

**ANCHORAGE POLICE AND FIRE  
RETIREMENT SYSTEM**

**ACTUARY'S REPORT  
(As of January 1, 2010)**



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April 20, 2010

Retirement Board  
Anchorage Police and Fire Retirement System  
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Dear Members of the Board:

At your request, we have completed an actuarial valuation of the Anchorage Police and Fire Retirement System as of January 1, 2010. Our findings are discussed in Section 1. In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, collective bargaining agreements, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All assumptions have been selected by the Board and should represent a best estimate of anticipated experience under the Plan. A thorough examination of all of the methods and assumptions was last performed in the 2007 Experience Analysis. The emerging costs will vary from those presented in this report to the extent that actual experience differs from that projected by the actuarial assumptions.

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. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work is prepared solely for the internal business use of the Anchorage Police and Fire Retirement System. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

- (a) The System may provide a copy of Milliman's work, in its entirety, to the System's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.
- (b) The System may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Respectfully submitted,



Peter R. Sturdivan, FSA, EA, MAAA  
Principal and Consulting Actuary



Kirk W. Parson, ASA, EA, MAAA  
Consulting Actuary

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### SECTION 1 DISCUSSION OF THE FINDINGS

#### SCOPE OF THE REPORT

This report presents the results of the Actuarial Valuation of the Anchorage Police and Fire Retirement System as of January 1, 2010. The last Actuarial Valuation of the System was performed as of January 1, 2009.

The purpose of this actuarial valuation is to analyze the resources needed to meet the current and future obligations of the three Plans. The actuarial computations in this report are for the purpose of determining the recommended funding amounts for each Plan for 2011.

A summary of the findings and an analysis of the funding level are presented in this Section. Tables 1 through 6 of Section 2 document the calculations that led to our findings.

All of the calculations were carried out using certain assumptions as to the future experience in matters affecting the actuarial cost. Section 3 summarizes these assumptions and describes the actuarial methods used to calculate costs.

Section 4 outlines the provisions of each Plan that were used in this report. The membership data included in this valuation is summarized in Section 5.

Section 6 shows the allocation of the various Reserves as of December 31, 2009.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

We have utilized the Pension Administration System database to generate the census for this valuation. We performed a significant amount of review to ensure the accuracy of the data, including tests for reasonableness and consistency. We believe the data was sufficient and reliable for the purposes of our calculations.

The tables on this and the next few pages summarize the census data. The first table is a reconciliation of the members' change in status for the year.

	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>System</u>
<b>Total on January 1, 2009</b>	<b>211</b>	<b>123</b>	<b>434</b>	<b>768</b>
<b>Active Members</b>				
Total on January 1, 2009	3	5	75	83
Reinstatements	-	-	-	-
Vested Terminations	-	-	-	-
Service Retirements	(2)	(1)	(6)	(9)
Disability Retirements	-	-	-	-
Deaths with Survivor	-	-	-	-
Deaths w/o Survivor	-	-	-	-
Total on January 1, 2010	1	4	69	74
<i>Police Officers</i>	-	3	40	43
<i>Firefighters</i>	1	1	29	31
<b>Terminated Members</b>				
Total on January 1, 2009	-	1	10	11
Reinstatements	-	-	-	-
New Terminations	-	-	-	-
Retirements	-	-	-	-
Total on January 1, 2010	-	1	10	11
<b>Service Retirees</b>				
Total on January 1, 2009	101	77	294	472
Service Retirements	2	1	6	9
Occ. Disability Conversions	-	-	-	-
Deaths with Survivor	(2)	-	(2)	(4)
Deaths w/o Survivor	-	-	-	-
Total on January 1, 2010	101	78	298	477
<b>Non-Occupational Disability Retirees</b>				
Total on January 1, 2009	13	8	7	28
Non-Occ. Disability Retirements	-	-	-	-
Occ. Disability Conversions	-	-	-	-
Deaths with Survivor	-	-	-	-
Deaths w/o Survivor	-	-	-	-
Total on January 1, 2010	13	8	7	28

**Anchorage Police and Fire Retirement System**  
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<b>Occupational Disability Retirees</b>				
Total on January 1, 2009	56	24	21	101
Occ. Disability Retirements	-	-	-	-
Occ. Disability Conversions	-	-	-	-
Deaths with Survivor	-	-	-	-
Deaths w/o Survivor	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total on January 1, 2010	56	24	21	101
<b>Survivors</b>				
Total on January 1, 2009	38	8	15	61
Deaths with Survivor	2	-	2	4
Deaths w/o Survivor	<u>(1)</u>	<u>-</u>	<u>-</u>	<u>(1)</u>
Total on January 1, 2010	39	8	17	64
<b>Children's Benefits</b>				
Total on January 1, 2009	-	-	12	12
Benefits Started	-	-	-	-
Benefits Ended	<u>-</u>	<u>-</u>	<u>(2)</u>	<u>(2)</u>
Total on January 1, 2010	-	-	10	10
<b>Total on January 1, 2010</b>	<b>210</b>	<b>123</b>	<b>432</b>	<b>765</b>

The next tables show the number of Alternate Payees and Installment Option Annuitants currently being paid. Note we have not included them in the previous table.

	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>System</u>
<b>Alternate Payees (not included above)</b>				
Total on January 1, 2009	21	4	32	57
QDROs Established	1	1	4	6
QDROs Terminated	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total on January 1, 2010	22	5	36	63
<b>Installment Option Annuitants (not included above)</b>				
Total on January 1, 2009	-	1	-	1
Deaths	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total on January 1, 2010	-	1	-	1

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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The key demographic characteristics of the active members are shown in the next table.

	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>
<b>January 1, 2009</b>			
Average Salary	\$115,462	\$120,649	\$90,267
Average Age	59.3	51.8	47.6
Average Years Employed	36.0	24.8	18.4
<b>January 1, 2010</b>			
Average Salary	\$116,168	\$119,840	\$95,600
Average Age	60.0	53.3	48.5
Average Years Employed	38.0	25.8	19.1
<b>Changes for the Year</b>			
Average Salary	0.6%	(0.7)%	5.9%
Average Salary increase for Members active in both valuations	(0.1)%	(0.3)%	4.5%
Average Age	0.7 yr.	1.5 yr.	0.9 yr.
Average Years Employed	2.0 yr.	1.0 yr.	0.7 yr.



# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

The following table shows the distribution of active members by age and years of service.

<b>Age Group</b>	<b>Years of Service by Age</b>						<b>Total</b>
	<b>&lt; 10</b>	<b>10-14</b>	<b>15-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30 +</b>	
<b>Plan I</b>							
30-34							0
35-39							0
40-44							0
45-49							0
50-54							0
55-59						0	0
60 & up						1	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
<hr style="border-top: 1px dashed black;"/>							
<b>Plan II</b>							
30-34							0
35-39							0
40-44							0
45-49							0
50-54			1		2		3
55-59					1		1
60 & up							0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>4</b>
<hr style="border-top: 1px dashed black;"/>							
<b>Plan III</b>							
30-34							0
35-39			2				2
40-44			15				15
45-49			27	1			28
50-54			13		1		14
55-59			2	3	2		7
60 & up			2		1		3
<b>Total</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>69</b>

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### ACTUARIAL METHODS AND ASSUMPTIONS

The actuarial methods and assumptions have been chosen on the basis of experience of the Plans and on current expectations as to future economic conditions. The assumptions are intended to estimate the future experience of the members of the Plans and of the Plans themselves in areas that impact projected benefits and anticipated investment earnings. Variations in future experience from that expected by the assumptions may result in corresponding changes in the estimated liabilities for future benefits, or the expected assets available to fund them.

A thorough examination of all of the methods and assumptions was last performed for the 2007 Experience Analysis. For the 2010 valuation, Milliman has used all assumptions and methods as stated in the 2007 Experience Analysis report after the expiration of the 2009 APDEA and IAFF collective bargaining agreements. The 2010 valuation reflects the negotiated salary increases contained in the 2009 APDEA and IAFF collective bargaining agreements as amended.

#### ACTUARIAL METHODS

<b>Actuarial Cost Method:</b>	Modified Aggregate Actuarial Cost Method
<b>Valuation Assets:</b>	Fair Market Value of Assets

#### ACTUARIAL ASSUMPTIONS

<b>Economic Assumptions:</b>	<b>Investment Return:</b> 8% per year, net of all investment and administrative expenses.
	<b>Interest on Member Accounts Balances:</b> 4% per year
	<b>Inflation:</b> 3.0% per year, so that Plan III retirement allowances will increase at the rate of 0.75% per year after the 20th anniversary of hire, and 1.50% after the 25th anniversary.
	<b>Future Salary Growth:</b>
	<b>Non-union Members:</b> 3.0% per year for inflation, plus 0.5% per annum to account for all other increases.
	<b>Union Members:</b> Negotiated increases contained in the 2009 PDEA and IAFF collective bargaining agreements, then 3.0% per year, plus 0.5% per annum to account for all other increases. Members who qualified for the PIP are assumed to remain in the PIP; to be reviewed annually.

<b>Demographic Assumptions:</b>	The following assumptions were developed to reflect the emerging experience of each Plan:
	<ul style="list-style-type: none"><li>• <b>Mortality</b> (before and after retirement)</li><li>• <b>Service Retirement</b></li><li>• <b>Disablement</b> (Occupational and Non-Occupational)</li><li>• <b>Other Terminations of Membership</b></li><li>• <b>Cause of Death</b></li></ul>

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### DETERMINATION OF THE PROJECTED LIABILITY

All future benefit payments from the System are projected for current members and beneficiaries. The level of benefits currently being paid is known, but assumptions are needed to estimate how long they will be paid, and the amount and timing of the payment of future benefits for active and inactive members who are not currently receiving payments. The summation of the discounted values to the valuation date, at the valuation interest rate, of the projected benefit payments for all current members and benefit recipients is called the Projected Liability.

(\$000)	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>System</u>
<b><u>January 1, 2009</u></b>				
<b>Active Members</b>				
Retirement Benefits	\$ 3,420	\$ 3,950	\$ 39,995	\$ 47,365
Disability Benefits	0	475	1,984	2,459
Death Benefits	0	30	509	539
Termination Benefits	<u>0</u>	<u>9</u>	<u>0</u>	<u>9</u>
Active Members	\$ 3,420	\$ 4,464	\$ 42,488	\$ 50,372
<b>Inactive Members</b>				
Service Retirees	\$ 52,858	\$ 44,601	\$ 152,795	\$ 250,254
Disabled Members	24,522	14,064	11,039	49,625
Surviving Beneficiaries	12,318	4,266	10,109	26,693
Terminated Members	<u>0</u>	<u>255</u>	<u>2,136</u>	<u>2,391</u>
Inactive Members	\$ 89,698	\$ 63,186	\$ 176,079	\$ 328,963
<b>Total Projected Liability</b>	<b>\$ 93,118</b>	<b>\$ 67,650</b>	<b>\$ 218,567</b>	<b>\$ 379,335</b>
<b><u>January 1, 2010</u></b>				
<b>Active Members</b>				
Retirement Benefits	\$ 1,231	\$ 3,506	\$ 42,791	\$ 47,528
Disability Benefits	0	253	1,684	1,937
Death Benefits	0	28	558	586
Termination Benefits	<u>0</u>	<u>5</u>	<u>0</u>	<u>5</u>
Active Members	\$ 1,231	\$ 3,792	\$ 45,033	\$ 50,056
<b>Inactive Members</b>				
Service Retirees	\$ 54,106	\$ 45,177	\$ 156,332	\$ 255,615
Disabled Members	24,073	13,816	11,142	49,031
Surviving Beneficiaries	12,513	4,363	11,637	28,513
Terminated Members	<u>0</u>	<u>274</u>	<u>1,976</u>	<u>2,250</u>
Inactive Members	\$ 90,692	\$ 63,630	\$ 181,087	\$ 335,409
<b>Total Projected Liability</b>	<b>\$ 91,923</b>	<b>\$ 67,422</b>	<b>\$ 226,120</b>	<b>\$ 385,465</b>

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

The next step in the actuarial process is to calculate the Actuarial Value of Assets that will be used to determine the Funding Status of each Plan. The table below shows the Fair Market Value of Assets for each Plan as reported to us by the System's staff from reports generated from the BNY Mellon database. Although not final audited figures, we believe this information is sufficient for purposes of this report.

2009 Activity (\$000)	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>System</u>
<b><u>Actual Earnings</u></b>				
Beginning Balance at BNY Mellon	\$ 70,585	\$ 49,649	\$ 157,351	\$ 277,585
Net Investment Income	12,581	8,889	28,858	50,328
Contributions – Municipality	0	0	0	0
Contributions – Members	0	0	0	0
Regular Benefit Payments	<u>(8,540)</u>	<u>(5,636)</u>	<u>(13,731)</u>	<u>(27,907)</u>
<b>Ending Balance at BNY Mellon</b>	<b>\$ 74,626</b>	<b>\$ 52,902</b>	<b>\$ 172,478</b>	<b>\$ 300,006</b>
<b><i>Estimated Rate of Return (net of all expenses)</i></b>	<b>19.0%</b>	<b>19.0%</b>	<b>19.2%</b>	<b>19.1%</b>
<b><u>Expected Earnings</u></b>				
Beginning Balance at BNY Mellon	\$ 70,585	\$ 49,649	\$ 157,351	\$ 277,585
Net Investment Income 8%	5,306	3,747	12,039	21,092
Contributions – Municipality	0	0	0	0
Contributions – Members	0	0	0	0
Regular Benefit Payments	<u>(8,540)</u>	<u>(5,636)</u>	<u>(13,731)</u>	<u>(27,907)</u>
<b>Ending Balance at BNY Mellon</b>	<b>\$ 67,351</b>	<b>\$ 47,760</b>	<b>\$ 155,659</b>	<b>\$ 270,770</b>
<b>Investment Gain (Loss)</b>	<b>\$ 7,275</b>	<b>\$ 5,142</b>	<b>\$ 16,819</b>	<b>\$ 29,236</b>

**Surplus Benefit Accounts:** We have excluded the Trust assets held in the Surplus Benefit Accounts from this valuation unless an installment option payout was elected by the member.

**Estimated Rate of Return:** The estimated return of 19% was calculated assuming uniform cash flows throughout the year. In addition, these returns represent earnings after all investment and administrative expenses. The System's investment advisor generally presents gross rates of return before expenses.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### FUNDED STATUS

The Funded Status is the difference between the Projected Liability and the Actuarial Value of Assets. The Funded Ratio is equal to the Value of Assets divided by the Projected Liability. The following chart shows the Funded Status of the System as of January 1, 2009, and January 1, 2010. As previously noted, the assets and liabilities exclude the individual supplemental accounts unless being paid under an installment option.

(\$000)	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>System</u>
<b><u>January 1, 2009</u></b>				
Projected Liability	\$ 93,118	\$ 67,650	\$ 218,567	\$ 379,335
Actuarial Value of Assets	<u>70,585</u>	<u>49,649</u>	<u>157,351</u>	<u>277,585</u>
Funded Status	\$ 22,533	\$ 18,001	\$ 61,216	\$ 101,750
<b>Funded Ratio</b>	<b>76%</b>	<b>73%</b>	<b>72%</b>	<b>73%</b>
<b><u>January 1, 2010</u></b>				
Projected Liability	\$ 91,923	\$ 67,422	\$ 226,120	\$ 385,465
Actuarial Value of Assets	<u>74,626</u>	<u>52,902</u>	<u>172,478</u>	<u>300,006</u>
Funded Status	\$ 17,297	\$ 14,520	\$ 53,642	\$ 85,459
<b>Funded Ratio</b>	<b>81%</b>	<b>78%</b>	<b>76%</b>	<b>78%</b>

As of January 1, 2009, Plans I, II, and III each had a significant. Unfunded Projected Liability. The favorable investment performance during 2009 improved the Funded Ratio of each Plan, however, each Plan continues to have a significant Unfunded Projected Liability. The recent history of the Funded Ratio for all three plans is shown below.

Funded Ratio	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>
January 1, 2000	193%	174%	135%
January 1, 2001	126%	122%	116%
January 1, 2002	110%	109%	103%
January 1, 2003	93%	92%	86%
January 1, 2004	108%	103%	98%
January 1, 2005	112%	107%	104%
January 1, 2006	112%	108%	103%
January 1, 2007	116%	112%	110%
January 1, 2008	114%	110%	108%
January 1, 2009	76%	73%	72%
January 1, 2010	81%	78%	76%

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### ACTUARIAL GAINS AND LOSSES

Actuarial gains are produced from experience that emerged more favorably than we assumed in the previous valuation. On the other hand, actuarial losses are produced from experience that emerged less favorably than we assumed. The most important of these gains and losses are shown below and described in the paragraphs that follow.

(\$000)	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>System</u>
<b><u>Actuarial (Gains) and Losses</u></b>				
Funded Status January, 2009	\$ 22,533	\$ 18,001	\$ 61,216	\$ 101,750
Expected Funded Status January, 2010	\$ 24,335	\$ 19,441	\$ 66,113	\$ 109,889
Actual Funded Status January, 2010	<u>\$ 17,297</u>	<u>\$ 14,520</u>	<u>\$ 53,642</u>	<u>\$ 85,459</u>
Actuarial (Gains) and Losses	\$ (7,038)	\$ (4,921)	\$ (12,471)	\$ (24,430)
<b><u>(Gains) and Losses by Source</u></b>				
PIP Wage Increases	\$ 0	\$ 75	\$ 889	\$ 964
<i>As a percent of 2010 Liabilities</i>	<i>0.0%</i>	<i>0.1%</i>	<i>0.4%</i>	<i>0.3%</i>
All other 2009 CBA Wage Increases	\$ 9	\$ 86	\$ 1,170	\$ 1,265
<i>As a percent of 2010 Liabilities</i>	<i>0.0%</i>	<i>0.1%</i>	<i>0.5%</i>	<i>0.3%</i>
All Other Liability Experience (Gain) or Loss	\$ 228	\$ 60	\$ 2,289	\$ 2,577
<i>As a percent of 2010 Liabilities</i>	<i>0.2%</i>	<i>0.1%</i>	<i>1.0%</i>	<i>0.7%</i>
Investment Return (Gain) or Loss	\$ (7,275)	\$ (5,142)	\$ (16,819)	\$ (29,236)
<i>As a percent of 2010 Assets</i>	<i>9.7%</i>	<i>9.7%</i>	<i>9.8%</i>	<i>9.7%</i>
Total Actuarial (Gains) and Losses	\$ (7,038)	\$ (4,921)	\$ (12,471)	\$ (24,430)

- Investment Return:** The actual investment return for 2009 was about 19% as calculated from the BNY Mellon financial statements. We estimated the dollar amount of the gains based on a uniform timing of the cash flow, and have historically shown the gain or loss as a percentage of the end of year assets. The investment gain as a percentage of the beginning of the year assets was 11%, which is approximately the difference between the return of 19% and the expected return of 8%.
- Demographic & Economic Experience:** The gains and losses due to all non-investment experience during 2009 were relatively minor as a percentage of the Projected Liability. This is an indication that the actuarial assumptions are reasonable in the aggregate. The Trustees should note that the 0.7% of liability loss on a system-wide basis consisted of approximately 0.3% due to Plan III cost-of-living increases greater than anticipated, 0.2% due to changes in marital status, 0.1% due to actual 2009 reported earnings for active members higher than expected, and 0.1% due to the net of all other causes combined.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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- **Wage Increases in 2009 APDEA and IAFF Agreements:** The wage increases contained in the 2009 collective bargaining agreements were significantly higher than what our long term assumption for future salary increases would have predicted. Therefore, we have included the impact of the negotiated increases in the 2010 valuation. The loss on the PIP program was \$964,000 or 0.3% of the Projected Liability. The loss on all other negotiated increases was \$1,265,000 or 0.3% of the Projected Liability.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### CALCULATION OF RECOMMENDED CONTRIBUTIONS

The Retirement Board has adopted an actuarial method that allows for the amortization of gains and losses past the expected working life of the active members. The Governmental Accounting Standards Board recognizes this situation for mature closed groups and allows an amortization of gains and losses over a fixed period of years.

The Retirement Board adopted a Modified Aggregate Actuarial Cost Method designed to produce stable contribution patterns. The Unfunded Projected Liability, if any, and future actuarial gains and losses will be amortized as a level dollar amount over a fixed 15-year period beginning one year after the valuation date.

The Projected Liabilities for all three Plans exceeded the Actuarial Value of Assets on January 1, 2010. Therefore, member and Municipality contributions are due for 2011. The following table summarizes the calculations using the method originally adopted in 2003 for the 2004 contributions, which was also used last year for 2010 contributions.

The Board has the authority to change this method at its discretion.

	(\$000)	Plan I	Plan II	Plan III
(1) Projected Liability		\$ 91,923	\$ 67,422	\$ 226,120
(2) Actuarial Value of Assets		<u>74,626</u>	<u>52,902</u>	<u>172,478</u>
(3) Unfunded Projected Liability (2) – (1)		\$ 17,297	\$ 14,520	\$ 53,642
(4) Expected 2010 Contribution <i>discounted to 1/1/2010 at 8.00% interest</i>		2,631	2,101	7,192
(5) Remaining Unfunded Projected Liability (3) – (4), but not less than zero		\$ 14,666	\$ 12,419	\$ 46,450
(6) Amortization Period		15 years	15 years	15 years
<b>(7) Amortization Payment for 2011</b>		<b>\$ 1,780</b>	<b>\$ 1,507</b>	<b>\$ 5,638</b>

Member contributions, if needed, are calculated to be 40% of the Municipality contributions (ratio of 2.5:1) subject to a maximum level of 6% of salary.

The following chart shows the determination of the expected member portion of the 2011 contribution. The remainder is payable by the Municipality of Anchorage.



**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

(\$000)	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>Total</u>
<b>Determination of Expected Member Share of 2011 Contributions</b>				
(8) Projected Payroll in 2011 <i>(based on current actuarial assumptions)</i>	\$ 0	\$ 288	\$ 5,755	
(9) Member Share (7) ÷ 3.5	\$ 0	\$ 431	\$ 1,611	
(10) Calculated Member Rate (9) ÷ (8)	n/a	149.40%	27.99%	
(11) <b>Actual Member Rate</b> <i>(subject to maximum; rounded down)</i>	<b>n/a</b>	<b>6.00%</b>	<b>6.00%</b>	
(12) Expected Member Share (8) x (11)	\$ 0	\$ 17	\$ 345	
<b>Determination of Municipality Share of 2011 Contributions</b>				
(13) Total Contribution in 2011	\$ 1,780	\$ 1,507	\$ 5,638	\$ 8,925
(14) Expected Member Share (12)	<u>0</u>	<u>17</u>	<u>345</u>	<u>362</u>
(15) <b>Municipality Share</b> (13) – (14)	<b>\$ 1,780</b>	<b>\$ 1,490</b>	<b>\$ 5,293</b>	<b>\$ 8,563</b>

The PIP wage increases increased the Municipality Share of the 2011 Contribution for all three Plans combined by \$107,000; the other wage increases in the 2009 APDEA and IAFF collective bargaining agreements as amended increased the 2011 Municipality Share by \$146,000.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### ALLOCATION OF RESERVES

The Retirement Board has established a procedure to allocate Actuarial Gains and Losses between the Benefit Enhancement Reserve and the Additional Contingency Reserve. The following is a description of each step used to determine the amount of the reserves as of the valuation date.

1. Each Plan maintains a Contingency Reserve equal to 16% of the Projected Liability. Regardless of the experience that emerged during the previous year, the Contingency Reserve has first priority and will be funded each year at the 16% level.
2. The Surplus Assets are determined. Surplus Assets are equal to Plan Assets less the sum of the Projected Liability and the Contingency Reserve.
3. The Surplus Assets are allocated to the Additional Contingency Reserve (25%) and the Benefit Enhancement Reserve (75%).

The ending balances, including the distribution of the Surplus Assets to the Additional Contingency Reserve and the Benefit Enhancement Reserve, are summarized below.

(\$000)	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>	<u>System Total</u>
<b>January 1, 2009</b>				
Projected Liability	\$ 93,118	\$ 67,650	\$ 218,567	\$ 379,335
Actuarial Value of Assets	<u>70,585</u>	<u>49,649</u>	<u>157,351</u>	<u>277,585</u>
Unfunded Projected Liability	\$ 22,533	\$ 18,001	\$ 61,216	\$ 101,750
Contingency Reserve	\$ 14,899	\$ 10,824	\$ 34,971	\$ 60,694
Additional Contingency Reserve	(9,358)	(7,206)	(24,047)	(40,611)
Benefit Enhancement Reserve	<u>(28,074)</u>	<u>(21,619)</u>	<u>(72,140)</u>	<u>(121,833)</u>
Total Reserves	\$ (22,533)	\$ (18,001)	\$ (61,216)	\$ (101,750)
<b>January 1, 2010</b>				
Projected Liability	\$ 91,923	\$ 67,422	\$ 226,120	\$ 385,465
Actuarial Value of Assets	<u>74,626</u>	<u>52,902</u>	<u>172,478</u>	<u>300,006</u>
Unfunded Projected Liability	\$ 17,297	\$ 14,520	\$ 53,642	\$ 85,459
Contingency Reserve	\$ 14,708	\$ 10,788	\$ 36,179	\$ 61,675
Additional Contingency Reserve	(8,001)	(6,327)	(22,455)	(36,783)
Benefit Enhancement Reserve	<u>(24,004)</u>	<u>(18,981)</u>	<u>(67,366)</u>	<u>(110,351)</u>
Total Reserves	\$ (17,297)	\$ (14,520)	\$ (53,642)	\$ (85,459)

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### SECTION 2 ACTUARIAL VALUATION RESULTS

The following tables document the findings of the actuarial valuation.

TABLE 1	Actuarial Present Value of Projected Benefits
TABLE 2	Actuarial Value of Assets
TABLE 3	Actuarial Balance Sheet
TABLE 4	Determination of Contribution Rates
TABLE 5	Disclosure Information - GASB Statement No. 25
TABLE 6	Disclosure Information - GASB Statement No. 50

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 1**  
**ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS**

		Plan I	Plan II	Plan III
<b>Active Members</b>				
(1)	Retirement Benefits	\$ 1,231,400	\$ 3,505,696	\$ 42,791,290
(2)	Termination Benefits	0	5,279	0
(3)	Occupational Disability Benefits	0	202,168	1,510,056
(4)	Non-Occupational Disability Benefits	0	51,042	137,822
(5)	Occupational Death Benefits	0	23,466	431,151
(6)	Non-Occupational Death Benefits	0	4,401	106,366
(7)	Children's Benefit	<u>0</u>	<u>0</u>	<u>56,658</u>
(8)	Subtotal Present Value of Benefits	\$ 1,231,400	\$ 3,792,052	\$ 45,033,343
<b>Inactive Members</b>				
(9)	Service Retirees	\$ 54,106,374	\$ 45,176,933	\$ 156,331,832
(10)	Disabilities	24,072,803	13,816,393	11,141,845
(11)	Surviving Beneficiaries	12,512,852	4,362,801	11,637,347
(12)	Vested Terminations	<u>0</u>	<u>273,916</u>	<u>1,975,811</u>
(13)	Subtotal Present Value of Benefits	\$ 90,692,029	\$ 63,630,043	\$ 181,086,835
(14)	<b>Total Present Value of Benefits (8) + (13)</b>	<b>\$ 91,923,429</b>	<b>\$ 67,422,095</b>	<b>\$ 226,120,178</b>

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 2**  
**ACTUARIAL VALUE OF ASSETS**

	<b>Plan I</b>	<b>Plan II</b>	<b>Plan III</b>
(1) As Reported in Prior Valuation	\$ 70,585,012	\$ 49,648,925	\$ 157,351,134
(2) Net Investment Income	12,580,146	8,888,886	28,857,688
(3) Contributions – Municipality	0	0	0
(4) Contributions – Member	62	97	0
(5) Benefit Distributions	<u>(8,539,599)</u>	<u>(5,635,761)</u>	<u>(13,731,163)</u>
(6) <b>Ending Balance at BNY Mellon included in this Valuation</b>	<b>\$ 74,625,621</b>	<b>\$ 52,902,147</b>	<b>\$ 172,477,659</b>

The table above shows the Fair Market Value of Assets for each Plan based on financial statements supplied by the BNY Mellon. Although not final audited figures, we believe this information is sufficient for purposes of this report.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 3**  
**ACTUARIAL BALANCE SHEET**

### RESOURCES

	Plan I	Plan II	Plan III
(1) Actuarial Value of Assets	\$ 74,625,621	\$ 52,902,147	\$ 172,477,659
(2) Actuarial Present Value of Future Contributions	<u>17,297,808</u>	<u>14,519,948</u>	<u>53,642,519</u>
(3) <b>Total Resources</b>	<b>\$ 91,923,429</b>	<b>\$ 67,422,095</b>	<b>\$ 226,120,178</b>

### REQUIREMENTS

(4) Actuarial Present Value of Projected Benefits			
(a) Retired or Disabled Members and Beneficiaries	\$ 90,692,029	\$ 63,356,127	\$ 179,111,024
(b) Vested Terminated and Inactive Members	0	273,916	1,975,811
(c) Active Members' Municipality-Provided Pension	1,088,232	3,370,892	42,962,998
(d) Active Members' Contributions	<u>143,168</u>	<u>421,160</u>	<u>2,070,345</u>
(5) <b>Total Requirements</b>	<b>\$ 91,923,429</b>	<b>\$ 67,422,095</b>	<b>\$ 226,120,178</b>

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 4**  
**DETERMINATION OF CONTRIBUTION RATES**  
**BASED ON 15-YEAR AMORTIZATION PERIOD**

	Plan I	Plan II	Plan III
(1) Actuarial Present Value of Benefits	\$ 91,923,429	\$ 67,422,095	\$ 226,120,178
(2) Actuarial Value of Assets	<u>\$ 74,625,621</u>	<u>\$ 52,902,147</u>	<u>\$ 172,477,659</u>
(3) Unfunded Projected Liability (1) – (2)	17,297,808	14,519,948	53,642,519
(4) Expected 2010 Contributions, <i>discounted to 1/1/2010 at 8% interest</i>	\$ 2,631,755	\$ 2,100,945	\$ 7,192,263
(5) Remaining Unfunded Projected Liability (3) – (4)	14,666,053	12,419,003	46,450,256
(6) Amortization Period	15 years	15 years	15 years
One-Year Deferred Amortization Factor at 8% Interest <i>(present value of \$1 per year for period)</i>	8.23840	8.23840	8.23840
(7) <b>Total Annual Contribution for 2010</b> <b>((5) ÷ (6)) , but not less than zero</b>	<b>\$ 1,780,208</b>	<b>\$ 1,507,454</b>	<b>\$ 5,638,265</b>
<b><u>Determination of Member Portion</u></b>			
(8) Projected Payroll in 2011 <i>(based on current actuarial assumptions)</i>	0	288,278	5,754,967
(9) Member Share (7) ÷ 3.5	0	430,701	1,610,933
(10) Calculated Member Rate (9) ÷ (8)	N/A	149.40%	27.99%
(11) <b>Actual Member Rate</b> <i>(subject to 6% maximum; rounded down)</i>	<b>N/A</b>	<b>6.00%</b>	<b>6.00%</b>
(12) Expected Member Share (8) x (11)	\$ 0	\$ 17,297	\$ 345,298
<b><u>Determination of Municipality Portion</u></b>			
(13) Total Contribution in 2011 (7)	1,780,208	1,507,454	5,638,265
(14) Expected Member Share (12)	0	17,297	345,298
(15) Municipality Share (13) – (14)	<b>\$ 1,780,208</b>	<b>\$ 1,490,157</b>	<b>\$ 5,292,967</b>

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 5**  
**DISCLOSURE INFORMATION - GASB STATEMENT NO. 25**

### Plan I

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
(Dollar Amounts in Thousands)

<b>Year Ending</b>	<b>Annual Required Contribution</b>	<b>Amount Contributed</b>	<b>Percentage Contributed</b>
December 31, 1992	\$ 0	\$ 0	100%
December 31, 1993	0	0	100%
December 31, 1994	0	0	100%
December 31, 1995	0	0	100%
December 31, 1996	0	0	100%
December 31, 1997	0	0	100%
December 31, 1998	0	0	100%
December 31, 1999	0	0	100%
December 31, 2000	0	0	100%
December 31, 2001	0	0	100%
December 31, 2002	0	0	100%
December 31, 2003	0	0	100%
December 31, 2004	752	752	100%
December 31, 2005	0	0	100%
December 31, 2006	0	0	100%
December 31, 2007	0	0	100%
December 31, 2008	0	0	100%
December 31, 2009	0	0	100%

The Municipality's contribution has been calculated in conformance with the provisions of GASB No. 27. Therefore, the contributions transmitted to the System in the year following the Actuarial Valuation are equal to the Annual Required Contribution (ARC), and there is no Net Pension Obligation (NPO) necessary to amortize any unmade contributions.



# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 5**  
**DISCLOSURE INFORMATION - GASB STATEMENT NO. 25**  
**(CONTINUED)**

### Plan II

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
(Dollar Amounts in Thousands)

<b>Year Ending</b>	<b>Annual Required Contribution</b>	<b>Amount Contributed</b>	<b>Percentage Contributed</b>
December 31, 1992	\$ 698	\$ 698	100%
December 31, 1993	237	237	100%
December 31, 1994	0	0	100%
December 31, 1995	0	0	100%
December 31, 1996	0	0	100%
December 31, 1997	0	0	100%
December 31, 1998	0	0	100%
December 31, 1999	0	0	100%
December 31, 2000	0	0	100%
December 31, 2001	0	0	100%
December 31, 2002	0	0	100%
December 31, 2003	0	0	100%
December 31, 2004	547	547	100%
December 31, 2005	0	0	100%
December 31, 2006	0	0	100%
December 31, 2007	0	0	100%
December 31, 2008	0	0	100%
December 31, 2009	0	0	100%

The Municipality's contribution has been calculated in conformance with the provisions of GASB No. 27. Therefore, the contributions transmitted to the System in the year following the Actuarial Valuation are equal to the Annual Required Contribution (ARC), and there is no Net Pension Obligation (NPO) necessary to amortize any unmade contributions.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 5**  
**DISCLOSURE INFORMATION - GASB STATEMENT NO. 25**  
**(CONTINUED)**

### Plan III

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
(Dollar Amounts in Thousands)

<b>Year Ending</b>	<b>Annual Required Contribution</b>	<b>Amount Contributed</b>	<b>Percentage Contributed</b>
December 31, 1992	\$ 2,387	\$ 2,387	100%
December 31, 1993	2,390	2,390	100%
December 31, 1994	2,236	1,204	54%
December 31, 1995	1,947	0	0%
December 31, 1996	2,340	0	0%
December 31, 1997	750	0	0%
December 31, 1998	0	0	100%
December 31, 1999	0	0	100%
December 31, 2000	0	0	100%
December 31, 2001	0	0	100%
December 31, 2002	0	0	100%
December 31, 2003	0	0	100%
December 31, 2004	2,519	2,519	100%
December 31, 2005	11	11	100%
December 31, 2006	0	0	100%
December 31, 2007	0	0	100%
December 31, 2008	0	0	100%
December 31, 2009	0	0	100%

The Municipality's contribution has been calculated in conformance with the provisions of GASB No. 27. Therefore, the contributions transmitted to the System in the year following the Actuarial Valuation are equal to the Annual Required Contribution (ARC). However, Ordinance AO 94-95 ceased contributions to Plan III on July 24, 1994.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 6**  
**DISCLOSURE INFORMATION - GASB STATEMENT No. 50**

### Plan I

#### SCHEDULE OF FUNDING PROGRESS (Dollar Amounts in Thousands)

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Liability (AAL) – Entry Age (b)</b>	<b>Unfunded AAL (UAAL) (b – a)</b>	<b>Funded Ratio (a ÷ b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll ((b – a) ÷ c)</b>
January 1, 2008	\$106,988	\$94,085	\$(12,903)	113.7%	\$336	-3,834.8%
January 1, 2009	\$70,585	\$93,118	\$22,533	75.8%	\$352	6,395.1%
January 1, 2010	\$74,626	\$91,923	\$17,297	81.2%	\$119	14,535.3%

This schedule is Required Supplementary Information under paragraph 6 of GASB 50. Plans that use the aggregate method for funding are required to present this schedule using the Entry Age actuarial cost method as a surrogate for the funding progress of the plan.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 6**  
**DISCLOSURE INFORMATION - GASB STATEMENT No. 50**  
**(CONTINUED)**

### Plan II

**SCHEDULE OF FUNDING PROGRESS**  
(Dollar Amounts in Thousands)

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Liability (AAL) – Entry Age (b)</b>	<b>Unfunded AAL (UAAL) (b – a)</b>	<b>Funded Ratio (a ÷ b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll ((b – a) ÷ c)</b>
January 1, 2008	\$74,765	\$67,463	\$ (7,302)	110.8%	\$1,055	-692.3%
January 1, 2009	\$49,649	\$67,290	\$17,641	73.8%	\$ 614	2,874.9%
January 1, 2010	\$52,902	\$67,180	\$14,278	78.7%	\$ 515	2,772.4%

This schedule is Required Supplementary Information under paragraph 6 of GASB 50. Plans that use the aggregate method for funding are required to present this schedule using the Entry Age actuarial cost method as a surrogate for the funding progress of the plan.

**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

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**TABLE 6**  
**DISCLOSURE INFORMATION - GASB STATEMENT NO. 50**  
**(CONTINUED)**

**Plan III**

**SCHEDULE OF FUNDING PROGRESS**  
(Dollar Amounts in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial 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)
January 1, 2008	\$232,051	\$207,442	\$(24,609)	111.9%	\$8,132	-302.6%
January 1, 2009	\$157,351	\$212,132	\$ 54,781	74.2%	\$6,795	806.2%
January 1, 2010	\$172,478	\$219,565	\$ 47,087	78.6%	\$7,005	672.2%

This schedule is Required Supplementary Information under paragraph 6 of GASB 50. Plans that use the aggregate method for funding are required to present this schedule using the Entry Age actuarial cost method as a surrogate for the funding progress of the plan.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### SECTION 3 ACTUARIAL METHODS AND ASSUMPTIONS

This section of the report describes the actuarial methods and assumptions used in this valuation. The actuarial methods and assumptions have been chosen on the basis of recent experience of the Plans and on current expectations as to future economic conditions. The assumptions are intended to estimate the future experience of the members of the Plans and of the Plans themselves in areas that affect the projected benefits and anticipated investment earnings. Any variations in future experience from that expected from the assumptions will result in corresponding changes in the estimated liabilities for future benefits.

A thorough examination of all of the methods and assumptions was last performed for the 2007 Experience Analysis. For the 2010 valuation, Milliman has used all assumptions and methods as stated in the 2007 Experience Analysis report after the expiration of the 2009 APDEA and IAFF collective bargaining agreements. The 2010 valuation reflects the negotiated salary increases contained in the 2009 APDEA and IAFF collective bargaining agreements as amended.

For a detailed description of the development of the assumptions refer to our 2007 Experience Analysis report dated October 4, 2007 and to the 2009 APDEA and IAFF bargaining agreements, as amended.

#### STANDARDS OF PRACTICE

- ◆ The economic assumptions have been developed in accordance with Actuarial Standard of Practice No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*.
- ◆ The demographic assumptions have been developed in accordance with Actuarial Standard of Practice No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*.
- ◆ We relied on the membership data furnished by the System. Although we did not audit this data, we compared the data for this and prior reports and tested for reasonableness. Based on these tests, we believe the data to be sufficiently accurate for the purposes of our calculations. Our review of the data was performed in accordance with the Actuarial Standard of Practice No. 23, *Data Quality*.
- ◆ Methods and assumptions have been developed in conformance with the Actuarial Standard of Practice No. 4, *Recommendations for Measuring Pension Obligations*.

#### RECORDS AND DATA

The data used in the valuation consist of financial information and records of age, service and income of contributing members, former contributing members and their survivors. All of the data were supplied by the Municipality and are accepted for valuation purposes without audit.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### ACTUARIAL COST METHOD

The accruing costs of all benefits under each Plan are measured by a Modified Aggregate Actuarial Cost Method.

The difference between the Actuarial Present Value of Projected Benefits and the Actuarial Value of Assets is called the Unfunded Projected Liability. Under an Unmodified Aggregate Actuarial Cost Method, the Unfunded Projected Liability is allocated on a level basis over the future earnings or service of the active population. At the request of the Board, we have employed a Modified Aggregate Actuarial Cost Method in which the Unfunded Projected Liability is amortized over a fixed amortization period (15 years for Plans I, II, and III).

### VALUATION ASSETS

Asset values were supplied by the Anchorage Police and Fire System and were accepted without audit. The Actuarial Value of Assets is equal to the Fair Market Value.

### INVESTMENT EARNINGS

The future investment earnings of the assets of the plan are assumed to accrue at an annual rate of 8%, compounded annually, net of investment and administrative expenses.

### INTEREST ON MEMBER CONTRIBUTIONS

Interest on member contributions is assumed to accrue at a net annual rate of 4%, compounded annually through December 31, 1993, and compounded bi-weekly thereafter.

### POST-RETIREMENT BENEFIT INCREASES

It is assumed that the Consumer Price Index will increase at a rate of 3.0% per year, so that Plan III retirement allowances will increase at the rate of 0.75% per year for present retirees and after retirement for current active members and their beneficiaries for payments after their 20th anniversary of hire, and 1.50% after their 25th anniversary of hire. The cost-of-living adjustments are assumed to begin immediately for disabled participants and beneficiaries.

### FUTURE SALARIES

**Non-union Members:** 3.0% per year for inflation, plus 0.5% per annum to account for all other increases.

**Union Members:** Negotiated increases contained in the 2009 PDEA and IAFF collective bargaining agreements, then 3.0% per year, plus 0.5% per annum to account for all other increases. Members who qualified for the PIP are assumed to remain in the PIP; to be reviewed annually.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### SERVICE RETIREMENT

The rates of retirement used in this valuation are shown below.

Plans I and II		Plan III	
Service	Rates	Service	Rates
20	27.5%	15	17.5%
21 – 22	12.5%	16 – 18	7.5%
23+	20.0%	19	7.5%
		20	15.0%
Age 57 & 5 Years of Service	100.0%	21 – 22	15.0%
		23 – 24	15.0%
		25 & Up	15.0%
		Age 60 & 5 Years of Service	100.0%

### DISABLEMENT

The rates of disablement used in this valuation are shown below. However, the service retirement benefit is assumed payable if it is projected to be greater than the disability benefit.

Age	Occupational Disability	Non-Occupational Disability
<b>Plans I and II</b>		
20 to 29	0.1%	0.1%
30 to 34	1.6%	0.1%
35 to 39	1.6%	0.1%
40 to 44	1.6%	0.4%
45 to 49	2.0%	1.0%
50 to 54	6.0%	2.0%
55+	10.0%	5.0%
<b>Plan III</b>		
20 to 29	0.2%	0.1%
30 to 39	0.2%	0.2%
40 to 44	0.5%	0.3%
45 to 49	1.5%	0.4%
50 to 54	5.0%	0.0%
55+	6.0%	0.0%



# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### MORTALITY

The probabilities of mortality for healthy lives are based on the UP-1994 Table, set back one year for males and females. Disabled mortality was assumed to follow the UP-1984 Table set forward two years.

### CAUSE OF DEATH

When a Heart/Lung presumption is in effect, 80% of deaths are assumed to be Occupational and when a Heart/Lung presumption is not in effect, 20% of deaths are assumed to be Occupational. An Occupational death is a death that results in an Occupational Death Benefit being payable to the survivor of the deceased member under the terms of Plan I, Plan II, or Plan III.

### OTHER TERMINATIONS OF EMPLOYMENT

The rates of assumed future withdrawal from active service for reasons other than death, disability or retirement are shown below. All members terminating before retirement, death, or disability are assumed to receive a deferred pension when first eligible.

Member's Service	Rate of Termination
1 <sup>st</sup> Year	8%
2 <sup>nd</sup> – 3 <sup>rd</sup> Years	3%
4 <sup>th</sup> – 7 <sup>th</sup> Years	2%
8 <sup>th</sup> or Later Years	1%

### FAMILY COMPOSITION

Reported marital status and the reported number of dependents are assumed to remain unchanged in the future. Wives are assumed to be four years younger than their husbands. Dependent children were assumed to have the following years left until their 18th birthday:

Member's Age	Years Until Age 18
20-39	18
40-44	9
45-49	5
50+	0

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### SECTION 4 SUMMARY OF PLAN PROVISIONS

#### Plan I

##### **EFFECTIVE DATE**

Plan I became effective as of July 1, 1968.

##### **MEMBERSHIP**

Enrollment in the Plans is closed for all new police officers and firefighters. In the Spring of 1984, an open enrollment allowed Plan I Members to switch into Plan III.

##### **CREDITED SERVICE**

Credited Service is the total period of regular full-time employment with the Municipality as a police officer or firefighter.

##### **BREAK IN SERVICE**

If a Member terminates employment prior to becoming eligible for a retirement benefit and subsequently is reemployed, all Credited Service accumulated prior to the date of termination will be reinstated once the Member makes a contribution to the Plan equal to the amount of the refund paid upon the earlier termination, including interest until the date of repayment. However, the contribution must be made within two years after reemployment. Membership will resume in the same plan the Member participated in at the time of termination, or the Member may elect to participate in the plan being offered to new Members, unless the Member previously elected not to participate. Benefit levels and entitlements are those in effect upon the date of reemployment.

##### **AVERAGE MONTHLY COMPENSATION**

Total compensation during three consecutive calendar years of Credited Service which yield the highest average monthly compensation (total compensation during period divided by number of months included). Compensation means that remuneration paid by the Municipality of Anchorage for personal services rendered during the period considered as credited service. This includes compensation reported on federal W-2 forms, temporary disability benefits and excludes meal and clothing allowances and annual leave cash-in.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### MEMBER CONTRIBUTIONS

Plan I Members will make contributions not to exceed 6% compensation. If the plan is determined to be in a significant actuarial surplus position, no Member contributions will be required.

### VOLUNTARY RETIREMENT BENEFIT

**Eligibility:** The earlier of the completion of 20 years of total Credited Service, or the attainment of age 55 with a minimum of 5 years of Credited Service.

**Benefit:** 2.5% of Average Monthly Compensation times the number of years of Credited Service

### TERMINATION BENEFIT

A Member who terminates employment before completing five years of Credited Service will receive all of the Member's contributions to the Plan plus interest at the nominal annual rate of 4% compounded bi-weekly. Payment is made upon application or age 62.

A vested Member who terminates employment prior to being eligible for the voluntary retirement benefit may elect one of the following two benefits:

- (a) Withdrawal of all the Member's contributions to the Plan plus interest at the nominal annual rate of 4% compounded bi-weekly.
- (b) A lifetime benefit beginning at age 55 equaling 2.5% of Average Monthly Compensation times the number of years of total Credited Service.

### OCCUPATIONAL DISABILITY

#### Definition:

- (a) Any injury received while performing official duties for the Municipality of Anchorage, or
- (b) Any heart, lung, or respiratory system illnesses occurring before or after retirement, or which renders a Member incapable of performing normal assigned duties. Heart, lung or respiratory system illness or injury shall be construed as an illness contracted or injury received in the performance of official duty.

**Benefit:** A monthly pension of 66-2/3% of the Member's gross monthly compensation at the time of disability, payable for life or until the Member is capable of resuming similar duty with any police or fire department.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

---

### NON-OCCUPATIONAL DISABILITY

**Eligibility:** Five years of Credited Service prior to the date of disability.

**Definition:** Any non-occupational disability which renders a Member incapable of performing the Member's assigned duties. This definition excludes elective surgery not required for the preservation of the Member's health.

**Benefit:** A monthly pension of 50% of gross compensation at the time of disability, payable for life or until the Member is capable of resuming similar duties with any police or fire department.

### OCCUPATIONAL DEATH BENEFIT

**Definition:** The death of an active Member or retired Member caused by an accident occurring during the performance of official duties for the Municipality of Anchorage, or by any heart, lung, or respiratory system illness.

**Benefit:** A monthly pension of 66-2/3% of the Member's monthly compensation, payable as designated by the Member to the surviving spouse or the surviving children until the surviving children reach the age of 18. The Member may designate the portion of the benefit paid to the surviving spouse and the portion paid to surviving children. The surviving spouse is entitled to receive at least 50% of the retirement benefits the Member was entitled to receive at death. In the event the participant makes no designation, then the surviving beneficiaries will receive the benefit in the following priority:

- (a) surviving spouse,
- (b) surviving children under the age of 18,
- (c) disabled children, regardless of age,
- (d) dependent parents,
- (e) dependent siblings under the age of 18.

### NON-OCCUPATIONAL DEATH BENEFIT

**Benefit:** A monthly pension of 50% of the Member's monthly compensation payable in the same manner as the occupational death benefit described above. However, in the event of the death of a retired member, the amount of the monthly non-occupational death benefit may not exceed the amount of the monthly retirement benefit the retiree was receiving while alive.

### OPTIONAL FORM OF BENEFIT

Members of Plan I may elect to participate in the Actuarial DROP program when they would otherwise be eligible for normal or early retirement. The DROP period must be between two and five years. DROP participation periods must be in full year increments. For every year served in the DROP, the member may elect to receive five percent (5%) of the monthly pension benefit calculated at the time of retirement in a lump sum form. The lump sum is computed to be actuarially equivalent to the DROP percentage of the member's monthly pension.

# Anchorage Police and Fire Retirement System

Actuarial Valuation as of January 1, 2010

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## SUMMARY OF PLAN PROVISIONS

### Plan II

#### EFFECTIVE DATE

Plan II became effective as of July 1, 1977.

#### MEMBERSHIP

Enrollment in the Plan is closed for all new police officers and firefighters. In the Spring of 1984, an open enrollment allowed Plan II Members to switch into Plan III.

#### CREDITED SERVICE

Credited Service is the total period of regular full-time employment with the Municipality as a police officer or firefighter.

#### BREAK IN SERVICE

If a Member terminates employment prior to becoming eligible for a retirement benefit and subsequently is reemployed, all Credited Service accumulated prior to the date of termination will be reinstated once the Member makes a contribution to the Plan equal to the amount of the refund paid upon the earlier termination, including interest until the date of repayment. However, the contribution must be made within two years after reemployment. Membership will resume in the same plan the Member participated in at the time of termination, or the Member may elect to participate in the plan being offered to new Members, unless the Member previously elected not to participate. Benefit levels and entitlements are those in effect upon the date of reemployment.

#### AVERAGE MONTHLY COMPENSATION

Total compensation during three consecutive calendar years of Credited Service which yield the highest average monthly compensation (total compensation during period divided by number of months included). Compensation means that remuneration paid by the Municipality of Anchorage for personal services rendered during the period considered as credited service. This includes compensation reported on federal W-2 forms, temporary disability benefits and excludes meal and clothing allowances and annual leave cash-in.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### MEMBER CONTRIBUTIONS

Plan II Members will make contributions not to exceed 6% compensation. If the plan is determined to be in a significant actuarial surplus position, no Member contributions will be required.

### VOLUNTARY RETIREMENT BENEFIT

**Eligibility:** The earlier of the completion of 20 years of total Credited Service, or the attainment of age 55 with a minimum of 5 years of Credited Service.

**Benefit:** 2.5% of Average Monthly Compensation times the number of years of Credited Service.

### TERMINATION BENEFIT

A Member who terminates employment before completing five years of Credited Service will receive all of the Member's contributions to the Plan plus interest at the nominal annual rate of 4% compounded bi-weekly. Payment is made upon application or age 62.

A vested Member who terminates employment prior to being eligible for the voluntary retirement benefit may elect one of the following two benefits:

- (a) Withdrawal of all the Member's contributions to the Plan plus interest at the nominal annual rate of 4% compounded bi-weekly.
- (b) A lifetime benefit beginning at age 55 equaling 2.5% of Average Monthly Compensation times the number of years of total Credited Service.

### OCCUPATIONAL DISABILITY

#### Definition:

- (a) Any injury received while performing official duties for the Municipality of Anchorage, or
- (b) Any heart, lung, or respiratory system illnesses occurring before or after retirement, or which renders a Member incapable of performing normal assigned duties. Plan II Members who retired under Voluntary Retirement or are receiving a Non-Occupational Disability Benefit are not eligible for conversion to occupational disability benefits after the seventh anniversary of retirement. Heart, lung or respiratory system illness or injury shall be construed as an illness contracted or injury received in the performance of official duty.

**Benefit:** A monthly pension of 66-2/3% of the Member's gross monthly compensation at the time of disability, payable for life or until the Member is capable of resuming similar duty with any police or fire department.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### NON-OCCUPATIONAL DISABILITY

**Eligibility:** Five years of Credited Service prior to the date of disability.

**Definition:** Any non-occupational disability which renders a Member incapable of performing the Member's assigned duties. This definition excludes elective surgery not required for the preservation of the Member's health.

**Benefit:** A monthly pension of 50% of gross compensation at the time of disability, payable for life or until the Member is capable of resuming similar duties with any police or fire department.

### OCCUPATIONAL DEATH BENEFIT

**Definition:** The death of an active Member or retired Member caused by an accident occurring during the performance of official duties for the Municipality of Anchorage, or by any heart, lung, or respiratory system illness. Plan II Members who retired under Voluntary Retirement or are receiving a Non-Occupational Disability Benefit are not eligible for conversion to occupational death benefits after the seventh anniversary of retirement.

**Benefit:** A monthly pension of 66-2/3% of the Member's monthly compensation, payable as designated by the Member to the surviving spouse or the surviving children until the surviving children reach the age of 18. The Member may designate the portion of the benefit paid to the surviving spouse and the portion paid to surviving children. The surviving spouse is entitled to receive at least 50% of the retirement benefits the Member was entitled to receive at death. In the event the participant makes no designation, then the surviving beneficiaries will receive the benefit in the following priority:

- (a) surviving spouse,
- (b) surviving children under the age of 18,
- (c) disabled children, regardless of age,
- (d) dependent parents,
- (e) dependent siblings under the age of 18.

### NON-OCCUPATIONAL DEATH BENEFIT

**Benefit:** A monthly pension of 50% of the Member's monthly compensation payable in the same manner as the occupational death benefit described above. However, in the event of the death of a retired member, the amount of the monthly non-occupational death benefit may not exceed the amount of the monthly retirement benefit the retiree was receiving while alive.

### OPTIONAL FORM OF BENEFIT

Members of Plan II may elect to participate in the Actuarial DROP program when they would otherwise be eligible for normal or early retirement. The DROP period must be between two and five years. DROP participation periods must be in full year increments. For every year served in the DROP, the member may elect to receive five percent (5%) of the monthly pension benefit calculated at the time of retirement in a lump sum form. The lump sum is computed to be actuarially equivalent to the DROP percentage of the member's monthly pension.

# Anchorage Police and Fire Retirement System

Actuarial Valuation as of January 1, 2010

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## SUMMARY OF PLAN PROVISIONS

### Plan III

#### EFFECTIVE DATE

Plan III became effective April 17, 1984.

#### MEMBERSHIP

Enrollment in the Plan is closed to all new police officers and firefighters. In the Spring of 1984, an open enrollment allowed Plan I and II Members to switch into Plan III.

#### CREDITED SERVICE

Credited Service is the total period of regular full-time employment with the Municipality as a police officer or firefighter.

#### BREAK IN SERVICE

If a Member terminates employment prior to becoming eligible for a retirement benefit and subsequently is reemployed, all Credited Service accumulated prior to the date of termination will be reinstated after the Member makes a contribution to the Plan equal to the amount of the refund paid upon the earlier termination, including interest until the date of repayment. However, the contribution must be made within two years after reemployment.

#### FINAL AVERAGE COMPENSATION

Average compensation during the last 52 biweekly pay periods, or any two consecutive tax years, whichever is higher. Compensation means the sum of the basic hourly wage, longevity, holiday pay, shift differential and educational pay received by a Member from Anchorage.

#### MEMBER CONTRIBUTIONS

Plan III Members will make contributions not to exceed 6% compensation. If the plan is determined to be in a significant actuarial surplus position, no Member contributions will be required.

#### NORMAL SERVICE RETIREMENT

**Eligibility:** 20 years of Credited Service.

**Benefit:** 2.5% of Final Average Compensation times the number of years of Credited Service.



# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### EARLY SERVICE RETIREMENT

**Eligibility:** 15 years of Credited Service.

**Benefit:** 2.5% of Final Average Compensation times the number of years of Credited Service, payable for life. The cost-of-living adjustment is not available until 20 years total service would have been obtained.

### TERMINATION BENEFIT

A Member who terminates employment before completing five years of Credited Service will receive all of the Member's contributions to the Plan plus interest at the nominal annual rate of 4% compounded bi-weekly upon request or at age 62.

A vested Member who terminates employment prior to being eligible for service retirement may elect one of the following:

- (a) Withdrawal of all the Member's contributions to the Plan plus interest at the nominal annual rate of 4% compounded bi-weekly.
- (b) The accrued Service Retirement Benefit beginning at the earlier of age 55 or when the Member would have completed 20 years of service.

### OCCUPATIONAL DISABILITY

**Definition:** Any injury received while performing official duties for the Municipality of Anchorage, or any heart, lung, or respiratory system illness are rebuttably presumed to be an occupational disability. Disability must occur prior to termination.

**Benefit:** A monthly pension of 50% of the Member's final average compensation at the time of disability. The benefit is payable for life or until the Member is capable of resuming assigned duties similar to their pre-disability assigned duties, with any police or fire department, and is offset by any other wage continuation benefits attributable to the Municipality.

### NON-OCCUPATIONAL DISABILITY

**Eligibility:** Five years of Credited Service prior to the date of disability.

**Definition:** Any non-occupational disability which renders a Member incapable of performing assigned duties similar to their pre-disability assigned duties. This definition excludes elective surgery not required for the preservation of the Member's health.

**Benefit:** A monthly pension of 25% of final average compensation if the Member retires after more than 5 years but less than 10 years of credited service. For every additional year of credited service more than 10 years up to 20 years, the benefit is increased by 2.5% of final average compensation. The benefit is payable for life or until the Member is capable of resuming duties with any police or fire department.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### **OCCUPATIONAL DEATH BENEFIT**

The benefit is the greater of the following:

- (a) 100% of the occupational disability benefit to which the Member would have been entitled had the Member survived with a disability. For a retired member, this amount is computed as of retirement date and increased by the COLA accrued since retirement on the benefit actually received by the retired member while alive, or,
- (b) For an active member, 75% of the service retirement benefit to which the Member would have been entitled had the Member survived. For a retired member, 75% of the service retirement benefit, occupational disability benefit, or non-occupational disability benefit the member was receiving at the time of death, including the COLA accrued on the retired member's benefit at the time of death.

Where a Heart/Lung/Respiratory occupational presumption is not available, the survivor must prove that the member's death was due to an occupational cause in order to qualify for this benefit. There is no occupational presumption available subsequent to termination of employment as an active Plan III member.

### **NON-OCCUPATIONAL DEATH BENEFIT**

The benefit is the greater of the following:

- (a) 100% of the non-occupational disability benefit to which the Member would have been entitled had the Member survived with a disability. For a retired member, this amount is computed as of retirement date and increased by the COLA accrued since retirement on the benefit actually received by the retired member while alive, or,
- (b) For an active member, 75% of the service retirement benefit to which the Member would have been entitled had the Member survived. For a retired member, 75% of the service retirement benefit, occupational disability benefit, or non-occupational disability benefit the member was receiving at the time of death, including the COLA accrued on the retired member's benefit at the time of death.

The Occupational and Non-Occupational death benefits are payable as designated by the Member to the surviving spouse or the surviving children until the surviving children reach the age of 18. The Member may designate the portion of the benefit paid to the surviving spouse and the portion paid to surviving children. The surviving spouse is entitled to receive at least 50% of the retirement benefits the Member was entitled to receive at death. In the event the participant makes no designation, then the surviving beneficiaries will receive the benefit in the following priority:

- (a) surviving spouse,
- (b) surviving children under the age of 18,
- (c) disabled children, regardless of age,
- (d) dependent parents,
- (e) dependent siblings under the age of 18.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### **CHILDREN'S BENEFIT**

5% of final average compensation for each dependent child, up to 10%, is payable monthly with disability benefits and to surviving spouse's with dependent children until age 18.

### **COST-OF-LIVING ADJUSTMENT**

All service retirees after 20 years from date of entry, disability, and survivor's and children's benefits are subject to an annual cost-of-living adjustment equal to the lesser of 3% or 25% of the CPI. Starting 25 years from date of hire, annual COLA is limited to 6% or 50% of the CPI. The CPI shall be the Anchorage CPI Urban Consumers Index or such other inflation index if the Anchorage CPI Urban Consumers Index ceases to exist. This adjustment is generally effective each July 1.

### **OPTIONAL FORM OF BENEFIT**

Members of Plan III may elect to participate in the Actuarial DROP program when they would otherwise be eligible for normal or early retirement. The DROP period must be between two and five years. DROP participation periods must be in full year increments. For every year served in the DROP, the member may elect to receive five percent (5%) of the monthly pension benefit calculated at the time of retirement in a lump sum form. The lump sum is computed to be actuarially equivalent to the DROP percentage of the member's monthly pension, without the value of future Cost-of-Living adjustments. The COLA on the portion of the member's monthly pension will be calculated based on the full monthly benefit without reduction for the DROP lump sum.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

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### SECTION 5 SUMMARY OF MEMBERSHIP DATA

The collection and analysis of the membership data was performed in the same manner as last year. There were no unusual changes in the number of members during 2009. The number of active members continues to decline because all Plans are closed to new members.

The following tables depict the membership data that was used in the valuation.

Table 7 is a five-year history of membership characteristics for each Plan.

Table 8 displays the data included in this valuation for the vested terminated members.

Table 9 is a distribution of the active members by age, service and salary.

Table 10 displays the number of retirees and beneficiaries by Plan in 5-year age groups and the total monthly benefit on record for each group.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 7**  
**HISTORICAL MEMBERSHIP SUMMARY - PLAN I**

	1-1-06	1-1-07	1-1-08	1-1-09	1-1-10
<b>Active Members</b>					
(1) Number	6	5	3	3	1
(2) Average Current Age	55.3	56.4	58.3	59.3	60.0
(3) Average Service to Date	31.1	32.6	35.0	36.0	38.0
(4) Average Salary	\$107,848	\$104,416	\$110,261	\$115,462	\$116,168
<b>Terminated Members</b>					
(5) Number	--	--	--	--	--
(6) Average Age	--	--	--	--	--
(7) Average Monthly Benefit	--	--	--	--	--
<b>Retirees, Beneficiaries, and Alternative Payees (QDROs)</b>					
(8) Number	228	227	228	229	231
(9) Average Age	62.9	63.6	64.5	65.3	66.1
(10) Average Monthly Benefit	\$3,003	\$3,033	\$3,074	\$3,065	\$3,109

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 7**  
**HISTORICAL MEMBERSHIP SUMMARY - PLAN II**

	1-1-06	1-1-07	1-1-08	1-1-09	1-1-10
<b>Active Members</b>					
(1) Number	14	11	9	5	4
(2) Average Current Age	50.4	51.4	51.6	51.8	53.3
(3) Average Service to Date	23.5	24.5	25.0	24.8	25.8
(4) Average Salary	\$105,690	\$106,690	\$115,219	\$120,649	\$119,840
<b>Terminated Members</b>					
(5) Number	3	2	1	1	1
(6) Average Age	52.3	52.5	51.0	52.0	53.0
(7) Average Monthly Benefit	\$2,069	\$2,227	\$2,182	\$2,182	\$2,182
<b>Retirees, Beneficiaries, and Alternative Payees (QDROs)</b>					
(8) Number	111	114	117	121	123
(9) Average Age	55.0	55.8	56.8	57.7	58.6
(10) Average Monthly Benefit	\$3,691	\$3,742	\$3,762	\$3,824	\$3,815

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 7**  
**HISTORICAL MEMBERSHIP SUMMARY - PLAN III**

	<b>1-1-06</b>	<b>1-1-07</b>	<b>1-1-08</b>	<b>1-1-09</b>	<b>1-1-10</b>
<b>Active Members</b>					
(1) Number	124	104	92 <sup>(1)</sup>	74 <sup>(1)</sup>	69
(2) Average Current Age	45.6	46.1	46.6	47.6	48.5
(3) Average Service to Date	16.5	16.9	17.5	18.4	19.1
(4) Average Salary	\$81,730	\$83,288	\$86,902	\$90,267	\$95,600
<b>Terminated Members</b>					
(5) Number	10	10	10	10	10
(6) Average Age	41.7	42.7	43.7	44.7	45.7
(7) Average Monthly Benefit	\$1,366	\$1,366	\$1,366	\$1,366	\$1,366
<b>Retirees, Beneficiaries<sup>(2)</sup>, and Alternative Payees (QDROs)</b>					
(8) Number	322	343	354	369	379
(9) Average Age	56.6	57.0	57.6	58.1	58.9
(10) Average Monthly Benefit	\$2,850	\$2,918	\$2,965	\$3,027	\$3,067

<sup>(1)</sup> Excludes one active member on unpaid leave.

<sup>(2)</sup> Excludes Child Beneficiaries with benefit payments scheduled to stop at age 18.

**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

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**TABLE 8**  
**SUMMARY OF TERMINATED MEMBERS**

Name	Monthly Benefit (for valuation purposes only)	Assumed Retirement Date
<b><u>PLAN I</u></b>		
None		
<b><u>PLAN II</u></b>		
	\$ 2,181.50	July 1, 2012
<b><u>PLAN III</u></b>		
	\$ 1,493.10	August 1, 2010
	807.74	January 1, 2011
	872.73	November 1, 2013
	1,760.71	March 1, 2012
	1,803.92	September 1, 2013
	1,559.73	January 1, 2011
	1,471.94	September 1, 2013
	1,264.92	September 1, 2013
	1,356.46	September 1, 2013
	1,267.30	August 1, 2010



**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

**TABLE 9**  
**ACTIVE MEMBER AGE AND SERVICE DISTRIBUTIONS - PLAN I**

Age Group	ANNUAL EARNINGS BY AGE		
	Count	Total Earnings	Average Earnings
25-29			
30-34			
35-39			
40-44			
45-49			
50-54			
55-59			
60-64	1	\$ 116,168	\$ 116,168
65-69			
<b>Total</b>	<b>1</b>	<b>\$ 116,168</b>	<b>\$ 116,168</b>

Service Group	ANNUAL EARNINGS BY SERVICE		
	Count	Total Earnings	Average Earnings
0-4			
5-9			
10-14			
15-19			
20-24			
25-29			
30 & up	1	\$ 116,168	\$ 116,168
<b>Total</b>	<b>1</b>	<b>\$ 116,168</b>	<b>\$ 116,168</b>

Age Group	YEARS OF SERVICE BY AGE							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30&up	
25-29								
30-34								
35-39								
40-44								
45-49								
50-54								
55-59								
60-64							1	1
65-69								
<b>Total</b>							<b>1</b>	<b>1</b>

**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

**TABLE 9**  
**ACTIVE MEMBER AGE AND SERVICE DISTRIBUTIONS - PLAN II**

Age Group	ANNUAL EARNINGS BY AGE		
	Count	Total Earnings	Average Earnings
25-29			
30-34			
35-39			
40-44			
45-49			
50-54	3	\$ 367,249	\$ 122,416
55-59	1	112,111	112,111
60-64			
<b>Total</b>	<b>4</b>	<b>\$ 479,360</b>	<b>\$ 119,840</b>

Service Group	ANNUAL EARNINGS BY SERVICE		
	Count	Total Earnings	Average Earnings
0-4			
5-9			
10-14			
15-19	1	\$ 98,316	\$ 98,316
20-24			
25-29	3	381,044	127,015
30 & up			
<b>Total</b>	<b>4</b>	<b>\$ 479,360</b>	<b>\$ 119,840</b>

Age Group	YEARS OF SERVICE BY AGE							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30&up	
25-29								
30-34								
35-39								
40-44								
45-49								
50-54				1		2		3
55-59						1		1
60-64								
65-69								
<b>Total</b>				<b>1</b>		<b>3</b>		<b>4</b>

**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

**TABLE 9**  
**ACTIVE MEMBER AGE AND SERVICE DISTRIBUTIONS - PLAN III**

Age Group	ANNUAL EARNINGS BY AGE		
	Count	Total Earnings	Average Earnings
25-29			
30-34			
35-39	2	\$ 201,075	\$ 100,538
40-44	15	1,448,596	96,573
45-49	28	2,592,390	92,585
50-54	14	1,360,728	97,195
55-59	7	676,561	96,652
60-64	2	196,070	98,035
65-69	1	121,010	121,010
<b>Total</b>	<b>69</b>	<b>\$ 6,596,430</b>	<b>\$ 95,600</b>

Service Group	ANNUAL EARNINGS BY SERVICE		
	Count	Total Earnings	Average Earnings
0-4			
5-9			
10-14			
15-19	61	\$ 5,771,391	\$ 94,613
20-24	4	406,128	101,532
25-29	4	418,911	104,728
30 & Up			
<b>Total</b>	<b>69</b>	<b>\$ 6,596,430</b>	<b>\$ 95,600</b>

Age Group	YEARS OF SERVICE BY AGE							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	
25-29								
30-34								
35-39				2				2
40-44				15				15
45-49				27	1			28
50-54				13		1		14
55-59				2	3	2		7
60-64				2				2
65-69						1		1
<b>Total</b>				<b>61</b>	<b>4</b>	<b>4</b>		<b>69</b>

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 10**  
**RETIREE AND BENEFICIARY DISTRIBUTIONS**

**PLAN 1**

**Distribution of Service Retirees**  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 50	0	\$ 0	\$ 0
50 – 54	0	0	0
55 – 59	33	143,223	4,340
60 – 64	36	155,861	4,329
65 – 69	13	50,696	3,900
70 – 74	9	33,304	3,700
75 – 79	4	8,987	2,247
80 – 84	6	10,149	1,692
85+	<u>0</u>	<u>0</u>	<u>0</u>
Totals	101	\$ 402,220	\$ 3,982

**PLAN 1**

**Distribution of Occupational Disability Retirees**  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 55	0	\$ 0	\$ 0
55 – 59	8	30,242	3,780
60 – 64	13	43,213	3,324
65 – 69	9	34,086	3,787
70 – 74	13	38,603	2,969
75 – 79	8	21,185	2,648
80 – 84	4	8,300	2,075
85+	<u>1</u>	<u>985</u>	<u>985</u>
Totals	56	\$ 176,614	\$ 3,154

# Anchorage Police and Fire Retirement System

Actuarial Valuation as of January 1, 2010

## PLAN 1

### Distribution of Non-Occupational Disability Retirees January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 55	0	\$ 0	\$ 0
55 – 59	0	0	0
60 – 64	4	7,442	1,861
65 – 69	7	12,815	1,831
70 – 74	2	4,503	2,252
75+	<u>0</u>	<u>0</u>	<u>0</u>
Totals	13	\$ 24,760	\$ 1,905

## PLAN 1

### Distribution of Survivors January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 50	0	\$ 0	\$ 0
50 – 54	4	14,884	3,721
55 – 59	2	6,018	3,009
60 – 64	3	6,967	2,322
65 – 69	8	20,732	2,592
70 – 74	4	10,600	2,650
75 – 79	6	11,681	1,947
80 – 84	6	9,801	1,634
85+	<u>6</u>	<u>5,999</u>	<u>1,000</u>
Totals	39	\$ 86,682	\$ 2,223

**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

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**PLAN 1**

**Distribution of Alternate Payees \***  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 55	0	\$ 0	\$ 0
55 – 59	6	8,820	1,470
60 – 64	10	11,915	1,192
65 – 69	5	6,437	1,287
70+	<u>1</u>	<u>722</u>	<u>722</u>
Totals	22	\$ 27,894	\$ 1,268

\* Ages shown are ages of the corresponding retirees. Benefits generally are payable to alternate payees for the life of the corresponding retiree.

**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

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**PLAN 2**

**Distribution of Service Retirees**  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 45	0	\$ 0	\$ 0
45 – 49	2	8,386	4,193
50 – 54	15	70,402	4,693
55 – 59	30	127,656	4,255
60 – 64	21	86,424	4,115
65 – 69	7	27,824	3,975
70+	<u>3</u>	<u>7,077</u>	<u>2,359</u>
Totals	78	\$ 327,769	\$ 4,202

**PLAN 2**

**Distribution of Occupational Disability Retirees**  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 45	0	\$ 0	\$ 0
45 – 49	0	0	0
50 – 54	6	23,065	3,844
55 – 59	7	22,134	3,162
60 – 64	6	24,629	4,105
65 – 69	3	10,114	3,371
70 – 74	1	3,509	3,509
75+	<u>1</u>	<u>3,391</u>	<u>3,391</u>
Totals	24	\$ 86,842	\$ 3,618

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### PLAN 2

#### Distribution of Non-Occupational Disability Retirees January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 50	0	\$ 0	\$ 0
50 – 54	1	2,482	2,482
55 – 59	1	2,940	2,940
60 – 64	3	8,385	2,795
65 – 69	2	5,475	2,738
70+	<u>1</u>	<u>2,546</u>	<u>2,546</u>
Totals	8	\$ 21,828	\$ 2,729

### PLAN 2

#### Distribution of Survivors\* January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 40	2	\$ 6,632	\$ 3,316
40 – 44	0	0	0
45 – 49	1	6,347	6,347
50 – 54	1	3,232	3,232
55 – 59	1	4,085	4,085
60 – 64	1	2,414	2,414
65+	<u>2</u>	<u>6,289</u>	<u>3,145</u>
Totals	8	\$ 28,999	\$ 3,625

\* Excludes one Annuity of \$899 per month being paid under an installment option.



**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

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**PLAN 2**

**Distribution of Alternate Payees \***  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 45	0	\$ 0	\$ 0
45 – 49	0	0	0
50 – 54	3	2,156	719
55 – 59	1	864	864
60 – 64	1	761	761
65+	<u>0</u>	<u>0</u>	<u>0</u>
Totals	5	\$ 3,781	\$ 756

\* Ages shown are ages of the corresponding retirees. Benefits generally are payable to alternate payees for the life of the corresponding retiree.

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### PLAN 3

#### Distribution of Service Retirees January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 40	1	\$ 2,463	\$ 2,463
40 – 44	8	22,302	2,788
45 – 49	29	89,036	3,070
50 – 54	51	159,169	3,121
55 – 59	60	220,448	3,674
60 – 64	67	233,792	3,489
65 – 69	60	200,480	3,341
70 – 74	15	51,721	3,448
75 – 79	5	16,652	3,330
80+	<u>2</u>	<u>8,527</u>	<u>4,264</u>
Totals	298	\$ 1,004,590	\$ 3,371

### PLAN 3

#### Distribution of Occupational Disability Retirees January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 40	0	\$ 0	\$ 0
40 – 44	1	2,406	2,406
45 – 49	1	1,750	1,750
50 – 54	5	13,871	2,774
55 – 59	9	27,466	3,052
60 – 64	1	2,897	2,897
65 – 69	2	6,068	3,034
70 – 74	1	2,698	2,698
75+	<u>1</u>	<u>3,389</u>	<u>3,389</u>
Totals	21	\$ 60,545	\$ 2,883

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

### PLAN 3

#### Distribution of Non-Occupational Disability Retirees January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 40	0	\$ 0	\$ 0
40 – 44	1	2,336	2,336
45 – 49	0	0	0
50 – 54	1	3,060	3,060
55 – 59	2	3,261	1,631
60 – 64	1	1,843	1,843
65 – 69	0	0	0
70 – 74	2	3,311	1,656
75+	<u>0</u>	<u>0</u>	<u>0</u>
Totals	7	\$ 13,811	\$ 1,973

### PLAN 3

#### Distribution of Survivors\* January 1, 2010

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 40	0	\$ 0	\$ 0
40 – 44	0	0	0
45 – 49	3	9,216	3,072
50 – 54	1	2,622	2,622
55 – 59	1	3,073	3,073
60 – 64	2	6,260	3,130
65 – 69	8	24,053	3,007
70 – 74	1	2,258	2,258
75+	<u>1</u>	<u>2,004</u>	<u>2,004</u>
Totals	17	\$ 49,486	\$ 2,911

\*Excludes Child Beneficiaries with benefit payments scheduled to stop at age 18.

**Anchorage Police and Fire Retirement System**  
**Actuarial Valuation as of January 1, 2010**

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**PLAN 3**

**Distribution of Child Beneficiaries**  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 18	10	\$ 2,400	\$ 240

**PLAN 3**

**Distribution of Alternate Payees \***  
**January 1, 2010**

<u>Age</u>	<u>Number</u>	<u>Total Monthly Pension</u>	<u>Average Monthly Pension</u>
Under 45	0	\$ 0	\$ 0
45 – 49	4	1,817	454
50 – 54	7	8,543	1,220
55 – 59	6	6,207	1,035
60 – 64	9	7,199	800
65 – 69	8	7,185	898
70+	<u>2</u>	<u>3,042</u>	<u>1,521</u>
Totals	36	\$ 33,993	\$ 944

\* Ages shown are ages of the corresponding retirees. Benefits generally are payable to alternate payees for the life of the corresponding retiree.

# Anchorage Police and Fire Retirement System

Actuarial Valuation as of January 1, 2010

## SECTION 6 ALLOCATION OF RESERVES

The Retirement Board has established a procedure to allocate Actuarial Gains and Losses between the Benefit Enhancement Reserve and the Additional Contingency Reserve. The following is a description of each step used to determine the amount of the reserves as of the valuation date.

1. Each Plan maintains a Contingency Reserve equal to 16% of the Projected Liability. Regardless of the experience that emerged during the previous year, the Contingency Reserve has first priority and will be funded each year at the 16% level.
2. The Surplus Assets are determined. Surplus Assets are equal to Plan Assets less the sum of the Projected Liability and the Contingency Reserve.
3. The Surplus Assets are allocated to the Additional Contingency Reserve (25%) and the Benefit Enhancement Reserve (75%).

The ending balances, including the distribution of the Surplus Assets to the Additional Contingency Reserve and the Benefit Enhancement Reserve, are summarized below.

<b>(\$000)</b>	<b><u>Plan I</u></b>	<b><u>Plan II</u></b>	<b><u>Plan III</u></b>	<b><u>System Total</u></b>
Projected Liability	\$ 91,923	\$ 67,422	\$ 226,120	\$ 385,465
Actuarial Value of Assets	<u>74,626</u>	<u>52,902</u>	<u>172,478</u>	<u>300,006</u>
Unfunded Projected Liability	\$ 17,297	\$ 14,520	\$ 53,642	\$ 85,459
Contingency Reserve	\$ 14,708	\$ 10,788	\$ 36,179	\$ 61,675
Additional Contingency Reserve	(8,001)	(6,327)	(22,455)	(36,783)
Benefit Enhancement Reserve	<u>(24,004)</u>	<u>(18,981)</u>	<u>(67,366)</u>	<u>(110,351)</u>
Total Reserves	\$ (17,297)	\$ (14,520)	\$ (53,642)	\$ (85,459)

# Anchorage Police and Fire Retirement System

## Actuarial Valuation as of January 1, 2010

**TABLE 11  
ALLOCATION OF RESERVES**

	<u>Plan I</u>	<u>Plan II</u>	<u>Plan III</u>
<b>January 1, 2009 Actuarial Valuation</b>			
Projected Liability	93,117,770	67,649,938	218,566,708
Contingency Reserve at 16%	14,898,843	10,823,990	34,970,673
Subtotal	<u>108,016,613</u>	<u>78,473,928</u>	<u>253,537,381</u>
Available Assets at Fair Value	70,585,012	49,648,925	157,351,134
Surplus Assets	<u>(37,431,601)</u>	<u>(28,825,003)</u>	<u>(96,186,247)</u>
Additional Contingency Reserves (25% of Surplus Assets)	(9,357,900)	(7,206,251)	(24,046,562)
Benefit Enhancement Reserves (75% of Surplus Assets)	(28,073,701)	(21,618,752)	(72,139,685)
<b>January 1, 2010 Actuarial Valuation</b>			
Projected Liability	91,923,429	67,422,095	226,120,178
Contingency Reserve at 16%	14,707,749	10,787,535	36,179,228
Subtotal	<u>106,631,178</u>	<u>78,209,630</u>	<u>262,299,406</u>
Available Assets at Fair Value	74,625,621	52,902,147	172,477,659
Surplus Assets	<u>(32,005,557)</u>	<u>(25,307,483)</u>	<u>(89,821,747)</u>
Additional Contingency Reserves (25% of Surplus Assets)	(8,001,389)	(6,326,871)	(22,455,437)
Benefit Enhancement Reserves (75% of Surplus Assets)	(24,004,168)	(18,980,612)	(67,366,310)