# MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM 

## REVISED ACTUARIAL VALUATION AS OF JUNE 30, 2005

G. S. CURRAN \& COMPANY, LTD.<br>Actuarial Services<br>10555 N. Glenstone Place • Baton Rouge, Louisiana 70810 • (225) 769-4825

Gary S. Curran, FCA, MAAA, ASA, EA
Consulting Actuary

December 15, 2005

Board of Trustees<br>Municipal Employees' Retirement System<br>7937 Office Park Blvd.<br>Baton Rouge, LA 70809

Ladies and Gentlemen:
We are pleased to present our report on the actuarial valuation of the Municipal Employees' Retirement System for the fiscal year ending June 30, 2005. Our report is based on the actuarial assumptions specified and relies on the data supplied by the system's administrative director and auditors. This report was prepared at the request of the Board of Trustees of the Municipal Employees' Retirement System. The primary purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 2006, and to provide information required for the system's financial statements. In addition, this report recommends employer contribution rates for fiscal 2007.

This report has been prepared in accordance with generally accepted actuarial principles and practices, and to the best of our knowledge and belief fairly reflects the actuarial present values and costs stated herein.

Sincerely,
G. S. CURRAN \& COMPANY, LTD.

By:


## TABLE OF CONTENTS

## SUBJECT

PAGE
Summary of Valuation Results - Plan A ..... 1
Summary of Valuation Results - Plan B ..... 2
Comments on Data ..... 3
Comments on Actuarial Methods and Assumptions ..... 4
Changes in Plan Provisions ..... 5
Asset Experience ..... 5
Plan A - Demographic and Liability Experience ..... 7
Plan B - Demographic and Liability Experience ..... 7
Funding Analysis and Recommendations ..... 8
Cost of Living Increases ..... 10
Graphs ..... 12
Exhibit I - Plan A: Analysis of Actuarially Required Contributions ..... 22
Exhibit II - Plan A: Present Value of Future Benefits ..... 23
Exhibit III - Plan A: Actuarial Value of Assets ..... 24
Exhibit IV - Plan A: Present Value of Future Contributions ..... 25
Exhibit V - Plan A: Change in Frozen Unfunded Actuarial Accrued Liability ..... 25
Exhibit VI - Plan A: Analysis of Increase in Assets ..... 26
Exhibit VII - Plan A: Fund Balance ..... 27
Exhibit VIII - Plan A: Pension Benefit Obligation ..... 27
Exhibit IX - Plan A: Cost Of Living Adjustments - Target Ratio. ..... 28
Exhibit X - Plan A: Census Data ..... 29
Exhibit XI - Plan A: Year to Year Comparison ..... 37
Exhibit XII - Plan B: Analysis of Actuarially Required Contributions ..... 40
Exhibit XIII - Plan B: Present Value of Future Benefits ..... 41
Exhibit XIV - Plan B: Actuarial Value of Assets ..... 42
Exhibit XV - Plan B: Present Value of Future Contributions. ..... 43
Exhibit XVI - Plan B: Change in Frozen Unfunded Actuarial Accrued Liability ..... 43
Exhibit XVII - Plan B: Analysis of Increase in Assets ..... 44
Exhibit XVIII - Plan B: Fund Balance ..... 45
Exhibit XIX - Plan B: Pension Benefit Obligation ..... 45
Exhibit XX - Plan B: Cost Of Living Adjustments - Target Ratio ..... 46
Exhibit XXI - Plan B: Census Data ..... 47
Exhibit XXII - Plan B: Year to Year Comparison ..... 55
Summary of Principal Plan Provisions. ..... 57
Actuarial Assumptions ..... 61
Glossary ..... 68

## SUMMARY OF VALUATION RESULTS MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM - PLAN A

Valuation Date:

Census Summary: | Active Members |
| :--- |
| Retirees and Beneficiaries |
|  |
|  |
|  |
| Terminated Due a Deferred Benefit |
| Terminated Due a Refund |

## Payroll:

Benefits in Payment:
Frozen Unfunded Actuarial Accrued Liability:
Market Value of Assets:
Actuarial Asset Value:
Actuarial Accrued Liability (as defined by GASB-25)

June 30, 2005

|  | 5,289 | 5,325 |
| :---: | :---: | :---: |
|  | 2,512 | 2,448 |
|  | 186 | 193 |
|  | 2,263 | 2,266 |
| $\$$ | $140,020,164$ | $\$ 135,925,550$ |
| $\$$ | $30,555,460$ | $\$ 29,043,640$ |
| $\$$ | $71,277,872$ | $\$ 70,149,946$ |
| $\$$ | $521,411,279$ | $\$ 485,539,046$ |
| $\$ 510,523,409$ | $\$ 465,429,341$ |  |
| $\$ 581,801,281$ | $\$ 535,579,287$ |  |
|  | $87.75 \%$ | $86.90 \%$ |

FISCAL 2006
Net Employer Normal Cost (July 1):
Amortization Cost (July 1):
Total Employer Actuarially Required Contribution (Including Estimated Administrative Costs):
$\$ 21,026,001$ \$ $19,751,813$
\$ 4,328,373
\$ 26,980,193
\$ 4,151,916
FISCAL 2005
\$ 25,499,485

Contribution as a Percentage of Projected Payroll: $\quad 16.30 \% \quad 15.87 \%$
Net Direct Employer Actuarially Required

Recommended Net Direct Employer Contribution Rate: For Fiscal 2007: 16.25\% For Fiscal 2006: 16.00\%
Employee Contribution Rate: $9.25 \%$ of Payroll
Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method
Valuation Interest Rate: 8\% (Net of Investment Expense)
Exclusions from Census: None
Basis of Actuarial Asset Value: Market Value of Assets adjusted to reflect a three year smoothing of realized and unrealized capital gains. Expense fund assets were allocated to each plan in proportion to reported payroll.

Changes in Valuation Methods, Assumptions, and Amortization Periods: Changes were made in the mortality tables used for non-disabled lives. In addition, assumed rates of retirement, DROP entry, post-DROP retirement, and withdrawal were changed to reflect recent experience. Finally, the period over which realized and unrealized capital gains and losses are spread over future normal costs was changed from three years to two years.

Method of Recognizing Gains and Losses: Under the Frozen Attained Age Normal Method, actuarial gains and losses are spread over future normal costs.

## SUMMARY OF VALUATION RESULTS MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM - PLAN B



## G. S. CURRAN \& COMPANY, LTD.

## COMMENTS ON DATA

For the valuation, the administrative director of the system furnished a census on magnetic diskette derived from the system's master data processing file indicating each active covered employee's sex, date of birth, service credit, annual salary, and accumulated contributions. Information on retirees detailing dates of birth of retirees and beneficiaries, as well as option categories and benefit amounts, was provided in like manner. In addition, data was supplied on former employees who are vested or who have contributions remaining on deposit. As illustrated in Exhibit X, there are 5,289 active members in Plan A of whom 2,357 have vested retirement benefits including 216 participants in the Deferred Retirement Option Plan (DROP); 2,512 former Plan A members or their beneficiaries are receiving retirement benefits. An additional 2,449 Plan A members have contributions remaining on deposit with the system; of this number, 186 have vested rights for future retirement benefits. Census data on Plan B members may be found in Exhibit XXI. There are 2,038 active members in Plan B of whom 804 have vested retirement benefits including 51 participants in the Deferred Retirement Option Plan (DROP); 745 former Plan B members or their beneficiaries are receiving retirement benefits. An additional 885 Plan $B$ members have contributions remaining on deposit with the system; of this number, 79 have vested rights for future retirement benefits. All individuals submitted were included in the valuation.

Census data submitted to our office is tested for errors. Several types of census data errors are possible; to ensure that the valuation results are as accurate as possible, a significant effort is made to identify and correct these errors. In order to minimize coverage errors (i.e., missing or duplicated individual records) the records are checked for duplicates, and a comparison of the current year's records to those submitted in prior years is made. Changes in status, new records, and previous records which have no corresponding current record are identified. This portion of the review indicates the annual flow of members from one status to another and is used to check some of the actuarial assumptions, such as retirement rates, rates of withdrawal, and mortality. In addition, the census is checked for reasonableness in several areas, such as age, service, salary, and current benefits. The records identified by this review as questionable are checked against data from prior valuations; those not recently verified are included in a detailed list of items sent to the system's administrative staff for verification and/or correction. Once the identified data has been researched and verified or corrected, it is returned to us for use in the valuation. Occasionally some requested information is either unavailable or impractical to obtain. In such cases, values may be assigned to missing data. The assigned values are based on information from similar records or based on information implied from other data in the record.

In addition to the statistical information provided on the system's participants, the system's administrative director furnished general information related to other aspects of the system's expenses, benefits and funding. Valuation asset values as well as income and expenses for the fiscal year were based on information furnished by the system's auditor, the firm of Duplantier, Hrapmann, Hogan \& Maher, L.L.P. As indicated in the system's audit report, the net market value of Plan A's assets was $\$ 521,411,279$ as of June 30, 2005. Net investment income for fiscal 2005 measured on a market value basis for Plan A amounted to $\$ 34,934,650$. Contributions to the system for the fiscal year totaled $\$ 38,076,861$; benefits and expenses amounted to $\$ 37,139,278$. The net market value of Plan B's assets was $\$ 101,109,899$ as of June 30, 2005. Net investment income for fiscal 2005 measured on a market value basis for Plan B amounted to $\$ 6,738,799$. Contributions to the system for the fiscal year totaled $\$ 8,395,669$; benefits and expenses amounted to $\$ 6,929,312$.

Notwithstanding our efforts to review both census and financial data for apparent errors, we must rely upon the system's administrative staff and accountants to provide accurate information. Our review of submitted information is limited to validation of reasonableness and consistency. Verification of submitted data to source information is beyond the scope of our efforts.

## COMMENTS ON ACTUARIAL METHODS AND ASSUMPTIONS

This valuation is based on the Frozen Attained Age Normal actuarial cost method with the unfunded actuarial accrued liability frozen as of June 30, 1989. Under the provisions of Louisiana R.S. 11:103 the unfunded accrued liability for Plan A, which was determined to be $\$ 48,466,297$ as of June 30 , 1989, was amortized over forty years with payments increasing at $4.25 \%$ per year. The unfunded accrued liability for Plan B, which was determined to be $\$ 9,853,175$ as of June 30 , 1989, was amortized over forty years with payments decreasing at $2 \%$ per year. In accordance with R.S. $11: 105$, in any year in which the net direct employer contribution is scheduled to decrease, the board of trustees may freeze the net direct employer contribution rate and use the excess funds collected, if any, to reduce the frozen unfunded actuarial accrued liability. In Plan B, the board elected to freeze the employer contribution rate in fiscal 2001. As a result of this freeze in rates, the unfunded accrued liability will be fully amortized by June 30, 2023. In Plan A, payroll growth in excess of $4.25 \%$ per year will reduce future amortization payments as a percent of payroll. In Plan B, any payroll growth or payroll decline less than $2 \%$ per year will reduce future amortization payments as a percent of payroll. Under the Frozen Attained Age Normal Cost Method, actuarial gains and losses are spread over future normal costs. Thus, favorable plan experience will lower future normal costs; unfavorable experience will cause future normal costs to increase. In addition, changes in benefits and assumptions are also spread over future normal costs.

The actuarial assumptions utilized for the report are outlined on pages sixty-one through sixty-four. The valuation for fiscal 2005 utilized updated assumptions related to mortality of plan participants and beneficiaries as well as new assumed rates of withdrawal, retirement, DROP entry, and postDROP retirement. The new assumptions were based on plan specific experience gathered from fiscal 2000 through fiscal 2005. Raw decrement rates for non-mortality decrements were grouped to reduce random fluctuations. A mortality study was performed based on five years of data on deaths within the system. The resulting number of deaths and the value of benefit cessations were compared to the expected results generated through the use of a number of standard mortality tables. The final results of the study revealed that the 1994 Uninsured Pensioner Mortality Table set forward two years exhibits a level of mortality consistent with plan experience adjusted for future expected mortality improvement. In addition to the changes in assumptions, a change was made in the methodology for determining the actuarial value of assets. In Plan A; the period over which capital gains and losses are smoothed was reduced from 3 to 2 years. No change was made for Plan B. The net effect of all changes in methods and assumptions was to increase the normal cost accrual rate by $0.9044 \%$ in Plan A and $0.7974 \%$ in Plan B.

In the aggregate the assumptions represent our "best estimate" of future long-term experience for the fund. All calculations, recommendations, and conclusions are based on the assumptions specified. To the extent that prospective experience differs from that assumed, adjustments will be required to contribution levels. Such differences will be revealed in future actuarial valuations.
G. S. CURRAN \& COMPANY, LTD.

## CHANGES IN PLAN PROVISIONS

Two acts of the 2005 regular legislative session effected changes in the provisions of the retirement system. The following is a short description of those acts:

Act 9 applies to all state and statewide public retirement systems in Louisiana. The act requires each system to make certain reports to the committees on retirement for the House of Representatives and Senate related to any investments in any company having facilities or employees located in a prohibited nation. The term "prohibited nation" is defined to mean Iran, Libya, North Korea, Sudan, or Syria. The act also amends R. S. 11:269 to require each consultant and money manager to submit a written disclosure report semiannually regarding any conflicts of interest, including non-pension sponsor sources of revenue. The act also provides penalties and damages for failure to disclose.

Act 448 creates the Funding Review Panel to study the funding and benefit provisions of the Firefighters' Retirement System, the Municipal Employees' Retirement System, and the Municipal Police Employees' Retirement System. The panel will conduct a review of the actuarial funding and benefit structure of each of the systems and will consider such things as rules related to retirement eligibility, benefit calculations (including the final average compensation), contributions, actuarial assumptions, and cost-of-living criteria. On or before February 15, 2006 the panel will submit a report containing its recommendations for increasing the actuarial soundness of each system to the legislative actuary and the Committees on Retirement for the House of Representatives and Senate.

## ASSET EXPERIENCE

The actuarial and market rates of retum for the past ten years are given below. These rates of return on assets were determined by assuming a uniform distribution of income and expense throughout the fiscal year.

|  |  | Actuarial Value | Market Value |
| :---: | :---: | :---: | :---: |
| PLAN A | 1996 | 12.0\% | 10.6\% |
|  | 1997 | 9.1\% * | 14.1\% |
|  | 1998 | 10.0\% ** | 16.4\% |
|  | 1999 | 12.1\% | 8.2\% |
|  | 2000 | 11.0\% | 9.1\% |
|  | 2001 | 4.5\% | -4.2\% |
|  | 2002 | 1.1\% | -1.8\% |
|  | 2003 | -1.0\% *** | 4.4\% |
|  | 2004 | 3.5\% | 9.6\% |
|  | 2005 | 9.6\% **** | 7.2\% |
| PLAN B |  | Actuarial Value | Market Value |
|  | 1996 | 11.6\% | 10.5\% |
|  | 1997 | 9.2\% * | 14.7\% |
|  | 1998 | 9.7\% ** | 16.2\% |


| 1999 | $11.7 \%$ | $7.9 \%$ |
| ---: | ---: | ---: |
| 2000 | $10.8 \%$ | $8.4 \%$ |
| 2001 | $4.2 \%$ | $-4.2 \%$ |
| 2002 | $0.3 \%$ | $-2.8 \%$ |
| 2003 | $-1.8 \%$ | $* * *$ |
| 2004 | $3.1 \%$ | $3.8 \%$ |
| 2005 | $6.4 \%$ | $9.7 \%$ |
|  |  |  |
|  |  |  |
|  |  |  |

＊Includes the effect of a change in methodology for determining actuarial value of assets．Prior to 1997 the values were based on market values for stocks and amortized cost for fixed income securities．In 1997，values for common stock were based on two－year smoothing of realized and unrealized capital gains．
＊＊Includes the effect of a change from two－year smoothing of realized and unrealized capital gains on common stock to a three－ year smoothing method．
Includes the effect of a change from amortized cost for fixed income securities to three year smoothing of realized and unrealized capital gains．
＊＊＊＊
Includes the effect of a change from three year smoothing of realized and unrealized capital gains to two year smoothing of realized and unrealized capital gains．

The market rate of return gives a measure of investment return on a total return basis and includes realized and unrealized capital gains and losses as well as interest income．This rate of return gives an indication of performance for an actively managed portfolio where securities are bought and sold with the objective of producing the highest total rate of return．The deferral of realized and unrealized capital gains and／or losses on securities was the main reason for the difference between the actuarial and market rates of return．Also，the allocation of expense fund assets and income to both Plan A and Plan B produces an additional very small difference between the actuarial and market rates of return．During 2005，the fund earned $\$ 13,159,971$ of dividends and interest for Plan A and $\$ 2,489,407$ for Plan B．This income was increased by realized and unrealized capital gains of $\$ 23,502,284$ for Plan A and $\$ 4,585,668$ for Plan B and offset by net investment expenses of $\$ 1,727,605$ for Plan A and $\$ 336,276$ for Plan B．The geometric mean of the market value rates of return measured over the last ten years was $7.2 \%$ for Plan A and $7.0 \%$ for Plan B．

The actuarial rate of return is presented for comparison to the assumed long－term rate of return of $8 \%$ used for the valuation．This rate is calculated based on the actuarial value of assets and all interest，dividends，other investment income，and recognized capital gains as given in Exhibit VI for Plan A and Exhibit XVII for Plan B，adjusted for any change in asset determination methodology． For Plan A in Fiscal 2005，it includes one－half of all realized and unrealized capital gains or losses on common stock and fixed income securities accrued during the fiscal year；two－thirds of those gains or losses accrued in the prior fiscal year；and one－third of those gains or losses accrued in the fiscal year two years ago．For Plan B in Fiscal 2005，it includes one－third of all realized and unrealized capital gains or losses on common stock and fixed income securities accrued during the fiscal year and one－third of those gains or losses accrued in the prior two fiscal years．Yields in excess of the $8 \%$ assumption will reduce future costs；yields below $8 \%$ will increase future costs． The geometric mean rate of return on an actuarial basis over the past ten years has been $7.1 \%$ for Plan A and $6.4 \%$ for Plan B．For fiscal 2005，Plan A experienced net actuarial investment earnings of $\$ 6,519,456$ less than the actuarial assumed earnings rate of $8 \%$ ．For Plan $B$ ，the shortfall in earnings amounted to $\$ 1,463,170$ ．These actuarial losses increased the normal cost accrual rate by $0.6123 \%$ and $0.3868 \%$ respectively for Plan A and B．

At the end of each fiscal year, a transfer of assets and liabilities should be made between the Plan A and Plan B trust funds pursuant to the provisions of R.S. 11: 1862(F). In the course of reviewing data for the June 30, 2005 valuation we found six current members of Plan A and one current member of Plan B who have consecutive service credit in both Plan A and Plan B and have not been addressed by previous transfers of assets and liabilities. These members have either changed employers or have been employed by employers who have changed plans. In order to properly assign liabilities to the plan in which they are currently contributing we recommend a transfer of assets of $\$ 62,837$ for these individuals from Plan B to Plan A (adjusted with $8 \%$ interest from June 30,2005 to the date of the transfer). The actuarial and market value of assets as of June 30, 2005, for Plan A and Plan B reflect the receivables and payables related to the transfer of these assets.

## PLAN A - DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the Plan is given in Exhibit X. The Plan's active membership decreased during the fiscal year by 36 members. The plan has experienced a decline in the active plan population of 269 members between 2000 and 2005. Should the five year trend in plan population continue, a change in the structure of the amortization of the frozen unfunded actuarial accrued liability will be required to prevent continual increases in contributions as a percentage of payroll. The number of retirees and beneficiaries receiving benefits from the system increased by 64 during the fiscal year and by 299 over the last five years.

A review of the active census by age indicates that over the last ten years the population in the under-forty age group has decreased while the proportion of active members over-forty increased. Over the same ten-year period the plan showed a decrease in the percentage of members with service less than five years; the percentage of members with service over five years has increased. These trends are indicative of a maturing population.

Plan liability experience for fiscal 2005 was favorable. There was no one significant factor affecting liability experience. Both regular and disability retirements were less than projected; withdrawals and retiree deaths were above projections. All of these elements contributed to cost reduction. DROP entries were above projected levels and salary increases were more than projected, partially offsetting the cost reduction. Plan liability gains reduced the normal cost accrual rate by $0.4137 \%$.

## PLAN B - DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the Plan is given in Exhibit XXI. The Plan's active membership decreased during the fiscal year with a population decrease of fourteen members over the last year. Over the last five years the active population decreased by thirty members. The number of retirees and beneficiaries receiving benefits from the system increased by eleven. Over the last five years this group increased by fifty-six.

A review of the active census by age indicates that over the last ten years the population in the under-forty age group has decreased while the proportion of active members over-forty increased. Over the same ten-year period the system showed a slight decrease in the percentage of members
with service less than five years and the corresponding increase in the percentage of members with service over five years. These trends are indicative of a maturing population.

Plan liability experience for fiscal 2005 was favorable. There was no one significant factor affecting liability experience. Retirements, disabilities, DROP entries, and salary increases were below projected levels. Withdrawals were above projected levels. All of these elements contributed to cost reduction. This was offset in part by retiree deaths slightly below projections. Plan liability gains decreased the normal cost accrual rate by $0.3933 \%$.

## FUNDING ANALYSIS AND RECOMMENDATIONS

Actuarial funding of a retirement system is a process whereby funds are accumulated over the working lifetimes of employees in such a manner as to have sufficient assets available at retirement to pay for the lifetime benefits accrued by each member of the system. The required contributions are determined by an actuarial valuation based on rates of mortality, termination, disability, and retirement, as well as investment return and other statistical measures specific to the particular group. Each year a determination is made of two cost components, and the actuarially required contributions are based on the sum of these two components plus administrative expenses. These two components are the normal cost and the amortization payment on the unfunded actuarial accrued liability. The normal cost refers to the portion of annual cost based on the salary of active participants. The term unfunded accrued liability (UAL) refers to the excess of the present value of plan benefits over the sum of current assets and future normal costs. Each year the UAL grows with interest and is reduced by payments. Under the funding method used for both plans, changes in plan experience, benefits, or assumptions do not affect the unfunded actuarial accrued liability. These items increase or decrease future normal costs.

In order to establish the actuarially required contribution in any given year, it is necessary to define the assumptions, funding method, and method of amortizing the UAL. Thus, the determination of what contribution is actuarially required depends upon the funding method and amortization schedules employed. Regardless of the method selected, the ultimate cost of providing benefits is dependent upon the benefits, expenses, and investment earnings. Only to the extent that some methods accumulate assets more rapidly and thus produce greater investment earnings does the funding method affect the ultimate cost.

For Plan A, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit I. The normal cost for fiscal 2006 as of July 1, 2005, is $\$ 21,026,001$. The amortization payment on the plan's frozen unfunded actuarial accrued liability as of July 1,2005 , is $\$ 4,328,373$. The total actuarially required contribution is determined by adjusting these two values for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 14 of Exhibit I, the total actuarially required contribution for fiscal 2006 is $\$ 26,980,193$. When this amount is reduced by projected tax contributions and revenue sharing funds the resulting employers' net direct actuarially required contribution for fiscal 2006 is $\$ 23,590,303$. This is $16.30 \%$ of the projected Plan A payroll for fiscal 2006.

Liability and asset experience as well as changes in assumptions and benefits can increase or lower plan costs. In addition to these factors, any COLA granted in the prior fiscal year will increase required contributions. New entrants to the system can also increase or lower costs as a percent of payroll depending upon their demographic distribution and other factors related to prior plan experience. Finally, contributions above or below requirements may reduce or increase future costs.

The effects of various factors on the cost structure for Plan A are outlined below:
Normal Cost Accrual Rate - Fiscal $2005 \quad 15.2828 \%$
Factors Increasing the Normal Cost Accrual Rate:

| Asset Experience | $0.6123 \%$ |
| :--- | :--- |
| Assumption Changes | $0.9044 \%$ |
| Contribution Shortfall | $0.0880 \%$ |

Factors Decreasing the Normal Cost Accrual Rate:
New Members -0.5767\%
Liability Experience -0.41.37\%
Normal Cost Accrual Rate - Fiscal 2006
15.8971\%

For Plan B, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit XII. The normal cost for fiscal 2006 as of July 1, 2005, is $\$ 4,981,639$. The amortization payment on the plan's frozen unfunded actuarial accrued liability as of July 1,2005 , is $\$ 674,174$. The total actuarially required contribution is determined by adjusting these two values for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 14 of Exhibit XII, the total actuarially required contribution for fiscal 2006 is $\$ 6,097,169$. When this amount is reduced by projected tax contributions and revenue sharing funds the resulting employers' net direct actuarially required contribution for fiscal 2006 is $\$ 4,918,376$. This is $9.86 \%$ of the projected Plan B payroll for fiscal 2006.

The effects of various factors on the cost structure for Plan B are outlined below:
Normal Cost Accrual Rate - Fiscal $2005 \quad 10.6646 \%$
Factors Increasing the Normal Cost Accrual Rate:

| Assumption Changes | $0.7974 \%$ |
| :--- | :--- |
| Asset Experience | $0.3868 \%$ |
| Contribution Loss | $0.0019 \%$ |

Factors Decreasing the Normal Cost Accrual Rate:

| New Members | $-0.4237 \%$ |
| :--- | ---: |
| Liability Experience | $-0.3933 \%$ |
| Cost Accrual Rate - Fiscal 2006 | $.11 .0337 \%$ |

In addition to the above factors, payroll growth affects plan costs to the extent that payments on the system's unfunded liability are on a schedule that varies from actual trends in payroll growth or
decline. If payroll changes at rates not consistent with the amortization schedule the result will be costs that change as a percentage of payroll. For fiscal 2006, the net effect of the change in payroll on amortization costs was an increase of $0.02 \%$ of payroll for Plan A, and reduced costs $0.05 \%$ of payroll for Plan B. Required net direct employer contributions are also affected by the available ad valorem taxes and revenue sharing funds which the system receives each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. We estimate that for Plan A these funds collected in fiscal 2006 will decrease by $0.04 \%$ of payroll; in Plan B the corresponding decrease is also $0.01 \%$. Although the actuarially required net direct employer contribution rate for Plan A for fiscal 2006 is $16.30 \%$, the actual employer contribution rate for fiscal 2006 is $16.00 \%$ of payroll. After giving consideration to the expected shortfall in, contributions collected in fiscal 2006, as detailed in Exhibit I, we recommend a net direct employer contribution of $16.25 \%$ of payroll for Plan A during fiscal 2007. Although the actuarially required net direct employer contribution rate in Plan B is $9.86 \%$, the actual employer contribution rate for fiscal 2006 is $9.75 \%$ of payroll. After giving consideration to the expected contribution shortfall in fiscal 2006, as detailed in Exhibit XII, we recommend a net direct employer contribution of 9.75\% of payroll for Plan B during fiscal 2007.

Capital market conditions in four of the last five fiscal years have resulted in asset experience losses for the Fund that have significantly increased its cost structure. These market conditions may be temporary or it may indicate that future return expectations should be reduced. In order to illustrate the impact of a reduction in return expectations, we have performed an alternative valuation at an assumed valuation interest rate of $7: 5 \%$ with all other assumptions unchanged. Lowering the valuation interest rate by $0.50 \%$ would significantly increase required funding. The employer normal cost accrual rate would be increased by $4.37 \%$ for Plan A and $2.46 \%$ for Plan B, although there would be a small offset resulting from lower amortization payments on the frozen unfunded accrued liability. In Plan A, the total employer actuarially required contribution would be increased by $\$ 5,926,521$ to $\$ 32,906,714$ and would increase the actuarially required net direct employer contribution rate for fiscal 2006 from $16.30 \%$ to $20.40 \%$. In Plan B, the total employer actuarially required contribution would be increased by $\$ 1,110,275$ to $\$ 7,207,444$ and would increase the actuarially required net direct employer contribution rate for fiscal 2006 from $9.86 \%$ to $12.09 \%$. After adjusting for the contribution shortfall in fiscal 2006, lowering the valuation interest rate from $8 \%$ to $7.50 \%$ in fiscal 2006 would result in a recommended minimum net direct employer contribution rate of $21.00 \%$ for Plan A and $12.25 \%$ for Plan B for fiscal 2007. Please note that any actual change in the valuation interest rate should only be effected with a review of all other plan assumptions. The impact of such other changes are not reflected in the above results. Whether or not the system's valuation rate will need to be adjusted will depend on the actual future portfolio performance and future long-term expectations for the capital markets in general.

## COST OF LIVING INCREASES

During fiscal 2005 the actual cost of living (as measured by the US Department of Labor CPI-U) increased by $2.53 \%$. Cost of living provisions for the system are detailed in R.S. 11:1761 and R.S. 11:246. The former statute allows the board to use interest earnings in excess of the normal requirements to grant annual cost of living increases of $2 \%$ of each retiree's original benefit. R.S. 11:246 provides cost of living increases of retirees and beneficiaries over the age of 65 equal to $2 \%$ of the benefit in payment on October 1, 1977, or the date the benefit was originally received if
retirement commenced after that date. R.S. 11:241 provides that cost of living benefits shall be in the form (unless the board otherwise specifies) of $\$ \mathrm{X} \times(\mathrm{A}+\mathrm{B})$ where X is at most $\$ 1$ and " A " represents the number of years of credited service accrued at retirement or at death of the member or retiree and " B " is equal to the number of years since retirement or since death of the member or retiree to June $30^{\text {th }}$ of the initial year of such increase. The provisions of this subpart do not repeal provisions relative to cost of living adjustments contained within the individual laws governing systems; however, they are to be controlling in cases of conflict. All of the above provisions require that the system earn sufficient excess interest earnings to fund the increases. In addition, the ratio of the plan's assets to benefit obligations must meet the criteria established in R.S. 11:242. This section sets forth a minimum "target ratio" of the actuarial value of assets to the Pension Benefit Obligation. We have determined that for fiscal 2005 Plan A no longer meets the target ratio although Plan B has met the necessary target ratio. Although investment experience in Plan A (including the effect of a change in asset valuation methods) exceeded assumptions, investment experience for Plan B was below assumptions. Neither Plan A nor Plan B qualifies for a cost of living increase since neither plan has both met the necessary target ratio and earned sufficient investment earnings to grant a COLA.

## Plan A-Components of Present Value of Future Benefits June 30, 2005



[^0]
## Plan A - Components of Present Value of Future Benefits



Plan A - Components of Actuarial Funding


Plan A - Frozen Unfunded Accrued Liability

G. S. CURRAN \& COMPANY, LTD.

Plan A
Actuarial Value of Assets vs. GASB-25 Accrued Liability


Plan A - Historical Asset Yield


Plan A - Net Non-Investment Income


Plan A - Total Income vs. Expenses
(Based on Actuarial Value of Assets)

G. S. CURRAN \& COMPANY, LTD.

# Plan A - Active - Census By Age 

(as a percent)


Plan A-Active - Census By Service
(as a percent)


- 16 -
G. S. CURRAN \& COMPANY, LTD.


## Plan B - Components of Present Value of Future Benefits June 30, 2005


$\square$ Present Value of Future Employer Normal Cost
$\square$ Unfunded Accrued Liability
$\square$ Present Value of Future Employee Contributions
$\square$ Actuarial Value of Assets

## Plan B - Components of Present Value of Future Benefits



Plan B-Components of Actuarial Funding


Plan B - Frozen Unfunded Accrued Liability


Plan B
Actuarial Value of Assets vs. GASB-25 Accrued Liability


Plan B - Historical Asset Yield


## Plan B - Net Non-Investment Income



## Plan B - Total Income vs. Expenses

(Based on Actuarial Value of Assets)


|  |  | $\mathbf{1 9 9 6}$ | $\mathbf{1 9 9 7}$ | $\mathbf{1 9 9 8}$ | $\mathbf{1 9 9 9}$ | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Income (\$Mil) | $\square$ | 12.6 | 10.8 | 10.9 | 14.1 | 14.3 | -0.3 | 5.5 | 4.7 | 10.1 | 14.1 |
| Benefits and Expenses (\$Mil) | $\square$ | 7.0 | 4.9 | 4.7 | 5.2 | 6.1 | 6.3 | 6.7 | 7.2 | 6.9 | 7.1 |
| Net Change in AVA (\$Mil) | $\square$ | 5.6 | 5.9 | 6.2 | 8.9 | 8.2 | -6.6 | -1.2 | -2.5 | 3.2 | 7.0 |



Plan B - Active - Census By Service
(as a percent)

G. S. CURRAN \& COMPANY, LTD.

## EXHIBIT I <br> PLAN A: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits
2. Frozen Unfunded Actuarial Accrued Liability.
3. Actuarial Value of Assets
4. Present Value of Future Employee Contributions
5. Present Value of Future Employer Normal Costs (1-2-3-4)
6. Present Value of Future Salaries
7. Employer Normal Cost Accrual Rate $(5 \div 6)$
8. Projected Fiscal 2006 Salary for Current Membership ....................................... \$ 132,262,831

9. Amortization Payment on Frozen Unfunded Accrued Liability of $\$ 71,277,872$
over 24 remaining years with Payments increasing at $4.25 \%$ per year ............... $\$ 4,328,373$
10. Total Employer Normal Cost \& Amortization Payment (9+10) ....................... \$ 25,354,374
11. Employer Normal Cost and Amortization Payment Interest Adjusted
for Midyear Payment................................................................................ \$ 26,349,038
12. Estimated Administrative Cost for Fiscal 2006................................................... \$ 631,155
13. Gross Employer Actuarially Required Contribution for
Fiscal $2006(12+13) \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~ \$ ~ 26,980,193 ~$
14. Projected Tax Contributions for Fiscal 2006...................................................... \$ 3,273,522
15. Projected Revenue Sharing Funds for Fiscal 2006.............................................. \$ 116,368

16. Projected Payroll (July 1, 2005 through June 30, 2006) .................................... \$ 144,700,199
17. Employers Minimum Net Direct Actuarially Required Contribution
as a \% of Projected Payroll for Fiscal $2006(17 \div 18) \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~$
$16.30 \%$
18. Actual Employer Contribution Rate for Fiscal 2006........................................... 16.00\%
19. Contribution Shortfall (Excess) as a Percentage of Payroll (19-20) ................... $0.30 \%$
20. Increase (Reduction) to Following Year Payment for Contribution Shortfall
(Excess) ......................................................................................................... $0.04 \%$
21. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2007 (19 + 22, Rounded to nearest . $25 \%$ )

## EXHIBIT II PLAN A: PRESENT VALUE OF FUTURE BENEFITS

Present Value of Future Benefits for Active Members:
Retirement Benefits ..... \$ 503,740,756
Survivor Benefits ..... 14,548,701
Disability Benefits ..... 10,162,059
Vested Deferred Termination Benefits ..... 14,620,384
Contribution Refunds ..... 14,123,370
TOTAL Present Value of Future Benefits for Active Members ..... \$ 557,195,270
Present Value of Future Benefits for Terminated Members:
Terminated Vested Members Due Benefits at Retirement.. \$ ..... 9,213,230
Terminated Members with ReciprocalsDue Benefits at Retirement721,358
Terminated Members Due a Refund ..... 1,535,909
TOTAL Present Value of Future Benefits for Terminated Members ..... \$ 11,470,497
Present Value of Future Benefits for Retirees:
Regular Retirees ..... \$ 212,571,057
Disability Retirees ..... $15,595,126$
Survivors \& Widows ..... 35,434,959
Reserve for Accrued Retiree DROP Account Balances ..... 3,561,341
TOTAL Present Value of Future Benefits for Retirees \& Survivors. ..... \$ 267,162,483
TOTAL Present Value of Future Benefits ..... \$ 835,828,250

## EXHIBIT III <br> PLAN A: ACTUARIAL VALUE OF ASSETS

Current Assets:
Cash ..... $\$ 9,470,565$
Contributions Receivable from Members. ..... 799,367
Contributions Receivable from Employers ..... 1,363,720
Accrued Interest and Dividends on Investments ..... 1,553,350
Investment Receivable ..... 297,224
Due From Plan B ..... 517,476
TOTAL CURRENT ASSETS ..... \$ ..... $14,001,702$
Allocated Share of the Expense Fund ..... \$ ..... 863,272
Property Plant \& Equipment ..... \$ ..... 577,741
Investments:
Common Stock\$ 183,742,977
Mutual Fund - Domestic Equities ..... 112,369,894
Corporate Bonds ..... 82,019,075
International Equities ..... 65,602,334
Federal National Mortgage Corporation ..... 28,018,857
Federal Home Loan Mortgage Corporation ..... 15,461,826
Cash Equivalents ..... 11,494,332
Government National Mortgage Association ..... 9,137,329
Deferred Capital Losses (Gains)$(11,751,142)$
TOTAL INVESTMENTS ..... \$ 496,095,482
TOTAL ASSETS ..... \$ 511,538,197
Current Liabilities:
Investment Payable ..... 401,273
Accounts Payable ..... 343,881
Refunds Payable ..... 269,634
TOTAL CURRENT LIABILITIES ..... \$ 1,014,788
ACTUARIAL VALUE OF ASSETS ..... \$ 510,523,409
EXHIBIT IVPLAN A: PRESENT VALUE OF FUTURE CONTRIBUTIONS
Employee Contributions to the Annuity Savings Fund. ..... \$ 84,762,421
Employer Normal Contributions to the Pension Accumulation Fund ..... $169,264,548$
Employer Amortization Payments to the Pension Accumulation Fund ..... $71,277,872$
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... \$325,304,841
EXHIBIT V
PLAN A: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY
Prior Year Frozen Unfunded Accrued Liability ..... \$ 70,149,946
Interest on Frozen Unfunded Accrued Liability ..... \$ 5,611,996
Employer Normal Cost for Prior Year ..... 19,751,813
Interest on the Normal Cost ..... 1,580,145
Administrative Expenses ..... 592,273
Interest on Expenses ..... 23,235
TOTAL Increases to Frozen Unfunded Accrued Liability ..... \$ 27,559,462
Gross Regular Employer Contributions ..... \$ 24,528,833
Interest on Employer Contributions ..... 962,278
Contribution Shortfall (Excess) ..... 904,924
Interest on Contribution Shortfall (Excess) ..... 35,501
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... \$ $26,431,536$
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ..... \$ 71,277,872

## EXHIBIT VI PLAN A: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (June 30, 2004) ..... \$ 465,429,341
Income:
Member Contributions ..... $\$ 12,398,438$
Employer Contributions ..... 21,178,909.
Ad Valorem Taxes ..... 3,238,928
Revenue Sharing Funds ..... 110,996
Irregular Contributions. ..... 1,086,154
Due from Plan B ..... 63,436
Other Income ..... 0
Total Contribution Income ..... $\$ 38,076,861$
Interest and Dividend Income ..... \$ 13,159,971
Recognized Realized Capital Gains (Losses) ..... 14,906,959
Recognized Unrealized Capital Gains (Losses) ..... 18,373,244
Investment Income Allocated from Expense Fund ..... 18,202
Securities Lending ..... 53,780
Allocated Share of Investment Expense ..... $(1,781,385)$
Net Investment Income ..... \$44,730,771
TOTAL Income ..... \$ ..... 82,807,632
Expenses:
Retirement Benefits ..... \$
29,786,918
Funds Transferred to Another System ..... 970,873
Refunds of Contributions ..... 3,914,352
DROP Disbursements ..... 2,452,327
Transfer to Plan B ..... 0
Allocated Share of Administrative Expenses. ..... 592,273
TOTAL Expenses. ..... \$
37,716,743
Net Income for Fiscal 2005 (Income - Expenses) ..... \$ 45,090,889
Unadjusted Fund Balance as of June 30, 2005 ..... $\$ 510,520,230$
Adjustment for Change in Allocated Expense Fund Balance ..... \$ ..... 3,179
Actuarial Value of Assets (June 30, 2005) ..... \$ ..... 510,523,409

## EXHIBIT VII <br> PLAN A: FUND BALANCE

Present Assets of the System Creditable to:
Annuity Savings Fund ..... \$ 96,252,259
Annuity Reserve Fund ..... 263,601,142
Pension Accumulation Fund ..... $146,022,263$
Deferred Retirement Option Plan Account ..... $15,535,615$
NET MARKET VALUE OF ASSETS ..... $\$ 521,411,279$
ADJUSTMENT FOR DEFERRAL OF REALIZED AND UNREALIZED CAPITAL LOSSES (GAINS) ON SECURITIES ..... $(11,751,142)$
ALLOCATED SHARE OF THE EXPENSE FUND ..... 863,272
ACTUARIAL VALUE OF ASSETS. ..... $\$ 510,523,409$
EXHIBIT VIII PLAN A: PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ... ..... \$ ..... 372,625,286
Present Value of Benefits Payable to Terminated Employees ..... $11,470,497$
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 267,162,483
TOTAL PENSION BENEFIT OBLIGATION ..... 651,258,266

## EXHIBIT IX PLAN A: COST OF LIVING ADJUSTMENTS - TARGET RATIO

1. Actuarial Value of Assets Divided by PBO as of Fiscal 1986: ..... 65.05\%
2. Amortization of Unfunded Balance over 30 years: ..... 22.13\%
Adjustments in Funded Ratio Due to Changes in Assumption(s):
Changes for Fiscal 1988 ..... 4.97\%
Changes for Fiscal 1989 ..... (1.98)\%
Changes for Fiscal 1995 ..... (1.38)\%
Changes for Fiscal 1997 ..... (3.44)\%
Changes for Fiscal 1998 ..... (3.63)\%
Changes for Fiscal 2000 ..... (1.35)\%
Changes for Fiscal 2003 ..... 0.89\%
Changes for Fiscal 2005 ..... 0.02\%
3. TOTAL Adjustments ..... (5.90\%)
Amortization of Adjustments in Funded Ratio over 30 years:
Changes for Fiscal 1988 ..... (2.82)\%
Changes for Fiscal 1989 ..... 1.06\%
Changes for Fiscal 1995 ..... 0.46\%
Changes for Fiscal 1997 ..... 0.92\%
Changes for Fiscal 1998 ..... 0.85\%
Changes for Fiscal 2000 ..... 0.22\%
Changes for Fiscal 2003 ..... (0.06\%)
Changes for Fiscal 2005 ..... 0.00\%
4. TOTAL Amortization of Adjustments ..... 0.63\%
5. Target Ratio for Current Fiscal Year (Lesser of $1+2+3+4$ or $100 \%$ ) ..... 81.91\%
6. Actuarial Value of Assets Divided by PBO as of June 30, 2005 ..... 78.39\%

EXHIBIT X
PLAN A: CENSUS DATA

|  | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of members as of June 30, 2004 | 5,123 | 2,459 | 202 | 2,448 | 10,232 |
| Additions to Census <br> Initial membership <br> Death of another member Omitted in error last year | 586 <br> (4) | 45 (1) | (3) | 8 | $\begin{array}{r}631 \\ 1 \\ \hline\end{array}$ |
| Change in Status during Year <br> Actives terminating service Actives who retired Actives entering DROP Term. members rehired Term. members who retire Retirees who are rehired Refunded who are rehired DROP participants retiring DROP returned to work Survivor due benefit at age 60 | (112) <br> (99) <br> (88) <br> 25 <br> 30 <br> 34 | 112 <br> (25) <br> (16) <br> 23 | 88 <br> (36) <br> (34) | 99 <br> 16 <br> 36 | $\begin{array}{r}53 \\ 1 \\ \hline\end{array}$ |
| Eliminated from Census <br> Refund of contributions <br> Deaths <br> Included in error last year <br> Adjustment for multiple records | (413) <br> (10) <br> 1 | (142) <br> (4) <br> (2) | (1) | (98) | (555) <br> (112) <br> (1) <br> 0 |
| Number of members as of June 30, 2005 | 5,073 | 2,449 | 216 | 2,512 | 10,250 |

PLAN A - ACTIVES CENSUS BY AGE:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Galary | $\begin{gathered} \text { Total } \\ \text { Salary } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16-20 | 40 | 2 | 42 | 14,025 | 589,034 |
| 21-25 | 175 | 62 | 237 | 18,468 | 4,376,930 |
| 26-30 | 213 | 101 | 314 | 21,147 | 6,640,069 |
| 31-35 | 281 | 142 | 423 | 24,336 | 10,293,925 |
| 36-40 | 377 | 188 | 565 | 25,386 | 14,343,079 |
| 41-45 | 532 | 292 | 824 | 27,147 | 22,369,443 |
| 46-50 | 602 | 299 | 901 | 29,022 | 26,149,047 |
| 51-55 | 537 | 261 | 798 | 28,668 | 22,876,890 |
| 56-60 | 414 | 207 | 621 | 28,004 | 17,390,584 |
| 61-65 | 235 | 107 | 342 | 27,137 | 9,280,698 |
| 66-70 | 106 | 43 | 149 | 26,833 | 3,998,111 |
| 71-75 | 35 | 11 | 46 | 24,718 | 1,138,405 |
| 76-80 | 18 | 2 | 20 | 23,717 | 474,335 |
| 81-85 | 4 | 1 | 5 | 10,586 | 52,930 |
| 86-90 | 1 | 0 | 1 | 30,101 | 30,101 |
| 91-95 | 1 | 0 | 1 | 16,583 | 16,583 |
| т0\%ar | 3,571 | 1,718 | 5,289 | 26,474 | 140,020,164 |

THE ACTIVE CENSUS INCLODES 2,357 ACTIVES WITE VEGTED BENEFTTS, INCLODING 216 DROP PARTICIPANTS AND 129 ACTIVE FORMER DROP PARTICIPANTS.


| Age | Number Male | Number <br> Pemale | Total <br> Number | Average Banefit | Total <br> Banefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 36-40 | 5 | 11 | 16 | 11,054 | 176,863 |
| 41-45 | 9 | 13 | 22 | 10,192 | 224,214 |
| 46-50 | 15 | 17 | 32 | 10,116 | 323, 726 |
| 51-55 | 25 | 10 | 35 | 13,495 | 472,336 |
| 56-60 | 38 | 14 | 52 | 10,031 | 521,628 |
| 61-65 | 18 | 3 | 21 | 3,464 | 72,749 |
| 66-70 | 5 | 3 | 8 | 4,854 | 38,832 |
| TOTAL | 115 | 71 | 186 | 9,841 | 1,830,348 |

PLAN A - TERMINATED MEXGBERS DUE A REFUND OF CONIRIBUTIONS:
Contributions Ranging
From
0 TO

|  | Total |
| :---: | :---: |
| Number | Conitributions |
| 1,572 | 40,085 |
| 387 | 86,587 |
| 80 | 53,672 |
| 66 | 94,315 |
| 68 | 232,691 |
| 54 | 378,267 |
| 30 | 403,085 |
| 6 | 189,836 |
| 2,263 | $1,468,538$ |
|  |  |

G. S. CURRAN \& COMPANY, LTD.

PLAN A - REGULAR R.YTIREEGs

| Ago | $\begin{aligned} & \text { Number } \\ & \text { Nala } \end{aligned}$ | Number <br> Female | Total <br> Number | Average Banefit | Total Bonafit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 41-45 | 12 | 1 | 13 | 15,819 | 205,641 |
| 16-50 | 23 | 9 | 32 | 17,049 | 545,564 |
| 51-55 | 57 | 16 | 73 | 23,461 | 1,712,629 |
| 56-60 | 89 | 36 | 125 | 21,526 | 2,690,780 |
| 61-65 | 220 | 57 | 277 | 16,214 | 4,491,346 |
| 66-70 | 290 | 85 | 375 | 13,829 | 5,186,047 |
| 71-75 | 259 | 67 | 326 | 12,951 | 4,221,902 |
| 76-80 | 179 | 70 | 249 | 11,487 | 2,860,361 |
| 81-85 | 130 | 42 | 172 | 10,193 | 1,753,134 |
| 86-90 | 52 | 17 | 69 | 8,618 | 594,631 |
| 91-99 | 22 | 7 | 29 | 6,864 | 199,064 |
| Torsx | 1,333 | 407 | 1,740 | 14,058 | 21,461,099 |

PLAN A - DIGABILITY RETIRNES:

| Age | Number Nale | Armber <br> Female | Total <br> Number | Average Banafit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 1 | 0 | - 1 | 8,208 | 8,208 |
| 36-40 | 1 | 1 | 2 | 13,119 | 26,237 |
| 41-45 | 12 | 1 | 13 | 8,270 | 107,510 |
| 16-50 | 17 | 6 | 23 | 11,125 | 255,884 |
| 51-55 | 31 | 9 | 40 | 8,730 | 349,212 |
| 56-60 | 37 | 1 | 41 | 9,961 | 408,525 |
| 61-65 | 17 | 11 | 28. | 8,447 | 236,506 |
| 66-70 | 14 | 3 | 17 | 6,665 | 113,308 |
| 71-75 | 10 | 2 | 12 | 7,208 | 86,494 |
| 76-80 | 7 | 3 | 10 | 4,638 | 46,377 |
| 81-85 | 2 | 0 | 2 | 9,665 | 19,329 |
| TOTAL | 149 | 10 | 189 | 8,770 | 1,657,590 |

PHAN A - EURVIVORE\&

| Age | Number Malo | Number <br> Fomale | Total <br> Number | Avoraga Bonefit | $\begin{gathered} \text { Total } \\ \text { Benefit } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0-25 | 1 | 11 | 12 | 2,686 | 32,226 |
| 31-35 | 1 | 3 | 4 | 6,143 | 24,571 |
| 36-40 | 2 | 5 | 7 | 3,511 | 24,578 |
| 41-45 | 2 | 18 | 20 | 8,775 | 175,491 |
| 16-50 | 1 | 23 | 24 | 7,607 | 182, 563 |
| 51-55 | 2 | 24 | 26 | 7,891 | 205,175 |
| 56-60 | 3 | 37 | 40 | 7,751 | 310,029 |
| 61-65 | 1 | 58 | 59 | 10,030 | 591, 781 |
| 66-70 | 3 | 72 | 75 | 7,868 | 590,127 |
| 71-75 | 3 | 90 | 93 | 7,946 | 739,023 |
| 76-80 | 2 | 89 | 91 | 8,692 | 790,977 |
| 81-85 | 5 | 63 | 68 | 7,046 | 479;112 |
| 86-90 | 1 | 45 | 46 | 4,815 | 221,505 |
| 91-99 | 0 | 18 | 18 | 3,867 | 69,613 |
| TOTAL | 27 | 556 | 583 | 7,610 | 4,436,771 |

PLAA A - ACTIVE mencrats:


Completed rears of service 18,025
21,147 Nico 27,386 $N$
8
0 50 N M
M
M 26, 833 $i$
$i$
$i$



 | $\circ$ |
| :--- |
| 0 |
| 0 |
| 0 |





 $N$
$\mathbf{N}$
$\mathbf{N}$
 8
-7
N
 흥
ले


$\circ$
\#i
ले
 ,

-
Average

Yeara Until Retiramont Eligibility

| Atcained Agen | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080ver | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-35 |  |  |  |  |  |  |  |  |  |  |  |  |
| 36-40 |  |  |  |  |  |  |  |  | 16 |  |  | 16 |
| 41-45 |  |  |  |  |  |  |  | 22 |  |  |  | 22 |
| 46-50 |  |  |  |  |  | 1 | 31 |  |  |  |  | 32 |
| 51-55 |  |  |  |  |  | 35 |  |  |  |  |  | 32 |
| 56-60 | 11 | 10 | 10 | 11 | 9 | 1 |  |  |  |  |  | 52 |
| 61-65 | 20 |  |  | 1 |  |  |  |  |  |  |  | 21 |
| 66-70 | 8 |  |  |  |  |  |  |  |  |  |  |  |
| 71 \& Orer |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 39 | 10 | 10 | 12 | 9 | 37 | 31 | 22 | 16 | 0 | 0 | 186 |
| plan a - a | has ra | dil bind | Ts or 2 | Retnates | GGERS | OE A DEF | RAD REI | ranasar | crit: |  |  |  |
| . |  |  |  |  | Yee | Ontil | otlramon | E1dgibi | ty |  |  |  |
| Attained |  |  |  |  |  |  |  |  |  |  |  | Average |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30xOver | Benofit |
| 0-35 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 36-40 |  |  | . |  |  |  |  |  | 11,054 |  |  | 11,054 |
| 41-45 |  |  |  |  |  |  |  | 10,192 |  |  |  | 10,192 |
| 46-50 |  |  |  |  |  | 3,384 | 10,334 |  |  |  |  | 10,116 |
| 51-55 |  |  |  |  |  | 13,495 |  |  |  |  |  | 13,495 |
| 56-60 | 8,198 | 12,250 | 9,480 | 10,722 | 8,982 | 15,366 |  |  |  |  |  | 10,031 |
| 61-65 | 3, 411 |  |  | 3,930 |  |  |  |  |  |  |  | 3,464 |
| 66-70 | 4,854 |  |  |  |  |  |  |  |  |  |  | 4,854 |
| 71 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Average | 5,073 | 12,250 | 9.480 | 10,156 | 8,982 | 13,273 | 10,334 | 10,192 | 11,054 | 0 | - 0 | 9, 841 |

PLAN A - SERVICE RETTREES:
Completed Yeary since Retiranent

| Attained Age* | 0 | 2 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 304000x | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-50 | 16 | 8 | 9 | 7 | 2 |  |  |  |  |  |  |  |
| 51-55 | 14 | 18 | 18 | 10 | 1 | 10 |  |  |  |  |  | 45 |
| 56-60 | 29 | 17 | 14 | 20 | 15 | 10 | 1 | 2 |  |  |  | 73 |
| 61-65 | 4 | 16 | 11 | 38 | 28 | 52 | 1 | 1 |  |  |  | 125 |
| 66-70 | 25 | 26 | 21 | 34 | 28 | 146 | 22 | 5 | 1 |  |  | 277 |
| 71-75 | 7 | 11 | 9 | 3 | 28 | 146 | 55 | 34 | 5 | 1 |  | 375 |
| 76-80 | 3 | 1 | 3 | 3 | 15 | 92 | 124 | 50 | 13 | 2 |  | 326 |
| 81-85 | 3 | 1 | 3 |  | 2 | 24 | 84 | 102 | 21 | 4 |  | 249 |
| 86-90 | 1 |  | 3 |  | 2 | 5 | 17 | 74 | 52 | 15 |  | 172 |
| 91 \& Over |  |  |  | 1 | 1 | 1 | 1 | 10 | 33 | 21 |  | 69 |
|  |  |  |  |  |  | 2 | 3 | 4 | 3 | 15 | 3 | 29 |
| Totals | 142 | 128 | 118 | 116 | 96 | 362 | 307 | 282 | 128 | 58 | 3 | 1740 |
| PLAN A - A | ERAGE A | AL BENL | S PAY | 508 | ICE Res | Lress |  |  |  |  |  |  |
|  |  |  |  |  | Com | Iated Ye | ra Since | Retixrm |  |  |  |  |
| Attained |  |  |  |  |  |  |  |  |  |  |  |  |
| $\boldsymbol{\lambda g e s}$ | 0 | 1 | 2 | 3 |  |  |  |  |  |  |  | Average |
|  |  |  | 2 | 3 | 1 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\%Orer | Benefit |
| 0-50 | 16,801 | 18,377 | 19,516 | 14,270 | 10,217 |  |  |  |  |  |  |  |
| $51-55$ | 25,090 | 30,185 | 21,735 | 27,282 | 27,289 | 21,478 |  |  |  |  |  | 16,693 |
| 56-60 | 22,086 | 20,081 | 21,964 | 20,045 | 18,492 | 21,700 |  | 5,959 |  |  |  | 23,461 |
| 61-65 | 12,744 | 14,347 | 14,025 | 15,846 | 16,526 | 19,824 | $23,560$ |  |  |  |  | 21,526 |
| 66-70 | 11,383 | 11,950 | 10,933 | 11,366 | 12,171 | 12,734 | 18,521 | 14,845 | 7,333 |  |  | 16,214 |
| 71-75 | 8,664 | 15,290 | 9,343 | 8,095 | 7,657 | 12,653 | 18,421 | 20,818 15,701 | 21,685 | 4,374 |  | 13,829 |
| 76-80 | 10,854 | 16,135 | 5,790 | 12,379 | 8,575 | 11,658 | 11,085 | 15,701 | 21,174 | 9,912 |  | 12,951 |
| 81-85 | 6,201 | 3,835 | 5,396 | 12,379 | 12,875 | 11,658 | 11,081 | 11,208 | 14,563 | 15,791 |  | 11,487 |
| 86-90 | 4,975 |  |  | 29, 335 | 12,8157 | 8,718 | 9,826 | 11,199 | 9,340 | 10,914 |  | 10,193 |
| 91 \& Orer |  |  |  | 29,435 | 3,467 | 7,126 | 20,410 | 8,817 | 8,976 | 6,897 |  | 8,618 |
| 91 a Orex | . |  |  |  |  | 23,837 | 5,041 | 7,177 | 7,482 | 6,985 | 1,389 | 6,864 |
| Average | 15,653 | 17,114 | 15,226 | 15,113 | 13,614 | 14,537 | 14,033 | 13,031 | 11.259 | 8,634 | 1389 | 14.058 |


Completed Yoary since Retirabont

| Agen | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080ver | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 31-35 |  |  |  |  |  | 1 |  |  |  |  |  | 0 |
| 36-40 |  |  |  |  |  | 2 |  |  |  |  |  | 1 |
| 41-45 |  |  |  | 3 | 1 | 4 | 1 | 1 |  |  |  | 2 |
| 46-50 | 2 | 1 | 2 | 4 | 2 | 8 | 2 | 2 |  |  |  | 13 |
| 51-55 | 5 | 2 |  | 3 | 4 | 18 | 5 | 2 | 1 |  |  | 23 |
| 56-60 | 3 | 2 | 2 | 2 | 2 | 17 | 10 | 1 | 1 | 2 |  | 41 |
| 61-65 | 1 |  | 2 | 1 | 4 | 5 | 9 | 2 | 4 |  |  | 41 |
| 66-70 |  | 3 | 2 |  |  | 1 | 8 | 2 | 2 | 1 | 1 | 28 |
| 71-75 |  | 1 |  |  |  | 1 | 3 | 2 | 4 | 1 | 1 | 17 |
| 76-80 |  |  |  |  |  |  | 5 | 2 | 3 | 1 | 2 | 12 |
| 81-85 |  |  |  |  |  | 1 | 5 |  | 3 | 1 | 1 | 10 |
| $86 \&$ Orer |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 11 | 9 | 7 | 13 | 13 | 58 | 46 | 10 | 14 | 4 | 4 | 189 |


completed Yaara since Retirament

| $\begin{gathered} \text { Attained } \\ \text { Agen. } \end{gathered}$ | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30sorer | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 31-35 |  |  |  |  |  | 8,208 |  |  |  |  |  | 8,208 |
| 36-40 |  |  |  |  |  | 13,118 |  |  |  |  |  | 8,208 23,118 |
| 41-45 |  |  |  | 10,613 | 5,568 | 7,555 | 8,594 | 6,110 |  |  |  | 13,118 8,270 |
| 46-50 | 17,695 | 19,373 | 8,502 | 12,179 | 8,030 | 10,060 | 8,958 | 10,473 |  |  |  | 11,125 |
| 51-55 | 8,591 | 7,575 |  | 6,500 | 8,879 | 9,003 | 10,058 | 8,840 | 6,060 |  |  | 11,125 8,730 |
| 56-60 | 5,883 | 6,523 | 8,860 | 9,020 | 11,456 | 12,124 | 11,600 | 7,922 |  | 3,062 |  | 8,730 |
| 61-65 | 3,867 |  | 4,096 | 5,267 | 10,795 | 7,805 | 10,880 | 5,738 | 6,894 |  |  | 9,964 |
| 66-70 |  | 6,114 | 1,623 |  |  | 8,372 | 7,056 |  | 7,025 | 5,856 | 5,611 | 8, 447 |
| 71-75 |  | 4,003 |  |  |  | 5,174 | 4,435 | 10,606 | 9,395 |  |  | 6,665 |
| 76-80 |  |  |  |  |  |  | 4,038 |  | 5,795 | 5,111 | 5,220 | 7,208 |
| 81-85 |  |  |  |  |  | 13,175 |  |  |  | 5,111 | 6,154 | 4,638 |
| 86 a Over |  |  |  |  |  | 13,175 |  |  |  |  | 6,154 | 9,664 |
| Average | 9,078 | 7.768 | 6,791 | 9,443 | 9,480 | 9,691 | 8,836 | 8,535 | 7,328 | 4,273 | 5,183 | 8,770 |

PLAN A - GORVIVING BENEFICIARIES OF FORNRR NEABERS:
C_Completed Yeara gince Retirament

| Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080vor | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.-20 | 1 |  | 7 |  |  |  |  |  |  |  |  |  |
| 21-25 |  |  | 2 |  |  | 2 | 2 |  |  |  |  | 12 |
| 26-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  | 1 | 1 |  | 1 | 1 |  |  |  |  | 0 |
| 36-40 | 1 |  |  |  |  | 2 | 1 |  |  |  | - | 4 |
| 41-45 | * 1 | 2 | 3 | 1 |  | 2 |  | 1 |  | 3 |  | 7 |
| 46-50 | 2 |  | 3 | 1 |  | 10 | 6 |  | 2 |  |  | 20 |
| 51-55 |  |  | 2 | 1 | 1 | 10 | 7 | 3 | 1 |  |  | 24 |
| 56-60 | 1 | 2 | 2 | 2 | 1 | 14 | 11 | 6 | 1 |  |  | 26 |
| 61-65 | 3 | 1 | 2 | 3 | 3 | 14 | 17 | 7 11 |  |  |  | 40 |
| 66-70 |  | 3 | 2 | 1 | 2 | 14 | 17 | 11 | 4 | 1 |  | 59 |
| 71-75 | 1 |  | 2 | 1 | 2 | 20 9 | 21 | 23 | 3 18 | 2 |  | 75 |
| $76-80$ $81-85$ |  |  |  |  | 2 | 6 | 17 | 27 32 | 18 | 7 | 2 | 93 |
| $81-85$ $86-90$ |  |  |  |  |  | 2 | 17 | 32 | 23 | 13 |  | 91 |
| $86-90$ 91 \& Over |  | 1 |  |  |  | 2 | 3 | 10 | 24 | 26 | 3 | 68 |
| 91 \& Over |  |  |  |  |  |  | 2 | 6 | 8 | 24 | 6 | 46 |
|  |  |  |  |  |  |  | , |  | 1 | 5 | 12 | 18 |
| totala | 10 | 9 | 19 | 11 | 8 | 91 | 120 | 126 | 85 | 81 | 23 | 583 |

Complated Yeara slaco Ratiramont


# EXHIBIT XI <br> PLAN A: YEAR-TO-YEAR COMPARISON 

|  |  | Fiscal 2005 |  | Fiscal 2004 |  | Fiscal 2003 |  | Fiscal 2002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Active Members |  | 5,289 |  | 5,325 |  | 5,533 |  | 5,481 |
| Number of Retirees and Survivors |  | 2,512 |  | 2,448 |  | 2,372 |  | 2,316 |
| Number Terminated Due Deferred Benefits |  | 186 |  | 193 |  | 192 |  | 193 |
| Number Terminated Due Refund |  | 2,263 |  | 2,266 |  | 2,185 |  | 2,158 |
| Active Lives Payroll | \$ | 140,020,164 | \$ | 135,925,550 | \$ | 135,876,426 | \$ | 130,191,230 |
| Retiree Benefits in Payment | \$ | 30,555,460 | \$ | 29,043,640 | \$ | 27,431,127 | \$ | 26,145,224 |
| Market Value of Assets | \$ | 521,411,279 | \$ | 485,539,046 | \$ | 444,996,698 | \$ | 432,669,352 |
| Ratio of Actuarial Value of Assets to |  |  |  |  |  |  |  |  |
| Actuarial Accrued Liability |  | 87.75\% |  | 86.90\% |  | 86.79\% |  | 87.26\% |
| Actuarial Accrued Liability (As defined by GASB-25) | \$ | 581,801,281 | \$ | 535,579,287 | \$ | 521,766,411 | \$ | 531,127,529 |
| Actuarial Value of Assets | \$ | 510,523,409 | \$ | 465,429,341 | \$ | 452,830,104 | \$ | 463,477,324 |
| Unfunded Actuarial Accrued Liability | \$ | 71,277,872 | \$ | 70,149,946 | \$ | 68,936,307 | \$ | 67,650,205 |
| Present Value of Future Employer Normal Cost | \$ | 169,264,548 | \$ | 161,387,026 | \$ | 146,656,618 | \$ | 100,815,782 |
| Present Value of Future Employee Contributions | \$ | 84,762,421 | \$ | 85,111,124 | \$ | 86,226,350 | \$ | 83,902,996 |
| Present Value of Future Benefits | \$ | 835,828,250 | \$ | 782,077,437 | \$ | 754,649,379 | \$ | 715,846,307 |


| Fiscal 2006 | Fiscal 2005 | Fiscal 2004 | Fiscal 2003 |
| :---: | :---: | :---: | :---: |
| $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ |
| $2.34 \%$ | $2.38 \%$ | $2.29 \%$ | $2.28 \%$ |
| $16.30 \%$ | $15.87 \%$ | $14.61 \%$ | $10.78 \%$ |
| $16.00 \%$ | $15.00 \%$ | $11.00 \%$ | $8.00 \%$ |



| Fiscal 2002 | Fiscal 2001 | Fiscal 2000 | Fiscal 1999 | Fiscal 1998 | Fiscal 1997 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ |
| $2.17 \%$ | $2.02 \%$ | $2.02 \%$ | $2.08 \%$ | $1.93 \%$ | $1.76 \%$ |
| $7.89 \%$ | $7.03 \%$ | $6.20 \%$ | $4.92 \%$ | $5.73 \%$ | $5.91 \%$ |
| $7.00 \%$ | $6.25 \%$ | $5.75 \%$ | $5.75 \%$ | $5.75 \%$ | $6.25 \%$ |

## Plan B Exhibits

## EXHIBIT XII PLAN B: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits.
\$ 161,368,844
2. Frozen Unfunded Actuarial Accrued Liability.................................................... \$
3. Actuarial Value of Assets
\$ 96,417,685
4. Present Value of Future Employee Contributions \$ 17,253,376
5. Present Value of Future Employer Normal Costs (1-2-3-4)
\$ 41,742,178
6. Present Value of Future Salaries ........................................................................ \$ 378,316,801
7. Employer Normal Cost Accrual Rate (5 $\div 6$ )
$11.033657 \%$
8. Projected Fiscal 2006 Salary for Current Membership ....................................... \$ 45,149,482
9. Employer Normal Cost as of July 1, 2005 (7x 8) \$ 4,981,639
10. Amortization Payment on Frozen Unfunded Accrued Liability of $\$ 5,955,605$ with Payments decreasing at 2\% per year ..... \$

674,174
11. TOTAL Employer Normal Cost \& Amortization Payment $(9+10)$
\$
5,655,813
12. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment. ..... \$

5,877,693
13. Estimated Administrative Cost for Fiscal 2006.................................................. \$ 219,476
14. TOTAL Employer Actuarially Required Contribution for Fiscal $2006(12+13)$ \$

6,097,169
15. Projected Tax Contributions for Fiscal 2006 \$
16. Projected Revenue Sharing Funds for Fiscal 2006.............................................. \$

1,138,327
17. Net Direct Employer Actuarially Required Contribution for Fiscal 2006 (14-15-16)
\$
4,918,376
18. Projected Payroll (July 1, 2005 through June 30, 2006) \$

49,861,824
19. Employers' Minimum Net Direct Actuarially Required Contribution as a \% of Projected Payroll for Fiscal $2006(17 \div 18)$ ..... 9.86\%
20. Actual Employer Contribution Rate for Fiscal 2006 ..... 9.75\%
21. Contribution Shortfall (Excess) as a Percentage of Payroll (19-20) ..... 0.11\%
22. Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) ..... $0.01 \%$
23. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2007 (19+22, Rounded to nearest .25\%) ..... 9.75\%

## EXHIBIT XIII <br> PLAN B: PRESENT VALUE OF FUTURE BENEFITS

Present Value of Future Benefits for Active Members:
Retirement Benefits ..... $\$ 95,676,848$
Survivor Benefits ..... 4,079,623
Disability Benefits ..... 2,517,899
Vested Deferred Termination Benefits ..... 6,272,642
Contribution Refunds. ..... 3,458,496
TOTAL Present Value of Future Benefits for Active Members ..... $\$ 112,005,508$
Present Value of Future Benefits for Terminated Members:
Terminated Vested Members Due Benefits at Retirement.... \$ ..... 2,718,940
Terminated Members with Reciprocals
Due Benefits at Retirement ..... 50,673
Terminated Members Due a Refund ..... 332,487
TOTAL Present Value of Future Benefits for Terminated Members ..... \$ ..... 3,102,100
Present Value of Future Benefits for Retirees:
Regular Retirees ..... \$ 35,721,961
Disability Retirees ..... 2,573,669
Survivors \& Widows ..... 7,482,697
Reserve for Accrued Retiree DROP Account Balances ..... 482,909
TOTAL Present Value of Future Benefits for Retirees \& Survivors ..... \$ ..... 46,261,236
TOTAL Present Value of Future Benefits ..... \$ ..... 161,368,844

## EXHIBIT XIV <br> PLAN B: ACTUARIAL VALUE OF ASSETS

## Current Assets:

Cash ..... \$
1,376,888
Contributions Receivable from Members ..... 195,606
Contributions Receivable from Employers ..... 385,204
Accrued Interest on Investments ..... 252,494
Dividends Receivable ..... 26,146
Investments Receivable ..... 68,759
TOTAL CURRENT ASSETS ..... $\$ 2,305,097$
Allocated Share of the Expense Fund ..... \$ 300,192
Property, Plant \& Equipment ..... \$ 178,770
Investments:
Common Stock ..... \$ 36,324,771
Mutual Fund - Domestic Equities ..... 22,690,289
Corporate Bonds ..... 16,109,202
Mutual Fund - International Equities ..... 12,661,872
Federal National Mortgage Corporation. ..... 5,204,431
Federal Home Loan Mortgage Corporation ..... 2,899,532
Cash Equivalents ..... 2,292,141
Government National Mortgage Association ..... 1,535,221
Deferred Capital Losses (Gains) ..... $(4,992,406)$
TOTAL INVESTMENTS ..... \$ 94,725,053
TOTAL ASSETS ..... \$ 97,509,112
Current Liabilities:
Investments Payable ..... \$ ..... 88,491
Accounts Payable ..... 69,307
Refunds Payable ..... 60,114
Funds Payable to Plan A ..... 873,515
TOTAL CURRENT LIABILITIES ..... \$ 1,091,427
ACTUARIAL VALUE OF ASSETS ..... \$ 96,417,685
EXHIBIT XVPLAN B: PRESENT VALUE OF FUTURE CONTRIBUTIONS
Employee Contributions to the Annuity Savings Fund ..... \$ 17,253,376
Employer Normal Contributions to the Pension Accumulation Fund ..... 41,742,178
Employer Amortization Payments to the Pension Accumulation Fund ..... 5,955,605
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... \$ 64,951,159
EXHIBIT XVI
PLAN B: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY
Prior Year Frozen Unfunded Accrued Liability ..... $\$ 6,202,383$
Interest on Frozen Unfunded Accrued Liability ..... \$ 496,190
Employer Normal Cost for Prior Year ..... 4,808,945
Interest on the Normal Cost ..... 384,715
Administrative Expenses ..... 205,303
Interest on Expenses ..... 8,054
TOTAL Increases to Frozen Unfunded Accrued Liability ..... \$ 5,903,207
Gross Employer Contributions ..... $\$ 5,914,099$
Interest on Employer Contributions ..... 232,013
Contribution Shortfall (Excess) ..... 3,727
Interest on Contribution Shortfall (Excess) ..... 146
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... $\$ 6,149,985$
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ..... \$ ..... 5,955,605

## EXHIBIT XVII <br> PLAN B: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (June 30, 2004). ..... \$ ..... $89,415,704$
Income:
Member Contributions ..... $\$ 2,372,792$
Employer Contributions ..... 4,701,002
Ad Valorem Taxes ..... 1,172,921
Revenue Sharing Funds ..... 40,176
Irregular Contributions. ..... 108,778
Due from Plan A ..... 0
Total Contribution Income ..... $\$ 8,395,669$
Interest and Dividend Income ..... \$ 2,489,407
Recognized Realized Capital Gains (Losses). ..... 1,244,969
Recognized Unrealized Capital Gains (Losses) ..... 2,335,181
Investment Income Allocated from Expense Fund ..... 6,329
Securities Lending ..... 10,052
Allocated Share of Investment Expense. ..... $(346,328)$
Net Investment Income ..... $\$ 5,739,610$
TOTAL Income ..... \$ 14,135,279
Expenses:
Retirement Benefits. ..... \$ 5,553,580
Refunds of Contributions ..... 691,476
Funds Transferred to Another System ..... 184,736
DROP Disbursements ..... 431,588
Transfer to Plan A ..... 63,436
Allocated Share of Administrative Expenses ..... 205,303
TOTAL Expenses. ..... \$ ..... 7,130,119
Net Income for Fiscal 2005 (Income - Expenses) ..... \$ 7,005,160
Unadjusted Fund Balance as of June 30, 2005
(Fund Balance Previous Year + Net Income) ..... \$ 96,420,864
Adjustment for Change in Allocated Expense Fund Balance ..... \$$(3,179)$
Actuarial Value of Assets (June 30, 2005) ..... $\$ 96,417,685$

## EXHIBIT XVIII <br> PLAN B: FUND BALANCE

Present Assets of the System Creditable to:
Annuity Savings Fund ..... \$ ..... $17,354,156$
Annuity Reserve Fund. ..... 45,778,327
Pension Accumulation Fund ..... 35,246,636
Deferred Retirement Option Plan Account ..... 2,730,780
NET MARKET VALUE OF ASSETS ..... $\$ 101,109,899$
ADJUSTMENT FOR DEFERRAL OF REALIZED AND UNREALIZED CAPITAL LOSSES (GAINS) ON SECURITIES ..... $(4,992,406)$
ALLOCATION OF EXPENSE FUND ..... 300,192
ACTUARIAL VALUE OF ASSETS ..... \$ ..... 96,417,685
EXHIBIT XIX
PLAN B: PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ..... \$ ..... 71,049,080
Present Value of Benefits Payable to Terminated Employees ..... 3,102,100
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 46,261,236
TOTAL PENSION BENEFIT OBLIGATION ..... \$ 120,412,416

## EXHIBIT XX PLAN B: COST OF LIVING ADJUSTMENTS - TARGET RATIO

1. Actuarial Value of Assets Divided by PBO as of Fiscal 1986: ..... 63.44\%
2. Amortization of Unfunded Balance over 30 years: ..... 23.15\%
Adjustments in Funded Ratio Due to Changes in Assumptions):
Changes for Fiscal 1988 ..... 2.40\%
Changes for Fiscal 1989 ..... (2.94\%)
Changes for Fiscal 1995 ..... (1.22\%)
Changes for Fiscal 1997 ..... (3.84\%)
Changes for Fiscal 1998 ..... (3.71\%)
Changes for Fiscal 2000 ..... (2.29\%)
Changes for Fiscal 2001 ..... 1.21\%
Changes for Fiscal 2003 ..... 0.53\%
Changes for Fiscal 2004 ..... (1.12)\%Should show Fiscal 20053. TOTAL Adjustment: instead of Fiscal 2004 .
Amortization of Adjusts Identified incorrectly but the calculations Changes for Fisca were correct and the $(1.36 \%)$
Changes for Fisca
$1.57 \%$ Changes for Fica were correct and the $\begin{aligned} & (1.36 \%) \\ & 1.57 \% \\ & \text { answer is wrrect in } \\ & 0.41 \% \\ & 1.02 \% \\ & 2005 \text {. }\end{aligned}$ 0.87\% were correct and the $\begin{aligned} & (1.36 \%) \\ & 1.57 \% \\ & \text { answer is wrrect in } \\ & 0.41 \% \\ & 1.02 \% \\ & 2085 \text {. }\end{aligned}$ 0.87\% Changes for Fiscal Changes for Fiscal] were correct and the $\begin{aligned} & (1.36 \%) \\ & 1.57 \% \\ & \text { answer is correct in } \\ & 0.41 \% \\ & 1.02 \% \\ & 2005 \text {. }\end{aligned}$ 0.87\% were correct and the $\begin{aligned} & (1.36 \%) \\ & 1.57 \% \\ & \text { answer is wrrect in } \\ & 0.41 \% \\ & 1.02 \% \\ & 2085 \text {. }\end{aligned}$ 0.87\% were correct and the $\begin{aligned} & (1.36 \%) \\ & 1.57 \% \\ & \text { answer is wrrect in } \\ & 0.41 \% \\ & 1.02 \% \\ & 2085 \text {. }\end{aligned}$ 0.87\% Changes for Fiscal Changes for Fiscal Changes for Fiscal Changes for Fiscal
 0.87\% . $0.00 \%$ )(10.98\%) 4. TOTAL Amortization of Adjustments 2.69\%
3. Target Ratio for Current Fiscal Year (Lesser of $1+2+3+4$ or $100 \%$ ) 78.30\%
4. Actuarial Value of Assets Divided by PBO as of June 30, 2005

## EXHIBIT XXI <br> PLAN B - CENSUS DATA

|  | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of members as of June 30, 2004 | 1,998 | 894 | 54 | 734 | 3,680 |
| Additions to Census <br> Initial membership <br> Death of another member Omitted in error last year | $\begin{array}{r} 256 \\ (4) \end{array}$ | 17 |  | 4 | 273 |
| Change in Status during Year <br> Actives terminating service <br> Actives who retired <br> Actives entering DROP <br> Term. members rehired <br> Term. members who retire <br> Retirees who are rehired <br> Refunded who are rehired DROP participants retiring DROP returned to work Omitted in error last year | (50) <br> (26) <br> (19) <br> 8 <br> 4 <br> 17 | 50 <br> (8) <br> (4) <br> 6 | 19 <br> (5) <br> (17) | 26 <br> 4 | 10 |
| Eliminated from Census <br> Refund of contributions Deaths Included in error last year Adjustment for multiple records Moved to Plan A | (187) <br> (5) <br> (1) <br> (4) | (69) <br> (1) |  | (29) <br> 1 | (256) <br> (34) <br> (5) |
| Number of members as of June 30, 2005 | 1,987 | 885 | 51 | 745 | 3,668 |

PLAN B - ACTIVES CENSUS BY AGE:

| Age | Number Male | Number <br> Female | Total <br> Number | Average salary | $\begin{aligned} & \text { Total } \\ & \text { Salary } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16-20 | 12 | 0 | 12 | 13,962 | 167,545 |
| 21-25 | 82 | 33 | 115 | 16,969 | 1,951,443 |
| 26-30 | 103 | 42 | 145 | 18,997 | 2,754,635 |
| 31-35 | 117 | 52 | 169 | 21,924 | 3,705,182 |
| 36-40 | 143 | 68 | 211 | 21,967 | 4,635,082 |
| 41-45 | 185 | 91 | 276 | 24,302 | 6,707,370 |
| 46-50 | 224 | 120 | 344 | 25,298 | 8,702,655 |
| 51-55 | 230 | 77 | 307 | 26,001 | 7,982,454 |
| 56-60 | 160 | 54 | 214 | 27,050 | 5,788,681 |
| 61-65 | 101 | 39 | 140 | 26,574 | 3,720,306 |
| 66-70 | 52 | 16 | 68 | 24,777 | 1,684,831 |
| 71-75 | 15 | 7 | 22 | 31,636 | 695,982 |
| 76-80 | 13 | 0 | 13 | 13,512 | 175,650 |
| 81-85 | 2 | 0 | 2 | 9,250 | 18,500 |
| TOTAL | 1,439 | 599 | 2,038 | 23,891 | 48, 690,316 |

THE ACTIVE CENSUS INCLUDES 804 ACTIVES WITH VESTED BENEFFITS, INCLODING 51 DROP PARTICIPANTS AND 41 ACTIVE FORMER DROP PARTICIPANTS.

PLAN B - TERMINATED MEMBERS DUE A DEFERRED RETIREMEANT BENEFIT:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Benefit | Total <br> Beneflt |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 1 | 0 | 1 | 4,374 | 4,374 |
| 41-45 | 7 | 2 | 9 | 7,441 | 66,970 |
| 86-50 | 12 | 5 | 17 | 8,127 | 138,155 |
| 51-55 | 14 | 5 | 19 | 7,692 | 146,146 |
| 56-60 | 10 | 8 | 18 | 6,799 | 122,389 |
| 61-65 | 8 | 2 | 10 | 1,770 | 17,702 |
| 66-70 | 2 | 0 | 2 | 531 | 1,062 |
| 76-80 | 0 | 3 | 3 | 1,393 | 1,178 |
| total | 54 | 25 | 79 | 6,341 | 500,976 |

PLAN B - TERMINATED MEMBERS DUE A REFUND OF CONIRIBUTIONS:

| Contributions Ranging |  |  |
| :---: | :---: | :---: |
| From | TO |  |
| 0 | - | 99 |
| 100 | - | 499 |
| 500 | - | 999 |
| 1000 | - | 1999 |
| 2000 | - | 4999 |
| 5000 | - | 9999 |
| 10000 | - | 19999 |


|  | Total |
| :---: | :---: |
| Number | Contributions |
| 627 | 14,646 |
| 96 | 20,591 |
| 23 | 16,853 |
| 17 | 27,402 |
| 28 | 87,970 |
| 11 | 73,965 |
| 4 | 47,242 |
| 806 | 288,669 |

PLAN B - REGULAR RETTREES:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Bonefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46-50 | 2 | 0 | 2 | 13,853 | 27,705 |
| 51-55 | 2 | 1 | 3 | 15,586 | 46,757 |
| 56-60 | 15 | 0 | 15 | 14,582 | 218,730 |
| 61-65 | 38 | 12 | 50 | 10,085 | 504,251 |
| 66-70 | 112 | 29 | 141 | 9,162 | 1,291,833 |
| 71-75 | 87 | 28 | 115 | 8,233 | 946,760 |
| 76-80 | 77 | 23 | 100 | 7,805 | 780,544 |
| 81-85 | 4 | 20 | 64 | 6,620 | 423,703 |
| 86-90 | 21 | 7 | 28 | 4,919 | 137,731 |
| 91-99 | 5 | 5 | 10 | 3,742 | 37,423 |
| TORAL | 403 | 125 | 528 | 8,363 | 4,415,437 |

PLAN B - DISABIITMY RETTREES:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Benefit | Total Banefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 36-40 | 1 | 0 | 1 | 6,973 | 6,973 |
| 11-45 | 3 | 1 | 4 | 7,081 | 28,325 |
| 46-50 | 3 | 1 | 4 | 5,794 | 23,175 |
| 51-55 | 10 | 1 | 11 | 7,074 | 77,811 |
| 56-60 | 8 | 1 | 9 | 6,540 | 58,858 |
| 61-65 | 3 | 2 | 5 | 5,939 | 29,693 |
| 66-70 | 2 | 1 | 3 | 5,842 | 17,526 |
| 71-75 | 1 | 0 | 1 | 10,023 | 10,023 |
| 76-80 | 0 | 1 | 1 | 3,870 | 3,870 |
| 81-85 | 2 | 0 | 2 | 2,960 | 5,919 |
| т0rar | 33 | 8 | 41 | 6,394 | 262,173 |

PLAN B - SURVIVORS:

| Age | Number Male | Number <br> Pemale | Total <br> Number | Average Benefit | Total Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 0 | 1 | 1 | 4,143 | 4,143 |
| 41-45 | 0 | 1 | 1 | 11,936 | 11,936 |
| 46-50 | 2 | 4 | 6 | 3,967 | 23,802 |
| 51-55 | 1 | 8 | 9 | 4,856 | 43,704 |
| 56-60 | 0 | 13 | 13 | 5,976 | 77,693 |
| 61-65 | 0 | 20 | 20 | 6,458 | 129,158 |
| 66-70 | 1 | 24 | 25 | 5,419 | 135,468 |
| 71-75 | 1 | 26 | 27 | 6,409 | 173,046 |
| 76-80 | 0 | 26 | 26 | 5,718 | 148,680 |
| 81-85 | 2 | 31 | 33 | 5,537 | 182,725 |
| 86-90 | 0 | 10 | 10 | 3,689 | 36,894 |
| 91-99 | 0 | 5 | 5 | 1,025 | 5,125 |
| TOTAL | 7 | 169 | 176 | 5,525 | 972,374 |

PLAN B - ACTIVE RGABERE:
Campleted Yeary of sexvice

Completed years of service

| Attained Ages | 0 | 1 | 2 | 3 | 1 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3060rex | Average Salary |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 13,468 | 19,392 |  |  | $\because$ |  |  |  |  |  |  |  |
| 21-25 | 14,838 | 16,711 | 18,791 | 20,082 | 18,711 | 20,539 |  |  |  |  |  | 13,962 |
| 26-30 | 15,579 | 18,906 | 18,727 | 18,711 | 21,180 | 21,744 |  |  |  |  |  | 16,969 |
| 31-35 | 18,299 | 18,777 | 23,477 | 20,842 | 20,167 | 24,519 | 23,129 | 23, 176 |  |  |  | 18,997 |
| 36-10 | 16,149 | 19,460 | 20,201 | 20,376 | 21,072 | 22,874 | 25,522 | 30,605 | 33,783 |  |  | 21,924 |
| 41 - 45 | 17,344 | 21,321 | 19,255 | 19,813 | 25,013 | 23,281 | 28,745 | 31,831 | 30,125 | 28,690 |  | 21,967 |
| 16-50 | 18,785 | 19,280 | 20,590 | 19,629 | 23,306 | 24,447 | 26,148 | 28,257 | 32,603 | 31,268 | 34,786 | 25,298 |
| 51-55 | 19,646 | 18, 878 | 22,512 | 25,266 | 20,640 | 21,529 | 25,301 | 28,828 | 29,784 | 34,757 | 37,598 | 26,001 |
| $56-60$ | 20,338 | 23,269 | 21,704 | 27,870 | 18,255 | 23,911 | 23,451 | 33,228 | 33,732 | 29,527 | 46,020 | 27,050 |
| $61-65$ $66-70$ | 17,637 | 24,220 | 29,175 | 31,136 | 32,864 | 22,141 | 23,869 | 26,122 | 29,661 | 32,447 | 45,728 | 26,574 |
| 66-70 | 15,334 | 25,744 | 29,271 | 27,182 | 45,878 | 19,758 | 25,865 | 22,774 | 32,631 | 35,545 | 32,267 | 24.777 |
| 71 \& Over |  | 17,848 |  |  | 36,177 | 22,372 | 12,936 | 30,214 | 25,662 | 24,056 | 52,829 | 24,058 |
| Avorago | 16,966 | 19,703 | 20,899 | 21,279 | 22,417 | 22,998 | 25,205 | 28,815 | 31,067 | 31,973 | 41.493 | 23,891 |


Yeara ontil Retirement Eligibility

| Attained Agez | 0 | 1 | 2 | 3 | 4 | 5－9 | 10－14 | 15－19 | 20－24 | 25－29 | 30s0ver | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0－30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 31－35 |  |  |  |  |  |  |  |  |  | 1 |  | 0 |
| 36－40 |  |  |  |  |  |  | ． |  |  | 1 |  | 1 |
| 41－45 |  |  |  |  |  |  |  |  |  |  |  | 9 |
| 46－50 |  |  |  |  | 1 |  | 15 | 1 |  |  |  | 17 |
| 51－55 |  |  |  |  |  | 19 |  |  |  |  |  | 19 |
| 56－60 | 1 | 3 | 7 | 4 | 3 |  |  |  |  |  |  | 18 |
| 61－65 | 10 |  |  |  |  |  |  |  |  |  |  | 10 |
| 66－70 | 2 |  |  |  |  |  |  |  |  |  |  | 10 |
| 71－75 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 76－80 | 3 |  |  |  |  |  |  |  |  |  |  | 3 |
| 81 a Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| totals | 16 | 3 | 7 | 4 | 4 | 19 | 15 | 10 | 0 | 1 | 0 | 79 |


4，374
$\stackrel{\circ}{\circ}$
： Hi \％

$\mathrm{H}^{\mathrm{H}}$


$$
\begin{array}{l|l}
0 & \\
n & 1 \\
1 & \\
\text { nn } &
\end{array}
$$

7
0
0
0
0
$\stackrel{7}{0}$
$\vdots$

Yeaxs Ontil Retiroment Eligibility



| TPE＇9 | 0 | ＊＊＇\％ | 0 | 191\％ 6 | ＊LE＇9 | 869 ${ }^{\circ}$ | 958＇フi | 9＜9＇s | SS6 9 | $588{ }^{\circ} \mathrm{L}$ | 995＇I | esprenk |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 |  |  |  |  |  |  |  |  |  |  |  | 7080 78 |
| E6E＇T |  |  |  |  |  |  |  |  |  |  | $E 6 \dot{\varepsilon}^{\prime} \boldsymbol{I}$ | 08－92 |
| 0 |  |  |  |  |  |  |  |  |  |  |  | SL－IL |
| 185 015 |  |  |  |  |  |  |  |  |  |  | IES | OL－99 |
| 66L＇9 |  |  |  |  |  |  | rep＇s |  |  |  | 0LL＇I | 59－59 |
| 2689 ${ }^{\circ}$ |  |  |  |  |  | $269 \%$ | TS\％ 8 | $949 \%$ | S56＇9 | S78 ${ }^{\circ} \mathrm{L}$ | SII＇ | 09－95 ss－ 59 |
| $\angle E T$＇s |  |  |  | 697＇01 | \％ 28 |  | TLO＇ 28 |  |  |  |  | SS－ 5 |
| 「1\％＇し |  |  |  | Tr8＇L |  |  |  |  |  |  |  | St－is |
|  |  |  |  |  |  |  |  |  |  |  |  | OP－9E |
| OE＇ |  | －6E＇＊ |  |  |  |  |  |  |  |  |  | SE．- IE |
| 0 |  |  |  |  |  |  |  |  |  |  |  | OE－O |
| 7fforeg ostrany | د040\％0¢ | 6z－sz | s－0z | 6I－sI | Pr－or | $6-5$ |  | $\varepsilon$ | $\boldsymbol{z}$ | $\tau$ | 0 | sosy |

PLAN B - SERVICE RETIREES:
Cosiploted Years since Retiremont

| Attained Age日 | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3040rer | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-50 |  | 2 |  |  |  |  |  |  |  |  |  |  |
| 51-55 |  |  |  |  |  |  |  |  |  |  |  | 2 |
| 56-60 | 5 | 2 | 3 | 3 | 2 |  |  |  |  |  |  | 3 |
| 61-65 | 11 | 11 | 11 | 3 | 2 |  |  |  |  |  |  | 25 |
| 66-70 | 12 | 7 | 12 | 20 | 16 | 8 68 | 2 |  |  |  |  | 50 |
| 71-75 | 4 | 4 | 8 | 20 | 16 | 68 47 | 5 38 | 1 |  |  |  | 141 |
| $76-80$ |  | 1 | 2 |  | 2 | 8 | 38 | 8 |  |  |  | 115 |
| 81-85 |  | 1 | 2 | 1 | 2 | 8 | 46 | 38 | 5 |  |  | 100 |
| 86-90 |  | 1 | 2 | 1 | 1 |  | 6 | 28 | 24 | 2 |  | 64 |
| 91 f Ovar |  |  |  |  |  | 1 |  | 3 | 16 | 7 |  | 28 |
|  |  |  |  |  |  |  |  | 1 | 1 | 5 | 3 | 10 |
| Totala | 32 | 29 | 37 | 29 | 32 | 132 | 95 | 79 | 46 |  |  |  |
|  |  |  |  |  |  |  |  |  | 6 | 14 | 3 | 528 |



| Agea | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080ver | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 - 50 |  | 13,852 |  |  |  |  |  |  |  |  |  |  |
| 51-55 |  |  |  | 19,064 | 8,629 |  |  |  |  |  |  | 13,852 |
| 56-60 | 13,149 | 16,788 | 10,985 | 19,358 | 14,190 |  |  |  |  |  |  | 15,586 |
| $61-65$ $66-70$ | 6,533 11,530 | 10,494 10,861 | 10,448 | 9,352 | 14,839 | 12,270 | 8,230 |  |  |  |  | 14,582 10,085 |
| 71-75 | 12,530 5,906 | 10,861 11,643 | 8,059 10,255 | 9,191 | 9,484 | 8,331 | 15,649 | 43.45 |  |  |  | 10,162 |
| 76-80 |  | 6,110 | 3,704 |  | 6,318 3,357 | 7,456 6,242 | 8,402 | 10,865 |  |  |  | 8,233 |
| 81-85 |  | 3,577 | 4,482 | 2,705 | 7,340 | 6,242 | 8,197 7,386 | 7,539 6,802 | 10,008 |  |  | 7,805 |
| 86-90 |  | 3,506 | 4,68 | 2,705 | 7,340 |  | 7,386 | 6,802 | 6,376 | 8,904 |  | 6,620 |
| $91 \& 0 \mathrm{ever}$ |  | 3,506 |  |  |  | 2,300 |  | 7,475 | 5,470 | 3,141 |  | 4,919 |
|  |  |  |  |  |  |  |  | 10,945 | 7,293 | 2,704 | 1,889 | 3,742 |
| Average | 9,362 | 10,776 | 9,149 | 10,717 | 9,377 | 8,086 | 8,759 | 7,565 | 6,476 | 3,808 | 1,889 | 8,363 |

PLAN E - DIEABILITY RETIREES

| Agea | 0 | 2 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30f0ver | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-35 |  |  |  |  |  |  |  |  |  |  |  |  |
| 36-40 | 1 |  |  |  |  |  |  |  |  |  |  | 0 |
| 41-45 | 1 | 1 | 1 |  |  |  | 1 |  |  |  |  | 1 |
| 46-50 |  |  | 1 |  |  | 1 | 2 |  |  |  |  | 4 |
| 51-55 | 2 | 1 |  | 1 | 2 | 3 | 2 |  |  |  |  | 11 |
| 56-60 |  |  | 1 | 1 |  | 5 | 2 |  |  |  |  | 11 |
| 61-65 |  |  | 2 | 1 |  | 1 | 1 |  |  | 1 |  | 9 |
| 66-70 |  |  |  |  |  |  | 2 |  | 1 | 1 |  | 3 |
| 71-75 |  |  |  |  |  |  | 1 |  | 1 |  |  | 3 |
| 76-80 |  |  |  |  |  |  | 1 |  |  |  |  | 1 |
| 81-85 |  |  |  |  |  |  |  |  | 2 | 1 |  | 2 |
| $86 ¢ 000 \mathrm{x}$ |  |  |  |  |  |  |  |  |  | 2 |  | 2 |
| Totala | 4 | 2 | 4 | 3 | 2 | 10 | 11 | 0 | 3 | 2 | 0 | 41 |


| Attained Ages | Coupleted Yeara since Retirament |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1. | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080Var | Average Benefit |
| $0-35$ |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 36-10 | 6,973 |  |  |  |  |  |  |  |  |  |  | 6,973 |
| 41-65 | 6,068 | 9,303 | 8,335 | - |  |  | 4,619 |  |  |  |  | 7,081 |
| $46-50$ |  |  | 9,061 |  |  | 5,625 | 4,214 |  |  |  |  | 5,794 |
| $51-55$ $56-60$ | 9,905 | 8,229 |  | 11,902 | 4,845 | 6,972 | 3,631 |  |  |  |  | 7,074 |
| $56-60$ $61-65$ |  |  | 5,869 | 10,479 |  | 5,011 | 8,728 |  |  |  |  | 6,540 |
| $61-65$ $66-70$ |  |  | 4,394 | 6,637 |  | 9,969 | 2,690 |  |  | 6,002 |  | 5,939 |
| $66-70$ $71-75$ |  |  |  |  | . |  | 7,036 10,023 |  | 3,453 |  |  | 5,842 |
| 76-80 |  |  |  |  |  |  | 10,023 |  |  |  |  | 10,023 |
| 81-85 |  |  |  |  | - |  |  |  | 3,870 $\mathbf{2 , 3 1 9}$ | 3,600 |  | 3,870 |
| 86 \& Ovex |  |  |  |  |  |  |  |  | 2,319 | 3,600 |  | 2,959 |
| Average | 8,213 | 8,766 | 6,915 | 9,673 | 4,845 | 6,157 | 5,874 | 0 | 3,214 | 4,801 | 0 | 6,394 |

PLAN E - SURUIVING BENEFICIARIES OF FORMISR MEARERS;

C. Completed Yoara gince Retixement

| Attained |  |  |  |  |  |  |  |  | . | 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Orex | Average <br> Benefit |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 32-35 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 36-40 |  |  |  |  |  | 4,243 |  |  |  |  |  | 4,243 |
| 41-45 |  | 11,936 |  |  |  |  |  |  |  |  |  | 0 |
| 46-50 |  |  |  | 3,588 |  |  |  |  |  |  |  | 11,936 |
| 51-55 |  | 4,573 |  | 3,580 |  | 3,531 $5,459$ | $5,320$ | 3,888 |  |  |  | 3,967 |
| 56-60 | 9,714 | 4,856 | 5,622 | 9,662 |  | 5,459 4,089 | ¢, <br> 876 |  | 3,818 |  |  | 4,856 |
| 61-65 | 3,468 | -856 | 5,622 | 9,662 | $6,490$ | 1,089 7,638 | 6,876 |  |  |  |  | 5,976 |
| 66-70 | 10,852 | 3,212 |  | 3,731 | $2,877$ | $6,534$ | 6.216 | $\begin{aligned} & 6,801 \\ & 5,836 \end{aligned}$ |  |  |  | 6,458 |
| 71-75 |  | 5,957 |  | 3,732 |  | 7, 625 | 7,980 | 5,836 4,582 | 5,778 6,274 | 26, 953 |  | 5,419 6,409 |
| $76-80$ $81-85$ |  |  |  | 2,807 |  | 0.029 | 6,666 | 6,634 | 6,276 | 26,304 2,131 |  | 6,409 5,718 |
| 86-90 |  |  | 11,304 |  |  | $\begin{aligned} & 2,022 \\ & 2,603 \end{aligned}$ | 412 | 7,582 | 7.374 | 2,305 | 1,306 | 5,537 |
| 91 \& Over |  |  |  |  |  |  |  |  | 7.420 | 2,165 | 1,207 | 3,689 |
|  |  |  |  |  |  |  | . |  |  |  | 1,025 | 1,025 |
| Average | 6,294 | 5,851 | 6,715 | 5,340 | 5,286 | 6,303 | 5,487 | 6,098 | 6,686 | 2,977 | 1,139 | 5,525 |

## EXHIBIT XXII

PLAN B: YEAR-TO-YEAR COMPARISON

|  |  | Fiscal 2005 |  | Fiscal 2004 |  | Fiscal 2003 |  | Fiscal 2002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Active Members |  | 2,038 |  | 2,052 |  | 2,064 |  | 2,066 |
| Number of Retirees and Survivors |  | 745 |  | 734 |  | 720 |  | 705 |
| Number Terminated Due Deferred Benefits |  | 79 |  | 74 |  | 63 |  | 60 |
| Number Terminated Due Refund |  | 806 |  | 820 |  | 790 |  | 761 |
| Active Lives Payroll | \$ | 48,690,316 | \$ | 47,676,817 | \$ | 45,260,679 | \$ | 43,560,002 |
| Retiree Benefits in Payment | \$ | 5,649,984 | \$ | 5,476,263 | \$ | 5,216,962 | \$ | 5,039,462 |
| Market Value of Assets | \$ | 101,109,899 | \$ | 92,904,743 | \$ | 83,836,074 | \$ | 81,767,131 |
| Ratio of Actuarial Value of Assets to Actuarial Accrued Liability |  | 94.18\% |  | 93.51\% |  | 93.04\% |  | 92.99\% |
| Actuarial Accrued Liability (As defined by GASB- 25) | \$ | 102,373,290 | \$ | 95,618,087 | \$ | 92,615,633 | \$ | 95,381,233 |
| Actuarial Value of Assets | \$ | 96,417,685 | \$ | 89,415,704 | \$ | 86,170,714 | \$ | 88,697,416 |
| Unfunded Actuarial Accrued Liability | \$ | 5,955,605 | \$ | 6,202,383 | \$ | 6,444,919 | \$ | 6,683,817 |
| Present Value of Future Employer Normal Cost | \$ | 41,742,178 | \$ | 42,458,765 | \$ | 36,670,550 | \$ | 28,532,252 |
| Present Value of Future Employee Contributions | \$ | 17,253,376 | \$ | 18,040,618 | \$ | 17,184,709 | \$ | 16,666,322 |
| Present Value of Future Benefits | \$ | 161,368,844 | \$ | 156,117,470 | \$ | 146,470,892 | \$ | 140,579,807 |


| Fiscal 2006 | Fiscal 2005 | Fiscal 2004 | Fiscal 2003 |  |
| :---: | :---: | :---: | :---: | :---: |
| $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ |  |
| $2.36 \%$ | $2.37 \%$ | $2.28 \%$ | $2.27 \%$ |  |
| $9.86 \%$ | $9.72 \%$ | $9.22 \%$ | $7.53 \%$ |  |
| $9.75 \%$ | $9.50 \%$ | $7.75 \%$ | $6.25 \%$ |  |



| Fiscal 2002 | Fiscal 2001 | Fiscal 2000 | Fiscal 1999 | Fiscal 1998 | Fiscal 1997 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ |
| $2.18 \%$ | $2.01 \%$ | $2.01 \%$ | $2.03 \%$ | $1.93 \%$ | $1.77 \%$ |
| $6.16 \%$ | $3.68 \%$ | $3.32 \%$ | $4.31 \%$ | $2.73 \%$ | $2.72 \%$ |
| $4.50 \%$ | $4.50 \%$ | $4.50 \%$ | $3.75 \%$ | $2.75 \%$ | $-3.25 \%$ |

## SUMMARY OF PRINCIPAL PLAN PROVISIONS

All members of the Municipal Employees' Retirement System are participants in either Plan A or B according to the provisions of the agreement entered into by their employer. All employees of a participating employer must participate in the same plan. The principal provisions of each plan are given below. The following summary of plan provisions as of July 1, 2005, is for general informational purposes only and does not constitute a guarantee of benefits.

MEMBERSHIP - All persons who are actively employed by a participating employer on a permanent, regularly scheduled basis of at least an average of thirty-five hours per week are members of this system. Excluded from membership are members of city councils, alderman, town councilmen, and constables; the exclusion does not apply to persons serving in excluded positions on January 1, 1997.

## PLAN A PROVISIONS:

CONTRIBUTION RATES - Employee contributions in Plan A are $9.25 \%$ of the member's earnings. In addition, each sheriff and ex officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, excepting Orleans Parish, and remits the money to the system on an annual basis. Taxes are apportioned between Plan A and Plan B in proportion to salaries of plan participants. Taxes received from East Baton Rouge Parish are apportioned between the Municipal Employees' Retirement System and the Employees' Retirement System of the City of Baton Rouge. The system also receives revenue sharing funds each year as appropriated by the legislature. The remaining employer contributions are determined according to actuarial requirements and are set annually.

RETIREMENT BENEFITS - Members with ten years of creditable service may retire at age sixty; members with twenty-five years of service may retire regardless of age. The monthly retirement allowance is equal to three percent of the member's final compensation multiplied by his years of creditable service; elected officials receive an additional one-half percent of final compensation for each year of such elective service. However, the accrued retirement benefits for those employees who were members of only the supplemental plan prior to October 1, 1978, are based on one percent of final compensation plus two dollars per month for each year of service credited prior to October 1, 1978. The retirement allowance may not exceed the greater of final annual salary or one hundred percent of the member's final three-year average compensation. Members with twenty years of service credit, not otherwise eligible for normal retirement, are eligible for a modified actuarially reduced early retirement.

DISABLITY BENEFITS - Five years of creditable service are required in order to be eligible for disability benefits. Twenty years of creditable service are required in order for a member to have a vested disability benefit. A disabled member receives a normal retirement allowance if eligible under regular retirement provisions; if he is not eligible for a normal retirement, he receives a disability benefit equal to the lesser of:

1) Forty-five percent of his final average compensation or three percent of his final average compensation multiplied by his years of creditable service, whichever is greater; or
2) Three percent of his final average compensation multiplied by his years of creditable service projected to his earliest normal retirement age.

SURVIVOR BENEFITS - Five years of creditable service are required in order to be eligible for survivor benefits. If the member is eligible for normal retirement at the time of death, the surviving spouse receives an automatic option two benefit. If the member is not eligible for a normal retirement, the surviving spouse with minor children receives sixty percent of final compensation payable until no child in her care satisfies the definition of minor child. The surviving spouse with no minor children receives forty percent of final compensation payable upon attainment of age sixty by the spouse, or the actuarial equivalent of this amount payable immediately (such equivalent not to be less than $20 \%$ of final compensation). Minor children with no surviving unmarried parent receive thirty percent of final compensation each not to exceed a total of sixty percent of final compensation. Survivor benefits are also payable to the surviving spouse's of former members who have not withdrawn their accumulated contributions and who have at least twenty years of creditable service. The benefits payable are the actuarial equivalent of the Option 2 benefits that would have become payable to the surviving spouse at the time the former member would have begun receiving deferred normal retirement benefits, had the member survived until that date, election Option 2, and died at that time.

## PLAN B PROVISIONS:

CONTRIBUTION RATES - Employee contributions in Plan B are 5.00\% of the member's earnings. In addition, each sheriff and ex officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, excepting Orleans Parish, and remits the money to the system on an annual basis. Taxes are apportioned between Plan A and Plan B in proportion to salaries of plan participants. Taxes received from East Baton Rouge Parish are apportioned between the Municipal Employees' Retirement System and the Employees' Retirement System of the City of Baton Rouge. The system also receives revenue sharing funds each year as appropriated by the legislature. The remaining employer contributions are determined according to actuarial requirements and are set annually.

RETIREMENT BENEFITS - Members with ten years of creditable service may retire at age sixty; members with thirty years of service may retire at any age. The monthly retirement allowance is equal to two percent of the member's final compensation multiplied by his years of creditable service; elected officials receive an additional one-half percent of final compensation for each year of such elective service.

DISABILITY BENEFITS - Ten years of creditable service are required in order to be eligible for disability benefits. Twenty years of creditable service are required in order for a member to have a vested disability benefit. A disabled member receives a normal retirement allowance if eligible under regular retirement provisions; if he is not eligible for a normal retirement allowance, he receives a disability benefit equal to the lesser of:

1) Thirty percent of his final average compensation or two percent of his final average compensation multiplied by his years of creditable service, whichever is greater; and
2) Two percent of his final average compensation multiplied by his years of creditable service projected to his earliest normal retirement age.

SURVIVOR BENEFITS - The surviving spouse of a member who was eligible for normal retirement at the time of death receives an automatic option two benefit. The surviving spouse of a member with five or more years of creditable service and not eligible for normal retirement at the time of death receives either $30 \%$ of the member's final compensation payable to the spouse when they attain age 60 or an actuarial equivalent of $30 \%$ of the deceased member's final compensation, but not less than $15 \%$ of such final compensation. Survivor benefits are also payable to the surviving spouse's of former members who have not withdrawn their accumulated contributions and who have at least twenty years of creditable service. The benefits payable are the actuarial equivalent of the Option 2 benefits that would have become payable to the surviving spouse at the time the former member would have begun receiving deferred normal retirement benefits, had the member survived until that date, elected Option 2, and died at that time.

## PROVISIONS APPLICABLE TO BOTH PLAN A AND B:

UNUSED SICK \& ANNUAL LEAVE - All unused sick and annual leave is credited at the time of retirement to the member if the employer so elects for his employees. The actuarial cost of providing this conversion is borne solely by the employer and must be paid to the board within thirty days of the member's retirement date.

OPTIONAL ALLOWANCES - Members may receive their benefits as a life annuity, or in lieu of such a reduced benefit according to the option selected which is the actuarial equivalent of the maximum benefit.

Option 2 - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will continue to receive the same reduced benefit.

Option 3 - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will receive one-half of the member's reduced benefit.

Option 4 - Upon retirement, the member elects to receive a board-approved benefit which is actuarially equivalent to the maximum benefit.

DEFERRED RETIREMENT OPTION PLAN - In lieu of terminating employment and accepting a service retirement allowance, any member of Plan A or B who is eligible for a normal retirement may elect to participate in the Deferred Retirement Option Plan (DROP) for up to three years and defer the receipt of benefits. Upon commencement of participation in the plan, membership in the system terminates. During participation in the plan, employer contributions are payable but employee contributions cease. The monthly retirement benefits that would have been payable, had the person elected to cease employment and receive a service retirement allowance, are paid into the DROP account. After a member terminates his participation in DROP his account will earn interest
at the actual rate of return earned on the funds left on deposit as certified by the custodian of the system's assets. This interest will be credited to the individual member's account balance on an annual basis. In addition, no cost of living increases are payable to participants until employment which made them eligible to become members of the system has been terminated for at least one full year.

Upon termination of employment prior to, or at the end of, the specified period of participation, a participant in the plan may receive, at his option, a lump sum payment from the account equal to the payments into the account, a true annuity based upon his account balance in that fund, or any other method of payment if approved by the board of trustees. The monthly benefits that were being paid into the DROP account will begin to be paid to the retiree. If a participant dies during the participation in the plan, a lump sum equal to his account balance in the plan fund shall be paid to his named beneficiary or, if none, to his estate. If employment is not terminated at the end of the three years, payments into the plan fund cease and the person resumes active contributing membership in the system. Additional accrued benefits are based on final average compensation used to calculate the member's original benefit unless the additional period of service is at least thirty-six months.

COST OF LIVING INCREASES - The board of trustees is authorized to grant retired members, and widows of members, who have been retired for at least one full year an annual cost of living increase of two percent of their benefit and all retired members and widows who are sixty-five years. of age and older a two percent increase in their original benefit (or their benefit as of October 1, 1977, if they retired prior to that time). In order for the board to grant either of these increases the system must meet certain criteria detailed in the statute related to funding status and interest earnings on investments. In lieu of other cost of living increases the board may grant an increase to retirees in the form " $\mathrm{X} \times(\mathrm{A} \& B)$ " where " A " is equal to the number of years of credited service accrued as retirement or death of the member or retiree and " B " is equal to the number of years since death of the member or retiree to June 30 of the initial year of increase and " X " is equal to any amount available for funding such increase up to a maximum of $\$ 1.00$.

## ACTUARIAL ASSUMPTIONS

In determining actuarial costs, certain assumptions must be made regarding future experience under the plan. These assumptions include the rate of investment return, mortality of plan members, rates of salary increase, rates of retirement, rates of termination, rates of disability, and various other factors that have an impact on the cost of the plan. To the extent that future experience varies from the assumptions selected for valuation, future costs will be either higher or lower than anticipated. The effect of emerging experience on the fund is illustrated by the following chart.

Factor<br>Investment Earnings Rate<br>Annual Rate of Salary Increase<br>Rates of Retirement<br>Rates of Termination<br>Rates of Disability<br>Rates of Mortality<br>Increase in Factor Results in<br>Decrease in Cost<br>Increase in Cost<br>Increase in Cost<br>Decrease in Cost<br>Increase in Cost<br>Decrease in Cost

ACTUARIAL COST METHOD:

ACTUARIAL ASSET VALUES:

VALUATION INTEREST RATE:
ANNUAL SALARY INCREASE RATE:

Frozen Attained Age Normal Actuarial Cost Method with allocation based on earnings. The frozen actuarial accrued liabilities were calculated on the projected unit credit cost method.

The actuarial value of assets in Plan A is based on the market value of investment securities adjusted to smooth realized and unrealized capital gains over a two year period by deferring one-half of such gains or losses accrued in the prior fiscal year and one-half of such gains or losses accrued in the current fiscal year. The actuarial value of assets in Plan $B$ is based on the market value of investment securities adjusted to smooth realized and unrealized capital gains over a three year period by deferring one-third of such gains or losses accrued in the prior fiscal year and two-thirds of such gains or losses accrued in the current fiscal year. In addition, expense fund assets were allocated to each plan in proportion to covered payroll.

8\% (Net of Investment Expense)
6\% (3.25\% Inflation / 2.75\% Merit)

ANNUITANT MORTALITY: 1994 Uninsured Pensioners' Table set forward 2 years (male mortality is based on 2 year set forward of the male table and female mortality is based on 2 year set forward of the female table)

RETIREE COST OF LIVING INCREASES:

DROP PARTICIPATION PERIOD:

# RETIREMENT RATES FOR ACTIVE FORMER DROP PARTICIPANTS: 

The present value of future retirement benefits is based on benefits currently being paid by the system and includes previously granted cost of living increases. The present values do not include provisions for potential future increases not yet authorized by the Board of Trustees.

RATES OF RETIREMENT: The table of these rates is included later in the report. These rates apply only to those individuals eligible to retire. Members are assumed to retire no earlier than normal retirement age. In the first year of eligibility the tabular rates are multiplied by 1.5 .

DROP ENTRY RATES: The table of these rates is included later in the report. These rates apply only to those individuals eligible to participate in DROP. In the first year of eligibility the tabular rates are multiplied by 1.5 .

All DROP participants are assumed to participate for 3 years and retire at the end of this participation period.

Retirement rates for active former DROP participants are as follows:

| Ages | Retirement Rates |
| :---: | :---: |
| Below 89 | 0.21 |
| 90 | 1.00 |

The rates of withdrawal are applied based upon completed years of service according to the following table:

| Service | Plan A | Plan B |
| :---: | :---: | :---: |
| 0 | 0.24 | 0.26 |
| 1 | 0.19 | 0.20 |
| 2 | 0.16 | 0.15 |
| 3 | 0.12 | 0.15 |
| 4 | 0.10 | 0.10 |
| 5 | 0.08 | 0.10 |
| 6 | 0.08 | 0.09 |


| 7 | 0.08 | 0.09 |
| ---: | ---: | ---: |
| 8 | 0.06 | 0.06 |
| 9 | 0.06 | 0.05 |
| 10 | 0.06 | 0.05 |
| 11 | 0.05 | 0.05 |
| 12 | 0.05 | 0.05 |
| 13 | 0.05 | 0.05 |
| 14 | 0.03 | 0.05 |
| 15 | 0.03 | 0.05 |
| 16 | 0.03 | 0.03 |
| 17 | 0.01 | 0.03 |
| 18 | 0.01 | 0.03 |
| 19 | 0.01 | 0.03 |
| 20 | 0.01 | 0.02 |
| over 20 | 0.01 | 0.02 |

Note: The withdrawal rate for individuals eligible to retire is assumed to be zero.

RATES OF DISABILITY: $25 \%$ of the disability rates used for the $21^{\text {st }}$ valuation of the Railroad Retirement System for individuals with $10-19$ years of service.

MARRIAGE STATISTICS: $80 \%$ of the members are assumed to be married; husbands are assumed to be three years older than wives.

FAMILY STATISTICS: Assumptions utilized in determining the costs of various survivor benefits as listed below:

| Age at <br> Death | \% With <br> Children | Number of <br> Children | Average <br> Age |
| :---: | :---: | :---: | :---: |
| 25 | $55 \%$ | 2.2 | 7 |
| 35 | $80 \%$ | 2.7 | 11 |
| 45 | $60 \%$ | 1.9 | 13 |
| 55 | $20 \%$ | 1.5 | 14 |
| 65 | $2 \%$ | 1.0 | 17 |

DISABLED LIVES MORTALITY: $175 \%$ of 1971 Group Annuity Table (Female rates are based on 6 year setback of male rates)

VESTING ELECTING PERCENTAGE: $65 \%$ of those vested elect deferred benefits in lieu of contribution refunds.

## ACTUARIAL TABLES AND RATES

| Age | Male Mortality Rates | Female Mortality Rates | Plan A Retirement Rates | Plan B Retirement Rates | Plan A DROP Entry Rates | $\begin{gathered} \text { Plan B } \\ \text { DROP Entry } \\ \text { Rates } \end{gathered}$ | $\begin{gathered} \text { Base } \\ \text { Disability } \end{gathered}$ | Remarriage Rates Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | 0.00054 | 0.00031 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.05665 |
| 19 | 0.00057 | 0.00031 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.05665 |
| 20 | 0.00060 | 0.00031 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.05665 |
| 21 | 0.00063 | 0.00031 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.05213 |
| 22 | 0.00067 | 0.00031 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.04834 |
| 23 | 0.00071 | 0.00031 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.04522 |
| 24 | 0.00075 | 0.00032 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.04270 |
| 25 | 0.00078 | 0.00032 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.04070 |
| 26 | 0.00081 | 0.00034 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03915 |
| 27 | 0.00084 | 0.00036 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03799 |
| 28 | 0.00086 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03714 |
| 29 | 0.00088 | 0.00040 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03654 |
| 30 | 0.00090 | 0.00043 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03611 |
| 31 | 0.00091 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03578 |
| 32 | 0.00091 | 0.00048 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03549 |
| 33 | 0.00091 | 0.00051 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03515 |
| 34 | 0.00093 | 0.00055 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00150 | 0.03471 |
| 35 | 0.00096 | 0.00059 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00170 | 0.03409 |
| 36 | 0.00101 | 0.00064 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00190 | 0.03286 |
| 37 | 0.00107 | 0.00070 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00210 | 0.03139 |
| 38 | 0.00115 | 0.00076 | 0.00000 | 0.00000 | 0.00000 | 0.00000 , | 0.00240 | 0.02973 |
| 39 | 0.00124 | 0.00083 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00270 | 0.02787 |
| 40 | 0.00135 | 0.00089 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00310 | 0.02585 |
| 41 | 0.00145 | 0.00094 | 0.06000 | 0.00000 | 0.27000 | 0.00000 | 0.00350 | 0.02352 |
| 42 | 0.00157 | 0.00099 | 0.06000 | 0.00000 | 0.27000 | 0.00000 | 0.00390 | 0.02111 |
| 43 | 0.00170 | 0.00105 | 0.06000 | 0.00000 | 0.27000 | 0.00000 | 0.00440 | 0.01868 |
| 44 | 0.00185 | 0.00111 | 0.06000 | 0.00000 | 0.27000 | 0.00000 | 0.00500 | 0.01629 |
| 45 | 0.00204 | 0.00120 | 0.06000 | 0.00000 | 0.27000 | 0.00000 | 0.00570 | 0.01400 |
| 46 | 0.00226 | 0.00130 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.00650 | 0.01208 |
| 47 | 0.00250 | 0.00141 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.00730 | 0.01034 |
| 48 | 0.00277 | 0.00154 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.00830 | 0.00879 |
| 49 | 0.00309 | 0.00169 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.00940 | 0.00744 |
| 50 | 0.00345 | 0.00186 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.01070 | 0.00629 |
| 51 | 0.00385 | 0.00205 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.01220 | 0.00551 |
| 52 | 0.00428 | 0.00224 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.01380 | 0.00493 |
| 53 | 0.00476 | 0.00247 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.01570 | 0.00451 |
| 54 | 0.00532 | 0.00276 | 0.06000 | 0.06000 | 0.27000 | 0.19000 | 0.01780 | 0.00423 |
| 55 | 0.00600 | 0.00314 | 0.06000 | 0.36000 | 0.27000 | 0.30000 | 0.02020 | 0.00406 |
| 56 | 0.00677 | 0.00361 | 0.06000 | 0.22000 | 0.27000 | 0.30000 | 0.02300 | 0.00000 |
| 57 | 0.00762 | 0.00415 | 0.06000 | 0.22000 | 0.27000 | 0.30000 | 0.02610 | 0.00000 |
| 58 | 0.00858 | 0.00477 | 0.06000 | 0.22000 | 0.27000 | 0.30000 | 0.02960 | 0.00000 |
| 59 | 0.00966 | 0.00548 | 0.06000 | 0.22000 | 0.27000 | 0.12500 | 0.03370 | 0.00000 |
| 60 | 0.01091 | 0.00627 | 0.14000 | 0.12000 | 0.27000 | 0.12500 | 0.04880 | 0.00000 |
| 61 | 0.01233 | 0.00718 | 0.14000 | 0.12000 | 0.12000 | 0.12500 | 0.05300 | 0.00000 |
| 62 | 0.01391 | 0.00819 | 0.14000 | 0.12000 | 0.12000 | 0.12500 | 0.05780 | 0.00000 |
| 63 | 0.01563 | 0.00929 | 0.14000 | 0.12000 | 0.12000 | 0.12500 | 0.05550 | 0.00000 |
| 64 | 0.01746 | 0.01042 | 0.14000 | 0.12000 | 0.12000 | 0.12500 | 0.03510 | 0.00000 |
| 65 | 0.01939 | 0.01157 | 0.14000 | 0.12000 | 0.12000 | 0.12500 | 0.00630 | 0.00000 |

## ACTUARIAL ASSUMPTIONS FROM 2004 VALUATION

After a review of the mortality and decrement assumptions used in the 2004 valuation, a number of assumptions were changed to better reflect recent experience. The following assumptions represent the assumptions used in the prior year and are for information purposes only.

ANNUITANT MORTALITY: $110 \%$ of 1971 Group Annuity Mortality Table (Female rates are based on 6 year setback of male rates)

RATES OF RETIREMENT: The table of these rates is included on the following page. These rates apply only to those individuals eligible to retire. Members are assumed to retire no earlier than normal retirement age.

DROP ENTRY RATES: The table of these rates is included on the following page. These rates apply only to those individuals eligible to participate in DROP. In Plan A, the tabular rate is multiplied by 2.5 in the first year of eligibility.

RETIREMENT RATES FOR ACTIVE FORMER DROP PARTICIPANTS:

Retirement rates for active former DROP participants are as follows:

| Ages | Retirement Rates |
| :---: | :---: |
| Below 81 | 0.30 |
| $81-89$ | 0.90 |
| 90 | 1.00 |

RATES OF WITHDRAWAL: The table of these rates is included later in the report. In the first ten years of service, the tabular rates were multiplied by the following adjustment factors:

| Service | Adjustment Factor |
| :---: | :---: |
| 1 | 7.000 |
| 2 | 5.500 |
| 3 | 4.000 |
| 4 | 3.500 |
| 5 | 3.000 |
| 6 | 2.666 |
| 7 | 2.333 |
| 8 | 2.000 |
| 9 | 1.666 |
| 10 | 1.333 |

Note: The withdrawal rate for individuals eligible to retire is assumed to be zero.

## DISABLED LIVES MORTALITY: 175\% of 1971 Group Annuity Table (Female rates are based on 6-year setback of male rates)

## ACTUARIAL TABLES AND RATES

(used in the 2004 actuarial valuation)

| Age | Mortality Rates | Plan A Retirement Rates | Plan B Retirement Rates | Plan A DROP Entry Rates | Plan B DROP Entry Rates | Withdrawal Rates | $\begin{aligned} & \text { Base } \\ & \text { Disability } \\ & \text { Rates } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | 0.00052 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04000 | 0.00073 |
| 19 | 0.00053 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04000 | 0.00073 |
| 20 | 0.00055 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04000 | 0.00073 |
| 21 | 0.00057 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03950 | 0.00073 |
| 22 | 0.00060 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03900 | 0.00073 |
| 23 | 0.00062 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03850 | 0.00073 |
| 24 | 0.00065 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03800 | 0.00073 |
| 25 | 0.00068 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03750 | 0.00073 |
| 26 | 0.00071 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03700 | 0.00073 |
| 27 | 0.00075 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03650 | 0.00073 |
| 28 | 0.00079 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03600 | 0.00076 |
| 29 | 0.00084 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03550 | 0.00081 |
| 30 | 0.00089 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03500 | 0.00086 |
| 31 | 0.00095 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03450 | 0.00093 |
| 32 | 0.00101 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03400 | 0.00101 |
| 33 | 0.00108 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03350 | 0.00111 |
| 34 | 0.00115 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03300 | 0.00121 |
| 35 | 0.00123 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03250 | 0.00132 |
| 36 | 0.00132 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03200 | 0.00144 |
| 37 | 0.00142 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03150 | 0.00157 |
| 38 | 0.00154 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03100 | 0.00171 |
| 39 | 0.00166 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03050 | 0.00185 |
| 40 | 0.00180 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03000 | 0.00199 |
| 41 | 0.00197 | 0.15000 | 0.00000 | 0.17000 | 0.00000 | 0.02950 | 0.00213 |
| 42 | 0.00220 | 0.15000 | 0.00000 | 0.17000 | 0.00000 | 0.02900 | 0.00227 |
| 43 | 0.00249 | 0.15000 | 0.00000 | 0.17000 | 0.00000 | 0.02850 | 0.00241 |
| 44 | 0.00283 | 0.15000 | 0.00000 | 0.17000 | 0.00000 | 0.02800 | 0.00254 |
| 45 | 0.00321 | 0.15000 | 0.00000 | 0.17000 | 0.00000 | 0.02750 | 0.00268 |
| 46 | 0.00365 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02700 | 0.00282 |
| 47 | 0.00413 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02650 | 0.00298 |
| 48 | 0.00465 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02600 | 0.00430 |
| 49 | 0.00521 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02550 | 0.00562 |
| 50 | 0.00581 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02500 | 0.00694 |
| 51 | 0.00645 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02450 | 0.00736 |
| 52 | 0.00713 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02400 | 0.00784 |
| 53 | 0.00784 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02350 | 0.00834 |
| 54 | 0.00859 | 0.15000 | 0.18000 | 0.17000 | 0.25000 | 0.02300 | 0.00893 |
| 55 | 0.00937 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02250 | 0.00786 |
| 56 | 0.01019 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02200 | 0.00679 |
| 57 | 0.01104 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02150 | 0.00570 |
| 58 | 0.01198 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02100 | 0.00627 |
| 59 | 0.01312 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02050 | 0.00694 |
| 60 | 0.01443 | 0.15000 | 0.20000 | 0.17000 | 0.30000 | 0.02000 | 0.00770 |
| 61 | 0.01588 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02000 | 0.00858 |
| 62 | 0.01745 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02000 | 0.00959 |
| 63 | 0.01915 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02000 | 0.01037 |
| 64 | 0.02110 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02000 | 0.01117 |
| 65 | 0.02339 | 0.15000 | 0.15000 | 0.17000 | 0.20000 | 0.02000 | 0.01197 |

## GLOSSARY

Actuarial Assumptions - Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of mortality, withdrawal, disablement, and retirement. Also included are rates of investment earnings, changes in compensation, as well as statistics related to marriage and family composition.

Actuarial Cost Method - A procedure for determining an allocation of pension costs to each fiscal year. Although all proper cost methods will accumulate sufficient assets to provide for members pensions, some accumulate assets more or less rapidly than others by producing higher or lower costs in the earlier years with corresponding decreasing or increasing costs in future years.

Actuarial Present Value - The value, as of a specified date, of an amount or series of amounts payable or receivable thereafter, with each amount adjusted to reflect the time value of money (through accrual of interest) and the possibility of payments. For example: if $\$ 600$ invested today will be worth $\$ 1,000$ in 10 years and there is a $50 \%$ probability that a person will live 10 years, then the actuarial present value of $\$ 1,000$ payable to that person if he should survive 10 years is $\$ 300$.

Actuarial Value of Assets - The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to the book value, market value, or some modification involving either or both book and market value.

Asset Gain (Loss) - That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

Amortization Payment - That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

Contribution Shortfall (Excess) - The difference between contributions recommended in the prior valuation and the actual amount received.

Employer Normal Cost - That portion of the normal cost not attributable to employee contributions. It includes both direct contributions made by the employer and contributions from other non-employee sources such as revenue sharing and revenues related to taxes.

Net Direct Employer Contribution Rate - Contribution rate applied to the employers' active payroll. This does not include contributions made to the plan by revenue sharing or ad valorem taxes.

Normal Cost - That portion of the actuarial present value of pension plan benefits and expenses allocated to a valuation year by the actuarial cost method. This is analogous to one year's insurance premium.

Pension Benefit Obligation - The actuarial present value of benefits earned or credited to date based on the member's expected final average compensation at retirement. For current retirees or terminated members this is equivalent to the actuarial present value of their accrued benefit.

Unfunded Actuarial Accrued Liability - The excess of the actuarial accrued liability over the actuarial value of assets.

Vested Benefits - Benefits that the members are entitled to even if they withdraw from service.

## NOTES:


[^0]:    $\square$ Present Value of Future Employer Normal Cost $\square$ Unfunded Accrued Liability
    $\square$ Present Value of Future Employee Contributions
    $\square$ Actuarial Value of Assets

