



# **Montana Firefighters' Unified Retirement System**

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 Montana Firefighters' Unified Retirement System, participating employers, and the State of Montana as a non-employer contributing entity in a special funding situation. 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 and the State of Montana Proportionate Shares and Reporting Amounts.

### **Highlights**

The reporting date for the State of Montana Firefighters' Unified Retirement System (FURS) 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**

Table 1 Summary of Results								
		Measurement Date 6/30/2015 6/30/2014						
Total Pension Liability Plan Fiduciary Net Position	\$	442,913,008 340,636,031	\$	419,173,248 321,556,669				
Net Pension Liability Deferred Outflows Deferred Inflows	\$	102,276,977 0 6,315,484	\$	97,616,579 0 19,388,910				
Net Impact on Statement of Net Position	\$	108,592,461	\$	117,005,489				
Pension Expense (\$ Amount) Pension Expense (% of Pensionable Payroll) Discount Rate	\$	11,260,214 27.05% 7.75%	\$	10,836,542 27.16% 7.75%				

<sup>\*</sup> 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 and the State would report a total Net Pension Liability of \$102,276,977 and Deferred Inflows of \$6,315,484. Consequently, the collective net impact on the employers' and the State's Statement of Net Position would be \$108,592,461 at the end of the reporting year. In addition, any contributions between the measurement date and the reporting date by each employer and the State 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 \$11,260,214 or 27.05% of pensionable payroll. This amount is not expected to be the same as the employers' and State's contribution to the Plan (\$19,673,242), but instead represents the change in the net impact on the employers' and State's Statement of Net Position plus employer and State contributions [\$108,592,461 - \$117,005,489 + \$19,673,242]. 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 Firefighters' Unified Retirement System (FURS). This report is for the use of FURS, the State of Montana as a non-employer contributing entity, 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 FURS.

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 FURS. 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 FURS 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

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	57. N				
Projection of Total Pension Liabi  Discount Rate		Valuation 75%		easureme 75%	nt L	Pate 8.75%
Valuation Total Pension Liability, 6/30/20	)14					
Actives		343,708	\$ 155	,630,624	\$ 1	31,211,019
Deferred Vested	,	401,406		,844,682		2,419,046
Retirees		781,843		,538,057		236,890,783
Total	\$ 478,	526,957	\$419	,013,363	\$ 3	370,520,848
Service Cost, Beginning of Year						
Service Cost Rate		34.13%		26.51%		20.82%
Expected Payroll During Year	\$ 41,	744,212	\$ 41	,744,212	\$	41,744,212
Service Cost	\$ 14,	247,300	\$ 11	,066,391	\$	8,691,145
Benefit Payments	\$ (19,	747,008)	\$ (19	,747,008)	\$	(19,747,008)
Interest	\$ 32,0	606,683	\$ 32	,580,262	\$	32,335,232
Change in Benefits	\$	0	\$	0	\$	0
Change in Assumptions	\$	0	\$	0	\$	0
Other Significant Events	\$	0	\$	0	\$	0
Total Pension Liability, 6/30/2015	\$ 505,0	633,932	\$ 442	,913,008	\$3	391,800,217



### **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 (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)						
Balances at 6/30/2014	\$ 419,173,248	\$ 321,556,669	\$ 97,616,579						
Changes for the year:									
Service Cost	11,066,391		11,066,391						
Interest	32,580,262		32,580,262						
Changes of Benefits	0		0						
Differences between Expected and									
Actual Experience	(159,885)		(159,885)						
Changes of Assumptions	0		0						
Contributions - Employer		6,421,701	(6,421,701)						
Contributions - Non-Employer		13,251,541	(13,251,541)						
Contributions - Member		4,710,082	(4,710,082)						
Net Investment Income		14,640,156	(14,640,156)						
Benefit Payments	(19,747,008)	(19,747,008)	0						
Administrative Expense		(197,110)	197,110						
Net Changes	23,739,760	19,079,362	4,660,398						
Balances at 6/30/2015	\$ 442,913,008	\$ 340,636,031	\$ 102,276,977						

There were no changes in benefits or changes in assumptions during the year. There was an actuarial experience gain during the year of approximately \$0.2 million.

The Service Cost, interest cost, and administrative expenses exceeded the total contributions and investment income combined with favorable plan experience, resulting in an increase in the collective Net Pension Liability (NPL) of \$4,660,398. The collective NPL remaining as of June 30, 2015 is \$102,276,977.



### **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%	Discount	1%						
	Decrease	Rate	Increase						
	6.75%	7.75%	8.75%						
Total Pension Liability Plan Fiduciary Net Position Net Pension Liability	\$ 505,633,932	\$ 442,913,008	\$ 391,800,217						
	340,636,031	340,636,031	340,636,031						
	\$ 164,997,901	\$ 102,276,977	\$ 51,164,186						
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	67.4%	76.9%	86.9%						

A one percent decrease in the discount rate increases the TPL by approximately 14.2% and increases the collective NPL by approximately 61.3%. A one percent increase in the discount rate decreases the TPL by approximately 11.5% and decreases the collective NPL by approximately 50.0%.



### REQUIRED SUPPLEMENTARY INFORMATION

The schedules of Required Supplementary Information generally start with one year of information as of the implementation of GASB 67, and eventually will need to 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 Liabilit	v a	ınd Related Ra	atio	)S
~ · · · · · · · · · · · · · · · · · · ·		FYE 2015		FYE 2014
Total Pension Liability				
Service Cost - beginning of year	\$	11,066,391	\$	10,608,895
Interest (includes interest on service cost)		32,580,262		30,847,306
Changes of Benefit Terms		0		0
Differences between Expected and Actual Experience		(159,885)		0
Changes of Assumptions		0		0
Benefit Payments, including Refunds of Member Contributions		(19,747,008)		(19,052,130)
Net Change in Total Pension Liability	\$	23,739,760	\$	22,404,071
Total Pension Liability - beginning		419,173,248		396,769,177
Total Pension Liability - ending	\$	442,913,008	\$	419,173,248
Plan Fiduciary Net Position				
Contributions - Employer	\$	6,421,701	\$	6,006,863
Contributions - Non-Employer		13,251,541		12,767,624
Contributions - Member		4,710,082		4,697,333
Net Investment Income		14,640,156		45,464,858
Benefit Payments, including Refunds of Member Contributions		(19,747,008)		(19,052,130)
Administrative Expense	_	(197,110)		(153,622)
Net Change in Plan Fiduciary Net Position	\$	19,079,362	\$	49,730,926
Plan Fiduciary Net Position - beginning		321,556,669		271,825,743
Plan Fiduciary Net Position - ending	\$	340,636,031	\$	321,556,669
Net Pension Liability - ending	\$	102,276,977	\$	97,616,579
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		76.91%		76.71%
Pensionable Payroll Net Pension Liability as a Percentage of Pensionable Payroll	\$	41,627,233 245.70%	\$	39,891,869 244.70%



### 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 Amounts in Thousands									
FYE 2015 FYE 2014									
Actuarially Determined Contribution	\$	13,279	\$	13,699					
Contributions in Relation to the Actuarially Determined Con	tribution	ı							
Employer Contributions	\$	6,422	\$	6,007					
Non-Employer Contributions		13,252		12,767					
Total Contributions	\$	19,674	\$	18,774					
Contribution Deficiency/(Excess)	\$	(6,395)	\$	(5,075)					
Pensionable Payroll	\$	41,627	\$	39,892					
Contributions as a Percentage of Pensionable Payroll		47.26%		47.06%					

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 AND NON-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 and the State 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 and the State for their 2016 reporting.

Because FURS is a cost-sharing multiple-employer pension plan, each employer participating in FURS 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 6.35 years<sup>1</sup>, which was rounded to 6.00 years for recognition purposes. During the measurement year, there were no assumption changes. There was an experience gain of approximately \$0.2 million with approximately \$0.03 million of that was recognized in the current year and will be recognized in each of the next five 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 \$10.4 million. Approximately \$2.1 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 \$19.4 million of which \$4.8 million was recognized as a reduction in the collective Pension Expense in the current year.

The combination of unrecognized investment losses and experience gains this year along with unrecognized net investment gains from prior periods results in a collective Deferred Inflow of Resources as of June 30, 2015 of approximately \$6.3 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.

<sup>&</sup>lt;sup>1</sup> The average expected future working lifetime for 616 active members was 13.38 years.



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### EMPLOYER AND NON-EMPLOYER REPORTING AMOUNTS

Table 7 Schedule of Deferred Inflows and 0 As of June 30, 2	<b>015</b>	Deferred	]	Deferred	
		Outflows of Resources	Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	133,237	
Changes in Assumptions		0		0	
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0		6,182,247	
Total	\$	0	\$	6,315,484	
Amounts reported as Deferred Outflows and (Deferred in Pension Expense as follows:	Inflo	ows) of Resource	es will	be recognized	
Measurement year ended June 30:					
2016	\$	(2,784,016)			
2017		(2,784,016)			
2018		(2,784,018)			
2019		2,063,211			
2020		(26,645)			
Future Year Deferrals		0			



### EMPLOYER AND NON-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 the collective Pension Expense.

Table 8  Calculation of Pension	n Ex	pense			
	Measurement Year Ending				
		2015		2014	
Change in Net Pension Liability	\$	4,660,398	\$	(27,326,855)	
Change in Deferred Outflows		0		0	
Change in Deferred Inflows		(13,073,426)		19,388,910	
Non-Employer Contributions		13,251,541		12,767,624	
Employer Contributions		6,421,701		6,006,863	
Pension Expense	\$	11,260,214	\$	10,836,542	
Pension Expense as % of Pensionable Payroll		27.05%		27.16%	
Operating Expenses					
Service Cost	\$	11,066,391	\$	10,608,895	
Employee Contributions		(4,710,082)		(4,697,333)	
Administrative Expenses		197,110		153,622	
Total	\$	6,553,419	\$	6,065,184	
Financing Expenses					
Interest Cost	\$	32,580,262	\$	30,847,306	
Expected Return on Assets		(25,089,451)		(21,228,721)	
Total	\$	7,490,811	\$	9,618,585	
Changes					
Benefit Changes	\$	0	\$	0	
Recognition of Assumption Changes		0		0	
Recognition of Liability (Gains)/Losses		(26,648)		0	
Recognition of Investment (Gains)/Losses		(2,757,368)		(4,847,227)	
Total	\$	(2,784,016)	\$	(4,847,227)	
Pension Expense	\$	11,260,214	\$	10,836,542	



#### EMPLOYER AND NON-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 For the Fiscal Year Ending June	
Market Value of Assets - beginning of year	\$ 321,556,669
Expected Return on Market Value	\$ 24,920,641
Employee Contributions	\$ 4,710,082
Non-Employer Contributions	13,251,541
Employer Contributions	6,421,701
Benefit Payments	(19,747,008)
Administrative Expenses	 (197,110)
Net Cash Flow - during year	\$ 4,439,206
Expected Return on Cash Flow Items	\$ 168,810
Expected Return on Assets	\$ 25,089,451

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.

### **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 and all non-employer contributing entities".



#### EMPLOYER AND NON-EMPLOYER REPORTING AMOUNTS

Also, a non-employer entity, the State of Montana, contributes to the Plan based upon the pensionable payroll of active plan members, which under GASB 68 constitutes a Special Funding Situation. The State also must reflect a share of the collective Net Pension Liability and Deferred Outflows and Inflows. The State will also record an amount of Support Expense which is allocated to each employer as Support Revenue.

The schedule provided in Appendix C includes the Proportionate Shares for each employer and for the State as a non-employer contributing entity, 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 and the State 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 and for the State
- Proportionate Shares of Net Pension Liability as of June 30, 2015 for each employer and for the State
- Employer Pension Expense and Support Revenue 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 and for the State
- 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.<sup>2</sup>

### 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.



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<sup>&</sup>lt;sup>2</sup> 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 and non-employer contributing entity 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. Special Funding Situation

Circumstances in which a non-employer entity is legally responsible for making contributions directly to a pension plan that is used to provide pensions to the employees of another entity and either (i) the amount of such contributions is not dependent upon one or more events or circumstances unrelated to pensions, or (ii) the non-employer entity is the only entity with a legal obligation to make contributions directly to the pension plan.

### 16. Support Expense

The amount of Pension Expense allocated to a non-employer contributing entity.

### 17. Support Revenue

The amount of revenue recognized by each employer based upon its share of the non-employer contributing entity's Support Expense.

### 18. 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.



## APPENDIX B DEVELOPMENT OF DISCOUNT RATE

		oll increases 4.0								
		ted Pensionabl			Projected Rate	es		Projected C	ontributions	
		iou i ondonas	o . ay.o					Contributions		
	Payroll for Current Employees	Payroll for Future Employees	Total Employee Payroll *	Employee Rate	Employer and State Rate	Rate Available for Amortization	Contributions for Current Employees	Employer and State Contributions for Current Employees	Related to Payroll of Future Employees	Total Contributions
Year	(a)	(b)	(c) = (a) + (b)	(d)	(e)	(f)	$(g) = (a) \times (d)$	(h) = (a) x (e)	$(i) = (b) \times (f)$	(j) = (g) + (h) + (i)
1	41,744	0	41,744				\$ 4,710	\$ 19,673	\$ 0	\$ 24,383
2	41,721	1,693	43,414	10.7%	47.0%	31.0%	4,460	19,596	524	24,580
3	41,600	3,551	45,151	10.7%	47.0%	31.0%	4,447	19,539	1,099	25,086
4	41,594	5,363	46,957	10.7%	47.0%	31.0%	4,446	19,537	1,660	25,643
5	41,575	7,260	48,835	10.7%	47.0%	31.0%	4,444	19,528	2,248	26,220
6	41,314	9,475	50,788	10.7%	47.0%	31.0%	4,416	19,405	2,933	26,755
7	41,008	11,811	52,820	10.7%	47.0%	31.0%	4,384	19,262	3,657	27,302
8	40,319	14,614	54,933	10.7%	47.0%	31.0%	4,310	18,938	4,524	27,772
9	39,922	17,208	57,130	10.7%	47.0%	31.0%	4,268	18,752	5,327	28,347
10	39,181	20,234	59,415	10.7%	47.0%	31.0%	4,188	18,403	6,264	28,856
11	38,476	23,315	61,792	10.7%	47.0%	31.0%	4,113	18,072	7,218	29,404
12	37,483	26,780	64,263	10.7%	47.0%	31.0%	4,007	17,606	8,291	29,904
13	36,418	30,416	66,834	10.7%	47.0%	31.0%	3,893	17,106	9,417	30,415
14	35,312	34,196	69,507	10.7%	47.0%	31.0%	3,775	16,586	10,587	30,948
15	33,799	38,488	72,287	10.7%	47.0%	31.0%	3,613	15,875	11,916	31,405
16	32,350	42,829	75,179	10.7%	47.0%	31.0%	3,458	15,195	13,260	31,913
17	30,609	47,577	78,186	10.7%	47.0%	31.0%	3,272	14,377	14,730	32,379
18	28,871	52,443	81,314	10.7%	47.0%	31.0%	3,086	13,561	16,236	32,883
19	26,906	57,660	84,566	10.7%	47.0%	31.0%	2,876	12,638	17,851	33,366
20	24,433	63,516	87,949	10.7%	47.0%	31.0%	2,612	11,476	19,665	33,752
21	21,956	69,510	91,467	10.7%	47.0%	31.0%	2,347	10,313	21,520	34,180
22	19,574	75,551	95,125	10.7%	47.0%	31.0%	2,093	9,194	23,391	34,677
23	17,317	81,613	98,930	10.7%	47.0%	31.0%	1,851	8,134	25,267	35,253
24	15,236	87,652	102,888	10.7%	47.0%	31.0%	1,629	7,156	27,137	35,922
25 26	13,103	93,900	107,003	10.7%	47.0%	31.0%	1,401	6,154	29,072	36,627
	11,183	100,100	111,283	10.7%	47.0%	31.0%	1,195	5,253	30,991	37,439
27 28	9,405 7,719	106,330 112,645	115,735 120,364	10.7% 10.7%	47.0% 47.0%	31.0% 31.0%	1,005 825	4,417 3,626	32,920 34,875	38,342 39,326
29	6,275	118,903	125,179	10.7%	47.0%	31.0%	671	2,947	36,812	40,431
30	4,912	125,274	130,186	10.7%	47.0%	31.0%	525	2,307	38,785	41,617
31	3,780	131,613	135,393	10.7%	47.0%	31.0%	404	1,775	40,748	42,927
32	2,847	137,962	140,809	10.7%	47.0%	31.0%	304	1,337	42,713	44,355
33	2,030	144,411	146,441	10.7%	47.0%	31.0%	217	953	44,710	45,880
34	1,415	150,883	152,299	10.7%	47.0%	31.0%	151	665	46,713	47,530
35	946	157,445	158,391	10.7%	47.0%	31.0%	101	444	48,745	49,290
36	609	164,117	164,726	10.7%	47.0%	31.0%	65	286	50,811	51,162
37	376	170,939	171,315	10.7%	47.0%	31.0%	40	177	52,923	53,140
38	205	177,963	178,168	10.7%	47.0%	31.0%	22	96	55,097	55,216
39	108	185,187	185,295	10.7%	47.0%	31.0%	12	51	57,334	57,396
40	52	192,654	192,707	10.7%	47.0%	31.0%	6	24	59,646	59,676
41	18	200,397	200,415	10.7%	47.0%	31.0%	2	8	62,043	62,053
42	6	208,425	208,431	10.7%	47.0%	31.0%	1	3	64,528	64,532
43	2	216,766	216,769	10.7%	47.0%	31.0%	0	1	67,111	67,112
44	0	225,439	225,439			31.0%	0	0	69,796	69,796
45	0	234,457	234,457			31.0%	0	0	72,588	72,588
46	0	243,835	243,835			31.0%	0	0	75,491	75,491
47	0	253,589	253,589			31.0%	0	0	78,511	78,511
48	0	263,732	263,732			31.0%	0	0	81,651	81,651
49	0	274,282	274,282			31.0%	0	0	84,918	84,918
50	0	285,253	285,253			31.0%	0	0	88,314	88,314
51	0	296,663	296,663			31.0%	0	0	91,847	91,847
52	0	308,529	308,529			31.0%	0	0	95,521	95,521
53	0	320,871	320,871			31.0%	0	0	99,342	99,342
54	0	333,705	333,705			31.0%	0	0	103,315	103,315
55	0	347,054	347,054			31.0%	0	0	107,448	107,448
56	0	360,936	360,936			31.0%	0	0	111,746	111,746
57	0	375,373	375,373			31.0%	0	0	116,216	116,216
58 59	0	390,388 406,004	390,388 406,004			31.0% 31.0%	0	0	120,864 125,699	120,864 125,699



## APPENDIX B DEVELOPMENT OF DISCOUNT RATE

Total p	ensionable payr	oll increases 4.0	00% per year							
					<u> </u>					
	Projec	ted Pensionab	le Payroll		Projected Ra	tes		Projected C	ontributions	
Year	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll * (c) = (a) + (b)	Employee Rate (d)	Employer and State Rate (e)	Rate Available for Amortization (f)	Member Contributions for Current Employees (g) = (a) x (d)	Employer and State 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	422,244	422,244			31.0%	\$ 0	\$ 0	\$ 130,727	\$ 130,72
61	0	439,134	439,134			31.0%	0	0	135,956	135,95
62	0	456,699	456,699			31.0%	0	0	141,394	141,39
63	0	474,967	474,967			31.0%	0	0	147,050	147,05
64	0	493,966	493,966			31.0%	0	0	152,932	152,93
65	0	513,724	513,724			31.0%	0	0	159,049	159,04
66	0	534,273	534,273			31.0%	0	0	165,411	165,41
67	0	555,644	555,644			31.0%	0	0	172,027	172,02
68	0	577,870	577,870			31.0%	0	0	178,908	178,90
69	0	600,985	600,985			31.0%	0	0	186,065	186,06
70	0	625,024	625,024			31.0%	0	0	193,507	193,50
71	0	650,025	650,025			31.0%	0	0	201,248	201,24
72	0	676,026	676,026			31.0%	0	0	209,298	209,29
73	0	703,067	703,067			31.0%	0	0	217,670	217,67
74	0	731,190	731,190			31.0%	0	0	226,376	226,37
75	0	760,437	760,437			31.0%	0	0	235,431	235,43
76	0	790,855	790,855			31.0%	0	0	244,849	244,84
77	0	822,489	822,489			31.0%	0	0	254,643	254,64
78	0	855,388	855,388			31.0%	0	0	264,828	264,82
79	0	889,604	889,604			31.0%	0	0	275,421	275,42
80	0	925,188	925,188			31.0%	0	0	286,438	286,43
81	0	962,196	962,196			31.0%	0	0	297,896	297,89
82	0	1,000,684	1,000,684			31.0%	0	0	309,812	309,81
83	0	1,040,711	1,040,711			31.0%	0	0	322,204	322,20
84	0	1,082,339	1,082,339			31.0%	0	0	335,092	335,09
85	0	1,125,633	1,125,633			31.0%	0	0	348,496	348,49
86	0	1,170,658	1,170,658			31.0%	0	0	362,436	362,43
87	0	1,217,485	1,217,485			31.0%	0	0	376,933	376,93
88	0	1,266,184	1,266,184			31.0%	0	0	392,011	392,01
89	0	1,316,831	1,316,831			31.0%	0	0	407,691	407,69
90	0	1,369,505	1,369,505			31.0%	0	0	423,999	423,99
91	0	1,424,285	1,424,285			31.0%	0	0	440,959	440,95
92	0	1,481,256	1,481,256			31.0%	0	0	458,597	458,59
93	0	1,540,506	1,540,506			31.0%	0	0	476,941	476,94
94	0	1,602,127	1,602,127			31.0%	0	0	496,018	496,01
95	0	1,666,212	1,666,212			31.0%	0	0	515,859	515,85
96	0	1,732,860	1,732,860			31.0%	0	0	536,493	536,49
97	0	1,802,174	1,802,174		-	31.0%	0	0	557,953	557,95
98	0	1,874,261	1,874,261		-	31.0%	0	0	580,271	580,27
99	0	1,949,232	1,949,232			31.0%	0	0	603,482	603,48
100	0	2,027,201	2,027,201			31.0%	0	0	627,621	627,62
101	0	2,108,289	2,108,289		-	31.0%	0	0	652,726	652,72
102	0	2,192,621	2,192,621			31.0%	0	0	678,835	678,83
103	0	2,280,326	2,280,326			31.0%	0	0	705,989	705,98
104	0	2,371,539	2,371,539		-	31.0%	0	0	734,228	734,22
105	0	2,466,400	2,466,400			31.0%	0	0	763,598	763,59
106	0	2,565,056	2,565,056			31.0%	0	0	794,141	794,14
107	0	2,667,658	2,667,658		-	31.0%	0	0	825,907	825,90
108	0	2,774,365 2,885,339	2,774,365			31.0%	0	0	858,943	858,94



## 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) Projected Beginning Projected Projected Projected **Fiduciary Net** Projected Total Benefit Administrative Investment **Projected Ending** Position Contributions \* **Payments** Expense **Earnings Fiduciary Net Position** Year (f) = (a) + (b) - (c) - (d) + (e)321.557 \$ 24 383 19 747 \$ 197 \$ 14 640 340 636 2 340,636 24,580 21,277 82 26,522 370,379 3 370,379 25,086 22,576 86 28,797 401,599 401.599 25.643 23.856 89 31.189 434,487 5 434,487 26.220 25.180 93 33.709 469.142 469,142 26,755 26,597 96 36,361 505,564 6 505,564 27,302 28,122 100 39,146 543,790 543,790 583,915 27.772 29.612 104 8 42.070 9 583,915 28,347 31,177 109 45,142 626,118 10 626,118 28,856 32,839 113 48,368 670,391 670.391 29.404 34.601 51.753 716.830 117 11 12 716.830 29.904 36,461 122 55.300 765.450 13 765,450 30,415 38,382 127 59,015 816,372 816,372 30.948 40,483 132 62.901 869,605 14 15 869.605 31.405 42.595 137 66.964 925.241 16 925,241 31,913 44,880 143 71,208 983,339 17 983,339 32,379 47,207 149 75,639 1,044,002 1.044.002 32.883 49.561 154 80.270 1.107.440 18 19 1.107.440 33.366 52.236 161 85.103 1.173.512 33,752 90,140 1,242,419 20 1,173,512 54.818 167 1,314,383 21 1.242.419 34,180 57.439 174 95.396 22 1,314,383 34,677 59 986 181 100.895 1.389.789 23 1,389,789 35,253 62,431 188 106,668 1,469,090 24 1,469,090 35,922 64,796 195 112,749 1,552,770 25 1.552.770 36.627 67.069 202 119.174 1.641.300 26 1.641.300 37.439 69.193 208 125.985 1.735.324 27 1,735,324 38,342 71,234 214 133,229 1,835,446 73,074 1,942,434 28 1.835.446 39.326 220 140.955 29 1.942.434 40.431 74.785 225 149.224 2.057.078 30 2,057,078 41,617 76,337 230 158,094 2,180,222 31 2,180,222 42,927 77,678 234 167,637 2,312,874 44 355 237 177.926 32 2.312.874 78.876 2.456.041 33 2,456,041 45,880 79,874 240 189,041 2,610,849 34 2,610,849 47,530 80,687 243 201,071 2,778,519 35 2.778.519 49.290 81.323 245 214.108 2.960.349 36 2,960,349 51,162 81.781 246 228.253 3,157,737 37 3,157,737 53,140 82,091 247 243,614 3,372,153 38 3,372,153 55,216 82,239 248 260,305 3,605,187 82 237 248 3.858.546 39 3.605.187 57.396 278,448 40 3,858,546 59,676 82,092 247 298,175 4,134,058 41 4,134,058 62,053 81,795 246 319,629 4,433,700 42 4.433.700 64.532 81.349 245 342.963 4,759,601 43 4,759,601 67.112 80.752 243 368.341 5,114,059 44 5,114,059 69,796 79,989 241 395,943 5,499,568 45 5,499,568 72,588 79,051 238 425,962 5,918,829 46 5.918.829 75.491 77.926 235 458.608 6.374.767 47 6,374,767 78,511 76,604 231 494,108 6,870,552 48 6,870,552 81,651 75,077 226 532,709 7,409,610 574,677 7.409.610 84.918 73.340 221 7.995.643 49 50 7.995.643 88.314 71.389 215 620,298 8.632.651 51 8.632.651 91.847 69,226 208 669.883 9,324,947 52 9.324.947 95.521 66.855 201 723.766 10.077.177 53 10,077,177 99.342 64.286 194 782.307 10.894.346 54 10,894,346 103,315 61,528 185 845,894 11,781,841 55 11,781,841 107,448 58,599 176 914,944 12,745,457 56 12,745,457 111.746 55.516 167 989.905 13.791.425 57 13.791.425 116.216 52.299 157 1.071.260 14.926.444 48,974 58 14,926,444 120,864 147 1,159,528 16,157,715



16.157.715

125,699

45.564

137

1,255,265

59

17,492,977

### 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)

	Projected Beginning		Projected	Projected	Projected	
	Fiduciary Net Position	Projected Total Contributions*	Benefit Payments	Administrative Expense	Investment Earnings	Projected Ending Fiduciary Net Position
Year	(a)	(b)	(c)	(d)	(e)	(f) = (a) + (b) - (c) - (d) + (e)
60	\$ 17,492,977	\$ 130,727	\$ 42,099	\$ 127	\$ 1,359,071	\$ 18,940,549
61	18,940,549	135,956	38,612	116	1,471,590	20,509,366
62	20,509,366	141,394	35,137	106	1,593,512	22,209,030
63	22,209,030	147,050	31,710	95	1,725,582	24,049,857
64	24,049,857	152,932	28,369	85	1,868,597	26,042,931
65	26,042,931	159,049	25,151	76	2,023,416	28,200,169
66	28,200,169	165,411	22,089	67	2,190,961	30,534,385
67	30,534,385	172,027	19,207	58	2,372,224	33,059,372
68	33,059,372	178,908	16,536	50	2,568,274	35,789,969
69	35,789,969	186,065	14,095	42	2,780,261	38,742,157
70	38,742,157	193,507	11,889	36	3,009,422	41,933,162
71	41,933,162	201,248	9,927	30	3,257,094	45,381,547
72	45,381,547	209,298	8,206	25	3,524,716	49,107,329
73	49,107,329	217,670	6,717	20	3,813,839	53,132,100
74	53,132,100	226,376	5,447	16	4,126,138	57,479,152
75	57,479,152	235,431	4,376	13	4,463,420	62,173,615
76	62,173,615	244,849	3,484	10	4,827,633	67,242,603
77	67,242,603	254,643	2,744	8	5,220,880	72,715,373
78	72,715,373	264,828	2,142	6	5,645,430	78,623,483
79	78,623,483	275,421	1,654	5	6,103,730	85,000,976
80	85,000,976	286,438	1,265	4	6,598,420	91,884,566
81	91,884,566	297,896	958	3	7,132,345	99,313,846
82	99,313,846	309,812	717	2	7,708,577	107,331,515
83	107,331,515	322,204	531	2	8,330,425	115,983,611
84	115,983,611	335,092	389	1	9,001,458	125,319,771
85	125,319,771	348,496	281	1	9,725,524	135,393,509
86	135,393,509	362,436	200	1	10,506,772	146,262,516
87	146,262,516	376,933	141	0	11,349,673	157,988,980
88	157,988,980	392,011	98	0	12,259,049	170,639,942
89	170,639,942	407,691	68	0	13,240,096	184,287,661
90	184,287,661	423,999	46	0	14,298,415	199,010,029
91	199,010,029	440,959	31	0	15,440,044	214,891,001
92	214,891,001	458,597	21	0	16,671,491	232,021,068
93	232,021,068	476,941	13	0	17,999,769	250,497,764
94	250,497,764	496,018	9	0	19,432,438	270,426,212
95	270,426,212	515,859	6	0	20,977,648	291,919,713
96	291,919,713	536,493	4	0	22,644,179	315,100,382
97	315,100,382	557,953	2	0	24,441,497	340,099,830
98	340,099,830	580,271	1	0	26,379,803	367,059,902
99	367,059,902	603,482	1	0	28,470,091	396,133,475
100	396,133,475	627,621	0	0	30,724,211	427,485,307
101	427,485,307	652,726	0	0	33,154,932	461,292,965
102	461,292,965	678,835	0	0	35,776,019	497,747,819
103	497,747,819	705,989	0	0	38,602,303	537,056,111
104	537,056,111	734,228	0	0	41,649,769	579,440,108
105	579,440,108	763,598	0	0	44,935,646	625,139,351
106	625,139,351	794,141	0	0	48,478,499	674,411,991
107	674,411,991	825,907	0	0	52,298,336	727,536,234
108	727,536,234	858,943	0	0	56,416,721	784,811,899
109	784,811,899	893,301	0	0	60,856,892	846,562,092



### APPENDIX B DEVELOPMENT OF DISCOUNT RATE

Table 3 - Actuarial Present Values of Projected Benefit Payments \*\* 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 (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)
1	\$ 321,557	\$ 19,747	\$ 19,747	\$ 0	\$ 18,327	\$ 0	\$ 18,327
2				0		0	
	340,636	21,277	21,277		18,326		18,326
3	370,379	22,576	22,576	0	18,047	0	18,047
4	401,599	23,856	23,856	0	17,698	0	17,698
5	434,487	25,180	25,180	0	17,337	0	17,337
6	469,142	26,597	26,597	0	16,996	0	16,996
7	505,564	28,122	28,122	0	16,678	0	16,678
8	543,790	29,612	29,612	0	16,298	0	16,298
9	583,915	31,177	31,177	0	15,925	0	15,925
10	626,118	32,839	32,839	0	15,567	0	15,567
11	670,391	34,601	34,601	0	15,223	0	15,223
12	716,830	36,461	36,461	0	14,888	0	14,888
13	765,450	38,382	38,382	0	14,545	0	14,545
14	816,372	40,483	40,483	0	14,237	0	14,237
15	869,605	42,595	42,595	0	13,903	0	13,903
16	925,241	44,880	44,880	0	13,595	0	13,595
17	983,339	47,207	47,207	0	13,271	0	13,271
18	1,044,002	49,561	49,561	0	12,931	0	12,931
19	1,107,440	52,236	52,236	0	12,649	0	12,649
20	1,173,512	54,818	54,818	0	12,319	0	12,319
21	1,242,419	57,439	57,439	0	11,980	0	11,980
22	1,314,383	59,986	59,986	0	11,611	0	11,611
23	1,389,789	62,431	62,431	0	11,215	0	11,215
24	1,469,090	64,796	64,796	0	10,803	0	10,803
25				0		0	
	1,552,770	67,069	67,069		10,377		10,377
26	1,641,300	69,193	69,193	0	9,936	0	9,936
27	1,735,324	71,234	71,234	0	9,493	0	9,493
28	1,835,446	73,074	73,074	0	9,038	0	9,038
29	1,942,434	74,785	74,785	0	8,584	0	8,584
30	2,057,078	76,337	76,337	0	8,132	0	8,132
31	2,180,222	77,678	77,678	0	7,680	0	7,680
32	2,312,874	78,876	78,876	0	7,238	0	7,238
33	2,456,041	79,874	79,874	0	6,802	0	6,802
34	2,610,849	80,687	80,687	0	6,377	0	6,377
35	2,778,519	81,323	81,323	0	5,965	0	5,965
36	2,960,349	81,781	81,781	0	5,567	0	5,567
37	3,157,737	82,091	82,091	0	5,186	0	5,186
38	3,372,153	82,239	82,239	0	4,822	0	4,822
39	3,605,187	82,237	82,237	0	4,475	0	4,475
40	3,858,546	82,092	82,092	0	4,146	0	4,146
41	4,134,058	81,795	81,795	0	3,834	0	3,834
42	4,433,700	81,349	81,349	0	3,539	0	3,539
43	4,759,601	80,752	80,752	0	3,260	0	3,260
44	5,114,059	79,989	79,989	0	2,997	0	2,997
45	5,499,568	79,051	79,051	0	2,749	0	2,749
46	5,918,829	77,926	77,926	0	2,515	0	2,515
47	6,374,767	76,604	76,604	0	2,294	0	2,294
48	6,870,552	75,077	75,077	0	2,087	0	2,087
49	7,409,610	73,340	73,340	0	1,892	0	1,892
50	7,995,643	71,389	71,389	0	1,709	0	1,709
51	8,632,651	69,226	69,226	0	1,538	0	1,538
52	9,324,947	66,855	66,855	0	1,379	0	1,379
53	10,077,177	64,286	64,286	0	1,230	0	1,230
54	10,894,346	61,528	61,528	0	1,093	0	1,093
55	11,781,841	58,599	58,599	0	966	0	966
56	12,745,457	55,516	55,516	0	849	0	849
57	13,791,425	52,299	52,299		743	0	743
58	14,926,444	48,974	48,974	0	645	0	645
59	16,157,715	45,564	45,564	0	557	0	557



### 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	\$ 17,492,977	\$ 42,099	\$ 42,099	\$ 0	\$ 478	\$ 0	\$ 478
61	18,940,549	38,612	38,612	0	407	0	407
62	20,509,366	35,137	35,137	0	343	0	343
63	22,209,030	31,710	31,710	0	288	0	288
64	24,049,857	28,369	28,369	0	239	0	239
65	26,042,931	25,151	25,151	0	197	0	197
66	28,200,169	22,089	22,089	0	160	0	160
67	30,534,385	19,207	19,207	0	129	0	129
68	33,059,372	16,536	16,536	0	103	0	103
69	35,789,969	14,095	14,095	0	82	0	82
70	38,742,157	11,889	11,889	0	64	0	64
71	41,933,162	9,927	9,927	0	50	0	50
72	45,381,547	8,206	8,206	0	38	0	38
73	49,107,329	6,717	6,717	0	29	0	29
74	53,132,100	5,447	5,447	0	22	0	22
75	57,479,152	4,376	4,376	0	16	0	16
76	62,173,615	3,484	3,484	0	12	0	12
77	67,242,603	2,744	2,744	0	9	0	9
78	72,715,373	2,142	2,142	0	6	0	6
79	78,623,483	1,654	1,654	0	5	0	5
80	85,000,976	1,265	1,265	0	3	0	3
81	91,884,566	958	958	0	2	0	2
82	99,313,846	717	717	0	2	0	2
83	107,331,515	531	531	0	1	0	1
84	115,983,611	389	389	0	1	0	1
85	125,319,771	281	281	0	0	0	0
86	135,393,509	200	200	0	0	0	0
87	146,262,516	141	141	0	0	0	0
88	157,988,980	98	98	0	0	0	0
89	170,639,942	68	68	0	0	0	0
90	184,287,661	46	46	0	0	0	0
91	199,010,029	31	31	0	0	0	0
92	214,891,001	21	21	0	0	0	0
93	232,021,068	13	13	0	0	0	0
94	250,497,764	9	9	0	0	0	0
95	270,426,212	6	6	0	0	0	0
96	291,919,713	4	4	0	0	0	0
97	315,100,382	2	2	0	0	0	0
98	340,099,830	1	1	0	0	0	0
99	367,059,902	1	1	0	0	0	0
100	396,133,475	0	0	0	0	0	0
101 102	427,485,307	0	0	0	0	0	0
102	461,292,965	0	0	0	0	0	0
103	497,747,819 537,056,111	0	0	0	0	0	0
104	579,440,108	0	0	0	0	0	0
106	625,139,351	0	0	0	0	0	0
107	674,411,991	0	0	0	0	0	0
107	727,536,234	0	0	0	0	0	0
109	784,811,899	0	0	0	0	0	0
100	707,011,099	0	0	0	\$ 506,745	\$ 0	\$ 506,745



IRS - Cost Sharing Plan w/ a Sp	pecial Funding S	ituation			Contrib				
				for Fisc	al Year End	ling	June 30, 2015		
mployer and State Contributions for t d Lodge Rural Fire District were adjus proportionate share, since active em ployees of the Rural Fire District mid	ted for purposes of ployees of the Town	calculating	Member Rate	Employer Rate	State Rate	C	Employer ontribution *	_ c	State Contribution *
Total Before Working Retiree C	ontributions and A	diustments				\$	6,299,119.80	\$	13,253,191.6
						_	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Ť	,,,
Due to Working Retiree Contribution	ons and Adjustment	S				\$	122,581.34	\$	(1,650.7
Total						\$	6,421,701.14	\$	13,251,540.8
State as Special Funding Entity									
Employers	OOLINT FOOSS		40.0000/	4.4.00001	00.04667	•	70 000 07		475 555
ANACONDA-DEER LODGE		FLICTOR	10.690%	14.360%	32.610%		78,820.87		175,555.
	LLINGS - FG0305	- FU0305	10.690%	14.360%	32.610%		1,313,599.63	_	2,925,735.
	ZEMAN - FG0306	FI 10207	10.690%	14.360%	32.610%		478,775.94	_	1,066,361.
	R BOW - FG0307	- FU0307	10.690%	14.360%	32.610%		346,242.30	_	771,173.
CITY OF COLUMBIA	ENDIVE - FG0314	- GP0333	10.690% 10.690%	14.360% 14.360%	32.610% 32.610%		8,893.97 40.796.39		19,809. 90,864.
	FALLS - FG0333	- GP0333	10.690%	14.360%	32.610%		628,398.41		,
	HAVRE - FG0339		10.690%	14.360%	32.610%		111,093.12		1,399,610. 247,433.
	ELENA - FG0340	- FU0340	10.690%	14.360%	32.610%		354,558.75		789,696.
	ISPELL - FG0343	- 1 00340	10.690%	14.360%	32.610%		279,275.17		622,020.
		- GP0347	10.690%	14.360%	32.610%		61,280.34	_	136,487.
	GSTON - FG0349	- GP0347	10.690%	14.360%	32.610%		120,686.29		268,800.
	S CITY - FG0353	31 00-13	10.690%	14.360%	32.610%		84,842.25	\$	188,966.
	SOULA - FG0354	- FU0354	10.690%	14.360%	32.610%		1,004,989.65		2,238,379.
	TEFISH - FG0376	7 5000 7	10.690%	14.360%	32.610%		159,716.61	\$	355,731.
	LODGE - FG0385		10.690%	14.360%	32.610%		-	\$	
MISSOULA RURAL FIRE			10.690%	14.360%	32.610%		318,073.00		708,433.
CENTRAL VALLEY FIRE			10.690%	14.360%	32.610%		113,799.40	_	253,461.
LOCKWOOD RURAL FIR			10.690%	14.360%	32.610%	-	102,082.37	_	227,364.
DEPT OF MILITARY A			10.690%	14.360%	32.610%		472,011.16		
GALLATIN CANYON CONS			10.690%	14.360%	32.610%		144,412.14		321,644.
FRENCHTOWN RURAL FI	RE DIS - FG9079		10.690%	14.360%	32.610%	\$	39,621.10		88,246.
HEBGEN BASIN RUI	RAL FD - FG9082		10.690%	14.360%	32.610%	\$	70,142.75	\$	156,226.
SOURDOUG	GH RFD - FG9090		10.690%	14.360%	32.610%		25,813.21		57,492.
COLUMBUS RURAL FIRE	DISTR - FG9093		10.690%	14.360%	32.610%	\$	32,395.65	\$	72,153.
RED LODGE RURAL FIR	F DIST - FG9110		10.690%	14.360%	32.610%	2	31,380.67	2	69,893.



S - Cost Sharing Plan w/ a Special F	Funding S	ituation		Net Pensio	n L	.iability	
				as of June	e 30	). 2014	
			Net Pension Liability - Employer	Employer Proportion based on Employer Contributions		Net Pension Liability - State	State Proportion based on Stat Contributions
Total Before Working Retiree Contribut	ions and A	djustments	\$ 97,616,579.17	100.000001%	\$	66,384,331.80	100.000000
Due to Working Retiree Contributions and	Adjustments	1					
Dub to Working Retired Continuations and 7	tajaotiriorite						
Total			\$ 97,616,579.17	100.000001%	\$	66,384,331.80	100.000000
			 77		Ť	, ,	
State as Special Funding Entity			\$ 66,384,331.82	68.005182%			
Employers							
ANACONDA-DEER LODGE COUNT	- FG0301		\$ 372,556.59	0.381653%	\$	840,469.53	1.266066
CITY OF BILLINGS	- FG0305	- FU0305	\$ 6,450,055.03	6.607541%	\$	14,551,009.58	21.91934
CITY OF BOZEMAN	- FG0306		\$ 2,361,550.94	2.419211%	\$	5,327,543.72	8.025303
BUTTE-SILVER BOW	- FG0307	- FU0307	\$ 1,732,272.48	1.774568%	\$	3,907,922.26	5.88681
CITY OF COLUMBIA FALLS	- FG0314		\$ 44,179.22	0.045258%	\$	99,666.10	0.15013
CITY OF GLENDIVE	- FG0333	- GP0333	\$ 210,889.13	0.216038%	\$	475,755.49	0.71666
CITY OF GREAT FALLS	- FG0334		\$ 3,276,334.68	3.356330%	\$	7,391,251.29	11.13403
CITY OF HAVRE	- FG0339		\$ 566,193.97	0.580018%	\$	1,277,305.90	1.92410
CITY OF HELENA	- FG0340	- FU0340	\$ 1,725,991.21	1.768133%	\$	3,893,751.95	5.86546
CITY OF KALISPELL	- FG0343		\$ 1,394,256.05	1.428298%	\$	3,145,373.64	4.73812
CITY OF LEWISTOWN	- FG0347	- GP0347	\$ 321,141.64	0.328983%	\$	724,479.82	1.091342
CITY OF LIVINGSTON	- FG0349	- GP0349	\$ 620,912.64	0.636073%	\$	1,400,748.57	2.11005
CITY OF MILES CITY	- FG0353		\$ 453,804.40	0.464885%	\$	1,023,760.57	1.54217
CITY OF MISSOULA	- FG0354	- FU0354	\$ 4,962,706.25	5.083876%		11,195,623.33	16.86485
CITY OF WHITEFISH	- FG0376		\$ 814,038.76	0.833914%	\$	1,836,431.77	2.766363
TOWN OF RED LODGE			\$ 164,792.62	0.168816%	\$	371,764.09	0.560018
MISSOULA RURAL FIRE DISTR			\$ 1,485,971.03	1.522253%		3,352,278.25	5.04980
CENTRAL VALLEY FIRE DISTR			\$ 521,403.92	0.534135%		1,176,261.80	1.77189
LOCKWOOD RURAL FIRE DIST			\$ 525,046.85	0.537866%	-	1,184,480.06	1.78427
DEPT OF MILITARY AFFAIRS			\$ 1,805,932.09	1.850026%	-	-	0.00000
GALLATIN CANYON CONSOL RR			\$ 623,245.78	0.638463%	_	1,406,012.11	2.11798
FRENCHTOWN RURAL FIRE DIS			\$ 190,780.76	0.195439%	_	430,392.10	0.64833
HEBGEN BASIN RURAL FD			\$ 342,255.99	0.350613%		772,112.81	1.16309
SOURDOUGH RFD			\$ 98,681.44	0.101091%	_	222,620.55	0.33535
COLUMBUS RURAL FIRE DISTR			\$ 167,253.88	0.171338%		377,316.51	0.568382
RED LODGE RURAL FIRE DIST	- FG9110		\$ -	0.000000%	\$	-	0.000000



RS - Cost Sharing Plan w/ a Special Funding Situation			Net Pensio	n L	iability	
			as of June	e 30	), 2015	
		Net Pension	Employer Proportion based on		Net Pension	State Proportion
		Liability	Employer		Liability	based on State
		- Employer	Contributions		- State	Contributions
	_	Linployer	CONTRIBUTIONS	_	Otato	Contributions
Total Before Working Retiree Contributions and Adjustments	\$	102,276,977.02	100.000002%	\$	68,891,926.41	100.0000009
Due to Working Retiree Contributions and Adjustments						
bue to Working Nethree Contributions and Adjustments						
<b>Fotal</b>	\$	102,276,977.02	100.000002%	\$	68,891,926.41	100.000000%
				Ė		
State as Special Funding Entity	\$	68,891,926.41	67.358196%			
Employers	•	400 770 04	0.4000500/	Φ.	040.070.05	4 0047000
ANACONDA-DEER LODGE COUNT - FG0301	\$	409,772.84	0.400650%		912,673.05	1.3247909
CITY OF BILLINGS - FG0305 - FU0305 CITY OF BOZEMAN - FG0306	\$	6,829,123.49	6.677088% 2.433640%		15,210,272.88	22.078455° 8.047074°
BUTTE-SILVER BOW - FG0307 - FU0307	\$	2,489,053.70 1,800,039.65	1.759966%		5,543,784.09 4,009,166.74	5.8195029
CITY OF COLUMBIA FALLS - FG0314	\$	46,237.85	0.045208%		102,984.00	0.1494869
CITY OF GLENDIVE - FG0333 - GP0333	\$	212,091.71	0.207370%		472,384.58	0.6856899
CITY OF GREAT FALLS - FG0334	\$	3,266,908.92	3.194178%		7,276,274.41	10.5618689
CITY OF HAVRE - FG0339	\$	577,549.37	0.564691%		1,286,356.02	1.8672099
CITY OF HELENA - FG0340 - FU0340	\$	1,843,275.10	1.802239%	_	4,105,463.55	5.9592819
CITY OF KALISPELL - FG0343	\$	1,451,891.87	1.419569%		3,233,749.13	4.6939459
CITY OF LEWISTOWN - FG0347 - GP0347	\$	318,583.38	0.311491%	\$	709,569.84	1.0299759
CITY OF LIVINGSTON - FG0349 - GP0349	\$	627,422.21	0.613454%	\$	1,397,436.09	2.0284479
CITY OF MILES CITY - FG0353	\$	441,076.71	0.431257%	\$	982,395.06	1.4259949
CITY OF MISSOULA - FG0354 - FU0354	\$	5,224,726.22	5.108409%		11,636,853.78	16.8914629
CITY OF WHITEFISH - FG0376	\$	830,332.49	0.811847%		1,849,371.14	2.6844539
TOWN OF RED LODGE - FG0385	\$	-	0.000000%		-	0.0000009
MISSOULA RURAL FIRE DISTR - FG0515	\$	1,653,593.49	1.616780%		3,682,992.15	5.3460439
CENTRAL VALLEY FIRE DISTR - FG0569	\$	591,618.74	0.578448%		1,317,692.23	1.9126959
LOCKWOOD RURAL FIRE DIST - FG0579	\$	530,704.41	0.518889%		1,182,019.76	1.7157599
DEPT OF MILITARY AFFAIRS - FG6701	\$	2,453,885.06	2.399255%		-	0.0000009
GALLATIN CANYON CONSOL RR - FG9012	\$	750,767.83	0.734054%		1,672,159.45	2.4272219
FRENCHTOWN RURAL FIRE DIS - FG9079	\$	205,981.62	0.201396%		458,775.87	0.6659369
HEBGEN BASIN RURAL FD - FG9082	\$	364,657.15	0.356539%		812,188.42	1.1789319
SOURDOUGH RFD - FG9090	\$	134,197.36	0.131210%		298,893.08	0.4338589
COLUMBUS RURAL FIRE DISTR - FG9093	\$	168,418.05	0.164669%		375,111.76	0.5444939
RED LODGE RURAL FIRE DIST - FG9110	Ф	163,141.39	0.159509%	Ф	363,359.33	0.5274349



JRS - Cost Sharing Plan w/ a Special Funding Situation			n Expense ading June 30, 2015					
		nployer Pension Expense Icludes Support Revenue)	Support Revenue provided by the State					
Total Before Working Retiree Contributions and Adjustmen	ts \$	11,260,214.00	\$ 7,458,508.8					
Due to Working Retiree Contributions and Adjustments								
But to Working National Continuations and Majactinorita								
Total	\$	11,260,214.00	\$ 7,458,508.8					
State as Special Funding Entity								
Employers	Φ.	4.47.000.00	ф 00.000 г					
ANACONDA-DEER LODGE COUNT - FG0301 CITY OF BILLINGS - FG0305 - FU030	\$	147,628.23	\$ 98,809.5 \$ 1,646,723.5					
CITY OF BILLINGS - FG0305 - F00305	5 \$	2,412,140.22 877,038.66	\$ 1,646,723.5					
BUTTE-SILVER BOW - FG0307 - FU030		629,376.36	\$ 434,048.0					
CITY OF COLUMBIA FALLS - FG0314	\$	16,230.38	\$ 434,046.0					
CITY OF GLENDIVE - FG0333 - GP033		72,802.10	\$ 51,142.2					
CITY OF GREAT FALLS - FG0334	\$	1,115,808.06	\$ 787,757.8					
CITY OF HAVRE - FG0339	\$	199,862.53	\$ 139,265.9					
CITY OF HELENA - FG0340 - FU034		654,060.27	\$ 444,473.5					
CITY OF HELENA - FG0340 - F0034	\$	508,242.38	\$ 350,098.3					
CITY OF LEWISTOWN - FG0347 - GP034		108,484.26	\$ 76,820.8					
CITY OF LIVINGSTON - FG0347 - GP034		215,957.22	\$ 151,291.8					
CITY OF MILES CITY - FG0353	\$	148,360.73	\$ 106,357.9					
CITY OF MISSOULA - FG0354 - FU035		1,839,853.04	\$ 1,259,851.2					
CITY OF WHITEFISH - FG0376	\$	287,332.47	\$ 200,220.1					
TOWN OF RED LODGE - FG0385	\$	(30,168.37)						
MISSOULA RURAL FIRE DISTR - FG0515	\$	599,221.61	\$ 398,735.1					
CENTRAL VALLEY FIRE DISTR - FG0569	\$	216,434.39	\$ 142,658.5					
LOCKWOOD RURAL FIRE DIST - FG0579	\$	182,697.43	\$ 127,970.0					
DEPT OF MILITARY AFFAIRS - FG6701	\$	377,265.80	\$ -					
GALLATIN CANYON CONSOL RR - FG9012	\$	282,331.55	\$ 181,034.5					
FRENCHTOWN RURAL FIRE DIS - FG9079	\$	73,508.14	\$ 49,668.8					
HEBGEN BASIN RURAL FD - FG9082	\$	129,233.40	\$ 87,930.6					
SOURDOUGH RFD - FG9090	\$	53,007.29	\$ 32,359.3					
COLUMBUS RURAL FIRE DISTR - FG9093	\$	57,852.59	\$ 40,611.0					
RED LODGE RURAL FIRE DIST - FG9110	\$	85,653.26	\$ 39,338.7					



									Deferre	d Ou	flows		
			Exp	ial vs. ected rience		nges of		Actual vs. Expected Investment Earnings	Total Collectiv		Changes in Proportionate Shares	Differences Between Actual Contributions and Proportionate Share Contributions	Employer contributions subsequent to the measurement date - # to b inserted by each employe
otal Before Working Retiree Contributi	ons and A	djustments	\$	-	\$	-	\$	-	\$	- (	1,118,165.15	\$ 13,761.67	
lue to Working Retiree Contributions and A	diustments	2											
de to Working Retiree Contributions and A	iujus ii neniis	2											
otal			\$		\$	-	\$	-	\$ -	- 9	1,118,165.15	\$ 13,761.67	
			Ψ		Ψ		Ψ		Ψ	- 1	.,110,100.10	Ψ 10,701.07	
tate as Special Funding Entity			\$	-	\$	-	\$	-	\$	- 5	-	\$ -	
g,			<u> </u>		,		Ť		,			•	
mployers													
ANACONDA-DEER LODGE COUNT -	FG0301		\$	-	\$	-	\$	_	\$ -	- 5	18,523.09	\$ -	#
CITY OF BILLINGS -		- FU0305	\$	-	\$	-	\$	_	\$ .	- 5			#
CITY OF BOZEMAN -			\$	-	\$		\$	-	\$ -				#
BUTTE-SILVER BOW -		- FU0307	\$	-	\$		\$	-	\$			\$ -	#
CITY OF COLUMBIA FALLS -			\$	-	\$	-	\$	_	\$ .			\$ -	#
CITY OF GLENDIVE -		- GP0333	\$		\$		\$	-	\$	- 5		\$ -	#
CITY OF GREAT FALLS -			\$		\$		\$	-	\$	- 5	-	\$ -	#
CITY OF HAVRE -			\$	-	\$		\$	-	\$	- 5	6 -	\$ -	#
CITY OF HELENA -		- FU0340	\$		\$		\$	-	\$	- 5	33,254.21	\$ -	#
CITY OF KALISPELL -			\$		\$		\$	-	\$	- 5		\$ -	#
CITY OF LEWISTOWN -		- GP0347	\$		\$		\$	-	\$	- 5	-	\$ -	#
CITY OF LIVINGSTON -	FG0349	- GP0349	\$	-	\$		\$	-	\$			\$ -	#
CITY OF MILES CITY -	FG0353		\$		\$		\$	-	\$	- 5	-	\$ -	#
CITY OF MISSOULA -		- FU0354	\$		\$		\$	-	\$ -	- 5	23,920.30	\$ -	#
CITY OF WHITEFISH -	FG0376		\$	-	\$	-	\$	-	\$ -	- 5	-	\$ -	#
TOWN OF RED LODGE -	FG0385		\$	-	\$		\$	-	\$	- 5	5 -	\$ 13,761.67	#
MISSOULA RURAL FIRE DISTR -			\$	-	\$		\$	-	-	- 5			#
CENTRAL VALLEY FIRE DISTR -			\$	-	\$	-	\$	-	\$ -				#
LOCKWOOD RURAL FIRE DIST -			\$	-	\$	-	\$	-	\$ -	- 3		\$ -	#
DEPT OF MILITARY AFFAIRS -			\$	-	\$	-	\$	-	\$			\$ -	#
GALLATIN CANYON CONSOL RR -			\$	-	\$	-	\$	-	-	- 3			#
FRENCHTOWN RURAL FIRE DIS -			\$	-	\$	-	\$	-	\$ -	- 5	. ,		#
HEBGEN BASIN RURAL FD -	FG9082		\$	-	\$	-	\$	-	\$ -	- 5			#
SOURDOUGH RFD -			\$	-	\$	-	\$	-	\$	- 5			#
COLUMBUS RURAL FIRE DISTR -			\$	-	\$	-	\$	-	\$ -		. ,	\$ -	#
RED LODGE RURAL FIRE DIST -			\$	-	\$		\$		1	- 5			#



			_						Deferred Infl	low	s				
			ı	Actual vs. Expected Experience	Changes of Assumptions		Actual vs. Expected Investment Earnings		otal Collective		Changes in Proportionate Shares	Actual and F	nces Between Contributions Proportionate Contributions	Employ contributi subsequent measuremen	ions to the
otal Before Working Retiree Contributi	one and A	diustments	\$	133,236.99	<b>e</b> _	\$	6,182,247.01	•	6,315,484.00	•	1,118,165.28	¢	13,761.67	¢	
otal Belore Working Retiree Contributi	ons and P	aujusiillellis	Ψ	100,200.99	Ψ -	Ψ	0,102,247.01	Ψ	0,313,404.00	Ψ	1,110,103.20	Ψ	13,701.07	Ψ	
ue to Working Retiree Contributions and A	djustment	s													
				100 000 00	•	•	0.400.047.04	•	0.045.404.00		4 440 405 00	•	10 701 07	Φ.	
otal			\$	133,236.99	\$ -	\$	6,182,247.01	\$	6,315,484.00	\$	1,118,165.28	Ф	13,761.67	Ф	
tate as Special Funding Entity			\$	89,746.04	\$ -	\$	4,164,250.04	\$	4,253,996.08	\$	630,840.76	\$	-		
tate as opecial I unumg Entity			Ψ	05,740.04	Ψ	Ψ	4,104,230.04	Ψ	4,200,000.00	Ψ	000,040.70	Ψ			
mployers															
ANACONDA-DEER LODGE COUNT	FG0301		\$	533.81	\$ -	\$	24,769.18	\$	25,302.99	\$	-	\$	-	\$	
CITY OF BILLINGS -	FG0305	- FU0305	\$	8,896.35	\$ -	\$	412,794.06	\$	421,690.41	\$	-	\$	-	\$	
CITY OF BOZEMAN -	FG0306		\$	3,242.51	\$ -	\$	150,453.65	\$	153,696.16	\$	-	\$	-	\$	
BUTTE-SILVER BOW -	FG0307	- FU0307	\$	2,344.93	\$ -	\$	108,805.42	\$	111,150.35	\$	14,237.87	\$	-	\$	
CITY OF COLUMBIA FALLS -	FG0314		\$	60.23	\$ -	\$	2,794.90	\$	2,855.13		48.21	\$	-	\$	
CITY OF GLENDIVE -	FG0333	- GP0333	\$	276.29	\$ -	\$	12,820.12	\$	13,096.41	\$	8,451.98	\$	-	\$	
CITY OF GREAT FALLS -	FG0334		\$	4,255.83	\$ -	\$	197,471.99	\$	201,727.82	\$	158,105.57	\$	-	\$	
CITY OF HAVRE -	FG0339		\$	752.38	\$ -	\$	34,910.62	\$	35,663.00	\$	14,944.30	\$	-	\$	
CITY OF HELENA -	FG0340	- FU0340	\$	2,401.25	\$ -	\$	111,418.84	\$	113,820.09	\$	-	\$	-	\$	
CITY OF KALISPELL -	FG0343		\$	1,891.39	\$ -	\$	87,761.24	\$	89,652.63	\$	8,511.95	\$	-	\$	
CITY OF LEWISTOWN -	FG0347	- GP0347	\$	415.02	\$ -	\$	19,257.13	\$	19,672.15	\$	17,055.38	\$	-	\$	
CITY OF LIVINGSTON -	FG0349	- GP0349	\$	817.35	\$ -	\$	37,925.24	\$	38,742.59	\$	22,054.49	\$	-	\$	
CITY OF MILES CITY -	FG0353		\$	574.59	\$ -	\$	26,661.38	\$	27,235.97	\$	32,788.32	\$	-	\$	
CITY OF MISSOULA -	FG0354	- FU0354	\$	6,806.29	\$ -	\$	315,814.46	\$	322,620.75	\$	-	\$	-	\$	
CITY OF WHITEFISH -	FG0376		\$	1,081.68	\$ -	\$	50,190.38	\$	51,272.06	\$	21,516.85	\$	-	\$	
TOWN OF RED LODGE -	FG0385		\$	-	\$ -	\$	-	\$	-	\$	164,603.54	\$	-	\$	
MISSOULA RURAL FIRE DISTR -	FG0515		\$	2,154.15	\$ -	\$	99,953.32	\$	102,107.47	\$	-	\$	-	\$	
CENTRAL VALLEY FIRE DISTR -	FG0569		\$	770.71	\$ -	\$	35,761.06	\$	36,531.77	\$	-	\$	-	\$	
LOCKWOOD RURAL FIRE DIST -	FG0579		\$	691.35	\$ -	\$	32,079.03	\$	32,770.38		18,503.50	\$	-	\$	
DEPT OF MILITARY AFFAIRS -	FG6701		\$	3,196.69	\$ -	\$	148,327.84	\$	151,524.53		-	\$	-	\$	
GALLATIN CANYON CONSOL RR -	FG9012		\$	978.03		\$	45,381.01		46,359.04		-	\$	-	\$	
FRENCHTOWN RURAL FIRE DIS -	FG9079		\$	268.33	\$ -	\$	12,450.79	\$	12,719.12	\$	-	\$	-	\$	
HEBGEN BASIN RURAL FD -	FG9082		\$	475.04	\$ -	\$	22,042.11	\$	22,517.15	\$	-	\$	-	\$	
SOURDOUGH RFD -	FG9090		\$	174.82		\$	8,111.71	\$	8,286.53	\$	-	\$	-	\$	
COLUMBUS RURAL FIRE DISTR -	FG9093		\$	219.40	\$ -	\$	10,180.22	\$	10,399.62	\$	6,502.56	\$	-	\$	
RED LODGE RURAL FIRE DIST -	FG9110		\$	212.53	\$ -	\$	9,861.27	\$	10,073.80	\$	-	\$	13,761.67	\$	



RS - Cost Sharing Plan w/ a Special F	Funding Si	ituation		Recogniti	of Deferred Out for Fiscal Year	•	d Infl	ows)	
			<u>2016</u>	<u> 2017</u>	<u>2018</u>	<u>2019</u>		<u> 2020</u>	ıre Year eferrals
Total Before Working Retiree Contribut	tions and A	djustments	\$ (2,784,016.04)	\$ (2,784,016.04)	\$ (2,784,018.00)	\$ 2,063,210.97	\$	(26,645.02)	\$
Due to Working Retiree Contributions and	Adjustments	i							
Total			\$ (2,784,016.04)	\$ (2,784,016.04)	\$ (2,784,018.00)	\$ 2,063,210.97	\$	(26,645.02)	\$
State as Special Funding Entity			\$ (2,001,431.10)	\$ (2,001,431.10)	\$ (2,001,432.45)	\$ 1,263,573.55	\$	(144,115.74)	\$
Employers									
ANACONDA-DEER LODGE COUNT	- FG0301		\$ (7,449.55)	\$ (7,449.55)	\$ (7,449.55)	\$ 11,970.88	\$	3,597.86	\$
CITY OF BILLINGS	- FG0305	- FU0305	\$ (172,328.85)	\$ (172,328.85)	\$ (172,328.98)	\$ 151,324.75	\$	11,783.23	\$
CITY OF BOZEMAN	- FG0306		\$ (64,939.08)	\$ (64,939.08)	\$ (64,939.13)	\$ 53,024.99	\$	2,165.41	\$
BUTTE-SILVER BOW	- FG0307	- FU0307	\$ (51,845.30)	\$ (51,845.30)	\$ (51,845.33)	\$ 33,464.23		(3,316.52)	\$
CITY OF COLUMBIA FALLS	- FG0314		\$ (1,268.25)	\$ (1,268.25)	\$ (1,268.25)	\$ 923.10	\$	(21.69)	\$
CITY OF GLENDIVE		- GP0333	\$ (7,463.61)	\$ (7,463.61)	\$ (7,463.61)	\$ 2,588.08	\$	(1,745.65)	\$
CITY OF GREAT FALLS	- FG0334		\$ (120,547.55)	\$ (120,547.55)	\$ (120,547.61)	\$ 34,281.52	\$	(32,472.20)	\$
CITY OF HAVRE	- FG0339		\$ (18,709.96)	\$ (18,709.96)	\$ (18,709.97)	\$ 8,661.92	\$	(3,139.32)	\$
CITY OF HELENA	- FG0340	- FU0340	\$ (43,523.77)	\$ (43,523.77)	\$ (43,523.80)	\$ 43,834.82	\$	6,170.63	\$
CITY OF KALISPELL	- FG0343		\$ (41,223.41)	\$ (41,223.41)	\$ (41,223.44)	\$ 27,586.31	\$	(2,080.63)	\$
CITY OF LEWISTOWN	- FG0347	- GP0347	\$ (12,083.03)	\$ (12,083.03)	\$ (12,083.04)	\$ 3,015.64	\$	(3,494.07)	\$
CITY OF LIVINGSTON	- FG0349	- GP0349	\$ (21,489.56)	\$ (21,489.56)	\$ (21,489.57)	\$ 8,245.95	\$	(4,574.35)	\$
CITY OF MILES CITY	- FG0353		\$ (18,563.93)	\$ (18,563.93)	\$ (18,563.94)	\$ 2,340.08	\$	(6,672.57)	\$
CITY OF MISSOULA	- FG0354	- FU0354	\$ (137,434.86)	\$ (137,434.86)	\$ (137,434.96)	\$ 110,181.31	\$	3,422.92	\$
CITY OF WHITEFISH	- FG0376		\$ (26,905.32)	\$ (26,905.32)	\$ (26,905.33)	\$ 12,446.75	\$	(4,519.69)	\$
TOWN OF RED LODGE	- FG0385		\$ (30,168.37)	\$ (30,168.37)	\$ (30,168.37)	\$ (30,168.37)	\$	(30,168.37)	\$
MISSOULA RURAL FIRE DISTR	- FG0515		\$ (26,577.77)	\$ (26,577.77)	\$ (26,577.80)	\$ 51,791.22	\$	18,002.85	\$
CENTRAL VALLEY FIRE DISTR	- FG0569		\$ (7,462.63)	\$ (7,462.63)	\$ (7,462.64)	\$ 20,576.04	\$	8,487.32	\$
LOCKWOOD RURAL FIRE DIST	- FG0579		\$ (18,146.66)	\$ (18,146.66)	\$ (18,146.67)	\$ 7,005.08		(3,838.96)	\$
DEPT OF MILITARY AFFAIRS	- FG6701		\$ 40,308.97	40,308.97	40,308.92	156,606.28		106,465.32	
GALLATIN CANYON CONSOL RR	- FG9012		\$ (1,795.14)	\$ (1,795.14)	\$ (1,795.15)	\$ 33,786.11	\$	18,445.44	
FRENCHTOWN RURAL FIRE DIS	- FG9079		\$ (4,445.23)	(4,445.23)	(4,445.23)	\$ 5,316.89		1,108.01	
HEBGEN BASIN RURAL FD	- FG9082		\$ (8,770.42)	\$ (8,770.42)	\$ (8,770.43)	\$ 8,511.83	\$	1,060.68	\$
SOURDOUGH RFD	- FG9090		\$ 2,220.56	2,220.56	\$ 2,220.56	\$ 8,580.59		5,838.50	\$
COLUMBUS RURAL FIRE DISTR	- FG9093		\$ (5,884.91)	\$ (5,884.91)	\$ (5,884.92)	\$ 2,096.95	\$	(1,344.39)	\$
RED LODGE RURAL FIRE DIST	- FG9110		\$ 23,912.69	\$ 23,912.69	\$ 23,912.69	\$ 31,644.47	\$	28,310.96	\$



S - Cost Sharing Plan w/ a Special Funding Situation	Sei	nsitivity of Employer	oportionate Share of thas of June 30, 2015	ne Ne	t Pension Liability
		1% Decrease 6.75%	 Discount Rate 7.75%		1% Increase 8.75%
Total Before Working Retiree Contributions and Adjustments	\$	164,997,901.02	\$ 102,276,977.02	\$	51,164,186.0
Due to Working Retiree Contributions and Adjustments					
Total	\$	164,997,901.02	\$ 102,276,977.02	\$	51,164,186.0
State as Special Funding Entity	\$	111,139,609.19	\$ 68,891,926.41	\$	34,463,272.5
Employers  ANACONDA-DEER LODGE COUNT - FG0301	\$	661,064.31	\$ 409,772.84	¢	204,989.3
CITY OF BILLINGS - FG0305 - FU0305	\$	11,017,054.62	6,829,123.49		3,416,277.5
CITY OF BOZEMAN - FG0306	\$	4,015,455.36	2,489,053.70		1,245,152.2
BUTTE-SILVER BOW - FG0307 - FU0307	\$	2,903,906.37	 1,800,039.65	_	900,472.0
CITY OF COLUMBIA FALLS - FG0314	\$	74,593.01	46,237.85		23,130.
CITY OF GLENDIVE - FG0333 - GP0333	\$	342,156.05	212,091.71		106,099.
CITY OF GREAT FALLS - FG0334	\$	5,270,327.01	\$ 3,266,908.92	\$	1,634,275.2
CITY OF HAVRE - FG0339	\$	931,729.08	\$ 577,549.37	\$	288,919.
CITY OF HELENA - FG0340 - FU0340	\$	2,973,655.77	\$ 1,843,275.10	\$	922,100.
CITY OF KALISPELL - FG0343	\$	2,342,258.43	\$ 1,451,891.87	\$	726,310.
CITY OF LEWISTOWN - FG0347 - GP0347	\$	513,953.29	 318,583.38		159,371.
CITY OF LIVINGSTON - FG0349 - GP0349	\$	1,012,186.22	627,422.21		313,868.
CITY OF MILES CITY - FG0353	\$	711,565.14	441,076.71		220,649.
CITY OF MISSOULA - FG0354 - FU0354	\$	8,428,767.50	5,224,726.22	_	2,613,675.
CITY OF WHITEFISH - FG0376	\$	1,339,530.38	\$ 830,332.49	\$	415,374.
TOWN OF RED LODGE - FG0385	\$		\$ 4 050 500 40	\$	-
MISSOULA RURAL FIRE DISTR - FG0515	\$	2,667,652.71	\$ 1,653,593.49	\$	827,212.
CENTRAL VALLEY FIRE DISTR - FG0569	\$	954,426.43	 591,618.74		295,958.
LOCKWOOD RURAL FIRE DIST - FG0579  DEPT OF MILITARY AFFAIRS - FG6701	\$	856,156.64 3,958,719.70	530,704.41 2,453,885.06		265,485.
GALLATIN CANYON CONSOL RR - FG9012	\$	1,211,173.02	750,767.83		1,227,559. 375,572.
FRENCHTOWN RURAL FIRE DIS - FG9079	\$	332,298.98	205,981.62		103,042.
HEBGEN BASIN RURAL FD - FG9082	\$	588,281.61	364,657.15		182,420.
SOURDOUGH RFD - FG9002	\$	216,493.32	134,197.36		67,132.
COLUMBUS RURAL FIRE DISTR - FG9093	\$	271,699.72	168,418.05		84,251.3
RED LODGE RURAL FIRE DIST - FG9110	\$	263,187.16	 163,141.39	_	81,611.6



			' Schedule of Employer's Proportionate Share of the Net Pension Liability as of June 30, 2015										
				Lial	ension bility bloyer		Net Pension Liability - State		as or Jun		Employer's Pensionable Payroll	Employer's Proportionate Share as % Pensionable Payroll	Plan Fiduciar Net Position as % of Total Pension Liabil
and Before Westing Before Continue				£ 22.20	DE 050 C4	•	CO 004 00C 44	•	400 070 077 00	•	44 007 000 00	-	
otal Before Working Retiree Contributi	ons and A	Adjustme	me	\$ 33,38	35,050.61	\$	08,891,926.41	ф	102,276,977.02	Ф	41,627,233.23		
Due to Working Retiree Contributions and A	Adiustment	S											
g rama ana ana ana ana ana ana ana ana ana													
otal	المهورين	البروان		\$ 33,38	5,050.61	\$	68,891,926.41	\$	102,276,977.02	\$	41,627,233.23		
				,	,	Ť	, ,- 2	Ť	, -,	Ė	,, , ,, ,, ,,		
State as Special Funding Entity													
Employers													
ANACONDA-DEER LODGE COUNT -	- FG0301				9,772.84		912,673.05	-	1,322,445.89		538,414.30	76.107%	76
CITY OF BILLINGS -	- FG0305	- FU030	05	\$ 6,82	9,123.49	\$	15,210,272.88	\$	22,039,396.37		8,973,014.20	76.107%	76
CITY OF BOZEMAN -				\$ 2,48	9,053.70	\$	5,543,784.09	\$	8,032,837.79	\$	3,270,451.07	76.107%	76
BUTTE-SILVER BOW -		- FU030	07		0,039.65	_	4,009,166.74	-	5,809,206.39		2,365,132.45	76.107%	76
	- FG0314				6,237.85		102,984.00		149,221.85		60,753.46	76.107%	76
CITY OF GLENDIVE -		- GP03	33		2,091.71		472,384.58		684,476.29		278,674.38	76.107%	76
CITY OF GREAT FALLS -					6,908.92	_	7,276,274.41	-	10,543,183.33		4,292,501.13	76.107%	76
CITY OF HAVRE -					7,549.37		1,286,356.02		1,863,905.39		758,861.52	76.107%	76
CITY OF HELENA -		- FU03	40		3,275.10		4,105,463.55		5,948,738.65		2,421,940.96	76.107%	76.
CITY OF KALISPELL -					1,891.87		3,233,749.13		4,685,641.00		1,907,689.43	76.107%	76.
CITY OF LEWISTOWN -		- GP03			8,583.38	_	709,569.84		1,028,153.22	-	418,597.37	76.107%	76.
CITY OF LIVINGSTON -		- GP03	49		27,422.21		1,397,436.09		2,024,858.30		824,391.12	76.107%	76.
CITY OF MILES CITY -				-	1,076.71	_	982,395.06		1,423,471.77		579,545.49	76.107%	76.
CITY OF MISSOULA -		- FU03	54		24,726.22		11,636,853.78		16,861,580.00		6,864,942.85	76.107%	76.
CITY OF WHITEFISH -		Ц			30,332.49		1,849,371.14		2,679,703.63		1,091,001.69	76.107%	76.
TOWN OF RED LODGE -		Ц		\$	-	\$	<u> </u>	\$		\$	112,804.82	0.000%	76.
MISSOULA RURAL FIRE DISTR -		Ц			3,593.49		3,682,992.15	-	5,336,585.64		2,172,711.89	76.107%	76.
CENTRAL VALLEY FIRE DISTR -					1,618.74		1,317,692.23		1,909,310.97		777,347.72	76.107%	76.
LOCKWOOD RURAL FIRE DIST -					0,704.41		1,182,019.76		1,712,724.17		697,310.32	76.107%	76.
	- FG6701				3,885.06		4 070 450 15	\$	2,453,885.06	-	985,737.96	248.939%	76.
GALLATIN CANYON CONSOL RR -					0,767.83		1,672,159.45		2,422,927.28		986,458.98	76.107%	76.
	- FG9079				5,981.62		458,775.87		664,757.49		270,646.20	76.107%	76.
HEBGEN BASIN RURAL FD					4,657.15		812,188.42		1,176,845.57		479,135.27	76.107%	76.
SOURDOUGH RFD -					34,197.36	_	298,893.08	-	433,090.44	-	176,326.36	76.107%	76.
COLUMBUS RURAL FIRE DISTR - RED LODGE RURAL FIRE DIST -				-	3,141.39	_	375,111.76 363,359.33	-	543,529.81 526,500.72	-	221,290.11 101,552.18	76.107% 160.648%	76.9 76.9



FURS - Cost Sharing Plan w/ a Special Funding Situation		Schedule of Employer Contributions as of June 30, 2015								
		Contractually Required Contribution		Contributions in Relation to the Contractually Required Contribution		Contribution Difference		Employer's Pensionable Payroll	Contributions as % Pensionable Payroll	
Total Before Working Retiree Contributions and Adjustments	\$	6,299,119.80	\$	6,299,119.80	\$	-	\$	41,627,233.23		
Due to Working Retiree Contributions and Adjustments	\$	122,581.34	¢	122,581.34	¢	-				
Due to Working Nethee Contributions and Adjustments	Ψ	122,301.34	Ψ	122,301.34	Ψ					
Total	\$	6,421,701.14	\$	6,421,701.14	\$	-	\$	41,627,233.23		
State as Special Funding Entity										
Employers	-									
ANACONDA-DEER LODGE COUNT - FG0301	\$	78,820.87	\$	78,820.87	\$		\$	538,414.30	14.639	
CITY OF BILLINGS - FG0305 - FU0305	\$	1,313,599.63		1,313,599.63			\$	8,973,014.20	14.639	
CITY OF BOZEMAN - FG0306	\$	478,775.94		478,775.94			\$	3,270,451.07	14.639	
BUTTE-SILVER BOW - FG0307 - FU0307	\$	346,242.30		346,242.30		_	\$	2,365,132.45	14.639	
CITY OF COLUMBIA FALLS - FG0314	\$	8,893.97		8,893.97		-	\$	60,753.46	14.639	
CITY OF GLENDIVE - FG0333 - GP0333	\$	40,796.39		40,796.39	\$	-	\$	278,674.38	14.639	
CITY OF GREAT FALLS - FG0334	\$	628,398.41		628,398.41		-	\$	4,292,501.13	14.639	
CITY OF HAVRE - FG0339	\$	111,093.12		111,093.12		-	\$	758,861.52	14.639	
CITY OF HELENA - FG0340 - FU0340	\$	354,558.75		354,558.75		-	\$	2,421,940.96	14.639	
CITY OF KALISPELL - FG0343	\$	279,275.17		279,275.17	\$		\$	1,907,689.43	14.639	
CITY OF LEWISTOWN - FG0347 - GP0347	\$	61,280.34		61,280.34	\$	-	\$	418,597.37	14.639	
CITY OF LIVINGSTON - FG0349 - GP0349	\$	120,686.29		120,686.29		-	\$	824,391.12	14.639	
CITY OF MILES CITY - FG0353	\$	84,842.25	-	84,842.25		-	\$	579,545.49	14.639	
CITY OF MISSOULA - FG0354 - FU0354	\$	1,004,989.65		1,004,989.65		-	\$	6,864,942.85	14.639	
CITY OF WHITEFISH - FG0376	\$	159,716.61		159,716.61	\$	-	\$	1,091,001.69	14.639	
TOWN OF RED LODGE - FG0385	\$	16,514.00	\$	16,514.00	\$	-	\$	112,804.82	14.639	
MISSOULA RURAL FIRE DISTR - FG0515	\$	318,073.00	\$	318,073.00	\$	-	\$	2,172,711.89	14.639	
CENTRAL VALLEY FIRE DISTR - FG0569	\$	113,799.40	\$	113,799.40	\$	-	\$	777,347.72	14.639	
LOCKWOOD RURAL FIRE DIST - FG0579	\$	102,082.37		102,082.37	\$	-	\$	697,310.32	14.639	
DEPT OF MILITARY AFFAIRS - FG6701	\$	472,011.16	\$	472,011.16	\$	-	\$	985,737.96	47.884	
GALLATIN CANYON CONSOL RR - FG9012	\$	144,412.14	\$	144,412.14	\$	-	\$	986,458.98	14.639	
FRENCHTOWN RURAL FIRE DIS - FG9079	\$	39,621.10	\$	39,621.10	\$	-	\$	270,646.20	14.639	
HEBGEN BASIN RURAL FD - FG9082	\$	70,142.75	\$	70,142.75	\$	-	\$	479,135.27	14.639	
SOURDOUGH RFD - FG9090	\$	25,813.21	\$	25,813.21		-	\$	176,326.36	14.639	
COLUMBUS RURAL FIRE DISTR - FG9093	\$	32,395.65	\$	32,395.65	\$	-	\$	221,290.11	14.639	
RED LODGE RURAL FIRE DIST - FG9110	\$	14,866.67	\$	14,866.67	\$	-	\$	101,552.18	14.639	

