



**VILLAGE OF ALGONQUIN**  
**ALGONQUIN POLICE PENSION FUND**

Actuarial Valuation Report

For the Year

Beginning May 1, 2012

And Ending April 30, 2013

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

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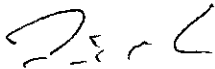
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## INTRODUCTION

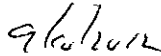
Police-sworn personnel of the Village of Algonquin are covered by the Police Pension Plan that is a defined-benefit, single-employer pension plan. The purpose of this report is to disclose the Tax Levy Requirement and GASB Statements No. 25 & 27 financial information and related actuarial information 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



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Date

## SUMMARY OF RESULTS

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

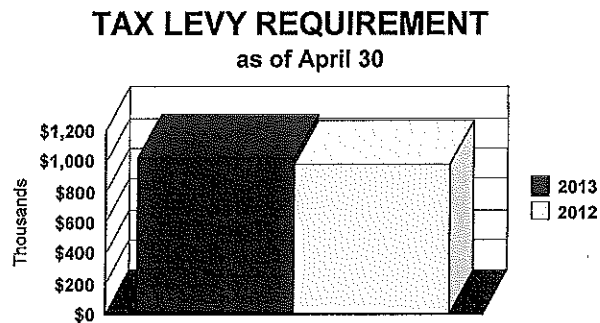
There were no unexpected changes with respect to the participants included in this actuarial valuation (0 new members, 0 terminations, 0 retirement, 0 incidents of disability, annual payroll increase 3.4%, average increase 3.4%).

There were no unexpected changes with respect to the Fund's investments from the prior year (annual investment return 4.36%).

The Village's Tax Levy Requirement has increased from \$987,225 last year to \$1,020,427 this year (3.4%). The increase in the Tax Levy is due to the increase in salaries. The Percent Funded has increased from 53.6% last year to 56.6% this year.

SUMMARY OF RESULTS (Continued)

	For Year Ending April 30	
	<u>2013</u>	<u>2012</u>
Tax Levy Requirement	\$ 1,020,427	\$ 987,225
	as of May 1	
	<u>2012</u>	<u>2011</u>
Village Normal Cost	324,134	332,610
Anticipated Employee Contributions	410,845	397,230
Accrued Liability	26,531,795	24,194,380
Actuarial Value of Assets	15,010,195	12,957,159
Unfunded Accrued Liability/(Surplus)	11,521,600	11,237,221
Amortization of Unfunded Accrued Liability/(Surplus)	629,536	590,030
Percent Funded	56.6%	53.6%
Annual Payroll	\$ 4,145,760	\$ 4,008,376



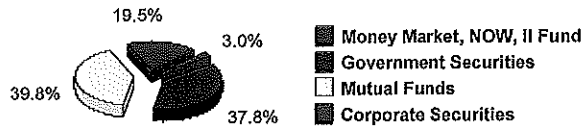
ACTUARIAL VALUATION OF ASSETS

		as of May 1	
	<u>2012</u>		<u>2011</u>
Money Market, NOW, II Fund	\$ 433,366	\$	987,519
Government Securities	5,527,097		5,924,496
Mutual Funds	5,819,772		5,456,885
Corporate Securities	2,857,588		531,737
Interest Receivable	<u>86,305</u>		<u>56,522</u>
Market Value of Assets	<u>14,724,128</u>		<u>12,957,159</u>
Actuarial Value of Assets	\$ 15,010,195	\$	

FYE 2012 (Gain)/Loss: \$357,584

**SUMMARY OF ASSETS**

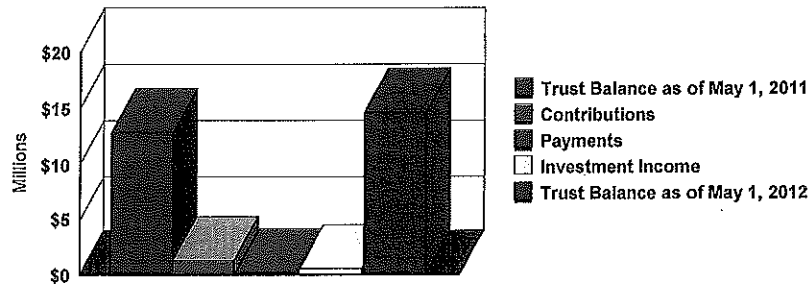
As Of May 1, 2012



## ASSET CHANGES DURING PRIOR YEAR

Trust Balance as of May 1, 2011		\$	12,957,158
Contributions			
Village	937,750		
Employee	<u>479,734</u>		
Total			1,417,484
Payments			
Benefit Payments	229,141		
Expenses	<u>11,963</u>		
Total			241,104
Investment Income			<u>590,590</u>
Trust Balance as of May 1, 2012		\$	<u>14,724,128</u>
Approximate Annual Rate of Return			4.36%

### ASSET CHANGES DURING PRIOR YEAR

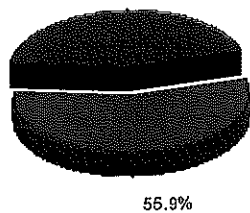


## NORMAL COST

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	\$ 734,979	\$ 729,840
Anticipated Employee Contributions	<u>410,845</u>	<u>397,230</u>
Village Normal Cost	<u>324,134</u>	<u>332,610</u>
Normal Cost Payroll	\$ 4,145,760	\$ 4,008,376
Village Normal Cost Rate	7.82%	8.30%
Total Normal Cost Rate	17.73%	18.21%

**NORMAL COST**  
As Of May 1, 2012



■ Anticipated Employee Contributions  
■ Village Normal Cost

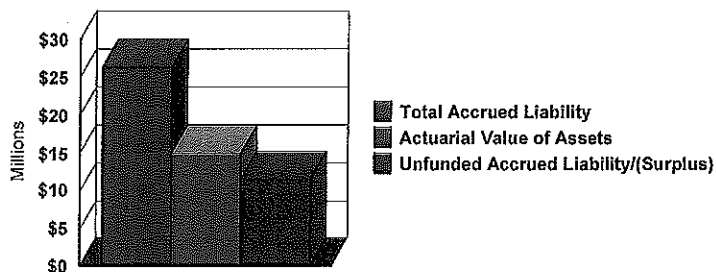


## ACCRUED LIABILITY

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	
	<u>2012</u>	<u>2011</u>
Accrued Liability		
Active Employees	\$ 21,958,078	\$ 19,657,172
Children Annuities	0	0
Disability Annuities	1,677,654	1,663,123
Retirement Annuities	2,022,041	2,004,472
Surviving Spouse Annuities	0	0
Terminated Vested Annuities	<u>874,022</u>	<u>869,613</u>
Total Annuities	4,573,717	4,537,208
 Total Accrued Liability	 26,531,795	 24,194,380
 Actuarial Value of Assets	 <u>15,010,195</u>	 <u>12,957,159</u>
 Unfunded Accrued Liability/(Surplus)	 \$ <u>11,521,600</u>	 \$ <u>11,237,221</u>
 Percent Funded	 56.6%	 53.6%

**ACCRUED LIABILITY**  
As Of May 1, 2012



## 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. Beginning in 2011, the amortization period remains 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	\$ 324,134	\$ 332,610
Amortization of Unfunded Accrued Liability/(Surplus)	629,536	590,030
Interest for One Year	<u>66,757</u>	<u>64,585</u>
Tax Levy Requirement as of End of Year	\$ <u>1,020,427</u>	\$ <u>987,225</u>
 Public Act 096-1495 Tax Levy Requirement		
1) Normal Cost (PUC)	651,256	593,472
2) Accrued Liability (PUC)	23,685,824	21,586,828
3) Amortization Payment	263,173	262,734
4) Interest for One Year	64,010	59,934
5) PA 096-1495 Tax Levy Requirement (1 + 3 + 4)	\$ 978,439	916,140

### 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	37		37	
Nonvested	<u>12</u>		<u>12</u>	
Total	<u>49</u>		<u>49</u>	
Inactive Participants		<u>Annual Benefits</u>		<u>Annual Benefits</u>
Children	0 \$	0	0 \$	0
Disabled Employees	3	98,745	3	98,745
Retired Employees	2	137,705	2	122,570
Surviving Spouses	0	0	0	0
Terminated Vesteds	<u>1</u>	<u>51,935</u>	<u>1</u>	<u>51,935</u>
Total	<u>6</u>	<u>288,385</u>	<u>6</u>	<u>273,250</u>
Annual Payroll	\$	4,145,760	\$	4,008,376

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	4	3						7	64,480
30-34	1	2	3					6	75,917
35-39		1	13	3				17	86,859
40-44		2	1	2				5	82,614
45-49					6	1		7	89,764
50-54				2	3	1		6	97,689
55-59								0	
60+						1		1	134,745
<b>Total</b>	<u>5</u>	<u>8</u>	<u>17</u>	<u>7</u>	<u>9</u>	<u>3</u>	<u>0</u>	<u>49</u>	<u>84,607</u>
<b>Salary</b>	62,408	70,846	86,859	89,302	92,506	110,896			

Average Age: 39.1      Average Service: 13.6

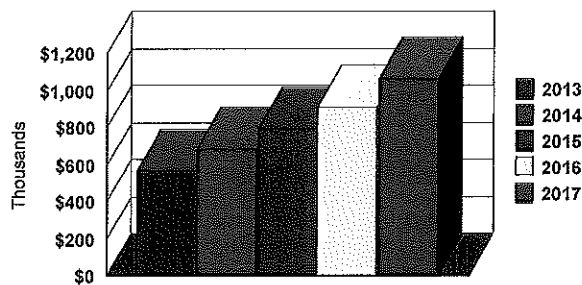
DURATION (years)    Active Members: 19.7    Retired Members: 11.6    All Members: 18.2

PROJECTED PENSION PAYMENTS

<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
\$571,935	\$687,051	\$798,641	\$909,406	\$1,060,089

**PROJECTED PENSION PAYMENTS**

2013-2017



## SUMMARY OF PLAN PROVISIONS

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

The Village of Algonquin 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 (100%) of final salary for fatalities resulting from an act of duty, or otherwise 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 greater of a) the sum of the Normal Costs for all active participants, and b) 17.5% of the total payroll of 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 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	1984 Unisex Pensioners Mortality Table
Withdrawal	Graduated Rates
Disability	Graduated Rates
Retirement	Graduated Rates (100% by Age 65)
Marital Status	80% Married, Female spouses 3 years younger
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	0.13	7.93	0.09	
30	0.11	7.22	0.09	
40	0.23	5.15	0.20	
50	0.62	2.56	0.62	40.00
60	1.55		1.40	10.00
65	2.48			100.00

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	5	5
Terminated plan members entitled to but not yet receiving benefits	1	1
Active vested plan members	37	37
Active nonvested plan members	<u>12</u>	<u>12</u>
Total	<u>55</u>	<u>55</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	10,875,019	21,820,186	10,945,167	49.8%	3,865,273	283.2%
04/30/11	12,957,159	24,194,380	11,237,221	53.6%	4,008,376	280.3%
04/30/12	14,724,128	26,531,795	11,807,667	55.5%	4,145,760	284.8%



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	933,392	916,506
Interest on net pension obligation	(1,619)	(1,600)
Adjustment to annual required contribution	<u>1,231</u>	<u>1,172</u>
Annual pension cost	933,004	916,078
Contributions made	<u>937,750</u>	<u>916,349</u>
Increase (decrease) in net pension obligation	(4,746)	(271)
Net pension obligation beginning of year	<u>(23,123)</u>	<u>(22,852)</u>
Net pension obligation end of year	<u>(27,869)</u>	<u>(23,123)</u>

THREE-YEAR TREND INFORMATION

<u>Fiscal Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation</u>
04/30/10	768,139	99.9%	(22,852)
04/30/11	916,078	100.0%	(23,123)
04/30/12	933,004	100.5%	(27,869)

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

FUNDING POLICY AND ANNUAL PENSION COST

Contribution rates:

Village	22.62%	22.86%
Plan members	9.91%	Same

Annual pension cost	933,004	916,078
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Contributions made	937,750	916,349
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Actuarial valuation date	04/30/2012	04/30/2011
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Actuarial cost method	Entry age	Same
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Amortization period	Level percentage of pay, closed	Same
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Remaining amortization period	21 years	22 years
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Asset valuation method	Market	Same
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Actuarial assumptions:

Investment rate of return*	7.00%	Same
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Projected salary increases*	5.50%	Same
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*Includes inflation at	3.00%	Same
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Cost-of-living adjustments	3.00% per year	Same
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