

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

Actuarial Valuation Report

As of

January 1, 2012

June, 2012

June 20, 2012

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, 2012, 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, 2012.

The valuation was based on the actuarial assumptions and methods as adopted by the Board of Trustees, and as specified by the Charter. Actuarial Standards of Practice now require that the likelihood and extent of future mortality improvements be considered for valuations performed on or after June 30, 2011. We will explore this issue in more detail during the experience review to be conducted before the January 1, 2013 valuation in accordance with Section 36-15-14.

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, 2012 valuation determine the employer contribution for the year ending December 31, 2012.

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 2012 plan year, to be paid January 31, 2013, would amount to \$221,538 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 in concurrence with the insolvency date determined in the January 1, 2011 actuarial valuation.

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,

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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, 2012.

In this report we present the results of the January 1, 2012 valuation and the contribution to be derived from the tax levy for the year ending December 31, 2012. 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, 2012. Comparable results from the January 1, 2011 valuation are also shown.

Item	January 1, 2012	January 1, 2011
Number of Participants		
➤ Active Members	0	0
➤ Annuitants	23	25
➤ Widow Annuitants	<u>47</u>	<u>56</u>
➤ Total Number of Participants	70	81
Benefits Paid in the Prior Year	\$ 765,365	\$ 894,264
Asset Values (includes contributions receivable)		
➤ Actuarial Value	\$ 1,007,534	\$ 1,584,173
➤ Market Value	\$ 1,007,534	\$ 1,584,173
Actuarially Determined Employer Contribution	Due 1/31/2013	Due 1/31/2012
➤ Annual Cost*	\$ 221,538	\$ 208,956
➤ As % of Prior Year Benefits Paid	28.95%	23.37%
*Plus budgeted administrative expenses		
Funded Status		
➤ Accrued Liability	\$ 2,451,276	\$ 2,945,917
➤ Actuarial (and Market) Value of Assets	<u>1,007,534</u>	<u>1,584,173</u>
➤ Unfunded (Overfunded) Accrued Liability	\$ 1,443,742	\$ 1,361,744
➤ Funded Ratio Based on Actuarial Value of Assets	41.1%	53.8%

Reasons for Change in the Funded Ratio

The funded ratio decreased from 53.8% as of January 1, 2011 to 41.1% as of January 1, 2012.

The funded ratio was expected to decrease from 53.8% to 46.8% as of January 1, 2012 based on the results of the January 1, 2011 actuarial valuation. Participant mortality experience in the form of more benefits being payable as of January 1, 2012 decreased the funded ratio from 46.8% to 46.0%. Asset experience in the form of actual returns of -2.11%, which was lower than the assumed return of 8.50%, further decreased the funded ratio from 46.0% to 41.1%.

Table 1
Summary of Market Value of Plan Assets
As of January 1, 2012
(in dollars)

Item	Amount
1. Market Value of Assets as of January 1, 2011	\$ 1,584,173
2. Contributions During Year	
a. Member	-
b. Administrative Expenses	16,013
c. Tax Levy (receivable 1/31/2012)	214,094
d. Total	<u>230,107</u>
3. Disbursements During Year	
a. Benefit Payments and Refunds During Year	765,365
b. Administrative Expenses	16,013
c. Total	<u>781,378</u>
4. Investment Return	
a. Net Appreciation, Interest and Dividends	(25,368)
5. Market Value of Assets as of 1/1/2012 (Unaudited) (1) + (2d) - (3c) + (4)	\$ 1,007,534
6. Net Rate of Return	
a. Actual	-2.11%
b. Expected	8.50%
c. Rate of Return Greater Than / (Less Than) Expected (a - b)	-10.61%
d. Dollar Amount of Gain / (Loss) on Assets	\$ (128,158)

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 41.1% as of January 1, 2012. The funded ratio is based on an actuarial value of assets of \$1,007,534, including a \$208,956 receivable contribution for the 2011 plan year, and an accrued liability of \$2,451,276.

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)
2012	\$1,007,534	\$2,451,276	\$1,443,742	41.1%	\$765,365	188.6%
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	93.80%	\$1,514,653	24.5%
2006	\$5,977,606	\$8,241,433	\$2,263,827	72.50%	\$2,006,273	112.8%

Schedule of Employer Contributions

Fiscal Year Ended December 31	Annual Required Contribution (ARC)	Percentage Contributed
2011	\$208,956	100%
2010	\$268,667	100%
2009	\$329,672	100%
2008	\$41,423	100%
2007	\$56,972	100%
2006	\$307,582	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, 2012
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, 2012 TO DECEMBER 31, 2031**

**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)
2012	\$ 1,007,534	\$ 2,451,276	\$ 1,443,742	\$ 669,796	\$ 56,063	\$ 221,538	\$ 615,339
2013	615,339	1,961,953	1,346,614	558,645	27,417	\$ 206,634	290,745
2014	290,745	1,546,816	1,256,071	457,977	4,127	\$ 192,741	29,636
2015	29,636	1,201,251	1,171,615	369,006	(14,261)	\$ 179,781	(173,850)
2016	(173,850)	918,988	1,092,838	292,216	(28,265)	\$ 167,693	(326,638)
2017	(326,638)	692,720	1,019,358	227,481	(38,468)	\$ 156,418	(436,169)
2018	(436,169)	514,649	950,818	174,179	(45,476)	\$ 145,901	(509,923)
2019	(509,923)	376,964	886,887	131,241	(49,880)	\$ 136,090	(554,954)
2020	(554,954)	272,301	827,255	97,334	(52,224)	\$ 126,940	(577,572)
2021	(577,572)	194,060	771,632	71,064	(52,985)	\$ 118,405	(583,216)
2022	(583,216)	136,532	719,748	51,155	(52,574)	\$ 110,443	(576,502)
2023	(576,502)	94,852	671,354	36,370	(51,329)	\$ 103,017	(561,184)
2024	(561,184)	65,030	626,214	25,529	(49,521)	\$ 96,091	(540,143)
2025	(540,143)	43,966	584,109	17,685	(47,355)	\$ 89,630	(515,553)
2026	(515,553)	29,282	544,835	12,055	(44,983)	\$ 83,603	(488,988)
2027	(488,988)	19,214	508,202	8,117	(42,516)	\$ 77,982	(461,639)
2028	(461,639)	12,392	474,031	5,397	(40,037)	\$ 72,739	(434,334)
2029	(434,334)	7,824	442,158	3,505	(37,599)	\$ 67,848	(407,590)
2030	(407,590)	4,838	412,428	2,245	(35,237)	\$ 63,286	(381,786)
2031	(381,786)	2,911	384,697	1,378	(32,974)	\$ 59,031	(357,107)

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, 2012**

Age	Annuitants		Widows		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
79			1	\$ 6,000	1	\$ 6,000
83			1	6,000	1	6,000
85			2	12,000	2	12,000
86			1	12,932	1	12,932
88			3	25,187	3	25,187
89	1	\$ 10,381	7	42,898	8	53,279
90	4	103,324	3	19,703	7	123,027
91	5	79,932	1	6,000	6	85,932
92	4	63,225	2	12,000	6	75,225
93	2	35,778	7	48,892	9	84,670
94	3	59,023	5	30,148	8	89,171
95			4	27,467	4	27,467
96	2	28,676	5	30,918	7	59,594
97	1	16,478	2	13,416	3	29,894
98			1	9,155	1	9,155
100			1	6,000	1	6,000
101	1	15,412			1	15,412
102			1	6,851	1	6,851
Total	23	\$ 412,229	47	\$ 315,567	70	\$ 727,796