

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO  
STAFF RETIREE HEALTHCARE BENEFIT PROGRAM  
ACTUARIAL VALUATION AS OF DECEMBER 31, 2013**

April 23, 2014

Ms. Regina Tuczak  
Executive Director  
Policemen's Annuity and Benefit Fund of Chicago  
221 N. LaSalle Street, Suite 1626  
Chicago, IL 60601-1404

Dear Gina:

We have performed an actuarial valuation as of December 31, 2013, of the Staff Retiree Healthcare Benefit Program sponsored by the Policemen's Annuity and Benefit Fund of Chicago. The actuarial valuation was performed in order to:

- Measure the actuarial liability as of December 31, 2013; and
- Develop retiree healthcare accounting expense information for fiscal years 2013, 2014 and 2015 as defined under the GASB Statement No. 45.

The valuation was based on the following:

- Census data as of December 31, 2013, and premium and enrollment data for fiscal year ending 2013, as provided by the Policemen's Annuity and Benefit Fund of Chicago (PABF).
- Plan provisions and funding policy in effect as of December 31, 2013, as provided by PABF are summarized in Section D; this is our understanding of the substantive plan in effect as currently being administered.
- Actuarial assumptions and methods shown in Section E are consistent with those used to value pension benefits that the staff is eligible for from the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (LABF).

The calculations reported herein have been made on a basis consistent with GASB Statement No. 45 (*Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pension*). The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

If you have any questions or comments, please call us at 312.456.9800.

Respectfully yours,



Alex Rivera, F.S.A., E.A., M.A.A.A.  
Senior Consultant



Lance Weiss, E.A., M.A.A.A., F.C.A.  
Senior Consultant

AR: ap

Enclosures

## **Additional Disclosures Required by Actuarial Standards of Practice**

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic 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 contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon information furnished by PABF, concerning Retiree Healthcare benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by PABF.

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## **SECTION A**

### **EXECUTIVE SUMMARY**

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## EXECUTIVE SUMMARY

This report presents the results of our actuarial valuation as of December 31, 2013, for the Staff Retiree Healthcare Benefit Program sponsored by the Policemen's Annuity and Benefit Fund of Chicago. The valuation was based on GASB Statement No. 45. The plan sponsor has not established a separate trust for the Staff Retiree Benefit Program, consequently this program is not subject to GASB Statement No. 43 reporting (*Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*). Our valuation was based on a discount rate assumption of 4.5 percent and an ultimate healthcare trend assumption of 5.0 percent. The discount rate reflects the employer's pay-as-you-go funding policy. The key valuation results are summarized below:

<b>Staff Retiree Healthcare Benefit Program</b>				
<b>4.5% Discount Rate and 5.0% Ultimate Trend</b>				
	<b>Fiscal Year Ending</b>			
	<b>12/31/2012</b>	<b>12/31/2013</b>	<b>12/31/2014</b>	<b>12/31/2015</b>
Actuarial Liability at Fiscal Year End	\$6,376,689	\$5,212,127	\$5,538,553	\$5,883,114
Normal Cost for Fiscal Year	\$279,271	\$208,688	\$216,514	\$224,633
GASB No. 45 Expense for Fiscal Year	\$491,848	\$406,183	\$423,369	\$445,966
(% of Payroll)	30.3%	31.8%	32.0%	32.5%
Benefit Payments for Fiscal Year	\$169,882	\$108,262	\$123,263	\$152,574
(% of Payroll)	10.5%	8.5%	9.3%	11.1%
Payroll	\$1,623,675	\$1,276,471	\$1,324,339	\$1,374,002
Number of Active Members	21	18	18	18
Number of Retirees and Beneficiaries	11	9	10	12

The details of the preceding valuation results are included in Section B of the report.

Policemen's Annuity and Benefit Fund of Chicago first adopted GASB Statement No. 45 in fiscal year ending December 31, 2007. The Net OPEB Obligation or balance sheet liability represents the cumulative difference of the Annual OPEB Costs over actual employer contributions.

The actuarial liability decreased from \$6.4 million as of December 31, 2012, to \$5.2 million as of December 31, 2013. The key factors contributing to the increase include:

- Increase due to expected growth in actuarial liability
- Increase due to change in assumptions
- Decrease due to average claims and premiums decreasing since the last valuation
- Decrease due to demographic experience
- The trend assumption was adjusted to recognize higher anticipated increases in healthcare costs

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## **SECTION B**

VALUATION RESULTS AT 4.5% DISCOUNT  
AND 5.0% TREND

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## **VALUATION RESULTS AT 4.5% DISCOUNT AND 5.0% TREND**

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The following table shows the results of our valuation assuming a discount rate of 4.5 percent, salary increases comprised of a wage inflation component of 3.75 percent plus a seniority and merit component that varies by service, and an ultimate healthcare trend rate of 5.0 percent. We believe these assumptions are consistent with the requirements of GASB Statement No. 45. According to paragraph 13(c) of GASB Statement No. 45, plans should use a discount rate consistent with the return on assets backing retiree healthcare benefits, which, for pay-as-you-go plans, will usually be the return earned by the employer's general assets. In order to use a discount rate consistent with a fully-funded program, the plan sponsor must demonstrate that a separate qualified trust earmarked for retiree healthcare benefits has been established, and that the funding and investment policy can support a fully-funded discount rate assumption.



**Policemen's Annuity and Benefit Fund of Chicago**

**Staff Retiree Healthcare Benefit Program  
GASB 45 Actuarial Valuation as of December 31, 2013**

Discount Rate	4.50%
Salary Scale <sup>1</sup>	3.75%
Ultimate Trend	5.00%
Wage Inflation	3.75%

Amortization: 30-year open, level percent of payroll

<b>Retiree Healthcare Program</b>	<b>Fiscal Year End December 31, 2013</b>	<b>Fiscal Year End December 31, 2014</b>	<b>Fiscal Year End December 31, 2015</b>
I) Actuarial Liability			
A) Health Insurance			
i) Active Employees <sup>2</sup>	\$ 2,480,308	\$ 2,452,176	\$ 2,502,242
ii) Retired Participants and Beneficiaries	<u>2,731,819</u>	<u>3,086,377</u>	<u>3,380,872</u>
iii) Total	\$ 5,212,127	\$ 5,538,553	\$ 5,883,114
II) Assets	-	-	-
III) Unfunded Actuarial Liability (UAL)	\$ 5,212,127	\$ 5,538,553	\$ 5,883,114
IV) Normal Cost for the Fiscal Year			
A) Health Insurance	\$ 208,688	\$ 216,514	\$ 224,633
V) Annual Required Contribution (ARC) for the Fiscal Year			
A) Normal Cost	\$ 208,688	\$ 216,514	\$ 224,633
B) Amortization of UAL	<u>185,533</u>	<u>192,490</u>	<u>204,546</u>
C) Total	\$ 394,221	\$ 409,004	\$ 429,179
VI) Estimated Annual OPEB Cost for the Fiscal Year			
i) ARC	\$ 394,221	\$ 409,004	\$ 429,179
ii) Interest on Net OPEB Obligation	66,710	80,116	93,621
iii) Adjustment to ARC	<u>(54,748)</u>	<u>(65,751)</u>	<u>(76,834)</u>
iv) Total	\$ 406,183	\$ 423,369	\$ 445,966
v) Percentage of Payroll	31.8%	32.0%	32.5%
VII) Estimated Employer Contributions for the Fiscal Year <sup>3</sup>			
i) Implicit Subsidy	\$ 10,276	\$ 10,661	\$ 16,921
ii) Explicit Subsidy	<u>97,986</u>	<u>112,602</u>	<u>135,653</u>
iii) Total	\$ 108,262	\$ 123,263	\$ 152,574
iv) Percentage of Payroll	8.5%	9.3%	11.1%
VIII) Net OPEB Obligation (boy)	1,482,440	1,780,361	2,080,467
IX) Net OPEB Obligation (eoy)	1,780,361	2,080,467	2,373,859
X) Payroll	\$ 1,276,471	\$ 1,324,339	\$ 1,374,002
XI) Covered Members at January 1,			
i) Active Employees <sup>2</sup>	18	18	18
ii) Retired Participants and Beneficiaries	<u>9</u>	<u>10</u>	<u>12</u>
iii) Total	27	28	30

<sup>1</sup> Base increase plus service-based component.

<sup>2</sup> Active employees eligible for future retiree healthcare.

<sup>3</sup> Expected employer contributions to finance current retiree healthcare premiums assuming pay-as-you-go funding and net of retiree premiums.

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## **SECTION C**

### **GASB ACCOUNTING INFORMATION**

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**This information is presented in draft form for review by PABF's auditor. Please let us know if there are any changes so that we may maintain consistency with PABF's financial statements.**

## GASB ACCOUNTING INFORMATION

### OPEB Cost Summary:

Year Ended	Annual OPEB Cost (AOC)	Employer Contributions	% of AOC Contributed	Net OPEB Obligation	Annual Required Contribution (ARC)	% of ARC Contributed
December 31, 2007	\$ 261,500	\$ 88,800	34.0%	\$ 172,700	\$ 261,500	34.0%
December 31, 2008	276,600	104,700	37.9%	344,600	274,600	38.1%
December 31, 2009	294,600	121,000	41.1%	518,200	290,600	41.6%
December 31, 2010	440,051	127,630	29.0%	830,621	434,005	29.4%
December 31, 2011	463,226	133,373	28.8%	1,160,474	453,535	29.4%
December 31, 2012	491,848	169,882	34.5%	1,482,440	478,309	35.5%
December 31, 2013	406,183	108,262	26.7%	1,780,361	394,221	27.5%
December 31, 2014*	423,369	123,263	29.1%	2,080,467	409,004	30.1%
December 31, 2015*	445,966	152,574	34.2%	2,373,859	429,179	35.6%

\*Estimated

### Schedule of Funding Progress:

Actuarial Valuation Date	GASB Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Payroll [(b - a)/c]
December 31, 2007	\$ 0	\$ 3,021,300	\$ 3,021,300	0.0 %	\$ 1,150,900	262.5 %
December 31, 2010	0	5,588,688	5,588,688	0.0	1,486,848	375.9
December 31, 2013	0	5,212,127	5,212,127	0.0	1,276,471	408.3

## GASB NO. 45 SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

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The GASB 45 financial disclosure information for the fiscal years ending 2013, 2014, and 2015 was based on the following assumptions and methods.

<i>Valuation Date</i>	December 31, 2013
<i>Actuarial Cost Method</i>	Entry Age Normal
<i>Actuarial Value of Assets</i>	No Assets (Pay-as-you-go)
<i>Amortization Method</i>	Level Percent Open
<i>Remaining Amortization Period</i>	30 Years
<i>Actuarial Assumptions:</i>	
<i>Investment Rate of Return</i>	4.5% per year
<i>Wage Inflation</i>	3.75% per year
<i>Healthcare and Dental Trend</i>	8.5% per year graded down to 5.0% per year ultimate trend in 0.5% increments

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## **SECTION D**

### **PLAN PROVISIONS**

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## **PLAN PROVISIONS**

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Following are the plan provisions reflected in our valuation as of December 31, 2013, of the PABF's Staff Retiree Healthcare Benefit Program applicable to fiscal years 2013, 2014, and 2015.

### **Medical and Dental Insurance Benefits:**

#### ***Medical Benefits Provided for Plan Year Beginning January 1, 2014***

The PABF provides pre and post-Medicare healthcare benefits to retired staff members and their dependents provided they satisfy one of the following requirements and if a dependent was a covered person on the employee's last day of active employment:

- An annuitant of the LABF
- The survivor of an annuitant of the LABF
- A dependent of an annuitant of the LABF

The eligibility requirements to receive a retirement annuity from the PABF are attainment of age 55 and 10 years of service or attainment of age 50 and 30 years of service.

#### ***Dental Benefits Provided for Plan Year Beginning January 1, 2014***

Retirees or spouses who become annuitants on or after May 31, 2005, receive PABF-paid postretirement dental benefits.

#### ***Post-Medicare Benefits***

The Fund provides benefits supplemental to Medicare, including prescription coverage, to its retirees and dependents.

***Funding Policy.*** Retiree healthcare benefits are funded on a pay-as-you-go basis. Benefits are fully insured.

#### ***Eligible Benefit Programs:***

A brief description of the medical healthcare plan offered by PABF and the required retiree contributions are shown on the following pages.

**PLAN PROVISIONS (CONTINUED)**

**BlueCross BlueShield PPO**

<b>Plan Feature</b>	<b>PPO (In Network)</b>			<b>PPO (Out of Network)</b>
Annual Deductible	\$ 500 per person \$1,500 per family			\$1,000 per person \$3,000 per family
Out of Pocket Maximum	\$1,000 per person \$3,000 per family			\$2,000 per person \$6,000 per family
<u>Covered Services</u>	<u>Coinsurance</u>			<u>Coinsurance</u>
-Physicians Visits	\$20 Copay/100%			70%
-Emergency Care	\$150 Copay/100%			\$150 Copay/100%
-Inpatient Services	90%			70%
-Outpatient Services	90%			70%
-Specialist Visits	\$40 Copay/100%			70%
Prescription Drug Copays	Generic	<u>Retail</u>	<u>Mail Order</u> (90 day supply)	N/A
	Formulary	\$15	\$30	
	Non-Formulary	\$30	\$60	
		\$50	\$100	
Maximum Lifetime Benefit	Unlimited			Unlimited

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**PLAN PROVISIONS (CONTINUED)**

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**Total Monthly Healthcare Premium Rates as of December 1, 2013**

	<b>Coverage Type</b>			
	<b>Single</b>	<b>2 Person</b>	<b>Emp + Child(ren)</b>	<b>Family</b>
Not Medicare Eligible	1,306.16	2,525.92	2,387.51	3,623.28
Medicare Eligible	666.36	1,333.30		

**Total Monthly Healthcare Premium Rates as of April 1, 2014**

	<b>Coverage Type</b>			
	<b>Single</b>	<b>2 Person</b>	<b>Emp + Child(ren)</b>	<b>Family</b>
Not Medicare Eligible	1,347.30	2,605.47	2,462.56	3,737.06
Medicare Eligible	686.84	1,374.28		



**PLAN PROVISIONS (CONTINUED)**

**Total Monthly Contribution Rates Paid by Retirees as of January 1, 2014**

	<u>Coverage Type</u>	
	Single	2 Person
<b>Retirement date on/after 08/23/1989 and before 07/01/2005</b>		
Not Medicare Eligible	286.00	665.00
Medicare Eligible	91.00	250.00
Medicare Eligible - Retiree Only		470.00
Medicare Eligible - Spouse Only		445.00
<b>Retirement date on/after 7/1/2005 with more than 20 years of service</b>		
Not Medicare Eligible	329.00	750.00
Medicare Eligible	109.00	286.00
Medicare Eligible - Retiree Only		530.00
Medicare Eligible - Spouse Only		506.00
<b>Retirement date on/after 7/1/2005 with between 15 and 19 years of service</b>		
Not Medicare Eligible	372.00	835.00
Medicare Eligible	128.00	323.00
Medicare Eligible - Retiree Only		591.00
Medicare Eligible - Spouse Only		567.00
<b>Retirement date on/after 7/1/2005 with between 10 and 14 years of service</b>		
Not Medicare Eligible	415.00	920.00
Medicare Eligible	146.00	358.00
Medicare Eligible - Retiree Only		651.00
Medicare Eligible - Spouse Only		627.00
<b>Retirement date on/after 7/1/2005 with less than 10 years of service</b>		
Not Medicare Eligible	757.00	1,602.00
Medicare Eligible	293.00	647.00
Medicare Eligible - Retiree Only		1,138.00
Medicare Eligible - Spouse Only		1,111.00

Effective January 1, 2011, premiums paid by retirees are not directly related to premiums paid by City of Chicago retirees. The premiums paid by the retiree will be tied to the increase/decrease in the medical premium of the whole plan and are not subject to a minimum increase.

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## **SECTION E**

### ASSUMPTIONS AND METHODS

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## **ACTUARIAL METHODS AND ASSUMPTIONS**

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### **Development of Per Capita Claim Costs**

Age adjusted per capita claims costs were developed using premium information as of December 2013 for all members enrolled in the BlueCross BlueShield program.

### **Cost Method and Expense Calculations for Retiree Healthcare Benefits**

The retiree healthcare valuation was based on the entry age normal cost method. Under this method, each participant's projected benefits are assumed to be funded by annual installments, equal to a level percentage of compensation, payable from date of participation to assumed date of retirement. The total normal cost is the sum of the current year's annual installment determined for all active participants. The actuarial accrued liability is the excess value of the present value of future benefits for all participants (both active and retired) over the present value of future normal costs.

Under GASB Statement No. 45, the entry age normal method is an acceptable cost method. The Annual Required Contribution (ARC) equals the normal cost plus the amortization of the unfunded actuarial accrued liability. The amortization cannot exceed 30 years. Our calculations assume a level-percent-of-pay 30-year open amortization period. The Annual Expense or Annual OPEB Cost equals the ARC plus interest on the Net OPEB Obligation less an adjustment to ARC.

The Net OPEB Obligation or balance sheet liability is equal to the cumulative difference between the Annual OPEB Costs and employer contributions. The OPEB liability at transition date, December 31, 2006, was set to zero.

### **Actuarial Assumptions**

The actuarial assumptions used in our valuation are outlined on the following pages. The demographic assumptions are consistent with those used to value pension benefits that the staff is eligible for from the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago.

**ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)**

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<b>Measurement</b>	December 31, 2013
<b>Discount Rate</b>	4.50%
<b>Wage Inflation</b>	3.75%
<b>Merit and Seniority Increases</b>	0.00%-6.25%
<b>Price Inflation</b>	3.00%

**Annual Healthcare Trend**

<u>Applied January 1,</u>	<u>Healthcare Trend</u>
2015	8.50%
2016	8.00%
2017	7.50%
2018	7.00%
2019	6.50%
2020	6.00%
2021	5.50%
2022 +	5.00%

**Annual Per Capita Claim Costs for  
Fiscal Year 2014**

<u>Age</u>	<u>Healthcare and Dental Costs</u>
50	\$ 12,702
55	14,725
60	17,489
64	20,069
65	6,999
70	7,823
75	8,743
80	9,189

**Participation and Spouse Coverage Assumptions**

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90% of future retirees elect postretirement healthcare coverage. The distribution by contract type for those electing coverage is assumed as follows:

	<u>1 Person</u>	<u>2 Person</u>
Elect Coverage	50%	50%

Females are assumed to be 4 years younger than their spouses.

100% of spouses are expected to continue coverage after the death of the retiree.

We have assumed retirees opting out of the retiree health program cannot reenter into the program.

Measurement Date

December 31, 2013

*Demographic Assumptions*

**Pre-Retirement and Post-Retirement Mortality<sup>1</sup>**

Post Retirement Mortality: RP2000 Combined Healthy mortality table, sex distinct, set forward one year for males and setback 2 years for females. Pre-Retirement Mortality is 80 percent of post-retirement mortality. No adjustment is made for post-disabled mortality. The mortality table used is a static table and provides an estimated margin of 18 percent for future mortality improvements.

**Disability<sup>1</sup>**

All disabilities are assumed to be short term in nature

**Sample Turnover Rates<sup>1</sup>**

**% Separating Within  
Next Year**

<b>Years of Service</b>	<b>Rate</b>
0	8.00%
1	7.00%
2-3	5.00%
4-9	4.00%
10-15	3.00%
16-19	2.00%
20-29	1.50%
30+	1.00%

<sup>1</sup>Assumptions are based on the most recent LABF pension valuation.

**Population Assumption** – The active population is assumed to remain level during the projection period.

## ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

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### Tier 1 Age-and-Service-Based Rates of Retirement

<u>Attained Age</u>	<u>Years of Service</u>								
	10	11-14	15-19	20-24	25-29	30-32	33-34	35-39	40+
<b>50-54</b>	-	-	-	-	-	24 %	40 %	35 %	100 %
<b>55-59</b>	-	-	-	16 %	24 %	24	40	35	100
<b>60-64</b>	16 %	10 %	10 %	16	24	24	40	35	100
<b>65-69</b>	16	16	24	24	24	24	40	35	100
<b>70-79</b>	24	24	24	24	24	24	40	40	100
<b>80+</b>	100	100	100	100	100	100	100	100	100

### Tier 2 Age-and-Service-Based Rates of Retirement

<u>Attained Age</u>	<u>Years of Service</u>	
	10-39	40+
<b>62-66</b>	24 %	100 %
<b>67-69</b>	40	100
<b>70-79</b>	40	100
<b>80+</b>	100	100

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**SECTION F**  
PARTICIPANT DATA

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## PARTICIPANT DATA

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**Policemen's Annuity and Benefit Fund of Chicago  
Staff Retiree Healthcare Benefit Program  
Actuarial Valuation as of December 31, 2013  
Population Breakout by Fund**

<b>Counts</b>		
Actives	Retirees and Beneficiaries	Total
18	9	27

<b>Retiree and Beneficiary Healthcare Coverage Type</b>		
1 Person	2 Person	Total
4	5	9

*Note: Coverage Type by Fund for actives not provided because assumption is made on coverage type at the time of retirement.*

**PARTICIPANT DATA**

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**Policemen's Annuity and Benefit Fund of Chicago  
 Staff Retiree Healthcare Benefit Program  
 Actuarial Valuation as of December 31, 2013  
 Age Service Distribution for Total Active Population**

Attained Age	Years of Service at Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 and Up	
Under 20								-
20-24								-
25-29	1	1						2
30-34								-
35-39	1		1					2
40-44		2			1			3
45-49	1							1
50-54		1			1			2
55-59	1			1		1		3
60-64								-
65-69			1			1		2
Over 70			1	1			1	3
<b>Total</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>18</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	52.5	years
Service:	13.7	years
Total Annual Pay:	\$1,276,471	
Average Annual Pay:	\$70,915	