

*City of Milwaukee
Policemen's Annuity and Benefit Fund*

Actuarial Valuation Report

As of

January 1, 2011

June, 2011

June 13, 2011

Annuity and Pension Board
Employees' Retirement System of
the City of Milwaukee
789 N. Water St., #300
Milwaukee, WI 53202

Members of the Board:

This report presents the results of the annual actuarial valuation of the assets and liabilities of the Policemen's Annuity and Benefit Fund of Milwaukee (PABF) as of January 1, 2011, prepared in accordance with Chapter 36, Part 15(15) of the Milwaukee City Charter. The valuation takes into account all of the promised benefits to which members were entitled as of January 1, 2011.

The valuation was based on the actuarial assumptions and methods as adopted by the Board of Trustees, and as specified by the Charter.

Assets and Membership Data

The individual data for members of the PABF as of the valuation date were reported to the actuary by the Employees Retirement System (ERS). While we did not verify the data at their source, we did perform tests for internal consistency and reasonability. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the ERS.

Financing Objective and Employer Contribution

The results of the January 1, 2011 valuation determine the employer contribution for the year ending December 31, 2011.

Based on the provisions of Chapter 35, the annual contribution consists of an amount sufficient to amortize the unfunded actuarial liability (the amount by which the actuarial liability exceeds the assets on the valuation date) over a ten-year period with a series of level dollar payments; plus budgeted administrative expenses for the year.

On this basis, the contribution for the 2011 plan year, to be paid January 31, 2012, would amount to \$208,956 plus budgeted administrative expenses for the year.

Financial Results and Membership Data

Detailed summaries of the financial results of the valuation, including a 20-year projection of assets, liabilities, benefit payments and contribution requirements (excluding future administrative expense requirements), and of the membership data used in preparing the valuation are shown in the valuation report.

As shown in Table 3, the Fund is projected to become insolvent sometime in 2015, which is a one year improvement over the 2014 insolvency date determined in the January 1, 2010 actuarial valuation. The primary reason for the one year improvement in solvency is market returns in excess of expected (17.91% versus 8.50%).

It is not uncommon for a fund that is closed to new entrants where a large percentage of the assets are paid out in benefits to become insolvent before all benefit payments are made. That is the case for the PABF. For PABF, the insolvency was exacerbated by the downturn in asset values during calendar year 2008. Consideration could be given to reviewing the current funding policy to ensure that it is still in line with the Board's funding and solvency objectives. Given the small magnitude of the benefit payments to be made after the projected insolvency date in 2015, it would not be unreasonable to consider allowing the plan sponsor to fund the plan as benefit payments come due.

To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,



Larry Langer, A.S.A., E.A., M.A.A.A.
Principal, Consulting Actuary



Marco Ruffini
Director, Retirement



Galen Lara Minetz, A.S.A., M.A.A.A.
Consultant

Introduction

The law governing the Policemen's Annuity and Benefit Fund (PABF) requires the Actuary, as the technical advisor to the Annuity and Pension Board, to make an annual valuation of the funds and liabilities of the Fund, and to determine and certify the annual contribution to be derived from the tax levy. {Chapter 35, Part 1(12)}. Buck Consultants, as Actuary, has completed the annual actuarial valuation of the System as of January 1, 2011.

In this report we present the results of the January 1, 2011 valuation and the contribution to be derived from the tax levy for the year ending December 31, 2011. For purposes of disclosure, the report also includes the schedule of employer contributions and schedule of funding progress as required by GASB Statement No. 25. The benefit provisions recognized in this valuation are those in place as of the valuation date.

The valuation was completed based upon membership and financial data provided by the administrative staff of the System. The mortality and investment return assumptions used to prepare the valuation were adopted as of January 1, 2007, and are based on the experience study prepared by the Actuary for the City of Milwaukee Employees' Retirement System (CMERS) for the five-year period ended December 31, 2006. The actuarial asset valuation method was adopted as of January 1, 2005.

Changes Since Last Year

There were no changes in actuarial assumptions and methods or plan provisions since the prior valuation.

Summary of Principal Results

Summarized below are the principal financial results for the Policeman's Annuity and Benefit Fund of Milwaukee based upon the actuarial valuation as of January 1, 2011. Comparable results from the January 1, 2010 valuation are also shown.

Item	January 1, 2011	January 1, 2010
Number of Participants		
➤ Active Members	0	0
➤ Annuitants	25	28
➤ Widow Annuitants	56	73
➤ Total Number of Participants	81	101
Prior Year Benefits Paid	\$ 894,264	\$ 1,049,503
Asset Values (includes contributions receivable)		
➤ Actuarial Value	\$ 1,584,173	\$ 1,935,745
➤ Market Value	\$ 1,584,173	\$ 1,935,745
Actuarially Determined Employer Contribution	Due 1/31/2012	Due 1/31/2011
➤ Annual Cost*	\$ 208,956	\$ 268,667
➤ As % of Prior Year Annuity Payroll *Plus budgeted administrative expenses	23.37%	25.60%
Funded Status		
➤ Accrued Liability	\$ 2,945,917	\$ 3,686,621
➤ Actuarial (and Market) Value of Assets	1,584,173	1,935,745
➤ Unfunded (Overfunded) Accrued Liability	\$ 1,361,744	\$ 1,750,876
➤ Funded Ratio Based on Actuarial Value of Assets	53.8%	52.5%

Reasons for Change in the Funded Ratio

The funded ratio increased from 52.5% as of January 1, 2010 to 53.8% as of January 1, 2011.

The funded ratio was expected to decrease from 52.5% to 46.2% as of January 1, 2011 based on the results of the January 1, 2010 actuarial valuation. Participant mortality experience in the form of fewer benefits being payable as of January 1, 2011 increased the funded ratio from 46.2% to 47.6%. Asset experience in the form of actual returns of 17.91%, which exceeded the assumed return of 8.50%, increased the funded ratio from 47.6% to 53.8%.

Table 1
Summary of Market Value of Plan Assets
As of January 1, 2011
(in dollars)

Item	Amount
1. Market Value of Assets as of January 1, 2010	\$ 1,935,745
2. Contributions During Year	
a. Member	-
b. Administrative Expenses	24,501
c. Tax Levy (receivable 1/31/2011)	272,792
d. Total	<u>297,293</u>
3. Disbursements During Year	
a. Benefit Payments and Refunds During Year	894,264
b. Administrative Expenses	24,501
c. Total	<u>918,765</u>
4. Investment Return	
a. Net Appreciation, Interest and Dividends	269,900
5. Market Value of Assets as of 1/1/2011 (Unaudited)	
(1) + (2d) - (3c) + (4)	\$ 1,584,173
6. Net Rate of Return	
a. Actual	17.91%
b. Expected	8.50%
c. Rate of Return Greater Than / (Less Than) Expected (a - b)	9.41%
d. Dollar Amount of Gain / (Loss) on Assets	\$ 142,593

GASB No. 25 Disclosure

Statement Number 25 of the Governmental Accounting Standards Board established reporting standards for the annual financial reports of defined benefit pension plans. The standards applied to the PABF effective with the January 1, 1997 valuation. The statement requires disclosure of the “schedule of funding progress” and the “schedule of employer contributions” in the System’s financial statements.

The “schedule of funding progress” (Table 2) shows historical trend information about the Fund’s actuarial value of assets, the actuarial accrued liability and the unfunded actuarial accrued liability. The actuarial funded status is measured by comparing the actuarial value of assets (based on market value) with the accrued liability. The accrued liability is the present value of benefits accumulated to date under the PABF’s funding method. On this basis, the PABF’s funded ratio is 53.8% as of January 1, 2011. The funded ratio is based on an actuarial value of assets of \$1,584,173, including a \$268,667 receivable contribution for the 2010 plan year, and an accrued liability of \$2,945,917.

The “schedule of employer contributions” (Table 2) shows historical trend information about the annual required contributions (ARC) of the employer and the percentage of the ARC contributed to the System. The Fund’s ARC is equal to the amortization of the unfunded actuarial accrued liability. The maximum period for amortizing the unfunded actuarial accrued liability permitted by GASB No. 25 is 30 years, and the ten-year level dollar amortization required by Chapter 35 Part 1(12) meets this standard. The employer contributions to the System are equal to 100% of the ARC.

Table 2
GASB Statement No. 25 Disclosure

Schedule of Funding Progress

Valuation as of January 1	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) (a-AAL)	Funded Ratio (a/AAL)	Annuity Payroll (b)	UAAL as a Percentage of Annuity Payroll (UAAL / b)
2011	\$1,584,173	\$2,945,917	\$1,361,744	53.8%	\$894,264	152.3%
2010	\$1,935,745	\$3,686,621	\$1,750,876	52.5%	\$1,049,503	166.8%
2009	\$2,147,172	\$4,295,606	\$2,148,434	50.0%	\$1,276,716	168.3%
2008	\$4,779,417	\$5,049,363	\$269,946	94.7%	\$1,354,412	19.9%
2007	\$5,585,697	\$5,956,976	\$371,279	93.8%	\$1,514,653	24.5%

Schedule of Employer Contributions

Fiscal Year Ended December 31	Annual Required Contribution (ARC)	Percentage Contributed
2010	\$268,667	100%
2009	\$329,672	100%
2008	\$41,423	100%
2007	\$56,972	100%

The information presented in the Schedule of Employer Contributions was determined as part of the actuarial valuation as of one year prior to the dates indicated (i.e., the contribution determined by the valuation completed as of January 1, 2007 was contributed for the fiscal year ending December 31, 2007).

Additional information as of the latest actuarial valuation follows:

Valuation Date:	January 1, 2011
Actuarial Cost Method:	Projected Unit Credit
Amortization Method:	Open; Level dollar
Remaining Amortization Period:	10 years
Asset Valuation Method:	Market Value

Actuarial Assumptions:

- Investment Rate of Return 8.5%
- Projected Salary Increases N/A
- Inflation Assumption 3.0%

Table 3

**CITY OF MILWAUKEE
POLICEMEN'S ANNUITY AND BENEFIT FUND
PROJECTION OF ACTUARIAL LIABILITY AND ASSETS
FROM JANUARY 1, 2011 TO DECEMBER 31, 2030**

**BASED ON ROLLING 10-YEAR LEVEL DOLLAR AMORTIZATION OF UNFUNDED ACTUARIAL LIABILITY
AND 8.50% PER ANNUM INVESTMENT RETURNS**

Calendar Year	(A) Beg.-of-Year (BOY) Assets	(B) BOY Actuarial Liability	(C) Unfunded Actuarial Liability (B) - (A)	(D) Expected Benefit Payments	(E) Investment Earnings at 8.50%	(F) Contribution Receivable Jan 31 Next Year	(G) End-of-Year Assets (A) - (D) + (E) + (F)
2011	\$ 1,584,173	\$ 2,945,917	\$ 1,361,744	\$ 775,091	\$ 100,410	\$ 208,956	\$ 1,118,448
2012	1,118,448	2,388,959	1,270,511	654,633	66,277	\$ 194,957	725,049
2013	725,049	1,910,133	1,185,084	544,156	37,541	\$ 181,848	400,282
2014	400,282	1,505,683	1,105,401	445,054	14,158	\$ 169,621	139,007
2015	139,007	1,170,083	1,031,076	358,141	(4,342)	\$ 158,216	(65,260)
2016	(65,260)	896,488	961,748	283,561	(18,516)	\$ 147,578	(219,759)
2017	(219,759)	677,323	897,082	220,940	(28,963)	\$ 137,655	(332,007)
2018	(332,007)	504,757	836,764	169,501	(36,289)	\$ 128,399	(409,398)
2019	(409,398)	371,103	780,501	128,092	(41,076)	\$ 119,766	(458,800)
2020	(458,800)	269,222	728,022	95,380	(43,849)	\$ 111,713	(486,316)
2021	(486,316)	192,755	679,071	69,999	(45,072)	\$ 104,202	(497,185)
2022	(497,185)	136,226	633,411	50,688	(45,137)	\$ 97,195	(495,815)
2023	(495,815)	95,007	590,822	36,260	(44,368)	\$ 90,660	(485,783)
2024	(485,783)	65,313	551,096	25,478	(43,019)	\$ 84,564	(469,716)
2025	(469,716)	44,326	514,042	17,630	(41,282)	\$ 78,878	(449,750)
2026	(449,750)	29,730	479,480	12,112	(39,313)	\$ 73,575	(427,600)
2027	(427,600)	19,641	447,241	8,219	(37,229)	\$ 68,628	(404,420)
2028	(404,420)	12,749	417,169	5,507	(35,109)	\$ 64,013	(381,023)
2029	(381,023)	8,096	389,119	3,606	(33,008)	\$ 59,709	(357,928)
2030	(357,928)	5,028	362,956	2,324	(30,960)	\$ 55,695	(335,517)

DESCRIPTION OF ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Cost Method

The method of financing the System is prescribed in Chapter 35 Part 1(12) of the Milwaukee City Charter.

Method: Projected Unit Credit

Since the Fund is closed to new participants and all participants are retired, the Actuarial Accrued Liability (AAL) is equal to the Actuarial Present Value of benefits expected to be paid to and on behalf of current Annuitants and Widow Annuitants. The Unfunded Actuarial Accrued Liability (UAAL) is the difference between the AAL and the Actuarial Value of Assets. Based on the provisions of Chapter 35, the annual contribution consists of an amount sufficient to amortize the UAAL over a ten-year period with a series of level dollar payments, plus budgeted administrative expenses for the year. This funding method was adopted effective January 1, 2006.

Actuarial Value of Assets

The market value of assets is the value of investments if they were to be sold currently, plus the contribution receivable for the plan year just ended. The actuarial value of assets is equal to the market value of assets. This definition of the actuarial value of assets was adopted in 2005.

Actuarial Assumptions
Adopted Effective January 1, 2007

Interest Rate and Inflation

Interest: 8.5% per annum

Inflation: 3.0% per annum

Post-Retirement Mortality

Male: RP-2000 Mortality Table with five years of projected improvements

Female: UP-1994 Mortality Table, with six years of projected improvements

Table 4

**CITY OF MILWAUKEE
POLICEMEN'S ANNUITY AND BENEFIT FUND**

**THE NUMBER AND ANNUAL BENEFITS PAYABLE TO
ANNUITANTS AND WIDOWS
AS OF JANUARY 1, 2011**

Age	Annuitants		Widows		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
78			1	\$ 6,000	1	\$ 6,000
82			2	12,000	2	12,000
84			2	12,000	2	12,000
85			1	15,332	1	15,332
86			1	6,000	1	6,000
87			3	25,187	3	25,187
88	1	\$ 10,381	6	36,898	7	47,279
89	4	103,324	2	13,703	6	117,027
90	6	111,778	3	19,037	9	130,815
91	4	63,225	2	12,000	6	75,225
92	2	35,778	9	61,147	11	96,925
93	3	59,023	5	30,148	8	89,171
94			6	41,000	6	41,000
95	2	28,676	6	36,918	8	65,593
96	1	16,478	3	28,956	4	45,433
97	1	9,204	2	15,155	3	24,359
99			1	6,000	1	6,000
100	1	15,412			1	15,412
101			1	6,851	1	6,851
Total	25	\$ 453,278	56	\$ 384,331	81	\$ 837,609