Gabriel Roeder Smith & Company
Consultants & Actuaries

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION OF MINNESOTA

MINNEAPOLIS EMPLOYEES RETIREMENT FUND

GASB STATEMENTS NO. 67 AND NO. 68 ACCOUNTING AND FINANCIAL REPORTING FOR PENSIONS

JUNE 30, 2014

GRS
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December 3, 2014

Public Employees Retirement Association of Minnesota
Minneapolis Employees Retirement Fund
St. Paul, Minnesota

Dear Trustees of the Minneapolis Employees Retirement Fund:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 for the Minneapolis Employees Retirement Fund ("MERF"). These calculations have been made on a basis that is consistent with our understanding of these accounting standards.

GASB Statement No. 67 is the accounting standard that applies to the financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statements No. 67 and No. 68. The calculation of the plan's liability for this report may not be applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement No. 67 may produce significantly different results. The information in this report is calculated on a total plan basis. PERA is responsible for preparing the Schedule of Employer Allocations and the Schedule of Pension Amounts by Employer. This report may be provided to parties other than the Public Employees Retirement Association (PERA) only in its entirety and only with the permission of PERA.

This report is based upon information, furnished to us by PERA, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different, please let us know. This information was checked for internal consistency, but it was not otherwise audited.

To the best of our knowledge, the information contained with this report is accurate and fairly represents the actuarial position of the Minneapolis Employees Retirement Fund as of the measurement date. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Brian B. Murphy and Bonita J. Wurst are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

By Brian B Murphy
Brian B. Murphy
FSA, EA, MAAA

By Bonita J. Wurst
Bonita J. Wurst
ASA, EA, MAAA

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SECTION A

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

as of June 30, 2014 *(Dollars in Thousands)*

		2014
Actuarial Valuation Date		June 30, 2014
Measurement Date of the Net Pension Liability		June 30, 2014
Membership		
Number of		
- Service Retirements		2,929
- Survivors		739
- Disability Retirements		109
- Deferred Retirements		43
- Terminated other non-vested		-
- Active Members		42
- Total		3,862
Covered Payroll	$	3,795
Net Pension Liability		
Total Pension Liability	$	1,157,169
Plan Fiduciary Net Position		935,946
Net Pension Liability	$	221,223
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		80.88%
Net Pension Liability as a Percentage of Covered Payroll		5,829.31%
Development of the Single Discount Rate		
Single Discount Rate		7.90%
Long-Term Expected Rate of Investment Return		7.90%
Long-Term Municipal Bond Rate*		4.29%
Last year ending June 30 in the 2015 to 2114 projection period for which projected benefit payments are fully funded		2114
Total Pension Expense/ (Income)	$	10,654

Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ -	$ -
Changes in assumptions	-	-
Net difference between projected and actual earnings on pension plan investments	-	64,348
Total	$ -	$ 64,348

** Based on the Bond Buyer 20-Bond Index of general obligation municipal bonds as of June 26, 2014 (i.e., the weekly rate closest to but not later than the Measurement Date).*

DISCUSSION

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans* establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state and local governmental employers to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a Statement of Fiduciary Net Position and a Statement of Changes in Fiduciary Net Position in accordance with GASB Statement No. 67. The *Statement of Fiduciary Net Position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *Statement of Changes in Fiduciary Net Position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes to the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

Both GASB Statements No. 67 and No. 68 require the notes to the financial statements for the employers and pension plans to include certain descriptive information about the pension plans through which the pension benefits are provided. The list of disclosure items should include:

- a description of benefits provided by the plan;
- the classes of employees and number of members covered by the pension plan;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- the pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- the net pension liability using a discount rate that is 1% higher and 1% lower than the current discount rate used to calculate the total pension liability and net pension liability for financial reporting purposes;
- significant assumptions and methods used to calculate the total pension liability;
- inputs to the discount rates; and
- certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with Statement No. 67. This information includes:

- the composition of the pension plan's board and the authority under which benefit terms may be amended;
- a description of how fair value is determined;
- information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- annual money-weighted rate of return.

Required Supplementary Information

Statement No. 67 requires a 10-year fiscal history of:

- sources of changes in the net pension liability;
- information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2014 and a measurement date of June 30, 2014.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a single discount rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the long-term expected rate of return on pension plan investments is 7.90%; the municipal bond rate is 4.29% (based on the weekly rate closest to but not later than the measurement date of the 20-Year Bond Buyer Index as published by the Federal Reserve Board); and the resulting single discount rate is 7.90%.

Effective Date and Transition

GASB Statements No. 67 and No. 68 are effective for fiscal years beginning after June 15, 2013, and June 15, 2014 respectively. Earlier application is encouraged by the GASB.

SECTION B

FINANCIAL STATEMENTS

PENSION EXPENSE UNDER GASB STATEMENT NO. 68

Fiscal Year Ended June 30, 2014 *(Dollars in Thousands)*

A. Expense

1. Service Cost	$	478
2. Interest on the Total Pension Liability		89,439
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(370)
5. Projected Earnings on Plan Investments (made negative for addition here)		(65,522)
6. Pension Plan Administrative Expense		146
7. Other Changes in Plan Fiduciary Net Position		(39)
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		2,609
9. Recognition of Outflow (Inflow) of Resources due to Assets		(16,087)
10. Total Pension Expense/ (Income)	**$**	**10,654**

Statement of Outflows and Inflows Arising from Current Reporting Period

Fiscal Year Ended June 30, 2014 *(Dollars in Thousands)*

A. Outflows (Inflows) of Resources due to Liabilities		
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	$	(6,857)
2. Assumption Changes (gains) or losses	$	9,466
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		1.0000
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the Difference between expected and actual experience of the Total Pension Liability	$	(6,857)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	$	9,466
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	$	2,609
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the Difference between expected and actual experience of the Total Pension Liability	$	-
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	$	-
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	$	-
B. Outflows (Inflows) of Resources due to Assets		
1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	$	(80,435)
2. Recognition period for Assets {in years}		5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	$	(16,087)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	$	(64,348)

STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM CURRENT AND PRIOR REPORTING PERIODS

Fiscal Year Ended June 30, 2014 *(Dollars in Thousands)*

A. Outflows and Inflows of Resources due to Liabilities and Assets to be recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	$ 9,466	$ 6,857	$ 2,609
2. Due to Assets	-	16,087	(16,087)
3. Total	$ 9,466	$ 22,944	$ (13,478)

B. Outflows and Inflows of Resources by Source to be recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	$ -	$ 6,857	$ (6,857)
2. Assumption Changes	9,466	-	9,466
3. Net Difference between projected and actual earnings on pension plan investments	-	16,087	(16,087)
4. Total	$ 9,466	$ 22,944	$ (13,478)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	$ -	$ -	$ -
2. Assumption Changes	-	-	-
3. Net Difference between projected and actual earnings on pension plan investments	-	64,348	(64,348)
4. Total	$ -	$ 64,348	$ (64,348)

D. Deferred Outflows and Deferred Inflows of Resources by Year to be recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2015	$ (16,087)
2016	(16,087)
2017	(16,087)
2018	(16,087)
2019	-
Thereafter	-
Total	$ (64,348)

STATEMENT OF FIDUCIARY NET POSITION

as of June 30, 2014 *(Dollars in Thousands)*

Assets in Trust	Market Value June 30, 2014	Market Value June 30, 2013
Cash, equivalents, short term securities	$ 24,264	$ 22,344
Fixed income	205,527	186,720
Equity	540,176	486,979
SBI Alternative	111,099	117,893
Other	0	0
Total Assets in Trust	**$ 881,066**	**$ 813,936**
Assets Receivable*	55,014	55,010
Amounts Payable	(134)	(133)
Net Position Restricted for Pensions	**$ 935,946**	**$ 868,813**

**Assets receivable include the following:*

	Market Value as of June 30, 2014	*Market Value as of June 30, 2013*
Source	*Amount*	*Amount*
State Contributions	*$24,000*	*$24,000*
Employer Contributions	*$31,000*	*$31,000*

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

for Year Ended June 30, 2014 *(Dollars in Thousands)*

Change in Assets		**Market Value**	
Year Ending		**June 30, 2014**	**June 30, 2013**
1.	Fund balance at market value at beginning of year*	$ 868,813	$ 842,811
2.	Contributions		
	a. Member	370	426
	b. Employer	31,426	31,447
	c. Other sources	24,000	24,000
	d. Total contributions	55,796	55,873
3.	Investment income		
	a. Investment income/(loss)	147,184	109,234
	b. Investment expenses	(1,227)	(1,118)
	c. Net subtotal	145,957	108,116
4.	Other	39	8
5.	**Total additions:** *(2.d.) + (3.c.) + (4.)*	**$ 201,792**	**$ 163,997**
6.	Benefits Paid		
	a. Annuity benefits	(134,466)	(137,807)
	b. Refunds	(47)	(57)
	c. Total benefits paid	(134,513)	(137,864)
7.	Expenses		
	a. Other	0	0
	b. Administrative	(146)	(131)
	c. Total expenses	(146)	(131)
8.	**Total deductions:** *(6.c.) + (7.c.)*	**(134,659)**	**(137,995)**
9.	Net increase (decrease) in net position: *(5) + (8)*	67,133	26,002
10.	**Net position restricted for pensions ***	**$ 935,946**	**$ 868,813**
11.	Approximate return on market value of assets	18.3%	14.0%

**Assets include the following contributions as assets receivable:*

Source	*Market Value as of June 30, 2014 Amount*	*Market Value as of June 30, 2013 Amount*	*Market Value as of June 30, 2012 Amount*
State	*$24,000*	*$24,000*	*$22,750*
Employer	*$31,000*	*$31,000*	*$31,000*

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS CURRENT PERIOD

Fiscal Year Ended June 30, 2014 *(Dollars in Thousands)*

A. Total pension liability		
1. Service Cost	$	478
2. Interest on the Total Pension Liability		89,439
3. Changes of benefit terms		0
4. Difference between expected and actual experience of the Total Pension Liability		(6,857)
5. Changes of assumptions		9,466
6. Benefit payments, including refunds of employee contributions		(134,513)
7. Net change in total pension liability	$	(41,987)
8. Total pension liability – beginning		1,199,156
9. Total pension liability – ending	**$**	**1,157,169**
B. Plan fiduciary net position		
1. Contributions – employer	$	55,426
2. Contributions – employee		370
3. Net investment income		145,957
4. Benefit payments, including refunds of employee contributions		(134,513)
5. Pension Plan Administrative Expense		(146)
6. Other		39
7. Net change in plan fiduciary net position	$	67,133
8. Plan fiduciary net position – beginning		868,813
9. Plan fiduciary net position – ending	**$**	**935,946**
C. Net pension liability	**$**	**221,223**
D. Plan fiduciary net position as a percentage of the total pension liability		**80.88%**
E. Covered-employee payroll	**$**	**3,795**
F. Net pension liability as a percentage of covered employee payroll		**5,829.31%**

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear *(Dollars in Thousands)*

Last 10 Fiscal Years (which may be built prospectively)

Fiscal year ending June 30,	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Total Pension Liability										
Service Cost	$ 478									
Interest on the Total Pension Liability	89,439									
Benefit Changes	-									
Difference between Expected and Actual Experience	(6,857)									
Assumption Changes	9,466									
Benefit Payments	(134,466)									
Refunds	(47)									
Net Change in Total Pension Liability	(41,987)									
Total Pension Liability - Beginning	1,199,156									
Total Pension Liability - Ending (a)	$ 1,157,169									
Plan Fiduciary Net Position										
Employer Contributions	$ 55,426									
Employee Contributions	370									
Pension Plan Net Investment Income	145,957									
Benefit Payments	(134,466)									
Refunds	(47)									
Pension Plan Administrative Expense	(146)									
Other	39									
Net Change in Plan Fiduciary Net Position	67,133									
Plan Fiduciary Net Position - Beginning	868,813									
Plan Fiduciary Net Position - Ending (b)	$ 935,946									
Net Pension Liability - Ending (a) - (b)	221,223									
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	80.88 %									
Covered Employee Payroll	$ 3,795									
Net Pension Liability as a Percentage of Covered Employee Payroll	5,829.31 %									

Notes to Schedule:

N/A

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

Schedule of the Net Pension Liability Multiyear *(Dollars in Thousands)*

Last 10 Fiscal Years (which may be built prospectively)

FY Ending June 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2005			$ -			
2006			-			
2007			-			
2008			-			
2009			-			
2010			-			
2011			-			
2012			-			
2013			-			
2014	$ 1,157,169	$ 935,946	$ 221,223	80.88%	$ 3,795	5,829.31%

SCHEDULE OF CONTRIBUTIONS MULTIYEAR *(DOLLARS IN THOUSANDS)*

Last 10 Fiscal Years

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2005	$ 14,478	$ 19,395	$ (4,917)	$ 27,479	70.58%
2006	13,955	44,953	(30,998)	21,669	207.45
2007	14,823	28,545	(13,722)	17,296	165.04
2008	24,714	15,272	9,442	13,957	109.42
2009	40,026	15,646	24,380	10,979	142.51
2010	91,360	13,798	77,562	11,090	124.42
2011	41,628	27,855	13,773	7,869	353.98
2012	29,836	54,373	(24,537)	5,785	939.90
2013	33,448	55,447	(21,999)	4,369	1,269.10
2014	29,242	55,426	(26,184)	3,795	1,460.50

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date:	June 30, 2014
Notes	Actuarially determined contribution rates are calculated as of each July 1.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar, Closed
Remaining Amortization Period	17 years
Asset Valuation Method	Market Value
Inflation	3.00%
Salary Increases	4.00% including inflation
Investment Rate of Return	8.00% through June 30, 2017; 8.50% thereafter
Retirement Age	Age 61, or immediately if over age 61
Mortality	RP-2000 annuitant mortality table, projected to 2018 according to scale AA, white collar adjustment.

Other Information:

Notes	The plan is assumed to pay a 2.5% post retirement benefit increase beginning January 1, 2027. See separate funding report as of July 1, 2014 for additional detail.

SCHEDULE OF INVESTMENT RETURNS MULTIYEAR

Last 10 Fiscal Years

FY Ending June 30,	Annual Return[1]
2005	
2006	
2007	
2008	
2009	
2010	
2011	
2012	
2013	
2014	

[1] *Annual money-weighted rate of return, net of investment expenses.*

It is our understanding that this schedule will be prepared by PERA with assistance from the State Board of Investment. Please provide a copy of the final exhibit for our files.

SECTION D

ADDITIONAL FINANCIAL STATEMENT DISCLOSURES

Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Fixed Income		
International Fixed Income		
Domestic Equity		
International Equity		
Private Equity		
Real Estate		
Commodities		
Cash		
Total		

It is our understanding that this schedule will be prepared by PERA with assistance from the State Board of Investment. Please provide a copy of the final exhibit for our files.

Single Discount Rate

A single discount rate of 7.90% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments for this plan and the PERA General Plan of 7.90%. The Minneapolis Employees Retirement Fund is expected to consolidate with the PERA General Plan within the next year. The projection of cash flows used to determine this single discount rate assumed that plan member and employer contributions will be made at the current statutory rates. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 7.90%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

(Dollars in Thousands)

1% Decrease 6.90%	Current Single Discount Rate Assumption 7.90%	1% Increase 8.90%
$308,017	$221,223	$145,398

SUMMARY OF POPULATION STATISTICS

		Terminated	Recipients			
	Actives	Deferred Retirement	Service Retirement	Disability Retirement	Survivor	Total
Members on 7/1/2013	**64**	**57**	**3,022**	**117**	**770**	**4,030**
New Members	0	0	0	0	0	**0**
Return to active	0	0	0	0	0	**0**
Terminated non-vested	0	0	0	0	0	**0**
Service retirements	(20)	(16)	36	0	0	**0**
Terminated deferred	(2)	2	0	0	0	**0**
Terminated refund/transfer	0	0	0	0	0	**0**
Deaths	0	0	(130)	(8)	(63)	**(201)**
New beneficiary	0	0	0	0	33	**33**
Disabled	0	0	0	0	0	**0**
Data correction	0	0	1	0	(1)	**0**
Net change	(22)	(14)	(93)	(8)	(31)	**(168)**
Members on 6/30/2014	**42**	**43**	**2,929**	**109**	**739**	**3,862**

GASB STATEMENT NO. 68 RECONCILIATION *(Dollars in Thousands)*

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)	Deferred Outflows	Deferred Inflows	Pension Expense
Balance Beginning of Year	**$ 1,199,156**	**$ 868,813**	**$ 330,343**			
Changes for the Year:						
Service Cost	$ 478		$ 478			$ 478
Interest on Total Pension Liability	89,439		89,439			89,439
Interest on Fiduciary Net Position		$ 65,522	(65,522)			(65,522)
Changes in Benefit Terms	-		-			-
Liability Experience Gains and Losses	(6,857)		(6,857)	$ -		(6,857)
Changes in Assumptions	9,466		9,466	-		9,466
Contributions - Employer		55,426	(55,426)			
Contributions - Employees		370	(370)			(370)
Asset Gain/(Loss)		80,435	(80,435)	-	$ 64,348	(16,087)
Benefit Payouts	(134,513)	(134,513)	-			-
Administrative Expenses		(146)	146			146
Other		39	(39)			(39)
Net Changes	**$ (41,987)**	**$ 67,133**	**$ (109,120)**	**$ -**	**$ 64,348**	**$ 10,654**
Balance End of Year	**$ 1,157,169**	**$ 935,946**	**$ 221,223**	**$ -**	**$ 64,348**	

SECTION E

SUMMARY OF BENEFITS

Summary of Plan Provisions

Following is a summary of the major plan provisions used in the valuation of this report. PERA is solely responsible for the validity, accuracy and comprehensiveness of this information. If any of the plan provisions shown below are not accurate and complete, the valuation results may differ significantly from those shown in this report and may require a revision of this report.

Plan year	July 1 through June 30.
Eligibility/employee rule	An employee of the City of Minneapolis, the Metropolitan Airports Commission, the Met Council/Environmental Services, the Municipal Employees Retirement Fund, and Special School District No. 1 if covered prior to July 1, 1978. Employees covered July 1, 1978 or later are covered by the Public Employees Retirement Association (PERA) Plan. Effective July 1, 1992, licensed peace officers and firefighters who are employed by the Metropolitan Airports Commission and covered by the Minneapolis Employees Retirement Fund will receive the greater of retirement, disability, or survivor benefits under: a) The Minneapolis Employees Retirement Fund; or b) The Public Employees Retirement Association (PERA) Police & Fire Plan.
Full consolidation	Per Statute, if the actuarial accrued liability funding ratio of this plan reaches 80%, the MERF Division will be merged with the PERA General Employees Retirement Plan, effective the first day of the month after the actuarial valuation report that triggers the consolidation is provided to the LCPR. Upon consolidation, Employer Special Additional Contributions cease, and Employer Supplemental Contributions are recalculated as a fixed dollar amount to amortize the remaining unfunded liability based on the mortality assumptions of the PERA General Employees Retirement Plan.

Summary of Plan Provisions (Continued)

Contributions

Member: 9.75% of salary

Employer: 9.75% of salary (Employer Regular Contributions)
2.68% of salary plus employing unit's share of $3.9 million (Employer Additional Contribution)

City of Minneapolis	$ 2,763,437
Minneapolis Schools	$ 731,125
Metropolitan Airports Commission	$ 402,512
MnSCU	$ 2,926
Total:	**$ 3,900,000**

Employer Regular and Additional Contributions will be paid as long as there are active members.

Employer Special Additional Contribution – required if expected benefit payments will likely exceed assets during the year (prior to full consolidation).

Employer Supplemental Contribution – first due after June 30, 2012 and until full consolidation, equals the larger of:

- Total actuarial required contributions minus member and employer regular and additional contributions less the maximum State contribution; or
- $27,000,000.

The total employer contribution (Regular, Additional and Supplemental) cannot exceed $34,000,000.

After consolidation, the Employer Supplemental Contribution equals a level dollar amortization payment through June 30, 2031 with actuarial accrued liability based on PERA General Plan mortality assumptions.

Contributions

The Supplemental and Special Additional Contributions are allocated to the employers in proportion to their share of the actuarial accrued liability of MERF on July 1, 2009, as follows:

Employer	**Allocation**
City of Minneapolis	54.78%
Minneapolis Park Board	10.33%
Met Council	1.74%
Metropolitan Airport Commission	5.76%
Municipal Building Commission	1.08%
Minneapolis School District No. 1	23.04%
Hennepin County	3.17%
MnSCU	0.10%
Total	100.00%

Summary of Plan Provisions (Continued)

State contributions	Equal to the actuarial required contribution minus expected member and employer regular and additional contributions. The State's contribution cannot exceed $24,000,000. The State's contributions end on the earlier of September 15, 2031, or in the year following the first date on which MERF assets equal or exceed MERF actuarial accrued liability.
Allowable service	Service during which member contributions were made. Allowable Service may also include certain leaves of absence, military service and service prior to becoming a member. Allowable service also includes time on duty disability provided that the member returns to active service if the disability ceases.
Salary	All amounts of salary, wages or compensation.
Average salary	Average of the five highest calendar years of salary out of the last ten calendar years.
Retirement	
<u>Normal retirement benefit</u>	
Age/service requirement	Age 60 and 10 years of employment. Any age with 30 years of employment. Proportionate retirement annuity is available at age 65 and 1 year allowable service.
Amount	2.00% of average salary for the first 10 years of allowable service plus 2.50% of average salary for each subsequent year of allowable service.

Summary of Plan Provisions (Continued)

Disability

Disability benefit	
Age/service requirement	Total and permanent disability before age 60 with five years of allowable service, or no allowable service if a work-related disability.
Amount	2.00% of average salary for the first 10 years of disability service plus 2.50% of average salary for each subsequent year of disability service. Disability service is the greater of (a) or (b) where: (a.) equals allowable service plus service projected to age 60, subject to a maximum of 22 years, and (b.) equals allowable service. Benefit is reduced by Workers' Compensation benefits. Payments stop at age 60 or earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.
Disability after separation	
Age/service requirement	Total and permanent disability after electing to receive a retirement benefit but before age 60.
Amount	Actuarial equivalent of total credit to member's account.
Retirement after disability	
Age/service requirement	Total and permanent disability after electing to receive a retirement benefit but before age 60. Employee is still disabled after age 60.
Amount	Benefit continues according to the option selected.

Summary of Plan Provisions (Continued)

Death

Pre-retirement survivor's spouse benefit	
Age/service requirement	Active member with 18 months of allowable service.
Amount	30% of salary averaged over the last six months to the surviving spouse plus 10% of salary averaged over the last six months to each surviving child. Maximum benefit is $900 per month.
Pre-retirement survivor's spouse annuity	
Age/service requirement	Active member or former member who dies before retirement with 20 years of allowable service.
Amount	Actuarial equivalent of a single life annuity which would have been paid as a retirement benefit on the date of death without regard to eligibility age for retirement benefit. If there is no surviving spouse, the designated beneficiary may be a dependent child or dependent parent.
Refund of accumulated city contributions	
Age/service requirement	Active member or former member dies after 10 years of allowable service and prior to retirement.
Amount	Present value of the City's annual installments of $60 or, in the case of a former member, the net accumulation of city deposits. This benefit is not payable if survivor's benefits are paid.
Lump sum	
Age/service requirement	Death prior to service or disability retirement without an eligible surviving beneficiary.
Amount	$750 with less than 10 years allowable service, or $1,500 with 10 or more years of allowable service.
Refund of member contributions at death	
Age/service requirement	Active member or former member dies before retirement.
Amount	The excess of the member's contributions (exclusive of the contributions to the survivor's account) plus interest to the date of death.

Summary of Plan Provisions (Concluded)

Termination	
Deferred benefit	
Age/service requirement	Three years of allowable service.
Amount	Benefit computed under law in effect at termination and increased by the following percentage (augmentation), compounded annually: (a.) 0.00% prior to July 1, 1971, (b.) 5.00% from July 1, 1971 to January 1, 1981, and (c.) 3.00% thereafter until the annuity begins. Amount is payable at or after age 60.
Refund of member contributions upon termination	
Age/service requirement	Termination of public service.
Amount	Member's contributions with interest. A deferred annuity may be elected in lieu of a refund if vested.
Form of payment	▪ Life annuity. ▪ Life annuity with 3, 5, 10 or 15 years guaranteed. ▪ Life annuity with lump sum death benefit. ▪ Joint & Survivor (with or without bounce back feature).
Optional form conversion factors	1986 PET mortality table with a one year setback, blended 50% male and 50% female, and 5% interest.
Two dollar bill and annuity	Optional Two Dollar Bill money purchase annuity available at age 55 with 20 years of service if member had service prior to June 28, 1973. According to PERA, this option is rarely utilized. We have assumed that remaining active members will not elect this optional benefit.
Benefit increases	Benefit recipients receive future annual 1.0% benefit increases. If the accrued liability funding ratio of the General Employees Retirement Plan reaches 90% (on a market value of assets basis) for two consecutive years, the benefit increase will change to 2.5%. If, after reverting to a 2.5% benefit increase, the funding ratio declines to less than 80% for one year or less than 85% for two consecutive years, the benefit increase will decrease to 1.0%.
Changes in plan provisions	None.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Actuarial Methods

Actuarial Cost Method

Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Total Pension Liability.

Valuation of Future Post-Retirement Benefit Increases

Benefit recipients receive a future annual 1.0% post-retirement benefit increase. If the funding ratio of the PERA General Plan reaches 90% (based on a 2.5% post-retirement benefit increase assumption) for two consecutive years, the benefit increase in the Minneapolis Employees Retirement Fund will revert to 2.5%. If, after reverting to a 2.5% benefit increase, the funding ratio declines to less than 80% for one year or less than 85% for two consecutive years, the benefit increase will decrease to 1.0%.

To determine an assumption regarding a future change in the post-retirement benefit increase, we performed a projection of PERA General Plan liabilities and assets. See the 2014 GASB Statements No. 67 and No. 68 valuation report for the PERA General Plan for additional detail. The projection indicates that this plan is expected to begin paying 2.5% benefit increases on January 1, 2031. This assumption is reflected in our calculations.

To determine liabilities as of July 1, 2013, we performed a similar projection, and assumed the plan would begin paying 2.5% post-retirement benefit increases on January 1, 2046.

Decrement Timing

All decrements are assumed to occur mid-year.

Asset Valuation Method

Fair value of assets.

Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan. All demographic actuarial assumptions are prescribed by Minnesota Statutes, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. These parties are responsible for selecting the assumptions used for this valuation. The demographic assumptions prescribed are based on the last experience study, dated September 30, 2009. The economic assumptions are based on a review of inflation and investment return assumptions dated September 11, 2014.

The Allowance for Combined Service Annuity was based on a recommendation by a former actuary. We are unable to judge the reasonableness of this assumption without performing a substantial amount of additional work beyond the scope of the assignment.

Investment return	7.90% per annum.
Benefit increases after retirement	1.00% per annum through 2030 and 2.5% per annum thereafter.
Salary increases	Total reported pay for prior calendar year increased 1.98% to prior fiscal year and 3.75% annually for each future year.
Mortality rates	
Healthy pre-retirement	RP-2000 annuitant mortality table, white collar adjustment, projected to 2018 according to scale AA.
Healthy post-retirement	RP-2000 annuitant mortality table, white collar adjustment, projected to 2018 according to scale AA. The RP-2000 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 15 to 70 and the annuitant mortality table contains mortality rates for ages 50 to 95. We have applied the employee mortality table for annuitants younger than age 50.
Disabled	RP-2000 annuitant mortality table, white collar adjustment, reduced 20%. The table adopted by the LCPR on July 8, 2010 differs from the table recommended in the GRS experience study report dated September 30, 2009, and in some cases, reflects lower mortality than the table used for healthy members.
Retirement	Active members are assumed to retire at age 61, or immediately if currently age 61 or older.
Withdrawal	Rates are shown in rate table.
Disability	Age-related rates based on experience; see table of sample rates.
Allowance for combined service annuity	Liabilities for active members are increased 0.2% and liabilities for former members are increased by 30.00% to account for the effect of some participants having eligibility for a Combined Service Annuity.
Administrative expenses	Prior year administrative expenses (excluding investment expenses) increased by 4% expressed as a percentage of annual projected payroll.

Summary of Actuarial Assumptions (Continued)

Investment expenses	Investment expenses for the fiscal year ending June 30, 1992 are being amortized as follows: Beginning Balance: \$2,849,000 — Fixed Annual Payment: \$207,000 — Years Remaining: 6
Refund of contributions	Account balances accumulate interest until normal retirement date and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Commencement of deferred benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 60.
Percentage married	66.67% of active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Females are assumed to be three years younger than their male spouses. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	Members are assumed to elect a life annuity.
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility.
Service credit accruals	It is assumed that members accrue one year of service credit per year.
Unknown data for certain members	To prepare this report, GRS has used and relied on participant data supplied by the Fund. Although GRS has reviewed the data in accordance with Actuarial Standards of Practice No. 23, GRS has not verified or audited any of the data or information provided. In cases where submitted data was missing or incomplete, the following assumptions were applied: There were no members with missing genders or dates of birth. <u>Data for active members:</u> There were no active members with missing salary or service. <u>Data for terminated members:</u> Benefits were provided by PERA for 12 members. For the remaining members, we calculated benefits using the reported Average Salary, credited service and termination date from the 2013 valuation data file. <u>Data for Retired members:</u> There was one survivor reported with an expired benefit. This member was excluded from the valuation and the enclosed exhibits. There were no members reported with missing benefits.
Changes in actuarial assumptions	As of July 1, 2013, the post-retirement benefit increase rate was assumed to increase from 1.0% to 2.5% on January 1, 2046. As of July 1, 2014, the post-retirement benefit increase rate was assumed to increase from 1.0% to 2.5% on January 1, 2031.

Summary of Actuarial Assumptions (Concluded)

	Rate (%) *			
	Healthy Post- and Pre-Retirement Mortality		Disability Mortality	
Age	Male	Female	Male	Female
20	0.02%	0.01%	0.03%	0.02%
25	0.03	0.02	0.03	0.02
30	0.03	0.02	0.03	0.02
35	0.05	0.04	0.05	0.04
40	0.08	0.05	0.07	0.05
45	0.11	0.08	0.11	0.08
50	0.43	0.18	0.48	0.20
55	0.38	0.30	0.43	0.28
60	0.49	0.51	0.53	0.45
65	0.90	0.83	0.93	0.73
70	1.47	1.39	1.54	1.21

* *Generally, mortality rates are expected to increase as age increases. Due to the combination of pre-retirement rates, post-retirement rates, the white collar adjustment, and Projection Scale AA, the prescribed mortality tables have a few ages where assumed mortality decreases slightly instead of increases. We have used the rates as prescribed, but note that the prescribed assumption may not be reasonable at every age. If the rates were reasonably adjusted so that they decreased at all ages, we would not expect the valuation results to be materially different.*

	Withdrawal		Disability Retirement	
Age	Male	Female	Male	Female
20	21.00%	21.00%	0.21%	0.21%
25	11.00	11.00	0.21	0.21
30	5.00	5.00	0.23	0.23
35	1.50	1.50	0.30	0.30
40	1.00	1.00	0.41	0.41
45	1.00	1.00	0.61	0.61
50	1.00	1.00	0.93	0.93
55	1.00	1.00	1.60	1.60
60	1.00	1.00	0.00	0.00
65	0.00	0.00	0.00	0.00

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

CALCULATION OF THE SINGLE DISCOUNT RATE

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed long-term expected rate of return is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a "risk-free" rate is required, as described in the following paragraph.

The *Single Discount Rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.90%; the municipal bond rate is 4.29%; and the resulting single discount rate is 7.90%.

The tables in this section provide background for the development of the single discount rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

We performed a similar analysis as of July 1, 2013. Based on an expected rate of return of 7.90% and a municipal bond rate of 4.63%, the plan is projected to have sufficient assets to pay future benefits. **The resulting single discount rate as of July 1, 2013 is 7.90%.**

SINGLE DISCOUNT RATE DEVELOPMENT

Projection of Contributions* *(Dollars in Thousands)*

Year	Payroll for Current Employees	Payroll for New Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees	State Contributions for Current Employees	Contributions on Future Payroll toward current UAL	Total Contributions
0	$ 3,795	$ -	$ 3,795					
1	2,844	-	2,844	$ 277	$ 31,272	$ 18,605	$ -	$ 50,154
2	1,419	-	1,419	138	31,094	16,036	-	47,268
3	913	-	913	89	31,031	13,252	-	44,372
4	502	-	502	49	30,980	10,323	-	41,352
5	296	-	296	29	30,955	6,613	-	37,597
6	122	-	122	12	30,933	2,733	-	33,678
7	-	-	-	-	30,918	-	-	30,918
8	-	-	-	-	27,018	-	-	27,018
9	-	-	-	-	27,018	-	-	27,018
10	-	-	-	-	27,018	-	-	27,018
11	-	-	-	-	27,018	-	-	27,018
12	-	-	-	-	27,018	-	-	27,018
13	-	-	-	-	27,018	-	-	27,018
14	-	-	-	-	27,018	-	-	27,018
15	-	-	-	-	27,018	-	-	27,018
16	-	-	-	-	27,018	-	-	27,018
17	-	-	-	-	27,018	-	-	27,018
18	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-

**Years 51-100 have no contributions and therefore are not shown.*

SINGLE DISCOUNT RATE DEVELOPMENT

Projection of Plan Fiduciary Net Position* *(Dollars in Thousands)*

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.90%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	$ 935,946	$ 50,154	$ 132,573	$ 359	$ 70,732	$ 923,900
2	923,900	47,268	129,579	365	69,784	911,008
3	911,008	44,372	125,960	371	68,794	897,843
4	897,843	41,352	122,162	378	67,784	884,439
5	884,439	37,597	118,119	385	66,736	870,268
6	870,268	33,678	114,153	392	65,618	855,019
7	855,019	30,918	110,040	207	64,473	840,163
8	840,163	27,018	105,865	-	63,318	824,634
9	824,634	27,018	101,666	-	62,253	812,239
10	812,239	27,018	97,531	-	61,435	803,161
11	803,161	27,018	93,460	-	60,875	797,594
12	797,594	27,018	89,419	-	60,592	795,785
13	795,785	27,018	85,397	-	60,605	798,011
14	798,011	27,018	81,385	-	60,936	804,580
15	804,580	27,018	77,373	-	61,611	815,836
16	815,836	27,018	73,354	-	62,655	832,155
17	832,155	27,018	69,321	-	64,101	853,953
18	853,953	-	66,197	-	64,897	852,653
19	852,653	-	62,976	-	64,919	854,596
20	854,596	-	59,647	-	65,202	860,151
21	860,151	-	56,203	-	65,774	869,722
22	869,722	-	52,653	-	66,668	883,737
23	883,737	-	49,018	-	67,916	902,635
24	902,635	-	45,326	-	69,552	926,861
25	926,861	-	41,606	-	71,610	956,865
26	956,865	-	37,895	-	74,124	993,094
27	993,094	-	34,236	-	77,128	1,035,986
28	1,035,986	-	30,668	-	80,654	1,085,972
29	1,085,972	-	27,232	-	84,736	1,143,476
30	1,143,476	-	23,963	-	89,406	1,208,919
31	1,208,919	-	20,894	-	94,695	1,282,720
32	1,282,720	-	18,053	-	100,635	1,365,302
33	1,365,302	-	15,458	-	107,260	1,457,104
34	1,457,104	-	13,121	-	114,603	1,558,586
35	1,558,586	-	11,046	-	122,700	1,670,240
36	1,670,240	-	9,226	-	131,591	1,792,605
37	1,792,605	-	7,648	-	141,319	1,926,276
38	1,926,276	-	6,299	-	151,932	2,071,909
39	2,071,909	-	5,159	-	163,481	2,230,231
40	2,230,231	-	4,206	-	176,025	2,402,050
41	2,402,050	-	3,417	-	189,629	2,588,262
42	2,588,262	-	2,770	-	204,365	2,789,857
43	2,789,857	-	2,244	-	220,312	3,007,925
44	3,007,925	-	1,818	-	237,556	3,243,663
45	3,243,663	-	1,476	-	256,192	3,498,379
46	3,498,379	-	1,202	-	276,325	3,773,502
47	3,773,502	-	983	-	298,069	4,070,588
48	4,070,588	-	809	-	321,545	4,391,324
49	4,391,324	-	670	-	346,889	4,737,543
50	4,737,543	-	558	-	374,244	5,111,229

* *For purposes of this projection, based on GASB guidance, we assumed the current contribution rates would continue after the plan becomes fully funded. If we reflected a decrease in contribution rates due to full funding, future assets and contributions would be less than what is shown herein.*

SINGLE DISCOUNT RATE DEVELOPMENT

Projection of Plan Fiduciary Net Position* (Continued) *(Dollars in Thousands)*

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.90%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
51	$ 5,111,229	$ -	$ 467	$ -	$ 403,769	$ 5,514,531
52	5,514,531	-	394	-	435,633	5,949,770
53	5,949,770	-	334	-	470,019	6,419,455
54	6,419,455	-	284	-	507,126	6,926,297
55	6,926,297	-	243	-	547,168	7,473,222
56	7,473,222	-	208	-	590,376	8,063,390
57	8,063,390	-	179	-	637,001	8,700,212
58	8,700,212	-	155	-	687,310	9,387,367
59	9,387,367	-	134	-	741,597	10,128,830
60	10,128,830	-	116	-	800,173	10,928,887
61	10,928,887	-	101	-	863,378	11,792,164
62	11,792,164	-	88	-	931,577	12,723,653
63	12,723,653	-	77	-	1,005,165	13,728,741
64	13,728,741	-	68	-	1,084,568	14,813,241
65	14,813,241	-	60	-	1,170,244	15,983,425
66	15,983,425	-	53	-	1,262,688	17,246,060
67	17,246,060	-	47	-	1,362,437	18,608,450
68	18,608,450	-	41	-	1,470,066	20,078,475
69	20,078,475	-	36	-	1,586,198	21,664,637
70	21,664,637	-	31	-	1,711,505	23,376,111
71	23,376,111	-	27	-	1,846,712	25,222,796
72	25,222,796	-	23	-	1,992,600	27,215,373
73	27,215,373	-	20	-	2,150,014	29,365,367
74	29,365,367	-	16	-	2,319,863	31,685,214
75	31,685,214	-	13	-	2,503,131	34,188,332
76	34,188,332	-	11	-	2,700,878	36,889,199
77	36,889,199	-	9	-	2,914,246	39,803,436
78	39,803,436	-	7	-	3,144,471	42,947,900
79	42,947,900	-	5	-	3,392,884	46,340,779
80	46,340,779	-	4	-	3,660,921	50,001,696
81	50,001,696	-	3	-	3,950,134	53,951,827
82	53,951,827	-	2	-	4,262,194	58,214,019
83	58,214,019	-	2	-	4,598,907	62,812,924
84	62,812,924	-	1	-	4,962,221	67,775,144
85	67,775,144	-	1	-	5,354,236	73,129,379
86	73,129,379	-	1	-	5,777,221	78,906,599
87	78,906,599	-	-	-	6,233,621	85,140,220
88	85,140,220	-	-	-	6,726,077	91,866,297
89	91,866,297	-	-	-	7,257,437	99,123,734
90	99,123,734	-	-	-	7,830,775	106,954,509
91	106,954,509	-	-	-	8,449,406	115,403,915
92	115,403,915	-	-	-	9,116,909	124,520,824
93	124,520,824	-	-	-	9,837,145	134,357,969
94	134,357,969	-	-	-	10,614,279	144,972,248
95	144,972,248	-	-	-	11,452,807	156,425,055
96	156,425,055	-	-	-	12,357,579	168,782,634
97	168,782,634	-	-	-	13,333,828	182,116,462
98	182,116,462	-	-	-	14,387,200	196,503,662
99	196,503,662	-	-	-	15,523,789	212,027,451
100	212,027,451	-	-	-	16,750,168	228,777,619

* *For purposes of this projection, based on GASB guidance, we assumed the current contribution rates would continue after the plan becomes fully funded. If we reflected a decrease in contribution rates due to full funding, future assets and contributions would be less than what is shown herein.*

SINGLE DISCOUNT RATE DEVELOPMENT

Present Values of Projected Benefits* *(Dollars in Thousands)*

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=((c)/(1+sdr)^(a-.5)
1	$ 935,946	$ 132,573	$ 132,573	$ -	$ 127,627	$ -	$ 127,627
2	923,900	129,579	129,579	-	115,612	-	115,612
3	911,009	125,960	125,960	-	104,155	-	104,155
4	897,843	122,162	122,162	-	93,618	-	93,618
5	884,439	118,119	118,119	-	83,892	-	83,892
6	870,268	114,153	114,153	-	75,140	-	75,140
7	855,019	110,040	110,040	-	67,129	-	67,129
8	840,163	105,865	105,865	-	59,854	-	59,854
9	824,633	101,666	101,666	-	53,271	-	53,271
10	812,239	97,531	97,531	-	47,363	-	47,363
11	803,161	93,460	93,460	-	42,063	-	42,063
12	797,593	89,419	89,419	-	37,298	-	37,298
13	795,784	85,397	85,397	-	33,012	-	33,012
14	798,010	81,385	81,385	-	29,158	-	29,158
15	804,580	77,373	77,373	-	25,691	-	25,691
16	815,835	73,354	73,354	-	22,573	-	22,573
17	832,154	69,321	69,321	-	19,770	-	19,770
18	853,952	66,197	66,197	-	17,497	-	17,497
19	852,652	62,976	62,976	-	15,427	-	15,427
20	854,596	59,647	59,647	-	13,542	-	13,542
21	860,150	56,203	56,203	-	11,825	-	11,825
22	869,721	52,653	52,653	-	10,267	-	10,267
23	883,736	49,018	49,018	-	8,859	-	8,859
24	902,633	45,326	45,326	-	7,592	-	7,592
25	926,859	41,606	41,606	-	6,458	-	6,458
26	956,863	37,895	37,895	-	5,452	-	5,452
27	993,091	34,236	34,236	-	4,565	-	4,565
28	1,035,983	30,668	30,668	-	3,790	-	3,790
29	1,085,969	27,232	27,232	-	3,119	-	3,119
30	1,143,474	23,963	23,963	-	2,543	-	2,543
31	1,208,917	20,894	20,894	-	2,055	-	2,055
32	1,282,718	18,053	18,053	-	1,646	-	1,646
33	1,365,300	15,458	15,458	-	1,306	-	1,306
34	1,457,101	13,121	13,121	-	1,027	-	1,027
35	1,558,583	11,046	11,046	-	802	-	802
36	1,670,237	9,226	9,226	-	620	-	620
37	1,792,603	7,648	7,648	-	477	-	477
38	1,926,274	6,299	6,299	-	364	-	364
39	2,071,907	5,159	5,159	-	276	-	276
40	2,230,229	4,206	4,206	-	209	-	209
41	2,402,048	3,417	3,417	-	157	-	157
42	2,588,261	2,770	2,770	-	118	-	118
43	2,789,856	2,244	2,244	-	89	-	89
44	3,007,924	1,818	1,818	-	67	-	67
45	3,243,662	1,476	1,476	-	50	-	50
46	3,498,378	1,202	1,202	-	38	-	38
47	3,773,502	983	983	-	29	-	29
48	4,070,587	809	809	-	22	-	22
49	4,391,323	670	670	-	17	-	17
50	4,737,542	558	558	-	13	-	13

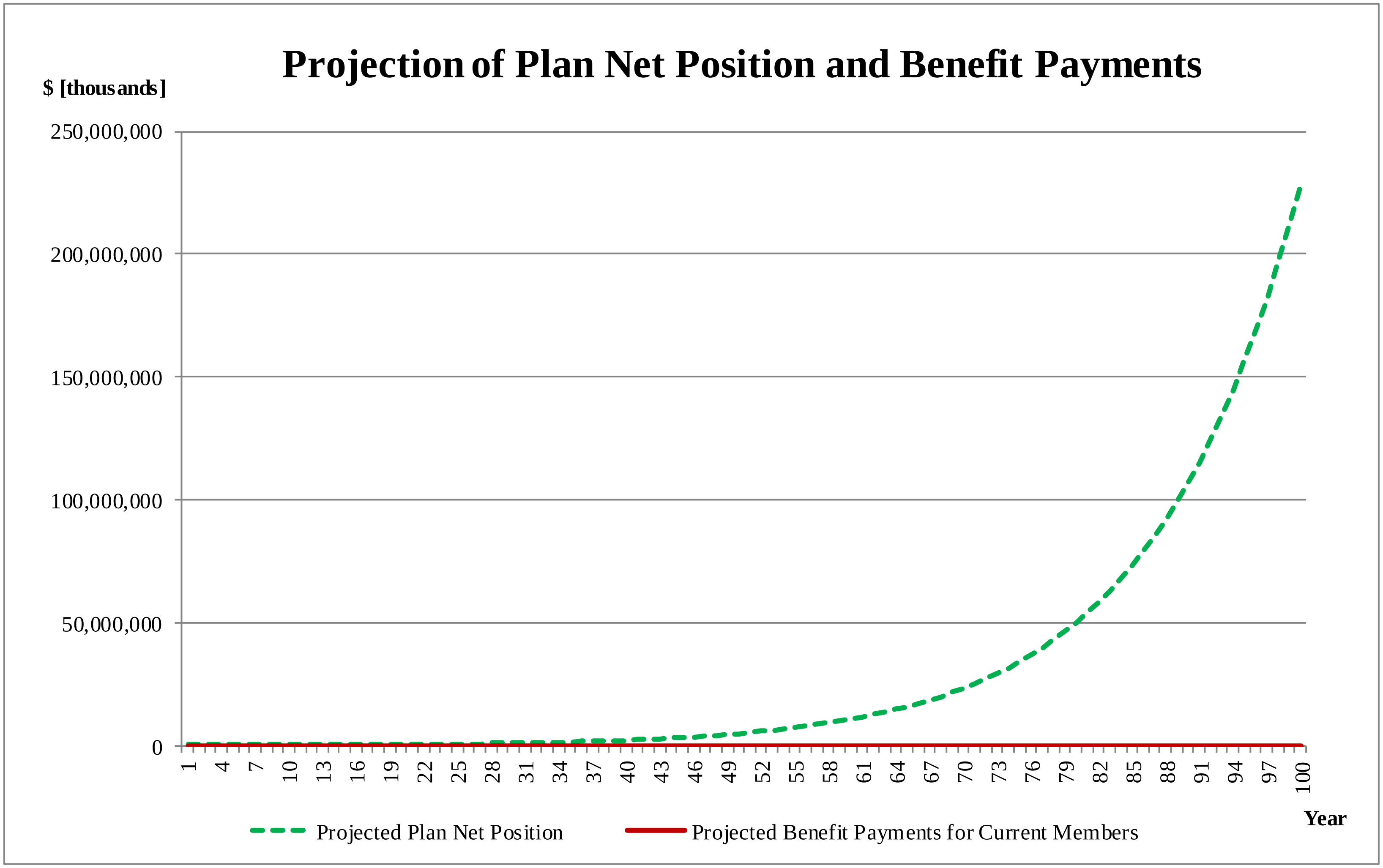
* *For purposes of this projection, based on GASB guidance, we assumed the current contribution rates would continue after the plan becomes fully funded. If we reflected a decrease in contribution rates due to full funding, future assets and contributions would be less than what is shown herein.*

SINGLE DISCOUNT RATE DEVELOPMENT

Present Values of Projected Benefits* (Concluded) *(Dollars in Thousands)*

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=((c)/(1+sdr)^(a-.5)
51	$ 5,111,228	$ 467	$ 467	$ -	$ 10	$ -	$ 10
52	5,514,530	394	394	-	8	-	8
53	5,949,769	334	334	-	6	-	6
54	6,419,453	284	284	-	5	-	5
55	6,926,295	243	243	-	4	-	4
56	7,473,219	208	208	-	3	-	3
57	8,063,387	179	179	-	2	-	2
58	8,700,208	155	155	-	2	-	2
59	9,387,364	134	134	-	2	-	2
60	10,128,827	116	116	-	1	-	1
61	10,928,885	101	101	-	1	-	1
62	11,792,162	88	88	-	1	-	1
63	12,723,652	77	77	-	1	-	1
64	13,728,740	68	68	-	1	-	1
65	14,813,240	60	60	-	-	-	-
66	15,983,424	53	53	-	-	-	-
67	17,246,059	47	47	-	-	-	-
68	18,608,449	41	41	-	-	-	-
69	20,078,474	36	36	-	-	-	-
70	21,664,636	31	31	-	-	-	-
71	23,376,110	27	27	-	-	-	-
72	25,222,794	23	23	-	-	-	-
73	27,215,371	20	20	-	-	-	-
74	29,365,365	16	16	-	-	-	-
75	31,685,212	13	13	-	-	-	-
76	34,188,330	11	11	-	-	-	-
77	36,889,197	9	9	-	-	-	-
78	39,803,434	7	7	-	-	-	-
79	42,947,899	5	5	-	-	-	-
80	46,340,777	4	4	-	-	-	-
81	50,001,694	3	3	-	-	-	-
82	53,951,824	2	2	-	-	-	-
83	58,214,016	2	2	-	-	-	-
84	62,812,921	1	1	-	-	-	-
85	67,775,141	1	1	-	-	-	-
86	73,129,376	1	1	-	-	-	-
87	78,906,596	-	-	-	-	-	-
88	85,140,216	-	-	-	-	-	-
89	91,866,293	-	-	-	-	-	-
90	99,123,730	-	-	-	-	-	-
91	106,954,505	-	-	-	-	-	-
92	115,403,910	-	-	-	-	-	-
93	124,520,819	-	-	-	-	-	-
94	134,357,964	-	-	-	-	-	-
95	144,972,243	-	-	-	-	-	-
96	156,425,050	-	-	-	-	-	-
97	168,782,629	-	-	-	-	-	-
98	182,116,457	-	-	-	-	-	-
99	196,503,657	-	-	-	-	-	-
100	212,027,446	-	-	-	-	-	-
				Totals	$ 1,157,591	$ -	$ 1,157,591

* *For purposes of this projection, based on GASB guidance, we assumed the current contribution rates would continue after the plan becomes fully funded. If we reflected a decrease in contribution rates due to full funding, future assets and contributions would be less than what is shown herein.*



* *For purposes of this projection, based on GASB guidance, we assumed the current contribution rates would continue after the plan becomes fully funded. If we reflected a decrease in contribution rates due to full funding, future assets and contributions would be less than what is shown herein.*

SECTION H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Actuarial Accrued Liability (AAL)
The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability".

Actuarial Assumptions
These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.

Accrued Service
Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Equivalent
A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

Actuarial Cost Method
A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.

Actuarial Gain (Loss)
The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.

Actuarial Present Value (APV)
The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future benefit payments at predetermined rates of interest to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

Actuarial Valuation
The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.

Actuarial Valuation Date
The date as of which an actuarial valuation is performed.

Actuarially Determined Contribution (ADC)
A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

GLOSSARY OF TERMS

Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Amortization Method	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year).
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)	A multiple-employer defined benefit pension plan in which the pension obligations to the employees 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.
Covered-Employee Payroll	The payroll of covered employees, which is typically only the pensionable pay (meets the statutory salary definition) and does not include pay above any pay cap.
Deferred Inflows and Outflows of Resources	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
Discount Rate or Single Discount Rate	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: 1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.
Entry Age Actuarial Cost Method or Entry Age Normal (EAN)	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

GLOSSARY OF TERMS

GASB	The Governmental Accounting Standards Board is an organization that exists with authority to promulgate accounting standards for state and local governmental entities.
Fiduciary Net Position	The fiduciary net position is the value of the net assets of the trust restricted for pension benefits.
Long-Term Expected Rate of Return	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
Money-Weighted Rate of Return	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
Multiple-Employer Defined Benefit Pension Plan	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Municipal Bond Rate	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
Net Pension Liability (NPL)	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
Non-Employer Contribution Entities	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting Statements No. 67 and No. 68 plan members are not considered non-employer contribution entities.
Normal Cost	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
Other Postemployment Benefits (OPEB)	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

GLOSSARY OF TERMS

Total Pension Expense

The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost
2. Interest on the Total Pension Liability
3. Current-Period Changes in Benefit Terms
4. Employee Contributions
5. Projected Earnings on Plan Investments
6. Pension Plan Administrative Expense
7. Other Changes in Plan Fiduciary Net Position
8. Recognition of Outflow (Inflow) of Resources due to the difference between expected and actual in measurement of the Total Pension Liability
9. Recognition of Outflow (Inflow) of Resources due to Assumption Changes
10. Recognition of Outflow (Inflow) of Resources due to the difference between projected and actual earnings on pension plan investments

Total Pension Liability (TPL)

The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued Liability (UAAL)

The UAAL is the difference between actuarial accrued liability and valuation assets.

Valuation Assets

The valuation assets are the plan fiduciary net position used in determining the net position liability of the fund. For purposes of the GASB Statement No. 67, the asset valuation method is equal to the market value of assets.