



VILLAGE OF CARPENTERSVILLE
CARPENTERSVILLE POLICE PENSION FUND

Actuarial Valuation Report

For the Year

Beginning May 1, 2012

And Ending April 30, 2013

Timothy W. Sharpe, Actuary, Geneva, IL (630) 262-0600

TABLE OF CONTENTS

	<u>Page</u>
Introduction	3
Summary of Results	4
Actuarial Valuation of Assets	6
Asset Changes During Prior Year	7
Normal Cost	8
Accrued Liability	9
Tax Levy Requirement	10
Summary of Plan Participants	11
Duration	12
Projected Pension Payments	12
Summary of Plan Provisions	13
Actuarial Method	14
Actuarial Assumptions	15
GASB Statements No. 25 & 27 Disclosure	16

INTRODUCTION

Police-sworn personnel of the Village of Carpentersville are covered by the Police Pension Plan that is a defined-benefit, single-employer pension plan. The purpose of this report is to disclose the Tax Levy Requirement and GASB Statements No. 25 & 27 financial information and related actuarial information for the year beginning May 1, 2012, and ending April 30, 2013.

The valuation results reported herein are based on plan provisions in effect as of May 1, 2012, the employee data furnished by the Village, the financial data provided by the Fund's trustee and the actuarial methods and assumptions described later in this report. I hereby certify that this report is complete and accurate and fairly presents the actuarial position of the Fund as of April 30, 2012, in accordance with generally accepted actuarial principles and procedures. In my opinion, the assumptions used are reasonably related to the experience of the Plan and to reasonable expectations.

Respectfully submitted,



Timothy W. Sharpe, EA, MAAA
Enrolled Actuary No. 11-4384

02/28/2013

Date

SUMMARY OF RESULTS

There were no changes with respect to Plan Provisions, Actuarial Methods or Actuarial Assumptions from the prior year.

There were no unexpected changes with respect to the participants included in this actuarial valuation, however a previously reported terminated member was reported as a disabled member (0 new members, 0 terminations, 3 retirement, 1 incident of disability, 1 return to active status from disability, annual payroll increase 6.2%, average salary increase 7.3%).

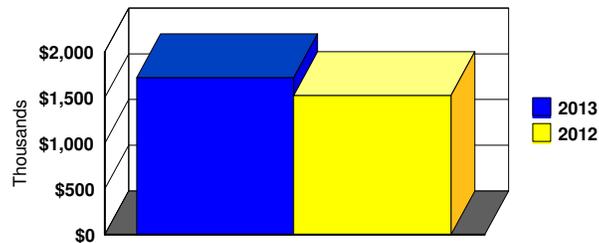
There were no unexpected changes with respect to the Fund's investments from the prior year (annual investment return 3.42%).

The Village's Tax Levy Requirement has increased from \$1,533,426 last year to \$1,736,094 this year (13.2%). The increase in the Tax Levy is due to the increase in salaries was more than assumed, the investment return was less than assumed and the newly reported disabled member, and was offset due to using 5-year market averaging. The Percent Funded has decreased from 57.0% last year to 55.5% this year.

SUMMARY OF RESULTS (Continued)

	For Year Ending April 30	
	<u>2013</u>	<u>2012</u>
Tax Levy Requirement	\$ 1,736,094	\$ 1,533,426
	as of May 1	
	<u>2012</u>	<u>2011</u>
Village Normal Cost	912,208	837,304
Anticipated Employee Contributions	505,354	495,616
Accrued Liability	49,270,372	44,435,270
Actuarial Value of Assets	27,320,471	25,317,418
Unfunded Accrued Liability/(Surplus)	21,949,901	19,117,852
Amortization of Unfunded Accrued Liability/(Surplus)	710,310	595,804
Percent Funded	55.5%	57.0%
Annual Payroll	\$ 5,099,437	\$ 5,001,167

TAX LEVY REQUIREMENT
as of April 30

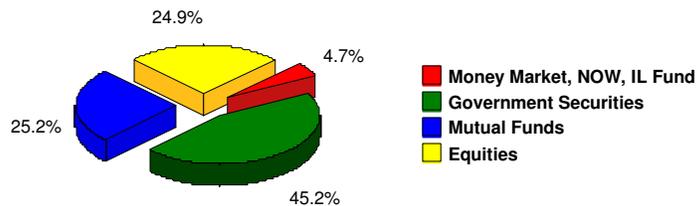


ACTUARIAL VALUATION OF ASSETS

		as of May 1	
	<u>2012</u>		<u>2011</u>
Money Market, NOW, IL Fund	\$ 1,246,675		\$ 338,346
Certificates of Deposit	0		250,000
Government Securities	11,968,800		12,029,125
Mutual Funds	6,661,888		7,128,290
Common Stock	6,605,319		5,452,463
Interest Receivable	96,764		101,438
Miscellaneous Receivable/(Payable)	<u>10,905</u>		<u>17,757</u>
Market Value of Assets	<u>26,590,350</u>		<u>25,317,418</u>
Actuarial Value of Assets	\$ 27,320,471		\$

FYE 2012 (Gain)/Loss: \$912,652

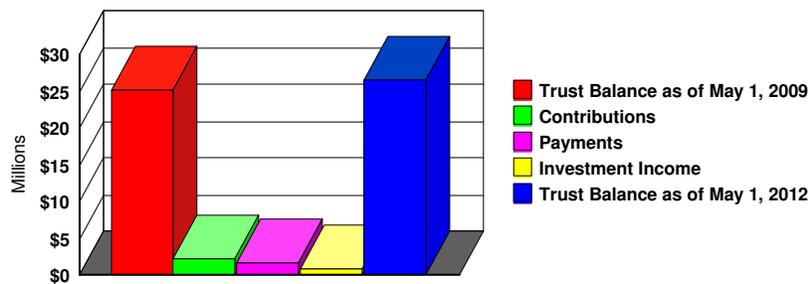
SUMMARY OF ASSETS As Of May 1, 2012



ASSET CHANGES DURING PRIOR YEAR

Trust Balance as of May 1, 2011		\$	25,317,418
Contributions			
Village	1,748,130		
Employee	<u>505,238</u>		
Total			2,253,368
Payments			
Benefit Payments	1,824,252		
Expenses	<u>29,730</u>		
Total			1,853,981
Investment Income			<u>873,546</u>
Trust Balance as of May 1, 2012		\$	<u>26,590,350</u>
Approximate Annual Rate of Return			3.42%

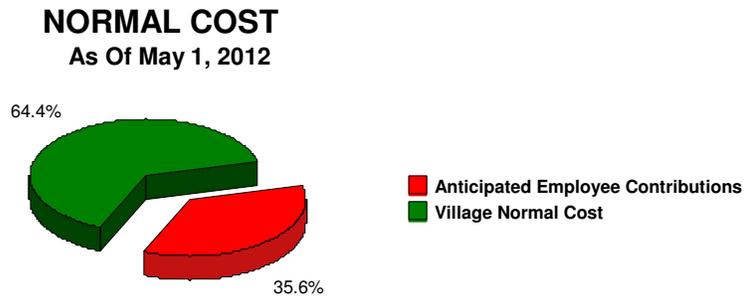
ASSET CHANGES DURING PRIOR YEAR



NORMAL COST

The Normal Cost is the actuarial present value of the portion of the projected benefits that are expected to accrue during the year based upon the actuarial valuation method and actuarial assumptions employed in the valuation.

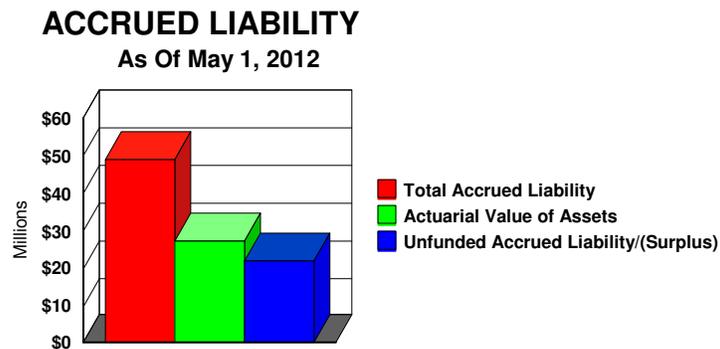
	as of May 1	
	<u>2012</u>	<u>2011</u>
Total Normal Cost	\$ 1,417,562	\$ 1,332,920
Anticipated Employee Contributions	<u>505,354</u>	<u>495,616</u>
Village Normal Cost	<u>912,208</u>	<u>837,304</u>
Normal Cost Payroll	\$ 5,099,437	\$ 5,001,167
Village Normal Cost Rate	17.89%	16.74%
Total Normal Cost Rate	27.80%	26.65%



ACCRUED LIABILITY

The Accrued Liability is the actuarial present value of the portion of the projected benefits that has been accrued as of the valuation date based upon the actuarial valuation method and actuarial assumptions employed in the valuation. The Unfunded Accrued Liability is the excess of the Accrued Liability over the Actuarial Value of Assets.

	as of May 1	
Accrued Liability	<u>2012</u>	<u>2011</u>
Active Employees	\$ 22,357,748	\$ 22,062,584
Children Annuities	0	0
Disability Annuities	6,390,546	5,707,594
Retirement Annuities	19,317,815	15,244,668
Surviving Spouse Annuities	348,762	362,793
Terminated Vested Annuities	<u>855,501</u>	<u>1,057,631</u>
Total Annuities	26,912,624	22,372,686
Total Accrued Liability	49,270,372	44,435,270
Actuarial Value of Assets	<u>27,320,471</u>	<u>25,317,418</u>
Unfunded Accrued Liability/(Surplus)	\$ <u>21,949,901</u>	\$ <u>19,117,852</u>
Percent Funded	55.5%	57.0%



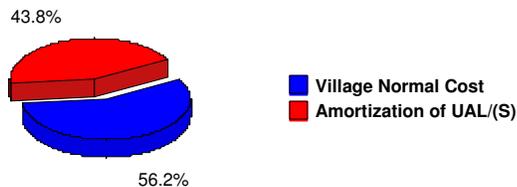
TAX LEVY REQUIREMENT

The Public Act 096-1495 Tax Levy Requirement is determined as the annual contribution necessary to fund the normal cost, plus the amount to amortize the excess (if any) of ninety percent (90%) of the accrued liability over the actuarial value of assets as a level percentage of payroll over a thirty (30) year period which commenced in 2011, plus an adjustment for interest. Prior to 2011, the amortization amount was equal to the amount to amortize the unfunded accrued liability as a level percentage of payroll over a forty (40) year period which commenced in 1993.

	For Year Ending April 30	
	<u>2013</u>	<u>2012</u>
Village Normal Cost as of Beginning of Year	\$ 912,208	\$ 837,304
Amortization of Unfunded Accrued Liability/(Surplus)	710,310	595,804
Interest for One Year	<u>113,576</u>	<u>100,318</u>
Tax Levy Requirement as of End of Year	\$ <u>1,736,094</u>	\$ <u>1,533,426</u>
 Public Act 096-1495 Tax Levy Requirement		
1) Normal Cost (PUC)	912,208	837,304
2) Accrued Liability (PUC)	49,270,372	44,435,270
3) Amortization Payment	710,310	595,804
4) Interest for One Year	113,576	100,318
5) PA 096-1495 Tax Levy Requirement (1 + 3 + 4)	\$ 1,736,094	1,533,426

TAX LEVY REQUIREMENT

For Fiscal Year Ending April 30, 2013



SUMMARY OF PLAN PARTICIPANTS

The actuarial valuation of the Plan is based upon the employee data furnished by the Village.
 The information provided for Active participants included:

- Name
- Sex
- Date of Birth
- Date of Hire
- Compensation
- Employee Contributions

The information provided for Inactive participants included:

- Name
- Sex
- Date of Birth
- Date of Pension Commencement
- Monthly Pension Benefit
- Form of Payment

Membership	<u>2012</u>	<u>2012</u>	<u>2011</u>	<u>2011</u>
Current Employees				
Vested	43		41	
Nonvested	<u>16</u>		<u>20</u>	
Total	<u>59</u>		<u>61</u>	
Inactive Participants		<u>Annual Benefits</u>		<u>Annual Benefits</u>
Children	0 \$	0	0 \$	0
Disabled Employees	10	433,026	9	381,959
Retired Employees	27	1,523,655	24	1,236,884
Surviving Spouses	3	68,194	3	68,194
Terminated Vesteds	<u>2</u>	<u>59,351</u>	<u>4</u>	<u>107,589</u>
Total	<u>42</u>	<u>2,084,226</u>	<u>40</u>	<u>1,794,626</u>
Annual Payroll	\$	5,099,437	\$	5,001,167

SUMMARY OF PLAN PARTICIPANTS (Continued)

Age and Service Distribution

Service Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total	Salary
20-24									
25-29		2						4	78,303
30-34	5	6	1					12	78,970
35-39		5	6					11	86,092
40-44		2	7	4	5			18	89,508
45-49		1	3	2	3	1		10	91,762
50-54				1		1		2	84,840
55-59					1	1		2	96,561
60+									
Total	<u>7</u>	<u>16</u>	<u>17</u>	<u>7</u>	<u>9</u>	<u>3</u>	<u>0</u>	<u>59</u>	<u>86,431</u>
Salary	73,586	84,191	87,427	87,277	92,648	102,082			

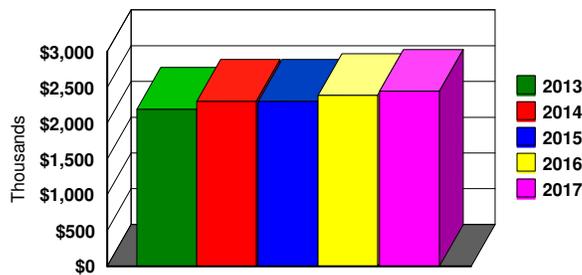
Average Age: 39.7 Average Service: 12.2

DURATION (years) Active Members: 21.5 Retired Members: 10.0 All Members: 15.2

PROJECTED PENSION PAYMENTS

<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
\$2,198,815	\$2,327,056	\$2,324,739	\$2,396,531	\$2,447,023

PROJECTED PENSION PAYMENTS
2013-2017



SUMMARY OF PLAN PROVISIONS

The Plan Provisions have not been changed from the prior year.

The Village of Carpentersville Police Pension Fund was created and is administered as prescribed by "Article 3. Police Pension Fund - Municipalities 500,000 and Under" of the Illinois Pension Code (Illinois Compiled Statutes, 1992, Chapter 40). A brief summary of the plan provisions is provided below.

Employees attaining the age of (50) or more with (20) or more years of creditable service are entitled to receive an annual retirement benefit of (2.5%) of final salary for each year of service up to (30) years, to a maximum of (75%) of such salary.

Employees with at least (8) years but less than (20) years of credited service may retire at or after age (60) and receive a reduced benefit of (2.5%) of final salary for each year of service.

Surviving spouses receive the greater of (50%) of final salary or the employee's retirement benefit.

Employees disabled in the line of duty receive (65%) of final salary.

The monthly pension of a covered employee who retired with (20) or more years of service after January 1, 1977, shall be increased annually, following the first anniversary date of retirement and be paid upon reaching the age of at least (55) years, by (3%) of the originally granted pension. Beginning with increases granted on or after July 1, 1993, the second and subsequent automatic annual increases shall be calculated as (3%) of the amount of the pension payable at the time of the increase.

Employees are required to contribute (9.91%) of their base salary to the Police Pension Plan. If an employee leaves covered employment with less than (20) years of service, accumulated employee contributions may be refunded without accumulated interest.

For Employees hired after January 1, 2011, the Normal Retirement age is attainment of age 55 and completion of 10 years of service; Early Retirement age is attainment of age 50, completion of 10 years of service and the Early Retirement Factor is 6% per year; the Employee's Accrued Benefit is based on the Employee's final 8-year average salary not to exceed \$106,800 (as indexed); Cost-of-living adjustments are simple increases (not compounded) of the lesser of 3% or 50% of CPI beginning the later of the anniversary date and age 60; Surviving Spouse's Benefits are 66 2/3% of the Employee's benefit at the time of death.

ACTUARIAL METHODS

The Actuarial Methods employed for this valuation are as follows:

Projected Unit Credit Cost Method (for years beginning on or after 2011 for PA 096-1495)

Under the Projected Unit Credit Cost Method, the Normal Cost is the present value of the projected benefit (including projected salary increases) earned during the year.

The Accrued Liability is the present value of the projected benefit (including projected salary increases) earned as of the actuarial valuation date. The Unfunded Accrued Liability is the excess of the Accrued Liability over the plan's assets. Experience gains or losses adjust the Unfunded Accrued Liability.

Entry Age Normal Cost Method

Under the Entry Age Normal Cost Method the Normal Cost for each participant is computed as the level percentage of pay which, if paid from the earliest age the participant is eligible to enter the plan until retirement or termination, will accumulate with interest to sufficiently fund all benefits under the plan. The Normal Cost for the plan is determined as the sum of the Normal Costs for all active participants.

The Accrued Liability is the theoretical amount that would have accumulated had annual contributions equal to the Normal Cost been paid. The Unfunded Accrued Liability is the excess of the Accrued Liability over the plan's assets. Experience gains or losses adjust the Unfunded Accrued Liability.

ACTUARIAL ASSUMPTIONS

The Actuarial Assumptions used for determining the Tax Levy Requirement and GASB Statements No. 25 & 27 Disclosure Information are the same (except where noted) and have not been changed from the prior year. The Actuarial Assumptions employed for this valuation are as follows:

Valuation Date	May 1, 2012
Asset Valuation Method	5-year Average Market Value
Investment Return	7.00%
Salary Scale	5.50%
Mortality	1971 Group Annuity Mortality Table. There is no margin for future mortality improvement beyond the valuation date.
Withdrawal	State of Illinois DOI Experience Rates
Disability	State of Illinois DOI Experience Rates
Retirement	State of Illinois DOI Experience Rates (100% by Age 62)
Marital Status	80% Married, Spouse Same Age
Plan Expenses	None

<u>Sample Annual Rates Per 100 Participants</u>				
<u>Age</u>	<u>Mortality</u>	<u>Withdrawal</u>	<u>Disability</u>	<u>Retirement</u>
20	0.05	6.00	0.07	
30	0.08	5.10	0.10	
40	0.16	2.85	0.20	
50	0.53		0.52	20.00
60	1.31		0.60	83.33
62	1.59			100.00

GASB STATEMENTS NO. 25 & 27 DISCLOSURE INFORMATION

The Governmental Accounting Standards Board (GASB) issued Statements No. 25 & 27 that established generally accepted accounting principles for the annual financial statements for defined benefit pension plans. The required information is as follows:

Membership in the plan consisted of the following as of:

	<u>April 30, 2012</u>	<u>April 30, 2011</u>
Retirees and beneficiaries receiving benefits	40	36
Terminated plan members entitled to but not yet receiving benefits	2	4
Active vested plan members	43	41
Active nonvested plan members	<u>16</u>	<u>20</u>
Total	<u>101</u>	<u>101</u>
Number of participating employers	1	1

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
04/30/10	22,124,891	44,558,123	22,433,232	49.7%	5,290,773	424.0%
04/30/11	25,317,418	44,435,270	19,117,852	57.0%	5,001,167	382.3%
04/30/12	26,590,350	49,270,372	22,680,022	54.0%	5,099,437	444.8%

GASB STATEMENTS NO. 25 & 27 DISCLOSURE INFORMATION (Continued)

ANNUAL PENSION COST AND NET PENSION OBLIGATION

	<u>April 30, 2012</u>	<u>April 30, 2011</u>
Annual required contribution	2,029,901	1,668,121
Interest on net pension obligation	116,371	114,181
Adjustment to annual required contribution	<u>(68,458)</u>	<u>(83,646)</u>
Annual pension cost	2,077,814	1,698,656
Contributions made	<u>1,748,130</u>	<u>1,667,375</u>
Increase (decrease) in net pension obligation	329,684	31,281
Net pension obligation beginning of year	<u>1,662,445</u>	<u>1,631,164</u>
Net pension obligation end of year	<u>1,992,129</u>	<u>1,662,445</u>

THREE-YEAR TREND INFORMATION

Fiscal Year <u>Ending</u>	Annual Pension Cost (APC) <u>Cost (APC)</u>	Percentage of APC Contributed <u>Contributed</u>	Net Pension Obligation <u>Obligation</u>
04/30/10	1,701,002	98.3%	1,631,164
04/30/11	1,698,656	98.2%	1,662,445
04/30/12	2,077,814	84.1%	1,992,129

GASB STATEMENTS NO. 25 & 27 DISCLOSURE INFORMATION (Continued)

FUNDING POLICY AND ANNUAL PENSION COST

Contribution rates:

Village	34.28%	33.34%
Plan members	9.91%	Same
Annual pension cost	2,077,814	1,698,656
Contributions made	1,748,130	1,667,375
Actuarial valuation date	04/30/2012	04/30/2011
Actuarial cost method	Entry age	same
Amortization period	Level percentage of pay, closed	same
Remaining amortization period	29 years	30 years
Asset valuation method	Market	same
Actuarial assumptions:		
Investment rate of return*	7.00%	same
Projected salary increases*	5.50%	same
*Includes inflation at	3.00%	same
Cost-of-living adjustments	3.00% per year	same