# PAROCHIAL EMPLOYEES' RETIREMENT SYSTEM 

ACTUARIAL VALUATION AS OF DECEMBER 31, 2011

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

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Consulting Actuary
June 1, 2012

Board of Trustees
Parochial Employees' Retirement System
P.O. Box 14619

Baton Rouge, LA 70898-4619
Ladies and Gentlemen:
We are pleased to present our report on the actuarial valuation of the Parochial Employees' Retirement System for the fiscal year ending December 31, 2011. Our report is based on the actuarial assumptions specified and relies on the data supplied by the system's administrators and accountants. The primary purpose of the report is to determine the actuarially required contribution for Plan A and Plan B for the fiscal year ending December 31, 2012. In addition, this report recommends minimum employer contribution rates for fiscal 2013, and provides information required for the system's financial statements. This report was prepared exclusively for the Parochial Employees' Retirement System and its auditors for specific limited purposes and may not be applicable for other purposes. It is not for the use or benefit of any third party for any purpose.
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. The undersigned actuaries are members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. If we can be of further assistance in amplifying any of the information contained herein, please let us know.

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

By:
Gary Curran, Rel., M.A.A.A., A.S.A.

By:


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



Changes in Valuation Methods, Assumptions, and Amortization Periods: None

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 PAROCHIAL EMPLOYEES' RETIREMENT SYSTEM - PLAN B

Valuation Date:
Census Summary

December 31, 2011

| Active Members | 2,303 | 2,313 |
| :--- | ---: | ---: |
| Retired Members | 611 | 576 |
| Terminated Due a Deferred Benefit | 129 | 125 |
| Terminated Due a Refund | 1,471 | 1,430 |


| Payroll: | \$ | 84,237,202 | \$ | 81,999,193 |
| :---: | :---: | :---: | :---: | :---: |
| Benefits In Payment: | \$ | 5,746,033 | \$ | 5,349,314 |
| Market Value of Assets: | \$ | 165,603,549 | \$ | 161,776,161 |
| Unfunded Actuarial Accrued Liability: |  | N/A |  | N/A |
| Actuarial Asset Value: |  | 173,354,490 | \$ | 163,075,793 |
| Funded Ratio (GASB 50) |  | 87.13\% |  | 87.62\% |
| **************************************************************************************************** |  |  |  |  |
|  | 2012 |  | 2011 |  |
| Employers' Normal Cost (January 1): | \$ | 8,584,382 | \$ | 8,123,995 |
| Amortization Cost (January 1): |  | N/A |  | N/A |
| Interest Adjusted Actuarially Required Contributions Including Estimated Administrative Costs: | \$ | 9,074,142 | \$ | 8,594,351 |
| Projected Ad Valorem and Revenue Sharing | \$ | 947,375 | \$ | 893,947 |
| Actuarially Required Net Direct Employer Contributions | \$ | 8,126,767 | \$ | 7,700,404 |
| Actuarially Required Net Direct Employer Contribution Rate |  | 9.31\% |  | 9.07\% |
| Actual Net Direct Employer Contribution Rate: |  | 10.00\% |  | 10.00\% |

***************************************************************************************************
Minimum Net Direct Employer Contribution Rate: For Fiscal 2013: 9.25\% For Fiscal 2012: 9.00\%
Employee Contribution Rate: $3.00 \%$ of salary
Actuarial Cost Method: Aggregate Actuarial Cost Method
Valuation Interest Rate: 7.50\% (Net of Investment Expense)
Census Exclusions: All individuals submitted by the system were included in the valuation.
Basis of Actuarial Asset Value: The actuarial value of assets is based on the market value of asets adjusted to average in asset earnings above or below the assumed rate of return over a five-year period subject to a corridor limit of $85 \%$ to $115 \%$ of the market value of assets. If the smoothed value lies outside of the corridor limit the actuarial value is determined by averaging the smoothed value with the corridor limit

Changes in Valuation Methods, Assumptions, and Amortization Periods: None
Method of Recognizing Gains and Losses: Under the Aggregate Actuarial Cost Method, actuarial gains and losses are spread over future normal costs.

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## 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 14,646 active members in Plan A, of whom, 7,370 members, including 671 participants in the Deferred Retirement Option Plan (DROP), have vested retirement benefits; 5,718 former members of Plan A or their beneficiaries are receiving retirement benefits. An additional 7,356 former members of Plan A have contributions remaining on deposit with the system. This includes 561 former members who have vested rights or have filed reciprocal agreements for future retirement benefits. Census data on members of Plan B may be found in Exhibit XXI. There are 2,303 active members in Plan B, of whom, 1,063 members, including 42 DROP participants, have vested retirement benefits; 611 former members of Plan B or their beneficiaries are receiving retirement benefits. An additional, 1,600 former members of Plan B have contributions remaining on deposit with the system. Of this number, 129 have vested rights or have filed reciprocal agreements 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 administrator 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 $\$ 2,230,462,425$ as of December 31, 2011. For Plan A, the net investment income for fiscal 2011 measured on a market value basis amounted to a loss of $\$ 14,740,500$. Contributions to Plan A for the fiscal year totaled $\$ 144,791,676$; benefits and expenses amounted to $\$ 124,630,158$.

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The net market value of Plan B's assets was $\$ 165,603,549$ as of December 31, 2011. For Plan B, the net investment loss for fiscal 2011 measured on a market value basis amounted to $\$ 1,071,814$. Contributions to Plan B for the fiscal year totaled $\$ 11,826,090$; benefits and expenses amounted to \$6,926,888.

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 of Plan A is based on the Frozen Attained Age Normal actuarial cost method with the unfunded accrued liability frozen as of December 31, 1989. Under the provisions of Louisiana R.S. 11:103 the unfunded accrued liability for Plan A, which was determined to be $\$ 110,022,497$ as of December 31, 1989, was amortized over forty years with payments increasing at $4 \%$ per year. In Plan A, payroll growth in excess of $4 \%$ per year will reduce future amortization payments as a percentage of payroll; payroll growth below $4 \%$ per year will increase amortization payments as a percentage of payroll. Plan B is funded utilizing the Aggregate Actuarial Funding Method. This method does not develop an unfunded actuarial liability. Under the Frozen Attained Age Normal Cost Method and the Aggregate 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 both plans, benefit and assumption changes are spread over future normal costs. Under the provisions of R.S. 11:105, the Board of Trustees froze the employer contribution rate in Plan A for fiscal 2008 and several other fiscal years prior to that. As prescribed in R.S. 11:105, excess funds if any, generated by these freezes of the employer contribution rate (prior to fiscal 2008) were allocated to reduce the frozen unfunded accrued liability. As a result, the current frozen unfunded accrued liability will be fully amortized no later than December 31, 2015. Effective with fiscal 2008, for both Plans A and B, any excess funds collected pursuant to R. S. 11:105 or R. S. 11:107 are allocated to the Funding Deposit Account. The credit balance as of the end of the prior fiscal year in the Funding Deposit Account for Plans A and B was $\$ 27,231,818$ and $\$ 334,656$, respectively. Both accounts were increased with interest at $7.50 \%$ for the year. Despite a freeze in the employer contribution rate for fiscal 2011 in Plan A, no excess contributions were generated. Therefore, no additional contributions were added to the Funding Deposit Account for Plan A for fiscal 2011. A freeze in the employer contribution rate in Plan B for fiscal 2011 resulted in a contribution gain of $\$ 653,112$ as of December 31, 2011. When interest and additional contributions were added to the Funding Deposit Accounts, the resulting balance as of December 31, 2011 for Plans A and B were $\$ 29,274,204$ and $\$ 1,012,867$, respectively.

The actuarial assumptions utilized for the report are outlined on pages $61-66$. 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 future contribution levels. Such differences will be revealed in future actuarial valuations.

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## CHANGES IN PLAN PROVISIONS

The following changes in plan provisions were enacted during the 2011 Regular Session of the Louisiana Legislature:

Act 354 changed the provisions related to survivor benefits to stipulate that if a member dies while in military service on or after January 1, 2007, under certain circumstances, he will be considered an active employee who died after returning to active employment for purposes of eligibility for survivor benefits. The military service will be considered service credit for the purpose of calculating eligibility for benefits, but will not count as creditable service when calculating the member's accrued benefit.

Act 377 excludes from earnable compensation for any member of a state or statewide retirement system who was elected for a term commencing July 1, 2011 or later, and who is employed in another position of public office or employment, any compensation earned from legislative service.

## ASSET EXPERIENCE

The actuarial and market rates of return 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.

| $\frac{\text { Plan A }}{2002}$ | Market Value | Actuarial Value |
| :---: | :---: | :---: |
| 2003 | $-2.7 \%$ | $-1.2 \%$ |
| 2004 | $15.6 \%$ | $3.4 \%$ |
| 2005 | $10.2 \%$ | $6.9 \%$ |
| 2006 | $6.3 \%$ | $11.1 \%$ |
| 2007 | $12.8 \%$ | $11.3 \%$ |
| 2008 | $7.9 \%$ | $*$ |
| 2009 | $-25.7 \%$ | $-4.1 \%$ |
| 2010 | $20.6 \%$ | $9.9 \%$ |
| 2011 | $15.2 \%$ | $4.4 \%$ |
|  | $-0.7 \%$ | $2.9 \%$ |
| Plan B |  |  |
| 2002 | $\underline{\text { Market Value }}$ |  |
| 2003 | $0.0 \%$ | Actuarial Value |
| 2004 | $15.9 \%$ | $0.5 \%$ |
| 2005 | $9.6 \%$ | $5.9 \%$ |
| 2006 | $5.1 \%$ | $8.5 \%$ |
| 2007 | $11.6 \%$ | $10.6 \%$ |
| 2008 | $7.7 \%$ | $9.8 \%$ |
| 2009 | $-25.0 \%$ | $* 13.4 \%$ |
| 2010 | $20.7 \%$ | $* *$ |
| 2011 | $15.4 \%$ | $-5.2 \%$ |
|  | $-0.7 \%$ | $8.8 \%$ |
|  |  | $4.6 \%$ |
|  |  | $3.2 \%$ |

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Includes effects of change in asset valuation method. Effective with the 2008 valuation the corridor limits on the smoothed value were changed from $+/-10 \%$ of market value to $+/-15 \%$ with smoothed values averaged with corridor limits when they fall outside the corridor limits.

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. During 2011, Plan A earned \$51,346,545 and Plan B earned $\$ 2,009,624$ of dividends, interest and other recurring income. In addition, Plan A had net realized and unrealized capital losses on investments of $\$ 57,416,358$ while the total of such losses for Plan B amounted to $\$ 2,422,000$. Investment expenses were $\$ 8,670,687$ for Plan A and $\$ 659,438$ for Plan B. The geometric mean of the market value rates of return measured over the last ten years was $5.1 \%$ for Plan A and $5.2 \%$ for Plan B. For the last twenty years, the geometric mean returns were $7.2 \%$ for Plan A and $6.9 \%$ for Plan B.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return of $7.5 \%$ used for the valuation. This rate is calculated based on the smoothed value of assets subject to constraints as given in Exhibit VI for Plan A and Exhibit XVII for Plan B. Investment income used to calculate this yield is based upon a smoothing of investment income above or below the valuation interest rate. The difference between rates of return on an actuarial and market value basis results from the smoothing utilized. Yields in excess of the $7.5 \%$ assumption will reduce future costs; yields below $7.5 \%$ will increase future costs. Net actuarial investment earnings were less than the actuarial assumed earnings rate of $7.5 \%$, used for fiscal 2011, by $\$ 105,504,471$ for Plan A and $\$ 7,031,588$ for Plan B. These earnings shortfalls produced actuarial losses, which increased the normal cost accrual rate by $2.3843 \%$ for Plan A and $1.0798 \%$ for Plan B.

## PLAN A - DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the plan is given in Exhibit X. The average active member is 46 years old with 9.94 years of service and an annual salary of $\$ 37,727$. The plan's active membership, inclusive of DROP participants, decreased by 145 members during the fiscal year. The plan has experienced an increase in the active plan population of 1,402 members over the last five years. A review of the active census by age indicates that over the last ten years the population under age fifty has decreased while the proportion of active members age fifty-one to seventy increased. Over the same ten-year period the plan showed a fairly stable distribution among the various service groups. The average regular retiree is 71 years old with a monthly benefit of $\$ 1,704$. The number of retirees and beneficiaries receiving benefits from the system increased by 187 during the fiscal year; over the last five years the number of retirees has increased by 740.

Plan liability experience for fiscal 2011 was favorable. Retirements and disabilities were below projected levels; retiree deaths were above those projected. In addition, salary increases were significantly below projected levels. All of these factors tend to reduce costs. However, these factors were partially offset by withdrawals below projected levels and DROP entries above projected levels. Plan liability gains decreased the normal cost accrual rate by $0.8029 \%$.

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## PLAN B - DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the plan is given in Exhibit XXI. The average active member is 46 years old with 9.02 years of service and an annual salary of $\$ 36,577$. The plan's active membership, inclusive of DROP participants, decreased by 10 members during the fiscal year. The plan has experienced an increase in the active plan population of 313 members 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 fifty age group has decreased while the proportion of active members age fifty-one and over increased. Over the same ten-year period the plan showed a fairly stable distribution of the various service groups with a slight increase in active membership with more than 20 years of service. The average regular retiree is 73 years old with a monthly benefit of $\$ 838$. The number of retirees and beneficiaries receiving benefits from the system increased by 35 during the fiscal year; over the last five years the number of retirees has increased by 103 .

Plan liability experience for fiscal 2011 was favorable. Retirements, disabilities, and DROP entries were below projected levels. In addition, salary increases were significantly below projected levels. All of these factors tend to reduce costs. However, these factors were partially offset by withdrawals below projected levels, and retiree deaths below projections. Plan liability gains decreased the normal cost accrual rate by $0.4134 \%$.

## 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.

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Liability and asset experience as well as changes in assumptions and benefits can increase or decrease plan costs. In addition to these factors, any COLA granted in the prior fiscal year would increase required contributions. New entrants to the system can also increase or decrease 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.

Under the provisions of R.S. 11:103, excess or deficient contributions typically decrease or increase future normal costs. However, if the minimum net direct employer contribution is scheduled to decrease, the board may maintain the contribution rate at some level above the minimum recommended rate. Pursuant to R. S. 11:105 and R. S. 11:107, such excess contributions are credited to the Funding Deposit Account.

The effects of various factors on the cost structure for Plan A are outlined below:

| Employer's Normal Cost Accrual Rate - Fiscal 2011 | $15.2456 \%$ |
| :--- | ---: |
| Factors Increasing the Normal Cost Accrual Rate: |  |
| Asset Loss | $2.3843 \%$ |
| Contribution Loss | $0.0211 \%$ |
| Factors Decreasing the Normal Cost Accrual Rate: |  |
| Plan Liability Experience | $0.8029 \%$ |
| New Members | $0.4682 \%$ |
| Employer's Normal Cost Accrual Rate - Fiscal 2012 | $16.3798 \%$ |

In addition to the above changes in the plan normal cost rate, 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 2012, the net effect of the change in payroll on amortization costs was to increase such costs by $0.07 \%$ of payroll for Plan A. 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 2012 will increase by $0.04 \%$ of payroll.

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 2012 as of January 1, 2012 is $\$ 84,963,956$. The amortization payment on the plan's frozen unfunded actuarial accrued liability is $\$ 11,884,883$ as of January $1,2012$. 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 15 of Exhibit I the total actuarially required contribution for fiscal 2012 is $\$ 101,554,138$. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for fiscal 2012 is $\$ 95,339,954$. This is $16.72 \%$ of the projected Plan A payroll for fiscal 2012. After rounding this result to the nearest $0.25 \%$ as required by the statutes we recommend a minimum net direct employer contribution rate of 16.75\% for fiscal 2013.

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The effects of various factors on the cost structure for Plan B are outlined below:

Employer's Normal Cost Accrual Rate - Fiscal 2011
Factors Increasing the Normal Cost Accrual Rate: Asset Experience 1.0798\%

Factors Decreasing the Normal Cost Accrual Rate:
Plan Liability Experience
0.4134\%

New Members
Employer's Normal Cost Accrual Rate - Fiscal $2012 \quad 11.0491 \%$

In Plan B we estimate that the projected tax contribution as a percentage of payroll will increase by $0.04 \%$ of projected payroll. Since Plan B is funded under the Aggregate Actuarial Cost Method, the plan has no unfunded accrued liability. The normal cost for fiscal 2012 as of January 1, 2012 is $\$ 8,584,382$. The interest adjusted actuarial and administrative cost for fiscal 2011 is given on line 12 of Exhibit XII as $\$ 9,074,142$. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' minimum net direct actuarially required contribution is $\$ 8,126,767$. This is $9.31 \%$ of projected payroll for fiscal 2012. After giving consideration to the rounding requirements in the statute, we recommend a minimum net direct employer contribution rate of $9.25 \%$ of payroll for fiscal 2013 for Plan B.

For Plan B, the board may set the rate at any rate between $9.25 \%$ and $10.00 \%$. Should the net direct employer contribution rate be set at a level above the minimum rate under R.S. 11:107, the resulting additional contributions paid by the employers, if they exceed any potential contribution losses, would be added to the Funding Deposit Account.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, completion of amortization payments or credit schedules, and changes in plan provisions or applicable law. Analysis of the effect of all these factors is beyond the scope of this report.

We have, however, calculated the sensitivity of the plans' costs to two factors. First, based on current assets and demographics, for each percentage under (over) performance of the return on the actuarial value of assets, there will be a corresponding increase (reduction) in the normal cost accrual rate of $0.53 \%$ for Plan A and $0.27 \%$ for Plan B. We have also determined that a $1 \%$ reduction in the valuation interest rate for Plan A would increase the actuarially required contribution rate for fiscal 2012 by $8.95 \%$; for Plan B the increase would be $5.27 \%$.

## COST OF LIVING INCREASES

During calendar 2011 the actual cost of living (as measured by the US Department of Labor CPI-U) increased by $2.96 \%$. Cost of living provisions for the system are detailed in R.S. 11:1937 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 $2.50 \%$ of the current benefit to retirees aged 62 or over, who have been retired at least one year. R.S. 11:246 provides cost of living increases to

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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 December $31^{\text {st }}$ 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 2011, neither Plan A or Plan B has met the necessary target ratio nor earned sufficient excess interest to provide a cost of living increase to its retirees.

# Plan A - Components of Present Value of Future Benefits December 31, 2011 


$\square$ Present Value of Future Employer Normal Cost (Net of Funding Deposit Account)
$\square$ Unfunded Accrued Liability
$\square$ Present Value of Future Employee Contributions
$\square$ Actuarial Value of Assets

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




Projected Tax Contributions consist of Projected Ad Valorem and Revenue Sharing Funds as a percent of payroll

## Plan A - Frozen Unfunded Accrued Liability


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## Actuarial Value of Assets vs. GASB-25 Accrued Liability

 Plan A

Plan A - Historical Asset Yield


Plan A - Net Non-Investment Income


|  |  | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Non-Investment Income (\$Mil) |  | 69.5 | 73.6 | 91.7 | 102.3 | 99.0 | 108.2 | 118.6 | 121.9 | 143.4 | 144.8 |
| Benefits and Expenses (\$Mil) | $\square$ | 64.4 | 68.4 | 75.6 | 83.7 | 90.1 | 94.1 | 102.3 | 108.1 | 114.8 | 124.6 |
| Net Non-Investment Income (\$Mil) |  | 5.1 | 5.2 | 16.1 | 18.6 | 8.9 | 14.1 | 16.3 | 13.8 | 28.6 | 20.2 |

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


|  |  | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Total Income (\$Mil) |  | 35.7 | 265.1 | 237.1 | 202.2 | 315.9 | 260.2 | -419.2 | 446.2 | 435.7 | 130.1 |
| Benefits and Expenses (\$Mil) |  | 64.4 | 68.4 | 75.6 | 83.7 | 90.1 | 94.1 | 102.3 | 108.1 | 114.8 | 124.6 |
| Net Change in MVA (\$Mil) |  | -28.7 | 196.7 | 161.5 | 118.5 | 225.8 | 166.1 | -521.5 | 338.1 | 320.9 | 5.5 |

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G. S. Curran \& Company, Ltd.


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

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G. S. Curran \& Company, Ltd.

## Plan B - Components of Present Value of Future Benefits December 31, 2011



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




Projected Tax Contributions consist of Projected Ad Valorem and Revenue Sharing Funds as a percent of payroll
Plan B-Actuarial Value of Assets vs. Pension Benefit Obligation


## Plan B - Net Non-Investment Income



|  |  | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Non-Investment Income (\$Mil) |  | 3.8 | 4.1 | 5.3 | 5.6 | 6.0 | 6.4 | 7.4 | 8.3 | 11.7 | 11.8 |
| Benefits and Expenses (\$Mil) | $\square$ | 3.1 | 3.5 | 3.8 | 4.3 | 4.8 | 5.1 | 5.6 | 6.1 | 6.1 | 6.9 |
| Net Non-Investment Income (\$Mil) | $\square$ | 0.7 | 0.6 | 1.5 | 1.3 | 1.2 | 1.3 | 1.8 | 2.2 | 5.6 | 4.9 |

Plan B - Total Income vs. Expenses
(Based on Market Value of Assets)


|  |  | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Total Income (\$Mil) |  | 3.3 | 3.9 | 14.9 | 11.3 | 19.8 | 16.6 | -28.8 | 31.3 | 32.9 | 10.8 |
| Benefits and Expenses (\$Mil) | $\square$ | 3.1 | 3.5 | 3.8 | 4.3 | 4.8 | 5.1 | 5.6 | 6.1 | 6.1 | 6.9 |
| Net Change in MVA (\$Mil) |  | 0.2 | 0.4 | 11.1 | 7.0 | 15.0 | 11.5 | -34.4 | 25.2 | 26.8 | 3.9 |



Plan B - Historical Asset Yield

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G. S. Curran \& Company, Ltd.

## Exhibits

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

1. Present Value of Future Benefits
2. Funding Deposit Account Credit Balance
3. Unfunded Actuarial Accrued Liability
4. Actuarial Value of Assets
5. Present Value of Future Employee Contributions
6. Present Value of Future Employer Normal Costs (1+2-3-4-5)
7. Present Value of Future Salaries
\$ 4,425,031,842
8. Employer Normal Cost Accrual Rate (6 $\div 7$ ) ....................................................... $16.379782 \%$
9. Projected Fiscal 2012 Salary for Current Membership $\qquad$ \$ 518,712,374
10. Employer Normal Cost as of January 1, 2012 ( $8 \times 9$ ) $\qquad$
11. Amortization Payment on remaining frozen Unfunded Accrued Liability of $\$ 36,903,336$ with Payments increasing at $4 \%$ per year ..... \$ ..... 11,884,883
12. TOTAL Employer Normal Cost and Amortization Payment $(10+11)$ ..... \$ ..... 96,848,839
13. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment ..... \$ 100,415,007
14. Estimated Administrative Cost for Fiscal 2012 ..... \$ 1,139,131
15. TOTAL Administrative and Interest Adjusted Actuarial Costs $(13+14)$ ..... \$ ..... 101,554,138
16. Estimated Ad Valorem Tax Contributions for Fiscal 2012 ..... \$ ..... 6,075,192
17. Estimated Revenue Sharing Funds for Fiscal 2012 ..... \$ ..... 138,992
18. Employers' Minimum Net Direct Actuarially Required Contribution for Fiscal 2012 (15-16-17) ..... \$ 95,339,954
19. Projected Payroll for Fiscal 2012 ..... \$ ..... 570,348,582
20. Employers' Minimum Net Direct Actuarially Required Contribution as a \% of Projected Payroll for Fiscal $2012(18 \div 19)$ ..... $16.72 \%$
21. Actual Employer Contribution Rate for Fiscal 2012 ..... $15.75 \%$
22. Contribution Shortfall (Excess) as a Percentage of Payroll (20-21) ..... $0.97 \%$
23. Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) ..... $0.11 \%$
24. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2013 (20+23, Rounded to nearest 0.25\%) ..... $16.75 \%$

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

## PRESENT VALUE OF FUTURE BENEFITS FOR ACTIVE MEMBERS:

Retirement Benefits ..... \$ 2,199,331,363
Survivor Benefits ..... 42,574,842
Disability Benefits ..... 52,847,588
Vested Termination Benefits ..... 75,724,138
Refunds of Contributions ..... 57,918,949
TOTAL Present Value of Future Benefits for Active Members ..... \$
PRESENT VALUE OF FUTURE BENEFITS FOR TERMINATED MEMBERS:
Terminated Vested Members Due Benefits at Retirement..... \$ ..... 47,839,211
Terminated Members with ReciprocalsDue Benefits at Retirement231,642
Terminated Members Due a Refund ..... 6,946,735
TOTAL Present Value of Future Benefits for Terminated Members

$\qquad$
PRESENT VALUE OF FUTURE BENEFITS FOR RETIREES:
Regular Retirees
Maximum.\$ 450,838,257
Option 1 ..... 2,138,695
Option 2 ..... 217,730,647
Option 3 ..... 111,938,197
Option 4 ..... 50,752,166
TOTAL Regular Retirees ..... \$ 833,397,963
Disability Retirees ..... 65,654,529
Survivors \& Widows ..... 66,779,205
Reserve for Accrued Retiree DROP Account Balances ..... 866,723
TOTAL Present Value of Future Benefits for Retirees \& Survivors ..... \$ ..... 966,698,420
TOTAL Present Value of Future Benefits ..... \$ ..... $3,450,112,888$

## EXHIBIT III - SCHEDULE A PLAN A: MARKET VALUE OF ASSETS

## CURRENT ASSETS:

Cash in Banks ..... \$ ..... 4,842,220
Contributions Receivable ..... 25,388,027
Ad Valorem Taxes Receivable \& Revenue Sharing ..... 5,838,931
Accrued Interest and Dividends ..... 688,585
Investments Receivable ..... 308,760
Due from Other Funds ..... 587,762
TOTAL CURRENT ASSETS. ..... \$
37,654,285
Property Plant \& Equipment ..... \$ ..... 729,559
Deposits ..... \$13
INVESTMENTS:
Common Trust Funds ..... \$ 973,028,019
Foreign Equities Fund ..... 440,396,074
Common Stock. ..... 402,696,019
Foreign Fixed Income ..... 172,574,047
Government Agency Bonds ..... 99,805,046
Hedge Funds ..... 66,671,033
Bond Funds ..... 21,134,159
Cash Equivalents ..... 21,118,291
Corporate Bonds ..... 7,277,934
TOTAL INVESTMENTS ..... \$ ..... 2,204,700,622
TOTAL ASSETS ..... \$ ..... $2,243,084,479$
CURRENT LIABILITIES:
Retirements Payable ..... \$
,907,665
Accounts Payable ..... 1,319,878
Refunds Payable ..... 564,696
Investments Payable ..... 445,845
Other Post-Employment Benefits Payable ..... 351,929
Withholding Taxes Payable ..... 27,770
Accrued Leave Payable ..... 4,271
TOTAL CURRENT LIABILITIES ..... \$

## EXHIBIT III - SCHEDULE B PLAN A - ACTUARIAL VALUE OF ASSETS

Excess (Shortfall) of invested income for current and previous 4 years:
Fiscal year 2011 ..... \$ $(182,360,994)$
Fiscal year 2010 ..... 147,846,491
Fiscal year 2009 ..... 206,437,835
Fiscal year 2008 ..... (694,894,129)
Fiscal year 2007 ..... 8,260,561
Total for five years ..... \$ $(514,710,236)$
Deferral of excess (shortfall) of invested income:
Fiscal year 2011 (80\%) ..... \$ $(145,888,795)$
Fiscal year 2010 (60\%) ..... 88,707,895
Fiscal year 2009 (40\%) ..... 82,575,134
Fiscal year 2008 (20\%) ..... $(138,978,826)$
Fiscal year 2007 ( 0\%)0
Total deferred for year ..... (113,584,592)
Market value of plan net assets, end of year ..... \$2,230,462,425
Preliminary actuarial value of plan assets, end of year ..... \$2,344,047,017
Actuarial value of assets corridor
$85 \%$ of market value, end of year ..... \$ 1,895,893,061
$115 \%$ of market value, end of year ..... \$2,565,031,789
Final actuarial value of plan net assets, end of year\$2,344,047,017
EXHIBIT IV
PLAN A: PRESENT VALUE OF FUTURE CONTRIBUTIONS
Employee Contributions to the Annuity Savings Fund ..... \$ ..... 373,626,178
Employer Normal Contributions to the Pension Accumulation Fund ..... 724,810,561
Employer Amortization Payments to the Pension Accumulation Fund ..... 36,903,336
Funding Deposit Account Credit Balance ..... (29,274,204)
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... \$ ..... $1,106,065,871$
EXHIBIT V
PLAN A: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITIES
Prior Year Frozen Unfunded Accrued Liability

$\qquad$

$\qquad$ ..... \$ ..... 45,756,457
Interest on Frozen Unfunded Accrued Liability ..... \$ 3,431,734
Employer Normal Cost for Prior Year. ..... 78,230,326
Interest on the Normal Cost ..... 5,867,274
Administrative Expenses ..... 1,164,209
Interest on Expenses ..... 42,869
TOTAL Increases to Frozen Unfunded Accrued Liability ..... \$
88,736,412
Direct Employer Contributions. ..... \$ 86,983,853
Interest on Employer Contributions. ..... 3,202,925
Ad Valorem Taxes and Revenue Sharing ..... 6,238,872
Interest on Ad Valorem Taxes and Revenue Sharing Funds ..... 229,728
Contribution Shortfall ..... 900,980
Interest on Contribution Shortfall ..... 33,175
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... \$97,589,533
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ..... \$36,903,336

## EXHIBIT VI <br> PLAN A: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (December 31, 2010) ..... \$ 2,259,207,052
INCOME:
Employer Contributions ..... \$ 86,983,853 0
Member Contributions ..... 49,659,918
Ad Valorem Taxes ..... 6,101,567
Revenue Sharing. ..... 137,305
Purchases and Transfers of Service Credit ..... 1,591,746
Irregular Contributions ..... 217,032
Transfers from Plan B ..... 100,255
Total Contributions\$ 144,791,676
Net Depreciation in Fair Value of Investments ..... $\$(57,416,358)$
Interest \& Dividends ..... 51,171,662
Class Action Settlement ..... 174,883
Investment Expense ..... $(8,670,687)$
Net Investment Income ..... \$ ..... (14,740,500)TOTAL Income\$ 130,051,176
EXPENSES:
Retirement Benefits ..... \$ 101,408,303
DROP Disbursements ..... 10,174,512
Refunds of Contributions ..... 9,853,911
Funds Transferred to another System ..... 2,029,223
Administrative Expenses ..... 1,134,932
Depreciation ..... 29,277
TOTAL Expenses ..... \$ ..... 124,630,158
Net Market Value Income for Fiscal 2011 (Income - Expenses) ..... \$ ..... 5,421,018
Unadjusted Fund Balance as of December 31, 2011
(Fund Balance Previous Year + Net Income) ..... \$ 2,264,628,070
Adjustment for Actuarial Smoothing. ..... \$ ..... 79,418,947
Actuarial Value of Assets: (December 31, 2011) ..... \$ 2,344,047,017

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

PRESENT ASSETS OF THE SYSTEM CREDITABLE TO:
Annuity Savings Fund ..... \$ ..... 380,732,590
Annuity Reserve Fund ..... 965,831,697
Pension Accumulation Fund ..... 807,114,624
Deferred Retirement Option Plan Account ..... 47,509,310
Funding Deposit Account ..... 29,274,204
NET MARKET VALUE OF ASSETS ..... \$ ..... $2,230,462,425$
ADJUSTMENT FOR ACTUARIAL SMOOTHING ..... \$113,584,592
ACTUARIAL VALUE OF ASSETS ..... \$$2,344,047,017$
EXHIBIT VIII PLAN A: PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ..... \$ ..... 1,582,327,133
Present Value of Benefits Payable to Terminated Employees ..... 55,017,588
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 966,698,420
TOTAL PENSION BENEFIT OBLIGATION ..... \$ ..... 2,604,043,141
NET ACTUARIAL VALUE OF ASSETS ..... \$ ..... $2,344,047,017$
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation.90.02\%

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

Actuarial Value of Assets Divided by PBO as of Fiscal 1986: ..... 59.75\%
Amortization of Unfunded Balance over 30 years: ..... $33.54 \%$
Adjustments in Funded Ratio Due to Mergers or Changes in Methods or Assumption(s):
Changes for Fiscal 1987 ..... 8.18\%
Changes for Fiscal 1988 ..... -0.75\%
Changes for Fiscal 1989 ..... 0.06\%
Changes for Fiscal 1990 ..... -1.91\%
Mergers in Fiscal 1994 ..... 0.82\%
Changes for Fiscal 1995 ..... -5.88\%
Changes for Fiscal 1997 ..... -2.43\%
Changes for Fiscal 1998 ..... -3.78\%
Changes for Fiscal 1999 ..... -3.73\%
Changes for Fiscal 2001 ..... -0.03\%
Changes for Fiscal 2003 ..... 0.43\%
Changes for Fiscal 2005 ..... -2.29\%
Changes for Fiscal 2006 ..... 0.07\%
Changes for Fiscal 2007 ..... 1.89\%
Changes for Fiscal 2008 ..... 10.12\%
Changes for Fiscal 2010 ..... $-2.50 \%$
TOTAL Adjustments ..... -1.73\%
Amortization of Adjustments in Funded Ratio over 30 years:
Changes for Fiscal 1987 ..... -6.54\%
Changes for Fiscal 1988 ..... 0.58\%
Changes for Fiscal 1989 ..... -0.04\%
Changes for Fiscal 1990 ..... 1.34\%
Mergers in Fiscal 1994 ..... -0.46\%
Changes for Fiscal 1995 ..... 3.14\%
Changes for Fiscal 1997 ..... 1.13\%
Changes for Fiscal 1998 ..... 1.64\%
Changes for Fiscal 1999 ..... 1.49\%
Changes for Fiscal 2001 ..... 0.01\%
Changes for Fiscal 2003 ..... -0.11\%
Changes for Fiscal 2005 ..... 0.46\%
Changes for Fiscal 2006 ..... -0.01\%
Changes for Fiscal 2007 ..... -0.25\%
Changes for Fiscal 2008 ..... -1.01\%
Changes for Fiscal 2010 ..... 0.08\%
TOTAL Amortization of Adjustments ..... $1.45 \%$
Target Ratio for Current Fiscal Year ..... 93.01\%
Actuarial Value of Assets Divided by PBO as of Fiscal 2011 ..... 90.02\%

EXHIBIT X CENSUS DATA - PLAN A

|  | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of members as of December 31, 2010 | 14,255 | 7,318 | 536 | 5,531 | 27,640 |
| Additions to Census <br> Initial membership <br> Omitted in error last year <br> Death of another member <br> Adjustment for multiple records | 1,413 | 41 |  | 52 9 | $\begin{array}{r} 1,454 \\ 52 \\ 10 \\ \hline \end{array}$ |
| 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 <br> DROP participants retiring <br> DROP returned to work <br> Omitted in error last year | $\begin{array}{r} (406) \\ (229) \\ (301) \\ 53 \\ \\ 1 \\ 31 \end{array}$ $70$ | 406 <br> (53) <br> (39) | 301 <br> (93) <br> (70) | 229 <br> 39 <br> (1) <br> 93 | 36 |
| Eliminated from Census <br> Refund of contributions <br> Deaths <br> Included in error last year <br> Adjustment for multiple records | $\begin{array}{r} (875) \\ (37) \end{array}$ | (314) <br> (9) | (1) (2) | (232) <br> (2) | $(1,189)$ <br> (279) <br> (2) <br> (2) |
| Number of members as of December 31, 2011 | 13,975 | 7,356 | 671 | 5,718 | 27,720 |

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## G. S. Curran \& Company, Ltd.

PLAN A - ACTIVES CENSUS BY AGE:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Salary | Total <br> Salary |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $16-20$ | 49 | 19 | 68 | 20,160 | $1,370,911$ |
| $21-25$ | 399 | 294 | 693 | 24,881 | $17,242,371$ |
| $26-30$ | 527 | 686 | 1,213 | 30,627 | $37,150,392$ |
| $31-35$ | 653 | 684 | 1,337 | 35,342 | $47,251,731$ |
| $36-40$ | 615 | 767 | 1,382 | 38,252 | $52,864,309$ |
| $41-45$ | 839 | 922 | 1,761 | 38,598 | $67,971,877$ |
| $46-50$ | 1,048 | 1,097 | 2,145 | 39,852 | $85,482,746$ |
| $51-55$ | 1,140 | 1,205 | 2,345 | 41,095 | $96,367,234$ |
| $56-60$ | 1,020 | 937 | 1,957 | 40,291 | $78,849,993$ |
| $61-65$ | 625 | 553 | 1,178 | 40,216 | $47,374,601$ |
| $66-70$ | 214 | 163 | 377 | 39,233 | $14,790,980$ |
| $71-75$ | 84 | 42 | 126 | 33,077 | $4,167,723$ |
| $76-80$ | 29 | 25 | 54 | 26,408 | $1,426,050$ |
| $81-85$ | 9 | 0 | 9 | 1 | 25,271 |
| $86-90$ | 1 | 0 | 14,646 | 227,437 |  |
| TOTAL | 7,252 | 7,394 | 14,800 | 4,800 |  |
|  |  |  |  |  | 37,727 |

THE ACTIVE CENSUS INCLUDES 7,370 ACTIVES WITH VESTED BENEFITS, INCLUDING 671 DROP PARTICIPANTS AND 266 ACTIVE FORMER DROP PARTICIPANTS.

PLAN A - TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 26-30 | 0 | 1 | 1 | 10,911 | 10,911 |
| $31-35$ | 2 | 10 | 12 | 9,481 | 113,776 |
| 36-40 | 13 | 22 | 35 | 11,710 | 409,841 |
| 41-45 | 26 | 42 | 68 | 12,260 | 833, 694 |
| 46-50 | 40 | 54 | 94 | 18,233 | 1,713,940 |
| 51-55 | 56 | 79 | 135 | 17,204 | 2,322,489 |
| 56-60 | 69 | 69 | 138 | 14,418 | 1,989,668 |
| 61-65 | 34 | 21 | 55 | 8,847 | 486,560 |
| 66-70 | 9 | 4 | 13 | 6,696 | 87,047 |
| 71-75 | 3 | 2 | 5 | 5,297 | 26,484 |
| 76-80 | 1 | 0 | 1 | 7,722 | 7,722 |
| 81-85 | 1 | 1 | 2 | 567 | 1,134 |
| 86-90 | 1 | 1 | 2 | 1,035 | 2,070 |
| TOTAL | 255 | 306 | 561 | 14,270 | 8,005,336 |

PLAN A - TERMINATED MEMBERS DUE A REFUND OF CONTRIBUTIONS:

| Contributions Ranging |  |  |
| ---: | ---: | ---: |
| From | TO |  |
| 0 | - | 99 |
| 100 | - | 499 |
| 500 | - | 999 |
| 1000 | - | 1999 |
| 2000 | - | 4999 |
| 5000 | - | 9999 |
| 10000 | - | 19999 |
| 20000 | - | 99999 |
|  | TOTAL |  |


|  | Total |
| :---: | :---: |
| Number | Contributions |
| 4,360 | 116,319 |
| 996 | 235,710 |
| 339 | 242,706 |
| 276 | 385,381 |
| 382 | $1,244,730$ |
| 236 | $1,713,956$ |
| 162 | $2,263,033$ |
| 44 | $1,301,135$ |
| 6,795 | $7,502,970$ |

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G. S. Curran \& Company, Ltd.

PLAN A - REGULAR RETIREES:

|  | Number | Number | Total | Average | Total <br> Age |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $46-50$ | 11 | Male | Female | Number | Benefit |$\quad$| Benefit |
| ---: | :--- |

PLAN A - DISABILITY RETIREES:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | $\begin{gathered} \text { Total } \\ \text { Benefit } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 1 | 1 | 2 | 8,723 | 17,446 |
| 36-40 | 4 | 1 | 5 | 13,225 | 66,124 |
| 41-45 | 6 | 9 | 15 | 12,391 | 185,866 |
| 46-50 | 25 | 15 | 40 | 14,622 | 584,865 |
| 51-55 | 53 | 29 | 82 | 15,354 | 1,259,003 |
| 56-60 | 101 | 40 | 141 | 14,730 | 2,076,942 |
| 61-65 | 82 | 43 | 125 | 13,363 | 1,670,329 |
| 66-70 | 48 | 23 | 71 | 11,459 | 813,599 |
| 71-75 | 19 | 11 | 30 | 5,918 | 177,538 |
| 76-80 | 7 | 1 | 8 | 4,000 | 32,001 |
| 81-85 | 4 | 1 | 5 | 6,745 | 33,726 |
| 86-90 | 2 | 0 | 2 | 4,174 | 8,348 |
| TOTAL | 352 | 174 | 526 | 13,167 | 6,925,787 |

PLAN A - SURVIVORS:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | $\begin{gathered} \text { Total } \\ \text { Benefit } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0-25 | 9 | 5 | 14 | 16,363 | 229,084 |
| 26-30 | 2 | 0 | 2 | 7,824 | 15,647 |
| 31-35 | 1 | 1 | 2 | 3,938 | 7,875 |
| $36-40$ | 0 | 2 | 2 | 12,491 | 24,981 |
| 41-45 | 2 | 5 | 7 | 10,393 | 72,749 |
| 46-50 | 3 | 15 | 18 | 17,260 | 310,682 |
| 51-55 | 7 | 21 | 28 | 14,942 | 418,366 |
| 56-60 | 8 | 27 | 35 | 13,162 | 460,677 |
| 61-65 | 5 | 75 | 80 | 11,967 | 957,387 |
| 66-70 | 14 | 107 | 121 | 12,233 | 1,480,218 |
| 71-75 | 13 | 121 | 134 | 10,384 | 1,391,498 |
| $76-80$ | 9 | 120 | 129 | 8,731 | 1,126,362 |
| 81-85 | 6 | 106 | 112 | 8,547 | 957,303 |
| 86-90 | 2 | 80 | 82 | 6,582 | 539,696 |
| ABOVE 90 | 1 | 45 | 46 | 4,230 | 192,998 |
| TOTAL | 82 | 730 | 812 | 10,081 | 8,185,523 |

PLAN A－ACTIVE MEMBERS：
Completed Years of Service

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plan a－average annual salary of active members：
Completed Years of Service

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5－9 | 10－14 | 15－19 | 20－24 | 25－29 | 30\＆Over | Average <br> Salary |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0－20 | 21，103 | 17，332 |  |  |  |  |  |  |  |  |  | 20，160 |
| 21－25 | 23，511 | 24，366 | 25，421 | 27，066 | 27，661 | 29，779 |  |  |  |  |  | 24，881 |
| 26－30 | 26，889 | 29，316 | 28，727 | 31，512 | 31，192 | 34，721 | 38，663 |  |  |  |  | 30，627 |
| 31－35 | 28，609 | 31，273 | 35，033 | 34，424 | 34，625 | 38，456 | 40，885 | 44，980 |  |  |  | 35，342 |
| 36－40 | 31，976 | 33，094 | 34，921 | 35，191 | 33，680 | 40，591 | 42，595 | 45，392 | 48，976 |  |  | 38，252 |
| 41－45 | 28，230 | 31，123 | 36，380 | 34，189 | 34，971 | 38，787 | 42，346 | 47，650 | 46，487 | 50，551 |  | 38，598 |
| 46－50 | 30，856 | 32，899 | 32，479 | 32，089 | 30，250 | 36，049 | 41，237 | 44，656 | 47，921 | 57，013 | 54，363 | 39，852 |
| 51－55 | 29，710 | 34，023 | 30，177 | 32，992 | 32，157 | 36，741 | 39，989 | 41，112 | 48，970 | 58，608 | 57，351 | 41，095 |
| 56－60 | 34，516 | 32，878 | 34，773 | 35，227 | 32，877 | 34，654 | 39，476 | 41，730 | 44，718 | 50，803 | 56，924 | 40，291 |
| 61－65 | 40，829 | 36，002 | 39，476 | 38，147 | 33，095 | 36，731 | 38，142 | 38，246 | 40，644 | 51，968 | 56，987 | 40，216 |
| 66－70 | 22，830 | 32，814 | 22，286 | 28，005 | 33，438 | 34，867 | 40，182 | 42，636 | 42，148 | 42，680 | 48，997 | 39，233 |
| 71 \＆Over |  | 21，698 | 28，355 | 61，435 | 23，584 | 28，980 | 27，726 | 30，868 | 26，327 | 36，170 | 29，618 | 30，663 |
| Average | 28，287 | 30，577 | 32，363 | 33，227 | 32，520 | 36，990 | 40，498 | 42，484 | 45，148 | 54，123 | 55，063 | 37，727 |

PLAN A - TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:
Years Until Retirement Eligibility

| Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-25 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 26-30 |  |  |  |  |  |  |  |  |  |  | 1 | 1 |
| 31-35 |  |  |  |  |  |  |  |  |  | 4 | 8 | 12 |
| 36-40 |  |  |  |  |  |  |  |  | 16 | 19 |  | 35 |
| 41-45 |  |  |  |  |  |  |  | 41 | 27 |  |  | 68 |
| 46-50 |  |  |  |  |  |  | 73 | 21 |  |  |  | 94 |
| 51-55 |  |  | 1 |  |  | 105 | 29 |  |  |  |  | 135 |
| 56-60 | 13 | 28 | 42 | 19 | 19 | 17 |  |  |  |  |  | 138 |
| 61-65 | 31 | 4 | 9 | 8 | 3 |  |  |  |  |  |  | 55 |
| 66-70 | 13 |  |  |  |  |  |  |  |  |  |  | 13 |
| 71-75 | 5 |  |  |  |  |  |  |  |  |  |  | 5 |
| 76-80 | 1 |  |  |  |  |  |  |  |  |  |  | 1 |
| 81-85 | 2 |  |  |  |  |  |  |  |  |  |  | 2 |
| 86-90 | 2 |  |  |  |  |  |  |  |  |  |  | 2 |
| 91 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 67 | 32 | 52 | 27 | 22 | 122 | 102 | 62 | 43 | 23 | 9 | 561 |

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Years Until Retirement Eligibility

| $25-29$ | $30 \&$ Ovex | Average <br> Benefit |
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PLAN A - SERVICE RETIREES:

| Attained |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| 0-50 | 11 | 2 | 1 | 1 |  |  |  |  |  |  |  | 15 |
| 51-55 | 29 | 23 | 18 | 10 | 12 | 9 |  |  |  |  |  | 101 |
| 56-60 | 60 | 41 | 45 | 47 | 27 | 75 | 8 |  |  |  |  | 303 |
| 61-65 | 128 | 125 | 102 | 90 | 80 | 183 | 36 | 2 | 1 |  |  | 747 |
| 66-70 | 48 | 63 | 82 | 82 | 76 | 362 | 104 | 30 | 7 | 2 |  | 856 |
| 71-75 | 21 | 18 | 35 | 35 | 29 | 277 | 326 | 92 | 40 | 7 | 2 | 882 |
| 76-80 | 10 | 7 | 7 | 18 | 15 | 78 | 189 | 226 | 79 | 25 | 3 | 657 |
| 81-85 | 2 | 3 | 2 | 2 | 4 | 35 | 50 | 167 | 158 | 49 | 10 | 482 |
| 86-90 |  |  |  | 1 | 1 | 9 | 11 | 37 | 83 | 100 | 16 | 258 |
| 91 \& Over | 1 |  |  |  |  | 1 | 4 | 3 | 9 | 24 | 37 | 79 |
| Totals | 310 | 282 | 292 | 286 | 244 | 1029 | 728 | 557 | 377 | 207 | 68 | 4380 |

plan a - average annual benefits payable to service rettrees:
Completed Years Since Retirement

| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-50 | 48,581 | 30,649 | 48,799 | 19,393 |  |  |  |  |  |  |  | 44,259 |
| 51-55 | 42,844 | 45,586 | 46,409 | 45,067 | 36,598 | 38,693 |  |  |  |  |  | 43,212 |
| 56-60 | 35,226 | 46,151 | 39,481 | 40,444 | 46,569 | 40,066 | 33,876 |  |  |  |  | 40,319 |
| 61-65 | 20,748 | 23,092 | 21,900 | 27,706 | 24,613 | 35,267 | 35,409 | 38,463 | 8,966 |  |  | 26,845 |
| 66-70 | 19,835 | 21,376 | 15,214 | 15,027 | 19,168 | 20,040 | 28,031 | 30,407 | 31,279 | 7,309 |  | 20,503 |
| 71-75 | 18,301 | 20,753 | 18,327 | 14,876 | 15,073 | 16,343 | 15,861 | 23,154 | 24,019 | 16,963 | 7,077 | 17,323 |
| 76-80 | 16,829 | 15,126 | 10,678 | 12,748 | 9,017 | 14,309 | 13,008 | 13,934 | 21,013 | 18,329 | 7,141 | 14,577 |
| 81-85 | 17,762 | 24,756 | 10,963 | 4,871 | 13,658 | 10,424 | 15,286 | 11,564 | 12,795 | 19,864 | 12,344 | 13,226 |
| 86-90 |  |  |  | 4,957 | 5,339 | 16,894 | 14,388 | 13,105 | 10,797 | 10,963 | 12,173 | 11,600 |
| 91 \& Over | 18,425 |  |  |  |  | 3,475 | 7,958 | 15,325 | 6,861 | 6,685 | 4,823 | 6,334 |
| Average | 26,145 | 27,620 | 23,563 | 23,991 | 23,585 | 22,570 | 17,918 | 15,674 | 15,460 | 13,631 | 7,827 | 20,450 |

plan a - disability retirees:

| Attained Ages | Completed Years Since Retirement |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 | 1 |  |  |  |  | 1 |  |  |  |  |  | 2 |
| 36-40 |  |  |  | 2 |  | 3 |  |  |  |  |  | 5 |
| 41-45 | 3 | 2 | 1 | 1 | 1 | 4 | 3 |  |  |  |  | 15 |
| 46-50 | 3 | 7 | 3 | 4 | 2 | 12 | 8 | 1 |  |  |  | 40 |
| 51-55 | 7 | 3 | 5 | 4 | 6 | 26 | 12 | 11 | 6 | 2 |  | 82 |
| 56-60 | 18 | 9 | 11 | 8 | 8 | 38 | 21 | 15 | 11 | 2 |  | 141 |
| 61-65 | 4 | 1 | 1 | 5 | 9 | 51 | 27 | 14 | 11 | 2 |  | 125 |
| 66-70 | 2 |  | 1 | 1 | 1 | 16 | 17 | 20 | 10 | 2 | 1 | 71 |
| 71-75 |  |  |  |  |  | 7 | 5 | 8 | 8 | 2 |  | 30 |
| 76-80 |  |  |  |  |  |  | 2 | 4 |  | 2 |  | 8 |
| 81-85 |  |  |  |  |  |  |  | 1 | 2 | 1 | 1 | 5 |
| 86-90 |  |  |  |  |  |  |  |  | 2 |  |  | 2 |
| 91 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 38 | 22 | 22 | 25 | 27 | 158 | 95 | 74 | 50 | 13 | 2 | 526 |


Completed Years Since Retirement

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 | 8,002 |  |  |  |  | 9,444 |  |  |  |  |  | 8,723 |
| 36-40 |  |  |  | 13,399 |  | 13,109 |  |  |  |  |  | 13,225 |
| 41-45 | 15,530 | 7,940 | 19,882 | 22,196 | 13,363 | 11,136 | 7,804 |  |  |  |  | 12,391 |
| 46-50 | 19,174 | 21,038 | 13,672 | 18,504 | 22,688 | 12,263 | 8,105 | 7,685 |  |  |  | 14,622 |
| 51-55 | 27,154 | 19,067 | 17,353 | 27,567 | 16,721 | 17,583 | 9,549 | 7,725 | 7,062 | 7,629 |  | 15,354 |
| 56-60 | 18,251 | 11,901 | 18,288 | 17,658 | 20,313 | 15,322 | 14,912 | 9,856 | 7,563 | 4,988 |  | 14,730 |
| 61-65 | 5,937 | 3,798 | 5,376 | 11,066 | 11,163 | 16,584 | 11,346 | 13,782 | 11,192 | 6,709 |  | 13,363 |
| 66-70 | 5,337 |  | 3,315 | 8,526 | 4,169 | 10,838 | 11,014 | 13,335 | 13,781 | 9,098 | 3,571 | 11,459 |
| 71-75 |  |  |  |  |  | 5,201 | 3,904 | 5,894 | 7,255 | 8,207 |  | 5,918 |
| 76-80 |  |  |  |  |  |  | 3,846 | 3,254 |  | 5,647 |  | 4,000 |
| 81-85 |  |  |  |  |  |  |  | 6,821 | 6,300 | 5,161 | 9,144 | 6,745 |
| 86-90 |  |  |  |  |  |  |  |  | 4,174 |  |  | 4,174 |
| 91 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Average | 17,503 | 15,057 | 16,251 | 17,536 | 15,785 | 14,782 | 10,913 | 10,367 | 9,310 | 6,901 | 6,357 | 13,167 |

PLAN A - SURVIVING BENEFICIARIES OF FORMER MEMBERS:

| Attained | Completed Years Since Retirement |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080 Orex | Total |
| 0-20 | 4 | 1 | 1 |  | 5 | 1 | 1 | 1 |  |  |  | 14 |
| 21-25 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 26-30 |  |  |  |  |  | 1 |  | 1 |  |  |  | 2 |
| 31-35 |  |  | 1 |  |  | 1 |  |  |  |  |  | 2 |
| 36-40 |  |  | 1 |  |  | 1 |  |  |  |  |  | 2 |
| 41-45 |  |  | 1 |  | 1 | 4 | 1 |  |  |  |  | 7 |
| 46-50 |  |  | 1 | 4 |  | 6 | 3 | 4 |  |  |  | 18 |
| 51-55 | 2 | 2 | 2 | 1 | 4 | 7 | 4 | 1 | 1 | 1 |  | 28 |
| 56-60 | 1 |  |  | 6 | 1 | 12 | 11 | 2 | 2 |  |  | 35 |
| 61-65 | 2 | 4 | 5 | 5 | 7 | 24 | 16 | 9 | 4 | 3 | 1 | 80 |
| 66-70 | 1 | 1 | 9 | 6 | 3 | 44 | 27 | 21 | 6 | 2 | 1 | 121 |
| 71-75 | 3 |  | 2 | 2 | 4 | 29 | 37 | 33 | 17 | 5 | 2 | 134 |
| 76-80 |  | 1 | 2 |  | 2 | 10 | 17 | 42 | 33 | 18 | 4 | 129 |
| 81-85 |  |  | 1 |  |  | 1 | 10 | 24 | 33 | 31 | 12 | 112 |
| 86-90 |  |  |  |  |  | 1 | 2 | 7 | 20 | 31 | 21 | 82 |
| 91 \& Over |  |  |  |  |  |  |  | 4 | 7 | 13 | 22 | 46 |
| Totals | 13 | 9 | 26 | 24 | 27 | 142 | 129 | 152 | 123 | 104 | 63 | 812 |

PLAN A - AVERAGE ANIVAL BENEFITS PAYABLE TO SURVIVORS OF FORMER MEMBERS:


## EXHIBIT XI PLAN A: YEAR-TO-YEAR COMPARISON

Fiscal $2011 \quad$ Fiscal $2010 \quad$ Fiscal $2009 \quad$ Fiscal 2008

| Number of Active Members |  | 14,646 |  | 14,791 |  | 14,795 |  | 14,373 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Retirees \& Survivors |  | 5,718 |  | 5,531 |  | 5,413 |  | 5,235 |
| Number of Terminated Due Deferred Benefits |  | 561 |  | 556 |  | 562 |  | 545 |
| Number Terminated Due Refunds |  | 6,795 |  | 6,762 |  | 6,611 |  | 6,464 |
| Active Lives Payroll | \$ | 552,543,155 | \$ | 546,737,427 | \$ | 536,408,372 | \$ | 511,891,487 |
| Retiree Benefits in Payment | \$ | 104,683,495 | \$ | 97,650,642 | \$ | 90,207,961 | \$ | 84,492,940 |
| Market Value of Assets | \$ | 2,230,462,425 | \$ | 2,225,041,407 | \$ | 1,904,114,041 | \$ | 1,565,934,957 |
| Ratio of AVA to GASB-25 Accrued Liability |  | 98.45\% |  | 98.01\% |  | 97.55\% |  | 96.99\% |
| Actuarial Value of Assets | \$ | 2,344,047,017 | \$ | 2,259,207,052 | \$ | 2,135,230,590 | \$ | 1,943,569,363 |
| Frozen Unfunded Actuarial Accrued Liability | \$ | 36,903,336 | \$ | 45,756,457 | \$ | 53,552,388 | \$ | 60,381,793 |
| Present Value of Future Employer Normal Cost | \$ | 724,810,561 | \$ | 669,371,250 | \$ | 552,376,261 | \$ | 613,635,252 |
| Present Value of Future Employee Contrib. | \$ | 373,626,178 | \$ | 370,489,102 | \$ | 355,947,027 | \$ | 339,052,728 |
| Funding Deposit Account Credit Balance | \$ | 29,274,204 | \$ | 27,231,818 | \$ | 25,331,924 | \$ | 23,564,580 |
| Present Value of Future Benefits | \$ | 3,450,112,888 | \$ | 3,317,592,043 | \$ | 3,071,774,342 | \$ | 2,933,074,556 |

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Fiscal $2012 \quad$ Fiscal $2011 \quad$ Fiscal $2010 \quad$ Fiscal 2009

| Employee Contribution Rate | $9.50 \%$ | $9.50 \%$ | $9.50 \%$ | $9.50 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| Estimated Tax Contribution as \% of Payroll | $1.09 \%$ | $1.05 \%$ | $1.13 \%$ | $1.15 \%$ |
| Actuarially Required Net Direct Employer  <br> Contribution Rate $16.72 \%$ | $15.58 \%$ | $13.46 \%$ | $15.40 \%$ |  |
| Actual Employer Contribution Rate | $15.75 \%$ | $15.75 \%$ | $15.75 \%$ | $12.25 \%$ |


|  | Fiscal 2007 |  | Fiscal 2006 |  | Fiscal 2005 |  | Fiscal 2004 |  | Fiscal 2003 |  | Fiscal 2002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 13,650 |  | 13,244 |  | 13,470 |  | 13,868 |  | 13,934 |  | 13,570 |
|  | 5,083 |  | 4,978 |  | 4,845 |  | 4,739 |  | 4,602 |  | 4,507 |
|  | 497 |  | 522 |  | 448 |  | 374 |  | 320 |  | 323 |
|  | 6,122 |  | 6,140 |  | 5,723 |  | 5,641 |  | 5,439 |  | 5,528 |
| \$ | 454,741,830 | \$ | 420,104,038 | \$ | 429,459,653 | \$ | 407,022,806 | \$ | 396,330,869 | \$ | 372,814,126 |
| \$ | 77,403,146 | \$ | 73,102,892 | \$ | 66,724,243 | \$ | 62,543,026 | \$ | 57,594,474 | \$ | 54,500,856 |
| \$ | 2,087,385,378 | \$ | 1,921,293,624 | \$ | 1,695,523,143 | \$ | 1,577,051,547 | \$ | 1,415,543,422 | \$ | 1,218,826,920 |
|  | 96.83\% |  | 95.04\% |  | 94.29\% |  | 93.46\% |  | 92.83\% |  | 92.47\% |
| \$ | 2,027,214,660 | \$ | 1,718,754,962 | \$ | 1,535,416,950 | \$ | 1,364,795,086 | \$ | 1,261,191,242 | \$ | 1,214,971,041 |
| \$ | 66,328,358 | \$ | 89,762,521 | \$ | 92,910,853 | \$ | 95,449,152 | \$ | 97,437,098 | \$ | 98,929,395 |
| \$ | 288,883,382 | \$ | 280,817,883 | \$ | 422,308,841 | \$ | 351,288,808 | \$ | 354,769,127 | \$ | 291,266,682 |
| \$ | 302,732,846 | \$ | 279,197,353 | \$ | 291,917,848 | \$ | 269,026,244 | \$ | 263,620,074 | \$ | 250,687,770 |
| \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 |
| \$ | 2,685,159,246 | \$ | 2,368,532,719 | \$ | 2,342,554,492 | \$ | 2,080,559,290 | \$ | 1,977,017,541 | \$ | 1,855,854,888 |
| *************************************************************************************************** |  |  |  |  |  |  |  |  |  |  |  |
|  | Fiscal 2008 |  | Fiscal 2007 |  | Fiscal 2006 |  | Fiscal 2005 |  | Fiscal 2004 |  | Fiscal 2003 |
|  | 9.50\% |  | 9.50\% |  | 9.50\% |  | 9.50\% |  | 9.50\% |  | 9.50\% |
|  | 1.11\% |  | 1.05\% |  | 0.94\% |  | 1.02\% |  | 0.96\% |  | 0.97\% |
|  | 8.98\% |  | 9.58\% |  | 13.12\% |  | 12.39\% |  | 12.66\% |  | 11.22\% |
|  | 12.75\% |  | 13.25\% |  | 12.75\% |  | 12.75\% |  | 11.75\% |  | 7.75\% |

EXHIBIT XII
PLAN B: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits $\qquad$2. Funding Deposit Account Credit Balance
$\qquad$3. Actuarial Value of Assets4. Present Value of Future Employee Contributions5. Present Value of Future Employer Normal Costs (1+2-3-4).6. Present Value of Future Salaries
$\qquad$
$\qquad$8. Projected Fiscal 2012 Salary for Current Membership
$\qquad$\$\$ 651,194,520
2. Employer Normal Cost Accrual Rate $(5 \div 6)$9. Employer Normal Cost as of January 1, 2012 (7x8)8).10. Normal Cost Interest Adjusted for Midyear Payment
$\qquad$\$
3. Estimated Administrative Cost for Fiscal 2012 ..... \$
4. TOTAL Administrative and Interest Adjusted Actuarial Costs $(10+11)$ ..... \$
5. Projected Ad Valorem Tax Contributions for Fiscal 2012

$\qquad$ ..... \$
14. Projected Revenue Sharing Funds for Fiscal 2012 ..... \$
15. Employers' Net Direct Actuarially Required Contribution for Fiscal 2012 (12-13-14) ..... \$
16. Projected Payroll for Fiscal 2012 ..... \$87,302,215
17. Employers' Net Direct Actuarially Required Contribution as a $\%$ of Projected Payroll for $2012(15 \div 16)$ ..... $9.31 \%$
18. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2013(17, Rounded to Nearest 0.25\%).

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

## PRESENT VALUE OF FUTURE BENEFITS FOR ACTIVE MEMBERS:

Retirement Benefits ..... \$177,489,304
Survivor Benefits ..... 4,869,913
Disability Benefits ..... 5,781,951
Vested Termination Benefits ..... 11,703,707
Refunds of Contributions ..... 3,081,830
TOTAL Present Value of Future Benefits for Active Members ..... \$
202,926,705
PRESENT VALUE OF FUTURE BENEFITS FOR TERMINATED MEMBERS:
Terminated Vested Members Due Benefits at Retirement ..... \$ 5,996,648
Terminated Members with Reciprocals
Due Benefits at Retirement. ..... 21,540
Terminated Members Due a Refund ..... 549,860
TOTAL Present Value of Future Benefits for Terminated Members ..... \$
6,568,048
PRESENT VALUE OF FUTURE BENEFITS FOR PENSIONERS:
Regular Retirees by Option Selected:
Maximum. ..... \$ 21,615,167
Option 1 ..... 130,965
Option 2 ..... 17,121,485
Option 3 ..... 3,802,678
Option 4 ..... 634,423
TOTAL Regular Retirees ..... \$ 43,304,718
TOTAL Disability Retirees ..... \$ 4,729,280
TOTAL Survivors \& Widows ..... \$ 4,781,415
Reserve for Accrued Retiree DROP Account Balances ..... \$ ..... 66,862
TOTAL Present Value of Future Benefits for Retirees \& Survivors ..... \$ ..... 52,882,275
TOTAL Present Value of Future Benefits ..... \$ ..... 262,377,028

## EXHIBIT XIV - SCHEDULE A PLAN B - MARKET VALUE OF ASSETS

## CURRENT ASSETS:

Cash in Banks ..... \$ ..... 238,109
Contributions Receivable ..... 1,663,175
Ad Valorem Taxes Receivable \& Revenue Sharing ..... 875,718
Accrued Interest and Dividends ..... 45,367
Investments Receivable ..... 21,382
TOTAL CURRENT ASSETS ..... \$
2,843,751
Property Plant \& Equipment ..... \$ ..... 109,418
Deposits ..... \$ ..... 2
INVESTMENTS:
Common Trust Funds ..... \$ 73,678,583
Foreign Equity Fund ..... 31,987,968
Common Stocks ..... 27,902,649
Foreign Fixed Income ..... 12,208,523
Bond Funds ..... 6,051,932
Hedge Funds ..... 4,746,883
Cash Equivalents ..... 2,785,830
Government Bonds ..... 2,400,172
Government Agency Bonds ..... 1,994,429
Corporate Bonds ..... 181,791
TOTAL INVESTMENTS ..... \$ ..... $163,938,760$
TOTAL ASSETS ..... \$ 166,891,931
CURRENT LIABILITIES:
Due to Other Plans ..... \$
587,762
Retirements Payable ..... 478,507
Accounts Payable ..... 93,749
Investments Payable ..... 85,718
Refunds Payable ..... 42,646
TOTAL CURRENT LIABILITIES ..... \$
1,288,382
MARKET VALUE OF ASSETS ..... \$

## EXHIBIT XIV - SCHEDULE B PLAN B - ACTUARIAL VALUE OF ASSETS

Excess (Shortfall) of invested incomefor current and previous 4 years:
Fiscal year 2011 ..... \$ (13,385,425)
Fiscal year 2010 ..... 10,833,284
Fiscal year 2009 ..... 14,683,472
Fiscal year 2008 ..... $(47,079,799)$
Fiscal year 2007 ..... 277,887
Total for five years\$ (34,670,581)
Deferral of excess (shortfall) of invested income:
Fiscal year 2011 (80\%) ..... \$ (10,708,340)
Fiscal year 2010 (60\%) ..... 6,499,970
Fiscal year 2009 (40\%) ..... 5,873,389
Fiscal year 2008 (20\%) ..... $(9,415,960)$
Fiscal year 2007 ( 0\%) ..... 0
Total deferred for year ..... \$ $(7,750,941)$
Market value of plan net assets, end of year ..... \$ 165,603,549
Preliminary actuarial value of plan assets, end of year ..... \$ 173,354,490
Actuarial value of assets corridor
$85 \%$ of market value, end of year ..... \$ 140,763,017
$115 \%$ of market value, end of year ..... \$ 190,444,081
Final actuarial value of plan net assets, end of year ..... \$ 173,354,490

## EXHIBIT XV <br> PLAN B: PRESENT VALUE OF FUTURE CONTRIBUTIONS

Employee Contributions to the Annuity Savings Fund ..... \$
Employer Normal Contributions to the Pension Accumulation Fund ..... 71,951,379
Funding Deposit Account Credit Balance

$\qquad$ ..... (1,012,867)
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... \$ ..... 89,022,538
EXHIBIT XVI
PLAN B: RECONCILIATION OF CONTRIBUTIONS
Employer Normal Cost for Prior Year. ..... \$8,123,995
Interest on Normal Cost ..... 609,300
Administrative Expenses ..... 174,059
Interest on Expenses ..... 6,409
TOTAL Interest Adjusted Actuarially Required Contributions ..... \$
Direct Employer Contributions ..... \$ 8,288,333
Interest on Employer Contributions. ..... 305,194
Ad Valorem Taxes and Revenue Sharing Funds ..... 938,780
Interest on Taxes and Revenue Sharing Funds ..... 34,568
TOTAL Interest Adjusted Employer Contributions ..... \$
Contribution Shortfall (Surplus) ..... \$

## EXHIBIT XVII PLAN B: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (December 31, 2010)

## INCOME:

Employer Contributions ..... \$ 8,288,333
Member Contributions ..... 2,435,044
Purchases and Transfers of Service Credit ..... 155,797
Ad Valorem Taxes ..... 917,773
Revenue Sharing. ..... 21,007
Irregular Contributions ..... 8,136
Total Contributions ..... \$11,826,090
Net Depreciation in Fair Value of Investments ..... \$(2,422,000)
Interest \& Dividends ..... 2,007,584
Class Action Settlement ..... 2,040
Investment Expense$(659,438)$
Net Investment Income ..... \$ ..... $(1,071,814)$
TOTAL Income ..... \$ ..... 10,754,276
EXPENSES:
Retirement Benefits ..... \$ 5,541,081
DROP Disbursements ..... 586,486
Refunds of Contributions ..... 467,714
Administrative Expenses ..... 169,668
Transfer to Plan A ..... 100,255
Funds Transferred to another System ..... 57,293
Depreciation ..... 4,391
TOTAL Expenses ..... \$ ..... 6,926,888
Net Market Value Income for Fiscal 2011 (Income - Expenses) ..... \$ ..... 3,827,388
Unadjusted Fund Balance as of December 31, 2011 (Fund Balance Previous Year + Net Income) ..... \$ ..... 166,903,181
Adjustment for Actuarial Smoothing. ..... \$ ..... 6,451,309
Actuarial Value of Assets (December 31, 2011) ..... \$

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

## PRESENT ASSETS OF THE SYSTEM CREDITABLE TO:

Annuity Savings Fund ..... \$ ..... 17,685,253
Annuity Reserve Fund ..... 52,815,413
Pension Accumulation Account ..... 91,930,229
Deferred Retirement Option Plan Account. ..... 2,159,787
Funding Deposit Account ..... 1,012,867
NET MARKET VALUE OF ASSETS ..... \$ ..... 165,603,549
ADJUSTMENT FOR ACTUARIAL SMOOTHING ..... 7,750,941
ACTUARIAL VALUE OF ASSETS ..... \$ ..... 173,354,490
EXHIBIT XIX - Schedule A
PLAN B: PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ..... \$ ..... 123,476,792
Present Value of Benefits Payable to Terminated Employees ..... 6,568,048
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 52,882,275
TOTAL PENSION BENEFIT OBLIGATION ..... \$ ..... 182,927,115
NET ACTUARIAL VALUE OF ASSETS ..... \$
173,354,490
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation. ..... 94.77\%
EXHIBIT XIX - Schedule B
ENTRY AGE NORMAL ACCRUED LIABILITIES
Accrued Liability for Active Employees ..... \$
139,512,569
Accrued Liability for Terminated Employees ..... 6,568,048
Accrued Liability for Current Retirees and Beneficiaries ..... 52,882,275
TOTAL ENTRY AGE NORMAL ACCRUED LIABILITY ..... \$ ..... 198,962,892
NET ACTUARIAL VALUE OF ASSETS. ..... \$ ..... 173,354,490Ratio of Net Actuarial Value of Assets to Entry Age Normal Accrued Liability87.13\%

## G. S. Curran \& Company, Ltd.

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

Actuarial Value of Assets Divided by PBO as of 1986: ..... $100.23 \%$
Amortization of Unfunded Balance over 30 years: ..... -0.19\%
Adjustments in Funded Ratio Due to Mergers or Changes in Methods or Assumption(s):
Changes for Fiscal 1987 ..... 13.61\%
Changes for Fiscal 1988 ..... -3.15\%
Changes for Fiscal 1989 ..... 0.13\%
Changes for Fiscal 1990 ..... -3.81\%
Changes for Fiscal 1995 ..... -3.33\%
Changes for Fiscal 1997 ..... 4.20\%
Changes for Fiscal 1998 ..... -3.43\%
Changes for Fiscal 1999 ..... -3.95\%
Changes for Fiscal 2001 ..... -0.11\%
Changes for Fiscal 2003 ..... -0.23\%
Changes for Fiscal 2005 ..... -3.19\%
Changes for Fiscal 2006 ..... -0.65\%
Changes for Fiscal 2007 ..... -0.58\%
Changes for Fiscal 2008 ..... 10.41\%
Changes for Fiscal 2010 ..... -1.78\%
TOTAL Adjustments ..... 4.14\%
Amortization of Adjustments in Funded Ratio over 30 years:
Changes for Fiscal 1987 ..... $-10.89 \%$
Changes for Fiscal 1988 ..... 2.42\%
Changes for Fiscal 1989 ..... -0.10\%
Changes for Fiscal 1990 ..... 2.67\%
Changes for Fiscal 1995 ..... 1.78\%
Changes for Fiscal 1997 ..... -1.96\%
Changes for Fiscal 1998 ..... 1.49\%
Changes for Fiscal 1999 ..... 1.58\%
Changes for Fiscal 2001 ..... 0.04\%
Changes for Fiscal 2003 ..... 0.06\%
Changes for Fiscal 2005 ..... 0.64\%
Changes for Fiscal 2006 ..... $0.11 \%$
Changes for Fiscal 2007 ..... 0.08\%
Changes for Fiscal 2008 ..... -1.04\%
Changes for Fiscal 2010 ..... 0.06\%
TOTAL Amortization of Adjustments ..... -3.06\%
Target Ratio for Current Fiscal Year (Not more than 100\%) ..... 100.00\%
Actuarial Value of Assets Divided by PBO as of 2011 ..... 94.77\%

## EXHIBIT XXI CENSUS DATA - PLAN B

|  | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of members as of December 31, 2010 | 2,275 | 1,555 | 38 | 576 | 4,444 |
| Additions to Census <br> Initial membership <br> Omitted in error last year <br> Death of Another Member | 253 | 17 |  |  | 270 2 7 |
| 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 | (85) <br> (33) <br> (17) <br> 7 <br> 1 <br> 1 <br> 7 | 85 <br> (7) <br> (6) | 17 <br> (6) <br> (7) | 33 <br> 6 <br> (1) <br> 6 | 1 |
| Eliminated from Census <br> Refund of contributions <br> Deaths <br> Included in error last year Adjustment for multiple records | $\begin{array}{r} (139) \\ (9) \end{array}$ | $\begin{array}{r} (43) \\ (1) \end{array}$ |  | (19) | (182) <br> (29) <br> 1 |
| Number of members as of December 31, 2011 | 2,261 | 1,600 | 42 | 611 | 4,514 |

PLAN B - ACTIVES CENSUS BY AGE:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Salary | $\begin{gathered} \text { Total } \\ \text { Salary } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16-20 | 12 | 3 | 15 | 25,806 | 387,086 |
| 21-25 | 58 | 56 | 114 | 25,979 | 2,961,552 |
| 26-30 | 94 | 123 | 217 | 32,576 | 7,068,935 |
| 31-35 | 86 | 102 | 188 | 34,003 | 6,392,479 |
| 36-40 | 107 | 129 | 236 | 37,311 | 8,805,438 |
| 41-45 | 106 | 172 | 278 | 37,170 | 10,333,226 |
| 46-50 | 158 | 160 | 318 | 37,745 | 12,002,805 |
| 51-55 | 180 | 148 | 328 | 38,473 | 12, 619,033 |
| 56-60 | 167 | 137 | 304 | 39,061 | 11,874,442 |
| 61-65 | 112 | 89 | 201 | 39,598 | 7,959,119 |
| 66-70 | 43 | 27 | 70 | 38,370 | 2,685,918 |
| 71-75 | 17 | 9 | 26 | 36,658 | 953,095 |
| 76-80 | 7 | 1 | 8 | 24,259 | 194,074 |
| total | 1,147 | 1,156 | 2,303 | 36,577 | 84,237,202 |

the active census includes 1,063 actives with vested benefits, INCLUDING 42 DROP PARTICIPANTS AND 26 ACTIVE FORMER DROP PARTICIPANTS.

PLAN B - TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $31-35$ | 2 | 2 | 4 |  | 8,126 |

PLAN B - TERMINATED MEMBERS DUE A REFUND OF CONTRIBUTIONS:

| Contributions Ranging |  | Total |  |
| ---: | ---: | ---: | :---: |
| From | To | Number | Contributions |
| 0 | - | 99 | 1,031 |

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G. S. Curran \& Company, Ltd.

PLAN B - REGULAR RETIREES:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $56-60$ | 6 | 3 | 9 | 23,020 | 207,176 |
| $61-65$ | 46 | 37 | 83 | 14,688 | $1,219,127$ |
| $66-70$ | 57 | 47 | 104 | 10,446 | $1,086,337$ |
| $71-75$ | 71 | 40 | 111 | 8,725 | 968,432 |
| $76-80$ | 43 | 39 | 82 | 8,314 | 681,736 |
| $81-85$ | 22 | 26 | 48 | 7,280 | 349,461 |
| $86-90$ | 5 | 23 | 28 | 6,974 | 195,278 |
| $91-99$ | 3 | 224 | 477 | 7,219 | 86,627 |
| TOTAL | 253 |  |  |  | 10,051 |

PLAN B - DISABILITY RETIREES:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $36-40$ | 1 | 0 | 1 | 5,293 | 5,293 |
| $46-50$ | 2 | 0 | 2 | 6,153 | 12,306 |
| $51-55$ | 5 | 3 | 8 | 9,858 | 78,862 |
| $56-60$ | 16 | 5 | 21 | 6,385 | 134,080 |
| $61-65$ | 14 | 6 | 4 | 19 | 8,139 |
| $66-70$ | 2 | 0 | 17 | 4,870 | 48,633 |
| $71-75$ | 46 | 17 | 63 | 10,862 | 21,724 |
| TOTAL |  |  |  |  | 7,232 |

PLAN B - SURVIVORS:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $31-35$ | 0 | 2 | 2 | 7,785 | 15,569 |
| 51-55 | 1 | 5 | 6 | 10,919 | 65,514 |
| 56-60 | 0 | 8 | 8 | 9,278 | 74,226 |
| 61-65 | 0 | 10 | 10 | 10,224 | 102,241 |
| 66-70 | 0 | 15 | 15 | 7,231 | 108,465 |
| 71-75 | 0 | 14 | 14 | 4,609 | 64,523 |
| 76-80 | 0 | 7 | 7 | 4,828 | 33,798 |
| 81-85 | 0 | 5 | 5 | 4,258 | 21,289 |
| 86-90 | 1 | 1 | 2 | 1,885 | 3,770 |
| 91-99 | 0 | 2 | 2 | 3,435 | 6,869 |
| total | 2 | 69 | 71 | 6,990 | 496,264 |

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G. S. Curran \& Company, Ltd.
plan b - active members:
Completed Years of Service


| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 308Over | Average Salary |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 22,741 | 33,009 | 27,639 |  |  |  |  |  |  |  |  | 25,806 |
| 21-25 | 24,746 | 28,082 | 23,946 | 24,839 | 27,873 | 49,881 |  |  |  |  |  | 25,979 |
| 26-30 | 32,333 | 29,283 | 30,338 | 40,188 | 31,860 | 33,871 | 20,260 |  |  |  |  | 32,576 |
| 31-35 | 37,172 | 35,158 | 32,628 | 33,191 | 33,285 | 32,126 | 34,262 |  |  |  |  | 34,003 |
| 36-40 | 30,093 | 30,246 | 34,087 | 43,776 | 30,556 | 42,171 | 37,733 | 40,830 | 56,160 |  |  | 37,311 |
| 41-45 | 40,444 | 28,627 | 31,236 | 37,968 | 38,969 | 37,304 | 36,485 | 42,750 | 40,683 | 35,259 |  | 37,170 |
| 46-50 | 28,002 | 34,861 | 33,509 | 29,886 | 33,844 | 40,369 | 38,328 | 41,797 | 45,246 | 47,421 | 42,211 | 37,745 |
| 51-55 | 26,459 | 36,448 | 35,753 | 41,847 | 47,345 | 35,910 | 36,053 | 36,240 | 40,610 | 46,246 | 44,286 | 38,473 |
| 56-60 | 29,083 | 29,335 | 38,127 | 35,765 | 35,154 | 38,489 | 38,847 | 42,136 | 38,474 | 45,272 | 50,073 | 39,061 |
| 61-65 | 37,873 | 26,682 | 34,855 | 49,102 | 31,795 | 39,231 | 35,719 | 43,974 | 42,190 | 36,371 | 46,970 | 39,598 |
| 66-70 | 39,243 |  | 40,847 | 37,623 | 29,860 | 33,782 | 44,195 | 40,800 | 37,890 | 24,483 | 53,619 | 38,370 |
| 71 \& Over | 31,604 |  |  | 42,673 |  | 27,385 | 39,946 | 34,555 | 43,495 | 23,970 | 21,386 | 33,740 |
| Average | 30,615 | 31,132 | 32,466 | 38,571 | 35,041 | 37,432 | 37,265 | 40,659 | 41,383 | 43,730 | 45,264 | 36,577 |

PLAN B - TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Attained Ages | Years Until Retirement Eligibility |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  |  |  |  |  |  |  |  | 2 | 2 | 4 |
| 36-40 |  |  |  |  |  |  |  |  | 3 | 1 |  | 4 |
| 41-45 |  |  |  |  |  |  |  | 17 | 4 |  |  | 21 |
| 46-50 |  |  |  |  |  |  | 18 | 3 |  |  |  | 21 |
| 51-55 | 1 |  |  |  |  | 27 | 12 |  |  |  |  | 40 |
| 56-60 | 1 | 7 | 4 | 4 | 3 | 5 |  |  |  |  |  | 24 |
| 61-65 | 5 | 2 | 2 |  | 1 |  |  |  |  |  |  | 10 |
| 66-70 | 2 |  |  |  |  |  |  |  |  |  |  | 2 |
| 71-75 | 2 |  |  |  |  |  |  |  |  |  |  | 2 |
| 76-80 | 1 |  |  |  |  |  |  |  |  |  |  | 1 |
| 81 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 12 | 9 | 6 | 4 | 4 | 32 | 30 | 20 | 7 | 3 | 2 | 129 |


| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  |  |  |  |  |  |  |  | 6,013 | 10,238 | 8,126 |
| 36-40 |  |  |  |  |  |  |  |  | 7,546 | 5,195 |  | 6,958 |
| 41-45 |  |  |  |  |  |  |  | 10,460 | 4,678 |  |  | 9,359 |
| 46-50 |  |  |  |  |  |  | 10,822 | 5,598 |  |  |  | 10,076 |
| 51-55 | 7,540 |  |  |  |  | 8,450 | 6,276 |  |  |  |  | 7,775 |
| 56-60 | 9,542 | 8,949 | 8,983 | 11,215 | 14,225 | 6,649 |  |  |  |  |  | 9,537 |
| 61-65 | 4,187 | 7,088 | 3,364 |  | 6,575 |  |  |  |  |  |  | 4,842 |
| 66-70 | 4,114 |  |  |  |  |  |  |  |  |  |  | 4,114 |
| 71-75 | 1,458 |  |  |  |  |  |  |  |  |  |  | 1,458 |
| 76-80 | 3,430 |  |  |  |  |  |  |  |  |  |  | 3,430 |
| 81 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Average | 4,383 | 8,535 | 7,110 | 11,215 | 12,312 | 8,169 | 9,004 | 9,731 | 5,907 | 5,740 | 10,238 | 8,305 |

PLAN B - SERVICE RETIREES:
Completed Years Since Retirement

|  | 0 | 1 | 2 |  |  |  |  |  | 20-24 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 3 | 4 | 5-9 | 10-14 | 15-19 |  | 25-29 | 30\&Over | Total |
| Attained |  |  |  |  |  |  |  |  |  |  |  |  |
| 0-55 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 56-60 | 3 | 2 | 2 | 1 |  | 1 |  |  |  |  |  | 9 |
| 61-65 | 25 | 17 | 14 | 5 | 8 | 11 | 3 |  |  |  |  | 83 |
| 66-70 | 10 | 7 | 8 | 17 | 9 | 50 | 3 |  |  |  |  | 104 |
| 71-75 | 3 | 1 | 6 | 6 | 7 | 46 | 36 | 6 |  |  |  | 111 |
| 76-80 |  |  | 2 | 3 |  | 16 | 35 | 21 | 4 | 1 |  | 82 |
| 81-85 | 1 | 1 |  |  |  | 5 | 2 | 19 | 19 |  | 1 | 48 |
| 86-90 | 1 |  |  |  |  |  |  | 3 | 14 | 10 |  | 28 |
| 91 \& Over |  |  |  |  |  |  |  |  | 3 | 5 | 4 | 12 |
| Totals | 43 | 28 | 32 | 32 | 24 | 129 | 79 | 49 | 40 | 16 | 5 | 477 |



| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-55 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 56-60 | 18,482 | 28,027 | 24,525 | 12,336 |  | 34,291 |  |  |  |  |  | 23,020 |
| 61-65 | 12,650 | 13,055 | 14,384 | 14,450 | 17,478 | 22,949 | 5,018 |  |  |  |  | 14,688 |
| 66-70 | 8,180 | 11,807 | 12,488 | 9,853 | 10,153 | 10,472 | 13,167 |  |  |  |  | 10,446 |
| 71-75 | 6,022 | 26,609 | 8,319 | 5,207 | 9,395 | 7,397 | 11,026 | 6,609 |  |  |  | 8,725 |
| 76-80 |  |  | 7,788 | 14,555 |  | 7,634 | 8,202 | 7,332 | 10,805 | 16,080 |  | 8,314 |
| 81-85 | 3,292 | 8,386 |  |  |  | 7,628 | 8,022 | 6,409 | 8,427 |  | 1,727 | 7,280 |
| 86-90 | 11,625 |  |  |  |  |  |  | 9,511 | 8,025 | 4,277 |  | 6,974 |
| 91 \& Over |  |  |  |  |  |  |  |  | 4,731 | 10,795 | 4,615 | 7,219 |
| Average | 11,313 | 14,130 | 12,994 | 10,219 | 12,373 | 10,162 | 9,552 | 7,019 | 8,247 | 7,051 | 4,037 | 10,051 |

PLAN B - DISABILITY RETIREES

| Attained Ages | Completed Years Since Retirement |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| 0-35 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 36-40 |  |  |  |  |  | 1 |  |  |  |  |  | 1 |
| 41-45 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 46-50 |  |  |  |  |  | 2 |  |  |  |  |  | 2 |
| 51-55 |  | 2 |  |  | 1 | 3 | 1 | 1 |  |  |  | 8 |
| 56-60 |  | 3 | 1 |  | 5 | 8 | 4 |  |  |  |  | 21 |
| 61-65 | 1 |  | 1 | 1 | 1 | 11 | 2 | 2 |  |  |  | 19 |
| 66-70 |  | 1 |  |  | 1 | 7 |  | 1 |  |  |  | 10 |
| 71-75 |  |  |  |  |  |  | 2 |  |  |  |  | 2 |
| 76 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 1 | 6 | 2 | 1 | 8 | 32 | 9 | 4 | 0 | 0 | 0 | 63 |

ears Since Retirement
PLAN B - AVERAGE ANNUAL BENEFITS PAYABLE TO DISABILITY RETIREES:



| Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  |  |  |  | 1 | 1 |  |  |  |  | 2 |
| 36-40 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 41-45 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 46-50 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 51-55 | 1 |  |  |  |  | 4 |  | 1 |  |  |  | 6 |
| $56-60$ | 1 |  |  |  | 2 | 2 | 3 |  |  |  |  | 8 |
| 61-65 |  |  |  |  | 1 | 5 | 3 | 1 |  |  |  | 10 |
| 66-70 |  |  |  | 2 | 2 | 7 | 2 | 2 |  |  |  | 15 |
| 71-75 |  |  | 1 |  | 1 | 2 | 6 | 2 | 1 |  | 1 | 14 |
| 76-80 |  |  |  |  |  | 2 | 1 | 3 | 1 |  |  | 7 |
| 81-85 |  |  |  |  |  |  | 1 |  | 2 | 1 | 1 | 5 |
| 86-90 |  |  |  |  |  |  |  |  | 1 | 1 |  | 2 |
| 91 \& Over |  |  |  |  |  |  |  |  |  | 1 | 1 | 2 |
| Totals | 2 | 0 | 1 | 2 | 6 | 23 | 17 | 9 | 5 | 3 | 3 | 71 |
| PLAN B - AVERAGE ANNUAL BENEFITS PAYABLE to SURVIVORS OF FORMER MEMBERS: |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Completed Years Since Retirement |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| $31-35$ |  |  |  |  |  | 12,078 | 3,490 |  |  |  |  | 7,784 |
| $36-40$ |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 41-45 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 46-50 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 51-55 | 26,422 |  |  |  |  | 7,884 |  | 7,556 |  |  |  | 10,919 |
| $56-60$ | 7,070 |  |  |  | 17,218 | 5,740 | 7,080 |  |  |  |  | 9,278 |
| 61-65 |  |  |  |  | 9,209 | 13,095 | 7,963 | 3,669 |  |  |  | 10,224 |
| 66-70 |  |  |  | 6,358 | 4,333 | 9,489 | 8,417 | 1,912 |  |  |  | 7,231 |
| 71-75 |  |  | 1,455 |  | 3,008 | 4,889 | 4,979 | 4,542 | 9,711 |  | 1,612 | 4,609 |
| 76-80 |  |  |  |  |  | 7,990 | 4,383 | 3,972 | 1,518 |  |  | 4,828 |
| 81-85 |  |  |  |  |  |  | 1,832 |  | 3,623 | 10,347 | 1,865 | 4,258 |
| 86-90 |  |  |  |  |  |  |  |  | 3,384 | 386 |  | 1,885 |
| 91 \& Over |  |  |  |  |  |  |  |  |  | 4,077 | 2,792 | 3,435 |
| Average | 16,746 | 0 | 1,455 | 6,358 | 9,220 | 9,250 | 5,973 | 4,006 | 4,372 | 4,937 | 2,090 | 6,990 |

## EXHIBIT XXII PLAN B: YEAR-TO-YEAR COMPARISON

Fiscal $2011 \quad$ Fiscal $2010 \quad$ Fiscal $2009 \quad$ Fiscal 2008

| Number of Active Members |  | 2,303 |  | 2,313 |  | 2,290 |  | 2,194 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Retirees \& Survivors |  | 611 |  | 576 |  | 560 |  | 548 |
| Number of Terminated Due Deferred Benefits |  | 129 |  | 125 |  | 118 |  | 108 |
| Number Terminated Due Refunds |  | 1,471 |  | 1,430 |  | 1,426 |  | 1,410 |
| Active Lives Payroll | \$ | 84,237,202 | \$ | 81,999,193 | \$ | 79,373,895 | \$ | 74,891,671 |
| Retiree Benefits in Payment | \$ | 5,746,033 | \$ | 5,349,314 | \$ | 4,986,096 | \$ | 4,744,664 |
| Market Value of Assets |  | 165,603,549 |  | 161,776,161 |  | 134,940,283 |  | 09,749,342 |
| Actuarial Value of Assets |  | 173,354,490 |  | 163,075,793 |  | 150,446,497 | \$ | 36,139,102 |
| Present Value of Future Employer Normal Cost | \$ | 71,951,379 | \$ | 67,556,191 | \$ | 60,488,525 | \$ | 63,985,978 |
| Present Value of Future Employee Contrib. | \$ | 18,084,026 | \$ | 17,527,008 | \$ | 16,221,775 | \$ | 15,422,566 |
| Funding Deposit Account Credit Balance | \$ | 1,012,867 | \$ | 334,656 | \$ | 311,308 | \$ | 289,589 |
| Present Value of Future Benefits |  | 262,377,028 |  | 247,824,336 |  | 226,845,489 | \$ 215,258,057 |  |


|  | Fiscal 2012 | Fiscal 2011 | Fiscal 2010 | Fiscal 2009 |
| :---: | :---: | :---: | :---: | :---: |
| Employee Contribution Rate | 3.00\% | 3.00\% | 3.00\% | 3.00\% |
| Projected Tax Contribution as \% of Payroll | 1.09\% | 1.05\% | 1.13\% | 1.13\% |
| Actuarially Required Net Direct Employer |  |  |  |  |
| Contribution Rate | 9.31\% | 9.07\% | 8.60\% | 9.56\% |
| Actual Employer Contribution Rate | 10.00\% | 10.00\% | 10.00\% | 6.25\% |


| Fiscal 2007 |  | Fiscal 2006 |  | Fiscal 2005 |  | Fiscal 2004 |  | Fiscal 2003 |  | Fiscal 2002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2,030 |  | 1,990 |  | 1,970 |  | 2,062 |  | 2,189 |  | 2,122 |
| 530 |  | 508 |  | 486 |  | 461 |  | 417 |  | 404 |
| 97 |  | 98 |  | 91 |  | 69 |  | 64 |  | 64 |
| 1,353 |  | 1,369 |  | 1,298 |  | 1,243 |  | 1,182 |  | 1,199 |
| \$ 62,859,807 | \$ | 59,155,664 | \$ | 54,810,437 | \$ | 54,325,541 | \$ | 54,823,785 | \$ | 52,863,764 |
| \$ 4,400,123 | \$ | 4,029,570 | \$ | 3,588,698 | \$ | 3,313,829 | \$ | 2,898,810 | \$ | 2,704,346 |
| \$ 144,163,791 |  | 132,695,110 |  | 117,661,283 |  | 110,700,198 | \$ | 99,612,361 | \$ | 85,214,085 |
| \$ 141,756,387 |  | 123,781,772 |  | 111,443,610 | \$ | 99,526,756 | \$ | 90,234,749 | \$ | 84,572,863 |
| \$ 36,302,827 | \$ | 30,194,074 | \$ | 30,452,448 | \$ | 30,454,650 | \$ | 31,528,445 | \$ | 28,501,122 |
| \$ 13,275,174 | \$ | 12,440,078 | \$ | 11,815,922 | \$ | 12,600,693 | \$ | 12,689,583 | \$ | 12,282,205 |
| \$ 0 | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 |
| \$ 191,334,388 |  | 166,415,924 |  | 153,711,980 |  | 142,582,099 | \$ | 134,452,777 | \$ | 125,356,190 |


| Fiscal 2008 | Fiscal 2007 | Fiscal 2006 | Fiscal 2005 | Fiscal 2004 | Fiscal 2003 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3.00\% | 3.00\% | 3.00\% | 3.00\% | 3.00\% | 3.00\% |
| 1.11\% | 1.05\% | 1.03\% | 1.00\% | 0.95\% | 0.96\% |
| 6.13\% | 5.39\% | 5.90\% | 5.45\% | 5.61\% | 5.18\% |
| 6.00\% | 6.00\% | 5.75\% | 5.75\% | 5.25\% | 3.75\% |

## SUMMARY OF PRINCIPAL PLAN PROVISIONS

All members of the Parochial Employees' Retirement System are participants in either Plan A or Plan 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 is for general informational purposes only and does not constitute a guarantee of benefits.

PLAN A:
CONTRIBUTION RATES - The Plan A fund is financed by employee contributions at a rate determined by the Board subject to the statutory range of $8 \%$ through $11 \%$ of each member's earnings and employer contributions as determined by the Public Retirement Systems' Actuarial Committee. 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 East Baton Rouge Parish, and remits the money to the system on an annual basis. The system also receives revenue sharing funds each year as appropriated by the legislature. In any fiscal year in which employer contribution rate as actuarially determined is scheduled to decrease, the Board of Trustees may elect to maintain the existing rate or any rate between the existing and minimum rates.

RETIREMENT BENEFITS - Members hired on or before December 31, 2006, with seven years of creditable service may retire at age sixty-five; ten years of creditable service may retire at age sixty; members with twenty-five years of service may retire at age fifty-five; members with thirty years of service may retire regardless of age. Members hired on or after January 1, 2007, with seven years of creditable service may retire at age sixty-seven; ten years of creditable service may retire at age sixtytwo; members with thirty years of service may retire at age fifty-five. The retirement allowance is equal to three percent of the member's final compensation multiplied by his years of creditable service; however, any employee who was a member of the supplemental plan only prior to the revision date has the benefit earned for service credited prior to the revision date on the basis of one percent of final compensation plus two dollars per month for each year of service credited prior to the revision date, and three percent of final compensation for each year of service credited after the revision date. All accumulated annual leave for which payment cannot be made in accordance with law and all unused sick leave accumulated at the time of retirement is included in the member's creditable service for retirement computation purposes. The retirement allowance may not exceed the greater of one hundred percent of member's final salary or final compensation.

DISABILITY BENEFITS - Five years of creditable service are required in order to be eligible for disability benefits for members hired on or before December 31, 2006. Seven years of creditable service are required in order to be eligible for disability benefits for members hired on or after January 1, 2007. Disabled members receive a normal retirement allowance if eligible. Otherwise, the member receives the lesser of three percent of compensation multiplied by his years of service, not to be less than fifteen years, or the accrual percentage as defined for retirement benefits multiplied by final compensation multiplied by years of service assuming continued service to age sixty for members hired on or before December 31, 2006 or age sixty-two for members hired on or after January 1, 2007.

SURVIVOR BENEFITS - Five years of creditable service is required in order to be eligible for survivor benefits. If a member is eligible for normal retirement at the time of death, the surviving

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spouse receives an automatic option 2 benefit. If the member was not eligible for a normal retirement, the surviving unmarried spouse with minor children receives sixty percent of final compensation. If the member was not eligible for a normal retirement, the surviving unmarried spouse with no minor children receives forty percent of final compensation payable upon the attainment of age sixty by the spouse, or upon becoming disabled. Minor children with no unmarried spouse receive thirty percent of final compensation each, not to exceed a total of sixty percent of final compensation.

CONTRIBUTION REFUNDS - Upon withdrawal from service, members not entitled to a retirement allowance are paid a refund of accumulated contributions upon request. Receipt of such a refund cancels all accrued rights in the system. If a member receives a refund of contributions and is subsequently rehired on or after January 1, 2007, the provisions applicable to members initially hired on or after January 1, 2007 will apply.

## PLAN B:

CONTRIBUTION RATES - The Plan B fund is financed by employee contributions at a rate determined by the Board subject to the statutory range of $3 \%$ through $5 \%$ of each member's earnings and employer contributions as determined by the Public Retirement Systems' Actuarial Committee. 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 East Baton Rouge Parish, and remits the money to the system on an annual basis. The system also receives revenue sharing funds each year as appropriated by the legislature. In any fiscal year in which the employer contribution rate as actuarially determined is scheduled to decrease, the Board of Trustees may elect to maintain the existing rate or any rate between the existing and minimum rates.

RETIREMENT BENEFITS: - Members hired on or before December 31, 2006, with seven years of creditable service my retire at age sixty-five; ten years of creditable service may retire at age sixty; members with thirty years of service may retire at age fifty-five. Members hired on or after January 1, 2007, with seven years of creditable service my retire at age sixty-seven; ten years of creditable service may retire at age sixty-two; members with thirty years of service may retire at age fifty-five. The retirement allowance is equal to two percent of the member's final compensation multiplied by the years of creditable service. All accumulated annual leave for which payment cannot be made in accordance with law and all unused sick leave accumulated at the time of retirement is included in the member's creditable service for retirement computation purposes.

DISABILITY BENEFITS - Five years of creditable service is required in order to be eligible for disability benefits for members hired on or before December 31, 2006. Seven years of creditable service is required in order to be eligible for disability benefits for members hired on or after January 1, 2007. Disabled members receive a normal retirement allowance, if eligible. Otherwise, the member receives the lesser of two percent of compensation multiplied by the years of service, not to be less than fifteen years, or two percent of final compensation multiplied by the years of service assuming continued service to age sixty for members hired on or before December 31, 2006 or age sixty-two for members hired on or after January 1, 2007.

SURVIVOR BENEFITS - The surviving spouse of a member who was eligible for normal retirement at the time of death receives an automatic option 2 benefit. The surviving spouse of a member with ten

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or more years of creditable service and not eligible for normal retirement at the time of death receives an option 2 benefit payable at attainment of age fifty by the spouse.

CONTRIBUTION REFUNDS - Upon withdrawal from service, members not entitled to a retirement allowance are paid a refund of accumulated contributions upon request. Receipt of such a refund cancels all accrued rights in the system. If a member receives a refund of contributions and is subsequently rehired on or after January 1, 2007, the provisions applicable to members initially hired on or after January 1, 2007 will apply.

DEFERRED RETIREMENT OPTION PLAN:
In lieu of terminating employment and accepting a service retirement allowance, any member of Plan A or Plan 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. In terms of DROP eligibility, any member whose service, when combined with service in any other state or statewide public retirement system exceeds thirty years will be eligible to include reciprocally recognized service credit. Upon commencement of 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 fund. This fund does earn interest once the member terminates participation in DROP but continues their employment. The interest rate is based upon the rate of return of a short-term U.S. Treasury security, a group of short-term U.S. Treasury Securities, or an index of short-term U.S. Treasury securities to be selected by the board of trustees. This interest is to be credited to the individual's account balance on an annual basis. Additionally, no cost-of-living increases are payable to the 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 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 Deferred Retirement Option Plan fund 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 for those individuals hired on or before December 31, 2006; or at least sixty months for those individuals hired on or after January 1, 2007.

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## 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 following chart illustrates the effect of emerging experience on the plan.

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

Increase in Factor Results in
Decrease in Cost
Increase in Cost
Increase in Cost
Decrease in Cost
Increase in Cost
Decrease in Cost

The following assumptions apply to both Plan A and Plan B unless stated otherwise.
ACTUARIAL COST METHOD: Plan A: Frozen Attained Age Normal Actuarial Method with allocation based on earnings. The normal cost is interest adjusted for midyear payment. The normal costs are calculated by aggregating present values of benefits and salaries for active members. The frozen actuarial accrued liability was calculated on the Projected Unit Credit Cost Method.

Plan B: The Aggregate Actuarial Cost Method with allocation based on earnings. The normal cost is interest adjusted for midyear payment.

ACTUARIAL ASSET VALUES: Invested assets are valued at market value adjusted to defer four-fifths of all earnings above or below the valuation interest rate in the valuation year, three-fifths of all earnings above or below the valuation interest rate in the prior year, two-fifths of all earnings above or below the valuation interest rate from two years prior, and one-fifth of all earnings above or below the valuation interest rate from three years prior. The resulting smoothed values are subject to a corridor of $85 \%$ to $115 \%$ of the market value of assets. If the smoothed value falls outside the corridor, the actuarial value is set equal to the average of the corridor limit and the smoothed value.

VALUATION INTEREST RATE: 7.50\%
ANNUAL SALARY INCREASE RATE: $\quad 5.75 \%$ (2.50\% Merit $/ 3.25 \%$ Inflation)

ANNUITANT, BENEFICIARY AND ACTIVE MORTALITY

RP2000 Combined Healthy table set back 1 year for males and RP2000 Combined Healthy Female Table for females.

RETIREE COST OF LIVING INCREASE: 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. All eligible persons age 80 and over in both plans are assumed to retire immediately. These rates apply only to those individuals eligible to retire. Rates are multiplied by a constant of 2 in the first year in which members become eligible for retirement.

RATES OF WITHDRAWAL: The rates of withdrawal are applied based upon completed years of service:

| PLAN A: | Service | Factor | Service | Factor |
| :---: | :---: | :---: | :---: | ---: |
|  | $<1$ | 0.25 | 11 | 0.04 |
|  | 1 | 0.21 | 12 | 0.03 |
|  | 2 | 0.15 | 13 | 0.03 |
|  | 3 | 0.12 | 14 | 0.02 |
|  | 4 | 0.10 | 15 | 0.02 |
|  | 5 | 0.09 | 16 | 0.02 |
|  | 6 | 0.08 | 17 | 0.02 |
|  | 7 | 0.07 | 18 | 0.02 |
|  | 8 | 0.06 | 19 | 0.02 |
|  | 9 | 0.05 | $>19$ | 0.01 |
|  | 10 | 0.04 |  |  |
|  | PLAN B: | Service | Factor | Service |
|  | $<1$ | 0.23 | 10 | Factor |
|  | 1 | 0.20 | 11 | 0.06 |
|  | 2 | 0.16 | 12 | 0.06 |
|  | 3 | 0.15 | 13 | 0.06 |
|  | 4 | 0.11 | 14 | 0.06 |
|  | 5 | 0.10 | 15 | 0.03 |
|  | 6 | 0.08 | 16 | 0.03 |
|  | 7 | 0.08 | 17 | 0.03 |
|  | 8 | 0.08 | $>17$ | 0.01 |
|  | 9 | 0.06 |  |  |

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

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

FAMILY STATISTICS: Assumptions used in determining the cost of various survivor benefits are listed below:

| Age at <br> Death | \% with <br> Children | \# of <br> Children | Average <br> Age |
| :---: | :---: | :---: | :---: |
| 25 | $62 \%$ | 1.7 | 6 |
| 35 | $82 \%$ | 2.1 | 10 |
| 45 | $66 \%$ | 1.8 | 13 |
| 55 | $19 \%$ | 1.4 | 15 |
| 65 | $2 \%$ | 1.4 | 15 |

## DISABLED LIVES MORTALITY: RP-2000 Disabled Lives Mortality Tables for Males and Females

VESTING ELECTING PERCENTAGE: The percent of those vested who elect deferred benefits in lieu of contribution refunds are as follows:

Plan A: Under Age 30: 35\%
Age 30-39: $\quad 40 \%$
Age 40 - 49: $\quad 45 \%$
Above Age 49: 65\%
Plan B: Under Age 40: 55\%
Age 40 - 49: 60\%
Above Age 49: $75 \%$
SICK AND ANNUAL LEAVE: Retirees were assumed to convert one month of sick and annual leave to retirement credit for each ten years of service credit.

RATES OF DROP ENTRY: The table of these rates is included later in the report. These rates apply only to those individuals eligible to enter the DROP plan. Rates are multiplied by a constant in the first year in which a member becomes eligible to enter DROP. For members of Plan A who were first employed before January 1, 2007 and for members of Plan B this constant is 2 . For members of Plan A who were first employed on or after January 1, 2007 the constant is 4.

DROP PARTICIPATION PERIOD:
All DROP participants are assumed to participate for 3 years and to retire at the end of their DROP participation period.

RETIREMENT RATES FOR ACTIVE
FORMER DROP PARTICIPANTS:

Retirement rates for active former DROP participants are $22 \%$ for Plan A and $21 \%$ for Plan B provided the member is below age 80 . For members age 80 or over, the retirement rate is set at $100 \%$.

## ACTUARIAL TABLES AND RATES

(For Participants Who Were First Hired Before January 1, 2007)

| Age | Male Mortality Rates | Female Mortality Rates | Disability Rates | Plan A Retirement Rates | Plan B Retirement Rates | Plan A DROP Entry Rates | $\begin{gathered} \text { Plan B } \\ \text { DROP Entry } \\ \text { Rates } \end{gathered}$ | Remarriage Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | 0.00030 | 0.00019 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05665 |
| 19 | 0.00032 | 0.00019 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05665 |
| 20 | 0.00033 | 0.00019 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05665 |
| 21 | 0.00035 | 0.00019 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05213 |
| 22 | 0.00036 | 0.00019 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04834 |
| 23 | 0.00037 | 0.00020 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04522 |
| 24 | 0.00037 | 0.00020 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04270 |
| 25 | 0.00038 | 0.00021 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04070 |
| 26 | 0.00038 | 0.00021 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03915 |
| 27 | 0.00038 | 0.00022 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03799 |
| 28 | 0.00038 | 0.00024 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03714 |
| 29 | 0.00039 | 0.00025 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03654 |
| 30 | 0.00041 | 0.00026 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03611 |
| 31 | 0.00044 | 0.00031 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03578 |
| 32 | 0.00050 | 0.00035 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03549 |
| 33 | 0.00056 | 0.00039 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03515 |
| 34 | 0.00063 | 0.00044 | 0.00045 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03471 |
| 35 | 0.00070 | 0.00047 | 0.00051 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03409 |
| 36 | 0.00077 | 0.00051 | 0.00057 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03286 |
| 37 | 0.00084 | 0.00055 | 0.00063 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03139 |
| 38 | 0.00090 | 0.00060 | 0.00072 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02973 |
| 39 | 0.00096 | 0.00065 | 0.00081 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02787 |
| 40 | 0.00102 | 0.00071 | 0.00093 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02585 |
| 41 | 0.00108 | 0.00077 | 0.00105 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02352 |
| 42 | 0.00114 | 0.00085 | 0.00117 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02111 |
| 43 | 0.00122 | 0.00094 | 0.00132 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01868 |
| 44 | 0.00130 | 0.00103 | 0.00150 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01629 |
| 45 | 0.00140 | 0.00112 | 0.00171 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01400 |
| 46 | 0.00151 | 0.00122 | 0.00195 | 0.20000 | 0.00000 | 0.35000 | 0.00000 | 0.01208 |
| 47 | 0.00162 | 0.00133 | 0.00219 | 0.20000 | 0.00000 | 0.35000 | 0.00000 | 0.01034 |
| 48 | 0.00173 | 0.00143 | 0.00249 | 0.20000 | 0.00000 | 0.35000 | 0.00000 | 0.00879 |
| 49 | 0.00186 | 0.00155 | 0.00282 | 0.20000 | 0.00000 | 0.35000 | 0.00000 | 0.00744 |
| 50 | 0.00200 | 0.00168 | 0.00321 | 0.20000 | 0.00000 | 0.35000 | 0.00000 | 0.00629 |
| 51 | 0.00214 | 0.00185 | 0.00366 | 0.20000 | 0.00000 | 0.35000 | 0.00000 | 0.00551 |
| 52 | 0.00245 | 0.00202 | 0.00414 | 0.20000 | 0.00000 | 0.35000 | 0.00000 | 0.00493 |
| 53 | 0.00267 | 0.00221 | 0.00471 | 0.11500 | 0.00000 | 0.35000 | 0.00000 | 0.00451 |
| 54 | 0.00292 | 0.00242 | 0.00534 | 0.11500 | 0.00000 | 0.35000 | 0.00000 | 0.00423 |
| 55 | 0.00320 | 0.00272 | 0.00606 | 0.11500 | 0.18000 | 0.35000 | 0.17000 | 0.00000 |
| 56 | 0.00362 | 0.00309 | 0.00690 | 0.11500 | 0.18000 | 0.22000 | 0.17000 | 0.00000 |
| 57 | 0.00420 | 0.00348 | 0.00783 | 0.11500 | 0.18000 | 0.22000 | 0.17000 | 0.00000 |
| 58 | 0.00469 | 0.00392 | 0.00888 | 0.11500 | 0.18000 | 0.22000 | 0.17000 | 0.00000 |
| 59 | 0.00527 | 0.00444 | 0.01011 | 0.11500 | 0.14000 | 0.22000 | 0.13500 | 0.00000 |
| 60 | 0.00595 | 0.00506 | 0.01464 | 0.11500 | 0.14000 | 0.22000 | 0.13500 | 0.00000 |
| 61 | 0.00675 | 0.00581 | 0.01464 | 0.11500 | 0.14000 | 0.10000 | 0.13500 | 0.00000 |
| 62 | 0.00768 | 0.00666 | 0.01464 | 0.11500 | 0.14000 | 0.10000 | 0.13500 | 0.00000 |
| 63 | 0.00876 | 0.00765 | 0.01464 | 0.11500 | 0.14000 | 0.10000 | 0.13500 | 0.00000 |
| 64 | 0.01001 | 0.00862 | 0.01464 | 0.11500 | 0.14000 | 0.10000 | 0.13500 | 0.00000 |
| 65 | 0.01128 | 0.00971 | 0.01464 | 0.11500 | 0.14000 | 0.10000 | 0.13500 | 0.00000 |

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# ACTUARIAL TABLES AND RATES 

(For Participants Who Were First Hired On or After January 1, 2007)

| Age | Male Mortality Rates | Female Mortality Rates | Disability Rates | Plan A Retirement Rates | Plan B Retirement Rates | Plan A DROP Entry Rates | Plan B DROP Entry Rates | Remarriage Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | 0.00030 | 0.00019 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05665 |
| 19 | 0.00032 | 0.00019 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05665 |
| 20 | 0.00033 | 0.00019 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05665 |
| 21 | 0.00035 | 0.00019 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.05213 |
| 22 | 0.00036 | 0.00019 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04834 |
| 23 | 0.00037 | 0.00020 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04522 |
| 24 | 0.00037 | 0.00020 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04270 |
| 25 | 0.00038 | 0.00021 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04070 |
| 26 | 0.00038 | 0.00021 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03915 |
| 27 | 0.00038 | 0.00022 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03799 |
| 28 | 0.00038 | 0.00024 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03714 |
| 29 | 0.00039 | 0.00025 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03654 |
| 30 | 0.00041 | 0.00026 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03611 |
| 31 | 0.00044 | 0.00031 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03578 |
| 32 | 0.00050 | 0.00035 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03549 |
| 33 | 0.00056 | 0.00039 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03515 |
| 34 | 0.00063 | 0.00044 | 0.00038 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03471 |
| 35 | 0.00070 | 0.00047 | 0.00043 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03409 |
| 36 | 0.00077 | 0.00051 | 0.00048 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03286 |
| 37 | 0.00084 | 0.00055 | 0.00053 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.03139 |
| 38 | 0.00090 | 0.00060 | 0.00060 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02973 |
| 39 | 0.00096 | 0.00065 | 0.00068 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02787 |
| 40 | 0.00102 | 0.00071 | 0.00078 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02585 |
| 41 | 0.00108 | 0.00077 | 0.00088 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02352 |
| 42 | 0.00114 | 0.00085 | 0.00098 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02111 |
| 43 | 0.00122 | 0.00094 | 0.00110 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01868 |
| 44 | 0.00130 | 0.00103 | 0.00125 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01629 |
| 45 | 0.00140 | 0.00112 | 0.00143 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01400 |
| 46 | 0.00151 | 0.00122 | 0.00163 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01208 |
| 47 | 0.00162 | 0.00133 | 0.00183 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01034 |
| 48 | 0.00173 | 0.00143 | 0.00208 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00879 |
| 49 | 0.00186 | 0.00155 | 0.00235 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00744 |
| 50 | 0.00200 | 0.00168 | 0.00268 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00629 |
| 51 | 0.00214 | 0.00185 | 0.00305 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00551 |
| 52 | 0.00245 | 0.00202 | 0.00345 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00493 |
| 53 | 0.00267 | 0.00221 | 0.00392 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00451 |
| 54 | 0.00292 | 0.00242 | 0.00445 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00423 |
| 55 | 0.00320 | 0.00272 | 0.00505 | 0.22800 | 0.22000 | 0.09600 | 0.19000 | 0.00000 |
| 56 | 0.00362 | 0.00309 | 0.00575 | 0.22800 | 0.22000 | 0.09600 | 0.19000 | 0.00000 |
| 57 | 0.00420 | 0.00348 | 0.00653 | 0.22800 | 0.22000 | 0.09600 | 0.19000 | 0.00000 |
| 58 | 0.00469 | 0.00392 | 0.00740 | 0.22800 | 0.22000 | 0.09600 | 0.19000 | 0.00000 |
| 59 | 0.00527 | 0.00444 | 0.00843 | 0.22800 | 0.22000 | 0.09600 | 0.19000 | 0.00000 |
| 60 | 0.00595 | 0.00506 | 0.01220 | 0.22800 | 0.22000 | 0.09600 | 0.19000 | 0.00000 |
| 61 | 0.00675 | 0.00581 | 0.01220 | 0.22800 | 0.22000 | 0.09600 | 0.19000 | 0.00000 |
| 62 | 0.00768 | 0.00666 | 0.01220 | 0.19000 | 0.17000 | 0.08000 | 0.15000 | 0.00000 |
| 63 | 0.00876 | 0.00765 | 0.01220 | 0.19000 | 0.17000 | 0.08000 | 0.15000 | 0.00000 |
| 64 | 0.01001 | 0.00862 | 0.01220 | 0.19000 | 0.17000 | 0.08000 | 0.15000 | 0.00000 |
| 65 | 0.01128 | 0.00971 | 0.01220 | 0.19000 | 0.17000 | 0.08000 | 0.15000 | 0.00000 |

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## GLOSSARY

Accrued Benefit - The pension benefit that an individual has earned as of a specific dated based on the provisions of the plan and the individual's age, service, and salary as of that date.

Actuarial Accrued Liability - The actuarial present value of benefits payable to members of the fund less the present value of future normal costs attributable to the members.

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 the portion of the cost of a pension plan to be allocated to each year. Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs. Once this allocation is made, a determination of the normal cost attributable to a specific year can be made along with the payment to amortize any unfunded actuarial accrued liability. To the extent that a particular funding method allocates a greater (lesser) portion of the actual present value of benefits to the actuarial accrued liability it will allocate less (more) to future normal costs.

Actuarial Equivalence - Payments or receipts with equal actuarial value on a given date when valued using the same set of actuarial assumptions.

Actuarial Gain (Loss) - The financial effect on the fund of the difference between the expected and actual experience of the fund. The experience may be related to investment earnings above (or below) those expected or changes in the liability structure due to fewer (or greater) than the expected numbers of retirements, deaths, disabilities, or withdrawals. In addition, other factors such as pay increases above (or below) those forecast can result in actuarial gains or losses. The effect of such gains (or losses) is to decrease (or increase) future costs.

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 probability 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. Adjustments to market values are often made to reduce the volatility of asset values.

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

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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.

Decrements - Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

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.

Funded Ratio - A measure of the ratio of assets to liabilities of the system according to a specific definition of those two values. Typically the assets used in the measure are the actuarial value of assets; the liabilities are defined by reference to some recognized actuarial funding method. Thus the funded ratio of a plan depends not only on the financial strength of the plan but also on the funding method used to determine the liabilities and the asset valuation method used to determine the assets in the ratio.

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 members expected final average compensation at retirement. For current retirees or terminated members this is equivalent to the actuarial present value of their accrued benefit.

Projected Benefits - The benefits expected to be paid in the future based on the provisions of the plan and the actuarial assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.

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]:    * Includes effect of change in asset valuation method. Effective with the 2007 valuation the method was changed from smoothing capital gains and losses over 3 years to smoothing investment earnings above or below the assumed rate of return over a five year period with $a+/-10 \%$ of market value corridor limit.

[^1]:    
    Average

