$ (4,439,694)</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	78.1%	90.2%	103.3%

A one percent decrease in the discount rate increases the TPL by approximately 15.5% and increases the NPL by approximately 157.7%. A one percent increase in the discount rate decreases the TPL by approximately 12.7% and decreases the NPL by approximately 129.4%.

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REQUIRED SUPPLEMENTARY INFORMATION

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

Table 5	
Schedule of Changes in Net Pension Liability and Related Ratios	
	FYE 2014
<u>Total Pension Liability</u>	
Service cost (BOY)	\$ 7,849,828
Interest (includes interest on service cost)	11,258,354
Changes of benefit terms	0
Differences between expected and actual experience	0
Changes of assumptions	0
Benefit payments, including refunds of member contributions	(5,229,489)
Net change in total pension liability	13,878,693
Total pension liability - beginning	139,985,218
Total pension liability - ending	\$ 153,863,911
<u>Plan fiduciary net position</u>	
Contributions - employer	\$ 3,762,217
Contributions - non-employer	0
Contributions - member	4,461,889
Net investment income	20,069,398
Benefit payments, including refunds of member contributions	(5,229,489)
Administrative expense	(161,663)
Net change in plan fiduciary net position	\$ 22,902,352
Plan fiduciary net position - beginning	115,840,754
Plan fiduciary net position - ending	\$ 138,743,106
Net pension liability - ending	\$ 15,120,805
Plan fiduciary net position as a percentage of the total pension liability	90.17%
Covered employee payroll	\$ 41,636,566
Net pension liability as a percentage of covered employee payroll	36.32%

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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	
Last Fiscal Year	
Dollar Amounts in Thousands	
	2014
Actuarially Determined Contribution	\$ 4,976
Contributions in Relation to the Actuarially Determined Contribution	
Employer Contributions	\$ 3,762
Non-Employer Contributions	<u>0</u>
Total Contributions	<u>\$ 3,762</u>
Contribution Deficiency/(Excess)	<u>\$ 1,214</u>
Covered-Employee Payroll	\$ 41,637
Contributions as a Percentage of Covered-Employee Payroll	9.04%

**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. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 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.

4. 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.

5. Net Pension Liability

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

6. Plan Fiduciary Net Position

The fair or market value of assets.

7. Reporting Date

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

**APPENDIX A
GLOSSARY OF TERMS**

8. 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.

9. 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.

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**APPENDIX B
DEVELOPMENT OF DISCOUNT RATE**

Table 1 - Projection of Contributions

Amounts in Thousands, Projections Commence June 30, 2013, Actual Amounts Shown for Year 1 (except Payroll)

* Total covered-employee payroll increases 4.00% per year

Year	Projected Covered Employee Payroll			Projected Contributions			
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll * (c) = (a) + (b)	Contributions for Current Employees (d) = (a) x EE Rate	Employer Contributions for Current Employees (e) = (a) x ER Rate	Contributions Related to Payroll of Future Employees (f) = (b) x AL Rate	Total Contributions (g) = (d) + (e) + (f)
1	\$ 41,710	\$ 0	\$ 41,710	\$ 4,461	\$ 3,763	\$ 0	\$ 8,224
2	39,277	4,102	43,378	4,148	3,535	40	7,723
3	37,742	7,372	45,114	3,986	3,397	85	7,467
4	36,404	10,514	46,918	3,844	3,276	137	7,258
5	35,333	13,461	48,795	3,731	3,180	193	7,104
6	34,120	16,627	50,747	3,603	3,071	260	6,934
7	33,058	19,719	52,776	3,491	2,975	331	6,797
8	31,971	22,917	54,888	3,376	2,877	410	6,663
9	30,737	26,347	57,083	3,246	2,766	500	6,512
10	29,490	29,876	59,366	3,114	2,654	598	6,367
11	28,165	33,576	61,741	2,974	2,535	707	6,216
12	26,818	37,393	64,211	2,832	2,414	823	6,069
13	25,427	41,352	66,779	2,685	2,288	949	5,922
14	24,080	45,370	69,450	2,543	2,167	1,080	5,790
15	22,541	49,687	72,228	2,380	2,029	1,226	5,635
16	20,985	54,133	75,117	2,216	1,889	1,380	5,484
17	19,555	58,568	78,122	2,065	1,760	1,535	5,360
18	17,988	63,259	81,247	1,900	1,619	1,704	5,223
19	16,536	67,961	84,497	1,746	1,488	1,875	5,109
20	15,090	72,787	87,877	1,593	1,358	2,052	5,003
21	13,512	77,880	91,392	1,427	1,216	2,242	4,885
22	11,852	83,196	95,047	1,252	1,067	2,443	4,762
23	10,384	88,465	98,849	1,097	935	2,642	4,673
24	9,139	93,664	102,803	965	823	2,835	4,623
25	7,956	98,960	106,915	840	716	3,031	4,588
26	6,836	104,356	111,192	722	615	3,231	4,568
27	5,784	109,856	115,640	611	521	3,432	4,564
28	4,895	115,370	120,265	517	441	3,632	4,589
29	4,087	120,989	125,076	432	368	3,833	4,632
30	3,355	126,724	130,079	354	302	4,036	4,693
31	2,688	132,594	135,282	284	242	4,243	4,769
32	2,133	138,561	140,693	225	192	4,451	4,868
33	1,700	144,621	146,321	180	153	4,658	4,991
34	1,319	150,855	152,174	139	119	4,870	5,128
35	1,001	157,260	158,261	106	90	5,086	5,282
36	762	163,829	164,591	80	69	5,305	5,455
37	566	170,609	171,175	60	51	5,531	5,641
38	409	177,613	178,022	43	37	5,762	5,842
39	305	184,838	185,143	32	27	6,000	6,059
40	218	192,331	192,549	23	20	6,245	6,288
41	141	200,110	200,251	15	13	6,500	6,528
42	87	208,174	208,261	9	8	6,763	6,780
43	50	216,541	216,591	5	4	7,036	7,046
44	37	225,218	225,255	4	3	7,319	7,326
45	12	234,253	234,265	1	1	7,613	7,615
46	1	243,635	243,636	0	0	7,918	7,918
47	0	253,381	253,381	0	0	8,235	8,235
48	0	263,516	263,516	0	0	8,564	8,564
49	0	274,057	274,057	0	0	8,907	8,907
50	0	285,019	285,019	0	0	9,263	9,263
51	0	296,420	296,420	0	0	9,634	9,634
52	0	308,277	308,277	0	0	10,019	10,019
53	0	320,608	320,608	0	0	10,420	10,420
54	0	333,432	333,432	0	0	10,837	10,837
55	0	346,769	346,769	0	0	11,270	11,270
56	0	360,640	360,640	0	0	11,721	11,721
57	0	375,066	375,066	0	0	12,190	12,190
58	0	390,068	390,068	0	0	12,677	12,677
59	0	405,671	405,671	0	0	13,184	13,184

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**APPENDIX B
DEVELOPMENT OF DISCOUNT RATE**

Table 1 - Projection of Contributions Continued

Amounts in Thousands, Projections Commence June 30, 2013, Actual Amounts Shown for Year 1 (except Payroll)

** Total covered-employee payroll increases 4.00% per year*

Year	Projected Covered Employee Payroll			Projected Contributions			
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll * (c) = (a) + (b)	Contributions for Current Employees (d) = (a) x EE Rate	Employer Contributions for Current Employees (e) = (a) x ER Rate	Contributions Related to Payroll of Future Employees (f) = (b) x AL Rate	Total Contributions (g) = (d) + (e) + (f)
60	0	421,898	421,898	0	0	13,712	13,712
61	0	438,774	438,774	0	0	14,260	14,260
62	0	456,325	456,325	0	0	14,831	14,831
63	0	474,578	474,578	0	0	15,424	15,424
64	0	493,561	493,561	0	0	16,041	16,041
65	0	513,303	513,303	0	0	16,682	16,682
66	0	533,836	533,836	0	0	17,350	17,350
67	0	555,189	555,189	0	0	18,044	18,044
68	0	577,397	577,397	0	0	18,765	18,765
69	0	600,492	600,492	0	0	19,516	19,516
70	0	624,512	624,512	0	0	20,297	20,297
71	0	649,493	649,493	0	0	21,109	21,109
72	0	675,472	675,472	0	0	21,953	21,953
73	0	702,491	702,491	0	0	22,831	22,831
74	0	730,591	730,591	0	0	23,744	23,744
75	0	759,815	759,815	0	0	24,694	24,694
76	0	790,207	790,207	0	0	25,682	25,682
77	0	821,815	821,815	0	0	26,709	26,709
78	0	854,688	854,688	0	0	27,777	27,777
79	0	888,876	888,876	0	0	28,888	28,888
80	0	924,431	924,431	0	0	30,044	30,044
81	0	961,408	961,408	0	0	31,246	31,246
82	0	999,864	999,864	0	0	32,496	32,496
83	0	1,039,859	1,039,859	0	0	33,795	33,795
84	0	1,081,453	1,081,453	0	0	35,147	35,147
85	0	1,124,711	1,124,711	0	0	36,553	36,553
86	0	1,169,700	1,169,700	0	0	38,015	38,015
87	0	1,216,488	1,216,488	0	0	39,536	39,536
88	0	1,265,147	1,265,147	0	0	41,117	41,117
89	0	1,315,753	1,315,753	0	0	42,762	42,762
90	0	1,368,383	1,368,383	0	0	44,472	44,472
91	0	1,423,118	1,423,118	0	0	46,251	46,251
92	0	1,480,043	1,480,043	0	0	48,101	48,101
93	0	1,539,245	1,539,245	0	0	50,025	50,025
94	0	1,600,815	1,600,815	0	0	52,026	52,026
95	0	1,664,847	1,664,847	0	0	54,108	54,108
96	0	1,731,441	1,731,441	0	0	56,272	56,272
97	0	1,800,699	1,800,699	0	0	58,523	58,523
98	0	1,872,727	1,872,727	0	0	60,864	60,864
99	0	1,947,636	1,947,636	0	0	63,298	63,298
100	0	2,025,541	2,025,541	0	0	65,830	65,830
101	0	2,106,563	2,106,563	0	0	68,463	68,463
102	0	2,190,825	2,190,825	0	0	71,202	71,202
103	0	2,278,458	2,278,458	0	0	74,050	74,050
104	0	2,369,597	2,369,597	0	0	77,012	77,012
105	0	2,464,381	2,464,381	0	0	80,092	80,092
106	0	2,562,956	2,562,956	0	0	83,296	83,296
107	0	2,665,474	2,665,474	0	0	86,628	86,628
108	0	2,772,093	2,772,093	0	0	90,093	90,093
109	0	2,882,977	2,882,977	0	0	93,697	93,697

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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, 2013, Actual Amounts Shown for Year 1
** From Table 1 - Projection of Contributions, column (g)*

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	\$ 115,841	\$ 8,224	\$ 5,229	\$ 162	\$ 20,069	\$ 138,743
2	138,743	7,723	5,201	74	10,846	152,037
3	152,037	7,467	5,684	77	11,848	165,591
4	165,591	7,258	6,196	80	12,871	179,443
5	179,443	7,104	6,788	83	13,916	193,591
6	193,591	6,934	7,548	86	14,977	207,867
7	207,867	6,797	8,437	90	16,044	222,181
8	222,181	6,663	9,429	93	17,110	236,433
9	236,433	6,512	10,422	97	18,171	250,597
10	250,597	6,367	11,526	101	19,221	264,558
11	264,558	6,216	12,758	105	20,250	278,161
12	278,161	6,069	14,028	109	21,251	291,343
13	291,343	5,922	15,339	114	22,217	304,029
14	304,029	5,790	16,792	118	23,139	316,049
15	316,049	5,635	18,272	123	24,009	327,298
16	327,298	5,484	19,720	128	24,819	337,753
17	337,753	5,360	21,199	133	25,569	347,351
18	347,351	5,223	22,611	138	26,253	356,078
19	356,078	5,109	24,002	144	26,872	363,914
20	363,914	5,003	25,446	149	27,420	370,742
21	370,742	4,885	26,934	155	27,888	376,426
22	376,426	4,762	28,320	162	28,271	380,977
23	380,977	4,673	29,572	168	28,573	384,482
24	384,482	4,623	30,754	175	28,797	386,974
25	386,974	4,588	31,792	181	28,949	388,538
26	388,538	4,568	32,880	187	29,028	389,067
27	389,067	4,564	33,608	191	29,041	388,873
28	388,873	4,589	34,309	195	29,000	387,959
29	387,959	4,632	34,885	198	28,909	386,417
30	386,417	4,693	35,363	201	28,773	384,319
31	384,319	4,769	35,673	203	28,602	381,814
32	381,814	4,868	35,795	203	28,407	379,090
33	379,090	4,991	35,765	203	28,201	376,314
34	376,314	5,128	35,617	202	27,997	373,619
35	373,619	5,282	35,300	201	27,806	371,206
36	371,206	5,455	34,839	198	27,644	369,267
37	369,267	5,641	34,252	195	27,523	367,985
38	367,985	5,842	33,543	191	27,458	367,551
39	367,551	6,059	32,741	186	27,464	368,147
40	368,147	6,288	31,857	181	27,552	369,949
41	369,949	6,528	30,872	175	27,739	373,168
42	373,168	6,780	29,819	169	28,038	377,999
43	377,999	7,046	28,683	163	28,466	384,664
44	384,664	7,326	27,509	156	29,038	393,363
45	393,363	7,615	26,278	149	29,770	404,320
46	404,320	7,918	25,002	142	30,680	417,775
47	417,775	8,235	23,695	135	31,785	433,964
48	433,964	8,564	22,365	127	33,103	453,139
49	453,139	8,907	21,021	119	34,653	475,559
50	475,559	9,263	19,670	112	36,456	501,496
51	501,496	9,634	18,321	104	38,532	531,235
52	531,235	10,019	16,981	96	40,902	565,079
53	565,079	10,420	15,658	89	43,591	603,342
54	603,342	10,837	14,360	82	46,622	646,359
55	646,359	11,270	13,092	74	50,021	694,483
56	694,483	11,721	11,864	67	53,814	748,088
57	748,088	12,190	10,680	61	58,032	807,568
58	807,568	12,677	9,548	54	62,703	873,347
59	873,347	13,184	8,473	48	67,862	945,871

**GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
GASB 67 REPORTING FOR JUNE 30, 2014 MEASUREMENT DATE**

**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, 2013, Actual Amounts Shown for Year 1
* From Table 1 - Projection of Contributions, column (g)

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	945,871	13,712	7,461	42	73,541	1,025,621
61	1,025,621	14,260	6,516	37	79,779	1,113,106
62	1,113,106	14,831	5,641	32	86,614	1,208,878
63	1,208,878	15,424	4,838	27	94,090	1,313,526
64	1,313,526	16,041	4,108	23	102,251	1,427,686
65	1,427,686	16,682	3,452	20	111,148	1,552,045
66	1,552,045	17,350	2,869	16	120,833	1,687,342
67	1,687,342	18,044	2,358	13	131,365	1,834,380
68	1,834,380	18,765	1,914	11	142,805	1,994,025
69	1,994,025	19,516	1,535	9	155,220	2,167,217
70	2,167,217	20,297	1,216	7	168,685	2,354,976
71	2,354,976	21,109	950	5	183,277	2,558,405
72	2,558,405	21,953	733	4	199,083	2,778,704
73	2,778,704	22,831	558	3	216,196	3,017,170
74	3,017,170	23,744	419	2	234,718	3,275,210
75	3,275,210	24,694	311	2	254,756	3,554,347
76	3,554,347	25,682	228	1	276,430	3,856,230
77	3,856,230	26,709	164	1	299,867	4,182,640
78	4,182,640	27,777	117	1	325,206	4,535,506
79	4,535,506	28,888	83	0	352,597	4,916,909
80	4,916,909	30,044	58	0	382,201	5,329,096
81	5,329,096	31,246	40	0	414,192	5,774,493
82	5,774,493	32,496	27	0	448,758	6,255,719
83	6,255,719	33,795	18	0	486,103	6,775,599
84	6,775,599	35,147	12	0	526,445	7,337,179
85	7,337,179	36,553	8	0	570,021	7,943,746
86	7,943,746	38,015	5	0	617,086	8,598,841
87	8,598,841	39,536	3	0	667,914	9,306,287
88	9,306,287	41,117	2	0	722,801	10,070,203
89	10,070,203	42,762	1	0	782,067	10,895,031
90	10,895,031	44,472	1	0	846,056	11,785,558
91	11,785,558	46,251	1	0	915,140	12,746,949
92	12,746,949	48,101	0	0	989,718	13,784,767
93	13,784,767	50,025	0	0	1,070,222	14,905,015
94	14,905,015	52,026	0	0	1,157,117	16,114,158
95	16,114,158	54,108	0	0	1,250,905	17,419,170
96	17,419,170	56,272	0	0	1,352,126	18,827,568
97	18,827,568	58,523	0	0	1,461,362	20,347,452
98	20,347,452	60,864	0	0	1,579,242	21,987,558
99	21,987,558	63,298	0	0	1,706,443	23,757,299
100	23,757,299	65,830	0	0	1,843,694	25,666,823
101	25,666,823	68,463	0	0	1,991,782	27,727,068
102	27,727,068	71,202	0	0	2,151,555	29,949,825
103	29,949,825	74,050	0	0	2,323,927	32,347,803
104	32,347,803	77,012	0	0	2,509,883	34,934,698
105	34,934,698	80,092	0	0	2,710,485	37,725,275
106	37,725,275	83,296	0	0	2,926,876	40,735,447
107	40,735,447	86,628	0	0	3,160,291	43,982,367
108	43,982,367	90,093	0	0	3,412,059	47,484,519
109	47,484,519	93,697	0	0	3,683,613	51,261,829

**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

Amounts in Thousands, Projections Commence June 30, 2013, 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+4.29%)^(a)	Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) / (1+
1	\$ 115,841	\$ 5,229	\$ 5,229	\$ 0	\$ 4,853	\$ 0	\$ 4,853
2	138,743	5,201	5,201	0	4,480	0	4,480
3	152,037	5,684	5,684	0	4,543	0	4,543
4	165,591	6,196	6,196	0	4,597	0	4,597
5	179,443	6,788	6,788	0	4,674	0	4,674
6	193,591	7,548	7,548	0	4,823	0	4,823
7	207,867	8,437	8,437	0	5,004	0	5,004
8	222,181	9,429	9,429	0	5,189	0	5,189
9	236,433	10,422	10,422	0	5,324	0	5,324
10	250,597	11,526	11,526	0	5,464	0	5,464
11	264,558	12,758	12,758	0	5,613	0	5,613
12	278,161	14,028	14,028	0	5,728	0	5,728
13	291,343	15,339	15,339	0	5,813	0	5,813
14	304,029	16,792	16,792	0	5,905	0	5,905
15	316,049	18,272	18,272	0	5,964	0	5,964
16	327,298	19,720	19,720	0	5,974	0	5,974
17	337,753	21,199	21,199	0	5,960	0	5,960
18	347,351	22,611	22,611	0	5,899	0	5,899
19	356,078	24,002	24,002	0	5,812	0	5,812
20	363,914	25,446	25,446	0	5,718	0	5,718
21	370,742	26,934	26,934	0	5,617	0	5,617
22	376,426	28,320	28,320	0	5,482	0	5,482
23	380,977	29,572	29,572	0	5,312	0	5,312
24	384,482	30,754	30,754	0	5,127	0	5,127
25	386,974	31,792	31,792	0	4,919	0	4,919
26	388,538	32,880	32,880	0	4,721	0	4,721
27	389,067	33,608	33,608	0	4,479	0	4,479
28	388,873	34,309	34,309	0	4,243	0	4,243
29	387,959	34,885	34,885	0	4,004	0	4,004
30	386,417	35,363	35,363	0	3,767	0	3,767
31	384,319	35,673	35,673	0	3,527	0	3,527
32	381,814	35,795	35,795	0	3,285	0	3,285
33	379,090	35,765	35,765	0	3,046	0	3,046
34	376,314	35,617	35,617	0	2,815	0	2,815
35	373,619	35,300	35,300	0	2,589	0	2,589
36	371,206	34,839	34,839	0	2,372	0	2,372
37	369,267	34,252	34,252	0	2,164	0	2,164
38	367,985	33,543	33,543	0	1,967	0	1,967
39	367,551	32,741	32,741	0	1,782	0	1,782
40	368,147	31,857	31,857	0	1,609	0	1,609
41	369,949	30,872	30,872	0	1,447	0	1,447
42	373,168	29,819	29,819	0	1,297	0	1,297
43	377,999	28,683	28,683	0	1,158	0	1,158
44	384,664	27,509	27,509	0	1,031	0	1,031
45	393,363	26,278	26,278	0	914	0	914
46	404,320	25,002	25,002	0	807	0	807
47	417,775	23,695	23,695	0	710	0	710
48	433,964	22,365	22,365	0	622	0	622
49	453,139	21,021	21,021	0	542	0	542
50	475,559	19,670	19,670	0	471	0	471
51	501,496	18,321	18,321	0	407	0	407
52	531,235	16,981	16,981	0	350	0	350
53	565,079	15,658	15,658	0	300	0	300
54	603,342	14,360	14,360	0	255	0	255
55	646,359	13,092	13,092	0	216	0	216
56	694,483	11,864	11,864	0	181	0	181
57	748,088	10,680	10,680	0	152	0	152
58	807,568	9,548	9,548	0	126	0	126
59	873,347	8,473	8,473	0	104	0	104

**GAME WARDENS' AND PEACE OFFICERS' RETIREMENT SYSTEM
GASB 67 REPORTING FOR JUNE 30, 2014 MEASUREMENT DATE**

**APPENDIX B
DEVELOPMENT OF DISCOUNT RATE**

Table 3 - Actuarial Present Values of Projected Benefit Payments Continued

Amounts in Thousands, Projections Commence June 30, 2013, 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+4.29%)^(a)	Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) / (1+
60	945,871	7,461	7,461	0	85	0	85
61	1,025,621	6,516	6,516	0	69	0	69
62	1,113,106	5,641	5,641	0	55	0	55
63	1,208,878	4,838	4,838	0	44	0	44
64	1,313,526	4,108	4,108	0	35	0	35
65	1,427,686	3,452	3,452	0	27	0	27
66	1,552,045	2,869	2,869	0	21	0	21
67	1,687,342	2,358	2,358	0	16	0	16
68	1,834,380	1,914	1,914	0	12	0	12
69	1,994,025	1,535	1,535	0	9	0	9
70	2,167,217	1,216	1,216	0	7	0	7
71	2,354,976	950	950	0	5	0	5
72	2,558,405	733	733	0	3	0	3
73	2,778,704	558	558	0	2	0	2
74	3,017,170	419	419	0	2	0	2
75	3,275,210	311	311	0	1	0	1
76	3,554,347	228	228	0	1	0	1
77	3,856,230	164	164	0	1	0	1
78	4,182,640	117	117	0	0	0	0
79	4,535,506	83	83	0	0	0	0
80	4,916,909	58	58	0	0	0	0
81	5,329,096	40	40	0	0	0	0
82	5,774,493	27	27	0	0	0	0
83	6,255,719	18	18	0	0	0	0
84	6,775,599	12	12	0	0	0	0
85	7,337,179	8	8	0	0	0	0
86	7,943,746	5	5	0	0	0	0
87	8,598,841	3	3	0	0	0	0
88	9,306,287	2	2	0	0	0	0
89	10,070,203	1	1	0	0	0	0
90	10,895,031	1	1	0	0	0	0
91	11,785,558	1	1	0	0	0	0
92	12,746,949	0	0	0	0	0	0
93	13,784,767	0	0	0	0	0	0
94	14,905,015	0	0	0	0	0	0
95	16,114,158	0	0	0	0	0	0
96	17,419,170	0	0	0	0	0	0
97	18,827,568	0	0	0	0	0	0
98	20,347,452	0	0	0	0	0	0
99	21,987,558	0	0	0	0	0	0
100	23,757,299	0	0	0	0	0	0
101	25,666,823	0	0	0	0	0	0
102	27,727,068	0	0	0	0	0	0
103	29,949,825	0	0	0	0	0	0
104	32,347,803	0	0	0	0	0	0
105	34,934,698	0	0	0	0	0	0
106	37,725,275	0	0	0	0	0	0
107	40,735,447	0	0	0	0	0	0
108	43,982,367	0	0	0	0	0	0
109	47,484,519	0	0	0	0	0	0
					\$ 191,646	+ \$ 0	= \$ 191,646

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