

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

**ACTUARIAL VALUATION  
AS OF JANUARY 1, 2008**

May 23, 2008

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, 2008, 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, 2008.

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, 2008 valuation determine the employer contribution for the year ending December 31, 2008.

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 2008 plan year, to be paid January 31, 2009, would amount to \$41,423 plus budgeted administrative expenses for the year.

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### **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.

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,



S. Lynn Hill  
Director, Retirement Consulting



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

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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, 2008.

In this report we present the results of the January 1, 2008 valuation and the contribution to be derived from the tax levy for the year ending December 31, 2008. 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, 2008. Comparable results from the January 1, 2007 valuation are also shown.

Item	January 1, 2008	January 1, 2007
<b>Number of Participants</b>		
➤ Active Members	0	0
➤ Annuitants	39	50
➤ Widow Annuitants	97	102
➤ Total Number of Participants	136	152
<b>Prior Year Annuity Payroll</b>	\$ 1,354,412	\$ 1,514,653
<b>Asset Values</b> (includes contributions receivable)		
➤ Actuarial Value	\$ 4,779,417	\$ 5,585,697
➤ Market Value	\$ 4,779,417	\$ 5,585,697
<b>Actuarially Determined Employer Contribution</b>	Due 1/31/2009	Due 1/31/2008
➤ Annual Cost*	\$ 41,423	\$ 56,972
➤ As % of Covered Payroll	3.06%	3.76%
*Plus budgeted administrative expenses		
<b>Funded Status</b>		
➤ Accrued Liability	\$ 5,049,363	\$ 5,956,976
➤ Actuarial (and Market) Value of Assets	4,779,417	5,585,697
➤ Unfunded (Overfunded) Accrued Liability	\$ 269,946	\$ 371,279
➤ Funded Ratio Based on Actuarial Value of Assets	94.7%	93.8%

### Reasons for Change in the Funded Ratio

The funded ratio increased from 93.8% as of January 1, 2007 to 94.7% as of January 1, 2008. This change is due to the net effect of (a) participant mortality and more precise reporting of birthdates, which decreased the actuarial liability; (b) the return on the actuarial value of assets which was lower than the expected return of 8.5% for the 2007 plan year; and (c) a restatement of the December 31, 2006 assets, which increased the net assets available for benefits.

**Table 1**  
**Summary of Market Value of Plan Assets**  
**As of January 1, 2008**  
**(in dollars)**

Item	Amount
1. Market Value of Assets as of December 31, 2006	
a. Assets used for 1/1/2007 Valuation	\$ 5,585,697
b. Restated Value of 12/31/2006 Assets	5,669,785
2. Contributions During Year	
a. Member	-
b. Administrative Expenses	94,200
c. Change due to Restated Asset Statements (1b) - (1a)	84,088
d. Tax Levy (receivable 1/31/2008)	56,972
e. Total	235,260
3. Disbursements During Year	
a. Benefit Payments and Refunds During Year	1,354,412
b. Administrative Expenses	94,200
c. Total	1,448,612
4. Investment Return	
a. Gross Return Based on Restated 12/31/2006 Assets	407,072
5. Market Value of Assets as of December 31, 2007 (Unaudited) (1a) + (2e) - (3c) + (4)	\$ 4,779,417
6. Net Rate of Return Based on Assets used for 1/1/2007 Valuation	
a. Actual	8.27%
a. Expected	8.50%
c. Rate of Return Greater Than / (Less Than) Expected (a - b)	-0.23%
d. Dollar Amount of Gain / (Loss) on Assets	\$ (11,323)
7. Net Unexpected Increase / (Decrease) in Assets (2c) + 6(d)	\$ 72,765

Note: The \$84,088 change due to restated assets in item 2c is equal to the City's contribution toward PABF expenses for the 2006 plan year. This contribution was not included in the assets used for the 1/1/2007 valuation.

## **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 94.7% as of January 1, 2008. The funded ratio is based on an actuarial value of assets of \$4,779,417, including a \$56,972 receivable contribution for the 2007 plan year, and an accrued liability of \$5,049,363.

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)
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%
2006	\$5,977,606	\$8,241,433	\$2,263,827	72.5%	\$2,006,273	112.8%

**Schedule of Employer Contributions**

Fiscal Year Ended December 31	Annual Required Contribution (ARC)	Percentage Contributed
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, 2008
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, 2008 TO DECEMBER 31, 2027**

**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)
2008	\$ 4,779,417	\$ 5,049,363	\$ 269,946	\$ 1,195,588	\$ 356,055	\$ 41,423	\$ 3,981,307
2009	3,981,307	4,233,195	251,888	1,038,576	294,867	38,652	3,276,250
2010	3,276,250	3,511,202	234,952	892,498	241,039	36,053	2,660,844
2011	2,660,844	2,879,999	219,155	758,235	194,339	33,629	2,130,577
2012	2,130,577	2,334,997	204,420	636,488	154,353	31,368	1,679,810
2013	1,679,810	1,870,485	190,675	527,628	120,586	29,259	1,302,026
2014	1,302,026	1,479,881	177,855	431,724	92,483	27,291	990,077
2015	990,077	1,155,973	165,896	348,509	69,446	25,456	736,471
2016	736,471	891,213	154,742	277,461	50,861	23,745	533,616
2017	533,616	677,953	144,337	217,802	36,115	22,148	374,077
2018	374,077	508,709	134,632	168,515	24,618	20,659	250,839
2019	250,839	376,418	125,579	128,484	15,820	19,270	157,445
2020	157,445	274,580	117,135	96,507	9,223	17,974	88,135
2021	88,135	197,395	109,260	71,398	4,387	16,766	37,890
2022	37,890	139,803	101,913	52,035	931	15,638	2,425
2023	2,425	97,485	95,060	37,351	(1,464)	14,587	(21,803)
2024	(21,803)	66,866	88,669	26,270	(3,054)	13,606	(37,521)
2025	(37,521)	45,186	82,707	18,162	(4,045)	12,691	(47,036)
2026	(47,036)	30,109	77,145	12,413	(4,608)	11,838	(52,219)
2027	(52,219)	19,739	71,958	8,348	(4,873)	11,042	(54,398)

## **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 DECEMBER 31, 2007**

Age	Annuitants		Widows		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
75			1	\$ 6,000	1	\$ 6,000
79			2	12,000	2	12,000
80			1	6,000	1	6,000
81			2	12,000	2	12,000
82			1	15,332	1	15,332
83			2	15,402	2	15,402
84			5	37,323	5	37,323
85	1	\$ 10,381	9	54,898	10	65,279
86	4	103,324	8	53,620	12	156,944
87	6	111,778	5	38,073	11	149,851
88	7	99,355	8	54,229	15	153,584
89	2	35,778	11	75,806	13	111,584
90	4	72,965	5	32,030	9	104,995
91	2	26,875	10	65,000	12	91,875
92	6	72,076	11	67,599	17	139,675
93	2	25,029	5	40,956	7	65,985
94	3	27,177	2	15,155	5	42,332
95	1	16,289	4	24,000	5	40,289
96			2	14,592	2	14,592
97	1	15,412			1	15,412
98			2	13,937	2	13,937
103			1	6,326	1	6,326
<b>Total</b>	39	\$ 616,439	97	\$ 660,277	136	\$ 1,276,716