



STATE OF WISCONSIN
Department of Employee Trust Funds
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CORRESPONDENCE MEMORANDUM

DATE: June 10, 2014
TO: Employee Trust Funds Board
FROM: Robert C. Willett, CPA
Chief Trust Finance Officer
SUBJECT: January 1, 2014 Duty Disability Actuarial Valuation

Staff requests the Employee Trust Funds Board (Board) approve the Duty Disability Plan Actuarial Review as of January 1, 2014.

Deloitte Consulting has completed the January 1, 2014 actuarial valuation of the Duty Disability program. The results of the valuation are as follows (millions \$):

	2014	2013
Actuarial Accrued Liability		
Active Employees	\$ 99	\$ 98
Disabled and Survivors	<u>414</u>	<u>409</u>
Total	513	507
Actuarial Value of Assets	<u>567</u>	<u>490</u>
Unfunded Actuarial Accrued Liability	(54)	17
Funded Ratio	111%	97%
Annual Required Contribution	\$8	\$50

As expected, the plan achieved full funding during 2013. The improved funded status was the result of stable claims experience and greater than assumed investment earnings.

In anticipation of full funding, the Board previously approved a new experience-rated, tiered contribution rate schedule that reduced the annual contribution paid by employers from approximately \$50 million to \$8 million. Contribution rates range from 0.25% of payroll to 6.6% of payroll, depending on the employer's past claims experience.

Reviewed and approved by Robert J. Conlin, Secretary

Electronically Signed 6/12/14

Board	Mtg Date	Item #
ETF	6.26.14	4C

Employers with one or fewer claims or claims representing less than 1.5% of covered payroll pay the lowest contribution rate of 0.25%.

An essential element of the new contribution schedule is an automatic adjustment to rates, based on the actuarially determined Annual Required Contribution (ARC). While the contribution rate structure remains constant, an Actuarial Adjustment Rate is applied to each tier, based on the ARC.

For 2015, the actuarially recommended ARC is \$8,173,000. The actuarial adjustment to the contribution rate schedule will be -0.12%. The contribution rate schedule for 2015 is shown below.

Base Contribution Rate	Actuarial Adjustment Rate	2015 Contribution Rate	# of Employers
0.25%	(0.12%)	0.13%	415
0.50%	(0.12%)	0.38%	43
1.00%	(0.12%)	0.88%	29
1.75%	(0.12%)	1.63%	9
2.75%	(0.12%)	2.63%	9
4.00%	(0.12%)	3.88%	1
5.50%	(0.12%)	5.38%	2
6.60%	(0.12%)	6.48%	2

Staff will be at the Board meeting to answer any questions.

Attachment: State of Wisconsin Duty Disability Program-January 1, 2014 Actuarial Valuation

State of Wisconsin
Duty Disability Program

January 1, 2014
Actuarial Valuation

Executive Summary

The purpose of this report is to provide the actuarial value of assets and actuarial accrued liability of the Wisconsin Duty Disability Program (“the Plan”) as of the valuation date as well as the changes in these values over the past year. This information is important to provide an understanding of the sufficiency of the contribution policy to meet the future obligations of the Plan. This report also provides a version of the information necessary for the Department of Employee Trust Funds’ financial statement disclosures under the Statement of Governmental Accounting Standards No. 43 (GASB 43).

Prior to 2011, the review of the sufficiency of the contribution policy and the GASB 43 disclosure information were contained in separate reports. Prior to this date, the actuarial reviews of the contribution policy were based on the liability for participants receiving benefits, the liability for participants who had become disabled but not yet started receiving benefits, and a reserve for conservatism.

Since 2011, the actuarial valuation has been based on the standards required under GASB 43, which necessitate that the liabilities attributable to the current active population be accrued during their working career. Therefore, a liability is determined for active participants based on expected future disablements in addition to current disabled participants and survivors.

As of January 1, 2014, the Plan is 111% funded on an actuarial basis. With the improvement of the level of funding, the Board had adopted a new contribution policy.

A brief summary of the results of the current and prior GASB 43 valuations are shown below (dollar values in millions):

	<u>2013</u>	<u>2014</u>
Actuarial Accrued Liability		
Actives	\$ 98	\$ 99
Disableds and Survivors	<u>409</u>	<u>414</u>
Total	\$ 507	\$ 513
Actuarial Value of Assets	<u>\$ (490)</u>	<u>\$ (567)</u>
Unfunded Actuarial Accrued Liability	\$ 17	\$ (54)
Funded ratio	97%	111%
Annual Required Contribution (GASB 43)	\$ 50	\$ 8

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June 2014

ACTUARIAL VALUATION OPINION

This report presents the results of the actuarial valuation of the State of Wisconsin Duty Disability Program (“the Plan”) as of January 1, 2014. In our opinion, this report is complete and accurate and represents fairly the actuarial position of the Plan for the purpose stated herein.

The State of Wisconsin provided the participant data, financial information and plan descriptions used in this valuation as of January 1, 2014. The actuary has analyzed the data and other information provided for reasonableness, but has not independently audited the data or other information provided. The actuary has no reason to believe the data or other information provided is not complete and accurate, and knows of no further information that is essential to the preparation of the actuarial valuation.

Actuarial information under Government Accounting Standards Board Statement No. 43 (GASB 43) is for purposes of fulfilling plan financial accounting requirements. The results have been made on a basis consistent with GASB 43 and are based upon assumptions prescribed by the State of Wisconsin.

In our opinion, all costs, liabilities, rates of interest, and other factors under the Plan have been determined on the basis of actuarial assumptions and methods that are each reasonable (or consistent with authoritative guidance) for the purposes herein, taking into account the experience of the Plan and future expectations and that, when combined, represent our best estimate of anticipated experience under the Plan.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operations of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law.

Our scope did not include analyzing the potential range of such future measurements, and we did not perform that analysis.

The undersigned with actuarial credentials collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This report was prepared solely for the benefit and internal use of the plan sponsor. This report is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party other than the plan sponsor.


Any tax advice included in this written communication was not intended or written to be used, and it cannot be used by the taxpayer, for the purpose of avoiding any penalties that may be imposed by any governmental taxing authority or agency.

To the best of our knowledge, no employee of the Deloitte U.S. Firms is an officer or director of the employer. In addition, we are not aware of any relationship between the Deloitte U.S. Firms and the employer that may impair or appear to impair the objectivity of the work detailed in this report.

Deloitte Consulting LLP



Michael de Leon, FCA, ASA, EA, MAAA
Specialist Leader



Rachna Malhotra, FCA, ASA, EA, MAAA
Specialist Master

**State of Wisconsin
Duty Disability Program
January 1, 2014
Actuarial Valuation**

Section I - Background and Comments

The Governmental Accounting Standards Board released the Statement of Governmental Accounting Standards No. 43 (“GASB 43”) and No. 45 (“GASB 45”) in 2004. These statements require trusts (GASB 43) and employers (GASB 45) to accrue the cost of Postretirement Welfare Plans while employees who will receive these benefits are providing services to the employer. The State of Wisconsin was a Phase 1 entity for implementation of GASB 43 and was therefore required to adopt GASB 43 for the financial period beginning January 1, 2006. The purpose of this report is to provide the information required under GASB 43 to be disclosed on the Plan’s financial statements for the financial period ending December 31, 2014. This report also provides the information necessary to provide an understanding of the sufficiency of the contribution policy to meet the future obligations of the Plan.

Plan Overview

The State of Wisconsin provides duty disability benefits for protective occupation participants at no cost to the employees. There were no changes to the plan provisions since the previous valuation. The substantive plan benefits are described in Section XI of this report.

Assumptions

Where applicable, the assumptions used in this actuarial valuation were based on the assumptions used for the WRS actuarial valuation as of December 31, 2012 and the recent experience study performed by GRS. Some additional or differing assumptions were required to handle issues unique to the plan and estimate the potential offsets to the Duty Disability benefits. The actuarial methods and assumptions are described in Section X of this report.

Actuarial Experience

During 2013, the market value of assets experienced an estimated investment return of 13.3%. Compared to the investment return assumption of 7.2%, there was a market value gain of about 5.6% or \$31.9 million. The Actuarial Value of Assets uses a method to smooth investment gains and losses over a five-year period. On an actuarial value basis, there was an asset gain of \$20.6 million from the partial recognition of market value gains and losses from 2010 to 2014. The effective rate of return on investments on an actuarial value basis was 10.9%.

There was also a liability gain of \$9.1 million during 2013 primarily due to fewer than expected new disablements over the past year.

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Funding Policy

The program is funded entirely by employer contributions, which vary by experience. The contribution policy does not meet the GASB 43 requirements for determining an Annual Required Contribution (ARC), which requires using a consistent amortization policy for the unfunded actuarial accrued liability; therefore, an amortization policy for the purpose of determining the ARC under GASB 43 was created. The initial amortization period, which was selected to approximate the actual contribution policy as of January 1, 2006, has been completed. Subsequent gains and losses were amortized over 15 years. However, as a result of the overfunded status of the Plan, the amortization bases have been re-set as of January 1, 2014 and the unfunded liability is now being amortized over 30 years.

The actual contribution policy resulted in employer contributions that were \$4.1 million more than the ARC in 2013. Additional details about the policy used to determine contributions under this plan can be found in Section XI.

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Section II – Summary of Actuarial Valuation Results

Presented below are the actuarial valuation results for the State of Wisconsin Duty Disability Program. Dollar amounts are in thousands.

	<u>January 1, 2013</u>	<u>January 1, 2014</u>
a. Actuarial Accrued Liability		
- Actives	\$ 98,428	\$ 98,718
- Disableds and Survivors	<u>408,653</u>	<u>414,447</u>
- Total	\$ 507,081	\$ 513,165
b. Actuarial Value of Assets	\$ (490,137)	\$ (567,329)
c. Unfunded Actuarial Accrued Liability (UAAL): (a) + (b)	\$ 16,944	\$ (54,164)
d. Funded ratio: (b / a)	96.7%	110.6%
e. UAAL as a percentage of covered payroll: (c / h.2)	1.3%	-4.2%
f. Annual Required Contribution (ARC)		
- Normal Cost	\$ 10,469	\$ 10,594
- Amortization Payment	35,944	(2,970)
- Interest to End of Year	<u>3,342</u>	<u>549</u>
- Total	\$ 49,755	\$ 8,173
g. Discount rate	7.2%	7.2%
h. Census data used		
1. Count of Covered Participants		
- Actives	21,976	22,018
- Disableds and Survivors*	<u>973</u>	<u>981</u>
- Total	22,949	22,999
2. Covered payroll	\$ 1,279,908	\$ 1,302,765
3. Expected Benefit Payments	\$ 31,352	\$ 32,307

* Includes 49 and 50 disabled participants with zero benefits in 2013 and 2014, respectively.

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Section III – Market Value of Assets and Summary of Transactions

A summary of the transactions during 2013 of the assets for the State of Wisconsin Duty Disability Program is shown below. Dollar amounts are in thousands.

1. Market value of assets as of January 1, 2013		\$ 509,717
2. Income		
Employer Contributions	\$ 53,902	
Investment Income	<u>69,890</u>	
Total Income		\$ 123,792
3. Disbursements		
Benefit Payments	\$ 31,427	
Expenses	<u>459</u>	
Total Disbursements		\$ 31,886
4. Net Change in Assets: (2) – (3)		\$ 91,906
5. Market Value of Assets as of December 31, 2013 (1) + (4)		\$ 601,623
6. Estimated Rate of Investment Return		13.33%

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Section IV – Actuarial Value of Assets

The following table develops the Actuarial Value of Assets as of January 1, 2014. Dollar amounts are in thousands.

1. Market value of assets as of January 1, 2013	\$ 509,717
2. Contributions*	53,902
3. Benefit payments*	(31,427)
4. Assumed earnings at 7.20% on (1), (2), and (3)	<u>37,509</u>
5. Expected assets at January 1, 2014: (1) + (2) + (3) + (4)	\$ 569,701
6. Actual assets at January 1, 2014	\$ 601,623
7. Investment gain (loss)	
a. Gain (loss) for 2013: (6) – (5)	\$ 31,922
b. Gain (loss) for 2012	28,608
c. Gain (loss) for 2011	(28,782)
d. Gain (loss) for 2010	15,529
8. Gain (loss) not yet reflected in actuarial value of assets	
a. 80% of 2013 gain (loss)	\$ 25,536
b. 60% of 2012 gain (loss)	17,165
c. 40% of 2011 gain (loss)	(11,513)
d. 20% of 2010 gain (loss)	<u>3,106</u>
e. Total gain (loss) not yet reflected in actuarial value of assets:	34,294
9. Actuarial value of plan assets as of January 1, 2014: (6) - (8e)	\$ 567,329
10. Estimated rate of return on actuarial value of assets	10.91%

* Contributions and benefit payments are assumed to be paid evenly throughout the year.

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Section V – Development of Unfunded Actuarial Accrued Liability

Presented below is the development of the Unfunded Actuarial Accrued Liability as of January 1, 2014, which is the excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The Actuarial Accrued Liability is the portion of the Present Value of Future Benefits (PVFB) accrued to date. The Present Value of Future Normal Costs represents the portion of the PVFB expected to accrue in the future, based on the current population. Dollar amounts are in thousands.

a.	Present Value of Future Benefits	
	Actives	\$ 165,712
	Disableds and Survivors	<u>414,447</u>
	Total	\$ 580,159
b.	Present Value of Future Normal Costs	\$ 66,994
c.	Actuarial Accrued Liability: (a) – (b)	\$ 513,165
d.	Actuarial Value of Assets	\$ 567,329
e.	Unfunded Accrued Actuarial Liability as of January 1, 2014: (c) – (d)	\$ (54,164)

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Section VI – Actuarial Experience

Actuarial gains and losses arise from experience different from that assumed, changes in actuarial assumptions and methods, and changes in plan provisions. The following summarizes the changes in the Unfunded Actuarial Accrued Liability (UAAL) due to these sources from January 1, 2013 to January 1, 2014. Dollar amounts are in thousands.

a.	UAAL as of January 1, 2013	\$ 16,944
b.	Normal Cost for 2013	10,469
c.	Annual Required Contribution for 2013	(49,755)
d.	Interest on UAAL and Normal Cost at 7.2%	<u>1,974</u>
e.	Expected UAAL as of January 1, 2014	\$ (20,368)
f.	2013 (Gain)/Loss	<u>(33,796)</u>
g.	UAAL as of January 1, 2014	\$ (54,164)
Sources of 2014 (Gain)/Loss*		
	Demographic (gain)/loss	\$ (9,091)
	(Gain)/Loss due to assumption changes	0
	(Gain)/Loss due to (over)/underpayment of ARC	(4,147)
	(Gain)/loss due to asset returns	<u>(20,558)</u>
	Total	\$ (33,796)

* See Section I for additional details regarding the sources of the 2013 gains and losses.

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Section VII – Determination of Annual Required Contribution

GASB 43 requires the disclosure of the Annual Required Contribution. The following is a brief explanation of the components of the Annual Required Contribution:

- **Normal Cost:** The portion of the total present value of benefits attributed to employee service during the current fiscal year.
- **Amortization Payments:** When in an underfunded position, closed 15-year level percent of pay amortizations of experience gains and losses, assumption changes, and contribution deficiencies or excess contributions (contributions less than or greater than the Annual Required Contribution, respectively). When in an overfunded position, open, 30-year level percent of pay amortization of the unfunded actuarial accrued liability.

Presented below is an illustration of the expected Annual Required Contribution for the fiscal year ending December 31, 2014. Dollar amounts are in thousands.

**Annual Required Contribution
for Fiscal Year Ending
December 31, 2014**

a.	Normal Cost	\$ 10,594
b.	Amortization Payment*	(2,970)
c.	Interest to End of Year	<u>549</u>
d.	Annual Required Contribution	\$ 8,173

*As a result of the plan being overfunded, all prior bases as of December 31, 2013 have been eliminated. The unfunded actuarial accrued liability as of January 1, 2014 is now being amortized over a 30-year period as a level percent of pay.

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Section VIII - Disclosure Information Pursuant to Statement No. 43 of the Governmental Accounting Standards Board

Governmental Accounting Standards Board (“GASB”) Statement No. 43 requires disclosure of notes to the financial statements and supplementary information that includes information shown in two schedules, the Schedule of Funding Progress and the Schedule of Employer Contributions. Table A shows the Schedule of Funding Progress. Table B shows the Schedule of Employer Contributions.

**Table A
GASB No. 43 Schedule of Funding Progress
(000’s)**

Actuarial <u>Valuation Date</u>	(a) Actuarial Value <u>of Assets</u>	(b) Actuarial Accrued <u>Liability (AAL)</u>	(c) Unfunded Actuarial Accrued Liability (UAAL) <u>(b - a)</u>	(d) Funded Ratio <u>(a / b)</u>	(e) Covered <u>Payroll</u>	(f) UAAL as a Percentage of Covered Payroll <u>(c) / (e)</u>
January 1, 2006	\$ 222,692	\$ 427,089	\$ 204,397	52.1%	\$ 1,144,529	17.9%
January 1, 2008	311,778	471,668	159,890	66.1	1,257,666	12.7
January 1, 2010	373,048	512,785	139,737	72.7	1,370,978	10.2
January 1, 2011	412,988	499,034	86,046	82.8	1,297,690	6.6
January 1, 2012	449,177	476,979	27,802	94.2	1,285,854	2.2
January 1, 2013	490,137	507,081	16,944	96.7	1,279,908	1.3
January 1, 2014	567,329	513,165	(54,164)	110.6	1,302,765	-4.2

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Section VIII - Disclosure Information Pursuant to Statement No. 43 of the Governmental Accounting Standards Board (continued)

Table B
GASB No. 43 Schedule of Employer Contributions
(000's)

<u>Year Ended</u>	(a) <u>Annual Required Contribution</u>	(b) <u>Employer Contribution</u>	(c) <u>Percentage Contributed (b / a)</u>
December 31, 2006	\$ 44,397	\$ 44,566	100.4%
December 31, 2007	46,174	47,765	103.4
December 31, 2008	47,684	50,574	106.1
December 31, 2009	50,193	51,556	102.7
December 31, 2010	53,181	51,861	97.5
December 31, 2011	50,364	52,335	103.9
December 31, 2012	48,377	52,978	109.5
December 31, 2013	49,755	53,902	108.3
December 31, 2014	8,173	TBD	TBD

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Section IX – 10-Year Projection of Employer Benefit Payments

Presented below are the projected employer benefit payments for the next ten years starting in 2015 based on the current plan design. These projected benefit payments are based on the actuarial assumptions shown in Section X. If actual experience differs from that expected by the actuarial assumptions, the actual employer benefit payments will vary from those presented below. Dollar amounts are in thousands.

<u>Year</u>	<u>Total</u>
2015	\$ 33,855
2016	35,382
2017	36,876
2018	38,341
2019	39,757
2020	41,096
2021	42,359
2022	43,564
2023	44,703
2024	45,765

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Section X - Summary of Actuarial Methods and Assumptions

Actuarial Cost Method

The Actuarial Cost Method used in this valuation to determine the Actuarial Accrued Liability and the Annual Required Contribution (ARC) was the Projected Unit Credit Method with service prorated to date of disability.

Under this method, the total present value of benefits is determined by projecting the benefit to be paid after the disability date and discounting those amounts to the valuation date. The Normal Cost is computed by dividing the total present value of benefits by the participant's total service (actual plus expected service) to date of disability.

The Actuarial Accrued Liability under this method represents the total present value of benefits multiplied by the ratio of the participant's actual service to date to expected service at decrement.

The Actuarial Accrued Liability for participants currently receiving payments is calculated as the actuarial present value of future benefits expected to be paid. No normal cost is payable for these participants.

This actuarial cost method is one of the GASB 43 approved methods.

Actuarial Value of Assets

The Actuarial Value of Assets is determined using a Five-Year Smoothed Market Value. Under this method, the Actuarial Value of Assets equals the Market Value less a decreasing fraction (4/5, 3/5, 2/5, etc.) of the prior five years of investment gains and losses compared to the assumed rate of investment return (currently 7.20%).

Amortization of Unfunded Accrued Actuarial Liability

The Unfunded Accrued Actuarial Liability (UAAL) is the excess of the Accrued Actuarial Liability over the Actuarial Value of Assets. This excess will be amortized as follows:

- When in an underfunded position, closed 15-year level percent of pay amortizations of experience gains and losses, assumption changes, and contribution deficiencies or excess contributions (contributions less than or greater than the Annual Required Contribution, respectively).
- When in an overfunded position, open, 30-year level percent of pay amortization of the unfunded actuarial accrued liability.

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Valuation Date: January 1, 2014

Census Date: January 1, 2014

Discount Rate: 7.20% (net of expenses)

Salary Increases: Salary increase assumptions for individual active members are shown for sample services below. Part of the assumption for each age is for merit and longevity increase, and another 3.2% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

% Merit & Longevity Increase Next Year

<u>Service</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
1	4.75%	5.50%
2	4.75	5.50
3	4.10	4.66
4	3.45	3.82
5	2.80	2.98
10	1.14	0.88
15	0.84	0.54
20	0.74	0.44
25	0.64	0.34
30	0.54	0.24

Payroll Growth: 3.2% annually

Pre-Retirement Mortality: This assumption applies to death while in service. Rates are based on the recent experience study performed by GRS. Sample rates of mortality are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
25	0.0184%	0.0097%
35	0.0398	0.0230
45	0.0717	0.0519
55	0.2228	0.1345

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Post-Retirement Mortality: This assumption applies to spouse mortality. Rates are based on the recent experience study performed by GRS. Sample rates of mortality are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
45	0.1303%	0.0943%
55	0.4050	0.2445
65	0.8752	0.5408
75	2.4683	1.6645
85	8.4634	6.2186

Post-Disability Mortality: This assumption applies to death after disablement. Rates are based on the recent experience study performed by GRS. Sample rates of mortality are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
45	0.2512%	0.1576%
55	0.6654	0.4021
65	1.9079	1.0968
75	6.3302	3.7543
85	18.7785	13.1729

Disability: Percent of employees expected to become disabled each year are as follows:

<u>Age</u>	<u>Rate of Disablement</u>
20	0.01%
25	0.02
30	0.09
35	0.13
40	0.18
45	0.24
50	0.35
55	0.20
60	0.20

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Withdrawal: Percent of employees expected to terminate each year within the first 10 years of employment are as follows:

<u>Service</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
0	15.0%	4.0%
1	7.0	3.5
2	4.3	2.1
3	3.8	1.3
4	3.4	1.2
5	2.6	1.1
6	2.5	1.0
7	2.3	0.9
8	2.0	0.8
9	1.7	0.7

Percent of employees expected to terminate each year after the first 10 years of employment are as follows:

<u>Age</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
25	1.58%	0.70%
30	1.58	0.70
35	1.38	0.67
40	1.18	0.62
45	1.07	0.57
50	1.02	0.52
55+	1.00	0.50

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Retirement: Percent of employees expected to retire each year are as follows.

<u>Age</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
50	6.0%	3.5%
51	7.0	3.8
52	8.0	4.5
53	23.0	17.0
54	18.0	25.0
55	17.0	21.0
56	16.0	27.0
57	16.0	30.0
58	16.0	30.0
59	16.0	30.0
60	18.0	26.0
61	18.0	15.0
62	22.0	20.0
63	29.0	40.0
64	16.0	40.0
65	30.0	40.0
66	20.0	40.0
67	15.0	40.0
68	25.0	40.0
69	20.0	40.0
70	100.0	100.0

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Benefit Offsets: There are many potential offsets to the member’s basic benefit. The following assumptions estimate those offsets.

<u>Offset</u>	<u>Valuation Estimate</u>
WRS Benefits and LTDI	<p>Assume 20% of members qualify for a WRS disability benefit or LTDI.</p> <p>Assume 10% of members under age 50 who do not qualify for a WRS disability benefit or LTDI elect to receive a WRS separation benefit.</p> <p>Assume other members commence a WRS retirement benefit at age 50 (requirement of plan).</p> <p>Benefits are based on plan provisions and actuarial assumptions stated above.</p>
Social Security	<p>Assume 10% of members covered by Social Security qualify for a Social Security disability award.</p> <p>Benefits are based on Social Security formula and assuming:</p> <ul style="list-style-type: none"> • 3.2% pay increases • 3.2% Social Security Taxable Wage Base increases • 2.5% cost-of-living adjustments
Unemployment Compensation:	<p>None (No offsets observed)</p>
Combined Offset from: <ul style="list-style-type: none"> • Worker’s Compensation • Employer Earnings • Other Earnings 	<p>Assume 3% reduction to 75%/80% target benefit (Observed reduction from all these offsets was about 3.1% of target benefit. This observation does not include a review of income tax returns or one-time earnings offsets as observation is taken from the December Payroll of each year.)</p>

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Active Members Included:	Only currently eligible WRS active members were included.
Expenses:	None included.
Future Service:	All members earn a full year of service in each calendar year.
Marital Status:	100% of members are married. Husbands are assumed to be three years older than their wives.
Dependents:	No dependent children are assumed to be covered at retirement.
Annual Benefit Increases:	Before age 60 (salary-indexed increases): 3.20% After age 60 (WRS dividend-based increases): 2.10%
Benefit Adjustments for Current Inactives:	None.
Changes Since Prior Valuation:	None

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Section XI - Summary of Substantive Plan Provisions

Participants Included: State and local protective occupation active employees, and retirees and their survivors who are currently receiving duty disability program benefits

Benefit Eligibility: Member must satisfy all of the following

- injured while performing duties or contracted disease due to occupation
- disability is work-related
- disability is expected to be permanent

Also, the disability must result in one of the following

- reduction in pay or position
- assignment to light duty
- retirement
- impairs promotional opportunities

Member Benefits: 80% of salary (75% for local employees who are not eligible for a Social Security disability award and not eligible for a WRS disability benefit or LTDI). For local members who have been terminated but not approved for WRS disability or LTDI only, the percentage is reduced by 0.5% for each month of WRS creditable service over 25 years. For local members who have not been terminated or have been approved for WRS disability or LTDI, the percentage is reduced by 0.5% per month for every month over 30 years. For all members, the offsets are as follows (with mandatory commencement ages in parenthesis if applicable):

- Any Social Security benefit based upon the participant's work record (age 62; if not already receiving SSDI)
- Unemployment compensation
- Worker's Compensation
- Any WRS retirement, separation, or disability benefit based upon member's earnings and service (age 50)
- all earnings from the employer where the disability occurred
- a percent of other earnings as follows:
 - 1/3 of earnings less than 40% of salary

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Section XI - Summary of Substantive Plan Provisions (continued)

- 1/2 of earnings between 40% and 80% of salary
- 2/3 of earnings over 80% of salary
- a 5% reduction for non-state members who have not filed a Worker's Compensation claim for permanent disability

**Annual Increases in
Member Benefits:**

Individuals receive an annual increase of either 1 or 2 below.

- 1) Social Security salary index for the following individuals:
 - under age 60, or
 - older than 60 and receiving a regular disability retirement or regular LTDI, or
 - receiving a duty disability death benefit based on 1998 law.
- 2) Prior year's WRS core annuity dividend for the following individuals:
 - over age 60 and receiving special disability retirement or special LTDI, or
 - over age 60 not receiving any regular disability retirement or LTDI

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Section XI - Summary of Substantive Plan Provisions (continued)

- Survivor Benefits:**
- State employees and pre-5/3/88 applications for local employees
 - 1/3 of the participant's monthly salary at time of death to surviving spouse (or domestic partner – State employees only), plus
 - \$15/month to the guardian of each unmarried child under the age of 18
 - not to exceed 65% of the participant's monthly salary at time of death
 - no annual adjustments
 - Post-5/3/88 applications for local employees
 - 1/2 of the participant's monthly salary at time of death to surviving spouse or domestic partner, less other income sources that are based on the participant's earnings record, plus
 - 1/10 of the participant's monthly salary at time of death to each unmarried child under the age of 18
 - not to exceed 70% of the participant's monthly salary at time of death less offsets for other income
 - subject to annual adjustments based on salary indexing
 - Cancer Presumptive Law (state and local)
 - 70% of the participant's monthly salary at time of death to surviving spouse or domestic partner, less other income sources that are based on the participant's earnings record
 - 1/10 of the participant's monthly salary at time of death to the guardian of each unmarried child under the age of 18, as long as there is no surviving spouse or domestic partner
 - there is no maximum on dependent benefits
 - subject to annual adjustments based on salary indexing
- Survivor benefits are offset by Chapter 102 Worker's Compensation death benefits
- Contributions:**
- The contribution policy was updated in June of 2013 to reflect the funded position of the Plan. The Plan is funded entirely by Employer contributions, which vary by experience as detailed in the following table. The contribution rate is adjusted by an Actuarial Adjustment Rate (AAR), updated each year such that

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expected employer contributions equal the current year's ARC.

Section XI - Summary of Substantive Plan Provisions (continued)

Contribution Rate Schedule

Employers pay the lower of the contribution rate associated with their claims as a percentage of payroll or their number of claims

Contribution Rate* (as a % of Covered Payroll)	Claims as a % of Covered Payroll	Number of Claims
0.25%	≤ 1.5%	1
0.50%	> 1.5% but ≤ 3.0%	2
1.00%	> 3.0% but ≤ 4.5%	3
1.75%	> 4.5% but ≤ 6.0%	4
2.75%	> 6.0% but ≤ 7.5%	5
4.00%	> 7.5% but ≤ 9.0%	6
5.50%	> 9.0% but ≤ 10.5%	7
6.60%	Claims > 10.5%	8 or more

* Contribution rates shown before adjusting for the Actuarial Adjustment Rate (AAR); for FY14, the AAR was -0.04%.

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Section XII - Summary of Participant Demographic Information

The participant data used in the valuation was provided by the State of Wisconsin as of January 1, 2014. While the participant data was checked for reasonableness, the data was not audited, and the valuation results presented in this report are dependent upon the accuracy of the participant data provided. The table below presents a summary of the basic participant information for the active and inactive participants covered under the terms of the Plan.

	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>	<u>Total</u>
a. Active participants			
Count	19,285	2,733	22,018
Average Age	40.8	41.3	40.8
Average Service	12.9	14.4	13.1
Average 2014 Pay	\$57,432	\$71,577	\$59,188
b. Disabled participants and Survivors*			
Count			981
Average Age			61.0
Average Current Benefit			\$32,552

* Includes 50 disabled participants with zero benefits.

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Section XII - Summary of Participant Demographic Information (continued)

Distribution by Age, Service and Average 2014 Pay – Actives – Protective without Social Security

Service Age Group	Under 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30+		All Years	
	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay
Under 25	64	\$ 40,051	1	\$ 66,806	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	65	\$ 40,463
25 to 29	207	\$ 50,174	103	68,716	1	71,806	-	-	-	-	-	-	-	-	311	56,384
30 to 34	118	\$ 52,169	198	68,434	71	70,215	-	-	-	-	-	-	-	-	387	63,801
35 to 39	37	\$ 54,840	98	69,423	214	72,298	84	75,269	-	-	-	-	-	-	433	70,732
40 to 44	15	\$ 44,043	50	71,996	142	73,366	240	76,561	87	79,921	-	-	-	-	534	74,918
45 to 49	7	\$ 52,743	12	67,314	65	73,794	144	77,735	172	79,058	57	82,038	1	83,380	458	77,565
50 to 54	6	\$ 48,686	6	72,716	21	74,646	61	77,603	122	79,233	141	86,255	41	90,122	398	81,792
55 to 59	3	\$ 93,663	4	75,654	2	74,995	13	79,345	46	79,659	39	84,191	22	82,949	129	81,688
60 to 64	-	\$ -	-	-	1	77,718	2	96,366	5	77,917	3	73,687	7	90,648	18	84,202
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	457	\$49,753	472	\$69,162	517	\$72,609	544	\$76,929	432	\$79,332	240	\$84,761	71	\$87,856	2,733	\$71,577

Distribution by Age, Service and Average 2014 Pay – Actives – Protective with Social Security

Service Age Group	Under 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30+		All Years	
	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay
Under 25	739	\$ 29,954	19	\$ 44,918	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	758	\$ 30,329
25 to 29	1,511	\$ 42,185	829	54,888	17	45,930	-	-	-	-	-	-	-	-	2,357	46,680
30 to 34	684	\$ 40,349	1,456	57,615	761	58,453	23	55,611	-	-	-	-	-	-	2,924	53,779
35 to 39	338	\$ 39,580	624	55,727	1,435	61,161	658	63,458	6	59,575	-	-	-	-	3,061	58,161
40 to 44	222	\$ 40,317	350	53,642	851	59,123	1,603	65,028	484	68,690	5	57,534	-	-	3,515	61,398
45 to 49	138	\$ 35,210	221	50,947	475	56,484	758	63,302	1,124	71,345	354	74,213	1	61,235	3,071	64,297
50 to 54	87	\$ 34,924	131	47,135	300	53,244	343	62,452	535	69,470	616	76,006	164	77,442	2,176	65,852
55 to 59	53	\$ 29,693	102	48,423	175	51,280	162	57,408	174	66,146	147	69,086	173	73,829	986	60,065
60 to 64	26	\$ 22,444	32	44,330	79	49,229	65	54,126	56	59,985	46	65,195	65	71,415	369	55,310
65 & Up	14	12,731	9	35,746	15	44,649	9	46,861	5	73,749	5	63,624	11	73,103	68	45,330
Total	3,812	\$38,310	3,773	\$55,103	4,108	\$58,344	3,621	\$63,496	2,384	\$69,715	1,173	\$74,042	414	\$74,832	19,285	\$57,432

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Section XII - Summary of Participant Demographic Information (continued)

Distribution by Age, Service and Average 2014 Pay – Actives – Total

Service	Under 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30+		All Years	
	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay
Under 25	803	30,759	20	\$ 46,012	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	823	\$ 31,129
25 to 29	1,718	43,148	932	56,416	18	47,368	-	-	-	-	-	-	-	-	2,668	47,811
30 to 34	802	42,088	1,654	58,910	832	59,457	23	55,611	-	-	-	-	-	-	3,311	54,950
35 to 39	375	41,086	722	57,586	1,649	62,606	742	64,795	6	59,575	-	-	-	-	3,494	59,719
40 to 44	237	40,553	400	55,936	993	61,160	1,843	66,530	571	70,401	5	57,534	-	-	4,049	63,181
45 to 49	145	36,057	233	51,790	540	58,567	902	65,606	1,296	72,369	411	75,298	2	72,307	3,529	66,019
50 to 54	93	35,812	137	48,255	321	54,644	404	64,739	657	71,283	757	77,915	205	79,978	2,574	68,316
55 to 59	56	33,120	106	49,450	177	51,548	175	59,038	220	68,972	186	72,253	195	74,858	1,115	62,567
60 to 64	26	22,444	32	44,330	80	49,586	67	55,387	61	61,455	49	65,715	72	73,285	387	56,654
65 & Up	14	12,731	9	35,746	15	44,649	9	46,861	5	73,749	5	63,624	11	73,103	68	45,330
Total	4,269	\$39,535	4,245	\$56,666	4,625	\$59,939	4,165	\$65,250	2,816	\$71,190	1,413	\$75,863	485	\$76,738	22,018	\$59,188

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Section XII - Summary of Participant Demographic Information (continued)

Distribution by Age and Average Current Benefits – Disableds and Survivors

Age Group	Count*	Average Current Benefit
Under 35	2	\$ 46,362
35 to 39	17	38,491
40 to 44	36	38,514
45 to 49	75	45,425
50 to 54	131	37,607
55 to 59	171	34,734
60 to 64	181	32,475
65 to 69	158	27,058
70 to 74	109	26,872
75 to 79	66	23,218
80 to 84	29	25,465
85 to 89	6	29,041
Total	981	32,552

* Includes 50 disabled participants with zero benefits.