

# The State of Wisconsin Employee Trust Funds Board



Section 40.65  
Duty Disability Program  
Actuarial Review  
As of December 31, 2004

## Table of Contents

I. Overview	1
II. 2004 Experience Review	2
III. Estimated Liability as of December 31, 2004	4
IV. Analysis of Funding Levels	6
Exhibit 1	7
Exhibit 2	8
Exhibit 3	9
Exhibit 4	10

# I. Overview

The purpose of this report is to summarize our review of the Section 40.65 Duty Disability Plan. Included is a brief review of the Plan's experience during 2004, an estimate of the State's liability as of December 31, 2004 and an analysis of current funding levels.

In preparing this report, we have relied on claim information provided by the Department of Employee Trust Funds. We have not audited this information, but have relied on it as submitted after making reasonableness checks, as we deemed appropriate under the circumstances.

The results of this review indicate that the Duty Disability program has assets of \$194.6 million and estimated liabilities of \$347.6 million as of December 31, 2004. The accrued funding shortfall is \$153.0 million, which represents about 14% of the \$1,061.4 million in covered payroll. This is a decrease of 3% from last year. The asset balance does not include 6.5 million in deferred market losses which will be smoothed over the next five years. This number is much less than last year.

The present premium level continues to meet the Board's funding policy. Therefore, no premium increase is recommended at this time.

The remainder of this report summarizes the review in more detail. A number of assumptions have been made in estimating the State's liability, which are described throughout the report and summarized in Exhibit 2.

## II. 2004 Experience Review

### Fund Balance

During 2004 the fund balance increased from \$163,379,523 to \$194,602,196; Investment earnings were \$13,960,608 with paid claims and administrative expenses totaling \$23,514,820. These components are shown in the following table along with figures for the prior years for comparison purposes.

Year	Contributions	Benefits		Admin Charge	Interest Credit (Charge)	Ending Balance	Average Contribution Rate
		Benefits Annual \$	% Increase				
1984	\$	\$	%	\$	\$	\$57,193	-%
1985	633,501	1,343,755	-	0	-160,822	-813,893	0.2
1986	1,259,167	2,474,345	84	0	-417,606	-2,446,677	0.4
1987	1,739,234	3,262,157	32	0	-416,385	-4,385,985	0.5
1988	3,939,946	4,662,629	43	348,018 #	-486,800	-5,943,496	1.1
1989	5,257,471	5,906,152	27	144,629	-1,121,646	-7,858,452	1.4
1990	9,125,470 *	7,178,185	22	75,481	-701,016	-6,687,664	2.1
1991	10,653,019	8,188,603	14	130,203	-773,655	-5,127,106	2.3
1992	12,244,608	9,288,487	13	120,462	-476,392	-2,767,839	2.5
1993	14,410,852	10,392,896	12	160,981	-105,814	983,322	2.8
1994	16,242,342 *	11,786,839	13	161,127	219,777	5,524,539	3
1995	19,738,999 *	12,748,266	8	183,922	1,007,019	13,322,102	3.4
1996	20,670,838 *	13,527,755	6	355,847	2,087,053	22,196,391	3.3
1997	21,924,843 *	14,432,206	7	119,017	3,060,768	32,630,779	3.3
1998	26,205,796	15,484,812	7	235,334	4,795,610	47,912,039	3.66
1999	26,585,142	16,802,277	9	612,691	7,020,204	66,102,416	3.88
2000	32,188,231	18,337,714	9	153,551	7,273,165	87,072,547	3.88
2001	35,120,406	19,857,704	8	290,919	10,127,493 <sup>1</sup>	112,171,824	3.88
2002	36,662,252	21,592,121	9	349,523	9,696,940 <sup>2</sup>	136,589,372	3.88
2003	39,308,775	22,984,246	6	460,353	10,925,975 <sup>3</sup>	163,379,523	3.88
2004	40,776,886	23,176,779	1	338,041	13,960,608 <sup>4</sup>	194,602,196	3.88

\* Includes adjustment to beginning balance.

<sup>1</sup> Includes a \$5,601,954 adjustment for 1999 Wisconsin Act 11.

<sup>2</sup> Includes a \$3,838,988 adjustment for understated interest during 2002 (including Wisc Act 11).

<sup>3</sup> Includes a \$215,444 adjustment for understated interest during 2003 (including Wisc Act 11).

<sup>4</sup> Includes a \$63,179 adjustment for understated interest during 2004 (including Wisc Act 11).

# Includes 3 1/2 years of administrative expense charges.

As of December 31, 2004 there were 838 claims in payment status with annual benefits totaling \$23,677,016. 798 of the claims were for disabled participants and 40 were for beneficiaries. The number of claims and benefits being paid increased over last year from 820 and \$23,177,416 respectively. The following table shows annual benefits as a dollar amount and as a percentage of payroll by recipient type.

	Claims in Payment Status		
	No.	Annual \$	% of Payroll
Disabled Participants	798	\$23,155,832	2.18%
Survivor Beneficiaries	40	521,184	0.05%
Total	838	\$23,677,016	2.23%

# III. Estimated Liability as of December 31, 2004

The liability for outstanding claims under the Duty Disability program was estimated in two parts - reported claims and incurred claims not yet in pay status. The following paragraphs summarize the methods used and results.

## Claims in Pay Status

The total liability for claims with a pay status of \$312 million is 3.41% higher than the liability as of 12/31/03. The \$10.3 million increase is the result of changes in the number and characteristics of the claims.

## Incurred Claims Not Yet in Pay Status

A review of recent claims data showed lags in the time between when claims are incurred and when they are reported and reach pay status. Sixty-five claims, which are likely to be approved for pay status, were in either pending or appeal status as of 12/31/04. This includes 9 claims for which applications were received during the first two months of 2005. The plan was changed during 1998 so that its liability begins on the later of the date the employee becomes disabled or the application is received. The application must be completed within one year from date of receipt. Previously there was no time limit. It is important to note that while this changes the date after which the plan liability begins to increase, it does not change the date upon which an actuary considers the claim to be incurred. Hence, if disability occurs in late 2004, but an application for benefits is not filed until early in 2005; the claim is still considered to be incurred at the end of 2004. The IBNR portion of the liability would reflect that benefits were not payable until the application is received.

The IBNR liability for 12/31/04 of \$35.2 million was developed using this group of claims that are currently either in appeal or pending status, average reserve factors, and a small load for conservatism.

## Results

The total estimated liability as of December 31, 2004 for the Duty Disability program is \$347,554,714 developed as follows:

	Offsets	Annual \$
Annual Benefits Before Offsets		37,463,223.78
Offsets		
Social Security	2,743,464.00	
Unemployment Compensation	0	
Worker's Compensation	550,503	
WRS Benefits		
- Separation	949,964	
- Disability	4,486,443	
- Normal Retirement	5,074,143	
Earnings	669,686	
Total Offsets	14,474,203.91	
Adjustment for offsets greater than base benefit	687,995.76	
Net Offsets	13,786,208.15	
Annual benefits after offsets		\$23,677,016
Present value of benefits being paid		\$312,351,714
Reserve for incurred but not paid claims		\$35,203,000
<b>Total</b>		<b>\$347,554,714</b>

**Total net offsets are 37% of gross benefits before offsets**

# IV. Analysis of Funding Levels

## Financial Progress

As of December 31, 2004 the payout rate from this program decreased to 2.22% of covered payroll (down from 2.31% a year ago). Pertinent elements of the present financial picture include:

- During 2004 benefit reserves increased from \$163.4 million to \$194.6 million.
- The contribution rate currently in effect (December 31, 2004) will generate approximately 3.88% of covered payroll. This rate appears to be sufficient to achieve a fully reserved status over an 11-year period (down from 21 years at 12/31/00 and 16 years at 12/31/03). These calculations assume that the group size stabilizes at about its current level, as follows:

Provision for annual incurred claims*	2.22%
Amortization of accrued shortfall	<u>1.66%</u>
<b>Total</b>	<b>3.88%</b>

\* Includes (Benefit Payments + Expenses) as a % of covered payroll as indicated in ETF Trust Statement.

Current funding policy recommends limiting the amortization period to approximately 30 years. The data above verifies that the current rate schedule is projected to do this for another year. In 1998 the Board approved a rate increase of approximately .22% of payroll. At that time, we expected the increase to be sufficient to meet the funding policy for two years. After six years, it still appears that the new contribution level is sufficient for at least one more year. Therefore, we do not recommend a contribution increase at this time.



# Exhibit 1

Section 40.65 duty disability benefits for protective occupation participants were added in 1982. Benefits are summarized below:

**Eligibility.** Duty-related injury or disease that is likely to be permanent, which causes a protective occupation participant to retire, accept reduced pay or light duty assignment, or in some cases, that impairs promotional opportunities.

**Amount.** 80% of salary (75% if partially disabled and not a State Employee), less the following offsets:

- Social Security
- Unemployment Compensation
- Worker's Compensation
- Any other WRS benefit
- All earnings from the employer under which the disability occurred
- A percent of other earnings as follows:
  - 1/3 of earnings less than 40% of monthly salary
  - 1/2 of earnings between 40% and 80% of monthly salary
  - 2/3 of earnings over 80% of monthly salary

## **Survivor Benefits.**

- Pre-5/3/88 and certain state employees:
  - 1/3 of the participants monthly salary at time of death to surviving spouse, plus
  - \$15/month to each unmarried child under the age of 18
  - Not to exceed 65% of participants monthly salary at time of death
- Post-5/3/88 and certain state employees:
  - 1/2 of the participants monthly salary at time of death to surviving spouse, less other income sources that are based on the participant's earnings record
  - 1/10 of the participants monthly salary at time of death to each unmarried child under the age of 18
  - Not to exceed 70% of participants monthly salary at time of death
- Cancer Presumptive Law:
  - 70% of the participants monthly salary at time of death to surviving spouse, less other income sources that are based on the participant's earnings record
  - 1/10 of the participants monthly salary at time of death to the guardian of any minor child, as long as there is no surviving spouse
  - There is no maximum

## **Increases After Retirement.**

- To age 60: In accordance with WRS salary index.
- After age 60: In accordance with WRS dividend increases (as long as the claimant is not also receiving a disability retirement benefit.)

**Contributions.** Vary by experience.

## Exhibit 2

**Mortality:** Wisconsin Projected Experience Table - 93; 98% of male mortality and 97% of female mortality.

**Set Forward:** 3 years for males only; changed from 12 years for males only.

**Recovery:** None.

**Sex:** All disabled recipients are assumed to be male; all beneficiary recipients are assumed to be female.

**Benefit Form:** Life annuity for unmarried disabled recipients and all beneficiaries; 50% joint and survivor annuity for married disabled recipients.

**Interest:** 4.8% (which approximates a 7.8% valuation rate with 3% annual benefit increases). The valuation rate was changed for the December 31, 2004 valuation to match the WRS interest rate. The WRS interest rate was reduced from 8% to 7.8% as of February 1, 2004. The interest rate used in last year's valuation was 5%.

**IBNR Loading:** 10% margin for conservatism

## Exhibit 3

### Benefits Being Paid and Reported Claim Liability by Year of Incurral

Year Incurred	Number Valued	Annual Benefit	% of Payroll	Actuarial Liability
2004	16	607,148	0.06%	\$9,109,197
2003	17	465,580	0.02%	\$6,948,983
2002	27	854,274	0.08%	\$12,891,988
2001	22	704,635	0.07%	\$10,899,858
2000	18	525,442	0.05%	\$8,198,739
1999	29	1,070,813	0.10%	\$15,853,693
1998	41	1,267,982	0.12%	\$18,463,568
1997	26	804,224	0.08%	\$11,966,792
1996	22	684,435	0.06%	\$9,781,821
1995	31	937,822	0.09%	\$13,343,803
1994	31	1,045,350	0.10%	\$14,301,165
1993	48	1,297,345	0.12%	\$18,114,491
1992	53	1,546,067	0.15%	\$21,040,538
1991	43	1,065,175	0.10%	\$14,026,726
1990	41	1,019,386	0.10%	\$13,661,145
1989	59	1,528,593	0.14%	\$19,120,486
1988	60	1,743,465	0.16%	\$21,511,317
1987	44	1,376,829	0.13%	\$16,303,211
1986	43	1,549,578	0.15%	\$17,357,047
1985	47	1,544,606	0.15%	\$17,394,932
1984	33	1,133,604	0.11%	\$12,586,323
1983	16	539,591	0.05%	\$5,358,051
1982	9	334,956	0.03%	\$3,697,863
1979	1	30,115	0.00%	\$419,976
<b>Total</b>	<b>777</b>	<b>23,677,016</b>	<b>2.23%</b>	<b>312,351,714</b>

## Exhibit 4

### Rate Schedule: Present & Proposed December 31, 2004 Valuation

<b>% of Covered Payroll</b>	<b>Applicable To</b>
1.9%	Groups with claims payout during the prior year of less than or equal to 0.5% of payroll.
2.4	Groups with one claim in which the payout during the prior year exceeded 0.5% of payroll, and groups with two or more claims in which the payout was more than 0.5% but less than 1.0% of payroll.
3.6	Groups with two or more claims in which the payout during the prior year was more than 1.0% but less than 2.0% of payroll.
5.4	Groups with two or more claims in which the payout during the prior year was more than 2.0% and less than 3.0% of payroll.
6.6 + 1/2 of claims over 6.6%*	Groups with two or more claims in which the payout exceeded 3.0% during the prior year.

\* The 50% experience factor is based on claims incurred in the last 4-1/2 years.



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