

**IOWA PUBLIC EMPLOYEES'  
RETIREMENT SYSTEM**

**Actuarial Valuation Report  
as of June 30, 2003**

A MILLIMAN GLOBAL FIRM



**Milliman USA**

*Consultants and Actuaries*

# ACTUARIAL VALUATION OF THE IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

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November 19, 2003

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

**Re: Iowa Public Employees' Retirement System**

Dear Board Members:

We have performed an actuarial valuation of the Iowa Public Employees' Retirement System (System) as of June 30, 2003. The major findings of the valuation are contained in this report. The benefit provisions and assumptions remain unchanged from those used in last year's valuation.

In preparing our 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. 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 principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

We hereby 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 internally consistent, individually reasonable (taking into account the experience of the Plan and reasonable expectations of future experience); and which, in combination, offer our best estimate of anticipated experience under the Plan. 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 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.

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 and 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, 2003 actuarial valuation, no increase in the dividend for the pre-July 1990 retirees may be paid without an increase in the statutory contribution rate of 9.45%.

Actuarial computations presented in this report are for purposes of determining the actuarial contribution rates for funding the System. Determinations for purposes other than this may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. Any distribution of this report must be in its entirety including this cover letter, unless prior written consent from Milliman USA is obtained.

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 USA, 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, 2003 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 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 evaluate the funded status of the System and disclose various asset and liability measures as of June 30, 2003, and
- to analyze and report on trends in System contributions, assets, and liabilities over the past several years.

The benefit provisions, actuarial assumptions and actuarial methods reflected in this report are unchanged from last year's report.

The actuarial valuation results provide a "snapshot" view of the System's financial condition on June 30, 2003. The results reflect net unfavorable experience for the past plan year as demonstrated by an unfunded actuarial liability (UAL) that was higher than was expected, based on actuarial assumptions. The UAL on June 30, 2003 for all membership groups covered by IPERS is \$1.867 billion as compared to an expected UAL of \$1.340 billion. The unfavorable experience was the net impact of an experience loss of \$402 million on the actuarial value of assets and \$125 million on System liabilities.

The System's normal cost rate (cost allocated to the current year of service worked by active members) this year is 9.06%, which represents a small increase from the normal cost rate in the 2002 valuation of 9.03%. With the normal cost rate at its current level, only a small part of the total contribution rate is available to fund the UAL. As was the case last year, the amortization period is infinite (the UAL cannot be amortized with the current contribution rate if all assumptions are met in the future). This is analogous to a mortgage or loan where the payment is not large enough to pay the interest on the outstanding debt. Consequently, the amount of the debt increases each year. In such a situation, even if all actuarial assumptions are met in future years, the current statutory contribution rate of 9.45% will not be sufficient to provide all of the future benefits promised to current members.

In 1998, legislation was passed to create the Favorable Experience Dividend (FED) reserve. The law provides that a portion of the favorable actuarial experience, if any, in subsequent years may be transferred to the FED reserve. Legislation passed in 2000 capped the FED reserve at ten years of expected payouts at the maximum level. Based on the results of the June 30, 2003 valuation, favorable actuarial experience did not occur for the System and, therefore, there is no transfer to the FED reserve. Given expected payout levels and no future transfers to the reserve, the current FED reserve is projected to be sufficient to make payments for the next eight years (including the January 2004 payment), plus a reduced payment in the ninth year, if all assumptions are met in future years. See Exhibit 6 for more detail. The FED calculations are based on pure market value of assets so past investment experience is fully reflected in each valuation. This has the potential to change the remaining years of payment from year to year.

## EXPERIENCE FOR 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, 2002 and June 30, 2003. The components are examined in the following discussion.

### ASSETS

As of June 30, 2003, the System (including Special Service) had total assets of \$14.9 billion, when measured on a market value basis, **excluding the Favorable Experience Dividend (FED) reserve account**. This was an increase of \$ 0.5 billion from the prior year. The components of this change are shown below:

	Market Value (\$M)
<b>Net Assets, June 30, 2002</b>	<b>\$ 14,388</b>
• Employer and Member Contributions	+ 485
• Benefit Payments and Refunds	- 746
• Expected Investment Income* (Based on 7.5% assumption)	+ 1,069
• Actuarial Gain/(Loss) on Investment Return	- 289
• Transfer from Cedar Rapids Water Works	+ 9
<b>Net Assets, June 30, 2003 Before FED Transfer</b>	<b>\$ 14,916</b>
• FED Transfer Payable January 15, 2004	- 0
<b>Net Assets, June 30, 2003 After FED Transfer</b>	<b>\$ 14,916</b>

\*net of expenses

On a market value basis, the rate of return was 5.59% 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 change in the actuarial value of assets from June 30, 2002 to June 30, 2003 (which also excludes the FED reserve account) is shown below:

	Actuarial Value (\$M)
<b>Actuarial Assets, June 30, 2002</b>	<b>\$ 15,613</b>
• Employer and Member Contributions	+ 485
• Benefit Payments and Refunds	- 746
• Expected Investment Income* (Based on 7.5% assumption)	+ 1,161
• Investment Gain/(Loss)	- 402
• Transfer from Cedar Rapids Water Works	+ 9
<b>Actuarial Assets, June 30, 2003 Before FED Transfer</b>	<b>\$ 16,120</b>
• FED Transfer Payable January 15, 2004	- 0
<b>Actuarial Assets, June 30, 2003 After FED Transfer</b>	<b>\$ 16,120</b>

\*net of expenses





The dollar-weighted rate of return, net of investment and administrative expenses, measured on the actuarial value of assets was 4.9%. Due to the use of an asset smoothing method, there is currently \$1.204 billion of deferred actuarial investment loss that has not yet been recognized in the valuation process. Absent investment returns significantly above the 7.5% assumption in the next few years, the deferred actuarial investment loss will gradually be reflected in the actuarial value of assets. As this occurs through the smoothing method, the valuation results will reflect an actuarial loss on investment experience, which will contribute toward an increase in the unfunded actuarial liability.

The summary of market and actuarial value of assets by group as of June 30, 2003 is shown below:

<i>(\$Millions excluding FED Reserve)</i>	<u>General Membership</u>	<u>Special Services 1</u>	<u>Special Services 2</u>	<u>Total</u>
Actuarial Value	\$15,420	\$247	\$453	\$16,120
Market Value	\$14,261	\$231	\$424	\$14,916
Difference	\$1,159	\$16	\$29	\$1,204
Actuarial/Market Value	108%	107%	107%	108%

A historical comparison of asset values on both the market and actuarial basis is shown below:

<i>(\$Millions excluding FED Reserve)</i>	<u>June 30</u>				
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Actuarial Value of Assets	\$11,352	\$14,145	\$15,112	\$15,613	\$16,120
Market Value of Assets	\$13,693	\$16,474	\$15,358	\$14,388	\$14,916
Difference	(\$2,341)	(\$2,329)	(\$246)	\$1,225	\$1,204
Actuarial Value/Market Value	83%	86%	98%	109%	108%

The following table shows the projection of asset values for the next five years assuming a 7.5% rate of return on the market value of assets each year:

<i>(\$Millions excluding FED Reserve)</i>	<u>June 30</u>				
	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Market Value of Assets	\$15,756	\$16,622	\$17,532	\$18,454	\$19,386
Actuarial Value of Assets	\$16,734	\$17,411	\$18,167	\$18,967	\$19,800
Actuarial Value/Market Value	106%	105%	104%	103%	102%

In order for the funded status of the System not to deteriorate, there will need to be significant investment gains to offset the currently unrecognized \$1.204 billion deferred actuarial investment loss (absent other changes). To illustrate, we estimate the following:

- A market return of approximately 16% in FYE 2004 will return the actuarial value of assets to market value at that time or,
- Market returns of approximately 11% in FYE 2004 and FYE 2005 will return the actuarial value of assets to market value at that time.

However, even if one of these events occurs, the amortization period will remain infinite and a change in benefits or contributions will still be necessary to bring the System's funding back into actuarial balance.

**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 years UAL.

The unfunded actuarial liability by group is shown as of June 30, 2003 below:

<i>(\$Millions)</i>	<u>General Membership</u>	<u>Special Services 1</u>	<u>Special Services 2</u>	<u>Total</u>
Actuarial Liability	\$17,321	\$231	\$435	\$17,987
Actuarial Value of Assets	15,420	247	453	16,120
Unfunded Actuarial Liability	1,901	(16)	(18)	1,867

See Exhibits 7 and 8 in Section III of the report for the detailed development of the unfunded actuarial liability for the System.

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 \$527 million (see Exhibit 9 for a detailed development).

The actuarial loss may be explained by considering the separate experience of assets and liabilities. As noted in the previous section, assets had a \$402 million dollar loss when measured on an actuarial value basis. The liability loss is \$125 million (or about 0.7% of total actuarial liability) and arises from demographic experience less favorable than anticipated by the actuarial assumptions. The primary source of the liability loss was retirement experience. While the number of retirements was less than expected, the individuals who retired had higher than average liabilities, resulting in the loss.

The change in the unfunded actuarial liability between June 30, 2002 and 2003 is shown below (in millions):

<b>Unfunded Actuarial Liability, June 30, 2002</b>	\$ 1,255
• Expected increase	+ 85
• Investment experience	+ 402
• Liability and other experience	+ 125
• Benefit enhancements	+ 0
• Change in actuarial assumptions	+ 0
<b>Unfunded Actuarial Liability <u>before</u> FED transfer, June 30, 2003</b>	<b>\$ 1,867</b>
• FED Transfer	+ 0
<b>Unfunded Actuarial Liability <u>after</u> FED transfer, June 30, 2003</b>	<b>\$ 1,867</b>





There are four different measurements of liabilities discussed in this section.

- **Actuarial Balance Sheet Liability** is the present value of all future benefits (PVFB) expected to be paid from the System to current members (retired, active and deferred vested). This liability is calculated based on both future payroll projections and service credits to retirement or other separation from service.
- **Actuarial Liability** is the portion of the present value of future benefits (actuarial balance sheet liability) that will not be paid by future normal costs. It is also defined as the portion of the actuarial balance sheet liability allocated to service before the valuation date by the actuarial cost method.
- **Projected Benefit Obligation (PBO)** was previously used for financial reporting purposes under GASB No. 5 (since superseded by GASB 25) and is provided here for comparative purposes only. It represents the present value of benefits based on future payroll projections but only reflecting service credits as of the valuation date. This measure of the funded status of the plan does not directly impact the contribution rate or amortization period. It is not uncommon for the PBO to exceed the actuarial value of assets, since the PBO reflects future assumed salary increases.
- **Present Value of Accrued Benefits (PVAB)** is used only for informational purposes. It does not directly impact the contribution rate or amortization period for the System. This liability represents the present value of benefits earned to date, based on service and salary as of the valuation date. The PVAB can be used as a measure of the funded status of the System since it more closely represents the amount required to pay all accrued benefits if the fund were to liquidate on the measurement date. In a well-funded System, the expectation would be that the assets would be equal to or exceed the PVAB.

Each liability measurement discussed above is used for a different purpose. Therefore, the relative importance of the measurement will depend on the perspective of the person using the information. From an actuarial viewpoint, the actuarial balance sheet liability and the actuarial liability are the most critical because, along with the actuarial value of assets, they ultimately determine whether the statutory contribution rate for the System is sufficient to fund the current benefit structure, within the parameters set out in IPERS' Funding Policy. The other liability figures are valuable because they provide useful comparisons of assets and liabilities.

The System liabilities as of June 30, 2003 and June 30, 2002 are summarized below:

(\$ Millions)	June 30	
	2003	2002
Actuarial Balance Sheet Liability (PVFB)	\$22,109	\$20,936
Actuarial Liability	\$17,987	\$16,868
Projected Benefit Obligation (PBO)	\$16,425	\$15,345
Present Value of Accrued Benefits (PVAB)	\$14,338	\$13,155

## CONTRIBUTION RATE

The Iowa statutes provide that most IPERS members (general members who represent 96% of total active members) shall contribute 3.7% of pay and employers shall contribute 5.75%, for a total of 9.45%. The remaining 4% of the active members, the Special Service groups, contribute at an actuarially determined rate that changes each year.



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".

One of the purposes of the actuarial valuation is to determine whether the contribution rate for the general membership will be sufficient to fund the future benefits expected to be paid by the System within the guidelines established in IPERS' Funding Policy. The statutory contribution rate is first applied to fund the normal cost rate. The remaining contribution rate is used to amortize the unfunded actuarial liability (UAL) as a level percentage of payroll, which in turn determines the amortization period. As a result, the remaining amortization period varies with each actuarial valuation. Because the normal cost rate for the general membership (9.06%) is so close to the statutory contribution rate of 9.45%, the remaining 0.39% of payroll available for payment toward the UAL is very small. Based on the current UAL amount and amortization payment, 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 increase by 1.71% to 11.16% of payroll. This rate is determined based on the snapshot of the System taken on the valuation date, June 30, 2003, and applies only for the fiscal year beginning July 1, 2004. The rate necessary for the System to continue to be "fully funded" in future years will change each year as the deferred actuarial investment losses are recognized and other experience (both investment and demographic) impacts the System. The Asset/Liability Study completed earlier this year indicated that, in order to reach a 30 year amortization of the UAL by 2014 (and not to exceed that limit thereafter), a contribution rate of 13.25% effective July 1, 2005 would be necessary. This is a better long term estimate of the level of contributions necessary to fund the System in accordance with the Funding Policy.

When the current actuarial value of assets plus the present value of future expected contributions are not equal to the present value of future benefits for the current membership, the System is not in "actuarial balance". IPERS' Funding Policy provides a set of criteria to assist in deciding whether an increase in the contribution rate should be considered. If either of the following occurs in at least three of any five consecutive years, the Funding Policy recommends a contribution increase be considered:

- (1) the normal cost rate is within 0.50% of the statutory contribution rate of 9.45% (which occurred in both the 2002 and 2003 valuations).
- (2) the amortization period exceeds 29 years (which has occurred in the 2001, 2002, and 2003 valuations).

Based on the criteria in the Funding Policy, consideration should be given to increasing the statutory contribution rate.

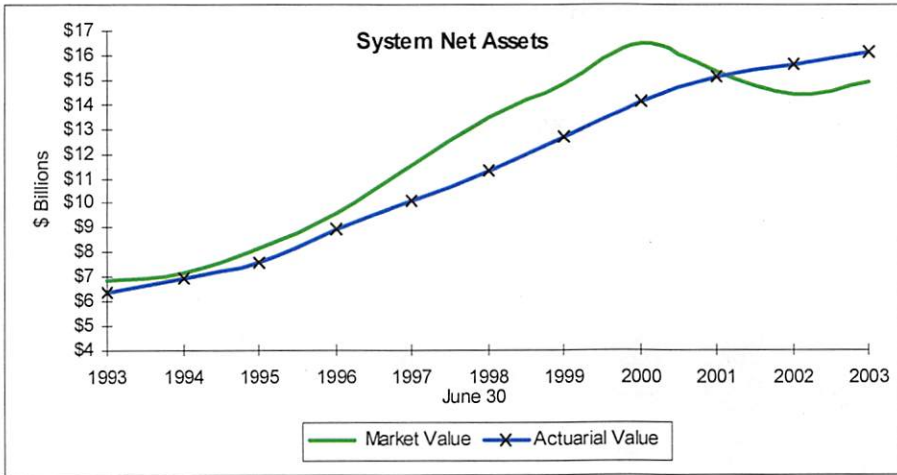
The Asset/Liability Study completed in September 2003 confirmed the long term funding concerns for IPERS. Based on capital market assumptions developed by Wilshire Associates, stochastic modeling was performed over a thirty year period. The results indicated that, absent changes in benefits or contributions, there is about a 75% probability that the System's funded ratio would steadily decline and the actuarial contribution rate (based on 30 year amortization of any UAL) would steadily increase.

Given the current normal cost rate, the unfunded actuarial liability, and the amount of the deferred actuarial investment loss, we believe some type of additional contributions or change in benefit structure (or both) will be necessary in the future to meet the standard set out in IPERS' Funding Policy. The Asset/Liability Study submitted to IPERS in September, 2003 provided several alternatives for both contribution increases and/or changes in the benefit structure. There are many other alternatives which could address the long term funding concerns of IPERS.

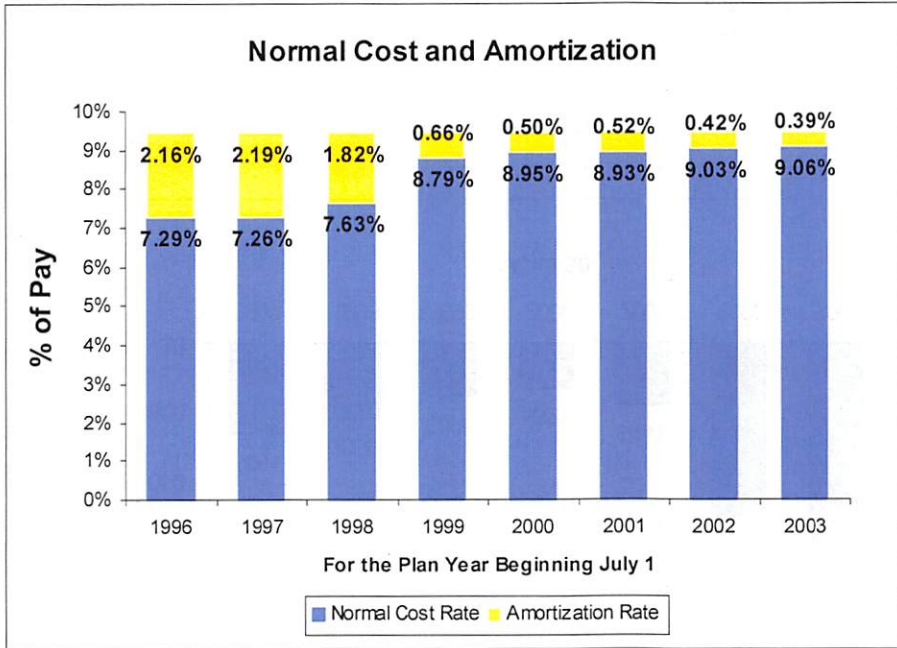
The fact that the System is not in actuarial balance does not create an immediate funding concern for the System. System assets are sufficient to make future projected benefit payments for many years. The shortfall between assets and liabilities that is indicated by this year's valuation is a long term funding issue. However, as the results of the Asset/Liability Study indicated, time is not likely to resolve the long term funding issues. It is in the System's best interest for changes in contributions or benefits to be made sooner instead of later. Furthermore, by making the changes earlier, they will be less severe.

**COMPARISON OF MAJOR VALUATION RESULTS**

The major findings of the 2003 valuation compared with prior valuation results are summarized and compared on the following pages.

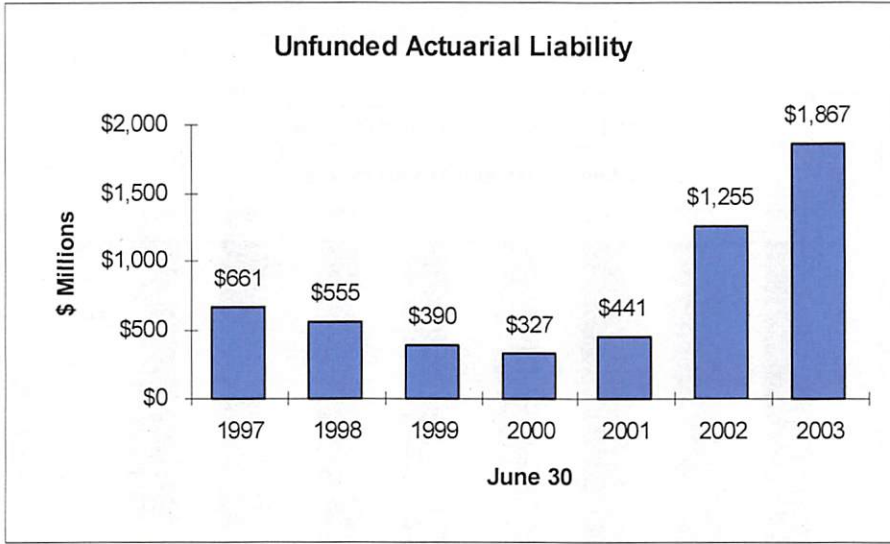


The market performance in the last three years has eliminated the surplus of market value over the actuarial value of assets. Currently the actuarial value exceeds the market value of assets by \$1.2 billion. Absent significant gains in the next few years, the deferred losses will flow through to the actuarial value of assets.

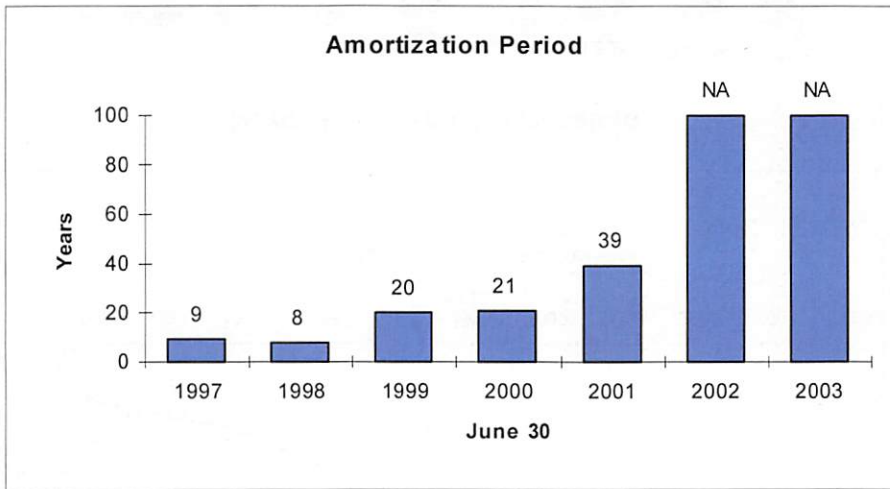


The normal cost rate has increased due to assumption changes, benefit improvements and demographic changes. As a result, the UAL payment has been reduced to a small part of the total contribution rate.

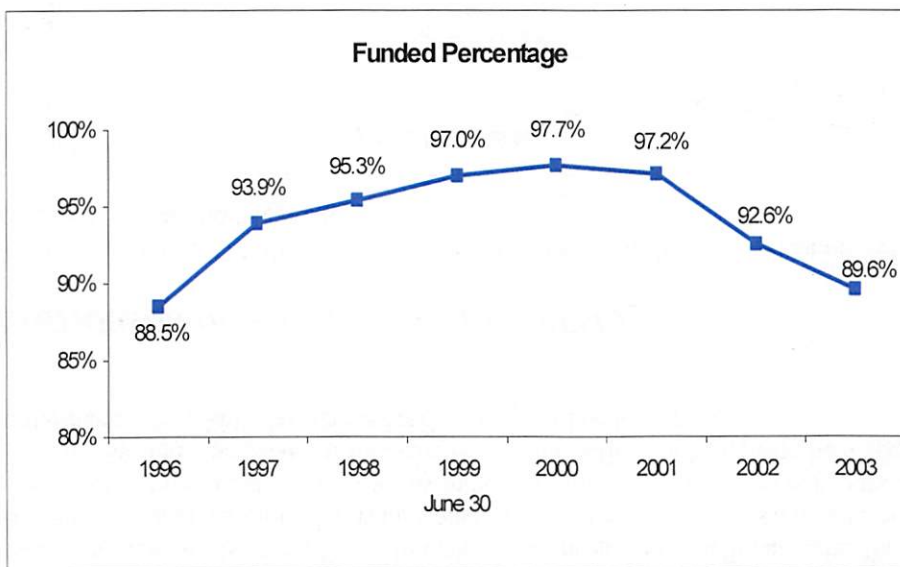




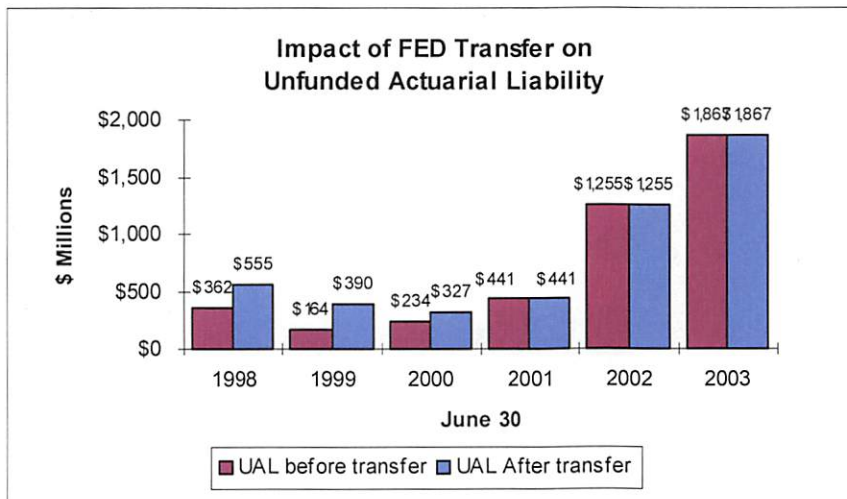
The unfunded actuarial liability reflects both asset and liability experience as well as changes due to benefit enhancements or changes in actuarial assumptions. The large increase in 2002 was the combined impact of an experience loss on assets and liabilities coupled with an increase due to assumption changes. The 2003 increase reflected an experience loss on assets and liabilities.



The amortization period reflects the size of the UAL as well as the decrease in the UAL payment due to increases in the normal cost rate.



The funded ratio for IPERS increased, steadily from 1996 through 2000. Investment performance and liability increases combined to lower the funded ratio in 2002 and 2003.



*The law provides for a portion of the favorable experience to be used to fund the FED Reserve. The amount transferred is dependent upon the funded status of IPERS. When such transfer occurs, there is an increase in the unfunded actuarial liability. No transfer has occurred in the last three years.*

## SUMMARY

IPERS, like most retirement plans in the United States (both public and private) is feeling the impact of three years of record low market returns. This, coupled with negative demographic experience and a change in actuarial assumptions in 2002 that increased liabilities, significantly increased the unfunded actuarial liability (UAL) of the System. For most members, IPERS is funded by a fixed (statutory) contribution rate of 9.45%.

Given the small (0.39%) difference between the 9.45% statutory rate and the 9.06% normal cost rate (cost allocated to the current year of service worked by active members), the unfunded actuarial liability cannot be amortized. Despite the unfavorable experience on both the asset and liability side, 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 11.16% of payroll. This rate is determined based on the snapshot of the System taken on the valuation date, June 30, 2003, and applies only for the fiscal year beginning July 1, 2004. The rate necessary for the System to continue to be "fully funded" in future years will change each year as the deferred actuarial investment losses are recognized and other experience (both investment and demographic) impacts the System. The Asset/Liability Study completed earlier this year indicated that, in order to reach a 30 year amortization of the UAL by 2014 (and not to exceed that limit thereafter), a contribution rate of 13.25% effective July 1, 2005 would be necessary. This is a better long term estimate of the level of contributions necessary to fund the System in accordance with the Funding Policy.

The System faces challenges similar to other large retirement systems. Like most large Systems, IPERS uses an asset smoothing method. This methodology delays recognition of investment gains and losses on a fair (market) value basis. If there is a net deferred actuarial investment gain, the actuarial value of assets will be less than the fair value and the funded status will improve in the future if experience follows the assumptions. On the other hand, if there is a net deferred actuarial investment loss, the actuarial value of assets will be greater than the fair value, and the funded status will decline over time if experience follows the assumptions. The current deferred actuarial investment loss for IPERS is \$1.204 billion. Absent market returns significantly in excess of 7.5% in the next few years, the deferred loss will flow into the actuarial value of assets and be recognized in the actuarial valuation process. They will be reflected as experience losses, with a resulting increase in the unfunded actuarial liability.

The small portion of the total contribution rate that is used to pay the unfunded actuarial liability exacerbates the situation with the deferred actuarial investment loss. Currently, only 0.39% of payroll is available for payment toward the UAL. With the expectation that additional losses will flow through to the actuarial value of assets, causing the UAL in future years to increase, it appears nearly impossible for the System to be able to pay off the UAL over any reasonable time period without an increase in future contributions.

We conclude this executive summary by providing certain historical and comparative information for the System. The following page reflects recent historical impacts on IPERS' unfunded actuarial liability. The final page of this executive summary presents comparative statistics and actuarial information on both the June 30, 2003 and June 30, 2002 valuations. All figures shown include the general membership and the two special service groups.





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

<u>(\$Millions)</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>Total</u>
<b>Unfunded Actuarial Liability (BOY<sup>1</sup>)</b>	661	555	390	327	441	1,255	N/A
• <b>Expected Change</b>	(43)	(37)	(32)	(22)	3	85	(46)
• <b>Investment Experience</b>	(716)	(730)	(781)	(81)	409	402	(1,497)
• <b>Liability and Other Experience</b>	118	(211)	515	217	258	125	1,022
• <b>Benefit Enhancements</b>	342	0	142	0	3	0	487
• <b>Change in Assumptions</b>	0	587	0	0	141	0	728
• <b>FED Transfer</b>	193	226	93	0	0	0	512
<b>Unfunded Actuarial Liability (EOY<sup>2</sup>)</b>	555	390	327	441	1,255	1,867	N/A
<b>Amortization Years</b>	8	20	21	39	*	*	

\*Infinite

1 = Beginning of Year

2 = End of Year

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

	June 30, 2003	June 30, 2002	% Chg
<b>SYSTEM MEMBERSHIP</b>			
1. Active Membership			
- Number of Members	159,310	158,467	0.5
- Projected Payroll for Fiscal Year	\$5,090M	\$5,090M	0.0
- Average Salary	\$31,950	\$32,119	-0.5
2. Inactive Membership			
- Number Not in Pay Status	104,304	98,228	6.2
- Number of Retirees/Beneficiaries	74,128	71,715	3.4
- Average Annual Benefit	\$9,399	\$9,091	3.4
<b>ASSETS AND LIABILITIES</b>			
1. Net Assets (excluding FED reserve)			
- Market Value	\$14,916M	\$14,388M	3.7
- Actuarial Value	16,120M	15,613M	3.2
2. Projected Liabilities			
- Retired Members	\$6,714M	\$6,207M	8.2
- Inactive Members	450M	426M	5.6
- Active Members	14,945M	14,303M	4.5
- Total Liability	22,109M	20,936M	5.6
3. Actuarial Liability	\$17,987M	\$16,869M	6.6
4. Unfunded Actuarial Liability	\$1,867M	\$1,255M	48.8
5. Funded Ratio (Actuarial Value Assets/Actuarial Liability)	89.62%	92.56%	-3.2
<b>SYSTEM CONTRIBUTIONS</b>			
Statutory Contribution Rate*	9.45%	9.45%	0.0
Years Required to Amortize Unfunded Actuarial Liability	Infinite	Infinite	N/A

M = (\$)Millions

\* Contribution for certain special groups (3.8% of the membership) are not fixed at 9.45% but are actuarially determined each year.

**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. In addition, the market value of assets provides a reference point to compare to various liability calculations.

#### 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, 2003 is presented on the following pages:

<u>Page</u>	<u>Contents</u>
15	Analysis of Net Assets
16	Graph of Asset Allocation
17	Summary of Fund Activity – Market Value
18	Actuarial Value of Net Assets
19	Historical Comparison (Actuarial and Market)
20	Summary of Favorable Experience Dividend Reserve





## EXHIBIT 1

### ANALYSIS OF NET ASSETS AT MARKET VALUES

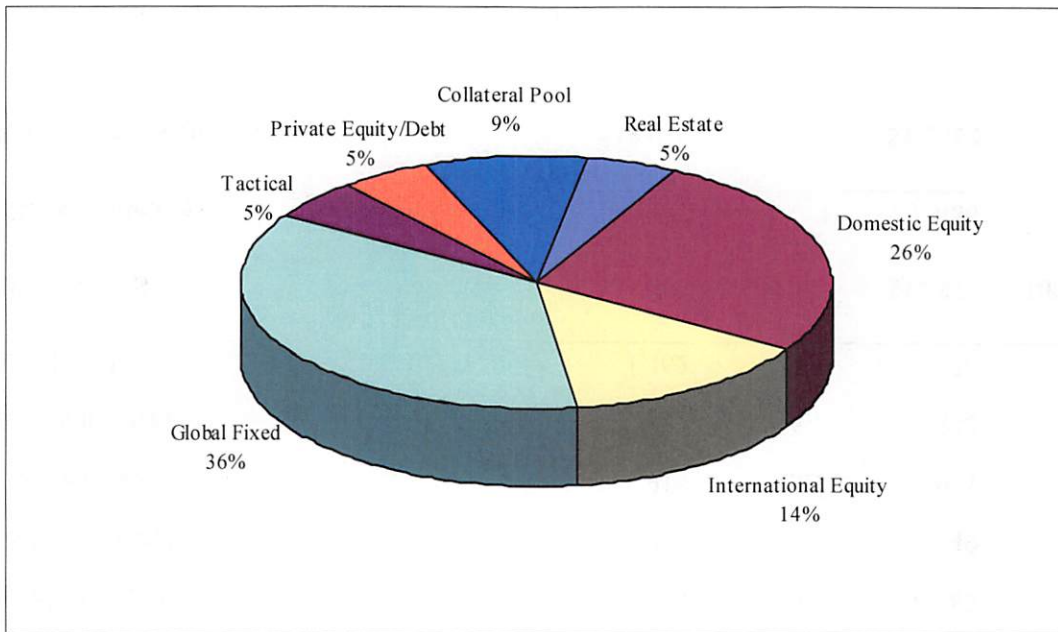
(\$ Millions)

	June 30, 2003		June 30, 2002	
	<u>Amount</u>	<u>% of Total</u>	Amount	<u>% of Total</u>
Cash & Equivalents	\$134	0.9%	\$56	0.4%
Capital Assets, Receivables and Payables	(1,906)	(12.4)	(446)	(3.0)
Domestic Equity	4,567	29.7	3,962	26.6
International Equity	2,363	15.3	2,302	15.5
Global Fixed Income	6,156	40.0	6,383	42.9
Tactical Asset Funds	777	5.0	749	5.0
Real Estate Funds	916	5.9	944	6.3
Private Equity/Debt	934	6.1	848	5.7
Collateral Pool	1,462	9.5	76	0.5
<b>TOTAL ASSETS</b>	<b>\$15,403</b>	<b>100.0%</b>	<b>\$14,874</b>	<b>100.0%</b>
FED Reserve (Before current year transfer)	487		486	
Net Retirement System Assets	\$14,916		\$14,388	
Allocation of Net Assets:				
General Membership	\$ 14,261			
Special Services Group 1	231			
Special Services Group 2	424			
Total Net Assets	<u>\$ 14,916</u>			

## EXHIBIT 2

### ALLOCATION OF IPERS INVESTMENTS

As of June 30, 2003  
(% Of Market Value by Type)



**EXHIBIT 3**  
**SUMMARY OF FUND ACTIVITY**  
(Market Value)

	General Membership	Special Service Group 1 *	Special Service Group 2 **	FED Reserve	Total
<b>NET RETIREMENT SYSTEM ASSETS ON JUNE 30, 2002</b>	13,780,630,942	216,550,516	390,618,179	486,619,557	14,874,419,194
<b>REVENUE</b>					
FED Transfer	-	-	-	-	-
Employer contributions	268,108,914	5,669,294	13,745,347	-	287,523,555
Member contributions	172,497,354	3,781,104	9,152,116	-	185,430,574
Service purchase	11,588,742	113,975	328,490	-	12,031,207
Investment income	782,395,180	12,490,428	22,729,669	27,172,581	844,787,858
<b>Total Revenue</b>	<u>\$1,234,590,190</u>	<u>\$22,054,801</u>	<u>\$45,955,622</u>	<u>\$27,172,581</u>	<u>\$1,329,773,194</u>
<b>DISBURSEMENTS</b>					
Benefit payments	695,862,307	5,895,422	9,002,366	25,570,783	736,330,878
Member and employer refunds	31,869,433	1,110,782	2,611,108	-	35,591,323
Administrative expense	7,866,621	43,422	131,070	-	8,041,113
Investment expense	27,699,235	442,200	804,702	961,994	29,908,131
<b>Total Expenses</b>	<u>\$763,297,596</u>	<u>\$7,491,826</u>	<u>\$12,549,246</u>	<u>\$26,532,777</u>	<u>809,871,445</u>
<b>NET RETIREMENT SYSTEM ASSETS ON JUNE 30, 2003</b>	\$14,251,923,536	\$231,113,491	\$424,024,555	\$487,259,361	15,394,320,943
<b>DISTRIBUTION TO FED ON JANUARY 2004</b>	\$0	\$0	\$0	\$0	\$0
Transfer from Cedar Rapids Water Works	\$8,879,964	\$0	\$0	\$0	\$8,879,964
<b>ADJUSTED ASSETS ON JUNE 30, 2003</b>	\$14,260,803,500	\$231,113,491	\$424,024,555	\$487,259,361	\$15,403,200,907

\* Includes Sheriffs, Deputies and Airport Firefighters

\*\* Includes all other public safety members

## EXHIBIT 4

### ACTUARIAL VALUE OF NET ASSETS

	General Membership	Special Service Group 1 *	Special Service Group 2 **	Total
1. Actuarial Value of Assets as of June 30, 2002	\$14,960,687,980	\$232,627,006	\$419,799,113	\$15,613,114,099
2. Actual Receipts/Disbursements				
a. Contributions	452,195,010	9,564,373	23,225,953	484,985,336
b. Benefit Payments and Refunds	727,731,740	7,006,204	11,613,474	746,351,418
c. Net Change	(275,536,730)	2,558,169	11,612,479	(261,366,082)
3. Expected Value of Assets as of June 30, 2003 $[(1) \times 1.075] + [(2c) \times (1.075)^{-5}]$	15,797,057,016	252,726,398	463,324,121	16,513,107,535
4. Market Value of Assets as of June 30, 2003 Before Transfer	14,251,923,536	231,113,491	424,024,555	14,907,061,582
5. Difference Between Market and Expected Values (4) - (3)	(1,545,133,480)	(21,612,907)	(39,299,566)	(1,606,045,953)
6. Actuarial Value of Assets as of June 30, 2003 (3) + [(5) x 25%]	15,410,773,646	247,323,171	453,499,230	16,111,596,047
7. Adjustment for Transfer to the Favorable Experience Dividend Reserve Account	0	0	0	0
8. Transfer from Cedar Rapids Water Works	8,879,964	0	0	8,879,964
9. Actuarial Value of Assets for June 30, 2003 Actuarial Valuation	\$15,419,653,610	\$247,323,171	\$453,499,230	\$16,120,476,011

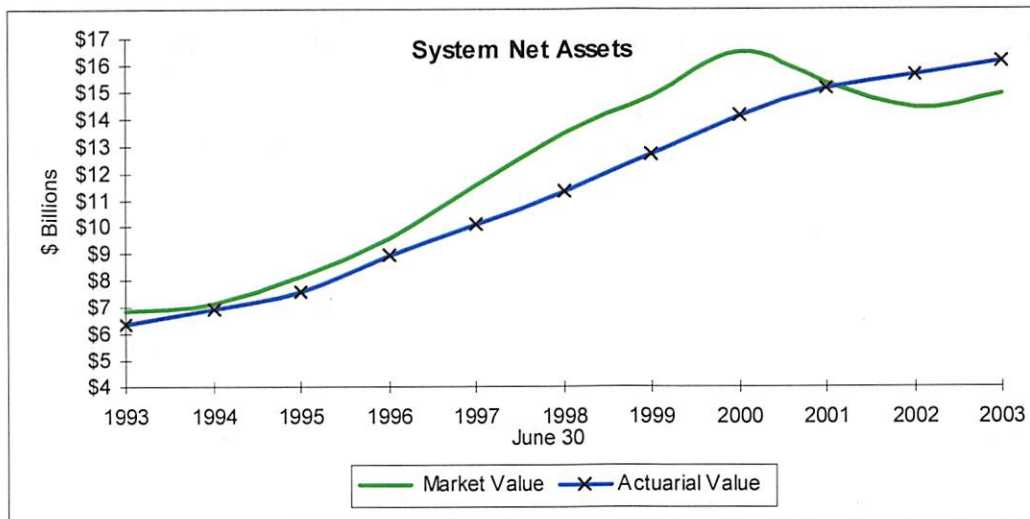
## EXHIBIT 5 HISTORICAL COMPARISON (ACTUARIAL AND MARKET)

Value as of June 30	Actuarial Value of Net Assets (AVA)	Market Value of Net Assets (MVA)	AVA/MVA
1993	6,365,169,296	6,899,590,868	92%
1994	6,926,678,212	7,126,124,256	97%
1995	7,574,159,776	8,199,217,051	92%
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%

Values are for combined general 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 6

### SUMMARY OF FAVORABLE EXPERIENCE DIVIDEND RESERVE

Market Value of FED Reserve as of June 30, 2003	\$	487,259,361
Transfer to FED Payable on January 15, 2004 Based on June 30, 2003 Valuation Results	\$	0
Total Value of FED Reserve as of June 30, 2003	\$	487,259,361

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.49F1.

Based on the June 30, 2003 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:

	Maximum*	Expected**
2004	\$86.6	\$30.9
2005	104.2	52.1
2006	123.4	61.7
2007	144.4	72.2
2008	135.9 ***	83.6
2009	-	96.1
2010	-	109.7
2011	-	124.3
2012	-	74.7 ***

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

\*\* Based on 1.07% in 2004 and 1.5% thereafter.

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

**SECTION III**  
**SYSTEM LIABILITIES**



## 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. Under this method, a contribution that is a level percent 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 accrued liability is that portion of the total liability or present value of future benefits (PVFB) that will not be paid by future normal costs. 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.

On the following pages we have summarized, as of June 30, 2003, various measurements of liability. It is important to note that the actuarial liability differs from the present value of accrued benefits (PVAB) and the pension benefit obligation (PBO). The actuarial liability is determined for funding purposes and includes some element of future pay increases and service credits. The PVAB represents the value of the benefits accrued as of the valuation date, assuming each member terminates employment at that time. As a result, there are no projections of future salary increases and service credits in these figures. Finally, the PBO value differs from the PVAB value in that while service accruals are similarly frozen, anticipated future salary increases are reflected.

The tables in this section present System liabilities as follows:

<u>Page</u>	<u>Contents</u>
22	Present Value of Future Benefits
23	Unfunded Actuarial Accrued Liability
24	Development of FED Transfer
25	Present Value of Accrued Benefits
26	Pension Benefit Obligation



## EXHIBIT 7

### PRESENT VALUE OF FUTURE BENEFITS as of June 30, 2003

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.

	General Membership	Special Service Group 1 *	Special Service Group 2 **	Total
Present Value of Future Benefits:				
Active Members				
Retirement benefits	\$12,641,152,038	\$123,071,198	\$265,784,087	\$13,030,007,323
Death benefits	180,718,554	6,423,306	12,874,075	200,015,935
Termination benefits	881,180,841	48,477,613	92,038,209	1,021,696,663
Disability benefits	406,694,801	89,869,153	196,722,044	693,285,998
Inactive Members				
Vested members	403,095,912	6,490,684	10,635,265	420,221,861
Nonvested members	29,075,950	121,604	539,024	29,736,578
Retired Members and Beneficiaries	6,578,965,060	50,582,925	84,423,835	6,713,971,820
<b>Total Present Value of Future Benefits</b>	<b>\$21,120,883,156</b>	<b>\$325,036,483</b>	<b>\$663,016,539</b>	<b>\$22,108,936,178</b>

\* Includes Sheriffs, Deputies and Airport Firefighters

\*\* Includes all other public safety members



## EXHIBIT 8

### UNFUNDED ACTUARIAL LIABILITY as of June 30, 2003

	General Membership	Special Services Group 1 *	Special Services Group 2 **	Total
1. Present Value of Future Benefits	\$21,120,883,156	\$325,036,483	\$663,016,539	\$22,108,936,178
2. Present Value of Future Normal Costs	3,799,912,492	93,577,300	228,071,426	4,121,561,218
3. Actuarial Liability (1) - (2)	17,320,970,664	231,459,183	434,945,113	17,987,374,960
4. Actuarial Value of Net Assets	15,419,653,610	247,323,171	453,499,230	16,120,476,011
5. Unfunded Actuarial Liability (3) - (4)	1,901,317,054	(15,863,988)	(18,554,117)	1,866,898,949

\* Includes Sheriffs, Deputies and Airport Firefighters

\*\* Includes all other public safety members

## EXHIBIT 9

### DEVELOPMENT OF AMOUNT TO BE TRANSFERRED TO THE FAVORABLE EXPERIENCE DIVIDEND RESERVE Based on the June 30, 2003 Actuarial Valuation

1. June 30, 2002 Unfunded Actuarial Liability	\$	1,255,445,086
2. Normal Cost as of June 30, 2002		447,152,001
3. Employer and Member Contributions *		472,954,129
4. Increase due to assumption changes		0
5. Increase due to plan amendments		0
6. Expected Unfunded Actuarial Liability as of June 30, 2003 [(1)+(2)] * 1.075 - [(3) * (1.075) <sup>2</sup> ] + (4) + (5)		1,339,922,591
7. Actual Unfunded Actuarial Liability as of June 30, 2003		1,866,898,949
8. (Gain)/loss (7)-(6)		526,976,358
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

## EXHIBIT 10

### PRESENT VALUE OF ACCRUED BENEFITS as of June 30, 2003

The actuarial present value of accrued benefits represents the value of benefits earned as of the valuation date, based on service and salary to date. This is equivalent to assuming each member terminates employment on the valuation date.

	General Membership	Special Services Group 1 *	Special Services Group 2 **	Total
1. Present value of vested accrued benefits for active plan members	\$ 6,717,340,059	\$ 138,882,785	\$ 269,938,763	\$ 7,126,161,607
Present value of vested benefits being paid to plan retirees and beneficiaries	6,578,965,060	50,582,925	84,423,835	6,713,971,820
Present value of vested benefits to terminated plan members not yet in pay status (deferred vested)	403,095,912	6,490,684	10,635,265	420,221,861
Accumulated employee account balance of nonvested inactive members	29,075,950	121,604	539,024	29,736,578
Total present value of vested accrued benefits	\$ 13,728,476,981	\$ 196,077,998	\$ 365,536,887	\$ 14,290,091,866
2. Present value of nonvested accrued benefits	44,681,365	547,209	2,667,624	47,896,198
3. Total present value of all accrued benefits	\$ 13,773,158,346	\$ 196,625,207	\$ 368,204,511	\$ 14,337,988,064

\* Includes Sheriffs, Deputies and Airport Firefighters

\*\* Includes all other public safety members

## EXHIBIT 11

### PENSION BENEFIT OBLIGATION

One liability measurement commonly used, and in fact required before GASB No. 25, for evaluating the funded status of retirement systems is the "pension benefit obligation". This value is that portion of the actuarial present value of all projected pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date under the projected unit credit actuarial cost method. This measurement is independent of the actuarial funding method used to determine contributions to the System.

The pension benefit obligation for the System in total (general membership plus special service groups) as determined for both this year and last year is summarized below:

	<b>June 30, 2003</b>	<b>June 30, 2002</b>
Pension Benefit Obligation		
Retired Members and Beneficiaries	\$ 6,713,971,820	\$ 6,207,351,544
Terminated Vested Members	420,221,861	402,649,460
Nonvested Members	29,736,578	23,012,540
Active Members		
-Accumulated employee contributions with interest	2,717,148,747	2,626,787,528
-Employer-financed vested portion	6,430,926,117	5,961,928,888
-Employer-financed non-vested portion	112,852,884	123,115,918
-Total	9,260,927,748	8,711,832,334
Total System Obligation	16,424,858,007	15,344,845,878
Market Value of Net Assets	\$14,915,941,546	\$14,387,799,637
Unfunded Pension Benefit Obligation	1,508,916,461	957,046,241
Funded Percentage	90.81%	93.76%



**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 accrued liability as a level percent of payroll. The unfunded actuarial accrued 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>
28	Actuarial Balance Sheet
29	Analysis of Contribution Rate
30	Calculation of Contribution Rates for Special Services Groups

**EXHIBIT 12**  
**ACTUARIAL BALANCE SHEET**  
**as of June 30, 2003**

	General Membership	Special Services Group 1 *	Special Services Group 2 **	Total
<b><u>ASSETS</u></b>				
Actuarial value of assets	\$15,419,653,610	\$247,323,171	\$453,499,230	\$16,120,476,011
Present value of future normal costs	3,799,912,492	93,577,300	228,071,426	4,121,561,218
Present value of future contributions to amortize unfunded actuarial liability	1,901,317,054	(15,863,988)	(18,554,117)	1,866,898,949
<b>Total Net Assets</b>	<b>\$21,120,883,156</b>	<b>\$325,036,483</b>	<b>\$663,016,539</b>	<b>\$22,108,936,178</b>
<b><u>LIABILITIES</u></b>				
Present Value of Future Benefits:				
Retired Members and Beneficiaries	\$6,578,965,060	\$50,582,925	\$84,423,835	\$6,713,971,820
Active Members	14,109,746,234	267,841,270	567,418,415	14,945,005,919
Inactive Members	432,171,862	6,612,288	11,174,289	449,958,439
<b>Total Liabilities</b>	<b>\$21,120,883,156</b>	<b>\$325,036,483</b>	<b>\$663,016,539</b>	<b>\$22,108,936,178</b>

\* Includes Sheriffs, Deputies and Airport Firefighters

\*\* Includes all other public safety members

## EXHIBIT 13

### 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.

	<b>General Membership</b>
1. (a) Normal Cost, Adjusted to Mid-year	\$ 439,834,565
(b) Expected Covered Payroll for Members Under Assumed Retirement Age	\$ 4,856,544,049
(c) Normal Cost Rate (a) / (b)	9.06%
2. Unfunded Actuarial Liability at Valuation Date	\$ 1,901,317,054
3. Contribution Toward Unfunded Actuarial Liability (UAL)	0.39%
4. Expected Payroll for FYE 2004	\$ 4,856,544,049
5. UAL Contribution Adjusted to Mid-year (3) x (4) / (1.075) <sup>5</sup>	\$ 18,267,861
6. Amortization Factor (2) / (5)	104.07989
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*	11.16%

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



**EXHIBIT 14**  
**CALCULATION OF CONTRIBUTION RATES**  
**FOR SPECIAL SERVICES 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.

	Special Services Group 1 *	Special Services Group 2 **
1. (a) Normal Cost, Adjusted to Mid-year	\$ 10,037,608	\$ 25,640,098
(b) Expected Covered Payroll for Members Under Assumed Retirement Age	\$ 72,126,894	\$ 160,188,390
(c) Normal Cost Rate (a) / (b)	13.92%	16.01%
2. Unfunded Actuarial Liability at Valuation Date	\$ (15,863,988)	\$ (18,554,117)
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)] * (1.075) <sup>5</sup>	\$ (850,660)	\$ (994,910)
6. Expected Payroll for FYE 2004	\$ 73,228,085	\$ 160,188,390
7. Contribution Rate Toward the UAL (5) / (6)	-1.16%	-0.62%
8. Total Contribution Rate Effective July 1, 2004 (1c) + (7)	12.76%	15.39%
Employer Contribution Rate (60%)	7.66%	9.23%
Employee Contribution Rate (40%)	5.10%	6.16%

\* Includes Sheriffs, Deputies and Airport Firefighters

\*\* Includes all other public safety members

**SECTION V**  
**ACCOUNTING INFORMATION**



## SECTION V

### PLAN ACCOUNTING INFORMATION

Historically, Government Accounting Standards Board (GASB) Statement No. 5, "Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Government Employers", required the disclosure of the funded status of the Plan on an annual basis using the pension benefit obligation (PBO).

In an effort to enhance the understandability and usefulness of the pension information that is included in the financial reports of pension plans for state and local governments, the Governmental Accounting Standards Board (GASB) issued Statement No. 25 - Financial Reporting for Defined Benefit Pension Plans. This Statement, along with GASB Statement No. 27, supersedes GASB Statement No. 5.

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>
32	Summary of Membership
33	Schedule of Funding Progress
34	Schedule of Employer Contributions

## EXHIBIT 15

### SUMMARY OF MEMBERSHIP

	<u>June 30, 2003</u>	<u>June 30, 2002</u>
Active Employees:		
Vested	119,682	115,987
Not yet vested	<u>39,628</u>	<u>42,480</u>
Total active employees *	159,310	158,467
Retirees and beneficiaries currently receiving benefits:	74,128	71,715
Terminated employees entitled to benefits but not yet receiving them:	35,375	34,792

\*Excludes retired/reemployed members



## EXHIBIT 16

### IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM SCHEDULE OF FUNDING PROGRESS

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

Actuarial Valuation Date	Net Actuarial Value of Assets (a)	Actuarial Liability (AL) (b)	Unfunded AL (UAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (P/R) (c)	UAL as a Percentage of Covered P/R [(b-a)/c]
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%	4,551,432,690	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%

Actuarial Assumptions: See Appendix C

Actuarial cost method: Entry age normal cost method

Amortization method: Open period, level percent of pay

Asset valuation method: Expected value +25% of difference between market and expected value

Investment Rate of Return: 7.5%

**EXHIBIT 17**

**IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM  
SCHEDULE OF EMPLOYER CONTRIBUTIONS**

<b>Fiscal Year Ending</b>	<b>Actuarially Required Contributions</b>	<b>Percentage of ARC Contributed</b>
6/30/98	\$227,772,773	100.0%
6/30/99	244,933,066	100.0%
6/30/00	253,271,051	100.0%
6/30/01	268,315,094	100.0%
6/30/02	278,682,745	100.0%
6/30/03	289,772,054	99.2%

**APPENDIX A**

**SUMMARY STATISTICS ON  
SYSTEM MEMBERSHIP**

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

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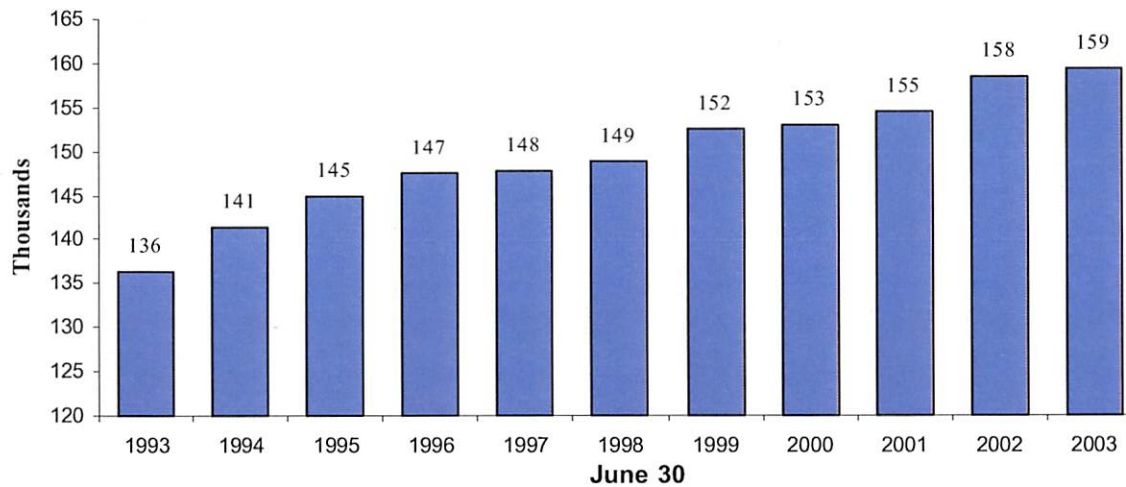


## SUMMARY OF ACTIVE MEMBERS

The data we received for the June 30, 2003 valuation contained information as of June 30, 2003.

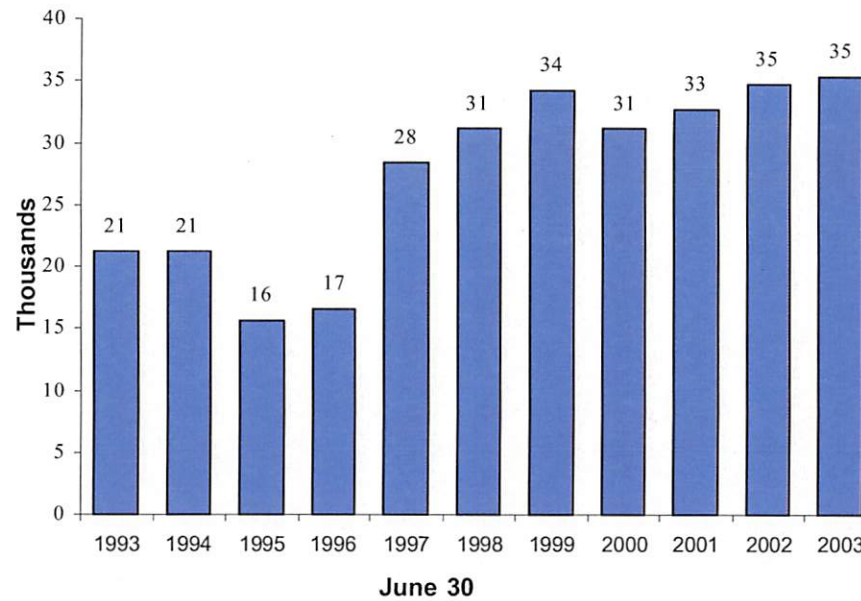
	General	Special Service Groups		Total	Total	Percent Change
	Membership	Group 1	Group 2	6/30/2003	6/30/2002	
Total Employees	153,444	1,531	4,335	159,310	158,467	0.5
Projected Covered						
Payroll* (millions)	\$4,857	\$73	\$160	\$5,090	\$5,090	0.0
Average Age	45.4	41.1	41.4	45.2	45.1	0.2
Average Entry Age	33.9	27.1	30.8	33.8	33.8	0.0
Average Earnings*	\$31,650	\$47,830	\$36,952	\$31,950	\$32,119	-0.5
Retired Reemployed	6,100	8	18	6,126	5,387	13.7

\*Payroll figures as of July 1 are actual amounts paid during the prior fiscal year, increased by an assumed salary increase factor for the coming fiscal year.



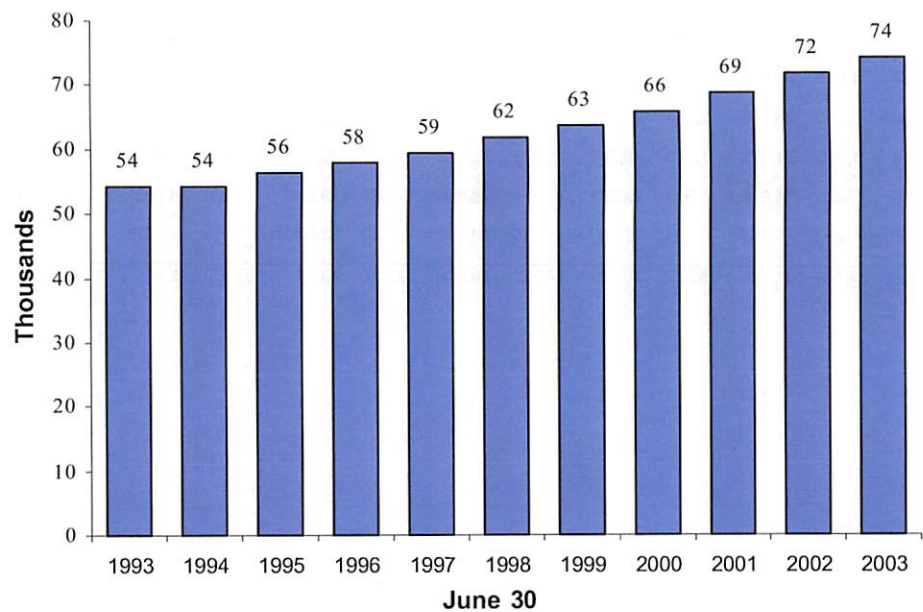
## SUMMARY OF INACTIVE VESTED MEMBERS

General Membership	Special Services		Total 6/30/2003	Total 6/30/2002	% Change
	Group 1	Group 2			
35,027	78	270	35,375	34,792	1.7%



## SUMMARY OF RETIRED MEMBERS AND BENEFICIARIES

General Membership	Special Services		Total 6/30/2003	Total 6/30/2002	% Change
	Group 1	Group 2			
73,393	235	500	74,128	71,715	3.4%



## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2003 FOR ACTIVE MEMBERS\*

Males and Females - General Membership

Age	Years of Service																		Total	
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 and over		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	5,514	13,155	118	20,501	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	5,632	13,309
25-29	8,538	23,432	2,401	30,104	28	24,099	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	10,967	24,894
30-34	5,858	22,330	5,817	32,258	1,491	36,008	27	29,916	0	NA	0	NA	0	NA	0	NA	0	NA	13,193	28,269
35-39	5,972	19,691	4,445	29,206	3,840	38,239	1,371	40,075	60	35,951	0	NA	0	NA	0	NA	0	NA	15,688	28,771
40-44	6,728	17,997	5,613	25,857	3,644	33,222	3,767	41,515	2,103	41,078	211	36,813	0	NA	0	NA	0	NA	22,066	28,905
45-49	5,430	18,974	5,232	25,399	4,174	30,570	3,451	37,862	3,845	43,619	2,936	43,216	116	39,143	0	NA	0	NA	25,184	31,501
50-54	4,037	19,933	3,910	25,787	4,015	30,076	3,847	35,590	3,217	40,821	5,161	47,112	2,743	47,984	84	39,332	0	NA	27,014	35,106
55-59	3,326	16,550	2,508	24,254	2,550	28,413	2,851	33,958	2,361	37,870	2,705	43,159	2,957	50,842	734	50,102	17	41,837	20,009	33,941
60-64	2,836	10,729	1,577	18,944	1,230	24,173	1,280	30,742	1,113	32,972	1,230	36,237	656	45,843	506	51,612	135	54,604	10,563	25,960
65-69	2,419	6,752	1,012	11,255	480	16,816	341	23,541	214	28,206	221	28,089	138	34,083	44	44,291	59	52,740	4,928	13,358
70 & over	2,670	7,221	1,231	8,416	297	9,841	44	17,603	19	19,440	23	21,870	9	23,102	0	NA	7	46,469	4,300	8,080
<b>Totals</b>	<b>53,328</b>	<b>17,752</b>	<b>33,864</b>	<b>26,089</b>	<b>21,749</b>	<b>31,440</b>	<b>16,979</b>	<b>36,791</b>	<b>12,932</b>	<b>40,218</b>	<b>12,487</b>	<b>43,711</b>	<b>6,619</b>	<b>48,570</b>	<b>1,368</b>	<b>49,812</b>	<b>218</b>	<b>52,843</b>	<b>159,544</b>	<b>28,868</b>

\*Including retired/reemployed members



## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2003 FOR ACTIVE MEMBERS\*

Males and Females - Special Services Group 1

Age	Years of Service																		Total	
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 and over		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	41	31,120	2	46,840	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	43	31,851
25-29	97	35,804	76	41,698	1	41,758	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	174	38,412
30-34	52	36,581	118	42,518	45	47,495	1	40,536	0	NA	0	NA	0	NA	0	NA	0	NA	216	42,116
35-39	26	33,073	74	43,874	104	46,137	57	45,863	1	54,838	0	NA	0	NA	0	NA	0	NA	262	44,175
40-44	18	38,997	46	43,458	54	45,690	70	46,319	43	49,785	4	48,737	0	NA	0	NA	0	NA	235	45,729
45-49	12	40,933	8	40,472	32	43,961	61	46,493	78	47,854	73	50,255	0	NA	0	NA	0	NA	264	47,193
50-54	5	39,725	11	43,264	20	43,947	27	42,947	44	47,679	64	51,041	41	55,047	0	NA	0	NA	212	48,747
55-59	6	16,081	3	38,351	11	38,506	9	42,110	8	43,197	29	49,560	21	55,285	2	53,813	0	NA	89	45,680
60-64	4	25,240	2	23,170	1	49,962	3	40,073	7	48,894	7	47,568	7	53,327	7	58,171	0	NA	38	46,663
65-69	2	42,223	0	NA	0	NA	1	34,788	0	NA	1	57,100	0	NA	1	48,088	1	43,440	6	44,644
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>263</b>	<b>34,923</b>	<b>340</b>	<b>42,608</b>	<b>268</b>	<b>45,536</b>	<b>229</b>	<b>45,532</b>	<b>181</b>	<b>48,143</b>	<b>178</b>	<b>50,323</b>	<b>69</b>	<b>54,945</b>	<b>10</b>	<b>56,291</b>	<b>1</b>	<b>43,440</b>	<b>1,539</b>	<b>44,425</b>

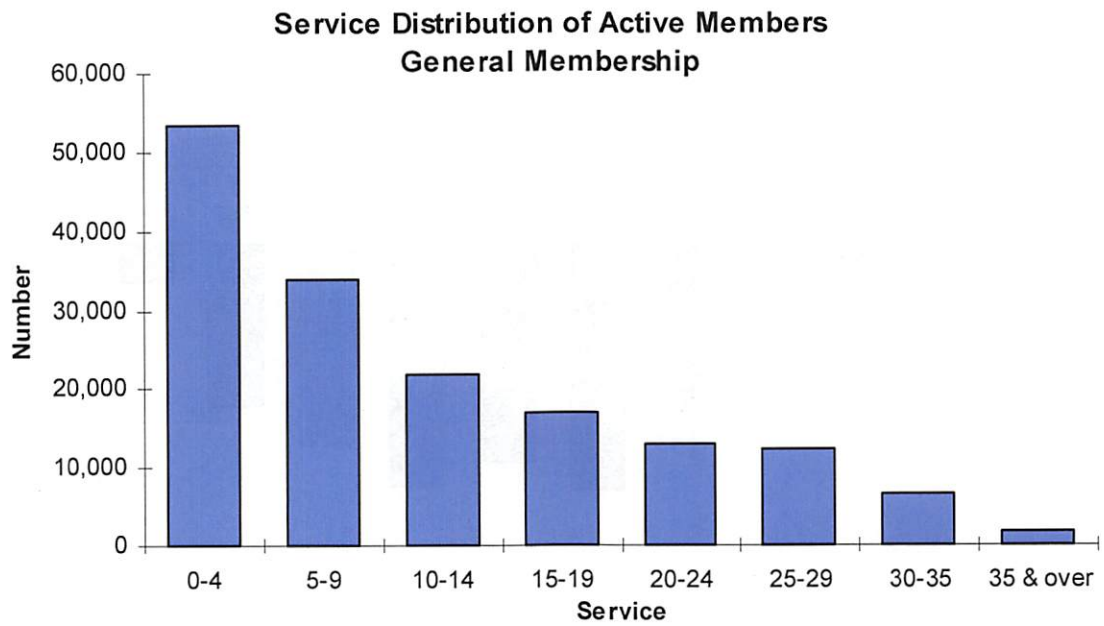
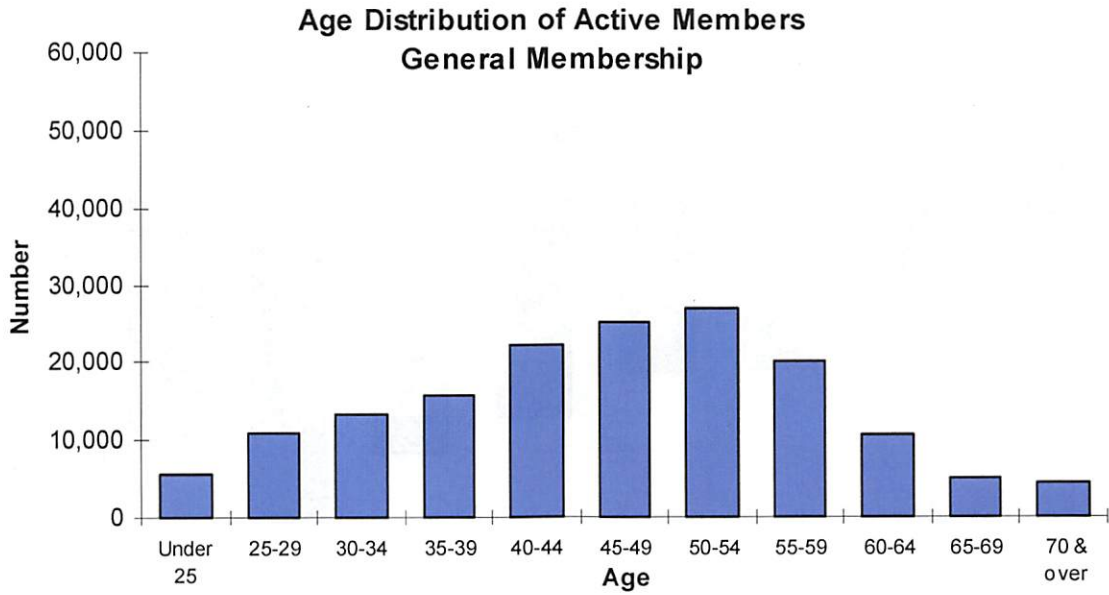
\*Including retired/reemployed members

## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2003 FOR ACTIVE MEMBERS\*

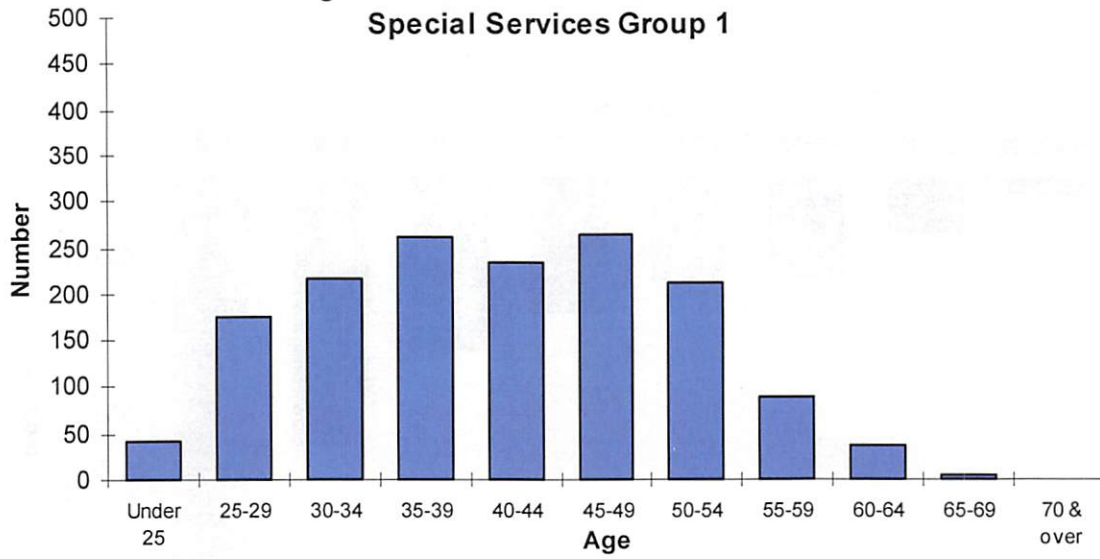
Males and Females - Special Service Group 2

Age	Years of Service																		Total	
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 and over		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	163	21,375	3	33,428	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	166	21,593
25-29	325	25,063	133	34,388	2	26,905	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	460	27,767
30-34	253	24,967	312	35,295	87	38,858	2	41,738	0	NA	0	NA	0	NA	0	NA	0	NA	654	31,793
35-39	167	24,879	209	34,888	177	39,507	71	40,898	0	NA	0	NA	0	NA	0	NA	0	NA	624	34,203
40-44	134	25,614	189	33,835	115	40,042	154	42,516	97	44,398	6	41,764	0	NA	0	NA	0	NA	695	36,743
45-49	113	24,582	133	33,356	94	40,108	98	41,806	152	44,484	67	45,554	1	42,198	0	NA	0	NA	658	37,898
50-54	65	28,205	104	35,370	70	36,935	72	42,268	115	43,535	114	45,186	39	49,440	1	65,472	0	NA	580	40,158
55-59	37	26,861	70	34,691	45	37,921	44	42,210	49	43,679	36	46,239	45	50,490	10	46,470	0	NA	336	40,260
60-64	18	16,214	33	34,284	20	39,073	21	36,912	26	41,008	11	44,769	8	47,363	6	52,478	3	48,535	146	36,835
65-69	5	8,079	11	24,715	5	20,491	4	35,715	3	42,085	0	NA	0	NA	0	NA	1	56,522	29	25,529
70 & over	4	12,388	1	44,864	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	5	18,883
<b>Totals</b>	<b>1,284</b>	<b>24,548</b>	<b>1,198</b>	<b>34,527</b>	<b>615</b>	<b>38,989</b>	<b>466</b>	<b>41,739</b>	<b>442</b>	<b>43,908</b>	<b>234</b>	<b>45,346</b>	<b>93</b>	<b>49,691</b>	<b>17</b>	<b>49,708</b>	<b>4</b>	<b>50,532</b>	<b>4,353</b>	<b>34,918</b>

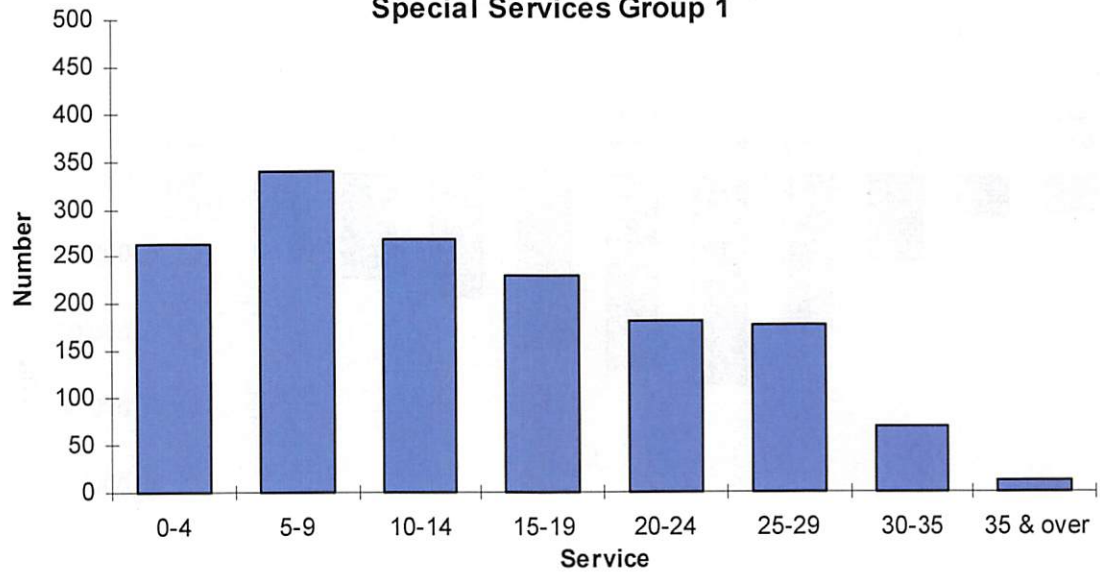
\*Including retired/reemployed members



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

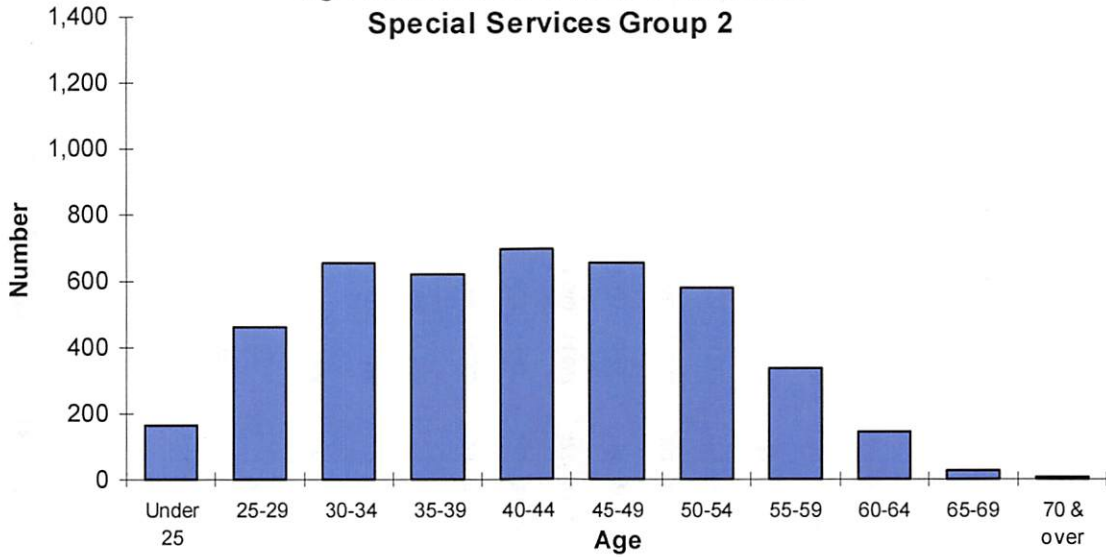


**Service Distribution of Active Members  
Special Services Group 1**

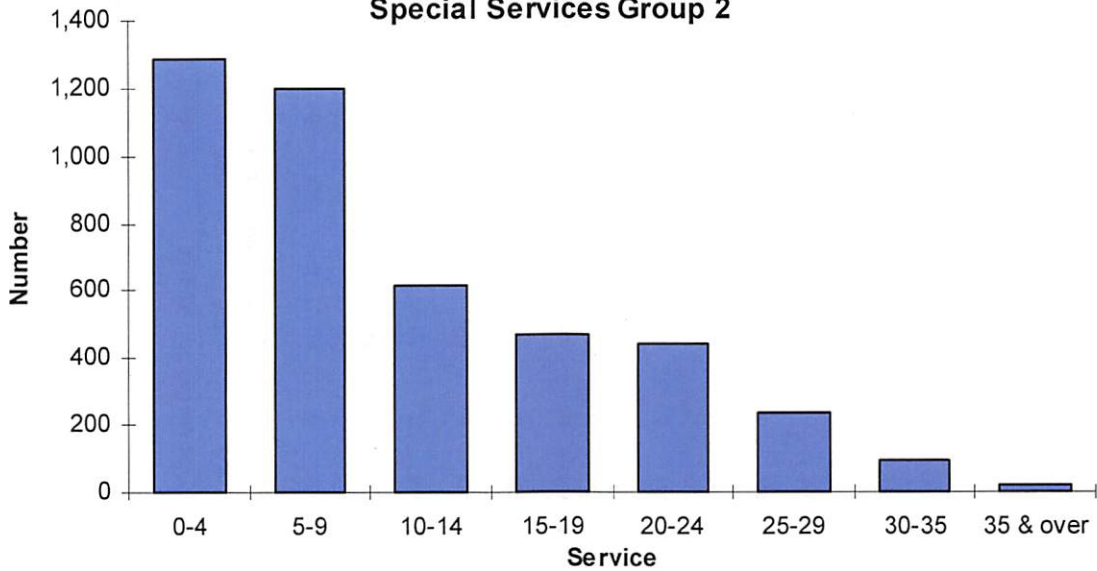




**Age Distribution of Active Members  
Special Services Group 2**



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



## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2003 FOR INACTIVE VESTED MEMBERS

Males and Females - General Membership

Age	Years of Service																			
	0 to 3		4 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 and over		Total	
	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	16	7,936	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	16	1,565
25-29	0	NA	328	20,228	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	328	4,019
30-34	0	NA	1,227	21,814	46	11,858	1	1,427	0	NA	0	NA	0	NA	0	NA	0	NA	1,274	5,785
35-39	0	NA	1,567	20,633	344	14,303	29	30,658	0	NA	0	NA	0	NA	0	NA	0	NA	1,940	7,890
40-44	0	NA	2,037	17,343	657	15,030	240	30,926	51	29,422	3	29,823	0	NA	0	NA	0	NA	2,988	9,825
45-49	0	NA	2,382	16,005	1,049	14,687	477	27,126	237	31,796	33	32,821	2	28,797	0	NA	0	NA	4,180	12,411
50-54	0	NA	2,535	15,745	1,301	16,452	734	26,322	408	31,428	201	38,806	51	38,814	0	NA	0	NA	5,230	16,690
55-59	6,766	4,808	1,906	13,346	792	15,618	433	22,725	196	28,384	88	33,078	21	39,587	2	29,834	0	NA	10,204	5,067
60-64	3,772	4,510	927	11,413	337	14,908	139	18,823	60	21,925	20	24,449	6	31,545	2	26,468	0	NA	5,263	3,538
65-69	2,038	3,719	320	7,232	75	12,528	32	16,217	18	15,592	5	16,337	0	NA	0	NA	0	NA	2,488	1,561
70 & over	994	2,540	87	3,869	17	8,294	10	6,040	7	13,502	1	45,187	0	NA	0	NA	0	NA	1,116	982
Totals	13,570	4,396	13,332	16,344	4,618	15,293	2,095	25,588	977	29,798	351	35,611	80	38,222	4	28,151	0	NA	35,027	7,648



## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2003 FOR INACTIVE VESTED MEMBERS

Males and Females - Special Services Group 1

Age	Years of Service																		Total	
	<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.
	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.	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	2	36,941	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	2	9,785
30-34	0	NA	7	34,494	1	18,123	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	8	15,174
35-39	0	NA	6	31,137	3	31,719	2	41,523	0	NA	0	NA	0	NA	0	NA	0	NA	11	25,104
40-44	0	NA	3	36,031	5	33,728	3	43,492	2	37,123	0	NA	0	NA	0	NA	0	NA	13	38,843
45-49	0	NA	3	20,153	3	31,908	5	29,024	4	31,189	3	49,968	0	NA	0	NA	0	NA	18	50,424
50-54	0	NA	4	33,327	2	42,042	6	29,782	3	37,824	4	39,529	0	NA	0	NA	0	NA	19	50,024
55-59	3	3,526	1	21,002	1	41,498	1	32,047	0	NA	1	46,396	0	NA	0	NA	0	NA	7	27,063
60-64	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
65-69	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
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>3</b>	<b>3,526</b>	<b>26</b>	<b>31,732</b>	<b>15</b>	<b>33,548</b>	<b>17</b>	<b>33,493</b>	<b>9</b>	<b>34,719</b>	<b>8</b>	<b>44,302</b>	<b>0</b>	<b>NA</b>	<b>0</b>	<b>NA</b>	<b>0</b>	<b>NA</b>	<b>78</b>	<b>38,073</b>

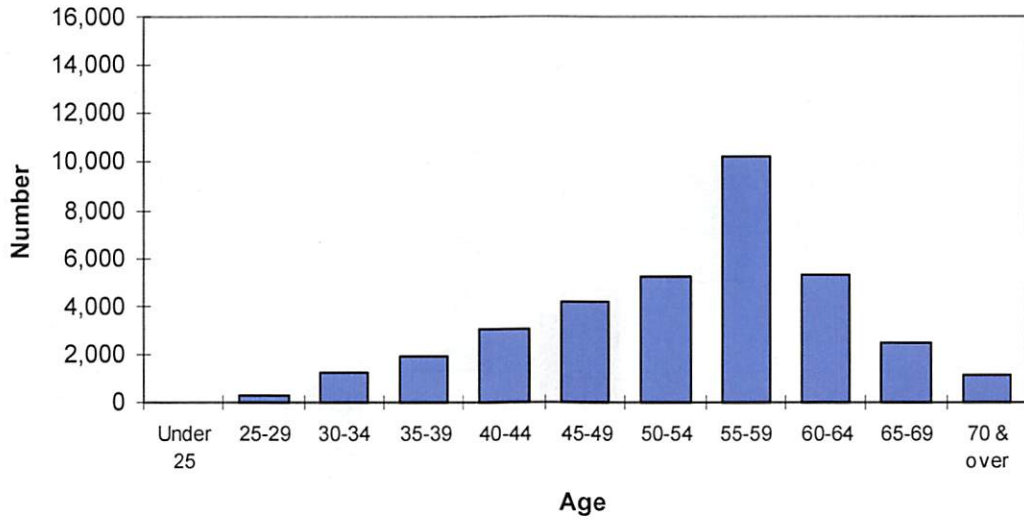
## AGE AND SERVICE DISTRIBUTION AS OF JUNE 30, 2003 FOR INACTIVE VESTED MEMBERS

Males and Females - Special Services Group 2

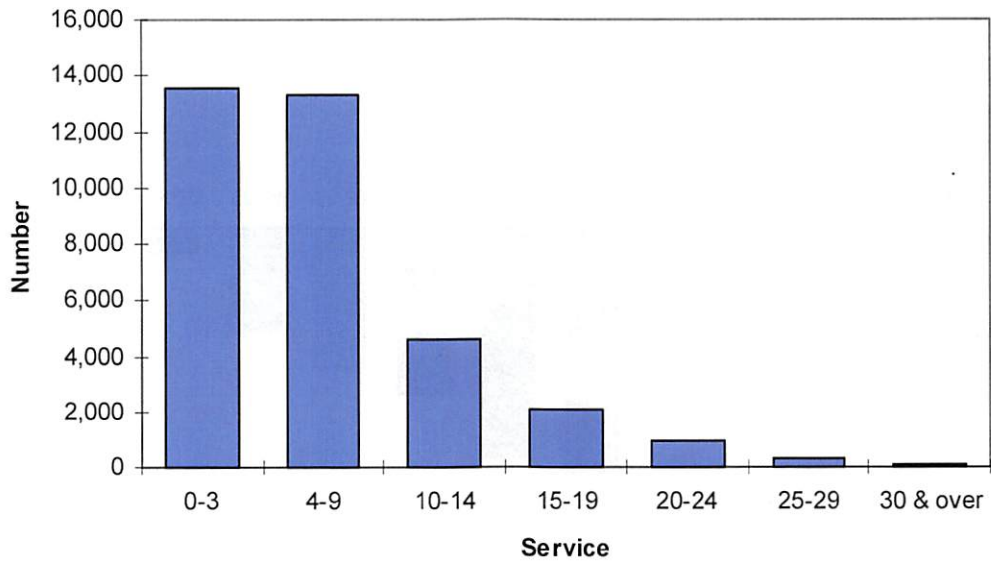
Age	Years of Service																			
	<u>0 to 3</u>		<u>4 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		<u>Total</u>	
	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. Hi-3	No.	Avg. 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	14	16,642	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	14	4,439
30-34	0	NA	26	22,425	1	19,031	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	27	8,678
35-39	0	NA	31	18,520	8	25,248	2	33,063	0	NA	0	NA	0	NA	0	NA	0	NA	41	13,179
40-44	0	NA	28	14,182	11	26,827	5	23,588	3	31,996	0	NA	0	NA	0	NA	0	NA	47	16,920
45-49	0	NA	19	18,268	8	27,134	6	31,285	5	33,222	3	37,069	0	NA	0	NA	0	NA	41	25,287
50-54	0	NA	15	19,039	6	17,292	5	25,603	8	31,901	4	42,241	0	NA	0	NA	0	NA	38	30,636
55-59	15	9,673	11	21,100	2	21,207	0	NA	3	29,056	1	33,177	2	42,114	0	NA	0	NA	34	16,408
60-64	17	10,118	5	9,271	1	3,318	0	NA	0	NA	1	4,015	0	NA	0	NA	0	NA	24	3,021
65-69	1	1,921	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	1	469
70 & over	3	1,449	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	3	224
<b>Totals</b>	<b>36</b>	<b>8,982</b>	<b>149</b>	<b>18,110</b>	<b>37</b>	<b>23,856</b>	<b>18</b>	<b>27,766</b>	<b>19</b>	<b>31,814</b>	<b>9</b>	<b>35,262</b>	<b>2</b>	<b>42,114</b>	<b>0</b>	<b>NA</b>	<b>0</b>	<b>NA</b>	<b>270</b>	<b>16,536</b>



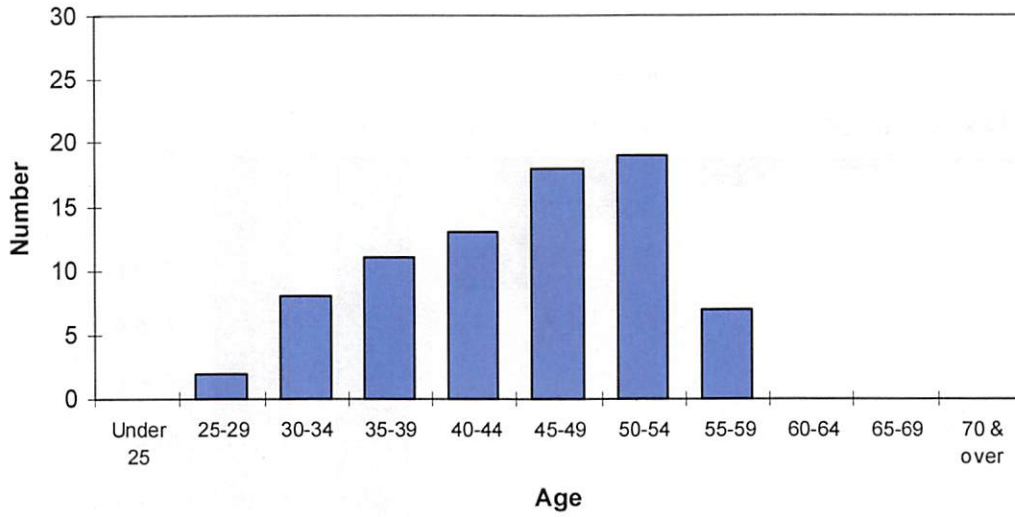
**Age Distribution of Inactive Vested Members  
General Membership**



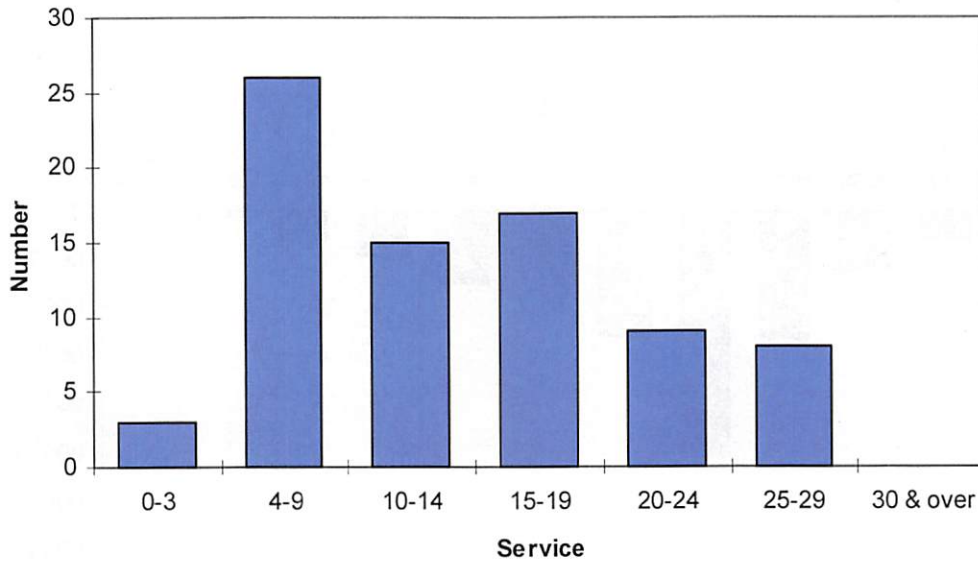
**Service Distribution of Inactive Vested Members  
General Membership**



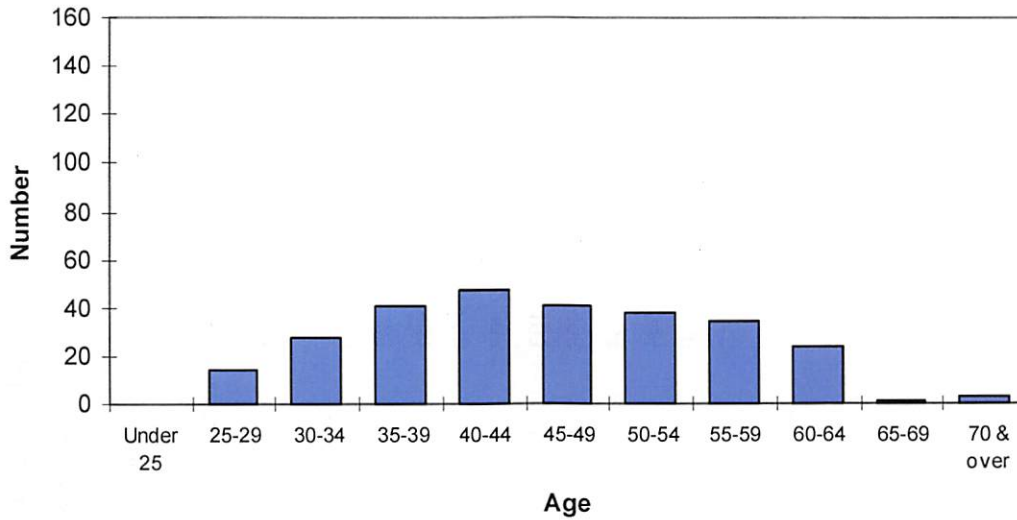
**Age Distribution of Inactive Vested Members  
Special Services Group 1**



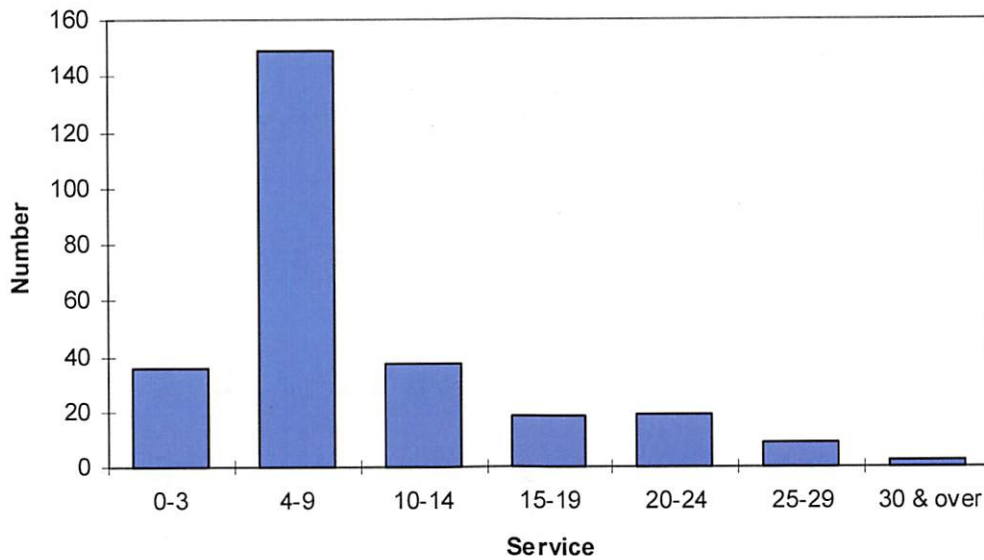
**Service Distribution of Inactive Vested Members  
Special Services Group 1**



**Age Distribution of Inactive Vested Members  
Special Services Group 2**



**Service Distribution of Inactive Vested Members  
Special Services Group 2**



## ANALYSIS OF RETIREES AND BENEFICIARIES

### Males and Females - General 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	11	4	0	2	13	3	3	22	58	\$ 6,600
40 to 44	0	25	2	3	7	13	5	1	7	63	6,343
45 to 49	0	60	15	15	31	28	8	10	5	172	6,947
50 to 54	0	123	35	34	58	69	21	17	9	366	8,739
55 to 59	0	1,255	961	656	539	106	600	712	21	4,850	16,297
60 to 64	0	2,782	1,899	1,411	1,582	192	1,384	797	42	10,089	15,284
65 to 69	0	4,352	2,867	1,667	2,686	354	1,920	272	55	14,173	11,919
70 to 74	0	4,510	3,163	1,428	2,527	483	1,690	62	75	13,938	8,289
75 to 79	0	4,297	2,998	1,170	1,709	563	1,342	1	33	12,113	5,968
80 to 84	1	3,762	1,734	799	943	450	1,330	0	8	9,027	4,924
85 to 89	3	2,773	564	472	305	225	1,038	0	3	5,383	4,078
90 to 94	8	1,401	156	225	54	91	452	0	0	2,387	3,398
95 to 99	8	442	40	90	6	17	81	0	0	684	3,590
100 & up	4	48	12	23	1	1	1	0	0	90	3,633
Counts	24	25,841	14,450	7,993	10,450	2,605	9,875	1,875	280	73,393	\$ 9,162
% of Total	0.0%	35.2%	19.7%	10.9%	14.2%	3.5%	13.5%	2.6%	0.4%	100.0%	

## ANALYSIS OF RETIREES AND BENEFICIARIES

### Males and Females - Special Services 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	1	0	1	0	3	\$15,657
40 to 44	0	0	0	0	0	1	0	0	0	1	2,192
45 to 49	0	1	0	1	1	0	0	1	0	4	20,816
50 to 54	0	2	1	0	1	0	1	2	0	7	19,805
55 to 59	0	16	2	5	15	1	8	14	0	61	23,577
60 to 64	0	16	7	6	25	5	4	2	0	65	21,549
65 to 69	0	11	2	3	25	4	5	6	0	56	17,570
70 to 74	0	5	7	1	12	5	1	0	1	32	12,953
75 to 79	0	0	1	0	0	3	0	0	0	4	9,725
80 to 84	0	0	0	0	1	1	0	0	0	2	6,990
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
<b>Counts</b>	0	52	20	16	80	21	19	26	1	235	\$19,410
<b>% of Total</b>	0.0%	22.1%	8.5%	6.8%	34.0%	8.9%	8.1%	11.1%	0.4%	100.0%	

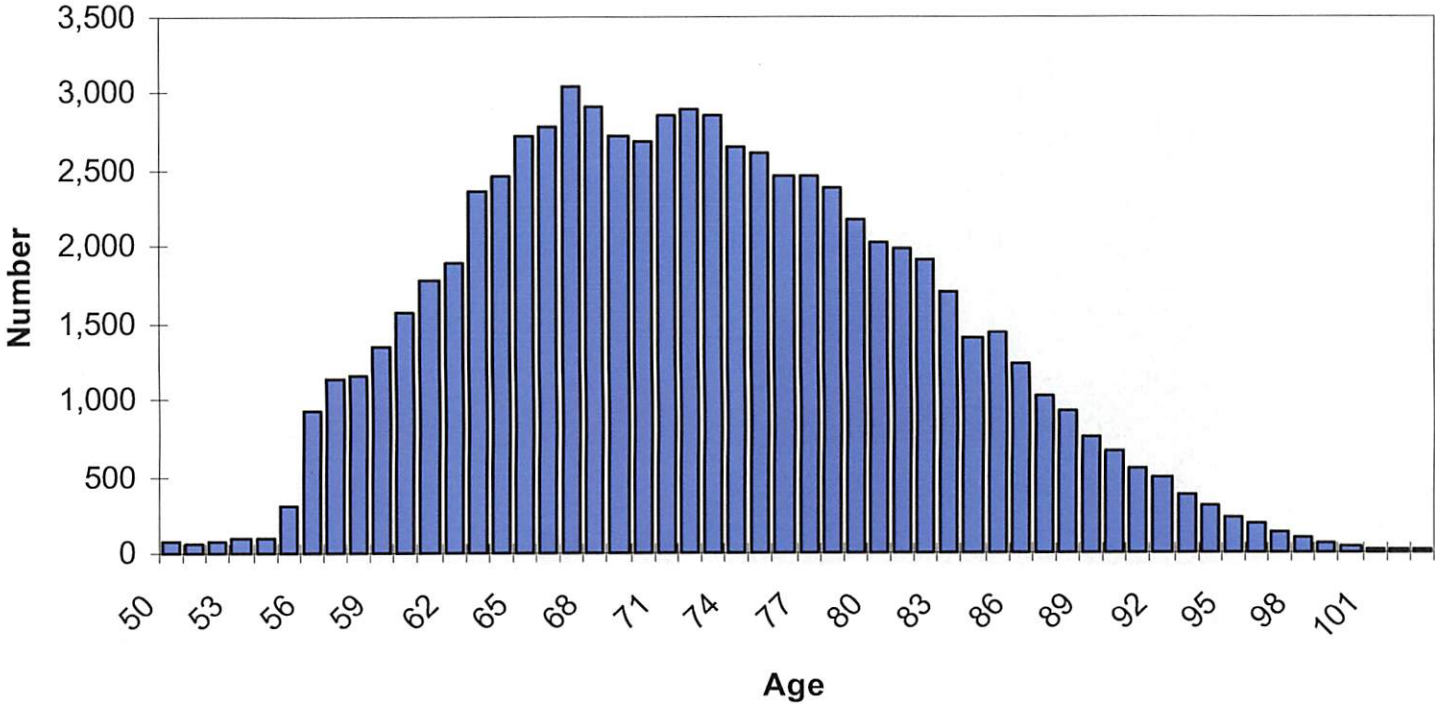


## ANALYSIS OF RETIREES AND BENEFICIARIES

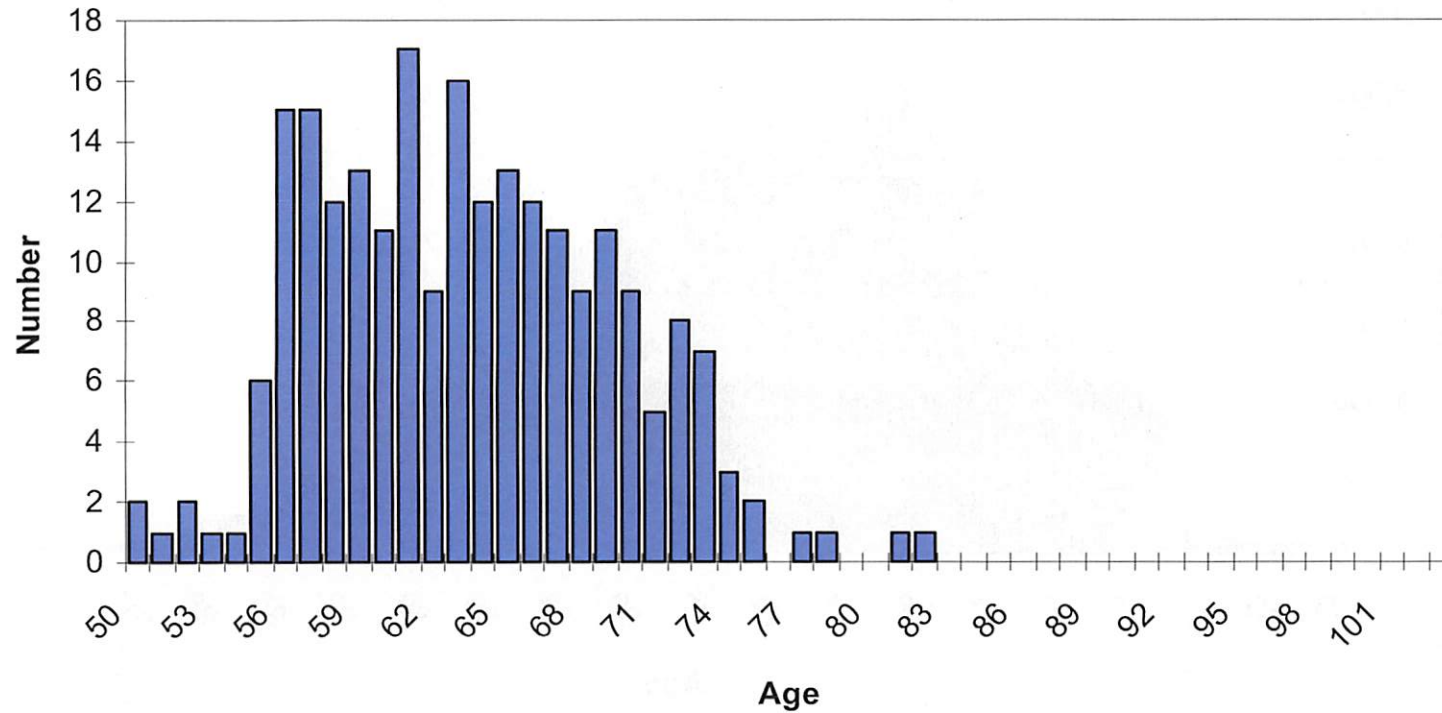
### Males and Females - Special Services Group 2

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	1	0	0	1	0	0	0	0	2	\$ 4,664
40 to 44	0	3	1	1	1	0	0	1	0	7	13,739
45 to 49	0	1	1	1	3	0	0	2	0	8	17,589
50 to 54	0	3	1	0	4	3	0	4	0	15	17,726
55 to 59	0	29	12	5	19	1	8	13	0	87	19,032
60 to 64	0	41	20	10	52	6	8	12	2	151	16,416
65 to 69	0	44	13	5	59	5	13	3	1	143	14,787
70 to 74	0	20	6	2	31	5	5	0	1	70	12,568
75 to 79	0	1	1	0	4	4	3	0	0	13	9,415
80 to 84	0	1	0	0	0	2	0	0	0	3	9,379
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
<b>Counts</b>	0	144	55	24	174	27	37	35	4	500	\$15,598
<b>% of Total</b>	0.0%	28.8%	11.0%	4.8%	34.8%	5.4%	7.4%	7.0%	0.8%	100.0%	

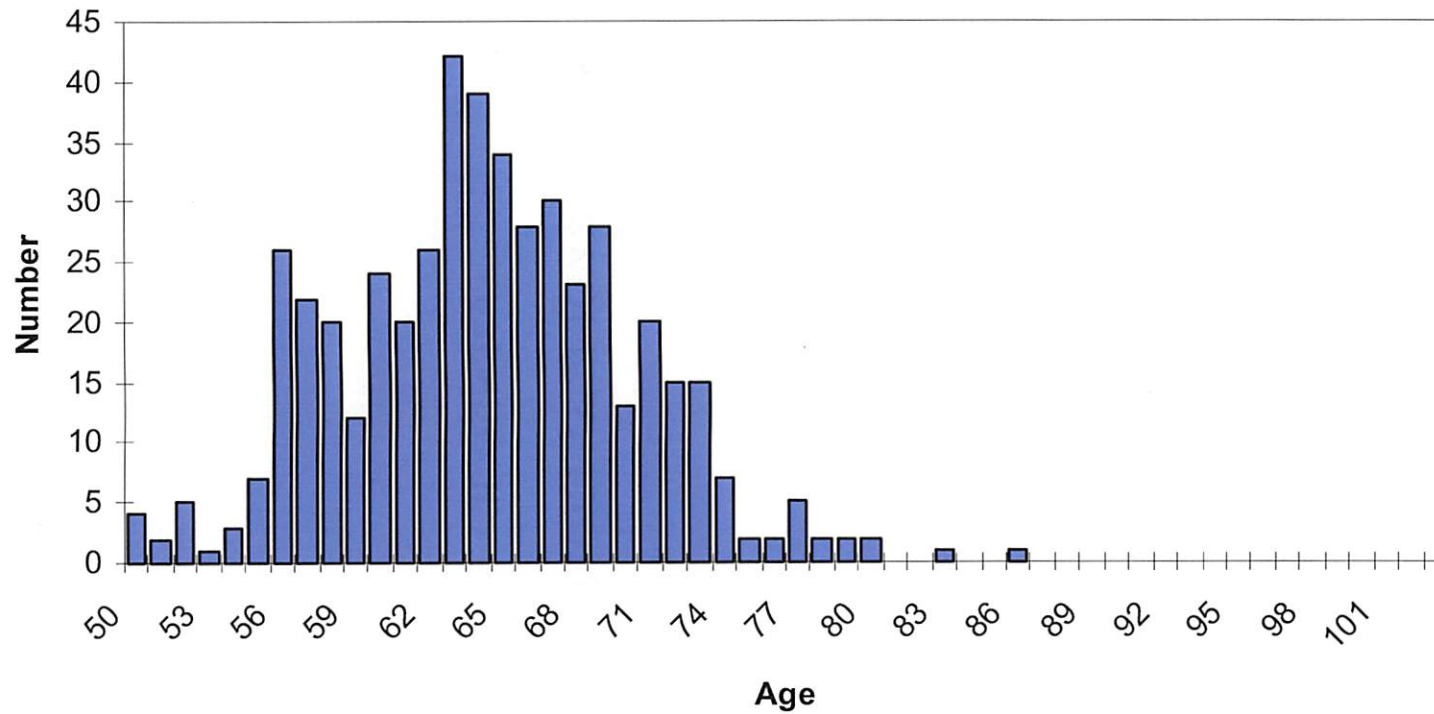
## Age Distribution of Retirees & Beneficiaries General Membership



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



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



**APPENDIX B**  
**SUMMARY OF PLAN PROVISIONS**





## APPENDIX B SUMMARY OF PLAN PROVISIONS

### IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

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.

**Final Average Salary:** The average of covered salaries for the highest paid three years of the member's service.

#### 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 age 55. Age 55 for Special Services members.
Early Retirement	First day of any month starting with the month of the member's 55th birthday but preceding the normal retirement date.
Late Retirement	After normal retirement date.
Deferred Vested Benefit	Before age 55 with at least four years of service.
Death Benefit	Upon death of a member before benefits have started.

#### Retirement Benefits:

Normal Retirement	An annual annuity equal to 2% of Final Average Salary (FAS) for each year of service up to 30 years plus 1% of FAS for each of the next 5 years of service. Maximum years of service recognized for benefit accrual purposes is 35.  Members who are sheriffs, deputies, or airport firefighters (Special Services Group 1) receive 60% of FAS after completion of 22 years of service, plus an additional 1.5% of
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FAS for years of service greater than 22 but not more than 30. Members of the other special service groups receive 60% of FAS after completion of 22 years of service plus an additional 1% (1.5% beginning in 2003) of FAS for each additional year up to a total of 30.

Early Retirement

An annuity, payable at the normal retirement date, determined in the same manner as for normal retirement. A reduction of .25% per month is applied for each month the benefit commences prior to normal retirement age.

Late Retirement

An annuity, payable after covered employment ends, determined as for normal retirement.

Form of Annuity:

The base form, or normal form, is a life annuity with a guaranteed return of employee contributions. Optional forms include a straight life annuity, a ten year certain and life thereafter annuity, joint and survivor annuities (with 25%, 50%, 75% or 100% to the surviving joint annuitant), and joint and survivor annuities with a pop-up.

Termination Benefits:

Before age 55, with less four years of service

A refund of the member's contributions with interest.

Before age 55 with four or more years of service

At the member's election either:

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

NOTE: A person eligible for, and receiving, federal social security disability benefits may begin IPERS benefits, unreduced, at any age.

Post-retirement Benefit Increases:

Annual dividends are paid to those retired prior to July 1990. Effective with the November 2000 dividend payment, the dividend will be 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%.

Death Benefits:

A lump sum equal to the greater of 1) the member's contributions with interest, plus 1/30 of the member's salary times years of membership service (up to 30) and 2) the present value of the member's accrued benefit. The beneficiary may optionally elect to receive an actuarially equivalent lifetime annuity.

Special service members killed in the line of duty are entitled to an additional lump sum payment of \$100,000.

Disability Benefits:

An annuity, payable immediately, equal to the Normal Retirement Benefit.

For Special Service Members, the benefit is the greater of the Normal Retirement Benefit and either 50% (for ordinary disability) or 60% (for in-service disability) of Final Average Earnings.

Source of Funds:

General Membership:

Member Contributions	3.7% of covered pay.
Employer Contributions	5.75% of covered pay.

Sheriffs and Deputies:

Member Contributions	Actuarially determined.
Employer Contributions	Actuarially determined.

Protection Occupation:

Member Contributions	Actuarially determined.
Employer Contributions	Actuarially determined.



**APPENDIX C**

**ACTUARIAL METHODS AND ASSUMPTIONS**



## APPENDIX C

### ACTUARIAL METHOD AND ASSUMPTIONS

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.

The assumptions and methods used in the actuarial valuation and the resulting liabilities are presented in this Section II.

#### PART A - 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 accrued 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 2002, based on experience from 1998-2001.





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

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

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

	<u>General Membership</u>	<u>Special Services</u>
Males:	Inactive Lives: RP-2000 Healthy Annuitant Table, Set Forward One Year	RP-2000 Healthy Annuitant Table Set Forward Three Years
	Active Lives: RP-2000 Employee Table, Set Forward One Year	RP-2000 Employee Table Set Forward Three Years
Females:	Inactive Lives: RP-2000 Healthy Annuitant Table, Set Back Two Years	RP-2000 Healthy Annuitant Table No Age Adjustment
	Active Lives: RP-2000 Employee Table, Set Back Two Years	RP-2000 Employee Table No Age Adjustment
Disabled Members:	Annual rates are the greater of 3% or 2.5% plus the corresponding non-disabled rate (no set forward or set back applied)	Same as healthy members set forward 6 years
Beneficiaries:	Same as members	Same as members

**Rates of Disablement (effective June 30, 1999)**

<u>Age</u>	<u>Annual Rate Per 1,000 Members</u>		
	<u>Males</u>	<u>Females</u>	<u>Special Services</u>
27	0.2%	0.2%	0.2%
32	0.2%	0.2%	0.2%
37	0.4%	0.3%	0.4%
42	0.7%	0.5%	0.7%
47	1.4%	0.9%	1.3%
52	3.3%	2.2%	2.35%
57	6.3%	3.9%	5.2%
62	9.0%	6.2%	9.8%

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

*General Membership*

		Annual Rate of Withdrawals Per 1,000 Members					
<b>Males:</b>							
<u>Age</u>	<u>Years 0-1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Years 4-6</u>	<u>Years 7-8</u>	<u>Years 9+</u>	
22	330.0	250.0	220.0	99.0	88.0	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	39.0	
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>Females:</b>							
<u>Age</u>	<u>Years 0-1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Years 4-6</u>	<u>Years 7-8</u>	<u>Years 9+</u>	
22	330.0	250.0	220.0	110.0	99.0	55.0	
27	275.0	170.0	140.0	110.0	99.0	55.0	
32	247.5	170.0	140.0	105.5	72.0	49.5	
37	198.0	150.0	140.0	105.5	66.0	36.3	
42	198.0	150.0	140.0	88.0	61.0	30.8	
47	198.0	130.0	140.0	82.5	49.5	25.3	
52	198.0	130.0	140.0	82.5	49.5	25.3	
55+	198.0	130.0	140.0	82.5	49.5	25.3	

*Special Services*

Age	Annual Rate of Withdrawals Per 1,000 Members
22	100
27	70
32	35
37	35
42	35
47	35
52	30

Rate of Election of Return of Contributions by Vested Members (effective June 30, 2002)

<u>Years of Service</u>	<u>General Membership</u>		<u>Special Services</u>
	<u>Males</u>	<u>Females</u>	
5	39%	30%	47%
10	34%	27%	35%
15	29%	20%	15%
20	24%	15%	5%
25	20%	10%	0%
30	15%	5%	0%

Rates of Salary Increase (effective June 30, 1999)

**Annual Rate of Increase Per 1,000 Members (%)**

<u>Age</u>	<u>Years 0-1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Years 4-5</u>	<u>Years 6-7</u>	<u>Years 8-10</u>	<u>Years 11-15</u>	<u>Years 16-20</u>	<u>Years 21+</u>
22	18.5	12.5	8.5	8.0	7.5	6.0	5.5	5.0	4.9
27	15.5	10.0	8.3	7.0	6.5	6.0	5.5	5.0	4.9
32	14.8	9.8	8.0	7.0	6.5	6.0	5.5	5.0	4.9
37	14.7	9.8	8.0	7.0	6.3	6.0	5.5	5.0	4.9
42	14.7	9.2	8.0	7.0	6.2	6.0	5.5	4.9	4.9
47	14.2	9.0	8.0	7.0	6.2	5.5	5.2	4.8	4.2
52	13.3	8.3	6.9	7.0	6.2	5.5	5.0	4.5	4.2
57	12.5	7.7	6.9	7.0	5.7	5.5	4.6	4.5	4.2
62	10.9	7.1	6.7	6.0	4.5	4.5	4.5	4.5	4.0

Retirement Rates (effective June 30, 2002)

Upon meeting the requirements for early retirement, the following rates apply to general 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 Services</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%

Terminated vested members are assumed to retire at age 62 (55 for special services). Retired re-employed members are assumed to retire at a rate of 25% per year until age 80 when all are assumed to retire.

**Rate of Crediting Interest on Contribution Balances (effective June 30, 2002)**

4.25% per annum, compounded annually

**Rate of Inflation (effective June 30, 1999)**

3.5% per annum

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

4.0% per annum

## 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 accrued liability (UAAL) 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.

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 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 accrued liability (UAAL). The difference between the statutory contribution rate (9.45%) and the normal cost rate is used to finance the UAAL and the number of years necessary to finance the unfunded actuarial accrued liability as a level percent of member payroll is determined.





## DEFINITION OF TERMS

<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 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>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<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 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>Experience Gain(Loss)</b>	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
<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>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**



## 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.