

# **IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM**

**Actuarial Valuation Report  
as of June 30, 2006**



A MILLIMAN GLOBAL FIRM

**Milliman**

*Consultants and Actuaries*

# ACTUARIAL VALUATION OF THE IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

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November 3, 2006

Investment Board  
Iowa Public Employees' Retirement System  
7401 Register Drive  
Des Moines, IA 50321

**Re: June 30, 2006 Actuarial Valuation Report**

Dear Board Members:

We have performed an actuarial valuation of the Iowa Public Employees' Retirement System (System) as of June 30, 2006 for determining contribution rates effective for the period July 1, 2007 to June 30, 2008. The major findings of the valuation are contained in this report. The report reflects the benefit provisions and contribution rates in effect as of June 30, 2006.

In preparing this report, we relied, without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, member data and financial information. In our examination of these data, we have found them reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

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 which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations of future experience); and which, in combination, offer our best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Investment Board has the final decision regarding the appropriateness of the assumptions and adopted them as of the dates indicated in Appendix C.

We also hereby certify that the assumptions and methods used for determining the funding requirements used in the preparation of the disclosure information under GASB Statement 25 meet the parameters imposed by the Statement.



Certain retirees in IPERS receive an annual dividend payment each November. Section 97B.49F of the Iowa Code provides that, for members who retired prior to July 1, 1990, the dividend shall be adjusted each year by the lesser of:

- (1) The percentage increase in the Consumer Price Index as published by the Bureau of Labor Statistics for the 12 months ending June 30 of that year,
- (2) The percentage amount that may be paid without requiring an increase in the employer/employee contribution rate, as certified by the actuary, or
- (3) Three percent.

Based on the June 30, 2006 actuarial valuation, no increase in the dividend for the pre-July 1990 retirees may be paid without an increase in the statutory contribution rate.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Actuarial computations under GASB Statement No. 25 are for purposes of fulfilling financial accounting requirement. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and of GASB Statement No. 25. 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 product was prepared exclusively for IPERS for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning IPERS operations, and uses IPERS data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We would like to express our appreciation to IPERS' Staff, who gave substantial assistance in supplying the data on which this report is based.

We, Patrice A. Beckham, F.S.A., and Brent A. Banister, F.S.A., are members of the American Academy of Actuaries and Fellows of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We respectfully submit the following report and look forward to discussing it with you.

MILLIMAN, Inc.

Sincerely,

Patrice A. Beckham, F.S.A.  
Consulting Actuary

Brent A. Banister, F.S.A.  
Actuary

# SECTION I

## EXECUTIVE SUMMARY

### *INTRODUCTION*

This report presents the results of the June 30, 2006 actuarial valuation of the Iowa Public Employees' Retirement System (IPERS). The primary purposes of performing the valuation are as follows:

- to evaluate the sufficiency of the statutory contribution rate structure to fund the benefits expected to be paid to regular members in the future and to determine if the Plan's funding meets the criteria set out in the Funding Policy established by IPERS,
- to determine the actuarial contribution rate for the Special Service Groups,
- to evaluate the funded status of the System and disclose various asset and liability measures as of June 30, 2006,
- to determine the experience of the System since the last valuation, and
- to analyze and report on trends in System contributions, assets, and liabilities over the past several years.

The benefit provisions and actuarial methods reflected in this report are unchanged from last year's report. The assumptions used in this valuation have changed from those used last year. Based on the results of the 2001 - 2005 Experience Study and our recommendations, the Investment Board adopted a new set of actuarial assumptions in September, 2006. The changes in the actuarial assumptions are listed below:

- Change to a service based only salary scale.
- Decrease in the assumed interest rate credited on contributions from 4.25% to 4.00%.
- Lower the inflation assumption from 3.50% to 3.25%.
- Lower disability rates for Special Service members.

The statutory contribution rate for regular members has been 9.45% (3.70% for members and 5.75% for employers) since 1979. The prior four actuarial valuation reports have indicated that the current statutory contribution rate of 9.45% was not adequate to meet IPERS Funding Policy of amortizing the unfunded actuarial liability within 30 years. The 2006 Legislature passed House File 729 (HF729) which contains several provisions of importance to IPERS:

- (1) Provides for an increase in the statutory contribution rate of 0.50% per year for four years commencing on July 1, 2007. The increase each year is shared 40% by the members and 60% by the employers. By July 1, 2010, the statutory contribution rate will have reached 11.45% of pay. For purposes of analyzing the long term funding of the System, this increase in contribution rate is reflected. However, for purposes of reporting under Governmental Accounting Standards, future increases in the contribution rate are not reflected.
- (2) Provides that no transfer may be made to the Favorable Experience Dividend unless the System is fully funded and would remain so after the transfer.
- (3) Provides that there may be no increase in benefits until after the System is fully funded and it must continue to be fully funded after the benefit change. An increase in benefits may be enacted if such increase is accompanied by an increase in the contribution rate necessary to support the benefit enhancement.



Passage of this legislation will begin to address the problem of meeting the IPERS Funding Policy; however, it is not clear based on this valuation snapshot if this will prove to be enough. We will continue to monitor the situation over the coming years to see what happens.

The actuarial valuation results provide a “snapshot” view of the System’s financial condition on June 30, 2006. The results reflect net unfavorable experience for the past plan year as demonstrated by an unfunded actuarial liability (UAL) that was higher than expected, based on actuarial assumptions. The UAL on June 30, 2006 for all membership groups covered by IPERS (Regular members and Special Service Groups) is \$2.507 billion as compared to an expected UAL of \$2.500 billion. The unfavorable experience was the sum of an experience gain of \$235 million on the actuarial value of assets and an experience loss of \$242 million on System liabilities.

The summary of the 2006 valuation results are shown below:

<b>Contribution Rate for FY08</b>			
	<b>Regular Membership</b>	<b>Special Service Group 1*</b>	<b>Special Service Group 2**</b>
1. Normal Cost	9.05%	14.93%	14.92%
2. Amortization of UAL over 30 years	<u>2.46%</u>	<u>0.47%</u>	<u>(0.81%)</u>
3. Total Contribution	11.51%	15.40%	14.11%
4. Member Contribution	(3.90%)	(7.70%)	5.64%
5. Employer Contribution (3) - (4)	7.61%	7.70%	8.47%
6. Statutory/Expected Contribution	<u>(6.05%)</u>	<u>(7.70%)</u>	<u>(8.47%)</u>
7. Shortfall	1.56%	0.00%	0.00%
8. Years to Amortize (Based on (6))	Infinite	30	30
9. Unfunded Actuarial Liability (\$M)	\$2,529	7	(29)
10. Funded Ratio	87.8%	97.9%	104.9%
* Includes Sheriffs and Deputies			
** Includes all other public safety members			

### ***EXPERIENCE FOR THE LAST PLAN YEAR***

Numerous factors contributed to the change in the Systems’ assets, liabilities and remaining amortization period for the unfunded actuarial liability between June 30, 2005 and June 30, 2006. The components are examined in the following discussion.

## MEMBERSHIP

Below is a summary of the changes in active members (excluding retired re-employed members) between June 30, 2005 and June 30, 2006.

	Regular	Special Service Groups		Total	Expected*
	Membership	Group 1	Group 2		
6/30/2005 Starting count	155,139	1,470	4,267	160,876	
New actives	+ 14,964	+ 38	+ 297	+ 15,299	
Returning actives	+ 3,443	+ 7	+ 85	+ 3,535	
Nonvested Terminations	(5,374)	(6)	(64)	(5,444)	
Elected Refund	(2,717)	(9)	(82)	(2,808)	
Vested Terminations	<u>(3,971)</u>	<u>(29)</u>	<u>(72)</u>	<u>(4,072)</u>	
Total Withdrawals	(12,062)	(44)	(218)	(12,324)	(10,346)
Deaths	(143)	0	(6)	(149)	(246)
Disability Retirements	(111)	(1)	(3)	(115)	(363)
AE Benefits	(407)	0	(3)	(410)	
Early Retirements	(1,252)	0	(6)	(1,258)	(2,124)
Unreduced Retirements	<u>(2,403)</u>	<u>(37)</u>	<u>(83)</u>	<u>(2,523)</u>	<u>(4,296)</u>
Total Retirements	(4,173)	(38)	(95)	(4,306)	(6,783)
Other/Transfer	(90)	45	166	121	0
6/30/2006 Ending count	157,078	1,478	4,496	163,052	

\*Expected counts based on assumptions used in the June 30, 2005 actuarial valuation.

During the year ended June 30, 2006, the Iowa Department of Corrections and the Iowa Department of Administrative Services changed the status of approximately 150 members from regular membership to Special Service Group 2. These members are reflected in the "Other/Transfer" line in the chart above. The addition of this group to Special Service Group 2 decreased Group 2's surplus assets by \$19 million and increased their contribution rate by 0.70%.

## ASSETS

As of June 30, 2006, the System (including Special Service groups) had total assets of \$19.8 billion, when measured on a market value basis, **excluding the Favorable Experience Dividend (FED) reserve account**. This was an increase of \$ 1.6 billion from the prior year. The actuarial value as of June 30, 2006 was \$19.1 billion, an increase of \$1.2 billion. The components of change in the asset values are shown below:

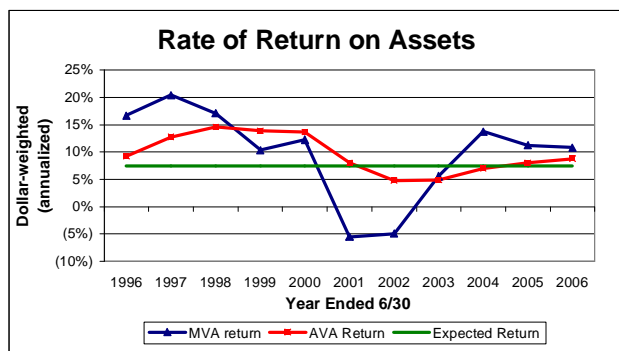
	Market Value (\$M)	Actuarial Value (\$M)
<b>Net Assets, June 30, 2005</b>	\$ <b>18,224</b>	\$ <b>17,951</b>
• Employer and Member Contributions	+ 547	+ 547
• Benefit Payments and Refunds	- 922	- 922
• Expected Investment Income, net of expenses (Based on 7.5% assumption)	+ 1,353	+ 1,333
• Actuarial Gain/(Loss) on Investment Return	+ 646	+ 235
<b>Net Assets, June 30, 2006 Before FED Transfer</b>	\$ <b>19,848</b>	\$ <b>19,144</b>
• FED Transfer Payable January 15, 2007	- 0	- 0
<b>Net Assets, June 30, 2006 After FED Transfer</b>	\$ <b>19,848</b>	\$ <b>19,144</b>



On a market value basis, the rate of return was 11.11% as reported by IPERS. The market value of assets is not used directly in the calculation of the contribution rate and amortization period. The actuarial value of assets is equal to the expected asset value based on the assumed interest rate of 7.5% plus 25% of the difference between the actual market value and the expected asset value. The dollar-weighted rate of return, net of investment and administrative expenses, measured on the actuarial value of assets was 8.8%.

Due to the use of an asset smoothing method, as of June 30, 2006, there is \$704 million of deferred actuarial investment gain that has not yet been recognized in the valuation process. Absent investment returns below the 7.5% assumption in the next few years, the deferred actuarial investment gain will gradually be reflected in the actuarial value of assets. As this occurs through the smoothing method, the valuation results will reflect an actuarial gain on investment experience, which will contribute toward a decrease in the unfunded actuarial liability.

Please see Exhibits 2 and 3 in Section II of this report for a summary of market and actuarial value of assets by group (Regular, Special Service 1 and Special Service 2) as of June 30, 2006.



*Rates of return on the actuarial value of assets are much smoother than market value returns, illustrating the advantage of using an asset smoothing method.*

## LIABILITIES

The actuarial liability is that portion of the present value of future benefits that will not be paid by future normal costs. The difference between this liability and the actuarial value of assets at the same date is called the unfunded actuarial liability (UAL). The dollar amount of unfunded actuarial liability is reduced if the contributions to the System exceed the normal cost for the year plus interest on the prior year's UAL.

The unfunded actuarial liability by group is shown as of June 30, 2006 below:

(\$Millions)	Regular Membership	Special Service 1	Special Service 2	Total
Actuarial Liability	\$20,738	\$320	\$593	\$21,651
Actuarial Value of Assets	18,209	313	622	19,144
Unfunded Actuarial Liability	2,529	7	(29)	2,507

See Exhibit 7 in Section III of the report for the detailed development of the unfunded actuarial liability for each group.

Actuarial gains (losses) result from actual experience that is more (less) favorable than anticipated based on the actuarial assumptions. These "experience" (or actuarial) gains or losses are reflected in the UAL and are measured as the difference between the expected unfunded actuarial liability and the actual unfunded actuarial liability, taking into account any changes due to assumption or benefit provision changes. Overall, the System experienced a net actuarial loss of \$7 million.

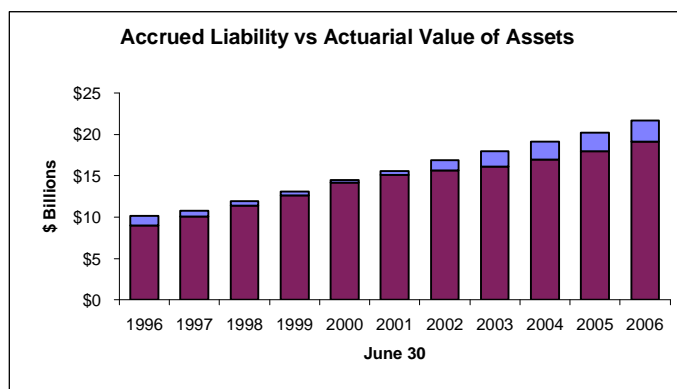




The net actuarial loss may be explained by considering the separate experience of assets and liabilities. As noted in the previous section, assets had a \$235 million gain when measured on an actuarial value basis. The liability loss is \$242 million (or about 0.9% of total actuarial liability) and arises from demographic experience less favorable than anticipated by the actuarial assumptions. The largest component of the actuarial loss was due to actual salary increases for active members that were higher than expected. The average salary for members who were active in both the 2005 and 2006 valuations was 1½% higher than expected, resulting in an actuarial loss of about \$163 million. There were also smaller losses from retiree mortality and retirement experience. While the number of retirements was less than expected, the members who retired had higher than average liabilities, resulting in an actuarial loss.

The change in the unfunded actuarial liability between June 30, 2005 and 2006 is shown below (in millions):

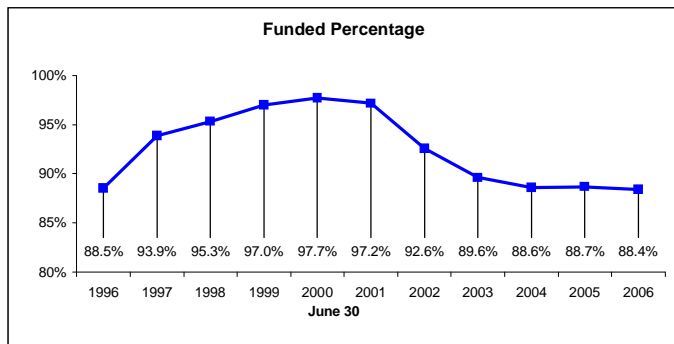
<b>Unfunded Actuarial Liability, June 30, 2005</b>	\$ 2,289
• Expected increase from amortization method	+ 22
• Expected increase from contributions below actuarial rate	+ 125
• Investment experience	+ (235)
• Liability and other experience	+ 242
• Benefit enhancements	+ 0
• Change in actuarial assumptions	+ 64
<b>Unfunded Actuarial Liability <u>before</u> FED transfer, June 30, 2006</b>	\$ 2,507
• FED Transfer	+ 0
<b>Unfunded Actuarial Liability <u>after</u> FED transfer, June 30, 2006</b>	\$ 2,507



*The dollar amount of UAL has been growing over the past several years, largely due to contributions below the actuarial rate.*

An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial liability. The funded status information is shown below (in millions).

	<b>6/30/03</b>	<b>6/30/04</b>	<b>6/30/05</b>	<b>6/30/06</b>
Funded Ratio	89.6%	88.6%	88.7%	88.4%
Unfunded Actuarial Liability (UAL)	\$1,867	\$2,176	\$2,289	\$2,507



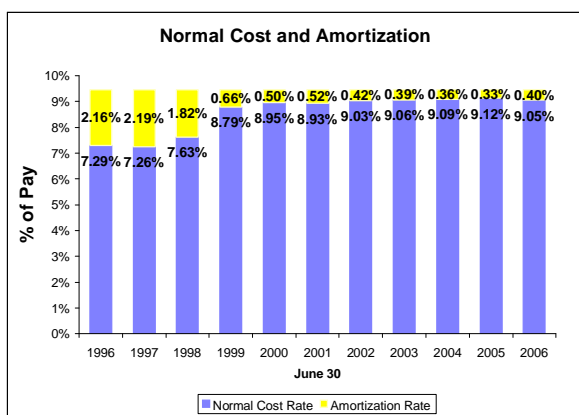
*While there has been a significant decline in the funded ratio, it has stabilized in the last four years.*

## CONTRIBUTION RATE

Under the Entry Age Normal cost method, the actuarial contribution rate consists of two components:

- a "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date, and
- an "unfunded actuarial liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets on hand.

The normal cost rate represents the portion of the ultimate cost of benefits to be received which is allocated to the current year of service worked by active members. Although the entry age cost method develops a normal cost rate that is expected to be relatively level, it will fluctuate from year to year depending on the demographic composition of the active members. Recent experience indicates that the average age of new entrants coming into the System is older than the average entry age of the current membership, and we have seen the normal cost rate increase in past valuations. Again this year the average entry age for active regular members increased (from 34.0 in the 2005 valuation to 34.1 in the 2006 valuation). Absent the impact of the assumption changes, the normal cost rate increased from 9.12% to 9.18%. Due to the assumption changes, the final normal cost rate is 9.05%. With the normal cost rate at its current level, only a small part of the total contribution rate is available to fund the UAL. If future investment returns on the market value of System assets meet the actuarial assumed rate of 7.5% and the future increases in the statutory contribution rate for regular members are factored into the projections, higher contributions are available to fund the UAL. Consequently, within the next 10 years, the amortization period may decline to below 30 years, assuming all assumptions are met (including 7.5% on market value) and that benefits remain unchanged. These projections are preliminary and subject to change once the valuation model is updated for the June 30, 2006 valuation results.



*This graph shows the normal cost rate and the contribution rate available to fund the UAL based on the statutory contribution rate applicable for that plan year.*

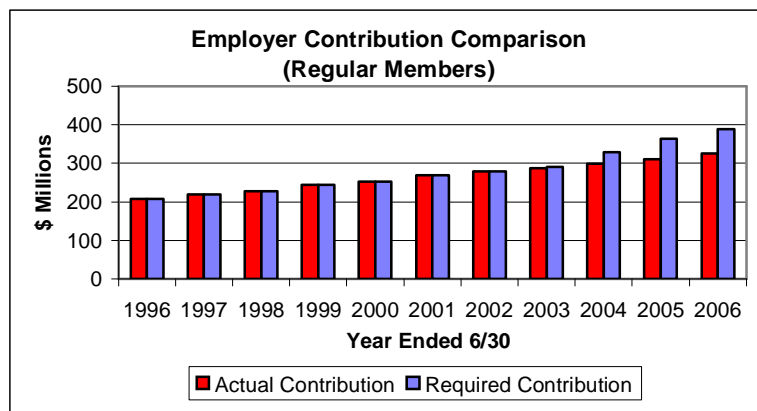
*Over the past decade, the normal cost rate has generally increased as a result of benefit improvements, assumption changes, and the increasing entry age. This has left a smaller portion of the contributions to pay down the UAL.*

This valuation sets the contribution rates effective July 1, 2007 for the year ending June 30, 2008. Most IPERS members (regular members who represent 96% of total active members) have contributed 3.7% of pay and employers have contributed 5.75%, for a total of 9.45%. Commencing July 1, 2007 the total contribution rate for regular members will increase 0.50% per year for four years to a total of 11.45%. The increase will be shared 40% by the members and 60% by employers. Therefore, the statutory contribution rate for FY08 is 9.95%, which are the numbers shown in the table below. The remaining 4% of the active members, the Special Service groups, contribute at an actuarially determined rate that changes each year.

See Exhibits 10 and 11 in Section IV for development of these rates which are summarized in the following table:

<b>Contribution Rate</b>	<b>Regular Membership</b>	<b>Special Service 1</b>	<b>Special Service 2</b>
Total Actuarial Contribution Rate	11.51%	15.40%	14.11%
Member Contribution Rate	<u>(3.90%)</u>	<u>(7.70%)</u>	<u>(5.64%)</u>
Employer Contribution Rate	7.61%	7.70%	8.47%
Employer Statutory Contribution Rate	<u>(6.05%)</u>	<u>(7.70%)</u>	<u>(8.47%)</u>
Shortfall	1.56%	0.00%	0.00%

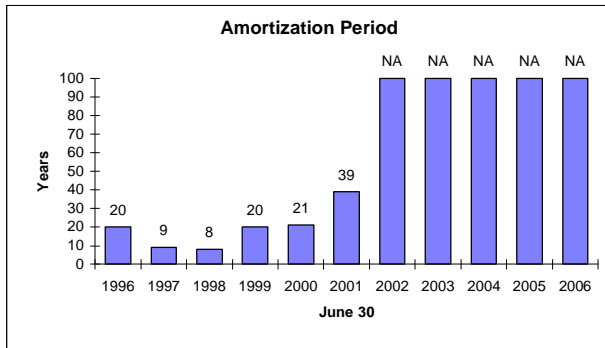
The graph below shows the total actuarial required employer contribution compared to the amount actually received in the year. The actuarial required contribution equals the System's normal cost and an amortization payment of the unfunded actuarial liability over 30 years.



IPERS adopted its Funding Policy in 1996 (see Appendix D for a copy of the Funding Policy). The purpose of the Funding Policy is to provide a basis for the evaluation of the System's funded status and to provide a set of safeguards to help ensure the financial solvency of the System. The Funding Policy defines the term "fully funded" to mean the current actuarial value of assets plus the present value of future expected contributions is equal to or greater than the present value of future benefit payments. There is an additional requirement that the amortization period not exceed 30 years in order for the System to be "fully funded".

Based on the current UAL amount and amortization payment for FY08, the amortization period is infinite. In order for the System to be "fully funded" in the current valuation (the amortization period to be 30 years), the resulting contribution rate would need to increase by 1.56% to 11.51% of payroll. This rate is determined based on the snapshot of the System taken on the valuation date, June 30, 2006, and applies only for the fiscal year beginning July 1, 2007. The rate necessary for the System to continue to be "fully funded" in future years will change each year as the deferred actuarial investment experience is recognized and other experience (both investment and demographic) impacts the System.





*Based on the statutory contribution rate, the period to amortize the UAL has been infinite in the last five valuations. Preliminary projections indicate that the scheduled increases in the contribution rate may be sufficient to lower the amortization period below 30 years if all actuarial assumptions are met, including an investment return of 7.5% on the market value of assets.*

## SUMMARY

The System remains nearly 90% funded. If the contribution rate were determined in this year's valuation with an amortization period of 30 years (which is the requirement in IPERS' Funding Policy for the System to be "fully funded"), the contribution rate would be 11.51% of payroll, as compared to the statutory contribution rate of 9.95%. This rate is determined based on the snapshot of the System taken on the valuation date, June 30, 2006, and applies only for the fiscal year beginning July 1, 2007. The rate necessary for the System to continue to be "fully funded" in future years will change each year as the deferred actuarial investment experience is recognized and as other experience (both investment and demographic) impacts the System.

The 2006 Legislature passed legislation that increased the statutory contribution rate from 9.45% to 11.45% over a four year period commencing July 1, 2007. This change makes a significant improvement to the long term funding of the System by creating a larger contribution amount to be used to pay off the unfunded actuarial liability. In addition, continued favorable investment experience resulted in an actuarial gain on assets for the year and the differential between the market and actuarial value of assets increased. If the market value of the System's assets earns the actuarial assumed rate of 7.5% each year in the future and all other actuarial assumptions are met, the 11.45% appears to be sufficient to lower the "years to amortize" to below 30 in the next ten years. These estimates are based on the June 30, 2005 valuation model using adjustments for the June 30, 2006 assets and liability amounts. However, these projections are preliminary and subject to change once the valuation model is updated for the June 30, 2006 valuation results.

We conclude this executive summary by presenting comparative statistics and actuarial information on both the June 30, 2006 and June 30, 2005 valuations. All figures shown include the regular membership and the two Special Service Groups.

**SUMMARY OF HISTORICAL CHANGE  
IN  
IPERS UNFUNDED ACTUARIAL LIABILITY**

<u>(\$Millions)</u>	<u>1996-97</u>	<u>1997-98</u>	<u>1998-99</u>	<u>1999-2000</u>	<u>2000-01</u>	<u>2001-02</u>	<u>2002-03</u>	<u>2003-04</u>	<u>2004-05</u>	<u>2005-06</u>
<b>Unfunded Actuarial Liability (BOY<sup>1</sup>)</b>	1,161	661	555	390	327	441	1,255	1,867	2,176	2,289
• <b>Expected Change</b>										
- <b>From Amortization Method</b>	(1)	(43)	(37)	(32)	(22)	3	24	36	42	22
- <b>Contributions less than Actuarial Rate</b>							61	87	103	125
• <b>Investment Experience</b>	(474)	(716)	(730)	(781)	(81)	409	402	75	(89)	(235)
• <b>Liability and Other Experience</b>	(25)	118	(211)	515	217	258	125	82	57	242
• <b>Benefit Enhancements</b>	0	342	0	142	0	3	0	29	0	0
• <b>Change in Assumptions</b>	0	0	587	0	0	141	0	0	0	64
• <b>FED Transfer</b>	0	193	226	93	0	0	0	0	0	0
<b>Unfunded Actuarial Liability (EOY<sup>2</sup>)</b>	661	555	390	327	441	1,255	1,867	2,176	2,289	2,507
<b>Amortization Years</b>	9	8	20	21	39	*	*	*	*	*

\*Infinite

1 = Beginning of Year

2 = End of Year



This work product was prepared solely for IPERS for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

**IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM  
PRINCIPAL RESULTS**

	June 30, 2006	June 30, 2005	% Chg
<b>SYSTEM MEMBERSHIP</b>			
1. Active Membership			
- Number of Members (excluding Retired/Reemployed)	163,052	160,876	1.4
- Projected Payroll for Upcoming Fiscal Year	\$5,784M	\$5,480M	5.5
- Average Salary	\$35,475	\$34,066	4.1
2. Inactive Membership			
- Number Not in Pay Status	61,731	65,482	(5.7)
- Number of Retirees/Beneficiaries	82,037	79,419	3.3
- Average Annual Benefit	\$10,818	\$10,215	5.9
<b>ASSETS AND LIABILITIES</b>			
1. Net Assets (excluding FED reserve)			
- Market Value	\$19,848M	\$18,224M	8.9
- Actuarial Value	19,144M	17,951M	6.6
2. Projected Liabilities			
- Retired Members	\$8,449M	\$7,841M	7.8
- Inactive Members	460M	456M	0.9
- Active Members	17,181M	16,277M	5.6
- Total Liability	26,090M	24,574M	6.2
3. Actuarial Liability	\$21,651M	\$20,240M	7.0
4. Unfunded Actuarial Liability	\$2,507M	\$2,289M	9.5
5. Funded Ratio (Actuarial Value Assets/Actuarial Liability)	88.42%	88.69%	(0.3)
<b>SYSTEM CONTRIBUTIONS</b>			
Statutory Contribution Rate*	9.95%	9.45%	5.3
Years Required to Amortize Unfunded Actuarial Liability	Infinite	Infinite	N/A
Total Actuarial Contribution Rate	11.51%	11.49%	0.2
Member Contribution Rate	3.90%	3.70%	5.4
Employer Contribution Rate	7.61%	7.79%	(2.3)

M = (\$)Millions

\* Contribution for certain special groups (4% of the membership) are not fixed by statute but are actuarially determined each year. The June 30, 2006 valuation is performed for the purpose of determining actuarial contribution rates effective July 1, 2007, and legislation has fixed the statutory rate on that date for regular members at 0.50% above the current rate, or 9.95%.



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**SECTION II**

**SYSTEM ASSETS**



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## SECTION II

### SYSTEM ASSETS

In this section, the values assigned to the assets held by the System are presented. These assets are valued on two different bases: the market value and the actuarial value.

#### Market Value of Net Assets

For certain accounting statement purposes, System assets are valued at current market rates. These values represent the "snapshot" or "cash-out" value of System assets as of the valuation date.

#### Actuarial Value of Net Assets

The market value of assets, representing a "cash-out" value of System assets, may not necessarily be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens volatility in the market value while still indirectly recognizing market value. The specific technique follows:

- Step 1:** Determine the expected value of plan assets at the current valuation date using the actuarial assumption for investment return and the actual receipts and disbursements of the fund for the previous 12 months.
- Step 2:** Subtract the expected value determined in Step 1 from the total market value of the Fund at the current valuation date.
- Step 3:** Multiply the difference between market and expected values determined in Step 2 by 25%.
- Step 4:** Add the expected value of Step 1 and the product of Step 3 to determine the actuarial value of assets.

Information regarding the actuarial and market values of System assets as of June 30, 2006 is presented on the following pages:

<u>Page</u>	<u>Contents</u>
12	Analysis of Net Assets
13	Summary of Fund Activity – Market Value
14	Actuarial Value of Net Assets
15	Historical Comparison (Actuarial and Market)
16	Summary of Favorable Experience Dividend Reserve



## EXHIBIT 1

### ANALYSIS OF NET ASSETS AT MARKET VALUES

(\$ Millions)

	June 30, 2006		June 30, 2005	
	<u>Amount</u>	<u>% of Total</u>	<u>Amount</u>	<u>% of Total</u>
Cash & Equivalents	\$102	0.5%	\$104	0.6%
Capital Assets, Receivables and Payables	(2,321)	(11.4)	(2,327)	(12.4)
Domestic Equity	6,249	30.6	6,248	33.3
International Equity	3,151	15.4	2,724	14.5
Fixed Income	8,457	41.5	7,662	40.8
Real Estate Funds	1,729	8.5	1,233	6.6
Private Equity/Debt	1,550	7.6	1,176	6.2
Collateral Pool	1,488	7.3	1,947	10.4
<b>TOTAL ASSETS</b>	<b>\$20,405</b>	<b>100.0%</b>	<b>\$18,767</b>	<b>100.0%</b>
FED Reserve (Before current year transfer)	(557)		(543)	
Current Year FED Transfer Payable	0		0	
Net Retirement System Assets	\$19,848		\$18,224	
Allocation of Net Assets:				
Regular Membership	\$ 18,874			
Special Service Group 1	326			
Special Service Group 2	648			
Total Net Assets	\$ 19,848			



**EXHIBIT 2**  
**SUMMARY OF FUND ACTIVITY**  
(Market Value)

	<b>Regular Membership</b>	<b>Special Service Group 1*</b>	<b>Special Service Group 2**</b>	<b>FED Reserve</b>	<b>Total</b>
<b>NET RETIREMENT SYSTEM</b>					
<b>ASSETS ON JUNE 30, 2005</b>	\$17,360,785,249	\$290,502,298	\$572,780,066	\$543,161,166	\$18,767,228,779
<b>REVENUE</b>					
FED Transfer	0	0	0	0	0
Employer contributions	301,566,112	6,228,836	16,881,866	0	324,676,814
Member contributions	194,041,222	6,228,515	11,266,189	0	211,535,926
Service purchase	10,860,075	101,023	314,330	0	11,275,428
Investment income	1,953,285,661	33,227,365	65,795,627	59,316,135	2,111,624,788
<b>Total Revenue</b>	<u>\$2,459,753,070</u>	<u>\$45,785,739</u>	<u>\$94,258,012</u>	<u>\$59,316,135</u>	<u>\$2,659,112,956</u>
<b>DISBURSEMENTS</b>					
Benefit payments	856,190,962	9,060,299	15,138,978	43,988,077	924,378,316
Member and employer refunds	38,593,756	558,048	2,515,799	0	41,667,603
Administrative expense	9,092,206	55,923	172,430	0	9,320,559
Investment expense	42,647,110	725,471	1,436,550	1,295,080	46,104,211
<b>Total Expenses</b>	<u>\$946,524,034</u>	<u>\$10,399,741</u>	<u>\$19,263,757</u>	<u>\$45,283,157</u>	<u>\$1,021,470,689</u>
<b>NET RETIREMENT SYSTEM</b>					
<b>ASSETS ON JUNE 30, 2006</b>	\$18,874,014,285	\$325,888,296	\$647,774,321	\$557,194,144	\$20,404,871,046
<b>EXPECTED DISTRIBUTION TO FED</b>					
<b>ON JANUARY 2007</b>	\$0	\$0	\$0	\$0	\$0
<b>ADJUSTED NET ASSETS</b>					
<b>ON JUNE 30, 2006</b>	\$18,874,014,285	\$325,888,296	\$647,774,321	\$557,194,144	\$20,404,871,046

\* Includes Sheriffs and Deputies

\*\* Includes all other public safety members



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## EXHIBIT 3

### ACTUARIAL VALUE OF NET ASSETS

	Regular Membership	Special Service Group 1*	Special Service Group 2**	Total
1. Actuarial Value of Assets as of June 30, 2005	\$17,106,984,761	\$284,220,942	\$560,284,368	\$17,951,490,071
2. Actual Receipts/Disbursements				
a. Contributions	506,467,409	12,558,374	28,462,385	547,488,168
b. Benefit Payments and Refunds	894,784,718	9,618,347	17,654,777	922,057,842
c. Net Change	(388,317,309)	2,940,027	10,807,608	(374,569,674)
3. Expected Value of Assets as of June 30, 2006 [(1) x 1.075] + [(2c) x (1.075) <sup>5</sup> ]	17,987,392,663	308,585,798	613,511,262	18,909,489,723
4. Market Value of Assets as of June 30, 2006 Before Transfers	18,874,014,285	325,888,296	647,774,321	19,847,676,902
5. Difference Between Market and Expected Values (4) - (3)	886,621,622	17,302,498	34,263,059	938,187,179
6. Actuarial Value of Assets as of June 30, 2006 (3) + [(5) x 25%]	18,209,048,069	312,911,423	622,077,027	19,144,036,519
7. Adjustment for Transfer to the Favorable Experience Dividend Reserve Account	0	0	0	0
8. Actuarial Value of Assets as of June 30, 2006	\$18,209,048,069	\$312,911,423	\$622,077,027	\$19,144,036,519

\* Includes Sheriffs and Deputies

\*\* Includes all other public safety members



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## EXHIBIT 4

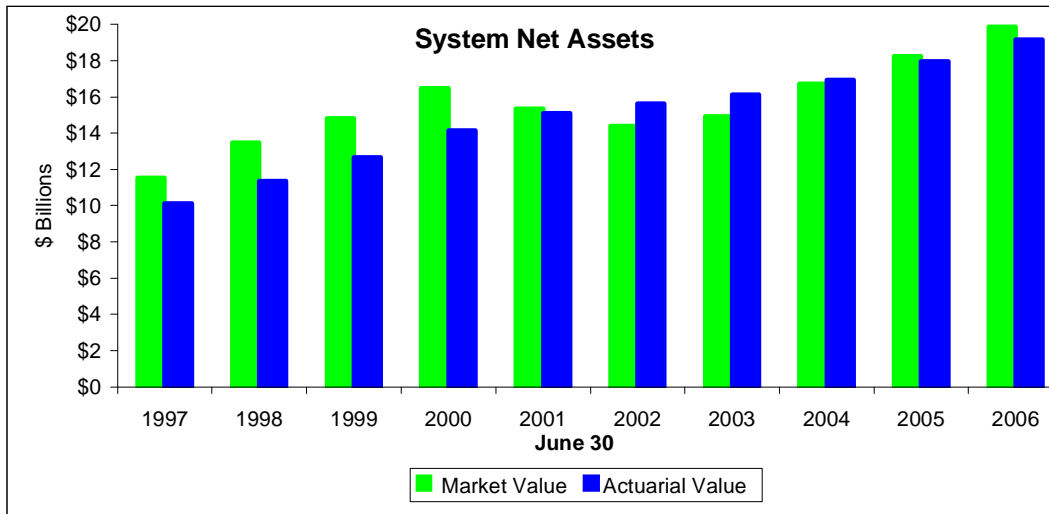
### HISTORICAL COMPARISON (ACTUARIAL AND MARKET)

Value as of June 30	Actuarial Value of Net Assets (AVA)	Market Value of Net Assets (MVA)	AVA/MVA
1996 *	8,975,396,251	9,587,104,982	94%
1997	10,112,976,077	11,533,968,923	88%
1998 **	11,352,674,142	13,463,899,832	84%
1999 **	12,664,031,437	14,814,311,451	85%
2000 **	14,145,141,535	16,473,516,141	86%
2001	15,112,424,729	15,357,519,356	98%
2002	15,613,114,099	14,387,799,637	109%
2003	16,120,476,011	14,915,941,546	108%
2004	16,951,942,539	16,726,227,853	101%
2005	17,951,490,071	18,224,067,613	99%
2006	19,144,036,519	19,847,676,902	96%

Values are for combined regular membership and Special Service groups but exclude the Favorable Experience Dividend Reserve Account.

\*In order to implement the new asset valuation method, the June 30, 1995 actuarial value of assets was revised to the actual market value on that date.

\*\*Reflects reduction for transfers to the Favorable Experience Dividend Reserve Account.



## EXHIBIT 5

### SUMMARY OF FAVORABLE EXPERIENCE DIVIDEND RESERVE

Market Value of FED Reserve as of June 30, 2006	\$	557,194,144
Transfer to FED Payable on January 15, 2007 Based on June 30, 2006 Valuation Results	\$	0
Total Value of FED Reserve as of June 30, 2006	\$	557,194,144

Payments to retirees from the FED reserve account are not a guaranteed benefit. The System Administration determines each year whether payments will be made and the percentage multiplier factor to be used for each year of retirement, up to the maximum 3% allowed by law. Factors considered by the Administration in this determination include, but are not limited to, the current value of the FED reserve account, past year payments from the reserve, the likelihood of future credits to and payments from the reserve, and distributions paid as a dividend under 97B.49F(1).

Based on the June 30, 2006 balance in the FED reserve and assuming (1) a 7.5% rate of return on the market value of assets in the future and (2) all other assumptions are exactly met, the FED reserve is projected to be sufficient to make payments through the dates shown below.

Estimated Potential Payments (in millions) from the FED on January 31:

	<u>Maximum*</u>	<u>Expected**</u>
2007	\$143.7	\$51.2
2008	167.1	59.6
2009	192.9	68.8
2010	143.1 ***	78.8
2011	-	89.7
2012	-	101.4
2013	-	114.0
2014	-	127.4
2015	-	112.5 ***
2016	-	-
2017	-	-

\* Based on the maximum payment of 3% for each year since retirement.

\*\* Based on 1.07% for each year since retirement.

\*\*\* Payment is equal to the remaining FED reserve balance.



**SECTION III**

**SYSTEM LIABILITIES**



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## SECTION III

### SYSTEM LIABILITIES

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. There are several methods used to allocate the cost of benefits to members' working lifetimes. These mathematical techniques are called actuarial cost methods.

The method used for this valuation is referred to as the "entry age normal" actuarial cost method. In general, under this method, a contribution that is a level percent of rates of pay is determined for each member, which if paid from date of hire to retirement date, will finance all future benefit payments. The level percent of pay that is developed is called the "**normal cost**". The sum of the individual normal cost dollar amounts is divided by covered payroll to determine the normal cost rate for the System.

The actuarial liability is that portion of the present value of future benefits (PVFB) that will not be paid by the normal costs in future years. The difference between this liability and the actuarial value of assets as of the same date is referred to as the **unfunded actuarial liability (UAL)**. If contributions exceed the normal cost for the year, after allowing for interest on the previous balance of the UAL, this liability will be reduced. Benefit improvements, experience gains and losses, and changes in actuarial assumptions or procedures will also have an effect on the total actuarial liability and on the portion of it that is unfunded.

Once the amount of the UAL has been calculated, the period over which the current statutory contribution rate (less the normal cost rate) will amortize the UAL is determined.

The tables in this section present System liabilities as follows:

<u>Page</u>	<u>Contents</u>
18	Present Value of Future Benefits
19	Unfunded Actuarial Liability
20	Development of FED Transfer



## EXHIBIT 6

### PRESENT VALUE OF FUTURE BENEFITS as of June 30, 2006

The actuarial present value of future benefits represents the current value of benefits expected to ultimately be earned by the current members of the System as of the valuation date.

	Regular Membership	Special Service Group 1*	Special Service Group 2**	Total
Present Value of Future Benefits:				
Active Members				
Retirement benefits	\$14,582,931,760	\$248,590,213	\$424,299,503	\$15,255,821,476
Death benefits	235,643,039	4,716,253	17,006,753	257,366,045
Termination benefits	913,030,459	34,352,748	112,040,965	1,059,424,172
Disability benefits	440,426,672	34,589,159	133,646,202	608,662,033
Inactive Members				
Vested members	414,428,763	7,608,026	13,522,480	435,559,269
Nonvested members	23,730,099	79,580	398,958	24,208,637
Retired Members and Beneficiaries	8,220,573,243	86,780,625	141,592,836	8,448,946,704
<b>Total Present Value of Future Benefits</b>	<b>\$24,830,764,035</b>	<b>\$416,716,604</b>	<b>\$842,507,697</b>	<b>\$26,089,988,336</b>

\* Includes Sheriffs and Deputies

\*\* Includes all other public safety members



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## EXHIBIT 7

### UNFUNDED ACTUARIAL LIABILITY as of June 30, 2006

	Regular Membership	Special Service Group 1*	Special Service Group 2**	Total
1. Present Value of Future Benefits	\$24,830,764,035	\$416,716,604	\$842,507,697	\$26,089,988,336
2. Present Value of Future Normal Costs	4,092,472,748	96,993,548	249,399,621	4,438,865,917
3. Actuarial Liability (1) - (2)	20,738,291,287	319,723,056	593,108,076	21,651,122,419
4. Actuarial Value of Net Assets	18,209,048,069	312,911,423	622,077,027	19,144,036,519
5. Unfunded Actuarial Liability (3) - (4)	2,529,243,218	6,811,633	(28,968,951)	2,507,085,900

\* Includes Sheriffs and Deputies

\*\* Includes all other public safety members



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## EXHIBIT 8

### CALCULATION OF ACTUARIAL (GAIN)/LOSS AND ANY TRANSFER TO THE FAVORABLE EXPERIENCE DIVIDEND RESERVE Based on the June 30, 2006 Actuarial Valuation

The Favorable Experience Dividend (FED) reserve account was created by legislation in 1998. The main purpose of the account is to help offset the negative impact of postretirement inflation for members who retired after June 30, 1990. The law provided that a portion of the favorable actuarial experience, if any, in subsequent years would be transferred to the FED reserve. Legislation passed in 2000 capped the FED reserve at ten years of expected payouts at the maximum level. Further legislation in 2006 prohibited further transfers to the FED until the System has no remaining UAL. Because the System experienced a loss and because there is a UAL, no transfer is to be made this year.

1. June 30, 2005 Unfunded Actuarial Liability	\$	2,288,608,596
2. Normal Cost as of June 30, 2005		495,008,454
3. Employer and Member Contributions*		536,212,740
4. Increase due to assumption changes		63,702,186
5. Increase due to plan amendments		0
6. Expected Unfunded Actuarial Liability as of June 30, 2006 [(1) + (2)] * 1.075 - [(3) * (1.075) <sup>-5</sup> ] + (4) + (5)		2,500,133,313
7. Actual Unfunded Actuarial Liability as of June 30, 2006		2,507,085,900
8. (Gain)/loss (7)-(6)		6,952,587
9. Portion of gain to transfer to FED		N/A
10. Amount of Actuarial Value of Assets to transfer to FED	\$	0
11. Market value of FED transfer	\$	0

\* Does not include service purchases



**SECTION IV**

**SYSTEM CONTRIBUTIONS**



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## SECTION IV

### SYSTEM CONTRIBUTIONS

Under the funding method described in Appendix C, the contribution rate consists of two elements: the normal cost rate and the contribution rate to amortize the unfunded actuarial liability as a level percent of payroll. The unfunded actuarial liability represents the difference between the portion of the present value of future benefits allocated to service credited prior to the valuation date by the actuarial cost method and the actuarial value of assets as of that date.

In the following pages, we present information on System contributions as follows:

<u>Page</u>	<u>Contents</u>
22	Actuarial Balance Sheet
23	Analysis of Contribution Rate
24	Calculation of Contribution Rates for Special Service Groups



**EXHIBIT 9**  
**ACTUARIAL BALANCE SHEET**  
**as of June 30, 2006**

	<b>Regular Membership</b>	<b>Special Service Group 1*</b>	<b>Special Service Group 2**</b>	<b>Total</b>
<b><u>ASSETS</u></b>				
Actuarial value of assets	\$18,209,048,069	\$312,911,423	\$622,077,027	\$19,144,036,519
Present value of future normal costs	4,092,472,748	96,993,548	249,399,621	4,438,865,917
Present value of future contributions to amortize unfunded actuarial liability	2,529,243,218	6,811,633	(28,968,951)	2,507,085,900
<b>Total Net Assets</b>	<b>\$24,830,764,035</b>	<b>\$416,716,604</b>	<b>\$842,507,697</b>	<b>\$26,089,988,336</b>
<b><u>LIABILITIES</u></b>				
Present Value of Future Benefits:				
Retired Members and Beneficiaries	\$8,220,573,243	\$86,780,625	\$141,592,836	\$8,448,946,704
Active Members	16,172,031,930	322,248,373	686,993,423	17,181,273,726
Inactive Members	438,158,862	7,687,606	13,921,438	459,767,906
<b>Total Liabilities</b>	<b>\$24,830,764,035</b>	<b>\$416,716,604</b>	<b>\$842,507,697</b>	<b>\$26,089,988,336</b>

\* Includes Sheriffs and Deputies

\*\* Includes all other public safety members



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## EXHIBIT 10

### ANALYSIS OF CONTRIBUTION RATE

The actuarial cost method used to determine the required level of annual contributions by the members and the employers to support the expected benefits is the Entry Age Normal Cost Method. Under this method, the total cost is comprised of the normal cost rate and the unfunded actuarial liability payment. The statutory contribution rate is first applied to payment of the normal cost rate. The remaining contribution is used to amortize the unfunded actuarial liability as a level percentage of payroll, which determines the period necessary to amortize the unfunded actuarial liability. According to IPERS Funding Policy, the System is considered to be “fully funded” if the amortization period does not exceed 30 years.

The contribution rate developed in this exhibit is based on the June 30, 2006 actuarial valuation and applies to the fiscal year beginning July 1, 2007. The statutory contribution rate for the year ending June 30, 2008 is 9.95%, reflecting the first scheduled increase provided by 2006 legislation.

	<b>Regular Membership</b>
1. (a) Normal Cost, Adjusted to Mid-year	\$ 496,887,233
(b) Expected Payroll for Members Under Assumed Retirement Age	\$ 5,493,367,426
(c) Normal Cost Rate (a) / (b)	9.05%
2. Unfunded Actuarial Liability at Valuation Date	\$ 2,529,243,218
3. Contribution Toward Unfunded Actuarial Liability (UAL)	0.90%
4. Expected Total Payroll for FYE 2007	\$ 5,513,541,518
5. UAL Contribution Adjusted to Mid-year (3) x (4) / (1.075) <sup>5</sup>	\$ 47,859,585
6. Amortization Factor (2) / (5)	52.84716
7. Amortization Period Necessary to Finance UAL as a Level Percent of Payroll at Contribution Rate Shown in (3)*	Cannot be amortized
8. Contribution Rate to Amortize UAL Over 30 Years*	11.51%

\* Assuming all actuarial assumptions are met in the future.



## EXHIBIT 11

### CALCULATION OF CONTRIBUTION RATES FOR SPECIAL SERVICE GROUPS

The actuarial cost method used to determine the actuarial contribution rate to be paid by the members and the employers to support the expected benefits is the Entry Age Normal Cost Method. Under this method, the total cost is comprised of the normal cost rate plus the unfunded actuarial liability payment. The payment to amortize the unfunded actuarial liability is determined as a level percentage of payroll, with an amortization period of 30 years.

The contribution rate developed in this exhibit is based on the June 30, 2006 actuarial valuation and applies to the fiscal year beginning July 1, 2007.

	<b>Special Service Group 1*</b>	<b>Special Service Group 2**</b>	
1. (a) Normal Cost, Adjusted to Mid-year	\$ 11,617,293	\$ 28,493,044	
(b) Expected Payroll for Members			
Under Assumed Retirement Age	\$ 77,804,766	\$ 191,015,247	
(c) Normal Cost Rate			
(a) / (b)	14.93%	14.92%	
2. Unfunded Actuarial Liability	\$ 6,811,633	\$ (28,968,951)	
at Valuation Date			
3. Amortization Period to Fund the UAL			
as a Level Percent of Payroll	30 years	30 years	
4. Amortization Factor	19.33574	19.33574	
5. UAL Contribution Adjusted to Mid-year			
[(2) / (4)] x (1.075) <sup>5</sup>	\$ 365,254	\$ (1,553,375)	
6. Expected Payroll for FYE 2007	\$ 78,045,746	\$ 192,711,128	
7. Contribution Rate Toward the UAL			
(5) / (6)	0.47%	(0.81%)	
8. Total Contribution Rate Effective July 1, 2007			
(1c) + (7)	15.40%	14.11%	
Employer Contribution Rate	7.70% (50%)	8.47% (60%)	
Employee Contribution Rate	7.70% (50%)	5.64% (40%)	

\* Includes Sheriffs and Deputies

\*\* Includes all other public safety members



**SECTION V**

**PLAN ACCOUNTING INFORMATION**



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## SECTION V

### PLAN ACCOUNTING INFORMATION

GASB Statement No. 25, effective for fiscal years beginning after June 15, 1996, establishes financial reporting standards for defined benefit pension plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress provides information about whether the financial strength of the Plan is improving or deteriorating over time.
- The Schedule of Employer Contributions provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed.

<u>Page</u>	<u>Contents</u>
26	Summary of Membership
27	Schedule of Funding Progress
28	Schedule of Employer Contributions
29	Expected Benefit Payments



## EXHIBIT 12

### SUMMARY OF MEMBERSHIP

	<u>June 30, 2006</u>	<u>June 30, 2005</u>
Active Employees:		
Vested	124,529	124,031
Not yet vested	<u>38,523</u>	<u>36,845</u>
Total active employees*	163,052	160,876
Retirees and beneficiaries currently receiving benefits:	82,037	79,419
Inactive vested members entitled to benefits but not yet receiving them:	25,918	26,919

\*Retired/reemployed members are included in retiree counts, but not active count.  
Counts are 8,044 for 2006 and 6,597 for 2005.



## EXHIBIT 13

### SCHEDULE OF FUNDING PROGRESS

In accordance with Statement No. 25 of the Governmental Accounting Standards Board

Actuarial Valuation <u>Date</u>	Net Actuarial Value of Assets <u>(a)</u>	Actuarial Liability (AL) <u>(b)</u>	Unfunded AL (UAL) <u>(b-a)</u>	Funded Ratio <u>(a/b)</u>	Covered Payroll (P/R) <u>(c)</u>	UAL as a Percentage of Covered P/R <u>[(b-a)/c]</u>
6/30/96	\$ 8,975,396,251	\$ 10,136,356,814	\$ 1,160,960,563	88.55%	\$ 3,463,455,913	33.52%
6/30/97	10,112,976,077	10,774,216,472	661,240,395	93.86%	3,640,257,177	18.16%
6/30/98	11,352,674,142	11,907,220,417	554,546,275	95.34%	3,908,471,056	14.19%
6/30/99	12,664,031,437	13,053,655,753	389,624,316	97.02%	4,086,572,426	9.53%
6/30/00	14,145,141,535	14,471,650,757	326,509,222	97.74%	4,365,451,325	7.48%
6/30/01	15,112,424,729	15,553,379,304	440,954,575	97.16%	4,550,180,113	9.69%
6/30/02	15,613,114,099	16,868,559,185	1,255,445,086	92.56%	4,743,576,424	26.47%
6/30/03	16,120,476,011	17,987,374,960	1,866,898,949	89.62%	4,881,100,238	38.25%
6/30/04	16,951,942,539	19,128,410,606	2,176,468,067	88.62%	5,072,027,906	42.91%
6/30/05	17,951,490,071	20,240,098,667	2,288,608,596	88.69%	5,236,860,886	43.70%
6/30/06	19,144,036,519	21,651,122,419	2,507,085,900	88.42%	5,523,863,321	45.39%



## EXHIBIT 14

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

The Actuarially Required Employer Contribution (ARC) is determined based on GASB Statement No. 25, Financial Reporting for Defined Benefit Pension Plans. The dollar amount of ARC is calculated by dividing the contributions paid by the Regular Membership for the fiscal year by the statutory contribution rate to determine covered payroll for the year. The covered payroll is then multiplied by the actuarial contribution rate including the normal cost and 30-year amortization of the UAL from the actuarial valuation two years prior (the June 30, 2004 valuation sets the ARC for FY 06). The resulting dollar amount of ARC for the regular Membership is added to the actual contributions paid by the Special Service 1 and the Special Service 2 employers to determine the total ARC for the fiscal year.

Fiscal Year Ending	Actuarially Required Contributions (ARC)				Percentage of ARC Contributed			
	Regular Membership	Special Service Group 1	Special Service Group 2	Total	Regular Membership	Special Service Group 1	Special Service Group 2	Total
6/30/01				\$268,315,094				100.0%
6/30/02				278,682,745				100.0%
6/30/03	\$270,363,338	\$5,670,239	\$13,738,478	289,772,054	99.2%	100.0%	100.0%	99.2%
6/30/04	309,006,609	5,489,797	14,263,836	328,760,242	90.3%	100.0%	100.0%	90.9%
6/30/05	341,552,685	6,236,611	15,391,729	363,181,025	84.7%	100.0%	100.0%	85.6%
6/30/06	364,424,911	6,228,675	16,888,833	387,542,419	82.7%	100.0%	100.0%	83.8%





## EXHIBIT 15

### EXPECTED BENEFIT PAYMENTS

The following chart shows the expected benefit payments to be made over the next 20 years. These payments include those expected to be made to current retirees and beneficiaries, current active members, and current deferred vested members (included in the active values) if all actuarial assumptions are met in future years. The benefits reflected include expected refunds and death benefits as well as annuity payments.

These payouts do not include any current nonvested inactive members, any future members, or any FED payments.

Fiscal Year End	Actives at 6/30/06	Retirees at 6/30/06	Total
2007	\$ 107,887,000	\$ 885,794,000	\$ 993,681,000
2008	205,621,000	871,213,000	1,076,834,000
2009	310,073,000	855,692,000	1,165,765,000
2010	421,728,000	839,013,000	1,260,741,000
2011	539,928,000	821,203,000	1,361,131,000
2012	662,442,000	802,092,000	1,464,534,000
2013	787,792,000	781,804,000	1,569,596,000
2014	915,578,000	760,666,000	1,676,244,000
2015	1,043,779,000	738,374,000	1,782,153,000
2016	1,171,980,000	715,180,000	1,887,160,000
2017	1,299,821,000	691,350,000	1,991,171,000
2018	1,427,260,000	666,974,000	2,094,234,000
2019	1,552,268,000	641,820,000	2,194,088,000
2020	1,674,480,000	615,958,000	2,290,438,000
2021	1,793,506,000	589,460,000	2,382,966,000
2022	1,909,224,000	562,408,000	2,471,632,000
2023	2,021,490,000	534,881,000	2,556,371,000
2024	2,128,008,000	506,976,000	2,634,984,000
2025	2,228,697,000	478,784,000	2,707,481,000
2026	2,323,834,000	450,411,000	2,774,245,000



**APPENDIX A**

**SUMMARY STATISTICS ON**

**SYSTEM MEMBERSHIP**



**Milliman**

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**APPENDIX A**  
**SUMMARY STATISTICS ON SYSTEM MEMBERSHIP**

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## HISTORICAL SUMMARY OF MEMBERS

The following table displays selected historical data (including regular and both Special Service groups) as available.

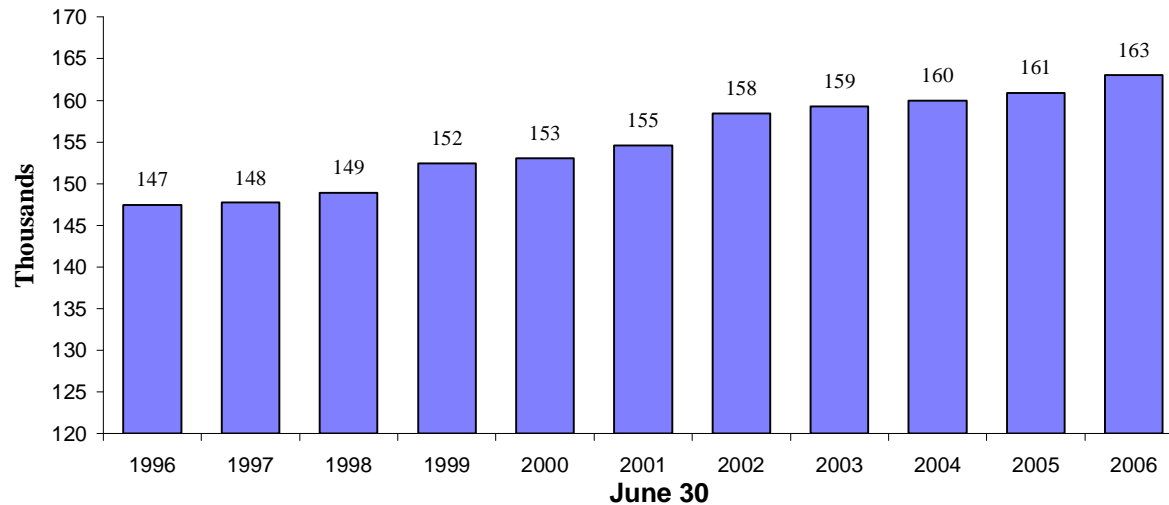
Valuation		Active Members						Number			Act/Ret Ratio
Date June 30	Total Count	Number	Average			Pay Increase	Retired Reemployed	Vested Inactive	Retired		
			Age	Entry Age	Service					Annual Pay (\$)	
1991	206,105	135,104	43.7			21,885		21,120	49,881	2.71	
1992	207,860	134,485	44.3			22,510	2.9%	22,128	51,247	2.62	
1993	211,862	136,409	43.9			22,604	0.4%	21,241	54,212	2.52	
1994	216,989	141,423	44.2			22,968	1.6%	21,271	54,295	2.60	
1995	216,973	144,912	44.1			23,322	1.5%	15,708	56,353	2.57	
1996	221,891	147,431	44.2			25,218	8.1%	16,546	57,914	2.55	
1997	224,357	147,736	44.6	33.1	11.5	26,031	3.2%	17,301	59,320	2.49	
1998	241,767	148,917	44.7	33.2	11.5	26,767	2.8%	31,202	61,648	2.42	
1999	250,168	152,440	44.8	33.4	11.4	27,322	2.1%	4,853	34,332	63,396	2.40
2000	249,970	153,039	44.8	33.2	11.6	29,032	6.3%	5,050	31,219	65,712	2.33
2001	255,963	154,610	45.0	33.5	11.5	30,341	4.5%	4,886	32,650	68,703	2.25
2002	264,974	158,467	45.1	33.8	11.3	32,119	5.9%	5,387	34,792	71,715	2.21
2003	268,813	159,310	45.2	33.8	11.4	31,950	-0.5%	6,126	35,375	74,128	2.15
2004	272,573	160,003	45.4	33.8	11.6	33,082	3.5%	6,438	35,788	76,782	2.08
2005	267,214	160,876	45.6	33.8	11.8	34,066	3.0%	6,592	26,919	79,419	2.03
2006	271,007	163,052	45.7	34.0	11.7	35,475	4.1%	8,044	25,918	82,037	1.99



## SUMMARY OF ACTIVE MEMBERS

	Regular Membership	Special Service Groups		Total 6/30/2006	Total 6/30/2005	Percent Change
		Group 1	Group 2			
Total Employees	157,078	1,478	4,496	163,052	160,876	1.4
Projected Covered						
Payroll* (millions)	\$5,514	\$78	\$193	\$5,784	\$5,480	5.5
Average Age	45.8	41.2	42.7	45.7	45.6	0.2
Average Entry Age	34.1	27.0	31.0	34.0	33.8	0.6
Average Earnings*	\$35,101	\$52,805	\$42,863	\$35,475	\$34,066	4.1
Retired Reemployed	8,017	7	20	8,044	6,592	22.0

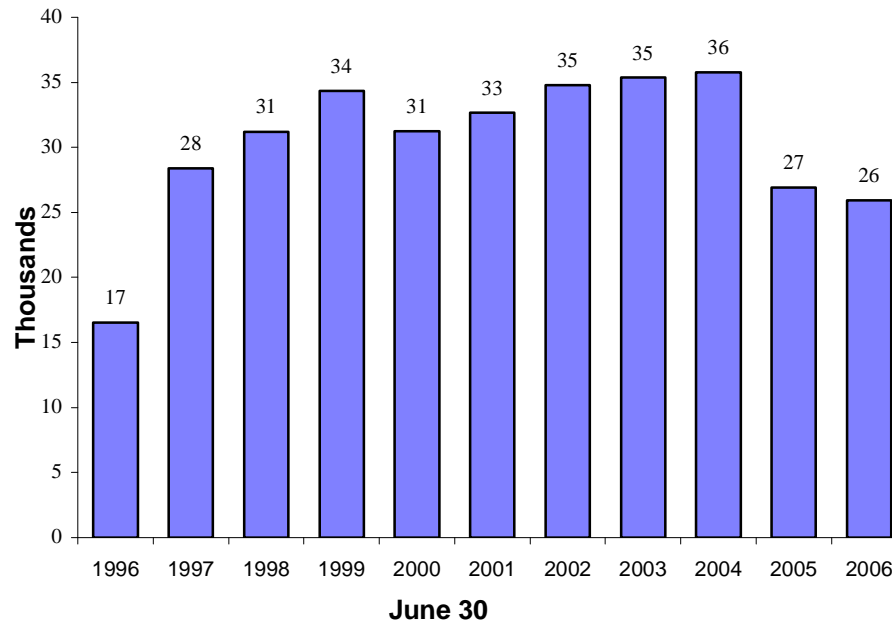
\*Payroll figures as of June 30 are actual amounts paid during the prior fiscal year, increased by the assumed salary increase factor for the upcoming fiscal year.



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## SUMMARY OF INACTIVE VESTED MEMBERS

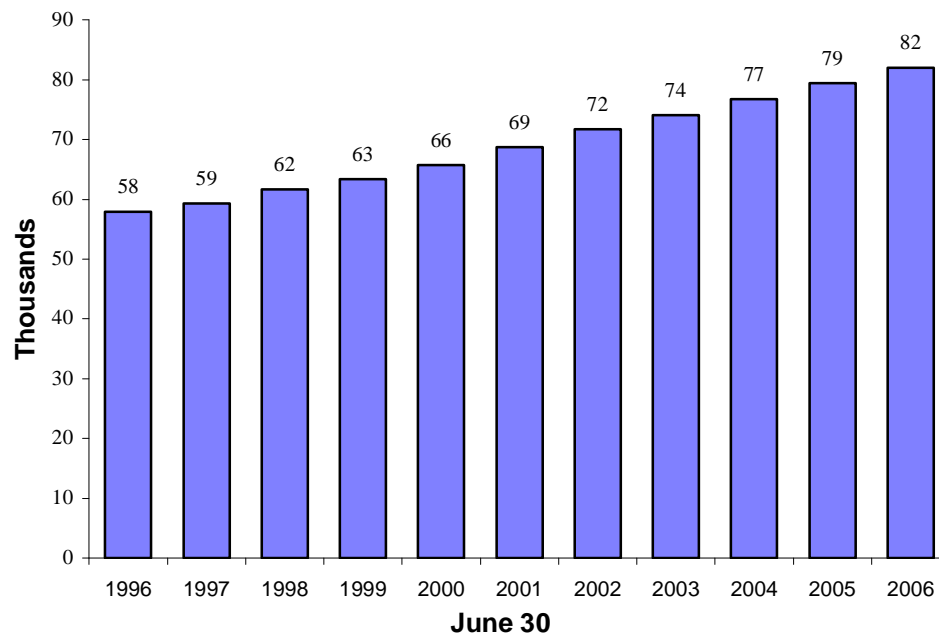
Regular Membership	Special Service		Total 6/30/2006	Total 6/30/2005	% Change
	Group 1	Group 2			
25,541	94	283	25,918	26,919	(3.7%)





## SUMMARY OF RETIRED MEMBERS AND BENEFICIARIES

Regular Membership	Special Service		Total 6/30/2006	Total 6/30/2005	% Change
	Group 1	Group 2			
80,915	345	777	82,037	79,419	3.3%



**AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2006 FOR ACTIVE MEMBERS\***  
**Males and Females - Regular Membership**

Age	<i>Years of Service</i>																			
	<u>0 to 4</u>		<u>5 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		<u>Total</u>	
	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary
Under 25	5,992	13,417	100	22,313	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	6,092	13,563
25-29	9,226	24,108	2,994	32,457	34	27,035	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	12,254	26,156
30-34	5,182	23,701	5,823	35,720	1,626	39,447	18	33,777	0	NA	0	NA	0	NA	0	NA	0	NA	12,649	31,272
35-39	5,312	21,600	4,960	33,332	4,349	41,776	1,288	44,679	21	39,499	0	NA	0	NA	0	NA	0	NA	15,930	32,651
40-44	5,502	19,449	5,248	29,146	3,416	37,012	3,564	46,322	1,511	46,391	120	41,734	0	NA	0	NA	0	NA	19,361	32,364
45-49	4,848	19,941	5,612	27,301	4,209	32,846	3,404	42,005	3,540	49,163	2,499	46,934	174	43,029	0	NA	0	NA	24,286	34,173
50-54	3,868	20,270	4,502	27,792	3,931	31,984	3,815	37,955	3,017	45,035	4,402	50,662	2,803	50,463	96	48,198	0	NA	26,434	37,036
55-59	3,986	19,176	3,194	27,999	2,928	31,278	3,336	37,180	3,032	42,345	3,024	47,660	3,744	55,274	1,208	54,180	43	49,041	24,495	37,905
60-64	3,599	13,952	1,878	22,543	1,457	28,362	1,534	34,914	1,401	38,658	1,355	41,485	858	49,863	720	56,676	216	52,651	13,018	30,171
65-69	2,527	8,314	1,279	12,694	588	18,932	376	26,531	303	34,715	222	30,939	179	39,474	94	46,213	73	53,210	5,641	16,138
70 & over	2,603	9,717	1,785	8,545	405	8,605	70	17,839	18	12,385	23	20,986	15	29,089	8	29,765	8	52,038	4,935	9,540
Totals	52,645	18,908	37,375	28,556	22,943	34,201	17,405	40,209	12,843	44,703	11,645	47,488	7,773	52,253	2,126	54,311	340	52,300	165,095	31,580

\*Including retired/reemployed members (see A-2)



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## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2006 FOR ACTIVE MEMBERS\*

### Males and Females - Special Service Group 1

Age	<i>Years of Service</i>																			
	<u>0 to 4</u>		<u>5 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		<u>Total</u>	
	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary
Under 25	25	33,227	2	38,461	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	27	33,614
25-29	85	40,368	76	48,322	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	161	44,123
30-34	43	39,391	123	47,750	56	48,217	1	52,417	0	NA	0	NA	0	NA	0	NA	0	NA	223	46,276
35-39	37	41,732	68	46,708	100	51,188	47	52,261	1	59,221	0	NA	0	NA	0	NA	0	NA	253	48,832
40-44	10	43,307	37	49,268	62	51,080	89	53,841	44	56,640	1	81,087	0	NA	0	NA	0	NA	243	52,626
45-49	5	34,633	25	51,426	27	48,660	50	50,407	57	51,924	62	56,668	6	56,629	0	NA	0	NA	232	52,180
50-54	7	51,164	4	52,767	17	52,639	26	51,398	38	51,941	66	54,235	48	57,161	0	NA	0	NA	206	53,871
55-59	6	17,779	3	49,753	11	44,496	17	49,334	14	52,420	20	55,412	31	63,084	5	54,047	0	NA	107	52,823
60-64	4	25,789	0	NA	1	44,926	3	32,521	4	43,227	5	57,491	6	59,560	2	79,832	2	45,868	27	48,695
65-69	2	40,775	1	12,881	0	NA	1	45,860	1	36,587	0	NA	0	NA	0	NA	1	51,838	6	38,119
70 & over	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
Totals	224	39,088	339	48,025	274	50,106	234	51,877	159	53,007	154	55,647	91	59,302	7	61,414	3	47,858	1,485	49,746

\*Including retired/reemployed members (see A-2)



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## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2006 FOR ACTIVE MEMBERS\*

### Males and Females - Special Service Group 2

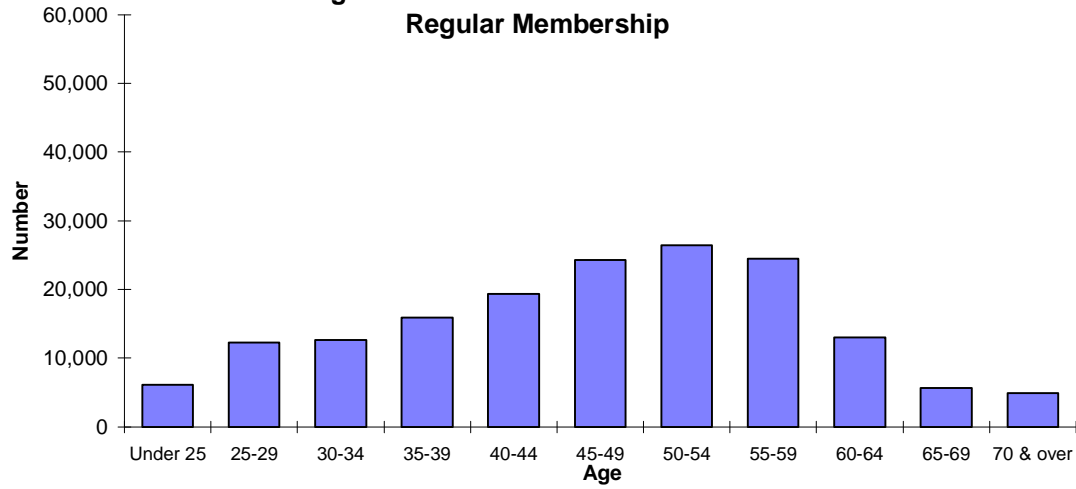
Age	<i>Years of Service</i>																			
	<u>0 to 4</u>		<u>5 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		<u>Total</u>	
	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary
Under 25	141	21,411	1	36,846	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	142	21,519
25-29	290	27,962	148	35,447	4	41,162	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	442	30,588
30-34	177	27,106	274	40,264	80	43,855	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	531	36,419
35-39	152	27,945	232	39,707	222	44,982	88	46,703	1	46,245	0	NA	0	NA	0	NA	0	NA	695	39,715
40-44	141	25,643	165	38,834	136	44,296	143	48,544	79	50,929	8	46,274	0	NA	0	NA	0	NA	672	40,748
45-49	86	27,234	140	38,921	111	43,630	96	47,166	144	50,878	107	51,912	4	51,513	0	NA	0	NA	688	43,966
50-54	72	29,678	115	39,198	95	46,764	74	47,511	113	49,098	132	50,851	68	51,658	3	65,650	0	NA	672	45,496
55-59	49	31,928	77	41,277	74	41,223	54	48,037	67	50,171	65	49,923	69	54,945	13	56,480	0	NA	468	45,981
60-64	18	22,313	43	40,916	31	42,927	23	50,887	21	49,495	20	51,805	7	58,987	5	53,393	0	NA	168	44,152
65-69	5	16,904	7	34,638	5	32,342	3	47,318	7	47,427	3	58,992	0	NA	0	NA	1	41,387	31	38,097
70 & over	3	17,376	2	7,385	2	3,195	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	7	10,469
<b>Totals</b>	<b>1,134</b>	<b>26,782</b>	<b>1,204</b>	<b>39,108</b>	<b>760</b>	<b>44,103</b>	<b>481</b>	<b>47,821</b>	<b>432</b>	<b>50,178</b>	<b>335</b>	<b>51,030</b>	<b>148</b>	<b>53,533</b>	<b>21</b>	<b>57,055</b>	<b>1</b>	<b>41,387</b>	<b>4,516</b>	<b>40,282</b>

\*Including retired/reemployed members (see A-2)

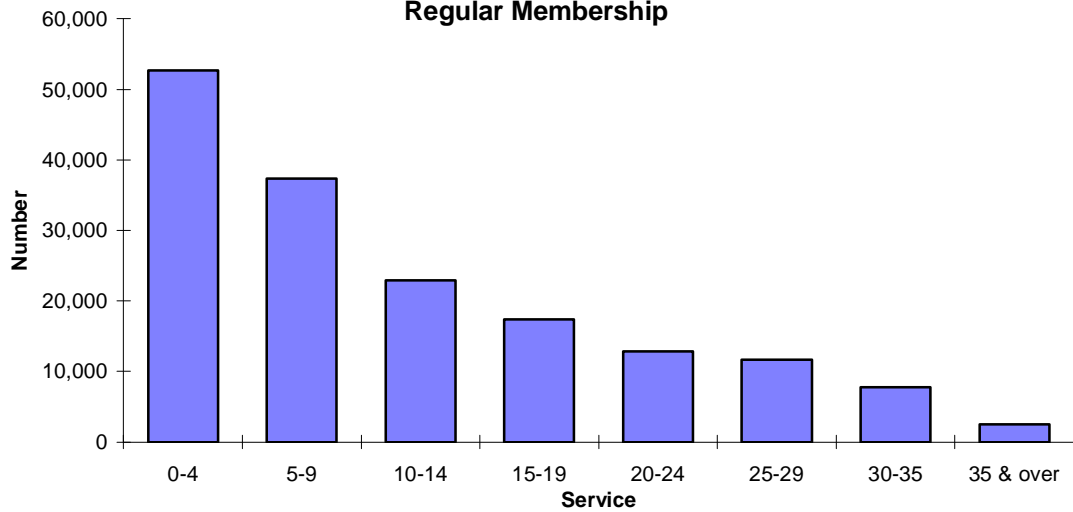


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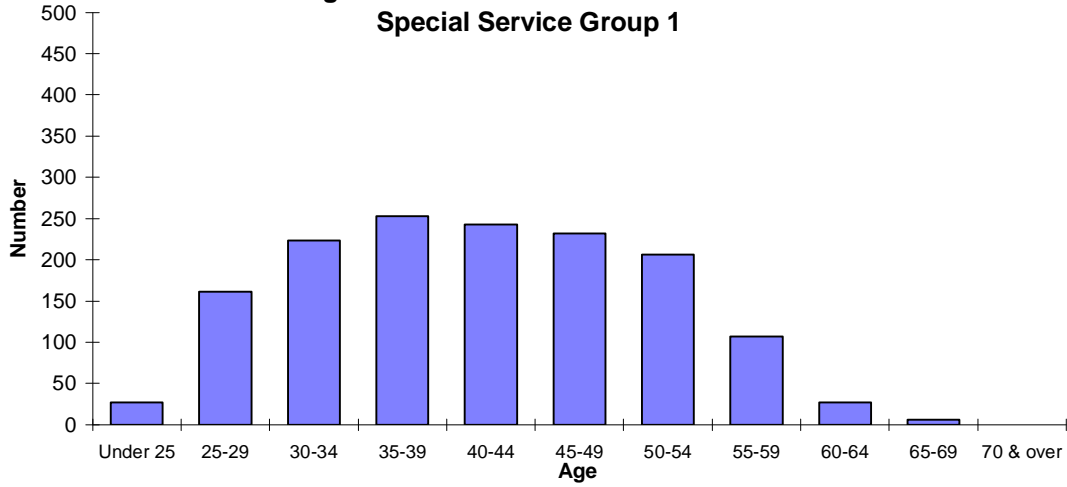
**Age Distribution of Active Members  
Regular Membership**



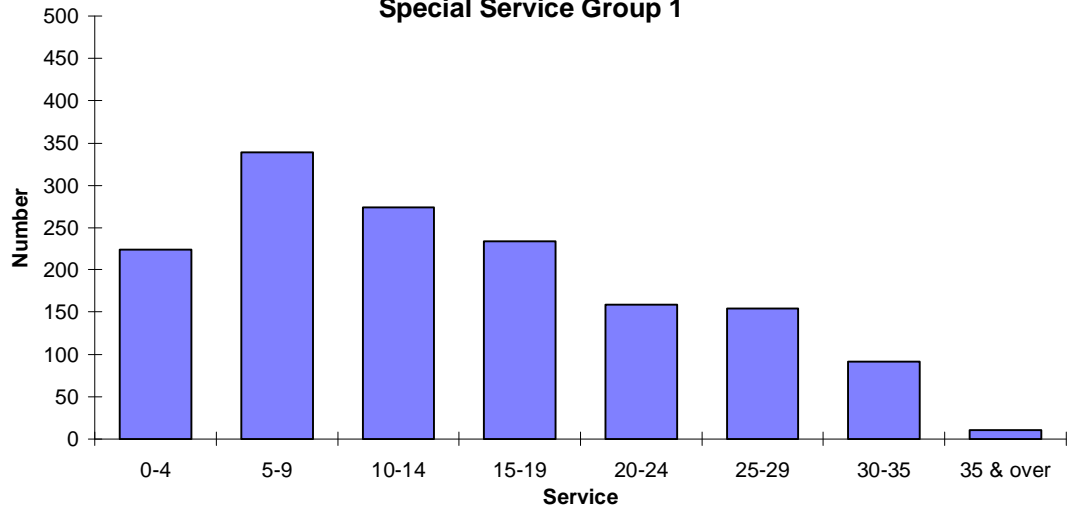
**Service Distribution of Active Members  
Regular Membership**



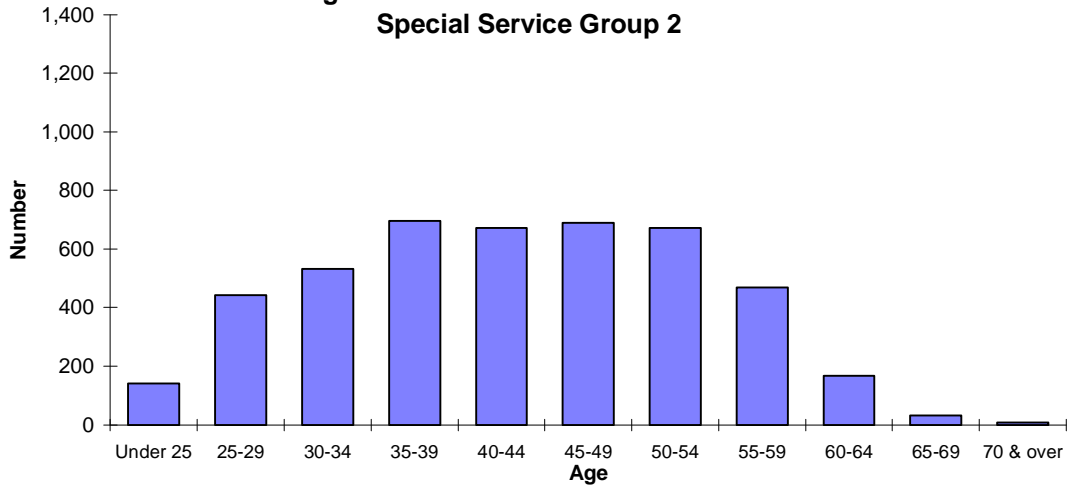
**Age Distribution of Active Members  
Special Service Group 1**



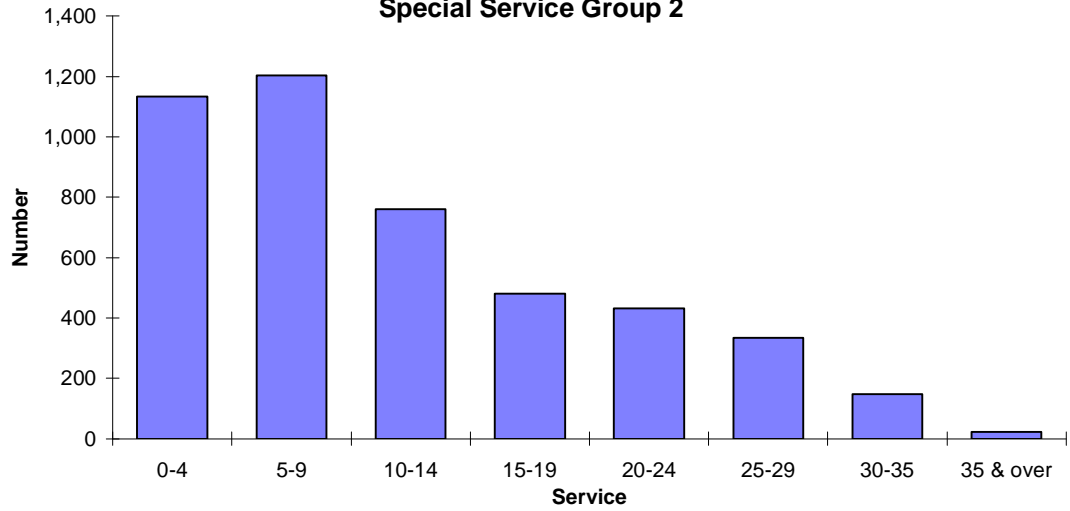
**Service Distribution of Active Members  
Special Service Group 1**



**Age Distribution of Active Members  
Special Service Group 2**



**Service Distribution of Active Members  
Special Service Group 2**



## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2006 FOR INACTIVE VESTED MEMBERS

Males and Females - Regular Membership

Age	<i>Years of Service</i>																		<u>Total</u>	
	<u>0 to 3</u>		<u>4 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		No.	Avg. Hi-3
	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3		
Under 25	0	NA	28	9,394	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	28	1,559
25-29	0	NA	400	20,566	1	3,256	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	401	4,023
30-34	0	NA	1,223	24,474	48	11,052	1	47,315	0	NA	0	NA	0	NA	0	NA	0	NA	1,272	6,029
35-39	0	NA	1,658	22,977	317	14,938	13	26,034	0	NA	0	NA	0	NA	0	NA	0	NA	1,988	8,057
40-44	0	NA	1,899	19,753	530	15,372	163	32,121	26	31,631	0	NA	0	NA	0	NA	0	NA	2,618	9,487
45-49	0	NA	2,372	17,301	959	15,064	427	31,137	168	33,199	28	38,676	1	36,195	0	NA	0	NA	3,955	12,103
50-54	0	NA	2,590	17,497	1,361	15,674	695	26,266	368	33,021	161	39,578	43	40,213	0	NA	0	NA	5,218	16,061
55-59	2,132	8,037	1,882	15,984	854	17,071	461	24,602	207	29,092	84	37,349	26	47,675	1	41,237	0	NA	5,647	10,201
60-64	1,204	6,493	815	13,437	301	15,903	148	20,095	52	25,515	26	32,165	8	34,304	0	NA	0	NA	2,554	7,347
65-69	666	5,605	265	9,218	64	12,213	12	10,325	16	26,323	5	16,569	1	27,750	1	25,094	0	NA	1,030	3,310
70 & over	696	3,001	96	5,545	23	7,908	11	9,690	3	11,372	1	9,964	0	NA	0	NA	0	NA	830	1,296
<b>Totals</b>	<b>4,698</b>	<b>6,551</b>	<b>13,228</b>	<b>18,475</b>	<b>4,458</b>	<b>15,595</b>	<b>1,931</b>	<b>26,783</b>	<b>840</b>	<b>31,376</b>	<b>305</b>	<b>37,775</b>	<b>79</b>	<b>41,862</b>	<b>2</b>	<b>33,166</b>	<b>0</b>	<b>NA</b>	<b>25,541</b>	<b>10,287</b>



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**AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2006 FOR INACTIVE VESTED MEMBERS**  
**Males and Females - Special Service Group 1**

Age	<i>Years of Service</i>																			
	<u>0 to 3</u>		<u>4 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		<u>Total</u>	
	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3
Under 25	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
25-29	0	NA	6	35,600	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	6	11,298
30-34	0	NA	7	40,281	4	25,835	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	11	18,938
35-39	0	NA	6	36,319	5	22,399	2	41,949	0	NA	0	NA	0	NA	0	NA	0	NA	13	24,503
40-44	0	NA	5	35,553	5	32,275	4	44,900	0	NA	0	NA	0	NA	0	NA	0	NA	14	35,924
45-49	0	NA	5	26,682	6	33,577	5	38,511	2	38,073	1	46,003	0	NA	0	NA	0	NA	19	40,188
50-54	0	NA	2	10,310	0	NA	6	24,341	6	34,249	7	50,072	1	55,438	0	NA	0	NA	22	69,648
55-59	1	1,138	3	22,317	0	NA	2	28,871	0	NA	0	NA	0	NA	0	NA	0	NA	6	22,508
60-64	0	NA	1	21,002	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	1	19,665
65-69	1	28,597	1	1,606	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	2	2,288
70 & over	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
<b>Totals</b>	<b>2</b>	<b>14,868</b>	<b>36</b>	<b>31,523</b>	<b>20</b>	<b>28,909</b>	<b>19</b>	<b>34,728</b>	<b>8</b>	<b>35,205</b>	<b>8</b>	<b>49,564</b>	<b>1</b>	<b>55,438</b>	<b>0</b>	<b>NA</b>	<b>0</b>	<b>NA</b>	<b>94</b>	<b>37,796</b>

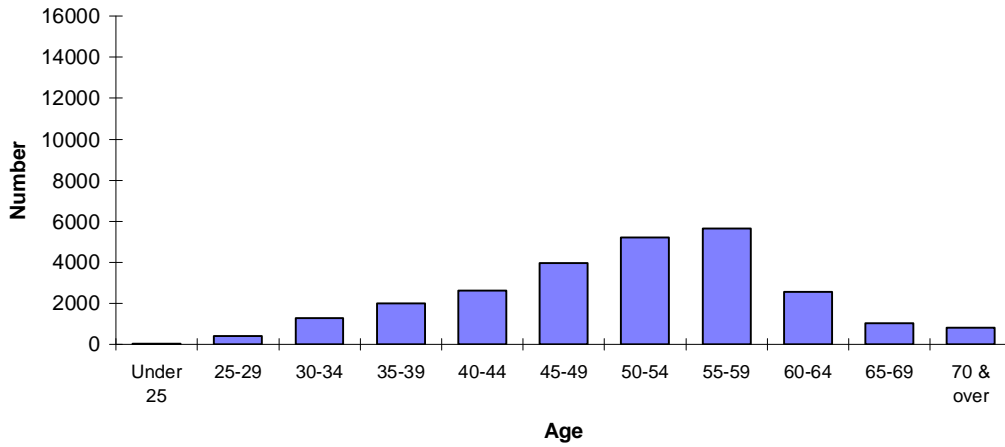


**AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2006 FOR INACTIVE VESTED MEMBERS**  
**Males and Females - Special Service Group 2**

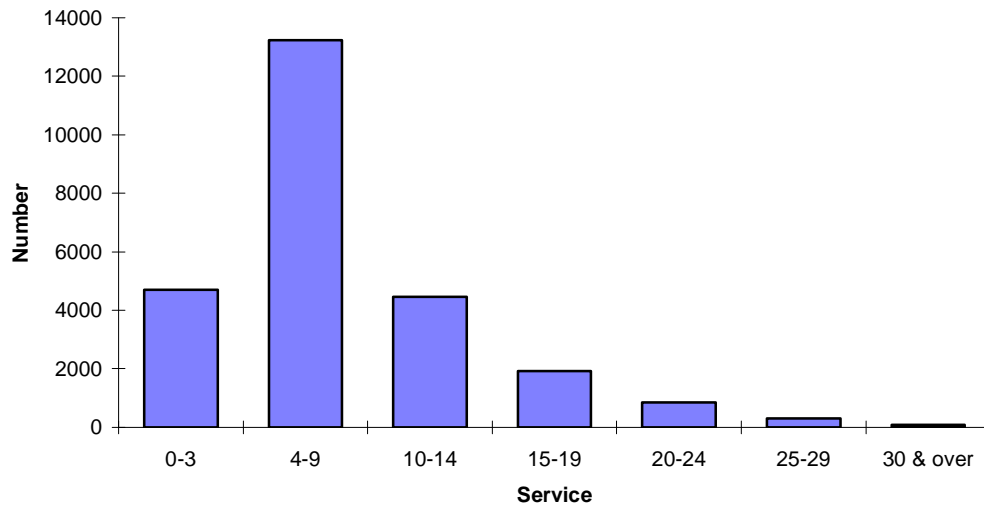
Age	<i>Years of Service</i>																		<u>Total</u>	
	<u>0 to 3</u>		<u>4 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		No.	Avg. Hi-3
	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3		
Under 25	0	NA	1	14,365	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	1	2,227
25-29	0	NA	13	25,386	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	13	7,421
30-34	0	NA	41	22,747	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	41	9,410
35-39	0	NA	34	21,978	10	18,607	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	44	12,210
40-44	0	NA	24	19,077	15	28,171	4	35,397	0	NA	0	NA	0	NA	0	NA	0	NA	43	18,412
45-49	0	NA	32	18,407	12	24,923	8	30,697	1	26,744	2	57,715	0	NA	0	NA	0	NA	55	20,066
50-54	0	NA	21	18,706	6	30,804	4	36,064	10	34,567	5	36,830	2	68,355	0	NA	0	NA	48	36,099
55-59	2	27,264	12	20,552	7	20,590	1	27,418	2	24,938	0	NA	2	51,280	0	NA	0	NA	26	22,804
60-64	5	12,767	3	13,750	1	18,559	0	NA	0	NA	0	NA	1	48,024	0	NA	0	NA	10	13,214
65-69	2	13,134	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	2	2,352
70 & over	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
<b>Totals</b>	<b>9</b>	<b>16,070</b>	<b>181</b>	<b>20,728</b>	<b>51</b>	<b>24,612</b>	<b>17</b>	<b>32,873</b>	<b>13</b>	<b>32,484</b>	<b>7</b>	<b>42,797</b>	<b>5</b>	<b>57,458</b>	<b>0</b>	<b>NA</b>	<b>0</b>	<b>NA</b>	<b>283</b>	<b>19,010</b>



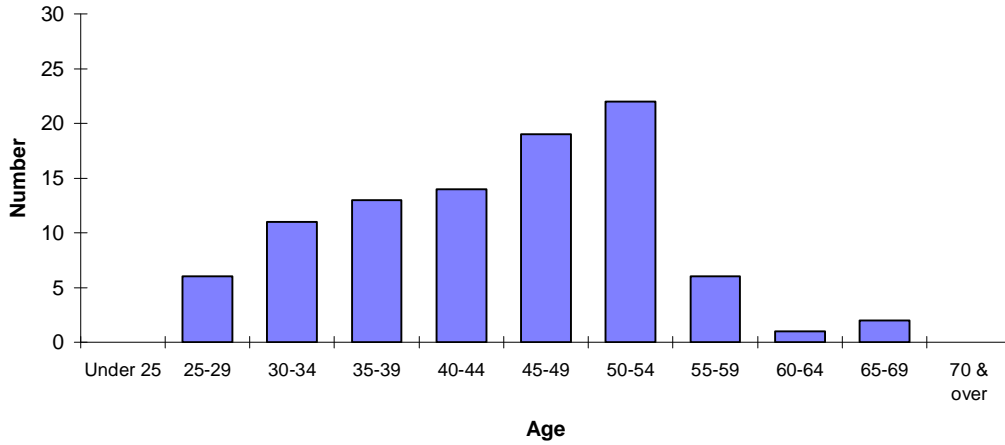
**Age Distribution of Inactive Vested Members  
Regular Membership**



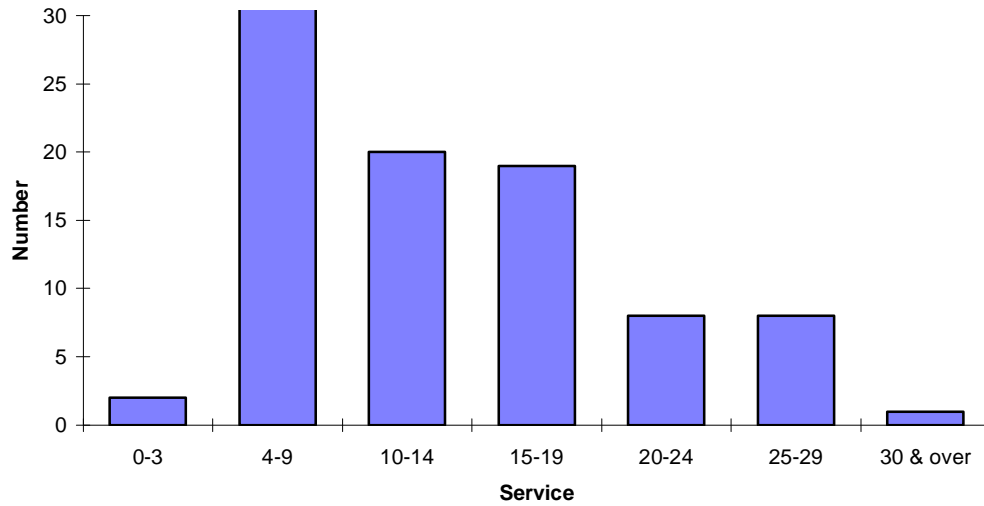
**Service Distribution of Inactive Vested Members  
Regular Membership**



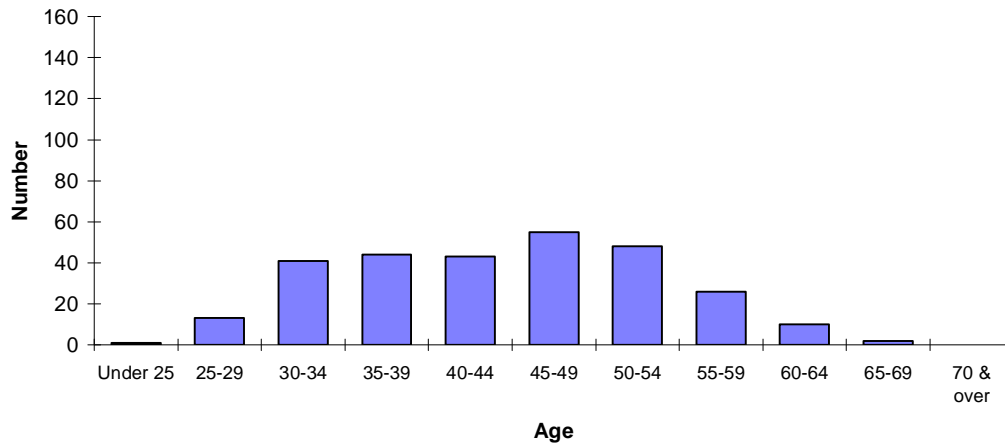
**Age Distribution of Inactive Vested Members  
Special Service Group 1**



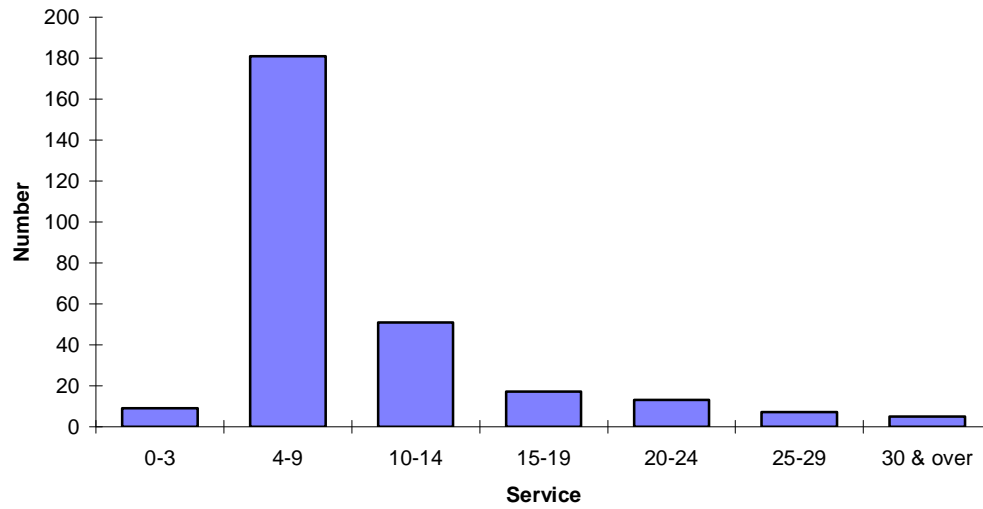
**Service Distribution of Inactive Vested Members  
Special Service Group 1**



### Age Distribution of Inactive Vested Members Special Service Group 2



### Service Distribution of Inactive Vested Members Special Service Group 2



## ANALYSIS OF RETIREES AND BENEFICIARIES

### Males and Females - Regular Membership

Age	Number of Members and Beneficiaries										Average Annual Benefit
	Chapt 97	Option 1	Option 2	Option 3	Option 4	Contingent Beneficiary	Option 5	Option 6	Period Certain	Total	
Under 40	0	7	6	0	2	22	3	2	13	55	\$ 6,314
40 to 44	0	19	5	1	7	9	4	8	8	61	6,820
45 to 49	0	67	13	11	21	33	9	14	6	174	7,164
50 to 54	0	128	43	43	53	86	12	47	11	423	9,776
55 to 59	0	1,438	1,258	928	403	169	690	1,308	20	6,214	17,153
60 to 64	0	3,009	2,413	1,680	1,255	238	1,389	1,763	32	11,779	16,511
65 to 69	0	4,196	3,001	2,129	2,144	397	1,908	1,174	48	14,997	13,594
70 to 74	0	4,623	3,148	1,758	2,708	532	1,900	249	63	14,981	10,105
75 to 79	0	4,187	3,180	1,244	2,006	649	1,469	28	24	12,787	7,202
80 to 84	0	3,585	2,311	948	1,175	635	1,137	2	13	9,806	5,449
85 to 89	1	2,788	946	499	500	354	1,027	0	2	6,117	4,700
90 to 94	6	1,415	230	245	111	109	487	0	0	2,603	3,756
95 to 99	3	479	47	78	13	32	137	0	0	789	3,398
100 & up	1	85	6	18	1	7	11	0	0	129	3,508
Counts	11	26,026	16,607	9,582	10,399	3,272	10,183	4,595	240	80,915	\$10,501
% of Total	0.0%	32.2%	20.5%	11.8%	12.9%	4.0%	12.6%	5.7%	0.3%	100.0%	



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## ANALYSIS OF RETIREES AND BENEFICIARIES

### Males and Females - Special Service Group 1

Age	Number of Members and Beneficiaries										Average Annual Benefit
	Chapt 97	Option 1	Option 2	Option 3	Option 4	Contingent Beneficiary	Option 5	Option 6	Period Certain	Total	
Under 40	0	1	0	0	0	2	0	0	0	3	\$16,370
40 to 44	0	0	0	0	0	1	0	0	0	1	155,302
45 to 49	0	0	0	0	0	1	0	0	0	1	20,672
50 to 54	0	3	1	2	2	0	1	5	0	14	30,733
55 to 59	0	23	11	4	19	3	7	34	0	101	28,923
60 to 64	0	26	11	4	26	3	7	15	0	92	25,161
65 to 69	0	13	6	5	28	6	6	11	0	75	21,594
70 to 74	0	9	5	3	14	2	3	2	0	38	17,617
75 to 79	0	4	2	0	6	4	0	0	1	17	13,205
80 to 84	0	0	0	0	0	3	0	0	0	3	7,926
85 to 89	0	0	0	0	0	0	0	0	0	0	NA
90 to 94	0	0	0	0	0	0	0	0	0	0	NA
95 to 99	0	0	0	0	0	0	0	0	0	0	NA
100 & up	0	0	0	0	0	0	0	0	0	0	NA
Counts	0	79	36	18	95	25	24	67	1	345	\$24,052
% of Total	0.0%	22.9%	10.4%	5.2%	27.5%	7.2%	7.0%	19.4%	0.3%	100.0%	



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## ANALYSIS OF RETIREES AND BENEFICIARIES

### Males and Females - Special Service Group 2

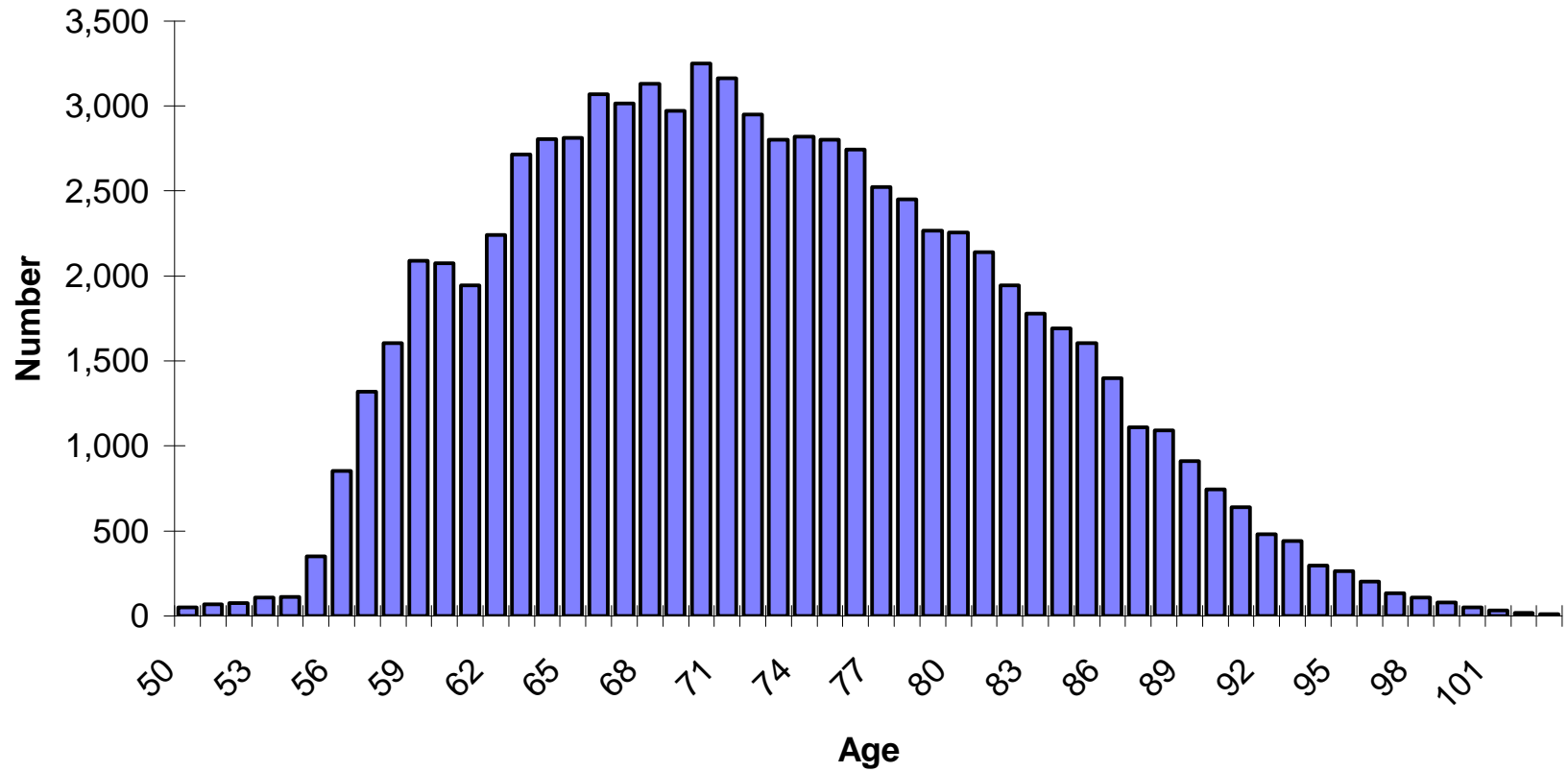
Age	Number of Members and Beneficiaries										Average Annual Benefit
	Chapt 97	Option 1	Option 2	Option 3	Option 4	Contingent Beneficiary	Option 5	Option 6	Period Certain	Total	
Under 40	0	0	0	0	2	0	1	1	0	4	\$19,833
40 to 44	0	3	0	1	0	1	0	1	0	6	13,364
45 to 49	0	3	1	4	4	1	0	4	0	17	16,613
50 to 54	0	5	1	1	3	2	0	3	0	15	19,477
55 to 59	0	41	19	16	32	4	8	51	0	171	23,049
60 to 64	0	50	30	14	38	7	13	29	0	181	19,879
65 to 69	0	49	29	13	66	9	18	35	2	221	15,913
70 to 74	0	38	7	5	46	7	10	2	1	116	13,044
75 to 79	0	10	5	1	15	4	1	0	0	36	13,084
80 to 84	0	2	0	0	1	4	2	0	0	9	7,033
85 to 89	0	0	0	0	0	1	0	0	0	1	7,582
90 to 94	0	0	0	0	0	0	0	0	0	0	NA
95 to 99	0	0	0	0	0	0	0	0	0	0	NA
100 & up	0	0	0	0	0	0	0	0	0	0	NA
Counts	0	201	92	55	207	40	53	126	3	777	\$17,819
% of Total	0.0%	25.9%	11.8%	7.1%	26.6%	5.1%	6.8%	16.2%	0.4%	100.0%	



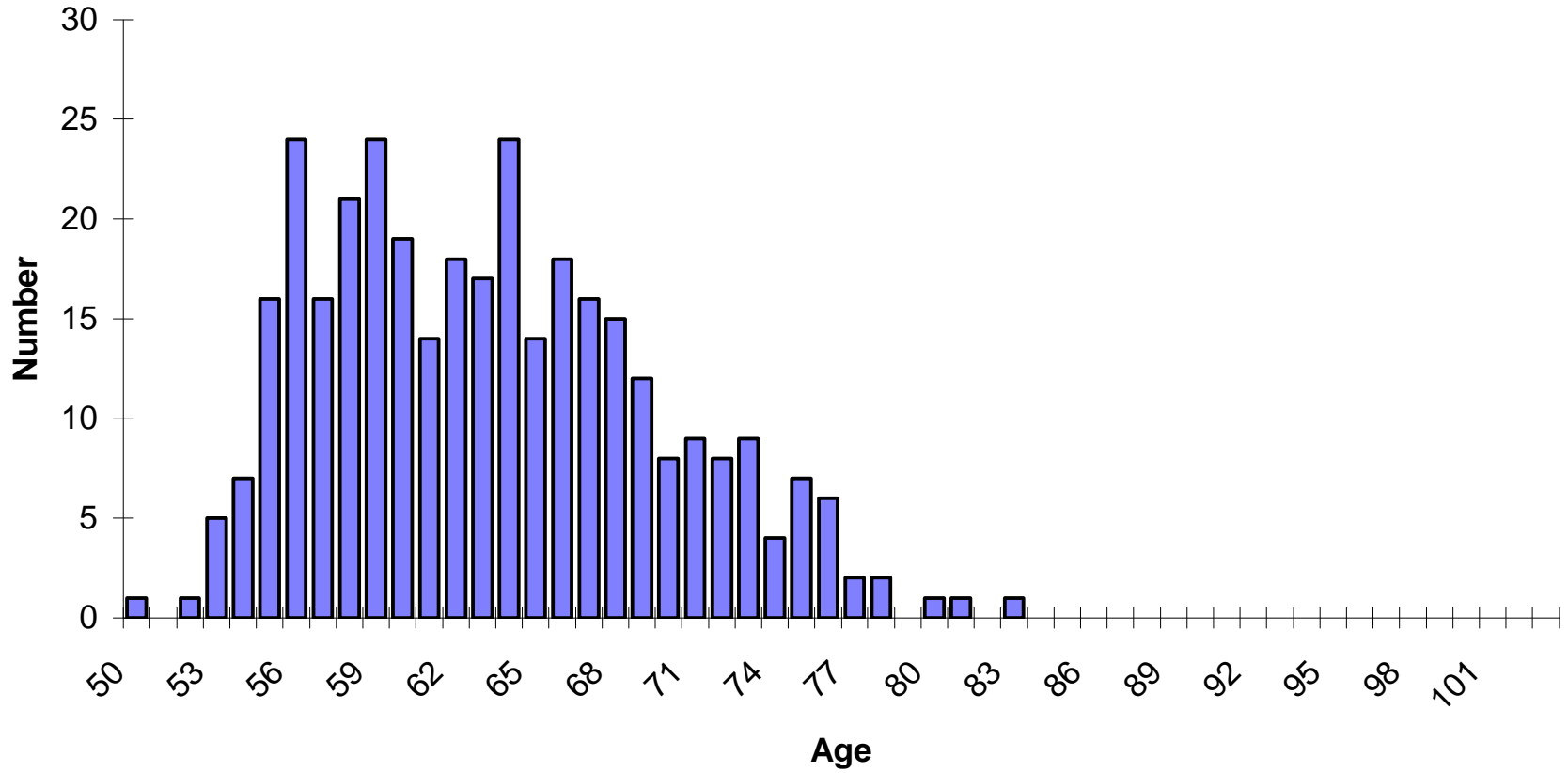
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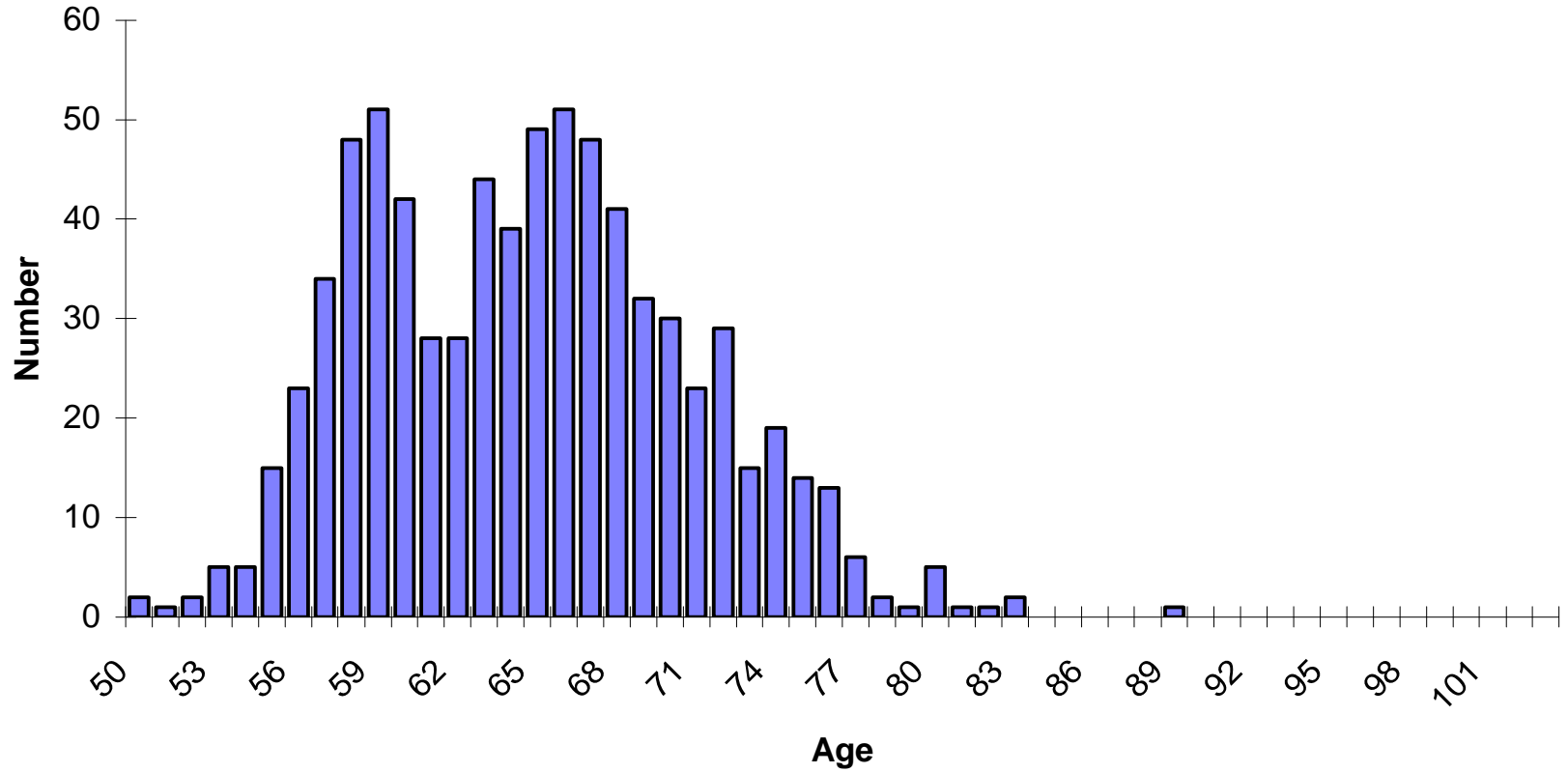
## Age Distribution of Retirees & Beneficiaries Regular Membership



## Age Distribution of Retirees & Beneficiaries Special Service Group 1



## Age Distribution of Retirees & Beneficiaries Special Service Group 2



## SUMMARY OF DATA FILE RECONCILIATION

The following table reconciles the data we received from IPERS to the final membership counts used in the valuation.

Records on the in-pay data file	82,204
Removed deaths prior to 7/1/06	(167)
Records used in the valuation	82,037
Records on the not-in-pay data file	248,789
Records removed because the member has received all benefits	(15,962)
Records used in the valuation	232,827

These records are allocated as follows:

Active members	163,052
Retired, re-employed members	8,044
Vested inactive members	25,918
Nonvested inactive members	<u>35,813</u>
Total	232,827



**APPENDIX B**

**SUMMARY OF PLAN PROVISIONS**



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## APPENDIX B

### SUMMARY OF PLAN PROVISIONS

Chapter 97B of the Iowa code sets out the IPERS provisions, which are briefly summarized as follows:

**Participation:** In general, the System covers people in non-federal public employment within the State of Iowa. Exceptions to this are set out in the law. A notable exception are those covered by another public system in Iowa (such as judges, state patrol, and policemen and firemen in cities having civil service), employees of the Regents' institutions, and employees of the community colleges who elect alternative coverage under TIAA. Membership is mandatory if a person is in covered employment.

**Average Salary:** It is the average of the member's highest three years of covered wages.

**Service Credit:** A member will receive membership credit for service rendered after July 4, 1953 (special rules apply to service before this date). Service is counted to the complete quarter of a calendar year. A member will not receive credit for more than four quarters of service in a calendar year regardless of the number of employers reporting covered wages for that member. A calendar year is the 12-month period beginning January 1 and ending December 31.

Members may purchase service under specified conditions. To make such a purchase, the member must pay the actuarial cost of such service.

#### **REGULAR MEMBERS:**

Age and Service Requirements for Benefits:

Normal Retirement	Earliest of the first day of the month of the member's 65th birthday, age 62 with 20 years of service or Rule of 88 (age plus service equals/exceeds 88), with a minimum of age 55.
Early Retirement	First day of any month starting with the month of the member's 55th birthday but preceding the normal retirement date.
Inactive Vested Benefit	Four years of service. Prior to July 1, 2005 inactive members could become eligible for a vested benefit merely by reaching age 55.
Pre-retirement Death Benefit	Upon death of a member before benefits have started.
Disability Benefit	Upon meeting requirements to be vested, if the active or inactive member begins receiving federal Social Security disability or Railroad Retirement disability benefits.



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## Retirement Benefits:

### Normal Retirement

An annual annuity equal to 2% of Average Salary (AS) for each year of service up to 30 years plus 1% of AS for each of the next 5 years of service. Maximum years of service recognized for benefit accrual purposes is 35 with a resulting maximum benefit of 65% of AS.

### Early Retirement

An annuity, determined in the same manner as for normal retirement. However, a reduction of .25% per month is applied for each month the benefit commences prior to normal retirement age (based on service at early retirement).

### Pre-retirement Death Benefits

Beneficiaries of members may receive a lump sum determined by a formula that includes how much the member contributed to IPERS, years of service, highest year's salary, and other factors. Beneficiaries may have the option of receiving a monthly benefit based on the present value of the member's accrued benefit at death.

### Disability Benefits

An annuity, payable immediately, equal to the Normal Retirement Benefit without an early retirement adjustment.

## Termination Benefits:

### Less than four years of Service (Nonvested)

A refund of all of the member's accumulated contributions.

### Four or more years of Service (Vested)

At the member's election either:

- (1) a refund of all of the member's accumulated contributions plus a portion (years of service divided by 30) of the employer's contributions with interest, or
- (2) a deferred benefit determined in the same manner as for normal retirement. Payments can begin at normal or early retirement.

## Form of Annuity:

The base form, or normal form, is a life annuity with a guaranteed return of employee contributions (Option 2).

## Optional Forms of Payment:

*Option 1:* The member specifies a dollar amount, in \$1,000 increments, that the member wishes to have paid to a designated beneficiary following the death of the member. The death benefit will be in the form of a single payment and cannot exceed the amount of a member's own accumulated contributions to IPERS, and it cannot lower the member's benefit as calculated under Option 2 by more than 50%.





*Option 3:* After the member's death, all benefits cease.

*Option 4:* The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. The member specifies what benefit the contingent annuitant will receive after the death of the member. The monthly benefit can be the same as the member's monthly benefit or three-fourths, one-half, or one-fourth of the amount. These choices may be restricted if the contingent annuitant is not the member's spouse and is more than ten years younger than the member.

*Option 5:* If the member dies before ten full years (120 months of payments) have ended, the member's beneficiary will receive a monthly benefit for the remainder of the ten years. Members who have attained age 90 as of the first month of entitlement are not allowed to select this option.

*Option 6:* (effective July 1, 2001) The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. In addition, the monthly amounts are also reduced to pay for a pop-up feature. The pop-up feature provides that if the contingent annuitant dies before the member, the member's benefit will pop back up to what it would have been under IPERS Option 2, and death benefits may be payable to the member's designated beneficiary if certain conditions are met.

**Actuarial Equivalent Lump Sum Payment:** If a vested member is entitled to receive a benefit and it is less than \$50 per month under Option 2, the member shall receive a retirement benefit in an actuarial equivalent lump sum payment. The lump sum will include the member's and employer's accumulated contributions.

**Post-retirement Benefit Increases:** Annual dividends are paid to those retired prior to July 1, 1990. Effective with the November 2000 dividend payment, the dividend is adjusted by the least of the following percentages: (1) the change in the CPI, (2) percentage certified to by the actuary as affordable by the System, and (3) 3%.

**Favorable Experience Dividend (FED):** For members who retired after June 30, 1990, a favorable experience dividend (FED) reserve account has been established under Iowa Code §97B.49F(2). The main purpose of this account is to help offset the negative effects of postretirement inflation. All members and beneficiaries who receive a monthly allowance qualify for favorable

experience dividend payments. Each November, IPERS determines if a FED payment should be paid the following January subject to the following conditions:

- The member must be retired one full calendar year.
- The FED rate cannot exceed 3%.
- The FED payment will be issued in a lump sum in January.
- The FED payment is not guaranteed.

The formula is as follows:

$$\text{(December's Monthly benefit)} \times (12 \text{ months}) \times (\text{Rate}) \times \text{(Full calendar years retired)} = \text{FED}$$

Source of Funds:

Regular Membership:	Member Contributions	3.70% of covered pay.
	Employer Contributions	5.75% of covered pay.

Beginning July 1, 2007, the contribution rate will increase 0.50% per year for four years. The members will pay 40% of the increase and the employer will pay 60% of the increase.

**SPECIAL SERVICE GROUPS 1 AND 2:**

Age and Service Requirements for Benefits:

Normal Retirement	Generally age 55. However, a member of the Sheriffs and Deputy Sheriffs (Group 1) may retire at age 50 with 22 years of service (phased in from July 1, 2004 through July 1, 2008). The age at which sheriffs and deputy sheriffs with 22 or more years of eligible service first qualify for a retirement benefit is reduced over a five-year period as follows:  54 effective July 1, 2004 [FY 2005] 53 effective July 1, 2005 [FY 2006] 52 effective July 1, 2006 [FY 2007] 51 effective July 1, 2007 [FY 2008] 50 effective July 1, 2008 [FY 2009]
Inactive Vested Benefit	Four years of service. Prior to July 1, 2005 inactive members could become eligible for vested benefits merely by reaching age 55.
Pre-retirement Death Benefit	Upon death of a member before benefits have started.
Disability Benefit	Upon meeting requirements to be vested. These benefits must be applied for through IPERS within one (1) year after termination of employment after July 1, 2000. Benefits may be paid for in service disability or ordinary disability.



Retirement Benefits:

Normal Retirement 60% of average salary after completion of 22 years of service, plus an additional 1.5% of AS for years of service greater than 22 but not more than 30. Maximum formula is 72%.

Pre-retirement Death Benefits Beneficiaries of members may receive a lump sum determined by a formula that includes how much the member contributed to IPERS, years of service, highest year's salary, and other factors. Beneficiaries may have the option of receiving a monthly benefit based on the present value of the member's accrued benefit at death.

Disability Benefits An annuity, payable immediately, equal to the Normal Retirement Benefit, without an early retirement adjustment.

The benefit is the greater of the Normal Retirement Benefit and either 50% (for ordinary disability) or 60% (for in-service disability) of Average Salary.

Termination Benefits:

Less than four years of Service (Non-vested) A refund of all of the member's accumulated contributions.

Four or more years of Service (Vested) At the member's election either:  
(1) a refund of all of the member's accumulated contributions plus a portion (years of service divided by 22) of the employer's contributions with interest, or  
(2) a deferred benefit determined in the same manner as for normal retirement. Payments begin at normal retirement.

Form of Annuity: The base form, or normal form, is a life annuity with a guaranteed return of employee contributions (Option 2).

Optional Forms of payment include: *Option 1:* The member specifies a dollar amount, in \$1,000 increments, that the member wishes to have paid to a designated beneficiary following the death of the member. The death benefit will be in the form of a single payment and cannot exceed the amount of a member's own accumulated contributions to IPERS, and it cannot lower the member's benefit as calculated under Option 2 by more than 50%.

*Option 3:* After the member's death, all benefits cease.



*Option 4:* The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. The member specifies what benefit the contingent annuitant will receive after the death of the member. The monthly benefit can be the same as the member's monthly benefit or three-fourths, one-half, or one-fourth of the amount. These choices may be restricted if the contingent annuitant is not the member's spouse and is more than ten years younger than the member.

*Option 5:* If the member dies before ten full years (120 months of payments) have ended, the member's beneficiary will receive a monthly benefit for the remainder of the ten years. Members who have attained age 90 as of the first month of entitlement are not allowed to select this option.

*Option 6 (effective July 1, 2001):* The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. In addition, the monthly amounts are also reduced to pay for a pop-up feature. The pop-up feature provides that if the contingent annuitant dies before the member, the member's benefit will pop back up to what it would have been under IPERS Option 2, and death benefits may be payable to the member's designated beneficiary if certain conditions are met.

*Level Income Payment Option:* A Level Income payment alternative is authorized for special service members. This alternative applies to all IPERS retirement options listed above except Option 6. The Level Income payment alternative permits a special service member to receive a relatively level income both before and after age 62 when benefits from IPERS and Social Security are combined. Higher IPERS benefits are paid prior to age 62. When the member reaches age 62, the member's IPERS benefit is permanently reduced. This amount is determined when the member retires and is not recomputed based on the actual Social Security benefit.

**Actuarial Equivalent Lump Sum Payment:** If a vested member is entitled to receive a benefit and it is less than \$50 per month under Option 2, the member shall receive a retirement benefit in an actuarial equivalent lump sum payment. The lump sum will include the member's and employer's accumulated contributions.

Post-retirement Benefit Increases: Annual dividends are paid to those retired prior to July 1, 1990. Effective with the November 2000 dividend payment, the dividend is adjusted by the least of the following percentages: (1) the change in the CPI, (2) percentage certified to by the actuary as affordable by the System, and (3) 3%.

Favorable Experience Dividend (FED): For members who retired after June 30, 1990, a favorable experience dividend (FED) reserve account has been established under Iowa Code §97B.49F(2). The main purpose of this account is to help offset the negative effects of postretirement inflation. All members and beneficiaries who receive a monthly allowance qualify for favorable experience dividend payments. Each November, IPERS determines if a FED payment should be paid the following January subject to the following conditions:

- The member must be retired one full calendar year.
- The FED rate cannot exceed 3%.
- The FED payment will be issued in a lump sum in January.
- The FED payment is not guaranteed.

The formula is as follows:

$$(\text{December's Monthly benefit}) \times (12 \text{ months}) \times (\text{Rate}) \times (\text{Full calendar years retired}) = \text{FED}$$

Source of Funds:

Special Service Group 1:	Actuarially determined contribution rate.	Members contribute 50% and employers contribute 50%.
Special Service Group 2:	Actuarially determined contribution rate.	Members contribute 40% and employers contribute 60%.



## **APPENDIX C**

### **ACTUARIAL ASSUMPTIONS AND METHODS**



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**APPENDIX C**  
**ACTUARIAL ASSUMPTIONS AND METHODS**  
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## APPENDIX C

### ACTUARIAL ASSUMPTIONS AND METHODS

Sound financing of any retirement system requires that benefits accruing to its members shall be paid for during their active working lifetime so that when a member (or his beneficiary) becomes entitled to a benefit, the monies necessary to provide such benefit shall be on hand. In this way, the cost of benefits for present active members will not become a liability to future taxpayers.

The principal purpose of an actuarial valuation is to calculate, on the basis of certain assumptions, the present value of benefits that are payable in the future from the system to present members (and their beneficiaries) and the present value of future contributions to be made by the members and their employers. Having calculated such present values, the level of annual contribution to the system required to fund (or pay for) the benefits, in accordance with the above stated principle of sound financing, may be determined.

#### VALUATION ASSUMPTIONS

Retirement System contribution requirements and actuarial present values are calculated by applying experience assumptions to the benefit provisions and census (member) information of the Retirement System, using the actuarial cost method.

The principal areas of risk which require experience assumptions about future activities of the Retirement System are:

- long-term rates of investment return to be generated by the assets of the system
- patterns of pay increases to members
- rates of mortality among members, retirants and beneficiaries
- rates of withdrawal of active members
- rates of disability among active members
- the age patterns of actual retirements

In making a valuation, the monetary effect of each assumption is calculated for as long as a present member survives -- a period of time which can be as long as a century.

Actual experience of the Retirement System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experiences. The result is a continual series of adjustments to the computed contribution rate, or alternatively to the amortization period for the unfunded actuarial liability.

From time to time, one or more of the assumptions are modified to reflect experience trends (but not random or temporary year to year fluctuations). A complete review of the actuarial assumptions was completed in 2006, based on experience from 2001-2005. The Investment Board has adopted and approved the use of the following assumptions and methods.

**ECONOMIC ASSUMPTIONS:**

**Rate of Inflation (effective June 30, 2006)**

3.25% per annum

**Rate of Crediting Interest on Contribution Balances (effective June 30, 2006)**

4.00% per annum, compounded annually

**Rate of Investment Return (effective June 30, 1996)**

7.50% per annum, compounded annually, net of expenses.

**Wage Growth Assumption (effective June 30, 1999)\***

4.00% per annum based on 3.25% inflation assumption and 0.75% real wage inflation.

\*Total of 4.0% did not change but the components changed June 30, 2006

**Payroll Increase Assumption (effective June 30, 1999)**

4.00% per year

**DEMOGRAPHIC ASSUMPTIONS:**

**Rates of Mortality (effective June 30, 2002)**

	<u>Regular Membership</u>	<u>Special Service Groups</u>
Males:		
Retirees:	RP-2000 Healthy Annuitant Table, Set Forward One Year	RP-2000 Healthy Annuitant Table Set Forward Three Years
Actives:	RP-2000 Employee Table, Set Forward One Year	RP-2000 Employee Table Set Forward Three Years
Females:		
Retirees:	RP-2000 Healthy Annuitant Table, Set Back Two Years	RP-2000 Healthy Annuitant Table No Age Adjustment
Actives:	RP-2000 Employee Table, Set Back Two Years	RP-2000 Employee Table No Age Adjustment
	The RP-2000 Tables are used with generational mortality	
Beneficiaries:	Same as members	Same as members
Disabled Members:	Annual rates are the greater of 3% or 2.5% plus the corresponding non-disabled rate (based on GAM 94 for males, 95% of GAM 94 for females)	Same as healthy members set forward 6 years

For Special Service Groups active members, 5% of deaths are assumed to be service related.



**Retirement Rates (effective June 30, 2002)**

Upon meeting the requirements for early retirement, the following rates apply to regular members:

<u>Age</u>	<u>Assumed Retirement Rate</u>
55-59	5%
60	10
61	15
62	25
63-64	20

Upon reaching the requirements for normal retirement, the following rates apply:

<u>Age</u>	<u>Assumed Retirement Rates</u>		
	<u>1st Year Eligible</u>	<u>After 1st Year</u>	<u>Special Service Groups</u>
55	20%	10%	15%
56	20%	10%	10%
57-59	20%	20%	10%
60	25%	25%	10%
61	35%	30%	20%
62	50%	40%	35%
63	35%	30%	20%
64	35%	35%	35%
65	30%	45%	100%
66	20%	20%	100%
67-68	15%	15%	100%
69	15%	35%	100%
70+	100%	100%	100%

Special Service Group 1 ages 50 to 55 with 22 years of service: 30%

Terminated vested members are assumed to retire at age 62 (55 for Special Service Groups).

For regular membership, retired re-employed members are assumed to retire at a rate of 25% per year until age 80 when all are assumed to retire.

**Rates of Disablement (effective June 30, 1999 for Regular Membership),  
(effective June 30, 2006 for Special Service Groups)**

<u>Age</u>	<u>Annual Rate Per 1,000 Members</u>		
	<u>Males</u>	<u>Females</u>	<u>Special Service Groups</u>
27	0.2	0.2	1.1
32	0.2	0.2	1.2
37	0.4	0.3	1.8
42	0.7	0.5	3.5
47	1.4	0.9	6.5
52	3.3	2.2	14.6
57	6.3	3.9	26.0
62	9.0	6.2	48.7



**Rates of Termination of Employment (effective June 30, 2002)**

***Regular Membership***

		<b>Annual Rate of Withdrawals Per 1,000 Members</b>					
<b><u>Males:</u></b>							
	<b><u>Age</u></b>	<b><u>Years 0-1</u></b>	<b><u>Year 2</u></b>	<b><u>Year 3</u></b>	<b><u>Years 4-6</u></b>	<b><u>Years 7-8</u></b>	<b><u>Years 9+</u></b>
	22	330.0	250.0	165.0	165.0	110.0	66.0
	27	231.0	145.0	121.0	99.0	88.0	66.0
	32	198.0	145.0	110.0	74.8	55.0	38.5
	37	195.8	140.0	110.0	74.8	49.5	33.0
	42	195.8	140.0	110.0	74.8	49.5	25.3
	47	195.8	130.0	99.0	74.8	49.5	19.8
	52	176.0	110.0	77.0	74.8	49.5	19.8
	55+	165.0	110.0	55.0	74.8	49.5	19.8
<b><u>Females:</u></b>							
	<b><u>Age</u></b>	<b><u>Years 0-1</u></b>	<b><u>Year 2</u></b>	<b><u>Year 3</u></b>	<b><u>Years 4-6</u></b>	<b><u>Years 7-8</u></b>	<b><u>Years 9+</u></b>
	22	330.0	250.0	220.0	220.0	165.0	55.0
	27	275.0	170.0	140.0	110.0	99.0	55.0
	32	247.5	170.0	140.0	104.5	71.5	49.5
	37	198.0	150.0	110.0	104.5	66.0	36.3
	42	198.0	150.0	110.0	88.0	60.5	30.8
	47	198.0	130.0	110.0	82.5	49.5	25.3
	52	198.0	130.0	110.0	82.5	49.5	25.3
	55+	198.0	130.0	110.0	82.5	49.5	25.3

***Special Service Groups***

**Annual Rate of Withdrawals  
Per 1,000 Members**

<b>Age</b>	
22	90
27	70
32	35
37	35
42	35
47	35
52	30

**Probability of Electing a Vested Benefit (effective June 30, 2002)**

<b><u>Years of Service</u></b>	<b><u>Regular Membership</u></b>		<b><u>Special Service Groups</u></b>
	<b><u>Males</u></b>	<b><u>Females</u></b>	
5	61%	70%	53%
10	66%	73%	65%
15	71%	80%	85%
20	76%	85%	95%
25	80%	90%	100%
30	80%	90%	100%

**Rates of Salary Increase\* (effective June 30, 2006)**

<b><u>Years of Service</u></b>	<b><u>Annual Increase</u></b>	<b><u>Years of Service</u></b>	<b><u>Annual Increase</u></b>	<b><u>Years of Service</u></b>	<b><u>Annual Increase</u></b>
		11	5.3%	22	4.5%
Under 2	12.0%	12	5.2%	23	4.4%
2	9.5%	13	5.1%	24	4.4%
3	7.7%	14	5.0%	25	4.4%
4	7.1%	15	4.9%	26	4.3%
5	6.6%	16	4.8%	27	4.3%
6	6.1%	17	4.7%	28	4.2%
7	5.9%	18	4.6%	29	4.1%
8	5.7%	19	4.6%	30	4.0%
9	5.5%	20	4.5%	Over 30	4.0%
10	5.4%	21	4.5%		

\*Includes 4.0% wage growth.



## ACTUARIAL COST METHOD

The actuarial cost method is a procedure for allocating the actuarial present value of pension plan benefits and expenses to time periods. The method used for the valuation is known as the entry age normal actuarial cost method. Under this method, a total contribution rate is determined which consists of two parts: (i) the normal cost rate and (ii) the unfunded actuarial liability (UAL) rate. The entry age normal cost method has the following characteristics:

- (i) The annual normal costs for each individual active member are sufficient to accumulate the value of the member's pension at time of retirement.
- (ii) Each annual normal cost is a constant percentage of the member's year by year projected compensation rates.

The entry age normal actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's compensation rates between the entry age of the member and the assumed exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting the actuarial value of assets from the actuarial accrued liability determines the unfunded actuarial liability (UAL). For regular members, the difference between the statutory contribution rate and the normal cost rate is used to finance the UAL and the number of years necessary to finance the unfunded actuarial accrued liability as a level percent of member payroll is determined. For Special Service members, the contribution rate is the sum of the normal cost rate and the rate required to amortize the UAL or surplus over 30 years.

## ACTUARIAL VALUE OF ASSETS SMOOTHING METHOD

The market value of assets, representing a "cash-out" value of System assets, may not necessarily be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens volatility in the market value while still indirectly recognizing market value. The specific technique follows:

- Step 1:** Determine the expected value of plan assets at the current valuation date using the actuarial assumption for investment return and the actual receipts and disbursements of the fund for the previous 12 months.
- Step 2:** Subtract the expected value determined in Step 1 from the total market value of the Fund at the current valuation date.
- Step 3:** Multiply the difference between market and expected values determined in Step 2 by 25%.
- Step 4:** Add the expected value of Step 1 and the product of Step 3 to determine the actuarial value of assets.

## TECHNICAL VALUATION PROCEDURES

### Data Procedures

#### *In-pay members:*

If a birth date is not available, the member is assumed to have retired at 65. If a retirement date is also not available, the member is assumed to be 80.

If a beneficiary birth date is needed but not supplied, husband's are assumed to be 3 years older than wives.

#### *Not in-pay members:*

If a birth date is not available, the member is assumed to be the average age of the members with the same status

If gender is not provided, regular members are assumed to be female and Special Service members are assumed to be male.

Salaries for first year members are annualized based on the number of quarters with wages.

### Other Valuation Procedures

No actuarial accrued liability in excess of the unclaimed member contribution balance is held for nonvested, inactive members. Inactive vested members who have died are treated in the same manner.

The wages used in the projection of benefits and liabilities are considered earnings for the year ending June 30, 2006, increased by the salary scale to develop expected earnings for the current valuation year.

The calculations for the actuarial required contribution are determined as of mid-year. This is a reasonable estimate since contributions are made on a monthly basis throughout the year.

Benefits above the projected IRC Section 415 limit for active participants are assumed to be immaterial for the valuation.

The compensation limitation under IRC Section 401(a)(17) is considered in this valuation. On a projected basis, the impact of this limitation is insignificant.



## DEFINITION OF TERMS

<b>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<b>Actuarial Assumptions</b>	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”
<b>Actuarial Equivalent</b>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<b>Actuarial Liability</b>	The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as “accrued liability” or “actuarial accrued liability.”
<b>Actuarial Present Value</b>	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
<b>Amortization</b>	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
<b>Experience Gain (Loss)</b>	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
<b>Normal Cost</b>	The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.

## **Unfunded Actuarial Liability**

The difference between actuarial liability and the valuation assets. Sometimes referred to as “unfunded accrued liability” or “unfunded liability”.

Most retirement systems have unfunded actuarial liability. They arise anytime new benefits are added and anytime an actuarial loss is realized.

The existence of unfunded actuarial liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial liability and make payments to finance it. Also of importance are trends in the amount or duration of payment.



**APPENDIX D**

**IPERS Funding Policy**



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## APPENDIX D

### IPERS FUNDING POLICY

*This policy was developed by joint action of IPERS' management team and the System's actuarial consultant, and adopted by IPERS management in 1996.*

#### **Purpose**

This funding policy is intended to provide a measure of the funded status of the Iowa Public Employees' Retirement System (System) on a long-term basis and to provide a set of safeguards as guidelines to help ensure the financial solvency of the System.

Recognizing that the System and its environment are not static, periodic review of this policy shall be conducted to ensure its continuing validity.

#### **Primary Goal**

The primary funding goal of the System is to be funded on an actuarially sound basis over the long term by maintaining actuarial contribution rates, given the maximum amortization period, which are equal to or less than the statutory contribution rates.

#### **Definition of "Fully Funded"**

The term "fully funded" is used to describe the situation in which the assets are equal to or greater than the liabilities. The focus of IPERS is to define assets and liabilities on a long term basis; therefore, the IPERS funding policy defines the term "fully funded," as well as the terms "actuarially sound" and "financial solvency," to mean that the current actuarial value of assets along with the future expected contributions will be sufficient to provide the benefits promised to members for both accrued and expected future service (as set forth in Iowa code Chapter 97B) within the parameters established in this funding policy. The minimum standards for the System to be considered fully funded is that the normal cost rate plus the amortization payment on the unfunded actuarial liability may not exceed the statutory combined contribution rate. In determining the amortization payment, the amortization period shall never exceed 30 years.

#### **Safeguards for System to Remain Fully Funded**

The following safeguards are established to ensure that IPERS continues to be funded on an actuarially sound basis over the long term, so that adequate funds will accumulate to provide all benefits promised to members.

1. The **normal cost rate** (the level percentage of salary required to pay the cost of retirement benefits that are allocated to the current year of service), based on the actuarial cost method used to determine the annual funding requirements for the System, shall not exceed the statutory combined employee/employer contribution rate minus 0.5%.
2. Given the statutory combined employer/employee contribution rate, the amortization period for the unfunded liability as reported in the annual valuation shall not exceed 24 years.



3. Any change in the benefit structure of IPERS that results in an increase in the normal cost rate and/or the unfunded actuarial liability, and/or any distribution to eligible members, should not be considered unless (a) the amortization period reported in the last actuarial valuation report is 20 years or less, and either (b) the amortization period has been less than the maximum (24 years) for at least three consecutive years or (c) the amortization period has been less than ten years for at least two consecutive years, subject to the additional constraint that any distribution does not prevent the amortization period of the prior period from declining.
4. Consideration should be given to increasing the statutory contribution rate if either of the following occur at least three years in any five consecutive year period:
  - The normal cost rate exceeds the standard set in item (1) above
  - The amortization period exceeds the standard set in item (2) above by more than 5 years.

