VILLAGE OF LAKE BLUFF
SPECIAL MEETING OF THE
VILLAGE BOARD OF TRUSTEES
COMMITTEE OF THE WHOLE AND
POLICE PENSION FUND BOARD
MEETING

Monday, May 9, 2016
6:00 P.M.

Village Hall Board Room
40 East Center Avenue

AGENDA

I. Call To Order

II. Roll Call

III. Non-Agenda Items and Visitors (Public Comment)

The Committee-of-the-Whole allocates fifteen (15) minutes during this item for those individuals who would like the opportunity to address the Committee-of-the-Whole on any matter not listed on the agenda. Each person addressing the Committee-of-the-Whole is asked to limit their comments to a maximum of three (3) minutes.

IV. General Business

The Committee-of-the-Whole will entertain requests from anyone present to modify the order of business to be conducted.

i. Consideration of the Minutes from the April 11, 2016 Committee-of-the-Whole Meeting

ii. A Discussion Regarding Police Pension Plan Actuarial Valuation Assumptions

V. Adjournment

R. Drew Irvin
Village Administrator

The Village of Lake Bluff is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding accessibility of the meeting or the facilities, are requested to contact R. Drew Irvin at 234-0774 or TDD number 234-2153 promptly to allow the Village of Lake Bluff to make reasonable accommodations.

VILLAGE OF LAKE BLUFF
COMMITTEE-OF-THE-WHOLE MEETING
APRIL 11, 2016

DRAFT MINUTES OF MEETING

The Village of Lake Bluff Board of Trustees met as a Committee-of-the-Whole (COW) in the Village Hall Board Room (40 East Center Avenue) on Monday, April 11, 2016. Village President O'Hara called the meeting to order at 6:30 p.m. and in the absence of Village Clerk Aaron Towle, Deputy Village Clerk Drew Irvin called the roll and announced the following were present:

Village President:	Kathleen O'Hara
Trustees:	Barbara Ankenman Steve Christensen Mark Dewart Eric Grenier John Josephitis William Meyer
Absent:	Aaron Towle, Village Clerk
Also Present:	Peter Friedman, Village Attorney Drew Irvin, Village Administrator David Belmonte, Chief of Police Jeff Hansen, Village Engineer Michael Croak, Building Codes Supervisor Jake Terlap, Public Works Superintendent Brandon Stanick, Assistant to the Village Administrator

Non-Agenda Items and Visitors

President O'Hara stated the COW allocates 15 minutes for those individuals who would like the opportunity to address the COW on any matter not listed on the agenda.

There were no requests to address the COW.

Consideration of the Minutes from the January 25, 2016 Committee-of-the-Whole Meeting

Trustee Grenier moved to approve the January 25, 2016 COW Meeting Minutes as presented. Trustee Meyer seconded the motion. The motion passed on a unanimous voice vote.

A Discussion Regarding the Moffett Road Culvert and Outfall Repair Project

Village Administrator Drew Irvin introduced the agenda item and noted that $250,000 was included in the Fiscal Year 2017-18 Biennial Budget for the project.

Village Engineer Jeff Hansen showed pictures of the current condition of the Moffett Road pavement noting the washout behind the curb and the wall failure at the base of the culvert. The cracked pavement allows water to seep through causing erosion at the bank of the wall. Village Engineer Hansen reviewed the Federal funding available through the Federal Surface Transportation Program. He reviewed the temporary repairs recommended by Consultant Baxter & Woodman noting they are currently working on a final temporary repair design for the headwall and roadway. The estimated cost is approximately $150,000 for design and construction. Village Engineer Hansen reviewed the following components associated with a permanent solution: slope regrading, headwall replacement, lining the culvert and repaving portions of Moffett Road. Lastly, he reviewed the budget impacts associated with the repairs.

In response to a question from Trustee Grenier, Village Engineer Hansen stated a portion of the grant will be used to repair Moffett Road.

In response to a question from Trustee Dewart, Village Engineer Hansen stated Phase II (design) and III (construction) are eligible for 80% federal funding and the Village would be responsible for the remaining 20%.

Trustee Dewart inquired about using STP funds for the future reconstruction of Green Bay Road. Village Engineer Hansen stated the same steps will be required with the future Green Bay Road project as the culvert project.

Trustee Meyer asked if the consultants confirmed the temporary repairs will be sufficient enough for the wall not to fail. Village Engineer Hansen stated the temporary design is not complete yet.

In response to a question from Trustee Meyer, Village Engineer Hansen stated it would likely not be a catastrophic failure if a part of the culvert system should fail.

Trustee Ankenman inquired about the total costs for the project. Village Engineer Hansen advised the total cost for the project would be approximately $1.5 million.

Village Administrator Irvin stated there would be no required changes to the biennial budget; procedurally, this qualifies as an emergency repair.

Village Engineer Hansen reported the design must be finalized and then priced, but suggested the project not be bid competitive due to the timing. The temporary solution will last approximately five years.

In conclusion, Village Engineer Hansen reviewed the next steps noting work will being during the summer of 2016.

Adjournment

As no further business came before the COW, Trustee Dewart moved to adjourn the meeting. Trustee Meyer seconded the motion. The motion passed on a unanimous voice vote and the meeting adjourned at 6:56 p.m.

Respectfully Submitted,

____

R. Drew Irvin
Village Administrator

MEMORANDUM

Date: May 6, 2016

To: President O'Hara and Members of the Committee of the Whole
President Vinson and Lake Bluff Police Pension Board Trustees
Drew Irvin, Village Administrator

From: Susan Griffin, Finance Director

Subject: Discussion Regarding Police Pension Fund Actuarial Valuation Assumptions

LAKE BLUFF

NORTH SHORE LIFE
LAKE BLUFF STYLE

Since 1993 the Village has engaged an actuarial firm to prepare the annual Police Pension Fund valuation to provide an independent calculation of the plan assets, the unfunded liability, and to recommend the Village's contribution (property tax levy) to fund the Plan in compliance with the law. Prior to 1993, the Village relied on the Illinois Department of Insurance, Pension Division actuarial valuation. By using a separate actuary the Village could develop its own funding method and actuarial assumptions as long as it met the requirements of the law.

Last year in planning for implementation of the new Governmental Accounting Standards Board (GASB) Statements 67 and 68, the Village engaged MWM Consulting Group to prepare an actuarial valuation of the Police Pension Plan in and to provide supplementary information required in the GASB 67/68 transition year (FY15). Pursuant to GASB 68 the Village's FY16 Comprehensive Annual Financial Report (CAFR) will include the net pension liability on the government-wide financial statements. GASB 67/68 is applicable to IMRF Pension Fund, however IMRF provides the actuarially required information to the municipalities.

Village Staff anticipates the Committee-of-the-Whole and the Lake Bluff Police Pension Board discussing and formalizing the actuarial assumptions for the preparation of this report.

Attachments:

1. MWM Consulting presentation and
2. FY15 Pension Fund actuarial valuation.

ATTACHMENT #1

MWM Consulting Group

THE VILLAGE OF LAKE BLUFF
Police Pension Plan

Actuarial Discussion

May 9, 2016

Disclosure

The information presented in this highlights summary was prepared to assist the Village of Lake Bluff and Trustees of the Police Pension Fund in their review of the funding and accounting policies of the pension plan. This summary was prepared as an information supplement to the previously provided complete actuarial reports. This summary may not otherwise be copied or reproduced in any form without the consent of the Village of Lake Bluff and may only be provided to other parties in its entirety.

MWM Consulting Group

Overview

- Introduction
- Funding Valuation Results
- Funding Policy
- Accounting Valuation Results
- GASB 67/68 impact
- Timing of Contributions
- Significant Actuarial Assumptions

Introduction: Who We Are

- Kathleen (Kathy) Manning FSA, EA, MAAA, FCA
  - Client experience includes non-profit, for profit and governmental entities
  - Consulting background includes retirement plans, health plans, executive benefits, strategic and dynamic forecasting, accounting requirements
- Daniel (Dan) Colby FSA, EA, MAAA, FCA
  - Client experience includes non-profit, for profit and governmental entities
  - Consulting background includes retirement plans, health plans, executive benefits, technology strategic and dynamic forecasting, specialty technology applications

MWM Consulting Group

Funding Valuation Results

Item	May 1, 2016	May 1, 2015
Participants		
Active, Layoff, Transfer	14	14
Retired	14	14
Vested Terminated	1	1
Total	29	29
Accrued Liabilities (Entry Age Method)		
Effective Interest Rate	7.00%	7.00%
Active, Layoff, Transfer	$ 4,375,605	$ 4,055,695
Retirees, widows , survivors	6,988,371	6,755,851
Disabled	3,894,257	3,846,023
Vested Terminated	119,590	915,238
Total	$ 15,377,823	$ 15,572,807
Actuarial Assets	$ 8,857,854	$ 8,367,021
Funded Percentage	57.60%	53.73%
Unfunded Liability	$ 6,519,969	$ 7,205,786
Actuarially Determined Contribution Funding Policy: Entry Age Normal/95% Target 2016/90% Target 2015/ Level Dollar Amortization to 2040	$ 650,024	$ 640,595
Statutory Minimum Contribution: Projected Unit Credit / 90% Target / Level % of Payroll Amortization to 2040	$ 455,599	$ 464,838
Benefit Payments (Expected for 2016)	$ 776,845	$ 821,147
Liquidity Ratio (based upon prior year end)	145%	

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Funding Policy

- Should be written, articulated policy reflecting the actuarial methodology to be used to determine the Actuarially Determined Contribution and commitment to fund accordingly
- Currently presumed Entry Age Normal plus amortization on level dollar amount to fund 95% of liability by 2040
- Level dollar amortization drives funding faster than percentage of payroll funding which pushes large dollar amounts to later years based upon anticipated increased payroll.
- GASB 67/68 components are based upon Entry Age Method, but with different annual costs and amortization methods.
- Under GASB 67/68 discounted liabilities are based upon projection of funding policy contributions. Change in policy will change projections and may cause discount rate to be adjusted lower with resulting increase in liabilities.
- Must consider intergenerational equity , stability of contributions as a percentage of payroll, along with solvency and liquidity demands of pension plan

MWM Consulting Group

Accounting Valuation Results

	April 30, 2015	April 30, 2014
Accrued Liability (Entry Age Normal)	$15,377,823	$15,572,807
Market Assets	$ 8,934,449	$ 8,558,316
Funded Ratio (Assets to Liabilities)	58.09%	54.95%
Annual Pension Cost (GASB 25/27)	$ 577,641	$ 518,246
Net Pension Obligation 4/30 (GASB 27)	$ 124,628	$ 157,215
Net Pension Liability 5/1/15 (GASB 68)	$ 6,443,374	n/a
Opening Pension Liability adjustment 5/1/2015	$ 6,318,746	n/a

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Significant Actuarial Assumptions

	Funding	Accounting	Comments
Salary Increase	Graded by age (6.86% at 25 to 3.12% at 55)	Graded by age (6.86% at 25 to 3.12% at 55)	
Long Term Rate of Return on Investments	7.0%	7.0%	Annual review – Important to have historical return information as support / documentation
Discount rate	7.0%	7.0%	For GASB 67/68 requires projected sufficiency else 20 year average muni rate (3%-4%)
Retirement Rates	Graded by age (36% at age 50 …. 100% at age 69)	Graded by age (36% at age 50 …. 100% at age 69)	Suggest review of experience with respect to actual retirements
Mortality Rates	RP 2000 projected to 2015 with Blue Collar adjustment and 50% load	RP 2000 projected to 2015 with Blue Collar adjustment and 50% load	Suggest removal of load and periodic review for updating

MWM Consulting Group

Significant Actuarial Assumptions

	Funding	Accounting	Comments
Rates of Disability	Sample rates: Age 25 – 0.13% Age 35 – 0.44% Age 45 – 1.08% Age 55 – 0.00%	Sample rates: Age 25 – 0.13% Age 35 – 0.44% Age 45 – 1.08% Age 55 – 0.00%	Duty disability percentage is important component
Withdrawal	7.34% at age 25 graded down to 0% at age 50	7.34% at age 25 graded down to 0% at age 50	
Payroll Growth	4.0% per year	Projected individually based upon salary scale	Funding payroll growth is used to develop amortization basis as a percentage of total payroll
Percentage Married	85% of participants are assumed to be married	85% of participants are assumed to be married	

GASB 68 Impact

- Expense and disclosure for 2015 was developed under GASB 25/27. Additional GASB 67 exhibit included for 2015
- Full reflection of GASB 68 in 2016 – 2015 was transitional year
- GASB 68 will require an opening balance sheet adjustment of

  $ 6,318,766 on May 1, 2015
- GASB 68 expense will be different than funding contribution amounts
- Expect increased disclosures, documentation and validation of assumptions, methods and procedures

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Questions???

ATTACHMENT #2

ACTUARIAL VALUATION

Village of Lake Bluff
Lake Bluff Police Pension Fund

As of May 1, 2015
For the Year Ending April 30, 2016

TABLE OF CONTENTS

SECTION 1: SUMMARY OF PRINCIPAL VALUATION RESULTS

MWM Consulting Group was retained to prepare an actuarial valuation as of May 1, 2015 for the Village of Lake Bluff Police Pension Fund. The purpose of the actuarial valuation was to determine the financial position and the annual actuarial requirements of the pension fund under Illinois statute 40 ILCS 5/3, Section 125, and to develop a recommended minimum contribution amount.

For quick reference, some of the key results of the valuation, along with selected financial and demographic information for the year ending April 30, 2016 are summarized in this overview section along with (for comparison) the results from the prior year.

CONTRIBUTIONS

The plan sponsor must contribute at least the statutorily required minimum contribution under Illinois statutes equal to the normal cost plus the amount necessary to amortize the unfunded accrued liability such that by 2040, the liabilities will be 90% funded.

Item	Current Valuation as of 5/1/2015	Prior Year Valuation as of 5/1/2014
Recommended Minimum Contribution	$650,024 (51.9%)	$640,595 (51.5%)
Statutory Minimum Contribution per 40 ILCS 5/3 Section 125	$455,599 (36.4%)	$464,838 (37.4%)

() amounts expressed as a percentage of payroll

STATUTORY MINIMUM FUNDING COST ELEMENTS

Illinois statues require employers to contribute at least the amount necessary such that assets will equal at least 90% of the accrued liability by 2040. The minimum amount is determined under the Projected Unit Credit funding method, with smoothed assets, and is equal to the normal cost plus the amortization amount.

Item	Current Valuation as of 5/1/2015	Prior Year Valuation as of 5/1/2014
Accrued Liability	$ 14,943,673	$ 14,493,065
Market Value of Assets	$ 8,934,449	$ 8,558,315
Actuarial (Smoothed) Value of Assets	$ 8,857,854	$ 8,367,021
Normal Cost (Total)	$ 288,721	$ 294,210
Amortization Amount	$ 253,001	$ 250,900
Statutory Minimum Contribution	$ 455,599	$ 464,838

RECOMMENDED MINIMUM FUNDING CONTRIBUTION COST ELEMENTS

The recommended minimum contribution is the amount necessary to fund 95% of the accrued liability by 2040 based upon a level dollar amortization basis and the entry age normal funding method.

Item	Current Valuation as of 5/1/2015	Prior Year Valuation as of 5/1/2014
Accrued Liability	$ 15,377,823	$ 15,572,807
Market Value of Assets	$ 8,934,449	$ 8,558,315
Actuarial (Smoothed) Value of Assets	$ 8,857,854	$ 8,367,021
Normal Cost (net of employee contributions)	$ 138,166	$ 175,780
Amortization Amount	$ 461,218	$ 433,105
Recommended Minimum Contribution	$ 650,024	$ 464,838

FINANCIAL THUMBNAIL RATIOS

This chart summarizes traditional financial ratios as applied to the pension plan. This liquidity ratio relates the cash flow position of the Fund by comparing the investment income plus employer and employee contributions to the annual benefit payments. Maintaining a ratio well above 100% prevents the liquidation of assets to cover benefit payments. The increase in benefits paid over the years is generally a result of the maturing of the pension plan.

Coverage of the Accrued Liabilities by the Assets is the Coverage Ratio and is one indication of the long term funding progress of the plan.

Tests	2015 Valuation	2014 Valuation
Liquidity Ratio (based upon year ended)	145%	
Coverage Ratio (Market Value Assets)	58.1%	
Annual Benefit Payments (expected)	$776,845	
Annual Contributions (expected)		
Members	$124,073	$118,430
Village	$650,024	$640,595

PARTICIPANT DATA SUMMARY

The Actuarial Valuation takes into account demographic and benefit information for active employees, vested former employees, and retired pensioners and beneficiaries. The statistics for the past two years are compared in the chart.

Item	Current Year Valuation as of 5/1/2015	Prior Year Valuation as of 5/1/2014
Active Members	14	14
Terminated Members entitled to future benefits	1	2
Retired Members (including beneficiaries and disabled participants receiving benefits)	14	14
Total	29	30

SECTION 2: VALUATION RESULTS

Significant Events and Issues Influencing Valuation Results

Actuarial valuations are snapshot calculations which incorporate and reflect the experience and events of the past year such as changes in the demographics of the plan participants, gains and losses in the plan assets, changes in actuarial assumptions about future experience and outside influences such as legislation. Some of the more significant issues affecting the Plan's contribution level are described here.

Change in Actuarial Assumptions/Methods

With respect to demographic assumptions, modifications were made to the disability and duty disability assumptions and to the mortality table which was upgraded to include mortality improvements to the 2015 valuation year and a lowering of the public safety adjustment to 50% from (125% to 200%). Retirement rates were not changed for this valuation, however, a review of the retirement rates is recommended before the next valuation.

For determination of the recommended contribution the amortization basis was increased to 95% of the accrued liability from 90%.

Asset Performance for yearend 4/30/2015

The approximate 5.41% return (not time weighted) on net assets was below the actuarial assumption of 7.00%.

ACTUARIAL CERTIFICATION

This is to certify that MWM Consulting Group has prepared an Actuarial Valuation of the Plan as of May 1, 2015 for the purposes of determining statutory contribution requirements for the Fund in accordance with the requirements of 40 ILCS 5/3, Section 125, of determining a recommended minimum contribution. The contributions determined are net of contributions made by active member police officers during the year.

The results shown in this report have been calculated under the supervisions of a qualified Actuary as defined in appropriate State statutes. All results are based upon demographic data submitted by the Fund /Village, financial data submitted by the Fund, applications of actuarial assumptions, and generally accepted actuarial methods.

This valuation report has been prepared at the request of Village of Lake Bluff Incorporated to assist in administering the Plan and meeting specified financial and accounting requirements. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Fund sponsor and may only be provided to other parties in its entirety. The information and valuation results shown in this report are prepared with reliance upon information and data provided to us, which we believe to the best of our knowledge to be complete and accurate and include:

- Employee census data submitted by the Village of Lake Bluff Incorporated. This data was not audited by us but appears to be consistent with prior information, and sufficient and reliable for purposes of this report.
- Financial data submitted by the Police Fund/Village of Lake Bluff Incorporated.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Actuarial valuations involve calculations that require assumptions about future events. Certain of the assumptions or methods are mandated for specific purposes. Future actuarial measurements may differ significantly from the current measurements presented in the report due to such factors as experience that deviates from the assumptions, changes in assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contributions based on the Plan's funded status) and changes in plan provisions or applicable law. This report does not include an analysis of the potential range of such future measurements.

We believe the assumptions and methods used are within the range of possible assumptions that are reasonable and appropriate for the purposes for which they have been used. In our opinion, all methods, assumptions and calculations are in accordance with requirements and the procedures followed and presentation of results are in conformity with generally accepted actuarial principles and practices. The undersigned actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. There is no relationship between the Village of Lake Bluff Incorporated and MWM Consulting Group that impacts our objectivity. I certify that the results presented in this report are accurate and correct to the best of my knowledge.

MWM CONSULTING GROUP

Kathleen E Manning, FSA Managing Principal & Consulting Actuary MWM Consulting Group	Daniel W. Colby, FSA Consulting Actuary MWM Consulting Group	10/15/2015 Date

SECTION 3 - FINANCIAL AND ACTUARIAL EXHIBITS

Exhibit 1 - Statement of Market Value of Assets

Item	Plan Year Ending	
	4/30/2015	4/30/2014
1. Investments at Fair Value:		
a. Cash and Cash equivalents	$ 0	$ 0
b. Money Market Mutual Funds	585,850	592,441
c. Municipal Bonds	2,019,323	1,820,606
d. Corporate Bonds	0	0
e. US Government and Agency Bonds	2,417,827	2,267,965
f. Common and Preferred Stocks	2,158,003	2,260,550
g. Insurance Contracts (at contract value):	0	0
h. Mutual Funds	1,730,277	1,596,771
i. Accrued Interest and receivables	25,448	27,297
j. Other	0	0
Total Assets (a + b + c +d + e + f + g+ h+ i +j)	$ 8,936,728	$ 8,565,630
2. Liabilities:		
a. Expenses Payable	$ 2,279	$ 7,314
b. Liability for benefits due and unpaid	0	0
c. Total Liabilities	$ 2,279	$ 7,314
3. Net Market Value of Assets Available for Benefits: (1j – 2c)	$ 8,934,449	$ 8,558,316

Exhibit 2 - Statement of Change in Net Assets

Item	Plan Year Ending	
	4/30/2015	4/30/2014
Additions		
Contributions		
Employer	$ 610,228	
Plan Member	126,214	
Other	0	
Total Contributions	$ 736,442	
Investment Income		
Net appreciation in fair value of investments	$ 269,498	
Interest	97,642	
Dividends	93,589	
Real estate operating income-net	0	
Investment Expenses	109	
Net Investment Income	460,838	
Total additions	$ 1,197,280	
Deductions		
Benefits	$ 771,609	
Refunds	0	
Administrative and Investment Expenses	49,538	
Total deductions	$ 821,147	
Total increase (decrease)	$ 376,133	
Net Fiduciary Position		
Beginning of year	$ 8,558,316	$ 7,697,491
End of year	$ 8,934,449	$ 8,558,316

Exhibit 3 – Actuarial Value of Assets

Under 40 ILCS 5/3, the statutory minimum required contribution is to be determined based upon **Actuarial Value of Assets**, which are asset values which have been smoothed over a five-year period, beginning with the year 2011. The **Actuarial Value of Assets** has been calculated below based upon the market value of assets at May 1, 2015 with adjustments for the preceding year's gains/losses, which are reflected at the rate of 20% per year.

1. Expected Return on Assets	
a. Market Value of Assets as of Beginning of Year	$ 8,558,315
b. Income and Disbursements During the year	
i. Contributions Received (weighted 50%)	$ 368,221
ii. Benefit Payments and Expenses (weighted 50%)	410,574
iii. Weighted net income (other than investment income) (i) – (ii)	(42,353)
c.. Market Value adjusted for income and disbursements	$ 8,515,963
d. Expected Return on Assets at assumed rate of 7.00%	**$ 596,117**
2. Actual Return on Assets for year	
a. Market Value of Assets (Beginning of Year)	$ 8,558,315
b. Income (less investment income)	736,442
c. Disbursements	821,147
d. Market Value of Assets (End of Year)	8,934,449
e. Actual Return on Assets (d) – (a) – (b) + (c)	460,839
f. Investment Gain/(Loss) for year 2(e) - 1(d)	**$ (135,278)**
3. Actuarial Value of Assets	
a. Market Value of Assets as of End of Year	$ 8,934,449
b. Deferred Investment gains/(losses)	
i. 80% of 2015 loss of $(135,278)	108,222
ii. 60% of 2014 gain of $416,724	(250,034)
iii. 40% of 2013 gain of $58,278	(23,311)
iv. 20% of 2012 loss of $(442,639)	88,528
v. Total	(76,595)
c. Actuarial Value of Assets for statutory funding 3(a) + 3(b)(iv)	**$ 8,857,854**

Exhibit 4- Determination of the Statutory Minimum Required Contribution

Under 40 ILCS 5/3, the statutory minimum required contribution is to be determined based upon the Projected Unit Credit actuarial funding method, where the unfunded liability is amortized such that 90% of the liability will be funded as of 2040. Under the statute, 90% of the unfunded liability is to be amortized as a level percentage of payroll over the period through 2040. The mandated funding method, the Projected **Unit Credit funding method, requires** the annual cost of the plan to be developed in two parts: that attributable to benefits allocated to the current year (the normal cost); and that allocated to benefits attributable to prior service (the accrued liability).

Funding Elements for 40 ILCS 5/3

	Present Value of Benefits as of 5/1/2015	Projected Unit Credit (PUC) Normal Cost 5/1/2015	PUC Actuarial Accrued Liability as of 5/1/2015
1. Active Officers			
a) Normal & Early Retirement	$ 5,738,579	$ 217,109	$ 3,130,931
b) Vested Withdrawal	261,769	15,287	163,905
c) Pre-Retirement Death	189,980	8,820	111,821
d) Disability	941,247	47,505	534,798
e) Total Active Police Officers	$ 7,131,575	$ 288,721	$ 3,941,455
2. . Inactive Police Officers and Survivors:			
a) Normal Retirees	$ 6,846,329		$ 6,846,329
b) Widows (survivors)	142,042		142,042
c) Deferred Vested	119,590		119,590
d) Disabled	3,894,257		3,894,257
e) Total - Nonactive	$ 11,002,218		$ 11,002,218
3. Total – All	$ 18,133,784		$ 14,943,673

Minimum Statutory Contribution under 40 ILCS 5/3

Item	Amount
1. Annual Payroll	$ 1,251,993
2. Normal Cost (net of employee/member contributions)	164,677
3. Employee Contributions (expected)	124,044
4. Funding Actuarial Liability	14,943,673
5. 90% of Funding Actuarial Liability	13,449,306
6. Actuarial Value of Assets (Exhibit 3)	8,857,854
7. Unfunded Actuarial Balance	4,591,452
8. Amortization of Unfunded Balance over 25 years as a level percentage of payroll	253,001
9. Interest on (2), (3) and (8)	37,921
10. Minimum statutory tax levy contribution per 40 ILCS 5/3 (2) + (8) + (9)	**$455,599 (36.4%)**

*() amount as a percent of payroll

Exhibit 5- Determination of the Recommended Contribution

The Tax Levy has been based upon the actuary's recommended contribution, rather than the amount determined as the minimum under 40 ILCS 5/3. The recommended contribution is developed below, based upon the Entry Age Normal Funding Method, with the unfunded accrued liability amortized as a level dollar amount over the 25 years through 2040. The contribution is then the sum of the Normal Cost (developed under the entry age method, but where the total normal cost is not less than 17.5%) plus the amortization payment.

Funding Elements for Recommended Contribution

	Present Value of Benefits as of 5/1/2015	Entry Age Normal Cost 5/1/2015	Entry Age Accrued Liability as of 5/1/2015
1. Active Officers			
a) Normal & Early Retirement	$ 5,738,579	$ 186,554	$ 3,804,593
b) Vested Withdrawal	261,769	17,958	63,657
c) Pre-Retirement Death	189,980	8,754	96,285
d) Disability	941,247	48,944	411,070
e) Total Active Police Officers	$ 7,131,575	$ 262,210	$ 4,375,605
2. . Inactive Police Officers and Survivors:			
f) Normal Retirees	$ 6,846,329		$ 6,846,329
g) Widows (survivors)	142,042		142,042
h) Deferred Vested	119,590		119,590
i) Disabled	3,894,257		3,894,257
j) Total - Nonactive	$ 11,002,218		$ 11,002,218
3. Total – All	$ 18,133,784		$ 15,377,823

Recommended Contribution for Tax Levy

Item	Amount
1. Normal Cost (net of employee/member contributions)	$ 138,166
2. Member Contributions	124,044
3. Funding Actuarial Liability	15,377,823
4. 95% of Funding Actuarial Liability	14,608,932
5. Actuarial Value of Assets (Exhibit 3)	8,857,854
6. Unfunded Actuarial Balance	5,751,078
7. Amortization of Unfunded Balance over 25 years as a level dollar amount	461,218
8. Interest on (1), (2) and (7)	50,149
9. Recommended tax levy contribution (1) + (7) + (8)	**$650,024 (51.9%)**

Exhibit 6 – Summary of Participant Data as of May 1, 2015

Participant Data

Item	As of 5/1/2015
Active Members	14
Terminated Members entitled to future benefits	1
Retired Members (including beneficiaries and disabled participants receiving benefits)	14
Total	29

AGE AND SERVICE DISTRIBUTION AS OF MAY 1, 2015

Active Employee Participants

Age Group	Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	
Under 20										0
20 - 24	1									1
25 - 29	3									3
30 - 34		2								2
35 - 39			4							4
40 - 44			1	1						2
45 - 49			1			1				2
50 - 54										0
55 - 59										0
60 - 64										0
75 & Over										0
Total	**4**	**2**	**6**	**1**	**0**	**1**	**0**	**0**	**0**	**14**

Average Age: 35.4 years
Average Length of Service: 10.4 years

SECTION 4 - SUMMARY OF PRINCIPAL PLAN PROVISIONS

This summary provides a general description of the major eligibility and benefit provisions of the pension fund upon which this valuation has been based. It is not intended to be, nor should it be interpreted as, a complete statement of all provisions

Definitions

Tier 1 – For Police Officers first entering Article 3 prior to May 1, 2011

Tier 2 – For Police Officers first entering Article 3 after December 31, 2010

Police Officer (3-106): Any person appointed to the police force and sworn and commissioned to perform police duties.

Persons excluded from Fund (3-109): Part-time officers, special police officer, night watchmen, traffic guards, clerks and civilian employees of the department. Also, police officers who fail to pay the required fund contributions or who elect the Self-Managed Plan option.

Creditable Service (3-110): Time served by a police officer, excluding furloughs in excess of 30 days, but including leaves of absences for illness or accident and periods of disability where no disability pension payments have been received and also including up to 3 years during which disability payments have been received provided contributions are made.

Pension (3-111)

Normal Pension Age

Tier 1 - Age 50 with 20 or more years of creditable service.

Tier 2 - Age 55 with 10 or more years of creditable service.

Normal Pension Amount

Tier 1 - 50% of the greater of the annual salary held in the year preceding retirement or the annual salary held on the last day of service, plus 2½% of such annual salary for service from 20 to 30 year (maximum 25%)].

Tier 2 - 2½% of Final Average salary for each year of service. Final Average Salary is the highest salary based on the highest consecutive 96 months of the final 120 months of service

Early Retirement at age 50 with 10 or more years of service but with a penalty of ½% for each month prior to age 55.

Annual Salary capped at $106,800 increased yearly by the lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3%. Salary for valuations beginning in 2013 is $109,971.43.

Minimum Monthly Benefit: $1,000

Maximum Benefit Percentage: 75% of salary

Termination Retirement Pension Date

Separation of service after completion of between 8 and 20 years of creditable service.

Termination Pension Amount
Commencing at age 60, 2½% of annual salary held in the year preceding termination times years of creditable service or refund of contributions, or for persons terminating on or after July 1, 1987, 2½% of annual salary held on the last day of service times years of credible service, whichever is greater.

Pension Increase Non-Disabled
Tier 1 - 3% increase of the original pension amount after attainment of age 55 for each year elapsed since retirement, followed by an additional 3% of the original pension amount on each May 1 thereafter. Effective July 1, 1993, 3% of the amount of pension payable at the time of the increase including increases previously granted, rather than 3% of the originally granted pension amount.

Tier 2 - The lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3% increase of the original pension amount after attainment of age 60, followed by an additional 3% of the original pension amount on each May 1 thereafter.

Disabled
3% increase of the original pension amount after attainment of age 60 for each year he or she received pension payments, followed by an additional 3% of the original pension amount in each May 1 thereafter.

Pension to Survivors (3-112)

Death of Retired Member
Tier 1 - 100% of pension amount to surviving spouse (or dependent children).

Tier 2 – 66 2/3% of pension amount to surviving spouse (or dependent children), subject to the following increase: the lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3% increase of the original pension amount after attainment of age 60, followed by an additional 3% of the original pension amount on each May 1 thereafter.

Death While in Service (Not in line of duty)
With 20 years of creditable service, the pension amount earned as of the date of death.

With between 10 and 20 years of creditable service, 50% of the salary attached to the rank for the year prior to the date of death.

Death in Line of Duty
100% of the salary attached to the rank for the last day of service year prior to date of death.

Minimum Survivor Pension
$1,000 per month to all surviving spouses.

Disability Pension - Line of Duty (3-114.1)

Eligibility
Suspension or retirement from police service due to sickness, accident or injury while on duty.

Pension
Greater of 65% of salary attached to rank at date of suspension or retirement and the retirement pension available. Minimum $1,000 per month.

Disability Pension - Not on Duty (3-114.2)

Eligibility

Suspension or retirement from police service for any cause other than while on duty.

Pension

50% of salary attached to rank at date of suspension or retirement. Minimum $1,000 per month.

Other Provisions

Marriage after Retirement (3-120)

No surviving spouse benefit available.

Refund (3-124)

At death prior to completion of 10 years of service, contributions are returned without interest to widow. At termination with less than 20 years of service, contributions are refunded upon request.

Contributions by Police Officers (3-125.1)

Beginning May 1, 2001, 9.91% of salary including longevity, but excluding overtime pay, holiday pay, bonus pay, merit pay or other cash benefit.

Actuarial Accrued Liability
See ***Entry Age Normal Cost*** *Method and* ***Projected Unit Credit Cost*** *Method.*

Actuarial Assumptions
The economic and demographic predictions used to estimate the present value of the plan's future obligations. They include estimates of investment earnings, salary increases, mortality, withdrawal and other related items. The *Actuarial Assumptions* are used in connection with the *Actuarial Cost Method* to allocate plan costs over the working lifetimes of plan participants.

Actuarial Cost Method
The method used to allocate the projected obligations of the plan over the working lifetimes of the plan participants. Also referred to as an *Actuarial Funding Method.*

Actuarial Funding Method
See *Actuarial Cost Method*

Actuarial Gain (Loss)
The excess of the actual *Unfunded Actuarial Accrued Liability* over the expected *Unfunded Actuarial Accrued Liability* represents an *Actuarial Loss.* If the expected *Unfunded Actuarial Accrued Liability* is greater, an *Actuarial Gain* has occurred.

Actuarial Present Value
The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of *Actuarial Assumptions*.

Actuarial Value of Assets
The asset value derived by using the plan's *Asset Valuation Method.*

Asset Valuation Method
A valuation method designed to smooth random fluctuations in asset values. The objective underlying the use of an asset valuation method is to provide for the long-term stability of employer contributions.

Employee Retirement Income Security Act of 1974 (ERISA)
The primary federal legislative act establishing funding, participation, vesting, benefit accrual, reporting, and disclosure standards for pension and welfare plans.

Entry Age Normal Cost Method
One of the standard actuarial funding methods in which the *Present Value of Projected Plan Benefits* of each individual included in the *Actuarial Valuation* is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The portion of this *Actuarial Present Value* allocated to a valuation year is called the *Normal Cost*. The portion of this *Actuarial Present Value* not provided for at a valuation date by the *Actuarial Present Value* of future *Normal Costs* is called the *Actuarial Accrued Liability*.

Normal Cost
The portion of the *Present Value of Projected Plan Benefits* that is allocated to a particular plan year by the *Actuarial Cost Method*. See *Entry Age Normal Cost Method* for a description of the Normal Cost under the *Entry Age Normal Cost Method.* See *Projected Unit Credit Cost Method* for a description of the Normal Cost under the *Projected Unit Credit Cost Method.*

Present Value of Future Normal Costs

The present value of future normal costs determined based on the *Actuarial Cost Method* for the plan. Under the *Entry Age Normal Cost Method*, this amount is equal to the excess of the *Present Value of Projected Plan Benefits* over the sum of the *Actuarial Value of Assets* and *Unfunded Actuarial Accrued Liability.*

Present Value of Projected Plan Benefits

The present value of future plan benefits reflecting projected credited service and salaries. The present value is determined based on the plan's actuarial assumptions.

Projected Unit Credit Cost Method

One of the standard actuarial funding methods in which the *Present Value of Projected Plan Benefits* of each individual included in the *Actuarial Valuation* is allocated by a consistent formula to valuation years. The *Actuarial Present Value* allocated to a valuation year is called the *Normal Cost*. The *Actuarial Present Value* of benefits allocated to all periods prior to a valuation year is called the *Actuarial Accrued Liability*.

Unfunded Actuarial Accrued Liability

The excess of the *Actuarial Accrued Liability* over the *Actuarial Value of Assets.*

SECTION 5 - SUMMARY OF ACTUARIAL ASSUMPTIONS AND COST METHODS

Nature of Actuarial Calculations

The results documented in this report are estimates based on data that may be imperfect and on assumptions about future events, some of which are mandated assumptions. Certain provisions may be approximated or deemed immaterial and therefore are not valued. Assumptions may be made about participant data or other factors. A range of results, different from those presented in this report could be considered reasonable. The numbers are not rounded, but this is for convenience and should not imply precisions, which is not inherent in actuarial calculations.

Actuarial Assumption Item	Annual Actuarial Valuation Statutory Minimum	Annual Actuarial Valuation Recommended Minimum
Interest	7.00% per annum	7.00% per annum
Mortality	RP2000 Mortality Table projected to 2015 with Blue Collar Adjustments, 50% Load	RP2000 Mortality Table projected to 2015 with Blue Collar Adjustments, 50% Load
Retirement	Rates of retirement for all ages are: Age / Age 50 35.52% 60 21.17% 51 22.38% 61 30.41% 52 18.42% 62 39.11% 53 18.83% 63 47.81% 54 19.24% 64 56.51% 55 19.65% 65 65.20% 56 20.07% 66 73.90% 57 20.48% 67 82.60% 58 20.89% 68 91.30% 59 21.30% 69 100%	Rates of retirement for all ages are: Age / Age 50 35.52% 60 21.17% 51 22.38% 61 30.41% 52 18.42% 62 39.11% 53 18.83% 63 47.81% 54 19.24% 64 56.51% 55 19.65% 65 65.20% 56 20.07% 66 73.90% 57 20.48% 67 82.60% 58 20.89% 68 91.30% 59 21.30% 69 100%
Withdrawal	Rates of termination are based upon age only. Sample rates for selected ages are: Age 25 7.34% 40 1.19% 50 0.00% 55 0.00%	Rates of termination are based upon age only. Sample rates for selected ages are: Age 25 7.34% 40 1.19% 50 0.00% 55 0.00%
Salary Increase	Rates of salary increases are based upon age only. An additional 2.5% reflecting inflationary increases, was added in addition to the rates illustrated below. Sample rates for selected ages are: Age 25 4.86% 40 1.52% 50 1.18% 55 1.12%	Rates of salary increases are based upon age only. An additional 2.5% reflecting inflationary increases, was added in addition to the rates illustrated below. Sample rates for selected ages are: Age 25 4.86% 40 1.52% 50 1.18% 55 1.12%

Actuarial Assumption Item	Annual Actuarial Valuation Statutory Minimum	Annual Actuarial Valuation Recommended Minimum
Payroll Growth	Total payroll is assumed to increase at 4.0% per year	Total payroll is assumed to increase at 4.0% per year
Percentage Married	85% are married, females are assumed to be 3 years younger	85% are married, females are assumed to be 3 years younger
Asset Valuation Method	Assets are valued at fair market value and smoothed over five years, reflecting gains and losses at 20% per year.	Assets are valued at fair market value and smoothed over five years, reflecting gains and losses at 20% per year.
Actuarial Cost Methods	Projected Unit Credit Cost Method This is the mandated actuarial method to be used in determining the statutory contribution requirements and under PA 096-1495. This method determines the present value of projected benefits and prorates the projected benefit by service to date to determine the accrued liability. Amounts attributable to past service are amortized as a level percentage of pay with the goal of reaching 90% of the accrued liability by 2040.	Entry Age Normal Cost Method This method projects benefits from entry age to retirement age and attributes costs over total service, as a level percentage of pay. Amounts attributable to past service have been amortized over 25 years as a level dollar amount.