

UTAH RETIREMENT SYSTEMS
ACTUARIAL VALUATION REPORT
AS OF JANUARY 1, 2011

August 11, 2011

Utah State Retirement Board
540 East 200 South
Salt Lake City, UT 84102

Dear Members of the Board:

Subject: Actuarial Valuation as of January 1, 2011

This report describes the current actuarial condition of the Utah Retirement Systems (URS), determines the calculated employer contribution rates, and analyzes changes in these contribution rates. In addition, the report provides information required by URS in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and it provides various summaries of the data. Results of this report should not be used for any other purpose without consultation with the undersigned. Valuations are prepared annually as of January 1, the first day of the URS plan year. This report was prepared at the request of the Board and is intended for use by the URS staff and those designated or approved by the Board. This report may be provided to parties other than URS staff only in its entirety and only with the permission of the Board.

Under URS statutes, the Board of Trustees must certify employer contribution rates annually. These rates are determined actuarially, based on the Board's funding policy, although, as discussed below, under certain circumstances the Board may choose not to reduce the current rate if it is greater than the actuarially calculated rate. Contribution rates determined by a given actuarial valuation become effective eighteen months after the valuation date. I.e., the rates determined by this January 1, 2011 actuarial valuation will be used by the Board when certifying the employer contribution rates for the year beginning July 1, 2012 and ending June 30, 2013. If new legislation is enacted between the valuation date and the date the contribution rates become effective, the Board may adjust the calculated rates before certifying them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

FINANCING OBJECTIVES AND FUNDING POLICY

In setting contribution rates, the Board's principal objectives are:

- To set rates so that the unfunded actuarial accrued liability (UAAL) will be amortized over a reasonable period from the current valuation date
- To set rates so that they remain relatively level over time.

To accomplish this, the Board's funding policy requires that the employer contribution rate be at least equal to the sum of the employer normal cost rate (which pays the current year's cost) and an amortization rate which results in the amortization of the UAAL over 25 years in installments

that increase at the assumed rate of growth in payroll for URS. The 25-year amortization period is measured from January 1, 2009, so 23 years remain at the current valuation date.

Under this policy, the objective of maintaining a relatively level contribution rate over time is achieved in normal conditions such as consistent financial markets.

Section 49-11-301(5) of the Utah Code allows the Board to set the employer contribution rate at the prior year's rate, if the rate otherwise would decrease and if the funded ratio is less than 110%. In such a case, the rate set by the Board would be higher than the actuarially determined contribution rate. The purpose of this legislation is to enhance the Board's ability to maintain more-level contribution rates while targeting a 100% - 110% funded level. The Board has historically followed this policy, so for some funds the recommended contribution rate may be greater than the actuarially determined rate. This year, however, for almost all funds, the actuarially determined contribution rates were larger than the rates being paid in FY 2012.

PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches at least 100%.

For all systems on a combined basis, the funded ratio decreased from 85.7% to 82.7%. This decrease was primarily due to the recognition of an additional 20% of the extraordinary investment loss that occurred in 2008 and the adoption of updated assumptions as a result of the 2011 experience investigation. Absent favorable experience, we expect the funded ratio will continue to decrease for the next two years as the rest of the 2008 investment loss is recognized in the development of the actuarial value of assets.

If market value had been used in the calculation instead of actuarial value, the aggregate funded ratio for all funds combined would have been 77.3%, compared to 73.0% in the prior year. The increase in funded ratio on a market value basis is due to favorable experience in the assets. In particular, the investment return during 2010 on a market value basis was 13.2%, which provided \$954 million more in assets than was expected.

BENEFIT PROVISIONS

The benefit provisions reflected in this valuation are those which were in effect on January 1, 2011, or which were adopted by the end of the 2011 legislative session and are effective on or before July 1, 2012. There were no changes made since the previous valuation that had a measurable effect on the current valuation. However, it is worth noting the status of two older pieces of legislation.

SB 19 was passed during the 2008 legislative session. This law opened a window to allow employers of the Public Safety Retirement Systems to adopt a 4% maximum COLA in lieu of the 2.5% maximum COLA. Adoption of the 4% maximum COLA was mandatory for the State of Utah. This window for making the election will close in December 2012. This legislation is reflected in the valuation for those units that made the election by December 31, 2010. Supplemental information will be provided to URS so that URS can adjust the contribution rates for employers electing the 4% COLA during 2011 or later. No new public safety units adopted the optional 4% COLA during 2010.

The New Public Employees' Tier II Contributory Retirement Act (SB 63) was passed during the 2010 legislative session. This law closed the current retirement systems (except for the Judges Retirement System) to new members effective June 30, 2011. It created a new retirement benefit structure (Tier II) for all employees hired after that date. Employers will continue to contribute the amortization rate to the current systems on the pay for Tier II members. Therefore, SB 63 did not affect the benefits provided to current URS members, and it created a mechanism for ensuring that the UAAL is amortized over the payroll for both current and Tier II members. Therefore, this law had no effect on this actuarial valuation.

Under Governmental Accounting Standards Board Statement No. 25 (GASB 25), when a plan is closed to new members, the amortization charge should be determined based on the closed group's pay or as fixed dollar payments, rather than as payments which are level as a percentage of increasing payroll. However, because the plan will continue to receive amortization payments from the employers of Tier II members, i.e., based on the payroll for an open group of current and future employees, not the closed group of current members, we believe it is appropriate to continue to use a level-payroll amortization of the UAAL.

ASSUMPTIONS AND METHODS

The Board, in consultation with the actuary, sets the actuarial assumptions and methods used in the valuation. Current Board policy is to have the actuary perform an experience study every three years. In connection with the appropriate valuation, the actuary conducts a thorough review of plan experience for the preceding five years, and then makes recommendations to the Board.

An experience analysis was carried out in connection with this valuation, and as a result, we recommended, and the Board adopted a number of changes in the actuarial assumptions. Our recommendations included:

- Decrease the investment return assumption from 7.75% to 7.50%
- Decrease the inflation assumption from 3.00% to 2.75%. The COLA assumption for annuitants was also decreased from 3.00% to 2.75% for the 4.00% maximum COLA funds. There was no change to the 2.50% COLA assumption for the 2.50% maximum COLA funds.

- Modifications to the rate of salary increases for all groups. The wage inflation assumption for all the groups was decreased from 4.00% to 3.75% (i.e. 2.75% price inflation plus 1.00% for productivity).
- Decrease the payroll growth assumption from 4.00% to 3.50%.
- Modify the post-retirement mortality assumption for all groups and include an explicit assumption for future improvement in life expectancy.
- Modify the retirement rates for all groups. The changes result in an overall decrease in the rates at which active members are expected to retire.
- Modify the termination rates for all groups. The updates result in a slight increase in the rates at which active members are expected to terminate.
- Minor adjustments to the rates of disability incidence.

We did not recommend any changes in the actuarial cost method (Entry Age Normal) or in the method for determining the actuarial value of assets (five-year smoothing).

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and calculated contribution rates.

It is our opinion that the recommended assumptions are internally consistent and are reasonably based on past and anticipated future experience of the System. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in GASB 25.

DATA

Member data for retired, active and inactive members was supplied as of December 31, 2010 by the URS staff. The staff also supplied asset information as of December 31, 2010. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by URS.

CERTIFICATION

We certify that the information presented herein is accurate and fairly portrays the actuarial position of URS as of January 1, 2011.

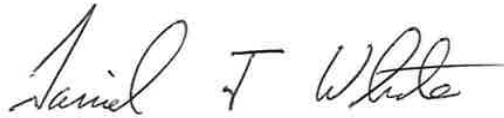
All of our work conforms with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Utah state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries and consultants. Mr. White and Mr. Conradi are Enrolled Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. All three consultants below are experienced in performing valuations for large public retirement systems.

Sincerely,



Lewis Ward
Consultant



Daniel J. White, FSA, EA, MAAA
Senior Consultant



J. Christian Conradi, ASA, EA, MAAA
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SECTION I
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY AND CONTRIBUTION REQUIREMENTS

- Contribution rates have increased, due to the recognition of an additional 20% of the 2008 investment loss and as a result of the adoption of the actuary's recommended assumptions for performing the 2011 actuarial valuation.
 - For State & School divisions, an increase of 1.90% of payroll
 - Fund 16 – Noncontributory State & School increased from 16.71% to 18.61% of payroll
 - For Local Government, an increase of 2.27% of payroll
 - Larger increases for Judges and most of the Public Safety divisions
 - Increases in recommended contributions shown in column (8) on Exhibit 1(a)
 - An appropriation will be required again for the Governors and Legislative Plan
 - See Exhibit 16
 - The gross contribution rates for the two Firefighter funds increased. The offset for fire insurance premium tax receipts no longer covers the employer contribution rates for either Division. The employer rate for Fund 31 (Division A) increased to 2.66% and the rate for Fund 32 (Division B) increased to 2.08%. The member contribution rates for Fund 31 remained unchanged at 15.05% and the member rate for Fund 32 increased from 16.18% to 16.71%.
 - See Exhibits 2(b) and 2(c) for details about the offsets applied to contribution rates for Firefighters
- Total projected contributions for all funds combined will be \$920 million
 - “New money” of \$105 million needed, as shown on Exhibit 1(c)
 - “New money” excludes effect of expected payroll growth
- Exhibit 1(a) shows the new recommended contribution rates, and compares these to the rates certified for FY 2012 based on the last valuation.
 - Rates include funding for the 3% substantial substitute benefit, where applicable
 - Rates do not include the 1.50% 401(k) contribution
 - Rates shown for both for the Public Employees Contributory and Noncontributory Retirement Systems exclude the contribution for the group insurance death benefit. PEHP determines the contribution rate for this benefit.
 - Offsets for Firefighters System and Judges System are shown
 - Rates shown on this table are the recommended contribution rates, not the actuarially determined rates. Under Utah Code §49-11-301(5), the Board may keep the contribution rate at the prior year's level, in order to reach and maintain a 110% funded ratio.
 - Rates shown on Exhibit 1(a), column 6 are for the twelve-month period beginning July 1, 2012 (FY 2013)

- Rates may need to be adjusted for the effect of 2012 legislation, if material, and for the effect of the 4.0% COLA for any new public safety employers that elect this benefit in 2011 or later.
- Exhibit 1(b) shows the development of the recommended rates under §49-11-301(5). The recommended rates are the larger of the actuarially calculated rates from the current valuation (Col. 2) and the rates certified for FY 2011 (Col. 3)
 - §49-11-301(5) permits the Board to set the contribution rate at the prior year's level if the actuarially calculated rate would be less and the funded ratio is less than 110%
 - None of the funds currently has a funded ratio greater than 110%
 - The policy is applied to the gross rates for the Firefighter funds and the Judges, i.e., before application of the offsets for the fire insurance premium tax receipts and the court fees
 - This policy is separately applied to the contribution rate for the 3% substantial substitute that is included with the contribution rates for the State and School funds, the State Public Safety funds and the Judges
- Exhibit 2(a) shows the components of the actuarially determined contribution rate, and Exhibit 4(a) reconciles the actuarially calculated rates determined by this valuation and the previous valuation
 - All the funds experienced an increase in their actuarially calculated contribution rate, although the current contribution rate for the 3% substantial substitute remains larger than the actuarially calculated rate
 - The increase in contribution rates was due to recognition of the investment losses incurred in 2008 and the adoption of recommended assumptions as a result of the 2011 experience investigation.
 - Funds with a 2.50% maximum COLA generally experienced larger increases in contribution rates than funds with a 4.00% maximum COLA, due to the recommended change in the inflation assumption.
- There were no changes to the benefit provisions that had an impact on the liabilities of this valuation
 - There were no new Public Safety units that elected to provide the 4% Maximum COLA benefit in 2010
- Recommend adoption of new assumptions. Principal assumption changes include:
 - Decrease the investment return assumption from 7.75% to 7.50%
 - Decrease the inflation assumption from 3.00% to 2.75%
 - Update the post-retiree mortality tables and include an explicit assumption for future increases in life expectancy

- Most other assumptions were also updated. Refer to the Actuarial Methods and Assumptions section of the Discussion Section for a more comprehensive list
- Impact on liabilities and contribution rates is shown on Exhibits 4(a) and 4(b), column 6
- Amortization payments are based on:
 - 23-year amortization period (25 years from January 1, 2009)
 - Contributions determined as level percentage of pay (except for Governors and Legislators Plan, where amortization is in level payments)
 - Total payroll increases of 3.50% per year
 - We believe continued use of level-percent-of-pay amortization is appropriate, even though SB 63 closed the current systems to new members, because membership for contribution purposes was not closed
 - No future growth in the number of active members is taken into account
- The plan earned 13.2%, net of investment and administrative expenses, on a market-value basis during 2010
 - \$954 million increase between actual market value as of December 31, 2009 (\$19.8 billion) and expected market assets at this date (\$18.8 billion, based on last year's 7.75% return assumption)
- Plan uses actuarial value to determine contribution rates and funded status
 - 5-year smoothing of net earnings above or below the investment return assumption
 - Method reflects just 20% of investment gain or loss each year
 - Extraordinary investment losses incurred during 2008 are now 60% recognized, and the remaining 40% will be recognized over the next two years
 - Actuarial value is approximately 107% on a combined asset basis.
 - No funds are impacted by the 25% corridor on the actuarial value
 - 2.9% return on actuarial value of assets
 - Impact on contribution rates shown on Exhibit 4(a) col. (4), and Exhibit 4(b) col. (5).
- The local government, state and school, firefighters, as well as a majority of the noncontributory public safety funds experienced liability gains. Smaller than expected salary increases at the individual level were the primary source of the liability gain.
 - Impact on contribution rates shown on Exhibit 4(a) col. (5), and Exhibit 4(b) col. (4)
- The Governors and Legislative Plan was 88.6% funded as of January 1, 2011. We recommend a \$269,982 appropriation be made to the plan on or before June 30, 2013. Please see Exhibit 16.

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 - 23-year amortization period (25 years from January 1, 2009)
 - Contributions determined as level percentage of pay (except for Governors and Legislators Plan, where amortization is in level payments)
 - Total payroll increases of 3.50% per year
 - We believe continued use of level-percent-of-pay amortization is appropriate, even though SB 63 closed the current systems to new members, because membership for contribution purposes was not closed
 - No future growth in the number of active members is taken into account
- The plan earned 13.2%, net of investment and administrative expenses, on a market-value basis during 2010
 - \$856 million increase between actual market value as of December 31, 2009 (\$19.8 billion) and expected market assets at this date (\$18.9 billion, based on 7.75% return assumption)
- Plan uses actuarial value to determine contribution rates and funded status
 - 5-year smoothing of net earnings above or below 7.75% assumption
 - Method reflects just 20% of investment gain or loss each year
 - Extraordinary investment losses incurred during 2008 are now 60% recognized, and the remaining 40% will be recognized over the next two years
 - Actuarial value is approximately 107% on a combined asset basis.
 - No funds are impacted by the 25% corridor on the actuarial value
 - 2.9% return on actuarial value of assets
 - Impact on contribution rates shown on Exhibit 4(a) col. (4), and Exhibit 4(b) col. (5).
- The local government, state and school, firefighters, as well as a majority of the noncontributory public safety funds experienced liability gains. Smaller than expected salary increases at the individual level were the primary source of the liability gain.
 - Impact on contribution rates shown on Exhibit 4(a) col. (5), and Exhibit 4(b) col. (4)
- The Governors and Legislative Plan was 88.6% funded as of January 1, 2011. We recommend a \$269,982 appropriation be made to the plan on or before June 30, 2012. Please see Exhibit 16.

SECTION II
DISCUSSION

DETERMINATION OF CALCULATED CONTRIBUTION RATES

The URS retirement systems, except for the Governors' and Legislators' Retirement Plan, are funded by employer contributions which are expressed as a percent of pay, and in some cases by member contributions. The Firefighters System and the Judges System receive additional funding from outside sources. As shown in Exhibit 2(a), the employer contribution rate can have as many as four components:

- The normal cost percentage (NC%)
- The amortization percentage (UAAL%)
- The contribution required to fund the 3% substantial substitute benefit (3%SS)
- The offset for fire insurance premium taxes and court fees which reduce the employer contribution rates in the Firefighters System and the Judges System, respectively.

The NC% is the theoretical amount which would be required to pay the members' benefits, based on the current plan provisions, if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions. This is the amount it should cost to provide the benefits for an average new member. The NC% for each fund is shown in Exhibit 6(a).

Some of the funds require active member contributions, and for these, only the excess of the NC% over the member contribution rate is included in the employer contribution rate, as shown in Exhibit 6(b) and in column 2 of Exhibit 2(a).

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current members of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan's assumptions, changes to the plan's actuarial assumptions, and amendments to the benefit provisions.

The UAAL% is the amount required to fund this difference. It is the amount, expressed as a level percentage of payroll, necessary to amortize the UAAL. The Board's current policy calls for amortizing the UAAL over 25 years from Jan. 1, 2009, so the development of the current amortization rate for 2011 is based on a funding period of 23 years. Column 3 of Exhibit 2(a) shows the UAAL% for each fund.

The 3% Substantial Substitute component of the employer contribution rate is only required for funds whose members are employees of the state (or who are paid by state funding). This piece is the amount necessary to fund the 3% Substantial Substitute. It is shown in Column 4 of Exhibit 2(a), and is described more fully later.

The last piece of the contribution rate is the offset. The Firefighters System receives a portion of the fire insurance premium taxes collected by the state, and the Judges System receives a portion of court fees collected by the judiciary. The calculation of the offsets is shown in Exhibit 2(b).

Section 49-11-301(5) of the Utah Code gives the Board the option of setting contribution rates at the higher of the previous year's rate or at the current year's actuarially calculated rate. The Board does not have to decrease the contribution rate from the prior year as long as it is funding towards or maintaining a funded ratio of 110%. As of this valuation, none of the funds currently exceeds the 110% funded level. The Board has historically followed the policy of holding the rates constant, but not less than the actuarially calculated rate, as permitted by §49-11-301(5).

Under the policy, the actuarial rates and last year's certified rates are compared, and the larger is set as the new certified rate. This is done separately for the contribution for the 3% Substantial Substitute fund, and then the rate for the 3% Substantial Substitute is added to the regular contribution rate, as shown on Exhibit 1(b). Then the offset for the fire insurance premium tax and the court fees are applied, as shown in Exhibit 2(c).

The fire insurance premium tax no longer remains large enough to reduce the employer contribution rate to zero for Firefighter Division B (Fund 32). As a result, the Division B contribution rate for employers of firefighters will be 2.08% and the contribution rate for members will increase from 16.18% to 16.71%. The Division A contribution rates for employers will increase to 2.66% and the member rate will remain unchanged at 15.05%.

The contribution rates set in this valuation will become effective for the twelve-month period beginning July 1, 2012 (FY 2013).

The Governors' and Legislators' Retirement Plan, unlike the other systems, is funded by direct legislative appropriations. Similar to last year, we are recommending an appropriation be made for this plan by the end of FY 2013. Please see the discussion about the determination of the appropriation later in this section and the calculation of the appropriation on Exhibit 16.

FINANCIAL DATA AND EXPERIENCE

As of December 31, 2010, the retirement systems that are part of URS have a total market value of \$19.8 billion. This excludes assets of the defined contribution plans that are also administered by URS. Assets of the various funds and systems are commingled for investment purposes. Financial information was gathered from the 2010 URS Comprehensive Annual Financial Report, with additional information provided by the URS staff.

The market value for the State's Public Safety fund shown in the CAFR includes \$5.2 million that is the Public Safety Retirees' Cost-Of-Living Increases Restricted Account. For valuation purposes, since this amount is to be used for all Public Safety units that adopt the optional 4% COLA, we removed this amount from the State's Public Safety funds' assets and treated it as an unallocated reserve. This will be allocated following the close of the election period during which units may elect the 4% COLA provision.

This report includes a number of exhibits related to plan assets. Exhibit 11(a) shows how the total market value is distributed among the various classes of investments. Currently, 60% of invested assets are held in equities and alternative investments, compared with 57% last year and 49% the year before.

Exhibit 11(b) shows a reconciliation of the market values between the beginning and end of 2010. The contributions shown in column 3 of Exhibit 11(b) include employer and member contributions, as well as court fees and fire insurance premium tax receipts. The 3% substantial substitute fund is shown as a separate item.

During 2010, the total investment return on market values was 13.2%, as shown on Exhibit 12(a). This return is net of all investment and administrative expenses.

In determining the contribution rates and funded status of the funds, an actuarial value of assets (AVA) is used, rather than the market value of assets. The method used to compute the AVA takes the difference between actual earnings and expected earnings (based on the assumed rate of investment return) each year, and recognizes the difference over five years, at 20% per year. This is intended to reduce the volatility of the contribution rates from year to year. This "smoothed" asset value is then subjected to the further constraint that the actuarial value of assets cannot be less than 75% or more than 125% of the market value of assets. For 2011, the 5-year smoothed asset value is \$21.1 billion for all systems combined, or 107% of the market value of assets.

The development of the AVA is shown on Exhibits 13 and 14. URS staff prepared the initial calculation of the AVAs, but these were reviewed and modified by GRS.

Some funds in the Contributory Public Employees System and the Contributory Public Safety System are paired with funds in the Public Employees and Public Safety noncontributory systems. For example, Fund 23, Other Division A, in the Public Safety Contributory System is paired with Fund 43, Other Division A, in the Public Safety Noncontributory System. In these cases, URS has established a policy of maintaining either the same difference between contribution rates for pairs of funds, or it maintains equal amortization percentages. To accomplish this, an amount of assets is transferred each year between fund pairs, as necessary. Exhibit 14, column 6 shows the change that must occur to the AVA in order to accomplish this. Exhibit 14, column 3 shows how much must be transferred between systems to accomplish this in terms of market value.

In addition to the normal transfer between paired funds, there is a special window open in the Public Safety systems until, December 31, 2012, allowing employers to elect a 4% maximum COLA, instead of the 2.5% COLA that is the base benefit provided in these systems. In order to determine the amount of assets to be transferred, we determined the liabilities for the transferring units under the 2.5% COLA and compared that liability with the liabilities of the entire fund. That ratio was then multiplied by the market value and actuarial value of assets to determine the amount of assets to be transferred. This provided both funds with the same funded ratio before reflecting the additional liabilities associated with the 4% maximum COLA. There were not any units that elected a 4% maximum COLA during 2010 and only four units that elected a 4% maximum in the year prior.

Because these 4% COLA funds in the Public Safety funds also contain employers that have members in both the Contributory and Noncontributory systems, we have continued the practice of pairing funds and transferring assets between the paired funds to produce the same amortization payment as a percentage of pay. For this purpose, Funds 77 & 75 are paired as are Funds 74 & 76. The transfers shown on Exhibit 14 are the net transfers of the assets from the 2.5% maximum COLA funds and the rebalancing transfer between the paired 4% maximum COLA funds.

In addition to the market return, Exhibit 12(a) also shows the return on the actuarial value for URS. For 2010, this return was 2.9%. Because this is less than the assumed 7.75% investment return for 2010, the plan experienced a loss on the actuarial value of assets. Exhibit 12(b) shows a summary of market and actuarial return rates in recent years.

Exhibits 4a and 4b show the reconciliation of the contribution rates and the unfunded actuarial accrued liabilities from the last valuation to this one, showing the effect of asset and liability gains and losses, changes in assumptions, changes in plan provisions, etc.

MEMBER DATA

Member data was supplied by URS staff on electronic files as of December 31, 2010. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall.

Exhibit 8 shows the number of members by category (active, inactive, retired, etc.) and by fund. Exhibit 9 shows active member statistics by fund, and Exhibit 10 shows retiree statistics by fund. Exhibits 17(a)-17(g) show summaries of certain historical data, including membership statistics, for each system.

For all funds combined, the number of active members decreased from 105,102 to 103,826, a 1.2% decrease. Last year, total active membership decreased by 1.0%, and over the last ten years, membership growth has averaged 1.0% per year.

Total active member payroll decreased by 1.4% last year for all funds combined, compared to a 1.1% increase in the prior year. Payroll growth for the last ten years has averaged 3.8% per year.

BENEFIT PROVISIONS

Appendix 2 includes a summary of the benefit provisions for each of the retirement systems in URS. The valuation would typically reflect any benefit changes enacted by the 2011 legislature. Although not effective on the valuation date, such legislation would generally be effective on or before the contribution rates actually go into effect at July 1, 2012.

However, there were no changes made since the previous valuation that had a measurable effect on the current valuations.

This valuation reflects all benefits promised to URS members, either by the statutes, or in the case of the special supplement for the Governors' and Legislators' Retirement Plan and the ROPP payments (discussed later), by the Board. There are no ancillary benefits that might be deemed a URS liability if continued beyond the availability of funding by the current funding source.

ACTUARIAL METHODS AND ASSUMPTIONS

Appendix 1 includes a summary of the actuarial assumptions and methods used in this valuation.

The Board, in consultation with the actuary, sets the actuarial assumptions and methods used in the valuation. Current Board policy is to perform an experience study every three years. In connection with the appropriate valuation, the actuary conducts a thorough review of plan experience for the preceding five years, and then makes recommendations to the Board. An experience study was conducted in conjunction with the 2011 valuation which resulted in a number of changes to the assumptions.

The following is a description of the main findings and recommendations of our study:

- Decrease the investment return assumption from 7.75% to 7.50%.
- Decrease the inflation assumption from 3.00% to 2.75%.
- Decrease the COLA assumption from 3.00% to 2.75% for funds with a 4.00% maximum COLA increase. No change to the COLA assumption for funds with a 2.50% maximum COLA increase.
- Decrease the payroll growth assumption from 4.00% to 3.50%.
- Decrease the salary increase rates. Reduce the wage inflation component from 4.00% to 3.75% (i.e. 2.75% price inflation plus 1.00% for productivity), and modify the service-related increases.
- Modify the post-retirement mortality tables and include an explicit assumption for future improvements in life expectancy.
- Modify the retirement rates for all groups. The changes result in an overall decrease in the rates at which active members are expected to retire.
- Modify the termination rates for all groups. The updates result in a slight increase in the rates active members are expected to terminate.
- Minor adjustments to the rates of disability incidence for several groups.
- No change to percentage of employees electing refunds.
- No change to any liability or asset valuation method.

For a more thorough discussion of the analysis of the experience and the assumption recommendations, please see our Actuarial Experience Study dated August 11, 2011. Please see Appendix 1 of this report for a complete description of these assumptions.

GASB 25 AND FUNDING PROGRESS

Governmental Accounting Standards Board Statement No. 25 (GASB 25) contains certain accounting requirements for URS. In particular, it requires the inclusion of two special schedules in the URS annual report:

1. Schedule of Funding Progress
2. Schedule of Employer Contributions

Information needed to prepare the Schedule of Funding Progress is included in Exhibit 3(a). This shows that overall URS has a funded ratio (ratio of actuarial assets to accrued liabilities) of 82.7%. This is a slight decrease from the prior year when the funded ratio was 85.7%. This decrease is attributable to the recognition of an additional 20% of the extraordinary investment loss that occurred in 2008 as well as the adoption of new assumptions for 2011. Absent future offsetting actuarial gains, it is expected that the funded status of the plans will continue to decrease as deferred investment losses for 2008 are gradually recognized over the next two years. All of the Noncontributory Public Safety funds as well as Judges and the 3% Substantial Substitute fund have funded ratios below 80%. See Exhibit 3(a), column 5.

GASB 25 also requires that plans calculate an Annual Required Contribution (ARC), and, if actual contributions received are less than the ARC, this must be disclosed. For this disclosure, URS treats the Board-established employer contribution rate as the ARC, as long as this produces a funding period of less than 30 years.

Under GASB 25, the ARC must be calculated in accordance with certain parameters. In particular, it must include a payment to amortize the UAAL. This amortization payment must be computed using a funding period no greater than 30 years. Further, the amortization payment included in the ARC may be computed as a level amount, or it may be computed as an amount which increases with payroll. However, if payments are computed on a level-percent-of-payroll approach, the payroll growth assumption may not anticipate future membership growth.

The calculated employer contribution rate is computed as a level percentage of payroll using a 23-year amortization period. (The Board set a 25-year amortization period at January 1, 2009.) Since the recommended employer rate is the greater of the prior year's certified rate or this year's calculated rate, the recommended rate meets the definition of an acceptable ARC.

Under Governmental Accounting Standards Board Statement No. 25 (GASB 25), when a plan is closed to new members, the amortization charge should be determined based on the closed group's pay or as fixed dollar payments, rather than as payments which are level as a percentage of increasing payroll. However, because the plan will continue to receive amortization payments from the employers of Tier 2 members, i.e., based on the payroll for an open group of current and future employees, not the closed group of current members, we believe it is appropriate to continue to use a level-payroll amortization of the UAAL.

GOVERNORS AND LEGISLATIVE PENSION PLAN

The Governors and Legislative Pension Plan (Leg/Gov Plan) is funded by direct appropriations rather than through pay-period contributions. Since the plan is less than fully funded for 2011, we are recommending an appropriation for fiscal year 2013. Please see Exhibit 16 for the determination of the appropriation amount. We also anticipate that appropriations will be recommended for each fiscal year for the next several years.

The Leg/Gov Plan is unique among the retirement systems in URS in that neither the benefits of the plan nor the contributions to the plan are tied to member pay. As a result, the calculation of the appropriation is performed in a slightly different manner than the determination of the contribution rates for the other funds.

The Entry Age Normal funding method is used to determine the cost allocation of the contribution requirements because it produces a cost pattern that remains level over time (if the assumptions are met). With the other URS systems, the cost is determined so as to remain level as a percentage of pay over time. Since neither the contributions nor benefits of the Leg/Gov Plan are pay related, it would be inappropriate to determine the cost of the plan as a level percentage of pay. Therefore, we have determined the cost as a level dollar amount. This method will produce appropriations that should remain level over time (if the actuarial assumptions are exactly met).

The Entry Age Normal level dollar approach will be used to determine the normal cost and actuarial accrued liabilities of the Leg/Gov Plan. In addition, the determination of the amortization payment for amortizing the unfunded liabilities of the system is determined using a level dollar approach as well. This valuation determines the appropriation for fiscal year 2013. Because of the lag between the determination of the dollar contribution amount and the payment of the contribution, we included an adjustment for interest in the determination of the appropriation.

FIREFIGHTERS AND JUDGES OFFSETS

A portion of the fire insurance premium taxes collected by the State of Utah is contributed to the Firefighters System, and a portion of the court fees collected by the state judiciary is contributed to the Judges System. To account for this prospectively, the recommended contribution rates for the funds in these systems are reduced.

In order to dampen year-to-year fluctuations in the offsets, we use a rolling three-year average in computing the offsets. First, we calculate a percentage of pay offset for each year, equal to receipts divided by payroll. (For the Firefighters, all calculations are done on a combined basis for Divisions A and B.) Then the offset percentages for the just completed year and the two prior years are averaged. This average is then used as the current year's offset. The calculation of the offsets is shown on Exhibit 2(b).

The offset for the Firefighter System decreased from 13.34% to 11.84%, and the offset for the Judges System decreased from 14.26% to 14.02%. The decrease in the Firefighter System offset is due to a decrease in the Fire Insurance Premium Tax receipts during 2010. Similarly, a decrease in the amount of court fees received during 2010 decreased the Judges' offset.

The gross employer contribution rate for Division A Firefighters (Fund 31) was larger than the offset, so employers will be required to make a contribution. Because there was no unused offset, the member contribution rate remains at 15.05%. Similarly, and for the first time in years, the gross employer contribution rate for Division B Firefighters (Fund 32) was larger than the offset, so those employers will be required to make a contribution as well. Because there was no unused offset, the member contribution rate will increase from 16.18% to 16.71%. See Table 2(c) for the effect of the offsets on the employer and member rates.

The 2004 Legislature enacted legislation which created the Public Safety Retirees' Cost-of-Living Increases Restricted Account (Restricted Account). As a result of this legislation a portion of fire insurance premium tax receipts that would normally have been contributed to the Firefighter System may instead be redirected to this new account. There was \$1.147 million of these funds redirected to the Restricted Account during 2010.

As a result of the creation of the Public Safety 4% maximum COLA window, funds from Public Safety Retirees' Cost-of-Living Increases Restricted Account will be transferred to the Public Safety funds which elect the 4% maximum COLA. The initial transfer will not occur until after the window closes in 2012.

3% SUBSTANTIAL SUBSTITUTE

Due to the removal of the state income tax exemption for benefits paid by URS, legislation was passed to provide a 3% retirement benefit increase for URS retirees who were members of URS prior to January 1, 1989. All future retirees who were members of URS prior to January 1, 1989 will be eligible for this benefit as well, as will beneficiaries of eligible members.

The 3% increase applies to all benefits paid to eligible members, including benefits earned after January 1, 1989 and including future cost-of-living increases. However, the 3% increase does not apply to refunds of employee contributions or to the Restoration of Purchasing Power (ROPP) benefits; see the next section.

Due to legislation passed in 1994, this benefit is now pre-funded. The obligation for payment of this benefit belongs to the state, however, not to the employer. Therefore the contribution needed to fund the benefit is determined as an addition to the employer contribution rates required for the State and School Funds in the Public Employees Contributory and Noncontributory Systems, the State of Utah funds in the Public Safety Contributory and Noncontributory Systems, and the Judges System.

The actuarially determined contribution required to pay for this benefit is 0.65%, 0.20% less than the current contribution rate of 0.85%. Details of the calculation are shown in Exhibit 15(a), while Exhibit 15(b) shows a distribution of the liabilities associated with this benefit.

The Board has the authority, under Section 11-49-301(5), to hold the contribution rate for the Substantial Substitute at 0.85% (last year's rate).

RESTORATION OF PURCHASING POWER (ROPP)

URS provides a special benefit to a closed group of retired members. This benefit was granted by the Board of Trustees, not by the legislature, and hence it does not appear in the statutes governing URS. The Board provided this benefit, called the Restoration of Purchasing Power benefit or ROPP benefit, to retired members during the 1980s, in order to counteract some of the impact of inflation.

The ROPP benefit is a fixed amount that does not increase and is not adjusted for changes in the cost of living. It is provided only to the closed group of members who were retired at the time of the Board's action. Therefore, since the group is closed and since the benefit amount cannot increase, this liability decreases from year to year as the retiree group receiving the ROPP grows older and decreases in size due to mortality.

Exhibit 5(e) shows the liabilities for the ROPP benefits in column 5.

PUBLIC SAFETY RETIREES' COST-OF-LIVING INCREASES RESTRICTED ACCOUNT

The 2004 Legislature enacted legislation which created a new fund—the Public Safety Retirees' Cost-of-Living Increases Restricted Account—under the General Fund of the State of Utah, effective July 1, 2004.

The legislation appropriated \$1.1 million from the Fire Academy Support Account. The legislation also required that a portion of the fire insurance premium tax receipts that currently go to the Firefighters System be redirected to this new fund. However, only money above a threshold determined actuarially goes to the Public Safety Retirees' Cost-of-Living Increases Restricted Account. Information about how much of the fire insurance premium tax receipts should go to the Firefighters Retirement System and how much should go to the Public Safety Retirees' Cost-of-Living Increases Restricted Account is provided to URS by the actuary in a separate communication.

The 2008 legislature opened a window to allow employers of the Public Safety Systems to elect a 4.0% maximum COLA. Employers that elect the 4.0% maximum COLA will be entitled to a share of the funds held in the Public Safety Retirees' Cost-of-Living Increases Restricted Account. As of December 31, 2010, the market value of this fund is \$5.2 million. The initial allocation of these funds will not occur until after the window closes at the end of 2012. In future years, any funds that would have been transferred into this account will be allocated to the employers that elected the 4.0% COLA.

SECTION III
SUPPORTING EXHIBITS

**Comparison of Prior Year Certified and
Current Year Recommended Contribution Rates**

| Fund/Division (1) | Prior Year Valuation Certified Rates for FY 2012 | | | Current Year Valuation Recommended Rates for FY 2013 | | | Increase/ (Decrease) in Total (8) |
|--------------------------------------|---|----------------|----------------|---|----------------|----------------|--|
| | Member | Employer | Total | Member | Employer | Total | |
| | (2) | (3) | (4) | (5) | (6) | (7) | |
| I. Public Employees Contributory | | | | | | | |
| A. Local Government | 6.00% | 9.61% | 15.61% | 6.00% | 11.88% | 17.88% | 2.27% |
| B. State and School | 6.00% | 12.22% | 18.22% | 6.00% | 14.12% | 20.12% | 1.90% |
| II. Public Employees Noncontributory | | | | | | | |
| A. Local Government | 0.00% | 13.62% | 13.62% | 0.00% | 15.89% | 15.89% | 2.27% |
| B. State and School | 0.00% | 16.71% | 16.71% | 0.00% | 18.61% | 18.61% | 1.90% |
| III. Public Safety Contributory | | | | | | | |
| A. State | 12.29% | 22.88% | 35.17% | 12.29% | 25.52% | 37.81% | 2.64% |
| B. Other Division A (2.5% COLA) | 12.29% | 15.78% | 28.07% | 12.29% | 19.69% | 31.98% | 3.91% |
| C. Other Division A (4% COLA) | 12.29% | 18.34% | 30.63% | 12.29% | 19.83% | 32.12% | 1.49% |
| D. Logan | 11.13% | 21.36% | 32.49% | 11.13% | 27.95% | 39.08% | 6.59% |
| E. Other Division B (2.5% COLA) | 10.50% | 19.48% | 29.98% | 10.50% | 22.86% | 33.36% | 3.38% |
| F. Other Division B (4% COLA) | 10.50% | 23.22% | 33.72% | 10.50% | 23.31% | 33.81% | 0.09% |
| IV. Public Safety Noncontributory | | | | | | | |
| A. State | 0.00% | 34.12% | 34.12% | 0.00% | 37.29% | 37.29% | 3.17% |
| B. Other Division A (2.5% COLA) | 0.00% | 27.07% | 27.07% | 0.00% | 31.06% | 31.06% | 3.99% |
| C. Other Division A (4% COLA) | 0.00% | 28.82% | 28.82% | 0.00% | 31.14% | 31.14% | 2.32% |
| D. Salt Lake City | 0.00% | 36.71% | 36.71% | 0.00% | 41.95% | 41.95% | 5.24% |
| E. Ogden | 0.00% | 36.13% | 36.13% | 0.00% | 42.21% | 42.21% | 6.08% |
| F. Provo | 0.00% | 33.05% | 33.05% | 0.00% | 38.54% | 38.54% | 5.49% |
| G. Logan | 0.00% | 31.91% | 31.91% | 0.00% | 38.18% | 38.18% | 6.27% |
| H. Bountiful | 0.00% | 29.19% | 29.19% | 0.00% | 37.16% | 37.16% | 7.97% |
| I. Other Division B (2.5% COLA) | 0.00% | 28.64% | 28.64% | 0.00% | 32.77% | 32.77% | 4.13% |
| J. Other Division B (4% COLA) | 0.00% | 32.70% | 32.70% | 0.00% | 32.99% | 32.99% | 0.29% |
| V. Firefighters | | | | | | | |
| A. Division A | | | | | | | |
| 1. Gross Rate | 15.05% | 13.84% | 28.89% | 15.05% | 14.50% | 29.55% | 0.66% |
| 2. Less Estimated Offset | <u>0.00%</u> | <u>-13.34%</u> | <u>-13.34%</u> | <u>0.00%</u> | <u>-11.84%</u> | <u>-11.84%</u> | <u>1.50%</u> |
| 3. Net Rate | 15.05% | 0.50% | 15.55% | 15.05% | 2.66% | 17.71% | 2.16% |
| B. Division B | | | | | | | |
| 1. Gross Rate | 16.71% | 11.76% | 28.47% | 16.71% | 13.92% | 30.63% | 2.16% |
| 2. Less Estimated Offset | <u>-0.53%</u> | <u>-11.76%</u> | <u>-12.29%</u> | <u>0.00%</u> | <u>-11.84%</u> | <u>-11.84%</u> | <u>0.45%</u> |
| 3. Net Rate | 16.18% | 0.00% | 16.18% | 16.71% | 2.08% | 18.79% | 2.61% |
| VI. Judges | | | | | | | |
| A. Gross Rate | 0.00% | 40.08% | 40.08% | 0.00% | 46.89% | 46.89% | 6.81% |
| B. Less Estimated Offset | <u>-0.00%</u> | <u>-14.26%</u> | <u>-14.26%</u> | <u>-0.00%</u> | <u>-14.02%</u> | <u>-14.02%</u> | <u>0.24%</u> |
| C. Net Rate | 0.00% | 25.82% | 25.82% | 0.00% | 32.87% | 32.87% | 7.05% |

Note: Rates reflect 3% Substantial Substitute where applicable
Group Insurance contribution rate has been excluded
Recommended rates reflect application of U.C. Sec. 49-11-301(5)

Development of Recommended Contribution Rates

| Fund/Division | Actuarially Calculated Rates for Current Year* | Certified Rates from Prior Year* | Larger of Columns (2,3)* | Recommended Rates Including 3% Substantial Substitute |
|--------------------------------------|---|-------------------------------------|-----------------------------|--|
| (1) | (2) | (3) | (4) | (5) |
| I. Public Employees Contributory | | | | |
| A. Local Government | 11.88% | 9.61% | 11.88% | 11.88% |
| B. State and School | 13.27% | 11.37% | 13.27% | 14.12% |
| II. Public Employees Noncontributory | | | | |
| A. Local Government | 15.89% | 13.62% | 15.89% | 15.89% |
| B. State and School | 17.76% | 15.86% | 17.76% | 18.61% |
| III. Public Safety Contributory | | | | |
| A. State | 24.67% | 22.03% | 24.67% | 25.52% |
| B. Other Division A (2.5% COLA) | 19.69% | 15.78% | 19.69% | 19.69% |
| C. Other Division A (4% COLA) | 19.83% | 18.34% | 19.83% | 19.83% |
| D. Logan | 27.95% | 21.36% | 27.95% | 27.95% |
| E. Other Division B (2.5% COLA) | 22.86% | 19.48% | 22.86% | 22.86% |
| F. Other Division B (4% COLA) | 23.31% | 23.22% | 23.31% | 23.31% |
| IV. Public Safety Noncontributory | | | | |
| A. State | 36.44% | 33.27% | 36.44% | 37.29% |
| B. Other Division A (2.5% COLA) | 31.06% | 27.07% | 31.06% | 31.06% |
| C. Other Division A (4% COLA) | 31.14% | 28.82% | 31.14% | 31.14% |
| D. Salt Lake City | 41.95% | 36.71% | 41.95% | 41.95% |
| E. Ogden | 42.21% | 36.13% | 42.21% | 42.21% |
| F. Provo | 38.54% | 33.05% | 38.54% | 38.54% |
| G. Logan | 38.18% | 31.91% | 38.18% | 38.18% |
| H. Bountiful | 37.16% | 29.19% | 37.16% | 37.16% |
| I. Other Division B (2.5% COLA) | 32.77% | 28.64% | 32.77% | 32.77% |
| J. Other Division B (4% COLA) | 32.99% | 32.70% | 32.99% | 32.99% |
| V. Firefighters | | | | |
| A. Division A | 14.50% | 13.84% | 14.50% | 14.50% |
| B. Division B | 13.92% | 11.76% | 13.92% | 13.92% |
| VI. Judges | 46.04% | 39.23% | 46.04% | 46.89% |
| VII. 3% Substantial Substitute | 0.65% | 0.85% | 0.85% | N/A |

* Rates exclude 3% Substantial Substitute

Note: Rates shown for Firefighters and Judges exclude offsets for fire insurance premium tax and court fees
 Rates exclude the Group Insurance contribution rate
 Rates in Column (4) reflect application of U.C. Sec. 49-11-301(5).

Estimated Fiscal Year 2013 Contribution Requirements

| Fund/Division (1) | FY 2013 Projected Pay (2) | FY 2013 Employer Contribution Rate (3) | Employer Contribution (2) x (3) (4) | Increase in Employer Contribution Rate [See Exhibit 1(a)] (5) | "New Money" Requirement (2) x (5) (6) |
|--------------------------------------|------------------------------------|--|--|--|--|
| I. Public Employees Contributory | | | | | |
| A. Local Government | 64,777 | 11.88% | 7,695 | 2.27% | 1,470 |
| B. State and School | 56,366 | 14.12% | 7,959 | 1.90% | 1,071 |
| C. Subtotal | 121,142 | | 15,654 | | 2,541 |
| II. Public Employees Noncontributory | | | | | |
| A. Local Government | 973,846 | 15.89% | 154,744 | 2.27% | 22,106 |
| B. State and School | 3,254,922 | 18.61% | 605,741 | 1.90% | 61,844 |
| C. Subtotal | 4,228,768 | | 760,485 | | 83,950 |
| III. Public Safety Contributory | | | | | |
| A. State | 302 | 25.52% | 77 | 2.64% | 8 |
| B. Other Division A (2.5% COLA) | 5,471 | 19.69% | 1,077 | 3.91% | 214 |
| C. Other Division A (4% COLA) | 305 | 19.83% | 61 | 1.49% | 5 |
| D. Logan | 565 | 27.95% | 158 | 6.59% | 37 |
| E. Other Division B (2.5% COLA) | 524 | 22.86% | 120 | 3.38% | 18 |
| F. Other Division B (4% COLA) | 447 | 23.31% | 104 | 0.09% | - |
| G. Subtotal | 7,613 | | 1,597 | | 282 |
| IV. Public Safety Noncontributory | | | | | |
| A. State | 123,402 | 37.29% | 46,016 | 3.17% | 3,912 |
| B. Other Division A (2.5% COLA) | 143,373 | 31.06% | 44,532 | 3.99% | 5,721 |
| C. Other Division A (4% COLA) | 35,955 | 31.14% | 11,196 | 2.32% | 834 |
| D. Salt Lake City | 30,419 | 41.95% | 12,761 | 5.24% | 1,594 |
| E. Ogden | 6,119 | 42.21% | 2,583 | 6.08% | 372 |
| F. Provo | 5,338 | 38.54% | 2,057 | 5.49% | 293 |
| G. Logan | 2,412 | 38.18% | 921 | 6.27% | 151 |
| H. Bountiful | 1,980 | 37.16% | 736 | 7.97% | 158 |
| I. Other Division B (2.5% COLA) | 36,888 | 32.77% | 12,088 | 4.13% | 1,523 |
| J. Other Division B (4% COLA) | 4,837 | 32.99% | 1,596 | 0.29% | 14 |
| K. Subtotal | 390,723 | | 134,486 | | 14,572 |
| V. Firefighters | | | | | |
| A. Division A | 30,401 | 2.66% | 809 | 2.16% | 657 |
| B. Division B | 86,079 | 2.08% | 1,790 | 2.08% | 1,790 |
| C. Subtotal | 116,481 | | 2,599 | | 2,447 |
| VI. Judges | 16,192 | 32.87% | 5,322 | 7.05% | 1,142 |
| VII. Governors and Legislative | 547 | N/A | 270 | N/A | 56 |
| VIII. Grand Total | 4,881,466 | | 920,413 | | 104,990 |

Note: Rates reflect 3% Substantial Substitute where applicable
Group Insurance contribution rate has been excluded
Rates for Firefighters and Judges are net of offsets for fire insurance premium tax receipts and court fees
Recommended rates reflect application of U.C. Sec. 49-11-301(5)
New money requirement for Governors and Legislative Plan is the increase in the recommended appropriation
Amounts shown are in \$ thousands
Columns may not add to total due to rounding

Components of Actuarially Calculated Contribution Rates

| Fund/Division | Net Normal Cost | Amortization of UAAL | 3% Substantial Substitute | Gross Employer Rate (2 + 3 + 4) | Offset | Net Employer Rate (5 - 6) |
|--------------------------------------|-----------------------|-------------------------|---------------------------------|--|--------|------------------------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 5.93% | 5.95% | 0.00% | 11.88% | 0.00% | 11.88% |
| B. State and School | 5.38% | 7.89% | 0.65% | 13.92% | 0.00% | 13.92% |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 11.71% | 4.18% | 0.00% | 15.89% | 0.00% | 15.89% |
| B. State and School | 12.11% | 5.65% | 0.65% | 18.41% | 0.00% | 18.41% |
| III. Public Safety Contributory | | | | | | |
| A. State | 11.16% | 13.51% | 0.65% | 25.32% | 0.00% | 25.32% |
| B. Other Division A (2.5% COLA) | 10.93% | 8.76% | 0.00% | 19.69% | 0.00% | 19.69% |
| C. Other Division A (4% COLA) | 11.50% | 8.33% | 0.00% | 19.83% | 0.00% | 19.83% |
| D. Logan | 12.46% | 15.49% | 0.00% | 27.95% | 0.00% | 27.95% |
| E. Other Division B (2.5% COLA) | 12.68% | 10.18% | 0.00% | 22.86% | 0.00% | 22.86% |
| F. Other Division B (4% COLA) | 13.34% | 9.97% | 0.00% | 23.31% | 0.00% | 23.31% |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 22.93% | 13.51% | 0.65% | 37.09% | 0.00% | 37.09% |
| B. Other Division A (2.5% COLA) | 22.30% | 8.76% | 0.00% | 31.06% | 0.00% | 31.06% |
| C. Other Division A (4% COLA) | 22.81% | 8.33% | 0.00% | 31.14% | 0.00% | 31.14% |
| D. Salt Lake City | 22.58% | 19.37% | 0.00% | 41.95% | 0.00% | 41.95% |
| E. Ogden | 22.53% | 19.68% | 0.00% | 42.21% | 0.00% | 42.21% |
| F. Provo | 22.56% | 15.98% | 0.00% | 38.54% | 0.00% | 38.54% |
| G. Logan | 22.69% | 15.49% | 0.00% | 38.18% | 0.00% | 38.18% |
| H. Bountiful | 22.37% | 14.79% | 0.00% | 37.16% | 0.00% | 37.16% |
| I. Other Division B (2.5% COLA) | 22.59% | 10.18% | 0.00% | 32.77% | 0.00% | 32.77% |
| J. Other Division B (4% COLA) | 23.02% | 9.97% | 0.00% | 32.99% | 0.00% | 32.99% |
| V. Firefighters | | | | | | |
| A. Division A | 11.66% | 2.84% | 0.00% | 14.50% | 11.84% | 2.66% |
| B. Division B | 9.89% | 4.03% | 0.00% | 13.92% | 11.84% | 2.08% |
| VI. Judges | 30.62% | 15.42% | 0.65% | 46.69% | 14.02% | 32.67% |

Determination of Contribution Rate Offsets for Firefighters and Judges

A. Firefighter's Offset

| | <u>2008</u> | <u>2009</u> | <u>2010</u> |
|--|---------------|---------------|---------------|
| 1. Calendar Year | | | |
| 2. Fire insurance premium receipts | \$ 10,219,000 | \$ 16,159,000 | \$ 10,677,000 |
| 3. Combined payroll for both funds* | 101,507,722 | 105,341,111 | 105,470,456 |
| 4. Premiums as percentage of payroll | 10.07% | 15.34% | 10.12% |
| 5. Offset: 3-year arithmetic average of percent of payroll | | | 11.84% |

B. Judge's Offset

| | <u>2008</u> | <u>2009</u> | <u>2010</u> |
|--|--------------|--------------|--------------|
| 1. Calendar Year | | | |
| 2. Court fees | \$ 2,072,000 | \$ 2,101,000 | \$ 1,944,000 |
| 3. Payroll* | 14,346,512 | 14,458,333 | 14,848,610 |
| 4. Premiums as percentage of payroll | 14.44% | 14.53% | 13.09% |
| 5. Offset: 3-year arithmetic average of percent of payroll | | | 14.02% |

* Reported payroll for members active at end of year

**Effect of Offsets on Recommended Employer Rates
 and Member Rates**

| Fund/Division (1) | Gross Recommended Employer Rates (2) | Offset Percentage (3) | Net Employer Rate Not Less Than Zero (4) | Unused Offset* (3) - (2) (5) |
|----------------------|---|-----------------------------|---|---------------------------------------|
| I. Firefighters | | | | |
| Division A | 14.50% | 11.84% | 2.66% | 0.00% |
| Division B | 13.92% | 11.84% | 2.08% | 0.00% |
| II. Judges | | | | |
| | 46.89% | 14.02% | 32.87% | 0.00% |

| Fund/Division (1) | Gross Member Rate (2) | Available Offset* (3) | Net (2) - (3) (4) | Net Member Rate from Prior Year (5) | Greater of (4, 5) (6) |
|----------------------|--------------------------------|-----------------------------|-------------------------|--|-----------------------------|
| I. Firefighters | | | | | |
| Division A | 15.05% | 0.00% | 15.05% | 15.05% | 15.05% |
| Division B | 16.71% | 0.00% | 16.71% | 16.18% | 16.71% |

* Available to offset member contribution rates

Schedule of Funding Progress

| Fund/Division (1) | Actuarial Value of Assets (2) | Actuarial Accrued Liability (AAL) (3) | Unfunded AAL (UAAL) (3 - 2) (4) | Funded Ratio (2 / 3) (5) | Covered Payroll (6) | UAAL as a Percentage of Covered Payroll (4 / 6) (7) |
|--------------------------------------|--|---|---|-----------------------------------|---------------------------|--|
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 379,160 | 434,288 | 55,128 | 87.3% | 59,027 | 93.4% |
| B. State and School | 753,501 | 817,124 | 63,623 | 92.2% | 51,664 | 123.1% |
| C. Subtotal | <u>1,132,661</u> | <u>1,251,412</u> | <u>118,751</u> | <u>90.5%</u> | <u>110,691</u> | <u>107.3%</u> |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 2,993,654 | 3,575,367 | 581,713 | 83.7% | 885,086 | 65.7% |
| B. State and School | 13,669,436 | 16,300,845 | 2,631,409 | 83.9% | 2,957,769 | 89.0% |
| C. Subtotal | <u>16,663,090</u> | <u>19,876,212</u> | <u>3,213,122</u> | <u>83.8%</u> | <u>3,842,855</u> | <u>83.6%</u> |
| III. Public Safety Contributory | | | | | | |
| A. State | 56,471 | 57,054 | 583 | 99.0% | 276 | 211.2% |
| B. Other Division A (2.5% COLA) | 133,030 | 139,888 | 6,858 | 95.1% | 4,976 | 137.8% |
| C. Other Division A (4% COLA) | 28,268 | 28,632 | 364 | 98.7% | 279 | 130.5% |
| D. Logan | 12,368 | 13,619 | 1,251 | 90.8% | 515 | 242.9% |
| E. Other Division B (2.5% COLA) | 31,668 | 32,430 | 762 | 97.6% | 479 | 159.1% |
| F. Other Division B (4% COLA) | 7,417 | 8,055 | 638 | 92.1% | 408 | 156.4% |
| G. Subtotal | <u>269,222</u> | <u>279,678</u> | <u>10,456</u> | <u>96.3%</u> | <u>6,933</u> | <u>150.8%</u> |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 713,910 | 952,310 | 238,400 | 75.0% | 112,282 | 212.3% |
| B. Other Division A (2.5% COLA) | 588,438 | 768,096 | 179,658 | 76.6% | 130,295 | 137.9% |
| C. Other Division A (4% COLA) | 166,729 | 209,560 | 42,831 | 79.6% | 32,693 | 131.0% |
| D. Salt Lake City | 191,117 | 275,419 | 84,302 | 69.4% | 27,682 | 304.5% |
| E. Ogden | 46,853 | 64,076 | 17,223 | 73.1% | 5,564 | 309.5% |
| F. Provo | 33,504 | 45,709 | 12,205 | 73.3% | 4,855 | 251.4% |
| G. Logan | 7,267 | 12,611 | 5,345 | 57.6% | 2,195 | 243.5% |
| H. Bountiful | 16,140 | 20,328 | 4,188 | 79.4% | 1,804 | 232.2% |
| I. Other Division B (2.5% COLA) | 130,379 | 184,069 | 53,690 | 70.8% | 33,547 | 160.0% |
| J. Other Division B (4% COLA) | 25,345 | 32,245 | 6,901 | 78.6% | 4,401 | 156.8% |
| K. Subtotal | <u>1,919,682</u> | <u>2,564,423</u> | <u>644,743</u> | <u>74.9%</u> | <u>355,318</u> | <u>181.5%</u> |
| V. Firefighters | | | | | | |
| A. Division A | 113,256 | 125,601 | 12,345 | 90.2% | 27,469 | 44.9% |
| B. Division B | 696,960 | 746,532 | 49,572 | 93.4% | 78,002 | 63.6% |
| C. Subtotal | <u>810,216</u> | <u>872,133</u> | <u>61,917</u> | <u>92.9%</u> | <u>105,471</u> | <u>58.7%</u> |
| VI. Judges | 131,869 | 167,581 | 35,712 | 78.7% | 14,849 | 240.5% |
| VII. Governors and Legislative | 10,197 | 11,513 | 1,316 | 88.6% | 547 | 240.6% |
| VIII. 3% Substantial Substitute | 189,601 | 512,547 | 322,946 | 37.0% | N/A | N/A |
| IX. Grand Total | 21,126,538 | 25,535,499 | 4,408,963 | 82.7% | 4,436,664 | 99.4% |

Note: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

Comparison of Funded Ratios

| Fund/Division (1) | Funded Ratios as of January 1 | | |
|--------------------------------------|-------------------------------|-------------|-------------|
| | 2011 (2) | 2010 (3) | 2009 (4) |
| I. Public Employees Contributory | | | |
| A. Local Government | 87.3% | 88.5% | 88.6% |
| B. State and School | 92.2% | 91.3% | 90.8% |
| C. Subtotal | 90.5% | 90.4% | 90.1% |
| II. Public Employees Noncontributory | | | |
| A. Local Government | 83.7% | 88.3% | 89.4% |
| B. State and School | 83.9% | 86.8% | 87.7% |
| C. Subtotal | 83.8% | 87.1% | 88.0% |
| III. Public Safety Contributory | | | |
| A. State | 99.0% | 98.8% | 98.7% |
| B. Other Division A (2.5% COLA) | 95.1% | 95.8% | 96.0% |
| C. Other Division A (4% COLA) | 98.7% | 99.0% | 98.8% |
| D. Logan | 90.8% | 93.1% | 93.2% |
| E. Other Division B (2.5% COLA) | 97.6% | 97.9% | 97.8% |
| F. Other Division B (4% COLA) | 92.1% | 91.4% | 89.2% |
| G. Subtotal | 96.3% | 96.8% | 96.8% |
| IV. Public Safety Noncontributory | | | |
| A. State | 75.0% | 77.2% | 78.1% |
| B. Other Division A (2.5% COLA) | 76.6% | 82.6% | 84.8% |
| C. Other Division A (4% COLA) | 79.6% | 81.2% | 80.0% |
| D. Salt Lake City | 69.4% | 73.2% | 73.7% |
| E. Ogden | 73.1% | 78.3% | 78.7% |
| F. Provo | 73.3% | 78.3% | 77.1% |
| G. Logan | 57.6% | 65.4% | 65.5% |
| H. Bountiful | 79.4% | 86.9% | 89.4% |
| I. Other Division B (2.5% COLA) | 70.8% | 75.2% | 74.5% |
| J. Other Division B (4% COLA) | 78.6% | 75.4% | 72.8% |
| K. Subtotal | 74.9% | 78.6% | 79.5% |
| V. Firefighters | | | |
| A. Division A | 90.2% | 91.7% | 93.5% |
| B. Division B | 93.4% | 97.0% | 99.4% |
| C. Subtotal | 92.9% | 96.3% | 98.6% |
| VI. Judges | 78.7% | 83.1% | 86.4% |
| VII. Governors and Legislative | 88.6% | 95.3% | 98.7% |
| VIII. 3% Substantial Substitute | 37.0% | 36.7% | 34.8% |
| IX. Grand Total | 82.7% | 85.7% | 86.6% |

Analysis of Changes in Calculated Contribution Rates

| Fund/Division | Calculated Rate From Jan. 1, 2010 Valuation | Changes in Calculated Rate Due To | | | | | | Act. vs Exp. Contributions | Assumption & Methods Change | Calculated Rate Jan. 1, 2011 Valuation |
|--------------------------------------|---|-----------------------------------|-------------------|-------------|---------------------------|-------------|--------|----------------------------|-----------------------------|--|
| | | Payroll Growth | Investment Return | Liabilities | Transfer to 4% COLA Funds | Legislation | | | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | |
| I. Public Employees Contributory | | | | | | | | | | |
| A. Local Government | 9.61% | 0.13% | 1.02% | -0.50% | 0.00% | 0.00% | 0.07% | 1.55% | 11.88% | |
| B. State and School | 11.98% | 0.19% | 1.43% | -0.75% | 0.00% | 0.00% | 0.10% | 0.93% | 13.92% | |
| II. Public Employees Noncontributory | | | | | | | | | | |
| A. Local Government | 13.62% | 0.13% | 1.02% | -0.50% | 0.00% | 0.00% | 0.07% | 1.55% | 15.89% | |
| B. State and School | 16.47% | 0.19% | 1.43% | -0.75% | 0.00% | 0.00% | 0.10% | 0.93% | 18.41% | |
| III. Public Safety Contributory | | | | | | | | | | |
| A. State | 22.64% | 0.82% | 2.00% | -1.98% | 0.00% | 0.00% | 0.32% | 1.48% | 25.32% | |
| B. Other Division A (2.5% COLA) | 15.78% | 0.26% | 1.51% | -0.81% | 0.00% | 0.00% | 0.23% | 2.72% | 19.69% | |
| C. Other Division A (4% COLA) | 17.91% | 0.27% | 1.70% | -1.53% | 0.00% | 0.00% | 0.19% | 1.29% | 19.83% | |
| D. Logan | 21.36% | 0.45% | 2.15% | -0.77% | 0.00% | 0.00% | 0.27% | 4.49% | 27.95% | |
| E. Other Division B (2.5% COLA) | 19.48% | 0.52% | 1.24% | -0.87% | 0.00% | 0.00% | 0.22% | 2.27% | 22.86% | |
| F. Other Division B (4% COLA) | 22.75% | 0.35% | 1.69% | -3.69% | 0.00% | 0.00% | 0.24% | 1.97% | 23.31% | |
| IV. Public Safety Noncontributory | | | | | | | | | | |
| A. State | 33.88% | 0.82% | 2.00% | -1.63% | 0.00% | 0.00% | 0.32% | 1.66% | 37.09% | |
| B. Other Division A (2.5% COLA) | 27.07% | 0.26% | 1.51% | -0.82% | 0.00% | 0.00% | 0.23% | 2.81% | 31.06% | |
| C. Other Division A (4% COLA) | 28.68% | 0.27% | 1.70% | -1.55% | 0.00% | 0.00% | 0.19% | 1.85% | 31.14% | |
| D. Salt Lake City | 36.71% | 0.44% | 2.06% | -1.15% | 0.00% | 0.00% | 0.12% | 3.77% | 41.95% | |
| E. Ogden | 36.13% | 0.18% | 2.68% | -1.19% | 0.00% | 0.00% | 0.20% | 4.21% | 42.21% | |
| F. Provo | 33.05% | 0.47% | 2.07% | -0.59% | 0.00% | 0.00% | 0.17% | 3.37% | 38.54% | |
| G. Logan | 31.91% | 0.45% | 2.15% | -0.73% | 0.00% | 0.00% | 0.27% | 4.13% | 38.18% | |
| H. Bountiful | 29.19% | 1.10% | 2.82% | 0.13% | 0.00% | 0.00% | 0.43% | 3.49% | 37.16% | |
| I. Other Division B (2.5% COLA) | 28.64% | 0.52% | 1.24% | -0.88% | 0.00% | 0.00% | 0.22% | 3.03% | 32.77% | |
| J. Other Division B (4% COLA) | 32.40% | 0.35% | 1.69% | -3.72% | 0.00% | 0.00% | 0.24% | 2.03% | 32.99% | |
| V. Firefighters | | | | | | | | | | |
| A. Division A | 13.84% | 0.03% | 1.07% | -0.93% | 0.00% | 0.00% | 0.29% | 0.20% | 14.50% | |
| B. Division B | 11.76% | 0.01% | 2.72% | -1.48% | 0.00% | 0.00% | 0.45% | 0.46% | 13.92% | |
| VI. Judges | 39.84% | 0.16% | 2.71% | 1.23% | 0.00% | 0.00% | 0.51% | 2.20% | 46.69% | |
| VII. 3% Substantial Substitute | 0.61% | 0.03% | 0.02% | -0.02% | 0.00% | 0.00% | -0.01% | 0.02% | 0.65% | |

Notes: Rates shown as of Jan. 1, 2010 do not include any adjustments for 2010 legislation
Rates shown include contribution for 3% Substantial Substitute, if applicable
Rates shown do not include the offsets for court fees or for fire insurance premium taxes
For paired funds, rates include asset rebalancing at each point of the analysis

Analysis of Change in UAAL

| Fund/Division (1) | Jan. 1, 2010 UAAL (2) | Changes in Unfunded Actuarial Accrued Liability Due To | | | | | | | Jan. 1, 2011 UAAL (10) |
|--------------------------------------|-----------------------------|--|--------------------------------|----------------------------|--|---|---|------------------------------------|------------------------------|
| | | Amortization Payments (3) | Liability (Gain)Loss (4) | Asset (Gain)Loss (5) | Creation of 4% COLA Funds (6) | Change in Benefit Provisions (7) | Change in Assumptions or Methods (8) | Other Asset Transfers (9) | |
| I. Public Employees Contributory | | | | | | | | | |
| A. Local Government | 47,843 | 630 | (7,255) | 18,434 | 0 | 0 | 8,601 | (13,124) | 55,128 |
| B. State and School | 71,431 | (1,591) | (19,279) | 39,440 | 0 | 0 | 2,846 | (29,224) | 63,623 |
| C. Subtotal | 119,274 | (961) | (26,534) | 57,874 | 0 | 0 | 11,447 | (42,348) | 118,751 |
| II. Public Employees Noncontributory | | | | | | | | | |
| A. Local Government | 384,960 | 9,472 | (61,200) | 137,698 | 0 | 0 | 97,659 | 13,124 | 581,713 |
| B. State and School | 2,059,903 | 55,555 | (340,832) | 657,278 | 0 | 0 | 170,281 | 29,224 | 2,631,409 |
| C. Subtotal | 2,444,863 | 65,027 | (402,032) | 794,976 | 0 | 0 | 267,940 | 42,348 | 3,213,122 |
| III. Public Safety Contributory | | | | | | | | | |
| A. State | 730 | 49 | (1,899) | 3,654 | 0 | 0 | (1,348) | (603) | 583 |
| B. Other Division A (2.5% COLA) | 5,804 | 509 | (4,052) | 7,814 | 0 | 0 | 3,912 | (7,128) | 6,858 |
| C. Other Division A (4% COLA) | 296 | 9 | (847) | 1,771 | 0 | 0 | (46) | (819) | 364 |
| D. Logan | 894 | 26 | (50) | 616 | 0 | 0 | 491 | (726) | 1,251 |
| E. Other Division B (2.5% COLA) | 667 | 13 | (298) | 1,958 | 0 | 0 | 1,201 | (2,778) | 762 |
| F. Other Division B (4% COLA) | 676 | 19 | (228) | 339 | 0 | 0 | 175 | (344) | 638 |
| G. Subtotal | 9,067 | 625 | (7,374) | 16,152 | 0 | 0 | 4,385 | (12,398) | 10,456 |
| IV. Public Safety Noncontributory | | | | | | | | | |
| A. State | 205,446 | 7,113 | (27,879) | 32,783 | 0 | 0 | 20,334 | 603 | 238,400 |
| B. Other Division A (2.5% COLA) | 121,361 | 5,227 | (12,230) | 25,075 | 0 | 0 | 0 | 7,128 | 179,658 |
| C. Other Division A (4% COLA) | 35,284 | 1,250 | (7,510) | 7,293 | 0 | 0 | 5,695 | 819 | 42,831 |
| D. Salt Lake City | 69,204 | 1,150 | (5,130) | 9,208 | 0 | 0 | 9,870 | 0 | 84,302 |
| E. Ogden | 13,129 | 306 | (1,002) | 2,410 | 0 | 0 | 2,380 | 0 | 17,223 |
| F. Provo | 9,205 | 211 | (523) | 1,625 | 0 | 0 | 1,687 | 0 | 12,205 |
| G. Logan | 3,868 | 129 | (293) | 327 | 0 | 0 | 588 | 726 | 5,345 |
| H. Bountiful | 2,475 | 137 | 35 | 821 | 0 | 0 | 721 | 0 | 4,188 |
| I. Other Division B (2.5% COLA) | 40,716 | 1,465 | (4,487) | 4,896 | 0 | 0 | 8,322 | 2,778 | 53,690 |
| J. Other Division B (4% COLA) | 7,386 | 226 | (2,758) | 979 | 0 | 0 | 724 | 344 | 6,901 |
| K. Subtotal | 508,074 | 17,214 | (61,777) | 85,417 | 0 | 0 | 50,321 | 12,398 | 644,743 |
| V. Firefighters | | | | | | | | | |
| A. Division A | 9,652 | 1,400 | (4,436) | 4,795 | 0 | 0 | 934 | 0 | 12,345 |
| B. Division B | 21,616 | 5,591 | (19,288) | 34,400 | 0 | 0 | 7,253 | 0 | 49,572 |
| C. Subtotal | 31,268 | 6,991 | (23,724) | 39,195 | 0 | 0 | 8,187 | 0 | 61,917 |
| VI. Judges | 26,812 | 1,391 | 1,517 | 6,428 | 0 | 0 | (436) | 0 | 35,712 |
| VII. Governors and Legislative | 535 | 183 | (26) | 582 | 0 | 0 | 42 | 0 | 1,316 |
| VIII. 3% Substantial Substitute | 319,807 | (2,859) | (7,618) | 9,497 | 0 | 0 | 4,119 | 0 | 322,946 |
| IX. Grand Total | 3,459,699 | 87,612 | (527,569) | 1,010,121 | 0 | 0 | 346,005 | 0 | 4,408,962 |

Note: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

**Actuarial Present Value of Future Benefits
by Fund and Status**

| Fund/Division | Retirees and Beneficiaries | Inactive Members | Active Members | Total |
|--------------------------------------|-------------------------------|---------------------|-------------------|------------|
| (1) | (2) | (3) | (4) | (5) |
| I. Public Employees Contributory | | | | |
| A. Local Government | 179,246 | 37,859 | 267,164 | 484,268 |
| B. State and School | 412,653 | 71,356 | 358,016 | 842,025 |
| C. Subtotal | 591,899 | 109,215 | 625,180 | 1,326,293 |
| II. Public Employees Noncontributory | | | | |
| A. Local Government | 1,344,758 | 251,729 | 2,869,800 | 4,466,287 |
| B. State and School | 7,613,693 | 715,299 | 10,988,474 | 19,317,465 |
| C. Subtotal | 8,958,451 | 967,028 | 13,858,274 | 23,783,752 |
| III. Public Safety Contributory | | | | |
| A. State | 53,975 | 947 | 2,348 | 57,271 |
| B. Other Division A (2.5% COLA) | 109,111 | 13,969 | 26,648 | 149,729 |
| C. Other Division A (4% COLA) | 26,545 | 693 | 1,820 | 29,058 |
| D. Logan | 10,863 | 198 | 3,414 | 14,475 |
| E. Other Division B (2.5% COLA) | 27,145 | 2,263 | 3,511 | 32,918 |
| F. Other Division B (4% COLA) | 5,526 | 446 | 2,679 | 8,650 |
| G. Subtotal | 233,165 | 18,516 | 40,420 | 292,101 |
| IV. Public Safety Noncontributory | | | | |
| A. State | 496,503 | 24,137 | 634,857 | 1,155,497 |
| B. Other Division A (2.5% COLA) | 311,567 | 27,445 | 689,335 | 1,028,347 |
| C. Other Division A (4% COLA) | 83,750 | 7,695 | 183,000 | 274,445 |
| D. Salt Lake City | 164,832 | 3,877 | 157,264 | 325,973 |
| E. Ogden | 44,479 | 901 | 29,990 | 75,371 |
| F. Provo | 26,343 | 1,140 | 27,466 | 54,950 |
| G. Logan | 4,081 | 100 | 12,624 | 16,805 |
| H. Bountiful | 12,445 | 73 | 10,890 | 23,408 |
| I. Other Division B (2.5% COLA) | 63,370 | 7,541 | 178,661 | 249,572 |
| J. Other Division B (4% COLA) | 14,698 | 1,187 | 24,852 | 40,736 |
| K. Subtotal | 1,222,068 | 74,096 | 1,948,939 | 3,245,104 |
| V. Firefighters | | | | |
| A. Division A | 47,275 | 3,246 | 163,698 | 214,219 |
| B. Division B | 448,710 | 6,046 | 520,247 | 975,003 |
| C. Subtotal | 495,985 | 9,292 | 683,945 | 1,189,222 |
| VI. Judges | 93,548 | 3,308 | 101,180 | 198,036 |
| VII. Governors and Legislative | 6,315 | 3,170 | 2,448 | 11,934 |
| VIII. Grand Total | 11,601,431 | 1,184,625 | 17,260,386 | 30,046,442 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

**Actuarial Present Value of Future Benefits
Details for Retirees and Beneficiaries, by Status**

| Fund/Division (1) | Retired Members (2) | Disabled Members (3) | Beneficiaries (4) | Total (5) |
|--------------------------------------|------------------------|-------------------------|----------------------|--------------|
| I. Public Employees Contributory | | | | |
| A. Local Government | 154,912 | 5,799 | 18,535 | 179,246 |
| B. State and School | 359,099 | 11,844 | 41,710 | 412,653 |
| C. Subtotal | 514,011 | 17,643 | 60,245 | 591,899 |
| II. Public Employees Noncontributory | | | | |
| A. Local Government | 1,228,708 | 31,082 | 84,968 | 1,344,758 |
| B. State and School | 7,122,641 | 104,020 | 387,031 | 7,613,693 |
| C. Subtotal | 8,351,349 | 135,102 | 471,999 | 8,958,451 |
| III. Public Safety Contributory | | | | |
| A. State | 36,354 | 2,365 | 15,256 | 53,975 |
| B. Other Division A (2.5% COLA) | 94,946 | 1,194 | 12,972 | 109,111 |
| C. Other Division A (4% COLA) | 21,499 | 235 | 4,811 | 26,545 |
| D. Logan | 10,625 | 110 | 128 | 10,863 |
| E. Other Division B (2.5% COLA) | 25,426 | 856 | 862 | 27,145 |
| F. Other Division B (4% COLA) | 5,040 | 0 | 485 | 5,526 |
| G. Subtotal | 193,890 | 4,760 | 34,514 | 233,165 |
| IV. Public Safety Noncontributory | | | | |
| A. State | 467,566 | 7,091 | 21,846 | 496,503 |
| B. Other Division A (2.5% COLA) | 292,953 | 3,421 | 15,193 | 311,567 |
| C. Other Division A (4% COLA) | 80,524 | 0 | 3,226 | 83,750 |
| D. Salt Lake City | 148,363 | 3,864 | 12,605 | 164,832 |
| E. Ogden | 39,811 | 510 | 4,158 | 44,479 |
| F. Provo | 24,514 | 0 | 1,830 | 26,343 |
| G. Logan | 3,780 | 0 | 301 | 4,081 |
| H. Bountiful | 11,670 | 380 | 395 | 12,445 |
| I. Other Division B (2.5% COLA) | 58,580 | 1,178 | 3,612 | 63,370 |
| J. Other Division B (4% COLA) | 14,333 | 0 | 364 | 14,698 |
| K. Subtotal | 1,142,094 | 16,444 | 63,530 | 1,222,068 |
| V. Firefighters | | | | |
| A. Division A | 37,530 | 5,654 | 4,091 | 47,275 |
| B. Division B | 386,544 | 20,652 | 41,514 | 448,710 |
| C. Subtotal | 424,074 | 26,306 | 45,605 | 495,985 |
| VI. Judges | 82,785 | 0 | 10,763 | 93,548 |
| VII. Governors and Legislative | 5,176 | 0 | 1,139 | 6,315 |
| VIII. Grand Total | 10,713,379 | 200,255 | 687,795 | 11,601,431 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

**Actuarial Present Value of Future Benefits
Details for Inactive Members, by Status**

| Fund/Division (1) | Disabled (2) | Other Vested (3) | Nonvested (4) | Total (5) |
|--------------------------------------|-----------------|---------------------|------------------|--------------|
| I. Public Employees Contributory | | | | |
| A. Local Government | 3,403 | 32,587 | 1,868 | 37,859 |
| B. State and School | 9,129 | 62,195 | 32 | 71,356 |
| C. Subtotal | 12,532 | 94,782 | 1,900 | 109,215 |
| II. Public Employees Noncontributory | | | | |
| A. Local Government | 29,744 | 220,925 | 1,060 | 251,729 |
| B. State and School | 98,289 | 612,486 | 4,524 | 715,299 |
| C. Subtotal | 128,033 | 833,411 | 5,584 | 967,028 |
| III. Public Safety Contributory | | | | |
| A. State | 0 | 937 | 10 | 947 |
| B. Other Division A (2.5% COLA) | 729 | 12,854 | 387 | 13,969 |
| C. Other Division A (4% COLA) | 0 | 684 | 9 | 693 |
| D. Logan | 0 | 186 | 12 | 198 |
| E. Other Division B (2.5% COLA) | 0 | 2,157 | 106 | 2,263 |
| F. Other Division B (4% COLA) | 302 | 144 | 0 | 446 |
| G. Subtotal | 1,031 | 16,962 | 524 | 18,516 |
| IV. Public Safety Noncontributory | | | | |
| A. State | 1,441 | 22,686 | 10 | 24,137 |
| B. Other Division A (2.5% COLA) | 2,935 | 24,484 | 26 | 27,445 |
| C. Other Division A (4% COLA) | 657 | 7,038 | 0 | 7,695 |
| D. Salt Lake City | 432 | 3,443 | 1 | 3,877 |
| E. Ogden | 0 | 901 | 0 | 901 |
| F. Provo | 0 | 1,121 | 20 | 1,140 |
| G. Logan | 0 | 100 | 0 | 100 |
| H. Bountiful | 0 | 73 | 0 | 73 |
| I. Other Division B (2.5% COLA) | 1,187 | 6,338 | 17 | 7,541 |
| J. Other Division B (4% COLA) | 0 | 1,187 | 0 | 1,187 |
| K. Subtotal | 6,652 | 67,371 | 74 | 74,096 |
| V. Firefighters | | | | |
| A. Division A | 0 | 3,058 | 189 | 3,246 |
| B. Division B | 0 | 5,773 | 273 | 6,046 |
| C. Subtotal | 0 | 8,831 | 462 | 9,292 |
| VI. Judges | 0 | 3,308 | 0 | 3,308 |
| VII. Governors and Legislative | 0 | 3,162 | 8 | 3,170 |
| VIII. Grand Total | 148,248 | 1,027,827 | 8,552 | 1,184,625 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

**Actuarial Present Value of Future Benefits
Details for Active Members, by Benefit**

| Fund/Division (1) | Retirement (2) | Deferred | | Refunds (5) | Death (6) | Total (7) |
|---|-------------------|--------------------|-------------------|----------------|--------------|--------------|
| | | Termination (3) | Disability (4) | | | |
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 250,192 | 4,337 | 4,616 | 2,730 | 5,289 | 267,164 |
| B. State and School | 350,601 | 27 | 2,056 | 0 | 5,332 | 358,016 |
| C. Subtotal | 600,793 | 4,364 | 6,672 | 2,730 | 10,621 | 625,180 |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 2,537,986 | 170,807 | 95,531 | 29 | 65,447 | 2,869,800 |
| B. State and School | 10,105,576 | 455,068 | 236,717 | 4 | 191,109 | 10,988,474 |
| C. Subtotal | 12,643,562 | 625,875 | 332,248 | 33 | 256,556 | 13,858,274 |
| III. Public Safety Contributory | | | | | | |
| A. State | 2,320 | 0 | 0 | 0 | 28 | 2,348 |
| B. Other Division A (2.5% COLA) | 25,100 | 355 | 325 | 394 | 475 | 26,648 |
| C. Other Division A (4% COLA) | 1,750 | 17 | 14 | 8 | 31 | 1,820 |
| D. Logan | 3,299 | 27 | 24 | 15 | 49 | 3,414 |
| E. Other Division B (2.5% COLA) | 3,412 | 17 | 15 | 4 | 63 | 3,511 |
| F. Other Division B (4% COLA) | 2,579 | 22 | 20 | 8 | 50 | 2,679 |
| G. Subtotal | 38,460 | 438 | 398 | 429 | 696 | 40,420 |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 600,314 | 13,747 | 7,923 | 0 | 12,873 | 634,857 |
| B. Other Division A (2.5% COLA) | 647,127 | 18,071 | 9,986 | 0 | 14,151 | 689,335 |
| C. Other Division A (4% COLA) | 172,449 | 4,410 | 2,519 | 0 | 3,623 | 183,000 |
| D. Salt Lake City | 149,437 | 2,838 | 1,649 | 0 | 3,341 | 157,264 |
| E. Ogden | 28,130 | 735 | 417 | 0 | 709 | 29,990 |
| F. Provo | 25,897 | 611 | 339 | 0 | 619 | 27,466 |
| G. Logan | 12,025 | 225 | 126 | 0 | 248 | 12,624 |
| H. Bountiful | 10,350 | 208 | 113 | 0 | 219 | 10,890 |
| I. Other Division B (2.5% COLA) | 168,148 | 4,006 | 2,326 | 0 | 4,181 | 178,661 |
| J. Other Division B (4% COLA) | 23,541 | 478 | 277 | 0 | 555 | 24,852 |
| K. Subtotal | 1,837,418 | 45,329 | 25,675 | 0 | 40,519 | 1,948,939 |
| V. Firefighters | | | | | | |
| A. Division A | 149,629 | 1,164 | 6,884 | 1,111 | 4,910 | 163,698 |
| B. Division B | 483,833 | 2,648 | 14,258 | 2,259 | 17,249 | 520,247 |
| C. Subtotal | 633,462 | 3,812 | 21,142 | 3,370 | 22,159 | 683,945 |
| VI. Judges | | | | | | |
| | 99,176 | 0 | 0 | 0 | 2,005 | 101,180 |
| VII. Governors and Legislative | | | | | | |
| | 1,780 | 648 | 0 | 0 | 20 | 2,448 |
| VIII. Grand Total | | | | | | |
| | 15,854,651 | 680,466 | 386,135 | 6,562 | 332,576 | 17,260,386 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

**Actuarial Present Value of Future Benefits
Details for Members Receiving Benefits, by Benefit**

| Fund/Division (1) | Basic Benefit (2) | COLA (3) | Subtotal (2) + (3) (4) | ROPP (5) | Total (4) + (5) (6) |
|--------------------------------------|----------------------|-------------|------------------------------|-------------|---------------------------|
| I. Public Employees Contributory | | | | | |
| A. Local Government | 126,897 | 52,192 | 179,089 | 157 | 179,246 |
| B. State and School | 282,042 | 129,767 | 411,809 | 844 | 412,653 |
| C. Subtotal | 408,939 | 181,959 | 590,898 | 1,001 | 591,899 |
| II. Public Employees Noncontributory | | | | | |
| A. Local Government | 958,506 | 386,252 | 1,344,758 | 0 | 1,344,758 |
| B. State and School | 5,363,668 | 2,250,025 | 7,613,693 | 0 | 7,613,693 |
| C. Subtotal | 6,322,174 | 2,636,277 | 8,958,451 | 0 | 8,958,451 |
| III. Public Safety Contributory | | | | | |
| A. State | 29,305 | 23,345 | 52,650 | 1,326 | 53,975 |
| B. Other Division A (2.5% COLA) | 72,169 | 36,416 | 108,585 | 526 | 109,111 |
| C. Other Division A (4% COLA) | 15,475 | 10,792 | 26,267 | 278 | 26,545 |
| D. Logan | 7,374 | 3,484 | 10,858 | 5 | 10,863 |
| E. Other Division B (2.5% COLA) | 19,189 | 7,954 | 27,143 | 2 | 27,145 |
| F. Other Division B (4% COLA) | 3,664 | 1,862 | 5,526 | 0 | 5,526 |
| G. Subtotal | 147,176 | 83,853 | 231,029 | 2,137 | 233,165 |
| IV. Public Safety Noncontributory | | | | | |
| A. State | 343,761 | 152,739 | 496,500 | 4 | 496,503 |
| B. Other Division A (2.5% COLA) | 222,833 | 88,734 | 311,567 | 0 | 311,567 |
| C. Other Division A (4% COLA) | 58,839 | 24,911 | 83,750 | 0 | 83,750 |
| D. Salt Lake City | 109,973 | 54,497 | 164,470 | 362 | 164,832 |
| E. Ogden | 30,174 | 14,252 | 44,426 | 54 | 44,479 |
| F. Provo | 18,105 | 8,189 | 26,294 | 50 | 26,343 |
| G. Logan | 3,048 | 1,033 | 4,081 | 0 | 4,081 |
| H. Bountiful | 8,820 | 3,618 | 12,438 | 7 | 12,445 |
| I. Other Division B (2.5% COLA) | 45,961 | 17,409 | 63,370 | 0 | 63,370 |
| J. Other Division B (4% COLA) | 10,643 | 4,055 | 14,698 | 0 | 14,698 |
| K. Subtotal | 852,157 | 369,437 | 1,221,594 | 477 | 1,222,068 |
| V. Firefighters | | | | | |
| A. Division A | 32,394 | 14,739 | 47,133 | 142 | 47,275 |
| B. Division B | 295,979 | 150,548 | 446,527 | 2,183 | 448,710 |
| C. Subtotal | 328,373 | 165,287 | 493,660 | 2,325 | 495,985 |
| VI. Judges | 62,492 | 31,056 | 93,548 | 0 | 93,548 |
| VII. Governors and Legislative | 3,984 | 1,743 | 5,727 | 588 | 6,315 |
| VIII. Grand Total | 8,125,295 | 3,469,612 | 11,594,907 | 6,528 | 11,601,431 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

Normal Cost

| Fund/Division (1) | Retirement (2) | Deferred Termination (3) | Disability (4) | Refunds (5) | Death (6) | Total (7) |
|--------------------------------------|-------------------|--------------------------------|-------------------|----------------|--------------|--------------|
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 8.88% | 0.87% | 0.59% | 1.32% | 0.27% | 11.93% |
| B. State and School | 8.57% | 0.62% | 0.41% | 1.56% | 0.22% | 11.38% |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 8.98% | 1.79% | 0.67% | 0.00% | 0.27% | 11.71% |
| B. State and School | 9.79% | 1.61% | 0.49% | 0.00% | 0.22% | 12.11% |
| III. Public Safety Contributory | | | | | | |
| A. State | 19.55% | 0.80% | 0.82% | 1.57% | 0.71% | 23.45% |
| B. Other Division A (2.5% COLA) | 19.66% | 0.66% | 0.67% | 1.58% | 0.65% | 23.22% |
| C. Other Division A (4% COLA) | 20.13% | 0.74% | 0.70% | 1.56% | 0.66% | 23.79% |
| D. Logan | 20.48% | 0.51% | 0.49% | 1.41% | 0.70% | 23.59% |
| E. Other Division B (2.5% COLA) | 19.05% | 0.86% | 0.83% | 1.35% | 1.09% | 23.18% |
| F. Other Division B (4% COLA) | 20.29% | 0.67% | 0.66% | 1.34% | 0.88% | 23.84% |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 19.97% | 1.41% | 0.79% | 0.00% | 0.76% | 22.93% |
| B. Other Division A (2.5% COLA) | 19.70% | 1.25% | 0.68% | 0.00% | 0.67% | 22.30% |
| C. Other Division A (4% COLA) | 20.17% | 1.26% | 0.70% | 0.00% | 0.68% | 22.81% |
| D. Salt Lake City | 19.91% | 1.15% | 0.65% | 0.00% | 0.87% | 22.58% |
| E. Ogden | 19.84% | 1.17% | 0.65% | 0.00% | 0.87% | 22.53% |
| F. Provo | 19.65% | 1.27% | 0.71% | 0.00% | 0.93% | 22.56% |
| G. Logan | 20.24% | 1.07% | 0.58% | 0.00% | 0.80% | 22.69% |
| H. Bountiful | 19.64% | 1.32% | 0.71% | 0.00% | 0.70% | 22.37% |
| I. Other Division B (2.5% COLA) | 19.85% | 1.18% | 0.67% | 0.00% | 0.89% | 22.59% |
| J. Other Division B (4% COLA) | 20.30% | 1.18% | 0.66% | 0.00% | 0.88% | 23.02% |
| V. Firefighters | | | | | | |
| A. Division A | 22.89% | 0.31% | 1.92% | 0.60% | 0.99% | 26.71% |
| B. Division B | 22.88% | 0.28% | 1.60% | 0.64% | 1.20% | 26.60% |
| VI. Judges | 29.55% | 0.00% | 0.00% | 0.00% | 1.07% | 30.62% |

Note: Columns may not add to total due to rounding

Net Employer Normal Cost

| Fund/Division (1) | Total Normal Cost (2) | Member Rate (3) | Net Employer Normal Cost (2) - (3) (4) |
|--------------------------------------|--------------------------|--------------------|---|
| I. Public Employees Contributory | | | |
| A. Local Government | 11.93% | 6.00% | 5.93% |
| B. State and School | 11.38% | 6.00% | 5.38% |
| II. Public Employees Noncontributory | | | |
| A. Local Government | 11.71% | 0.00% | 11.71% |
| B. State and School | 12.11% | 0.00% | 12.11% |
| III. Public Safety Contributory | | | |
| A. State | 23.45% | 12.29% | 11.16% |
| B. Other Division A (2.5% COLA) | 23.22% | 12.29% | 10.93% |
| C. Other Division A (4% COLA) | 23.79% | 12.29% | 11.50% |
| D. Logan | 23.59% | 11.13% | 12.46% |
| E. Other Division B (2.5% COLA) | 23.18% | 10.50% | 12.68% |
| F. Other Division B (4% COLA) | 23.84% | 10.50% | 13.34% |
| IV. Public Safety Noncontributory | | | |
| A. State | 22.93% | 0.00% | 22.93% |
| B. Other Division A (2.5% COLA) | 22.30% | 0.00% | 22.30% |
| C. Other Division A (4% COLA) | 22.81% | 0.00% | 22.81% |
| D. Salt Lake City | 22.58% | 0.00% | 22.58% |
| E. Ogden | 22.53% | 0.00% | 22.53% |
| F. Provo | 22.56% | 0.00% | 22.56% |
| G. Logan | 22.69% | 0.00% | 22.69% |
| H. Bountiful | 22.37% | 0.00% | 22.37% |
| I. Other Division B (2.5% COLA) | 22.59% | 0.00% | 22.59% |
| J. Other Division B (4% COLA) | 23.02% | 0.00% | 23.02% |
| V. Firefighters | | | |
| A. Division A | 26.71% | 15.05% | 11.66% |
| B. Division B | 26.60% | 16.71% | 9.89% |
| VI. Judges | 30.62% | 0.00% | 30.62% |

Determination of Actuarial Accrued Liability

| Fund/Division (1) | Actuarial Present Value of Future Benefits (2) | Actuarial Present Value of Future Normal Costs | | | Actuarial Accrued Liability (2) - (5) (6) |
|--------------------------------------|---|--|------------------|--------------|---|
| | | Members (3) | Employers (4) | Total (5) | |
| I. Public Employees Contributory | | | | | |
| A. Local Government | 484,268 | 25,137 | 24,843 | 49,980 | 434,288 |
| B. State and School | 842,025 | 13,129 | 11,772 | 24,901 | 817,124 |
| C. Subtotal | 1,326,293 | 38,266 | 36,615 | 74,881 | 1,251,412 |
| II. Public Employees Noncontributory | | | | | |
| A. Local Government | 4,466,287 | 0 | 890,919 | 890,919 | 3,575,367 |
| B. State and School | 19,317,465 | 0 | 3,016,620 | 3,016,620 | 16,300,845 |
| C. Subtotal | 23,783,752 | 0 | 3,907,539 | 3,907,539 | 19,876,212 |
| III. Public Safety Contributory | | | | | |
| A. State | 57,271 | 114 | 103 | 217 | 57,054 |
| B. Other Division A (2.5% COLA) | 149,729 | 5,209 | 4,632 | 9,841 | 139,888 |
| C. Other Division A (4% COLA) | 29,058 | 220 | 206 | 426 | 28,632 |
| D. Logan | 14,475 | 404 | 452 | 856 | 13,619 |
| E. Other Division B (2.5% COLA) | 32,918 | 221 | 267 | 488 | 32,430 |
| F. Other Division B (4% COLA) | 8,650 | 262 | 334 | 596 | 8,055 |
| G. Subtotal | 292,101 | 6,430 | 5,994 | 12,424 | 279,678 |
| IV. Public Safety Noncontributory | | | | | |
| A. State | 1,155,497 | 0 | 203,186 | 203,186 | 952,310 |
| B. Other Division A (2.5% COLA) | 1,028,347 | 0 | 260,251 | 260,251 | 768,096 |
| C. Other Division A (4% COLA) | 274,445 | 0 | 64,885 | 64,885 | 209,560 |
| D. Salt Lake City | 325,973 | 0 | 50,555 | 50,555 | 275,419 |
| E. Ogden | 75,371 | 0 | 11,295 | 11,295 | 64,076 |
| F. Provo | 54,950 | 0 | 9,241 | 9,241 | 45,709 |
| G. Logan | 16,805 | 0 | 4,194 | 4,194 | 12,611 |
| H. Bountiful | 23,408 | 0 | 3,080 | 3,080 | 20,328 |
| I. Other Division B (2.5% COLA) | 249,572 | 0 | 65,503 | 65,503 | 184,069 |
| J. Other Division B (4% COLA) | 40,736 | 0 | 8,490 | 8,490 | 32,245 |
| K. Subtotal | 3,245,104 | 0 | 680,680 | 680,680 | 2,564,423 |
| V. Firefighters | | | | | |
| A. Division A | 214,219 | 49,933 | 38,685 | 88,618 | 125,601 |
| B. Division B | 975,003 | 143,524 | 84,947 | 228,471 | 746,532 |
| C. Subtotal | 1,189,222 | 193,457 | 123,632 | 317,089 | 872,133 |
| VI. Judges | 198,036 | 0 | 30,456 | 30,456 | 167,581 |
| VII. Governors and Legislative | 11,934 | 0 | 421 | 421 | 11,513 |
| VIII. Grand Total | 30,046,442 | 238,153 | 4,785,337 | 5,023,490 | 25,022,952 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

**Actuarial Accrued Liability
Details of Member and Employer Financing**

| Fund/Division | Inactive Members | | | Active Members | | |
|--------------------------------------|--|----------------------|-----------|--|----------------------|------------|
| | Accumulated Member Contributions | Employer Financed | Total | Accumulated Member Contributions | Employer Financed | Total |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 31,124 | 6,735 | 37,859 | 86,929 | 130,255 | 217,184 |
| B. State and School | 56,978 | 14,378 | 71,356 | 132,865 | 200,250 | 333,115 |
| C. Subtotal | 88,102 | 21,113 | 109,215 | 219,794 | 330,505 | 550,299 |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 32,786 | 218,943 | 251,729 | 98,419 | 1,880,461 | 1,978,880 |
| B. State and School | 88,503 | 626,796 | 715,299 | 356,159 | 7,615,695 | 7,971,854 |
| C. Subtotal | 121,289 | 845,739 | 967,028 | 454,578 | 9,496,156 | 9,950,734 |
| III. Public Safety Contributory | | | | | | |
| A. State | 667 | 280 | 947 | 917 | 1,214 | 2,131 |
| B. Other Division A (2.5% COLA) | 8,572 | 5,397 | 13,969 | 7,002 | 9,806 | 16,808 |
| C. Other Division A (4% COLA) | 585 | 108 | 693 | 565 | 829 | 1,394 |
| D. Logan | 198 | 0 | 198 | 919 | 1,639 | 2,558 |
| E. Other Division B (2.5% COLA) | 1,903 | 360 | 2,263 | 1,200 | 1,823 | 3,023 |
| F. Other Division B (4% COLA) | 239 | 207 | 446 | 816 | 1,268 | 2,084 |
| G. Subtotal | 12,164 | 6,352 | 18,516 | 11,419 | 16,579 | 27,998 |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 1,334 | 22,803 | 24,137 | 4,617 | 427,053 | 431,670 |
| B. Other Division A (2.5% COLA) | 3,083 | 24,362 | 27,445 | 16,026 | 413,058 | 429,084 |
| C. Other Division A (4% COLA) | 959 | 6,736 | 7,695 | 2,151 | 115,964 | 118,115 |
| D. Salt Lake City | 218 | 3,659 | 3,877 | 2,005 | 104,704 | 106,709 |
| E. Ogden | 95 | 806 | 901 | 588 | 18,107 | 18,695 |
| F. Provo | 1,066 | 74 | 1,140 | 6,622 | 11,603 | 18,225 |
| G. Logan | 76 | 24 | 100 | 2,134 | 6,296 | 8,430 |
| H. Bountiful | 0 | 73 | 73 | 296 | 7,514 | 7,810 |
| I. Other Division B (2.5% COLA) | 1,208 | 6,333 | 7,541 | 8,252 | 104,906 | 113,158 |
| J. Other Division B (4% COLA) | 515 | 672 | 1,187 | 1,547 | 14,814 | 16,361 |
| K. Subtotal | 8,554 | 65,542 | 74,096 | 44,238 | 1,224,019 | 1,268,257 |
| V. Firefighters | | | | | | |
| A. Division A | 2,027 | 1,219 | 3,246 | 21,548 | 53,532 | 75,080 |
| B. Division B | 3,256 | 2,790 | 6,046 | 76,847 | 214,929 | 291,776 |
| C. Subtotal | 5,283 | 4,009 | 9,292 | 98,395 | 268,461 | 366,856 |
| VI. Judges | 651 | 2,657 | 3,308 | 3,658 | 67,067 | 70,725 |
| VII. Governors and Legislative | 101 | 3,069 | 3,170 | 1 | 2,026 | 2,027 |
| VIII. Grand Total | 236,144 | 948,481 | 1,184,625 | 832,083 | 11,404,813 | 12,236,896 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

Number of Members

| Fund/Division (1) | Active (2) | Inactive Members | | | Members Receiving Benefits | | | Total (9) |
|--------------------------------------|---------------|------------------|---------------|------------------|----------------------------|--------------------------|----------------------|--------------|
| | | Disabled (3) | Vested (4) | Nonvested (5) | Regular Retirees (6) | Disabled Retirees (7) | Beneficiaries (8) | |
| I. Public Employees Contributory | | | | | | | | |
| A. Local Government | 1,264 | 15 | 865 | 755 | 973 | 53 | 268 | 4,193 |
| B. State and School | 1,025 | 44 | 724 | 13 | 2,779 | 140 | 734 | 5,459 |
| C. Subtotal | 2,289 | 59 | 1,589 | 768 | 3,752 | 193 | 1,002 | 9,652 |
| II. Public Employees Noncontributory | | | | | | | | |
| A. Local Government | 19,577 | 225 | 10,340 | 386 | 5,371 | 186 | 611 | 36,696 |
| B. State and School | 72,294 | 679 | 28,267 | 1,031 | 27,389 | 687 | 2,368 | 132,715 |
| C. Subtotal | 91,871 | 904 | 38,607 | 1,417 | 32,760 | 873 | 2,979 | 169,411 |
| III. Public Safety Contributory | | | | | | | | |
| A. State | 5 | 0 | 15 | 12 | 159 | 14 | 145 | 350 |
| B. Other Division A (2.5% COLA) | 104 | 2 | 207 | 64 | 300 | 8 | 117 | 802 |
| C. Other Division A (4% COLA) | 6 | 0 | 26 | 3 | 100 | 1 | 45 | 181 |
| D. Logan | 10 | 0 | 4 | 1 | 28 | 1 | 2 | 46 |
| E. Other Division B (2.5% COLA) | 8 | 0 | 54 | 16 | 59 | 5 | 8 | 150 |
| F. Other Division B (4% COLA) | 7 | 1 | 3 | 0 | 22 | 0 | 4 | 37 |
| G. Subtotal | 140 | 3 | 309 | 96 | 668 | 29 | 321 | 1,566 |
| IV. Public Safety Noncontributory | | | | | | | | |
| A. State | 2,434 | 7 | 1,189 | 2 | 1,140 | 30 | 124 | 4,926 |
| B. Other Division A (2.5% COLA) | 2,795 | 16 | 1,189 | 2 | 706 | 15 | 76 | 4,799 |
| C. Other Division A (4% COLA) | 702 | 3 | 280 | 0 | 194 | 0 | 18 | 1,197 |
| D. Salt Lake City | 481 | 1 | 123 | 1 | 356 | 18 | 88 | 1,068 |
| E. Ogden | 119 | 0 | 61 | 0 | 110 | 2 | 34 | 326 |
| F. Provo | 90 | 0 | 24 | 5 | 57 | 0 | 13 | 189 |
| G. Logan | 49 | 0 | 7 | 0 | 7 | 0 | 1 | 64 |
| H. Bountiful | 34 | 0 | 6 | 0 | 29 | 1 | 3 | 73 |
| I. Other Division B (2.5% COLA) | 662 | 5 | 240 | 3 | 133 | 4 | 19 | 1,066 |
| J. Other Division B (4% COLA) | 77 | 0 | 22 | 0 | 27 | 0 | 2 | 128 |
| K. Subtotal | 7,443 | 32 | 3,141 | 13 | 2,759 | 70 | 378 | 13,836 |
| V. Firefighters | | | | | | | | |
| A. Division A | 533 | 0 | 129 | 39 | 88 | 18 | 21 | 828 |
| B. Division B | 1,357 | 0 | 135 | 96 | 785 | 67 | 220 | 2,660 |
| C. Subtotal | 1,890 | 0 | 264 | 135 | 873 | 85 | 241 | 3,488 |
| VI. Judges | 110 | 0 | 5 | 0 | 82 | 0 | 33 | 230 |
| VII. Governors and Legislative | 83 | 0 | 115 | 4 | 150 | 0 | 71 | 423 |
| VIII. Grand Total | 103,826 | 998 | 44,030 | 2,433 | 41,044 | 1,250 | 5,025 | 198,606 |

Active Membership Statistics

| Fund/Division (1) | Number (2) | Total Compensation \$ Thousands (3) | Average Compensation (\$'s) (4) | Accumulated Member Contributions With Interest \$ Thousands (5) | Average Age (6) | Average Service (7) |
|--------------------------------------|---------------|--|--|---|-----------------------|---------------------------|
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 1,264 | 59,027 | 46,699 | 86,929 | 48.7 | 14.9 |
| B. State and School | 1,025 | 51,664 | 50,404 | 132,865 | 56.6 | 28.1 |
| C. Subtotal | 2,289 | 110,691 | 48,358 | 219,794 | 52.2 | 20.8 |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 19,577 | 885,086 | 45,208 | 98,419 | 45.1 | 9.9 |
| B. State and School | 72,294 | 2,957,769 | 40,913 | 356,159 | 45.5 | 10.8 |
| C. Subtotal | 91,871 | 3,842,855 | 41,828 | 454,578 | 45.4 | 10.6 |
| III. Public Safety Contributory | | | | | | |
| A. State | 5 | 276 | 55,224 | 917 | 55.0 | 24.8 |
| B. Other Division A (2.5% COLA) | 104 | 4,976 | 47,844 | 7,002 | 40.1 | 9.7 |
| C. Other Division A (4% COLA) | 6 | 279 | 46,430 | 565 | 45.0 | 14.3 |
| D. Logan | 10 | 515 | 51,504 | 919 | 39.7 | 14.5 |
| E. Other Division B (2.5% COLA) | 8 | 479 | 59,817 | 1,200 | 51.4 | 19.6 |
| F. Other Division B (4% COLA) | 7 | 408 | 58,271 | 816 | 44.1 | 14.9 |
| G. Subtotal | 140 | 6,933 | 49,514 | 11,419 | 41.7 | 11.6 |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 2,434 | 112,282 | 46,131 | 4,617 | 41.3 | 10.7 |
| B. Other Division A (2.5% COLA) | 2,795 | 130,295 | 46,617 | 16,026 | 38.4 | 9.3 |
| C. Other Division A (4% COLA) | 702 | 32,693 | 46,572 | 2,151 | 38.8 | 10.2 |
| D. Salt Lake City | 481 | 27,682 | 57,551 | 2,005 | 39.4 | 10.6 |
| E. Ogden | 119 | 5,564 | 46,759 | 588 | 37.9 | 9.5 |
| F. Provo | 90 | 4,855 | 53,942 | 6,622 | 39.3 | 10.5 |
| G. Logan | 49 | 2,195 | 44,803 | 2,134 | 37.7 | 10.1 |
| H. Bountiful | 34 | 1,804 | 53,052 | 296 | 41.9 | 12.1 |
| I. Other Division B (2.5% COLA) | 662 | 33,547 | 50,675 | 8,252 | 38.6 | 9.2 |
| J. Other Division B (4% COLA) | 77 | 4,401 | 57,161 | 1,547 | 38.9 | 9.9 |
| K. Subtotal | 7,443 | 355,318 | 47,739 | 44,238 | 39.5 | 10.0 |
| V. Firefighters | | | | | | |
| A. Division A | 533 | 27,469 | 51,536 | 21,548 | 38.9 | 8.0 |
| B. Division B | 1,357 | 78,002 | 57,481 | 76,847 | 40.0 | 11.4 |
| C. Subtotal | 1,890 | 105,471 | 55,805 | 98,395 | 39.7 | 10.4 |
| VI. Judges | 110 | 14,849 | 134,987 | 3,658 | 56.6 | 10.1 |
| VII. Governors and Legislative | 83 | 547 | 6,587 | 1 | 54.1 | 6.9 |
| VIII. Grand Total | 103,826 | 4,436,664 | 42,732 | 832,083 | 45.1 | 10.8 |

Retired Member Statistics
(Including Disabled Retirees and Beneficiaries)

| Fund/Division (1) | Number (2) | Annual Total Benefits (\$ Thousands) (3) | Average Monthly Benefit (\$'s) (4) |
|--------------------------------------|---------------|---|---|
| I. Public Employees Contributory | | | |
| A. Local Government | 1,294 | 17,424 | 1,122 |
| B. State and School | 3,653 | 46,746 | 1,066 |
| C. Subtotal | 4,947 | 64,170 | 1,081 |
| II. Public Employees Noncontributory | | | |
| A. Local Government | 6,168 | 115,831 | 1,565 |
| B. State and School | 30,444 | 662,545 | 1,814 |
| C. Subtotal | 36,612 | 778,376 | 1,772 |
| III. Public Safety Contributory | | | |
| A. State | 318 | 6,204 | 1,626 |
| B. Other Division A (2.5% COLA) | 425 | 9,253 | 1,814 |
| C. Other Division A (4% COLA) | 146 | 2,590 | 1,478 |
| D. Logan | 31 | 854 | 2,297 |
| E. Other Division B (2.5% COLA) | 72 | 1,884 | 2,181 |
| F. Other Division B (4% COLA) | 26 | 415 | 1,330 |
| G. Subtotal | 1,018 | 21,200 | 1,735 |
| IV. Public Safety Noncontributory | | | |
| A. State | 1,294 | 37,096 | 2,389 |
| B. Other Division A (2.5% COLA) | 797 | 22,909 | 2,395 |
| C. Other Division A (4% COLA) | 212 | 5,808 | 2,283 |
| D. Salt Lake City | 462 | 13,555 | 2,445 |
| E. Ogden | 146 | 3,506 | 2,001 |
| F. Provo | 70 | 2,099 | 2,499 |
| G. Logan | 8 | 264 | 2,747 |
| H. Bountiful | 33 | 936 | 2,363 |
| I. Other Division B (2.5% COLA) | 156 | 4,381 | 2,341 |
| J. Other Division B (4% COLA) | 29 | 1,001 | 2,876 |
| K. Subtotal | 3,207 | 91,555 | 2,379 |
| V. Firefighters | | | |
| A. Division A | 127 | 3,528 | 2,315 |
| B. Division B | 1,072 | 36,295 | 2,821 |
| C. Subtotal | 1,199 | 39,823 | 2,768 |
| VI. Judges | 115 | 8,555 | 6,199 |
| VII. Governors and Legislative | 221 | 778 | 293 |
| VIII. Grand Total | 47,319 | 1,004,457 | 1,769 |

**Market Value of Assets
(All Retirement Systems Combined)**

| Item (1) | December 31, 2009 (2) | December 31, 2010 (3) |
|---|--------------------------|--------------------------|
| 1. Cash | 3,670 | 347 |
| 2. Receivables: | | |
| a. Member contributions | 898 | 982 |
| b. Employer contributions | 33,279 | 39,107 |
| c. Fire insurance premium tax & court fees | 10,345 | 145 |
| d. Investments | <u>289,324</u> | <u>654,888</u> |
| e. Total | 333,846 | 695,122 |
| 3. Investments | | |
| a. Short-term securities – domestic | 791,507 | 1,031,311 |
| b. Short-term securities – international | 12,593 | 25,054 |
| c. Bonds – domestic | 3,738,145 | 3,524,901 |
| d. Bonds – international | 782,717 | 881,454 |
| e. Equities – domestic | 4,473,180 | 4,756,953 |
| f. Equities – international | 2,631,259 | 2,764,267 |
| g. Absolute return | 2,411,419 | 3,137,599 |
| h. Private equity | 1,410,809 | 1,839,452 |
| i. Real estate | 2,799,042 | 3,023,729 |
| j. Mortgage loans | <u>6,844</u> | <u>6,845</u> |
| k. Total | 19,057,515 | 20,991,565 |
| 4. Other | 1,438,571 | 1,257,730 |
| 5. Total assets | 20,833,602 | 22,944,764 |
| 6. Liabilities | | |
| a. Securities lending liability | (1,438,249) | (1,256,870) |
| b. Other accounting liabilities and reserves | (1,677,508) | (1,931,788) |
| c. Public Safety Restricted 4% COLA Account | <u>(3,563)</u> | <u>(5,195)</u> |
| d. Total | (3,119,320) | (3,193,853) |
| 7. Net assets | 17,714,282 | 19,750,911 |

Note: Assets exclude the defined contribution plans
Amounts shown are in \$ thousands
Amounts shown are from the December 31, 2010 Comprehensive Annual Financial Report and may differ from other numbers contained in this report due to rounding.

Reconciliation of Market Value of Assets (MVA)

| Fund/Division (1) | MVA as of Dec. 31, 2009 (2) | Contributions (3) | Benefits and Refunds (4) | Earnings, Net of Expenses (5) | Transfers (6) | MVA as of Dec. 31, 2010 (7) |
|--------------------------------------|-----------------------------------|----------------------|--------------------------------|-------------------------------------|------------------|-----------------------------------|
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 313,270 | 9,674 | (19,631) | 40,421 | (3,391) | 340,342 |
| B. State and School | 624,315 | 12,476 | (49,560) | 80,196 | (519) | 666,909 |
| C. Subtotal | 937,585 | 22,150 | (69,192) | 120,617 | (3,910) | 1,007,251 |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 2,491,043 | 119,226 | (120,513) | 328,746 | 4,768 | 2,823,270 |
| B. State and School | 11,504,266 | 451,844 | (676,846) | 1,503,006 | 20,087 | 12,802,356 |
| C. Subtotal | 13,995,309 | 571,069 | (797,359) | 1,831,752 | 24,855 | 15,625,626 |
| III. Public Safety Contributory | | | | | | |
| A. State | 49,529 | 95 | (6,168) | 6,241 | 856 | 50,553 |
| B. Other Division A (2.5% COLA) | 93,144 | 1,328 | (9,603) | 13,460 | 14,084 | 112,413 |
| C. Other Division A (4% COLA) | 23,517 | 81 | (2,570) | 3,095 | 1,257 | 25,379 |
| D. Logan | 9,920 | 158 | (848) | 1,285 | 170 | 10,685 |
| E. Other Division B (2.5% COLA) | 24,677 | 166 | (1,966) | 3,134 | (111) | 25,900 |
| F. Other Division B (4% COLA) | 6,021 | 129 | (419) | 789 | 102 | 6,622 |
| G. Subtotal | 206,808 | 1,956 | (21,575) | 28,003 | 16,358 | 231,551 |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 594,769 | 35,360 | (38,370) | 78,184 | 749 | 670,690 |
| B. Other Division A (2.5% COLA) | 515,510 | 32,504 | (24,001) | 65,647 | (26,499) | 563,161 |
| C. Other Division A (4% COLA) | 127,234 | 9,027 | (5,817) | 17,924 | 11,173 | 159,540 |
| D. Salt Lake City | 160,521 | 10,080 | (13,524) | 20,958 | 514 | 178,548 |
| E. Ogden | 39,961 | 1,885 | (3,447) | 5,165 | (117) | 43,447 |
| F. Provo | 28,239 | 1,562 | (2,185) | 3,690 | (26) | 31,281 |
| G. Logan | 6,520 | 649 | (235) | 869 | (139) | 7,664 |
| H. Bountiful | 13,967 | 485 | (1,154) | 1,795 | (96) | 14,997 |
| I. Other Division B (2.5% COLA) | 108,055 | 9,291 | (5,056) | 14,559 | 582 | 127,431 |
| J. Other Division B (4% COLA) | 19,610 | 1,355 | (979) | 2,778 | 1,749 | 24,513 |
| K. Subtotal | 1,614,387 | 102,197 | (94,768) | 211,569 | (12,110) | 1,821,273 |
| V. Firefighters | | | | | | |
| A. Division A | 91,427 | 6,975 | (3,741) | 11,841 | 440 | 106,941 |
| B. Division B | 590,791 | 18,052 | (37,793) | 76,921 | 1,344 | 649,315 |
| C. Subtotal | 682,218 | 25,027 | (41,534) | 88,762 | 1,784 | 756,256 |
| VI. Judges | 111,727 | 4,714 | (9,011) | 14,528 | 1,078 | 123,037 |
| VII. Governors and Legislative | 8,995 | 0 | (796) | 1,137 | 2 | 9,337 |
| VIII. 3% Substantial Substitute | 157,252 | 26,613 | (60) | 20,836 | (28,057) | 176,583 |
| IX. Grand Total | 17,714,281 | 753,727 | (1,034,295) | 2,317,203 | 0 | 19,750,915 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

Investment Return Rates for Prior Year

| | Basis of Assets | |
|--|-----------------|-----------------|
| | Market Value | Actuarial Value |
| | (1) | (2) |
| 1. Beginning of year assets | 17,714,282 | 20,814,941 |
| 2. Contributions to fund during year | 754,874 | 754,874 |
| 3. Benefit payments during year (including refunds of contributions) | (1,034,295) | (1,034,295) |
| 4. Transfers to and (from) URS | 0 | 0 |
| 5. Investment income, net of investment and administrative expenses | 2,316,054 | 591,018 |
| 6. End of year assets | 19,750,915 | 21,126,538 |
| 7. Investment return rate | 13.2% | 2.9% |

Note: Amounts shown are in \$ thousands

Summary of Investment Return Rates

| Year | Return on Market Value | Return on Actuarial Value |
|------|---------------------------|------------------------------|
| (1) | (2) | (3) |
| 1991 | 21.5% | 11.4% |
| 1992 | 4.3% | 10.5% |
| 1993 | 15.7% | 13.8% |
| 1994 | 0.0% | 8.8% |
| 1995 | 21.4% | 11.6% |
| 1996 | 14.7% | 11.7% |
| 1997 | 15.8% | 13.7% |
| 1998 | 9.4% | 12.6% |
| 1999 | 16.3% | 14.7% |
| 2000 | 1.8% | 11.2% |
| 2001 | -5.3% | 6.8% |
| 2002 | -8.0% | -1.5% |
| 2003 | 25.6% | 8.0% |
| 2004 | 13.7% | 5.3% |
| 2005 | 9.2% | 7.4% |
| 2006 | 14.4% | 11.1% |
| 2007 | 6.6% | 13.0% |
| 2008 | -23.4% | -1.1% |
| 2009 | 13.2% | 6.1% |
| 2010 | 13.2% | 2.9% |

Average return

| | | |
|----------------|------|------|
| Last 5 years: | 3.7% | 6.3% |
| Last 10 years: | 5.0% | 5.7% |
| Last 15 years: | 7.1% | 8.0% |
| Last 20 years: | 8.4% | 8.8% |

**Calculation of Actuarial Value of Assets
 (All Retirement Systems Combined)**

1. Market value of assets 19,750,915

2. Adjustments to smooth asset values based on
 excess/shortfall of expected investment income for:

| <u>Year</u> | <u>Total Excess/(Shortfall)</u> | <u>Weight Subtracted</u> | <u>Weighted Amount</u> |
|-------------|-------------------------------------|------------------------------|----------------------------|
| a. 2010 | 954,218 | 80% | 764,175 |
| b. 2009 | 855,579 | 60% | 513,455 |
| c. 2008 | (6,489,978) | 40% | (2,595,991) |
| d. 2007 | (286,308) | 20% | (57,262) |
| e. 2006 | 1,116,942 | 0% | <u>0</u> |
| f. Total | | | (1,375,623) |

3. Preliminary actuarial value of assets (1-2f) 21,126,538

4. Corridor Limits

a. 75% of market value 14,813,186

b. 125% of market value 24,688,643

c. Actuarial value (Item 3, not more than 4b, not less than 4a) 21,127,490

5. Ratio of actuarial value to market value 107.0%

Note: Amounts shown are in \$ thousands

Transfer Adjustments to Asset Values

| Fund/Division (1) | Market Value of Assets (MVA) at January 1, 2011 | | | Actuarial Value of Assets (AVA) at January 1, 2011 | | |
|--------------------------------------|---|---------------------------|------------------------------|--|---------------------------|------------------------------|
| | MVA Before Transfer (2) | Transfer Amount (3) | MVA After Transfer (4) | AVA Before Transfer (5) | Transfer Amount (6) | AVA After Transfer (7) |
| I. Public Employees Contributory | | | | | | |
| A. Local Government | 340,342 | 12,323 | 352,665 | 366,036 | 13,124 | 379,160 |
| B. State and School | 666,909 | 27,312 | 694,221 | 724,277 | 29,224 | 753,501 |
| C. Subtotal | 1,007,251 | 39,635 | 1,046,886 | 1,090,313 | 42,348 | 1,132,661 |
| II. Public Employees Noncontributory | | | | | | |
| A. Local Government | 2,823,270 | (12,323) | 2,810,947 | 3,006,778 | (13,124) | 2,993,654 |
| B. State and School | 12,802,356 | (27,312) | 12,775,044 | 13,698,660 | (29,224) | 13,669,436 |
| C. Subtotal | 15,625,626 | (39,635) | 15,585,991 | 16,705,438 | (42,348) | 16,663,090 |
| III. Public Safety Contributory | | | | | | |
| A. State | 50,553 | 566 | 51,119 | 55,868 | 603 | 56,471 |
| B. Other Division A (2.5% COLA) | 112,413 | 6,664 | 119,077 | 125,902 | 7,128 | 133,030 |
| C. Other Division A (4% COLA) | 25,379 | 766 | 26,144 | 27,449 | 819 | 28,268 |
| D. Logan | 10,685 | 696 | 11,381 | 11,642 | 726 | 12,368 |
| E. Other Division B (2.5% COLA) | 25,900 | 2,597 | 28,497 | 28,890 | 2,778 | 31,668 |
| F. Other Division B (4% COLA) | 6,622 | 322 | 6,943 | 7,073 | 344 | 7,417 |
| G. Subtotal | 231,551 | 11,610 | 243,161 | 256,824 | 12,398 | 269,222 |
| IV. Public Safety Noncontributory | | | | | | |
| A. State | 670,690 | (566) | 670,124 | 714,513 | (603) | 713,910 |
| B. Other Division A (2.5% COLA) | 563,161 | (6,664) | 556,497 | 595,566 | (7,128) | 588,438 |
| C. Other Division A (4% COLA) | 159,540 | (766) | 158,774 | 167,548 | (819) | 166,729 |
| D. Salt Lake City | 178,548 | 0 | 178,548 | 191,117 | 0 | 191,117 |
| E. Ogden | 43,447 | 0 | 43,447 | 46,853 | 0 | 46,853 |
| F. Provo | 31,281 | 0 | 31,281 | 33,504 | 0 | 33,504 |
| G. Logan | 7,664 | (696) | 6,968 | 7,992 | (726) | 7,267 |
| H. Bountiful | 14,997 | 0 | 14,997 | 16,140 | 0 | 16,140 |
| I. Other Division B (2.5% COLA) | 127,431 | (2,597) | 124,834 | 133,157 | (2,778) | 130,379 |
| J. Other Division B (4% COLA) | 24,513 | (322) | 24,192 | 25,689 | (344) | 25,345 |
| K. Subtotal | 1,821,273 | (11,610) | 1,809,663 | 1,932,079 | (12,398) | 1,919,682 |
| V. Firefighters | | | | | | |
| A. Division A | 106,941 | 0 | 106,941 | 113,256 | 0 | 113,256 |
| B. Division B | 649,315 | 0 | 649,315 | 696,960 | 0 | 696,960 |
| C. Subtotal | 756,256 | 0 | 756,256 | 810,216 | 0 | 810,216 |
| VI. Judges | 123,037 | 0 | 123,037 | 131,869 | 0 | 131,869 |
| VII. Governors and Legislative | 9,337 | 0 | 9,337 | 10,197 | 0 | 10,197 |
| VIII. 3% Substantial Substitute | 176,583 | 0 | 176,583 | 189,601 | 0 | 189,601 |
| IX. Grand Total | 19,750,915 | 0 | 19,750,915 | 21,126,538 | 0 | 21,126,538 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

Actuarially Determined Contribution Rate for 3% Substantial Substitute

| | |
|--|----------------|
| 1. Actuarial accrued liability, all funds combined | |
| a. Retirees | 325,417 |
| b. Inactives | 17,390 |
| c. Actives | <u>169,740</u> |
| d. Total | 512,547 |
| 2. Actuarial value of assets | 189,601 |
| 3. Unfunded actuarial accrued liability | 322,946 |
| 4. Covered compensation of state funds that will pay for benefit | 3,221,716 |
| 5. Calculated rate (23-year funding period and 3.50% PGR) | 0.65% |

Notes: Amounts shown are in \$ thousands

Columns may not add to total due to rounding

Liabilities for 3% Substantial Substitute

| Fund/Division (1) | Retirees and Beneficiaries (2) | Inactive Members (3) | Active Members (4) | Total (5) |
|--------------------------------------|--------------------------------------|----------------------------|--------------------------|----------------|
| I. Public Employees Contributory | | | | |
| A. Local Government | 5,215 | 879 | 5,749 | 11,843 |
| B. State and School | 12,305 | 2,128 | 10,731 | 25,164 |
| C. Subtotal | <u>17,520</u> | <u>3,007</u> | <u>16,480</u> | <u>37,007</u> |
| II. Public Employees Noncontributory | | | | |
| A. Local Government | 36,343 | 3,369 | 24,340 | 64,052 |
| B. State and School | 214,590 | 9,478 | 114,483 | 338,550 |
| C. Subtotal | <u>250,933</u> | <u>12,847</u> | <u>138,823</u> | <u>402,602</u> |
| III. Public Safety Contributory | | | | |
| A. State | 1,575 | 28 | 70 | 1,673 |
| B. Other Division A (2.5% COLA) | 3,113 | 319 | 137 | 3,569 |
| C. Other Division A (4% COLA) | 768 | 17 | 10 | 795 |
| D. Logan | 325 | 2 | 0 | 326 |
| E. Other Division B (2.5% COLA) | 776 | 38 | 35 | 849 |
| F. Other Division B (4% COLA) | 166 | 4 | 0 | 170 |
| G. Subtotal | <u>6,723</u> | <u>408</u> | <u>252</u> | <u>7,382</u> |
| IV. Public Safety Noncontributory | | | | |
| A. State | 13,734 | 305 | 3,323 | 17,363 |
| B. Other Division A (2.5% COLA) | 8,479 | 267 | 2,633 | 11,379 |
| C. Other Division A (4% COLA) | 2,192 | 83 | 503 | 2,778 |
| D. Salt Lake City | 4,783 | 46 | 810 | 5,639 |
| E. Ogden | 1,314 | 9 | 127 | 1,451 |
| F. Provo | 748 | 9 | 167 | 924 |
| G. Logan | 109 | 0 | 69 | 178 |
| H. Bountiful | 349 | 1 | 91 | 441 |
| I. Other Division B (2.5% COLA) | 1,707 | 135 | 623 | 2,465 |
| J. Other Division B (4% COLA) | 413 | 22 | 194 | 628 |
| K. Subtotal | <u>33,828</u> | <u>877</u> | <u>8,540</u> | <u>43,246</u> |
| V. Firefighters | | | | |
| A. Division A | 1,156 | 46 | 762 | 1,964 |
| B. Division B | 12,723 | 101 | 3,642 | 16,466 |
| C. Subtotal | <u>13,879</u> | <u>147</u> | <u>4,404</u> | <u>18,430</u> |
| VI. Judges | 2,398 | 52 | 1,231 | 3,681 |
| VII. Governors and Legislative | 136 | 51 | 13 | 200 |
| VIII. Grand Total | 325,417 | 17,389 | 169,743 | 512,548 |

Notes: Amounts shown are in \$ thousands
Columns may not add to total due to rounding

**Governors and Legislative Pension Plan
Determination of Contribution**

| | |
|---|------------------|
| 1. Actuarial Accrued Liability | |
| a. Retirees | 6,315,339 |
| b. Inactives | 3,169,912 |
| c. Actives | <u>2,027,363</u> |
| d. Total | 11,512,614 |
| | |
| 2. Actuarial Value of Assets | 10,197,000 |
| | |
| 3. Unfunded Actuarial Accrued Liability (UAAL) (1d) - (2) | 1,315,614 |
| | |
| 4. Normal Cost | 115,878 |
| | |
| 5. Total Recommended Appropriation Payable by June 30, 2013 | |
| a. Normal Cost | 115,878 |
| b. Amortization Charge | <u>117,746</u> |
| c. Subtotal | 233,624 |
| d. Interest Adjustment (two years at 7.50%) | <u>36,358</u> |
| e. Total | 269,982 |

**Historical Summary of Statistical Data
Public Employees Retirement System
(Contributory)**

| Plan Year Beginning January 1st | Participant Counts | | | | Covered Payroll (\$ Thousands) | Average Pay (7) | Retirement Benefits in Force Annual Amount (\$ Thousands) | Average Retiree Monthly Benefit (9) | Market Value of Assets (\$ Thousands) | Actuarial Value of Assets (\$ Thousands) |
|---------------------------------------|--------------------|-----------------|----------------|--------------|--------------------------------------|-----------------------|---|---|---|--|
| | Active (2) | Inactive (3) | Retired (4) | Total (5) | | | | | | |
| 1990 | 20,773 | 8,984 | 13,029 | 42,786 | 428,720 | 20,638 | 55,504 | 355 | Not Available | 954,900 |
| 1991 | 15,784 | 892 | 12,331 | 29,007 | 340,524 | 21,574 | 56,673 | 383 | 803,332 | 796,016 |
| 1992 | 12,430 | 1,629 | 12,275 | 26,334 | 287,907 | 23,162 | 57,306 | 389 | 867,300 | 785,115 |
| 1993 | 11,405 | 1,497 | 11,858 | 24,760 | 283,299 | 24,840 | 57,608 | 405 | 833,053 | 800,806 |
| 1994 | 10,826 | 1,733 | 11,444 | 24,003 | 280,655 | 25,924 | 57,861 | 421 | 929,993 | 880,979 |
| 1995 | 10,421 | 1,805 | 11,115 | 23,341 | 284,657 | 27,316 | 58,345 | 437 | 922,155 | 935,845 |
| 1996 | 6,954 | 2,028 | 10,645 | 19,627 | 195,717 | 28,145 | 58,238 | 456 | 919,007 | 852,034 |
| 1997 | 4,673 | 1,906 | 10,176 | 16,755 | 135,083 | 28,907 | 57,770 | 473 | 859,304 | 772,977 |
| 1998 | 4,396 | 1,975 | 9,724 | 16,095 | 134,341 | 30,560 | 57,496 | 493 | 916,532 | 809,388 |
| 1999 | 4,144 | 2,089 | 9,208 | 15,441 | 133,440 | 32,201 | 56,599 | 512 | 927,169 | 840,215 |
| 2000 | 3,967 | 2,134 | 8,717 | 14,818 | 133,615 | 33,682 | 55,716 | 533 | 974,834 | 878,190 |
| 2001 | 3,827 | 2,149 | 8,264 | 14,240 | 134,816 | 35,228 | 56,264 | 567 | 936,798 | 924,573 |
| 2002 | 3,703 | 2,262 | 7,822 | 13,787 | 137,721 | 37,192 | 55,569 | 592 | 827,741 | 927,523 |
| 2003 | 3,608 | 2,269 | 7,375 | 13,252 | 137,743 | 38,177 | 54,765 | 619 | 749,408 | 899,290 |
| 2004 | 3,444 | 2,293 | 6,916 | 12,653 | 134,144 | 38,950 | 53,815 | 648 | 873,520 | 913,948 |
| 2005 | 3,318 | 2,285 | 6,550 | 12,153 | 134,810 | 40,630 | 53,630 | 682 | 971,242 | 933,974 |
| 2006 | 3,140 | 2,321 | 5,963 | 11,424 | 131,437 | 41,859 | 51,646 | 722 | 1,014,414 | 951,540 |
| 2007 | 2,964 | 2,372 | 5,687 | 11,023 | 127,588 | 43,046 | 53,059 | 777 | 1,105,890 | 1,004,452 |
| 2008 | 2,821 | 2,425 | 5,718 | 10,964 | 128,030 | 45,385 | 57,596 | 839 | 1,142,078 | 1,102,107 |
| 2009 | 2,701 | 2,476 | 5,408 | 10,585 | 128,970 | 47,749 | 58,318 | 899 | 878,169 | 1,097,711 |
| 2010 | 2,470 | 2,467 | 5,171 | 10,108 | 120,258 | 48,687 | 62,382 | 1,005 | 939,905 | 1,116,735 |
| 2011 | 2,289 | 2,416 | 4,947 | 9,652 | 110,691 | 48,358 | 64,170 | 1,081 | 1,046,886 | 1,132,661 |

**Historical Summary of Statistical Data
Public Employees Retirement System
(Noncontributory)**

| Plan Year Beginning January 1st | Participant Counts | | | | Covered Payroll (\$ Thousands) | Average Pay (7) | Retirement Benefits in Force Annual Amount (\$ Thousands) | Average Retiree Monthly Benefit (9) | Market Value of Assets (\$ Thousands) | Actuarial Value of Assets (\$ Thousands) |
|---------------------------------------|--------------------|-----------------|----------------|--------------|--------------------------------------|-----------------------|---|---|---|--|
| | Active (2) | Inactive (3) | Retired (4) | Total (5) | | | | | | |
| 1990 | 43,981 | 9,783 | 4,421 | 58,185 | 940,325 | 21,380 | 56,500 | 1,064 | Not Available | 2,100,892 |
| 1991 | 50,245 | 15,373 | 5,206 | 70,824 | 1,061,835 | 21,133 | 68,032 | 1,089 | 2,618,017 | 2,594,245 |
| 1992 | 58,836 | 8,042 | 6,114 | 72,992 | 1,329,925 | 22,604 | 76,871 | 1,048 | 3,345,871 | 3,041,640 |
| 1993 | 59,739 | 7,911 | 7,023 | 74,673 | 1,425,612 | 23,864 | 89,557 | 1,063 | 3,609,761 | 3,480,582 |
| 1994 | 63,448 | 9,507 | 8,025 | 80,980 | 1,536,528 | 24,217 | 104,731 | 1,088 | 4,258,021 | 4,039,120 |
| 1995 | 67,698 | 10,131 | 9,143 | 86,972 | 1,688,967 | 24,949 | 121,850 | 1,111 | 4,312,948 | 4,372,190 |
| 1996 | 69,922 | 12,413 | 10,458 | 92,793 | 1,862,940 | 26,643 | 142,838 | 1,138 | 5,497,373 | 5,128,203 |
| 1997 | 73,478 | 13,965 | 11,841 | 99,284 | 2,048,876 | 27,884 | 166,432 | 1,171 | 6,547,598 | 5,954,796 |
| 1998 | 76,728 | 15,383 | 13,242 | 105,353 | 2,231,957 | 29,089 | 192,723 | 1,213 | 7,711,808 | 6,896,740 |
| 1999 | 77,360 | 17,494 | 14,645 | 109,499 | 2,343,986 | 30,300 | 220,230 | 1,253 | 8,560,909 | 7,894,249 |
| 2000 | 80,639 | 18,630 | 16,163 | 115,432 | 2,486,200 | 30,831 | 248,366 | 1,281 | 10,112,606 | 9,186,463 |
| 2001 | 81,850 | 20,357 | 17,728 | 119,935 | 2,611,413 | 31,905 | 280,910 | 1,320 | 10,367,596 | 10,294,444 |
| 2002 | 83,690 | 27,385 | 19,145 | 130,220 | 2,801,564 | 33,475 | 314,821 | 1,370 | 9,848,682 | 11,021,828 |
| 2003 | 83,925 | 26,664 | 20,623 | 131,212 | 2,888,853 | 34,422 | 351,690 | 1,421 | 8,963,388 | 10,756,065 |
| 2004 | 84,039 | 28,673 | 22,202 | 134,914 | 2,915,008 | 34,686 | 388,305 | 1,457 | 11,191,566 | 11,551,092 |
| 2005 | 85,502 | 30,498 | 23,782 | 139,782 | 3,058,487 | 35,771 | 426,813 | 1,496 | 12,639,732 | 12,093,408 |
| 2006 | 86,502 | 33,035 | 25,446 | 144,983 | 3,121,800 | 36,089 | 466,287 | 1,527 | 13,756,039 | 12,935,862 |
| 2007 | 87,960 | 34,820 | 27,866 | 150,646 | 3,284,295 | 37,339 | 532,188 | 1,592 | 15,664,709 | 14,295,945 |
| 2008 | 91,342 | 36,713 | 30,325 | 158,380 | 3,583,525 | 39,232 | 596,337 | 1,639 | 16,564,574 | 16,026,629 |
| 2009 | 93,633 | 38,324 | 32,104 | 164,061 | 3,837,934 | 40,989 | 642,434 | 1,668 | 12,533,979 | 15,667,473 |
| 2010 | 92,847 | 39,583 | 34,433 | 166,863 | 3,888,415 | 41,847 | 726,282 | 1,758 | 13,992,989 | 16,434,614 |
| 2011 | 91,871 | 40,928 | 36,612 | 169,411 | 3,842,855 | 41,828 | 778,376 | 1,772 | 15,585,991 | 16,663,090 |

**Historical Summary of Statistical Data
Public Safety Retirement System
(Contributory)**

| Plan Year Beginning January 1st | Participant Counts | | | | Covered Payroll (\$ Thousands) | Average Pay (7) | Retirement Benefits in Force Annual Amount (\$ Thousands) | Average Retiree Monthly Benefit (9) | Market Value of Assets (\$ Thousands) | Actuarial Value of Assets (\$ Thousands) |
|---------------------------------------|--------------------|-----------------|----------------|--------------|--------------------------------------|-----------------------|---|---|---|--|
| | Active (2) | Inactive (3) | Retired (4) | Total (5) | | | | | | |
| 1990 | 2,612 | 713 | 1,194 | 4,519 | 65,978 | 25,260 | 13,139 | 917 | Not Available | 330,407 |
| 1991 | 1,641 | 520 | 1,190 | 3,351 | 42,496 | 25,896 | 13,530 | 948 | 240,788 | 241,347 |
| 1992 | 1,644 | 709 | 1,237 | 3,590 | 44,469 | 27,049 | 14,290 | 963 | 289,472 | 263,237 |
| 1993 | 1,591 | 705 | 1,251 | 3,547 | 44,934 | 28,244 | 14,860 | 990 | 295,915 | 285,043 |
| 1994 | 1,601 | 714 | 1,273 | 3,588 | 46,728 | 29,187 | 15,373 | 1,006 | 326,536 | 311,148 |
| 1995 | 1,280 | 568 | 1,294 | 3,142 | 38,571 | 30,134 | 16,087 | 1,036 | 284,198 | 289,572 |
| 1996 | 971 | 525 | 1,321 | 2,817 | 30,304 | 31,209 | 17,323 | 1,093 | 310,209 | 291,478 |
| 1997 | 952 | 543 | 1,322 | 2,817 | 31,940 | 33,550 | 17,735 | 1,118 | 335,065 | 304,699 |
| 1998 | 1,006 | 531 | 1,340 | 2,877 | 34,262 | 34,058 | 18,487 | 1,150 | 364,531 | 324,488 |
| 1999 | 855 | 498 | 1,344 | 2,697 | 29,704 | 34,742 | 19,147 | 1,187 | 347,477 | 316,739 |
| 2000 | 804 | 486 | 1,333 | 2,623 | 28,957 | 36,016 | 19,351 | 1,210 | 363,654 | 327,635 |
| 2001 | 794 | 479 | 1,243 | 2,516 | 30,021 | 37,810 | 18,611 | 1,248 | 331,370 | 326,949 |
| 2002 | 795 | 503 | 1,257 | 2,555 | 30,783 | 38,721 | 19,480 | 1,291 | 293,617 | 328,959 |
| 2003 | 789 | 502 | 1,250 | 2,541 | 31,501 | 39,925 | 20,222 | 1,348 | 269,041 | 322,275 |
| 2004 | 759 | 519 | 1,249 | 2,527 | 31,688 | 41,749 | 20,759 | 1,385 | 316,514 | 331,432 |
| 2005 | 740 | 522 | 1,241 | 2,503 | 32,446 | 43,846 | 21,202 | 1,424 | 352,753 | 339,304 |
| 2006 | 698 | 526 | 1,256 | 2,480 | 31,443 | 45,047 | 22,127 | 1,468 | 368,717 | 345,699 |
| 2007 | 693 | 534 | 1,252 | 2,479 | 32,291 | 46,596 | 23,020 | 1,532 | 398,502 | 361,788 |
| 2008 | 539 | 505 | 1,101 | 2,145 | 25,700 | 47,681 | 20,452 | 1,548 | 330,176 | 318,303 |
| 2009 | 188 | 431 | 1,027 | 1,646 | 9,507 | 50,569 | 19,531 | 1,585 | 201,270 | 267,761 |
| 2010 | 165 | 404 | 1,046 | 1,615 | 8,398 | 50,906 | 21,177 | 1,687 | 222,779 | 271,894 |
| 2011 | 140 | 408 | 1,018 | 1,566 | 6,933 | 49,514 | 21,200 | 1,735 | 243,161 | 269,222 |

**Historical Summary of Statistical Data
Public Safety Retirement System
(Noncontributory)**

| Plan Year Beginning January 1st | Participant Counts | | | | Covered Payroll (\$ Thousands) | Average Pay (7) | Retirement Benefits in Force Annual Amount (\$ Thousands) | Average Retiree Monthly Benefit (9) | Market Value of Assets (\$ Thousands) | Actuarial Value of Assets (\$ Thousands) |
|---------------------------------------|--------------------|-----------------|----------------|--------------|--------------------------------------|-----------------------|---|---|---|--|
| | Active (2) | Inactive (3) | Retired (4) | Total (5) | | | | | | |
| 1990 | 1,512 | 32 | 15 | 1,559 | 37,798 | 24,999 | 229 | 917 | Not Available | 330,407 |
| 1991 | 2,697 | 154 | 65 | 2,916 | 68,205 | 25,290 | 997 | 1,278 | 136,287 | 132,275 |
| 1992 | 3,006 | 174 | 120 | 3,300 | 76,914 | 25,587 | 1,939 | 1,346 | 179,950 | 162,737 |
| 1993 | 3,198 | 185 | 175 | 3,558 | 85,678 | 26,791 | 2,935 | 1,398 | 200,668 | 193,301 |
| 1994 | 3,289 | 198 | 238 | 3,725 | 89,839 | 27,315 | 4,272 | 1,496 | 251,536 | 236,786 |
| 1995 | 3,899 | 360 | 304 | 4,563 | 111,292 | 28,544 | 5,684 | 1,558 | 297,278 | 300,101 |
| 1996 | 4,455 | 555 | 395 | 5,405 | 130,552 | 29,305 | 7,596 | 1,603 | 409,217 | 379,132 |
| 1997 | 4,720 | 614 | 492 | 5,826 | 149,086 | 31,586 | 9,870 | 1,672 | 496,197 | 450,407 |
| 1998 | 5,033 | 664 | 592 | 6,289 | 161,826 | 32,153 | 12,068 | 1,699 | 606,326 | 542,680 |
| 1999 | 5,427 | 752 | 747 | 6,926 | 180,904 | 33,334 | 15,603 | 1,741 | 726,304 | 672,062 |
| 2000 | 5,735 | 865 | 882 | 7,482 | 196,271 | 34,223 | 18,504 | 1,748 | 898,266 | 818,697 |
| 2001 | 5,974 | 832 | 1,118 | 7,924 | 212,442 | 35,561 | 23,428 | 1,746 | 964,708 | 960,047 |
| 2002 | 6,120 | 1,464 | 1,326 | 8,910 | 225,760 | 36,889 | 28,907 | 1,817 | 936,286 | 1,047,507 |
| 2003 | 6,228 | 1,733 | 1,462 | 9,423 | 237,192 | 38,085 | 33,444 | 1,906 | 855,508 | 1,027,160 |
| 2004 | 6,324 | 1,915 | 1,617 | 9,856 | 243,745 | 38,543 | 38,614 | 1,990 | 1,087,654 | 1,117,457 |
| 2005 | 6,428 | 2,093 | 1,808 | 10,329 | 257,241 | 40,019 | 44,508 | 2,051 | 1,241,290 | 1,185,601 |
| 2006 | 6,556 | 2,283 | 2,038 | 10,877 | 263,905 | 40,254 | 51,112 | 2,090 | 1,367,735 | 1,287,322 |
| 2007 | 6,740 | 2,481 | 2,205 | 11,426 | 282,955 | 41,981 | 57,294 | 2,165 | 1,582,989 | 1,447,411 |
| 2008 | 7,015 | 2,633 | 2,612 | 12,260 | 311,886 | 44,460 | 67,997 | 2,169 | 1,776,121 | 1,720,309 |
| 2009 | 7,642 | 2,854 | 2,841 | 13,337 | 356,186 | 46,609 | 75,602 | 2,218 | 1,409,649 | 1,745,887 |
| 2010 | 7,519 | 3,066 | 3,042 | 13,627 | 359,978 | 47,983 | 84,735 | 2,321 | 1,598,416 | 1,861,644 |
| 2011 | 7,443 | 3,186 | 3,207 | 13,836 | 355,318 | 47,739 | 91,555 | 2,379 | 1,809,663 | 1,919,682 |

**Historical Summary of Statistical Data
Firefighters Retirement System**

| Plan Year Beginning January 1st | Participant Counts | | | | Covered Payroll (\$ Thousands) | Average Pay (7) | Retirement Benefits in Force Annual Amount (\$ Thousands) | Average Retiree Monthly Benefit (9) | Market Value of Assets (\$ Thousands) | Actuarial Value of Assets (\$ Thousands) |
|---------------------------------------|--------------------|-----------------|----------------|--------------|--------------------------------------|-----------------------|---|---|---|--|
| | Active (2) | Inactive (3) | Retired (4) | Total (5) | | | | | | |
| 1990 | 993 | 76 | 544 | 1,613 | 28,661 | 28,863 | 6,626 | 1,015 | Not Available | 149,672 |
| 1991 | 1,024 | 66 | 553 | 1,643 | 30,649 | 29,932 | 7,134 | 1,075 | 163,428 | 161,945 |
| 1992 | 1,047 | 82 | 575 | 1,704 | 33,232 | 31,740 | 7,672 | 1,112 | 202,726 | 183,352 |
| 1993 | 1,072 | 89 | 587 | 1,748 | 36,500 | 34,049 | 8,209 | 1,165 | 211,975 | 203,985 |
| 1994 | 1,079 | 100 | 595 | 1,774 | 37,191 | 34,468 | 8,678 | 1,215 | 247,715 | 234,501 |
| 1995 | 1,123 | 103 | 618 | 1,844 | 39,669 | 35,324 | 9,811 | 1,323 | 249,712 | 253,304 |
| 1996 | 1,165 | 116 | 644 | 1,925 | 42,599 | 36,566 | 10,397 | 1,415 | 315,063 | 293,816 |
| 1997 | 1,229 | 123 | 675 | 2,027 | 47,550 | 38,690 | 12,049 | 1,488 | 362,555 | 329,475 |
| 1998 | 1,285 | 130 | 707 | 2,122 | 50,886 | 39,600 | 13,747 | 1,620 | 421,184 | 376,178 |
| 1999 | 1,352 | 156 | 736 | 2,244 | 54,402 | 40,238 | 14,940 | 1,692 | 460,190 | 423,405 |
| 2000 | 1,380 | 160 | 772 | 2,312 | 57,664 | 41,786 | 16,112 | 1,739 | 532,783 | 483,373 |
| 2001 | 1,433 | 173 | 823 | 2,429 | 61,593 | 42,982 | 18,163 | 1,839 | 540,822 | 536,503 |
| 2002 | 1,504 | 179 | 866 | 2,549 | 66,871 | 44,462 | 20,008 | 1,925 | 508,565 | 569,151 |
| 2003 | 1,545 | 197 | 884 | 2,626 | 71,347 | 46,179 | 22,246 | 2,097 | 461,324 | 553,589 |
| 2004 | 1,577 | 222 | 920 | 2,719 | 75,148 | 47,653 | 22,859 | 2,071 | 570,160 | 589,502 |
| 2005 | 1,608 | 237 | 948 | 2,793 | 79,168 | 49,234 | 24,242 | 2,131 | 637,979 | 610,688 |
| 2006 | 1,647 | 294 | 979 | 2,920 | 83,495 | 50,695 | 26,064 | 2,219 | 686,062 | 644,496 |
| 2007 | 1,690 | 315 | 1,021 | 3,026 | 87,089 | 51,532 | 28,312 | 2,311 | 773,774 | 705,051 |
| 2008 | 1,786 | 338 | 1,098 | 3,222 | 94,488 | 52,905 | 31,944 | 2,424 | 814,674 | 787,663 |
| 2009 | 1,852 | 370 | 1,120 | 3,342 | 101,508 | 54,810 | 33,985 | 2,529 | 612,696 | 765,871 |
| 2010 | 1,899 | 396 | 1,168 | 3,463 | 105,341 | 55,472 | 37,991 | 2,711 | 682,218 | 802,576 |
| 2011 | 1,890 | 399 | 1,199 | 3,488 | 105,471 | 55,805 | 39,823 | 2,768 | 756,256 | 810,216 |

**Historical Summary of Statistical Data
Judges Retirement System**

| Plan Year Beginning January 1st | Participant Counts | | | | Covered Payroll (\$ Thousands) | Average Pay (7) | Retirement Benefits in Force Annual Amount (\$ Thousands) | Average Retiree Monthly Benefit (9) | Market Value of Assets (\$ Thousands) | Actuarial Value of Assets (\$ Thousands) |
|---------------------------------------|--------------------|-----------------|----------------|--------------|--------------------------------------|-----------------------|---|---|---|--|
| | Active (2) | Inactive (3) | Retired (4) | Total (5) | | | | | | |
| 1990 | 90 | 0 | 50 | 140 | 5,283 | 58,700 | 826 | 1,015 | Not Available | 19,127 |
| 1991 | 87 | 0 | 46 | 133 | 5,867 | 67,438 | 827 | 1,499 | 22,432 | 22,242 |
| 1992 | 89 | 0 | 53 | 142 | 6,267 | 70,416 | 1,087 | 1,710 | 28,765 | 26,167 |
| 1993 | 80 | 1 | 62 | 143 | 6,434 | 80,424 | 1,597 | 2,147 | 31,388 | 30,254 |
| 1994 | 85 | 1 | 68 | 154 | 6,897 | 81,142 | 1,930 | 2,365 | 37,398 | 35,479 |
| 1995 | 87 | 0 | 70 | 157 | 7,263 | 83,488 | 2,193 | 2,610 | 38,220 | 38,726 |
| 1996 | 98 | 3 | 70 | 171 | 8,480 | 86,534 | 2,309 | 2,749 | 47,531 | 44,304 |
| 1997 | 100 | 1 | 69 | 170 | 9,202 | 92,019 | 2,396 | 2,894 | 55,757 | 50,721 |
| 1998 | 102 | 1 | 72 | 175 | 9,298 | 91,158 | 2,778 | 3,215 | 66,299 | 59,373 |
| 1999 | 103 | 2 | 73 | 178 | 9,667 | 93,850 | 2,970 | 3,391 | 73,650 | 67,998 |
| 2000 | 106 | 2 | 73 | 181 | 10,150 | 95,750 | 3,078 | 3,514 | 85,921 | 78,130 |
| 2001 | 104 | 4 | 75 | 183 | 10,318 | 99,208 | 3,299 | 3,666 | 87,731 | 87,139 |
| 2002 | 106 | 4 | 78 | 188 | 10,910 | 102,925 | 3,608 | 3,855 | 82,760 | 92,649 |
| 2003 | 106 | 4 | 77 | 187 | 11,095 | 104,674 | 3,728 | 4,035 | 75,753 | 90,904 |
| 2004 | 106 | 5 | 83 | 194 | 11,163 | 105,311 | 4,306 | 4,324 | 94,467 | 97,412 |
| 2005 | 108 | 6 | 84 | 198 | 11,820 | 109,442 | 4,431 | 4,396 | 105,483 | 100,814 |
| 2006 | 109 | 5 | 85 | 199 | 11,721 | 107,533 | 4,711 | 4,618 | 113,353 | 106,374 |
| 2007 | 110 | 5 | 87 | 202 | 12,336 | 112,143 | 5,145 | 4,928 | 128,300 | 116,879 |
| 2008 | 110 | 6 | 96 | 212 | 13,387 | 121,700 | 5,931 | 5,149 | 134,366 | 129,847 |
| 2009 | 110 | 5 | 97 | 212 | 14,347 | 130,423 | 6,190 | 5,318 | 100,896 | 126,120 |
| 2010 | 108 | 4 | 107 | 219 | 14,458 | 133,873 | 7,435 | 5,791 | 111,727 | 131,491 |
| 2011 | 110 | 5 | 115 | 230 | 14,849 | 134,987 | 8,555 | 6,199 | 123,037 | 131,869 |

**Historical Summary of Statistical Data
Legislative and Governors Retirement System**

| Plan Year Beginning January 1st | Participant Counts | | | | Covered Payroll (\$ Thousands) | Average Pay (\$ Thousands) | Retirement Benefits in Force Annual Amount (\$ Thousands) | Average Retiree Monthly Benefit | Market Value of Assets (\$ Thousands) | Actuarial Value of Assets (\$ Thousands) |
|---------------------------------------|--------------------|----------|---------|-------|--------------------------------------|----------------------------------|---|--|---|--|
| | Active | Inactive | Retired | Total | | | | | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 1990 | 76 | 133 | 162 | 371 | 288 | 3,789 | 329 | 169 | Not Available | 6,007 |
| 1991 | 57 | 118 | 150 | 325 | 238 | 4,172 | 295 | 164 | 6,427 | 6,355 |
| 1992 | 87 | 127 | 173 | 387 | 254 | 2,925 | 369 | 178 | 7,584 | 6,790 |
| 1993 | 84 | 120 | 180 | 384 | 246 | 2,925 | 396 | 183 | 7,443 | 7,122 |
| 1994 | 93 | 126 | 188 | 407 | 427 | 4,593 | 385 | 171 | 8,089 | 7,683 |
| 1995 | 89 | 112 | 196 | 397 | 412 | 4,628 | 422 | 180 | 7,684 | 7,804 |
| 1996 | 96 | 111 | 201 | 408 | 439 | 4,569 | 445 | 184 | 8,788 | 8,185 |
| 1997 | 75 | 115 | 200 | 390 | 367 | 4,892 | 457 | 190 | 9,561 | 8,636 |
| 1998 | 90 | 108 | 208 | 406 | 488 | 5,419 | 476 | 191 | 10,531 | 9,318 |
| 1999 | 91 | 99 | 211 | 401 | 495 | 5,440 | 504 | 199 | 10,976 | 9,988 |
| 2000 | 94 | 101 | 221 | 416 | 511 | 5,437 | 531 | 200 | 12,159 | 10,946 |
| 2001 | 86 | 96 | 218 | 400 | 478 | 5,557 | 536 | 205 | 11,724 | 11,569 |
| 2002 | 94 | 107 | 228 | 429 | 601 | 6,391 | 562 | 206 | 10,448 | 11,710 |
| 2003 | 94 | 105 | 231 | 430 | 592 | 6,297 | 585 | 211 | 8,932 | 10,719 |
| 2004 | 100 | 110 | 223 | 433 | 610 | 6,097 | 573 | 214 | 10,390 | 10,906 |
| 2005 | 97 | 103 | 221 | 421 | 521 | 5,374 | 577 | 218 | 11,066 | 10,650 |
| 2006 | 88 | 113 | 224 | 425 | 788 | 8,955 | 608 | 226 | 11,319 | 10,587 |
| 2007 | 89 | 110 | 216 | 415 | 797 | 8,955 | 604 | 233 | 12,163 | 10,983 |
| 2008 | 92 | 118 | 220 | 430 | 538 | 5,850 | 596 | 226 | 12,195 | 11,736 |
| 2009 | 91 | 111 | 222 | 424 | 532 | 5,850 | 580 | 218 | 8,673 | 10,841 |
| 2010 | 94 | 117 | 223 | 434 | 585 | 6,224 | 773 | 289 | 8,995 | 10,770 |
| 2011 | 83 | 119 | 221 | 423 | 547 | 6,587 | 778 | 293 | 9,337 | 10,197 |

APPENDIX 1

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

1. *Investment return rate:*

7.50% per annum, compounded annually, composed of a 2.75% inflation rate, a 5.10% real rate of return, then net of 0.35% for administrative and investment expenses.

2. *Active member mortality rates:*

Active member mortality rates are a function of the member’s sex, occupation, and age. These rates were developed based on plan experience. For the Public Safety and Firefighters Systems, 25% of deaths are assumed to be service related. Rates at selected ages are shown:

| Active Male Members | | | |
|----------------------------|--|-------------------------|---|
| Age | Local Government and Public Employees | Public Educators | Public Safety and Firefighters¹ |
| 20 | .000495 | .000130 | .000440 |
| 25 | .000385 | .000130 | .000440 |
| 30 | .000440 | .000195 | .000440 |
| 35 | .000660 | .000195 | .000440 |
| 40 | .000825 | .000390 | .000605 |
| 45 | .001045 | .000650 | .001045 |
| 50 | .001540 | .001300 | .001760 |
| 55 | .002585 | .002340 | .002750 |
| 60 | .004180 | .003705 | .003740 |
| 65 | .006380 | .004680 | .004730 |
| 70 | .009130 | .005200 | .005665 |

| Active Female Members | | |
|------------------------------|--|-------------------------|
| Age | Local Government and Public Employees | Public Educators |
| 20 | .000275 | .000490 |
| 25 | .000275 | .000210 |
| 30 | .000275 | .000070 |
| 35 | .000330 | .000210 |
| 40 | .000440 | .000420 |
| 45 | .000660 | .000840 |
| 50 | .001045 | .001260 |
| 55 | .001540 | .001750 |
| 60 | .002200 | .002380 |
| 65 | .003025 | .003290 |
| 70 | .004015 | .004550 |

¹ Males and female combined.

3. *Disability rates:*

Disability rates are a function of the member’s sex, occupation, and age. These rates were developed based on plan experience. Rates are applied at all ages. For the Public Safety and Firefighters Systems, 25% of disabilities are assumed to be service related. Rates at selected ages are shown:

| Active Male Members | | | | | |
|---------------------|------------------|------------------|------------------|---------------|--------------|
| Age | Local Government | Public Employees | Public Educators | Public Safety | Firefighters |
| 20 | .000250 | .000220 | .000120 | .000320 | .000480 |
| 25 | .000375 | .000330 | .000180 | .000480 | .000720 |
| 30 | .000750 | .000660 | .000360 | .000960 | .001440 |
| 35 | .001125 | .000990 | .000540 | .001440 | .002160 |
| 40 | .001500 | .001320 | .000720 | .001920 | .002880 |
| 45 | .002500 | .002200 | .001200 | .003200 | .004800 |
| 50 | .003250 | .002860 | .001560 | .004160 | .006240 |
| 55 | .005125 | .004510 | .002460 | .006560 | .009840 |
| 60 | .007000 | .006160 | .003360 | .008960 | .013440 |

| Active Female Members | | | | | |
|-----------------------|------------------|------------------|------------------|---------------|--------------|
| Age | Local Government | Public Employees | Public Educators | Public Safety | Firefighters |
| 20 | .000220 | .000220 | .000120 | .000320 | .000480 |
| 25 | .000330 | .000330 | .000180 | .000480 | .000720 |
| 30 | .000660 | .000660 | .000360 | .000960 | .001440 |
| 35 | .000990 | .000990 | .000540 | .001440 | .002160 |
| 40 | .001320 | .001320 | .000720 | .001920 | .002880 |
| 45 | .002200 | .002200 | .001200 | .003200 | .004800 |
| 50 | .002860 | .002860 | .001560 | .004160 | .006240 |
| 55 | .004510 | .004510 | .002460 | .006560 | .009840 |
| 60 | .006160 | .006160 | .003360 | .008960 | .013440 |

4. *Termination rates (for causes other than death, disability or retirement):*

Termination rates are a function of the member’s sex, occupation, and service. These rates were developed based on plan experience. Termination rates are not applied after a member becomes eligible for a reduced or unreduced retirement benefit.

| Active Male Members | | | | | |
|----------------------------|-------------------------|-------------------------|-------------------------|----------------------|---------------------|
| Years of Service | | | | | |
| Service | Local Government | Public Employees | Public Educators | Public Safety | Firefighters |
| 0 | 0.1900 | 0.2700 | 0.1300 | 0.1000 | 0.0825 |
| 1 | 0.1500 | 0.2450 | 0.1100 | 0.0650 | 0.0350 |
| 2 | 0.1100 | 0.1500 | 0.0900 | 0.0600 | 0.0300 |
| 3 | 0.0900 | 0.1200 | 0.0750 | 0.0550 | 0.0300 |
| 4 | 0.0800 | 0.1000 | 0.0650 | 0.0500 | 0.0250 |
| 5 | 0.0700 | 0.0900 | 0.0500 | 0.0475 | 0.0250 |
| 6 | 0.0600 | 0.0800 | 0.0400 | 0.0450 | 0.0150 |
| 7 | 0.0550 | 0.0700 | 0.0300 | 0.0425 | 0.0150 |
| 8 | 0.0475 | 0.0600 | 0.0275 | 0.0375 | 0.0150 |
| 9 | 0.0400 | 0.0450 | 0.0250 | 0.0325 | 0.0150 |
| 10 | 0.0350 | 0.0425 | 0.0250 | 0.0300 | 0.0150 |
| 11 | 0.0325 | 0.0400 | 0.0225 | 0.0275 | 0.0150 |
| 12 | 0.0300 | 0.0375 | 0.0225 | 0.0250 | 0.0050 |
| 13 | 0.0300 | 0.0350 | 0.0200 | 0.0225 | 0.0050 |
| 14 | 0.0300 | 0.0300 | 0.0200 | 0.0200 | 0.0050 |
| 15 | 0.0275 | 0.0250 | 0.0175 | 0.0175 | 0.0050 |
| 16 | 0.0275 | 0.0225 | 0.0175 | 0.0150 | 0.0050 |
| 17 | 0.0275 | 0.0200 | 0.0175 | 0.0150 | 0.0050 |
| 18 | 0.0250 | 0.0175 | 0.0150 | 0.0125 | 0.0050 |
| 19 | 0.0250 | 0.0175 | 0.0050 | 0.0100 | 0.0050 |
| 20 | 0.0200 | 0.0175 | 0.0050 | 0.0000 | 0.0000 |
| 21 | 0.0200 | 0.0150 | 0.0050 | 0.0000 | 0.0000 |
| 22 | 0.0175 | 0.0125 | 0.0050 | 0.0000 | 0.0000 |
| 23 | 0.0150 | 0.0100 | 0.0050 | 0.0000 | 0.0000 |
| 24 | 0.0125 | 0.0075 | 0.0050 | 0.0000 | 0.0000 |
| 25+ | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

4. Termination rates (continued):

| Active Female Members | | | | | |
|-----------------------|------------------|------------------|------------------|---------------|--------------|
| Years of Service | | | | | |
| Service | Local Government | Public Employees | Public Educators | Public Safety | Firefighters |
| 0 | 0.2200 | 0.2500 | 0.1700 | 0.1000 | 0.0825 |
| 1 | 0.1800 | 0.2100 | 0.1600 | 0.0650 | 0.0350 |
| 2 | 0.1400 | 0.1700 | 0.1450 | 0.0600 | 0.0300 |
| 3 | 0.1200 | 0.1400 | 0.1250 | 0.0550 | 0.0300 |
| 4 | 0.1100 | 0.1100 | 0.1000 | 0.0500 | 0.0250 |
| 5 | 0.0975 | 0.0950 | 0.0850 | 0.0475 | 0.0250 |
| 6 | 0.0825 | 0.0825 | 0.0700 | 0.0450 | 0.0150 |
| 7 | 0.0750 | 0.0700 | 0.0550 | 0.0425 | 0.0150 |
| 8 | 0.0675 | 0.0650 | 0.0450 | 0.0375 | 0.0150 |
| 9 | 0.0625 | 0.0600 | 0.0400 | 0.0325 | 0.0150 |
| 10 | 0.0550 | 0.0550 | 0.0325 | 0.0300 | 0.0150 |
| 11 | 0.0475 | 0.0475 | 0.0275 | 0.0275 | 0.0150 |
| 12 | 0.0425 | 0.0450 | 0.0200 | 0.0250 | 0.0050 |
| 13 | 0.0400 | 0.0425 | 0.0200 | 0.0225 | 0.0050 |
| 14 | 0.0375 | 0.0375 | 0.0200 | 0.0200 | 0.0050 |
| 15 | 0.0350 | 0.0350 | 0.0200 | 0.0175 | 0.0050 |
| 16 | 0.0325 | 0.0300 | 0.0200 | 0.0150 | 0.0050 |
| 17 | 0.0300 | 0.0275 | 0.0180 | 0.0150 | 0.0050 |
| 18 | 0.0275 | 0.0275 | 0.0170 | 0.0125 | 0.0050 |
| 19 | 0.0250 | 0.0275 | 0.0160 | 0.0100 | 0.0050 |
| 20 | 0.0225 | 0.0275 | 0.0140 | 0.0000 | 0.0000 |
| 21 | 0.0200 | 0.0200 | 0.0130 | 0.0000 | 0.0000 |
| 22 | 0.0175 | 0.0150 | 0.0075 | 0.0000 | 0.0000 |
| 23 | 0.0150 | 0.0125 | 0.0075 | 0.0000 | 0.0000 |
| 24 | 0.0125 | 0.0100 | 0.0075 | 0.0000 | 0.0000 |
| 25+ | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

5. *Refund rates:*

The percent of vested members electing to receive a refund of contributions on termination of employment. This rate is only applied to members of the contributory systems; vested members in the noncontributory systems are assumed to defer their benefits until retirement, even if they have a contribution account from service prior to the establishment of the noncontributory system. The rate is a function of the member's sex, occupation and service. These rates are based on plan experience.

| Males | | | | |
|----------------|-------------------------|-------------------------|-------------------------|---|
| Service | Local Government | Public Employees | Public Educators | Public Safety & Firefighters¹ |
| 0-3 | 100% | 100% | 100% | 100% |
| 4 | 75% | 86% | 75% | 76% |
| 5 | 73% | 83% | 73% | 74% |
| 6 | 70% | 80% | 70% | 71% |
| 7 | 67% | 78% | 66% | 69% |
| 8 | 65% | 77% | 61% | 67% |
| 9 | 62% | 75% | 57% | 65% |
| 10 | 61% | 73% | 54% | 57% |
| 11 | 59% | 70% | 50% | 50% |
| 12 | 58% | 68% | 47% | 42% |
| 13 | 55% | 66% | 42% | 40% |
| 14 | 52% | 65% | 38% | 37% |
| 15 | 49% | 63% | 33% | 35% |
| 16 | 48% | 61% | 28% | 33% |
| 17 | 46% | 60% | 22% | 31% |
| 18 | 45% | 58% | 17% | 29% |
| 19 | 23% | 29% | 09% | 15% |
| 20 or more | 00% | 00% | 00% | 00% |

¹ Male and female members combined.

5. *Refund rates (continued):*

| Females | | | |
|----------------|-------------------------|-------------------------|-------------------------|
| Service | Local Government | Public Employees | Public Educators |
| 0-3 | 100% | 100% | 100% |
| 4 | 77% | 80% | 65% |
| 5 | 75% | 79% | 64% |
| 6 | 72% | 77% | 62% |
| 7 | 69% | 74% | 61% |
| 8 | 67% | 71% | 59% |
| 9 | 64% | 68% | 58% |
| 10 | 61% | 64% | 53% |
| 11 | 57% | 60% | 48% |
| 12 | 54% | 56% | 43% |
| 13 | 49% | 55% | 39% |
| 14 | 45% | 53% | 36% |
| 15 | 40% | 52% | 32% |
| 16 | 35% | 49% | 27% |
| 17 | 30% | 46% | 21% |
| 18 | 25% | 43% | 16% |
| 19 | 13% | 22% | 08% |
| 20 or more | 00% | 00% | 00% |

6. *Retirement rates:*

Retirement rates are a function of the member’s age, sex and occupation (and service in the case of Firefighters, Public Safety and Judges). Rates are based on plan experience. Rates are applied only at ages at which the member is eligible for a reduced or unreduced retirement benefit. Members are assumed to retire no later than age 75 (age 70 for the public safety, firefighter and judges systems). Sample rates are shown below.

| Local Government | | | | |
|------------------|--------------------|----------------------|--------------------|----------------------|
| Age | Male | | Female | |
| | Reduced Retirement | Unreduced Retirement | Reduced Retirement | Unreduced Retirement |
| 50 | 0.040 | 0.180 | 0.040 | 0.250 |
| 51 | 0.040 | 0.180 | 0.040 | 0.250 |
| 52 | 0.040 | 0.180 | 0.040 | 0.250 |
| 53 | 0.040 | 0.180 | 0.040 | 0.250 |
| 54 | 0.040 | 0.180 | 0.040 | 0.250 |
| 55 | 0.050 | 0.180 | 0.040 | 0.300 |
| 56 | 0.050 | 0.180 | 0.040 | 0.300 |
| 57 | 0.050 | 0.180 | 0.040 | 0.300 |
| 58 | 0.060 | 0.180 | 0.040 | 0.300 |
| 59 | 0.060 | 0.180 | 0.040 | 0.300 |
| 60 | 0.060 | 0.250 | 0.100 | 0.400 |
| 61 | 0.060 | 0.250 | 0.100 | 0.400 |
| 62 | 0.130 | 0.300 | 0.130 | 0.400 |
| 63 | 0.160 | 0.300 | 0.160 | 0.400 |
| 64 | 0.160 | 0.300 | 0.160 | 0.400 |
| 65 | N/A | 0.300 | N/A | 0.300 |
| 66 | N/A | 0.300 | N/A | 0.300 |
| 67 | N/A | 0.200 | N/A | 0.200 |
| 68 | N/A | 0.200 | N/A | 0.200 |
| 69 | N/A | 0.200 | N/A | 0.200 |
| 70 | N/A | 0.200 | N/A | 0.200 |
| 71 | N/A | 0.150 | N/A | 0.150 |
| 72 | N/A | 0.150 | N/A | 0.150 |
| 73 | N/A | 0.150 | N/A | 0.150 |
| 74 | N/A | 0.150 | N/A | 0.150 |
| 75+ | N/A | 1.000 | N/A | 1.000 |

6. Retirement rates (continued):

| Public Employees | | | | |
|------------------|--------------------|----------------------|--------------------|----------------------|
| Age | Male | | Female | |
| | Reduced Retirement | Unreduced Retirement | Reduced Retirement | Unreduced Retirement |
| 50 | 0.040 | 0.160 | 0.050 | 0.220 |
| 51 | 0.040 | 0.160 | 0.050 | 0.220 |
| 52 | 0.040 | 0.160 | 0.050 | 0.220 |
| 53 | 0.040 | 0.160 | 0.050 | 0.220 |
| 54 | 0.040 | 0.160 | 0.050 | 0.220 |
| 55 | 0.040 | 0.180 | 0.050 | 0.220 |
| 56 | 0.040 | 0.180 | 0.050 | 0.220 |
| 57 | 0.040 | 0.180 | 0.050 | 0.220 |
| 58 | 0.060 | 0.180 | 0.050 | 0.220 |
| 59 | 0.060 | 0.180 | 0.050 | 0.220 |
| 60 | 0.100 | 0.230 | 0.130 | 0.320 |
| 61 | 0.100 | 0.230 | 0.130 | 0.320 |
| 62 | 0.150 | 0.350 | 0.200 | 0.320 |
| 63 | 0.150 | 0.300 | 0.200 | 0.320 |
| 64 | 0.150 | 0.300 | 0.200 | 0.320 |
| 65 | N/A | 0.300 | N/A | 0.320 |
| 66 | N/A | 0.300 | N/A | 0.320 |
| 67 | N/A | 0.250 | N/A | 0.250 |
| 68 | N/A | 0.250 | N/A | 0.250 |
| 69 | N/A | 0.200 | N/A | 0.250 |
| 70 | N/A | 0.200 | N/A | 0.250 |
| 71 | N/A | 0.150 | N/A | 0.150 |
| 72 | N/A | 0.150 | N/A | 0.150 |
| 73 | N/A | 0.150 | N/A | 0.150 |
| 74 | N/A | 0.150 | N/A | 0.150 |
| 75+ | N/A | 1.000 | N/A | 1.000 |

6. Retirement rates (continued):

| Public Educators | | | | |
|------------------|--------------------|----------------------|--------------------|----------------------|
| Age | Male | | Female | |
| | Reduced Retirement | Unreduced Retirement | Reduced Retirement | Unreduced Retirement |
| 50 | 0.010 | 0.200 | 0.020 | 0.200 |
| 51 | 0.050 | 0.200 | 0.050 | 0.250 |
| 52 | 0.050 | 0.200 | 0.050 | 0.250 |
| 53 | 0.050 | 0.200 | 0.050 | 0.250 |
| 54 | 0.050 | 0.200 | 0.050 | 0.250 |
| 55 | 0.050 | 0.200 | 0.050 | 0.250 |
| 56 | 0.050 | 0.200 | 0.075 | 0.250 |
| 57 | 0.050 | 0.200 | 0.075 | 0.250 |
| 58 | 0.075 | 0.200 | 0.075 | 0.275 |
| 59 | 0.075 | 0.250 | 0.075 | 0.275 |
| 60 | 0.100 | 0.275 | 0.100 | 0.350 |
| 61 | 0.150 | 0.275 | 0.150 | 0.350 |
| 62 | 0.200 | 0.350 | 0.300 | 0.350 |
| 63 | 0.150 | 0.350 | 0.250 | 0.350 |
| 64 | 0.150 | 0.350 | 0.150 | 0.350 |
| 65 | N/A | 0.350 | N/A | 0.350 |
| 66 | N/A | 0.275 | N/A | 0.350 |
| 67 | N/A | 0.275 | N/A | 0.250 |
| 68 | N/A | 0.275 | N/A | 0.250 |
| 69 | N/A | 0.275 | N/A | 0.250 |
| 70 | N/A | 0.200 | N/A | 0.200 |
| 71 | N/A | 0.200 | N/A | 0.200 |
| 72 | N/A | 0.200 | N/A | 0.200 |
| 73 | N/A | 0.200 | N/A | 0.200 |
| 74 | N/A | 0.200 | N/A | 0.200 |
| 75+ | N/A | 1.000 | N/A | 1.000 |

6. Retirement rates (continued):

| Public Safety - Males and Females | | | | Firefighters – Males and Females | |
|-----------------------------------|------------------|---------|-------|----------------------------------|-------|
| Age | Years of Service | | | Years of Service | |
| | 0 - 19 | 20 - 29 | 30+ | 0 - 29 | 30+ |
| 40-44 | 0.00 | 0.180 | 0.200 | 0.150 | 0.160 |
| 45 | 0.00 | 0.180 | 0.200 | 0.150 | 0.160 |
| 46 | 0.00 | 0.180 | 0.200 | 0.150 | 0.160 |
| 47 | 0.00 | 0.180 | 0.200 | 0.080 | 0.160 |
| 48 | 0.00 | 0.180 | 0.200 | 0.080 | 0.160 |
| 49 | 0.00 | 0.180 | 0.200 | 0.080 | 0.160 |
| 50 | 0.00 | 0.180 | 0.200 | 0.080 | 0.160 |
| 51 | 0.00 | 0.180 | 0.220 | 0.080 | 0.160 |
| 52 | 0.00 | 0.180 | 0.220 | 0.080 | 0.160 |
| 53 | 0.00 | 0.180 | 0.220 | 0.080 | 0.160 |
| 54 | 0.00 | 0.180 | 0.220 | 0.080 | 0.160 |
| 55 | 0.00 | 0.180 | 0.250 | 0.100 | 0.180 |
| 56 | 0.00 | 0.180 | 0.250 | 0.100 | 0.180 |
| 57 | 0.00 | 0.180 | 0.250 | 0.100 | 0.180 |
| 58 | 0.00 | 0.180 | 0.250 | 0.100 | 0.180 |
| 59 | 0.00 | 0.180 | 0.250 | 0.100 | 0.180 |
| 60 | 0.120 | 0.250 | 0.250 | 0.200 | 0.400 |
| 61 | 0.120 | 0.300 | 0.300 | 0.200 | 0.400 |
| 62 | 0.120 | 0.350 | 0.350 | 0.300 | 0.400 |
| 63 | 0.120 | 0.350 | 0.350 | 0.300 | 0.400 |
| 64 | 0.120 | 0.350 | 0.350 | 0.300 | 0.400 |
| 65 | 0.250 | 0.500 | 0.500 | 0.600 | 0.600 |
| 66 | 0.250 | 0.500 | 0.500 | 0.600 | 0.600 |
| 67 | 0.250 | 0.500 | 0.500 | 0.600 | 0.600 |
| 68 | 0.250 | 0.500 | 0.500 | 0.600 | 0.600 |
| 69 | 0.250 | 0.500 | 0.500 | 0.600 | 0.600 |
| 70+ | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

6. Retirement rates (continued):

| Judges - Males and Females | | | |
|-----------------------------------|-------------------------|----------------|------------|
| Age | Years of Service | | |
| | 0 - 24 | 25 - 29 | 30+ |
| 45 | N/A | 0.100 | 0.200 |
| 46 | N/A | 0.100 | 0.200 |
| 47 | N/A | 0.100 | 0.200 |
| 48 | N/A | 0.100 | 0.200 |
| 49 | N/A | 0.100 | 0.200 |
| 50 | N/A | 0.100 | 0.200 |
| 51 | N/A | 0.100 | 0.200 |
| 52 | N/A | 0.100 | 0.200 |
| 53 | N/A | 0.100 | 0.200 |
| 54 | N/A | 0.100 | 0.200 |
| 55 | N/A | 0.100 | 0.200 |
| 56 | N/A | 0.100 | 0.200 |
| 57 | N/A | 0.100 | 0.200 |
| 58 | N/A | 0.100 | 0.200 |
| 59 | N/A | 0.100 | 0.200 |
| 60 | N/A | 0.100 | 0.200 |
| 61 | N/A | 0.100 | 0.200 |
| 62 | 0.150 | 0.200 | 0.200 |
| 63 | 0.150 | 0.200 | 0.200 |
| 64 | 0.150 | 0.200 | 0.200 |
| 65 | 0.150 | 0.200 | 0.200 |
| 66 | 0.150 | 0.200 | 0.200 |
| 67 | 0.150 | 0.200 | 0.200 |
| 68 | 0.150 | 0.200 | 0.200 |
| 69 | 0.150 | 0.200 | 0.200 |
| 70 | 1.000 | 1.000 | 1.000 |

7. *Salary increase rates:*

Salaries for individual members are assumed to increase each year, as a function of the member’s occupation and service. Rates are composed of a 2.75% inflation rate, a 1.00% general increase rate that applies to all, and a variable promotional/longevity component that is a function of the member’s service.

| Active Male and Female Members - Local Government | | |
|--|---|---|
| Years of Service | Annual Promotional/Longevity Rates of Increase | Total Annual Rate of Increase Including 3.75% Wage Inflation |
| 0 | 6.00% | 9.75% |
| 1 | 4.50 | 8.25 |
| 2 | 3.75 | 7.50 |
| 3 | 3.25 | 7.00 |
| 4 | 2.75 | 6.50 |
| 5 | 2.50 | 6.25 |
| 6 | 2.25 | 6.00 |
| 7 | 2.00 | 5.75 |
| 8 | 1.75 | 5.50 |
| 9 | 1.75 | 5.50 |
| 10 | 1.50 | 5.25 |
| 11 | 1.25 | 5.00 |
| 12 | 1.25 | 5.00 |
| 13 | 1.00 | 4.75 |
| 14 | 1.00 | 4.75 |
| 15 | 1.00 | 4.75 |
| 16 | 0.75 | 4.50 |
| 17 | 0.75 | 4.50 |
| 18 | 0.75 | 4.50 |
| 19 | 0.75 | 4.50 |
| 20 | 0.50 | 4.25 |
| 21 | 0.25 | 4.00 |
| 22 | 0.25 | 4.00 |
| 23 | 0.00 | 3.75 |
| 24 | 0.00 | 3.75 |
| 25 or more | 0.00 | 3.75 |

7. Salary increase rates (continued):

| Active Male and Female Members - Public Employees | | |
|---|--|--|
| Years of Service | Annual Promotional/Longevity Rates of Increase | Total Annual Rate of Increase Including 3.75% Wage Inflation |
| 0 | 5.25% | 9.00% |
| 1 | 4.50 | 8.25 |
| 2 | 3.50 | 7.25 |
| 3 | 2.75 | 6.50 |
| 4 | 2.50 | 6.25 |
| 5 | 2.00 | 5.75 |
| 6 | 1.75 | 5.50 |
| 7 | 1.50 | 5.25 |
| 8 | 1.50 | 5.25 |
| 9 | 1.25 | 5.00 |
| 10 | 1.25 | 5.00 |
| 11 | 1.00 | 4.75 |
| 12 | 1.00 | 4.75 |
| 13 | 1.00 | 4.75 |
| 14 | 0.75 | 4.50 |
| 15 | 0.50 | 4.25 |
| 16 | 0.50 | 4.25 |
| 17 | 0.50 | 4.25 |
| 18 | 0.50 | 4.25 |
| 19 | 0.50 | 4.25 |
| 20 | 0.25 | 4.00 |
| 21 | 0.25 | 4.00 |
| 22 | 0.25 | 4.00 |
| 23 | 0.25 | 4.00 |
| 24 | 0.00 | 3.75 |
| 25 or more | 0.00 | 3.75 |

7. Salary increase rates (continued):

| Active Male and Female Members Public Educators | | |
|---|--|--|
| Years of Service | Annual Promotional/Longevity Rates of Increase | Total Annual Rate of Increase Including 3.75% Wage Inflation |
| 0 | 7.00% | 10.75% |
| 1 | 6.25 | 10.00 |
| 2 | 5.25 | 9.00 |
| 3 | 4.75 | 8.50 |
| 4 | 4.50 | 8.25 |
| 5 | 4.00 | 7.75 |
| 6 | 4.00 | 7.75 |
| 7 | 3.75 | 7.50 |
| 8 | 3.50 | 7.25 |
| 9 | 3.25 | 7.00 |
| 10 | 2.75 | 6.50 |
| 11 | 2.25 | 6.00 |
| 12 | 1.75 | 5.50 |
| 13 | 1.25 | 5.00 |
| 14 | 1.00 | 4.75 |
| 15 | 0.75 | 4.50 |
| 16 | 0.75 | 4.50 |
| 17 | 0.50 | 4.25 |
| 18 | 0.50 | 4.25 |
| 19 | 0.50 | 4.25 |
| 20 | 0.50 | 4.25 |
| 21 | 0.50 | 4.25 |
| 22 | 0.25 | 4.00 |
| 23 | 0.25 | 4.00 |
| 24 | 0.25 | 4.00 |
| 25 or more | 0.00 | 3.75 |

7. *Salary increase rates (continued):*

| Active Male and Female Members Public Safety | | |
|---|---|---|
| Years of Service | Annual Promotional/Longevity Rates of Increase | Total Annual Rate of Increase Including 3.75% Wage Inflation |
| 0 | 5.50% | 9.25% |
| 1 | 3.75 | 7.50 |
| 2 | 3.25 | 7.00 |
| 3 | 2.75 | 6.50 |
| 4 | 2.75 | 6.50 |
| 5 | 2.50 | 6.25 |
| 6 | 2.50 | 6.25 |
| 7 | 2.25 | 6.00 |
| 8 | 2.00 | 5.75 |
| 9 | 2.00 | 5.75 |
| 10 | 2.00 | 5.75 |
| 11 | 1.50 | 5.25 |
| 12 | 1.25 | 5.00 |
| 13 | 1.25 | 5.00 |
| 14 | 1.00 | 4.75 |
| 15 | 1.00 | 4.75 |
| 16 | 1.00 | 4.75 |
| 17 | 0.75 | 4.50 |
| 18 | 0.75 | 4.50 |
| 19 | 0.75 | 4.50 |
| 20 | 0.75 | 4.50 |
| 21 | 0.75 | 4.50 |
| 22 | 0.75 | 4.50 |
| 23 | 0.25 | 4.00 |
| 24 | 0.25 | 4.00 |
| 25 or more | 0.00 | 3.75 |

7. *Salary increase rates (continued):*

| Active Male and Female Members Firefighters | | |
|---|--|--|
| Years of Service | Annual Promotional/Longevity Rates of Increase | Total Annual Rate of Increase Including 3.75% Wage Inflation |
| 0 | 6.00% | 9.75% |
| 1 | 5.50 | 9.25 |
| 2 | 5.25 | 9.00 |
| 3 | 5.00 | 8.75 |
| 4 | 4.75 | 8.50 |
| 5 | 4.50 | 8.25 |
| 6 | 4.50 | 8.25 |
| 7 | 4.00 | 7.75 |
| 8 | 3.75 | 7.50 |
| 9 | 3.50 | 7.25 |
| 10 | 3.00 | 6.75 |
| 11 | 2.25 | 6.00 |
| 12 | 1.75 | 5.50 |
| 13 | 1.75 | 5.50 |
| 14 | 1.75 | 5.50 |
| 15 | 1.25 | 5.00 |
| 16 | 1.25 | 5.00 |
| 17 | 1.00 | 4.75 |
| 18 | 1.00 | 4.75 |
| 19 | 0.75 | 4.50 |
| 20 | 0.75 | 4.50 |
| 21 | 0.50 | 4.25 |
| 22 | 0.25 | 4.00 |
| 23 | 0.00 | 3.75 |
| 24 | 0.00 | 3.75 |
| 25 or more | 0.00 | 3.75 |

8. *Annuitant mortality rates (nondisabled retirees):*

All non-educator groups:

Male retirees: 100% of RP-2000 Combined Healthy for Males with White Collar adjustments, projected with Scale AA from 2000.

Female retirees: 120% of rates in a GRS table based on female teacher experience, projected with Scale AA from 2000.

Educator group:

Male retirees: 90% of rates in a GRS table based on male teacher experience, projected with Scale AA from 2000.

Female retirees: 107% of rates in a GRS table based on female teacher experience, projected with Scale AA from 2000.

| Mortality Rates in Base Tables before Projection (Multipliers Applied) | | | | |
|---|----------------------|----------------|------------------|----------------|
| Age | Non-educators | | Educators | |
| | Males | Females | Males | Females |
| 50 | 0.001978 | 0.001843 | 0.002496 | 0.001644 |
| 55 | 0.003302 | 0.004522 | 0.004282 | 0.004032 |
| 60 | 0.005583 | 0.005660 | 0.004028 | 0.005047 |
| 65 | 0.011061 | 0.005232 | 0.005139 | 0.004665 |
| 70 | 0.019275 | 0.010756 | 0.013480 | 0.009590 |
| 75 | 0.033634 | 0.017066 | 0.022424 | 0.015218 |
| 80 | 0.059412 | 0.038077 | 0.044386 | 0.033952 |
| 85 | 0.104665 | 0.088752 | 0.088040 | 0.079137 |
| 90 | 0.178273 | 0.166303 | 0.154143 | 0.148287 |

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection:

| Life Expectancy for an Age 65 Retiree in Years | | | | | |
|---|---------------------------|-------------|-------------|-------------|-------------|
| Group | Year of Retirement | | | | |
| | 2015 | 2020 | 2025 | 2030 | 2035 |
| Noneducators - Male | 20.3 | 20.6 | 21.0 | 21.3 | 21.6 |
| Noneducators - Female | 22.2 | 22.3 | 22.5 | 22.7 | 22.9 |
| Educators - Male | 22.3 | 22.6 | 22.9 | 23.2 | 23.5 |
| Educators - Female | 23.0 | 23.2 | 23.3 | 23.5 | 23.7 |

9. *Disabled annuitant mortality rates:*

Males: 100% of the RP-2000 for Disabled Males, projected with Scale AA from 2000.

Females: 110% of the RP-2000 for Disabled females, projected with Scale AA from 2000.

| Disabled Mortality Rates in Base Table before Projections (Multipliers Applied) | | |
|--|--------------|----------------|
| Age | Males | Females |
| 20 | 0.022571 | 0.008195 |
| 25 | 0.022571 | 0.008195 |
| 30 | 0.022571 | 0.008195 |
| 35 | 0.022571 | 0.008195 |
| 40 | 0.022571 | 0.008195 |
| 45 | 0.022571 | 0.008195 |
| 50 | 0.028975 | 0.012689 |
| 55 | 0.035442 | 0.018198 |
| 60 | 0.042042 | 0.024023 |
| 65 | 0.050174 | 0.030829 |
| 70 | 0.062583 | 0.041398 |
| 75 | 0.082067 | 0.057453 |
| 80 | 0.109372 | 0.079543 |
| 85 | 0.141603 | 0.110223 |
| 90 | 0.183408 | 0.154054 |

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection:

| Life Expectancy for an Age 65 Retiree in Years | | | | | |
|---|---------------------------|-------------|-------------|-------------|-------------|
| Gender | Year of Retirement | | | | |
| | 2015 | 2020 | 2025 | 2030 | 2035 |
| Males | 14.1 | 14.6 | 15.1 | 15.6 | 16.1 |
| Females | 16.1 | 16.4 | 16.7 | 16.9 | 17.2 |

10. *Actuarial cost method:*

The Entry Age Normal actuarial cost method is used. This method is designed to produce a relatively level funding pattern when expressed as a percent of pay.

First, the actuarial present value of all future expected benefits is determined for each member, including retired members, beneficiaries, inactive members and active members. This takes into account both the probability that a benefit will be paid at a given age and the time value of money. The sum of these amounts--the Present Value of Future Benefits (PVFB)--is then determined.

Next, the Entry Age Normal actuarial cost method is used to allocate the PVFB between the current year (the normal cost), prior years (the Actuarial Accrued Liability), and future years (future normal costs). The current and future normal costs are determined as a level percentage of pay, except that for the Legislators and Governors plan, which is not pay related, normal costs are determined as a level dollar amount.

A portion of the normal cost may be paid by employee contributions in which case the balance becomes the normal cost portion of the employer contribution rate.

The difference between the Actuarial Accrued Liability (the portion of the total actuarial present value of future benefits allocated to prior years) and the Actuarial Value of Assets is called the Unfunded Actuarial Accrued Liability (UAAL). This is funded over 25 years from January 1, 2009. (This period is closed, so as of January 1, 2011 the remaining amortization period is 23 years. The period will continue to decrease by one in each subsequent year, until the Board of Trustees modifies the method and period for amortizing the UAAL).

The total employer cost rate is the sum of (i) the normal cost rate, net of employee contributions if applicable, and (ii) the level percent-of-pay amortization of the UAAL. For the Judges' System and the Firefighters' System, certain specified revenues (court fees and a tax on fire insurance premiums, respectively) are used as an offset to the employer contribution rate each year, as described elsewhere in this report.

All contribution rates are based upon monthly payments of contributions.

11. *Actuarial value of assets:*

The actuarial value of assets is equal to the market value, adjusted for a five-year phase in of actual investment return in excess of (or less than) expected investment return. The actual return is calculated net of investment and administrative expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds. The actuarial value of assets is further adjusted, if necessary, so that it is not less than 75% of market value and not more than 125% of market value.

12. *Payroll growth rate:*

In determining the level percent of payroll amortization rate, payroll is assumed to grow annually at 3.50%. No allowance is made for future growth in the number of members.

13. *Marital status:*

All nonretired members are assumed to be married with no children. Female members are assumed to be three years younger than their spouses, while male members are assumed to be three years older than their spouses.

14. *Administrative and investment expenses:*

The assumed 7.50% investment return rate represents the anticipated net return after payment of all investment and administrative expenses. These expenses are assumed to be 0.35% of plan assets each year.

15. *Judges System:*

For the Judges System, no disability or withdrawal rates were used. Salaries are assumed to increase at 3.75% per year.

16. *Governors and Legislative Pension Plan:*

A 10% withdrawal rate is assumed regardless of age or service. No disability rates are used. No salary increase rate is used because the benefits do not reflect pay. Members are assumed to retire at the earlier of (i) age 65 with four years of service, or (ii) age 62 with 10 years of service. Normal cost and actuarial accrued liability are based on Level Dollar Entry Age Cost Method (not Level Percent of Pay).

17. *Interest Credited on Member Contribution Account Balances:*

In projecting member contribution account balances, we assume that the rate credited is 7.50% each year. (The actual rate is set by the Board of Trustees annually, based on investment performance.) Interest is not credited to account balances for members of the Firefighters Retirement System.

18. *Mortality Improvement:*

For post-retirement mortality, both healthy and disabled, we assume continuous (generational) mortality improvement according to Scale AA from a base year of 2000. Mortality improvement is ignored for the pre-retirement mortality assumption, since it would not have a material effect on the liabilities.

19. *Cost-of-living increases:*

Retirement benefits for all systems with a maximum 4.00% COLA are assumed to increase at 2.75% even though the maximum allowable rate is 4.00%. Retirement benefits for the funds with a maximum 2.50% COLA—e.g., some of the Public Safety funds—are assumed to increase at the maximum allowable rate of 2.50%.

For current retirees who have received cumulative COLAs less than the total of annual CPI increases since retirement, we assume higher COLAs, subject to the annual maximum, as long as the member has “banked” CPI increases left.

APPENDIX 2

**SUMMARY OF BENEFIT PROVISIONS FOR
PUBLIC EMPLOYEE RETIREMENT SYSTEMS
(CONTRIBUTORY AND NONCONTRIBUTORY)**

1. *Effective Date:* Contributory System - July 1, 1961.
Noncontributory System - July 1, 1986.
2. *Plan Year:* Twelve-month period ending December 31st.
3. *Administration:* The Systems are administered by a Board of Trustees (which also administers the other Utah Retirement Systems). The Board of Trustees is responsible for both administration of the Systems and investment of the fund assets.
4. *Type of Plan:* These are qualified governmental defined benefit retirement plans. Under GASB 25, they are considered to be cost-sharing multiple-employer plans.
5. *Eligibility:* These Systems cover eligible employees of the State of Utah, most local government employees, and most public education employees. Generally all employees are covered, except for those covered by another System--public safety employees, firefighters, judges, legislators, and higher education employees covered under TIAA-CREF. Eligible employees become participants immediately when hired, and are required to participate. The employer-selected plan determines whether new employees participate in the Contributory or Noncontributory System. Employees who were members of the Contributory System at the time their employer selected the Noncontributory System had an option to remain in the Contributory System.
6. *Employee Contributions:* Members of the Contributory System contribute 6.00% of salary per year. Employers may "pick-up" employee contributions under Section 414(h) of the Internal Revenue Code. No contributions are made by members of the Noncontributory System.
7. *Employer Contributions:* The current contribution rates differ between the Contributory and Noncontributory Systems, and also differ depending on whether the member is employed by a local government (Level B) or the State of Utah or a public school (Level A). Rates are set by the Board of Trustees, based upon the actuarial valuation report for the preceding year. The Funds participating in these systems are:

Fund 11 - Local Government Contributory
Fund 12 - State and School Contributory
Fund 15 - Local Government Noncontributory
Fund 16 - State and School Noncontributory

8. *Final Average Monthly Salary (FAMS)*: The monthly average of the member's highest salaries preceding retirement. For the Contributory System a five-year average is used, while a three-year average is used for the Noncontributory System.
9. *Service Retirement (Unreduced)*:
- Eligibility: A member may retire with an unreduced benefit at age 65 with four years of service or after 30 years of service if earlier.
 - Monthly Benefit (Contributory): 2.00% times Final Average Monthly Salary (FAMS) times years of service earned since July 1, 1975, plus 1.25% of FAMS times service earned prior to July 1, 1975.
 - Monthly Benefit (Noncontributory): 2.00% of Final Average Monthly Salary times years of service.
 - Payment Form: Life annuity.
10. *Service Retirement (Reduced)*:
- Eligibility: A member may retire with a reduced benefit upon attaining age 62 with 10 years of service or age 60 with 20 years of service. A member of the Noncontributory System may retire at any age after earning 25 years of service.
 - Reduction: 3% per year that retirement is earlier than age 65. For Noncontributory System members retiring prior to age 60, actuarial reduction is applied to the 85% factor at age 60. The early retirement reduction factors are shown below:

| Age | Factor | Age | Factor |
|-----|--------|-----|--------|
| 64 | 97.00% | 54 | 48.60% |
| 63 | 94.00% | 53 | 44.44% |
| 62 | 91.00% | 52 | 40.67% |
| 61 | 88.00% | 51 | 37.26% |
| 60 | 85.00% | 50 | 34.16% |
| 59 | 77.20% | 49 | 31.34% |
| 58 | 70.21% | 48 | 28.77% |
| 57 | 63.93% | 47 | 26.43% |
| 56 | 58.28% | 46 | 24.30% |
| 55 | 53.19% | 45 | 22.35% |

- Payment Form: Life annuity.

11. *Disability Retirement:*

- a. Eligibility: Member must be eligible for retirement under the Disability Act and must not be eligible for a 30-year service retirement at time of disability.
- b. Monthly Benefits Payable Prior to Retirement: A separate fund established under the Disability Act provides benefits from the time of disability until the age specified in 49-21-403. Benefits from this separate fund are not covered by these Systems.
- c. Monthly Benefits Payable after Retirement: An unreduced service retirement benefit is payable. The member receives service credit for time while disabled (both for computing the benefit amount and for determining whether the member is eligible for an unreduced service retirement benefit). Final Average Monthly Salary is increased by the same factors used for automatic cost-of-living benefit increases. I.e., the FAMS is adjusted by a cost-of-living increase up to 4.0% per year (simple interest).
- d. Payment Form: Life annuity.
- e. Death while Disabled: A disabled member is treated as an active member for purposes of determining a death benefit for the period prior to retirement.

12. *Vesting and Refunds:*

- a. Eligibility: All members who are not vested are eligible for a refund when they terminate service. Members are vested after four years of service. Vested members may also elect to receive a refund in lieu of the deferred termination benefit described below. (Noncontributory System members hired after July 1, 1986, are ineligible for a refund.)
- b. Amount: The refund benefit is the accumulated value of the member's contributions plus interest credited by the fund. The amount of interest credited each year is set annually by the Board of Trustees.

13. *Deferred Termination Benefit:*

- a. Eligibility: Member must be vested (4 years of service) and must elect to leave his/her contributions on deposit.
- b. Monthly Benefit: Same as the unreduced or reduced service retirement benefit, based on service and FAMS at termination, and commencing once the member is eligible.
- c. Payment Form: Life annuity.
- d. Death Benefit: The beneficiary of an inactive member who dies is entitled to receive a refund benefit.

14. *Death while an Active Member:*
- a. In General: A refund of the member's accumulated contributions (with interest) is paid to the beneficiary of a deceased member.
 - b. Spousal Annuity: If the deceased member was married at the time of death and was either (i) eligible for reduced or unreduced service retirement, or (ii) had 25 years of service (15 years of service in the noncontributory system), the spouse may elect an annuity benefit in lieu of the refund benefit. The annuity is equal to the reduced or unreduced service retirement benefit payable as though Plan 3 (a Joint and 100% Survivor annuity) were elected. If the member had 25 years of service or more, no reduction factor is applied in determining the service retirement benefit. If a member of the noncontributory system is not eligible for a retirement benefit and has less than 25 years of service, then the death benefit is equal to 1/3 of Plan 3 benefit if the member has at least 15 and less than 20 years of service, and 2/3 of the Plan 3 benefit if the member has at least 20 and less than 25 years of service.
15. *Optional Forms of Benefit*: The Systems permit members to elect from six forms of benefit at retirement. In each case the benefit amount is adjusted to be actuarially equivalent to the "Plan 1" form. The six optional forms are:

Plan 1 - A life annuity with no benefits due following the member's death.

Plan 2 - Modified Cash Refund Annuity. A reduced annuity payable for the member's lifetime, plus a death benefit equal to the excess of the member's accumulated contributions (determined at retirement) over the sum of the member's annuity payments from retirement. (The annuity payments are that part of the original benefit derived from the member's own accumulated contributions.)

Plan 3 - Joint and 100% Survivor Annuity. An annuity payable as long as either the member or his/her spouse is living.

Plan 4 - Joint and 50% Survivor Annuity. An annuity payable during the member's lifetime, and after the member's death if the member's spouse is still living, an annuity to the spouse of 50% of the original benefit.

Plan 5 - Joint and 100% Pop-up Annuity. Same as Plan 3, except that the benefit amount reverts to the Plan 1 (life annuity) amount if the member's spouse predeceases the member.

Plan 6 - Joint and 50% Pop-up Annuity. Same as Plan 4, except that the benefit amount reverts to the Plan 1 (life annuity) amount if the member's spouse predeceases the member.

16. *Postretirement Death Benefit:* None, except as elected by the member. See Optional Forms of Benefit above.
17. *Postretirement Benefit Increases:* Benefits are increased annually to take into account changes in the cost of living, with a maximum annual increase of 4% of the original benefit (i.e., a maximum 4% simple interest increase). In years in which the cost of living increases more than 4%, the excess increase is accumulated and used in later years in which the cost-of-living increase is less than 4%. This calculation is made separately for each individual. In addition, a closed group of retirees also receives a second special increase amount paid as a level annuity under whichever form of payment was elected. This is the Restoration of Purchasing Power (ROPP) payment.
18. *3% Substantial Substitute:* All members whose service began before January 1, 1989, receive an additional annual payment equal to 3% of their benefit. These payments are made to offset the taxability of the retirement benefits under the State income tax provisions. Prior to July 1, 1995, this benefit was funded by annual appropriations made by the State on a pay-as-you go basis. Beginning July 1, 1995, this benefit is funded on an actuarial basis by increasing the employer contribution rate for those Funds which are funded by the State.

**SUMMARY OF BENEFIT PROVISIONS FOR
PUBLIC SAFETY RETIREMENT SYSTEMS
(CONTRIBUTORY AND NONCONTRIBUTORY)**

1. *Effective Date:* Contributory System - July 1, 1969.
Noncontributory System - July 1, 1989.
2. *Plan Year:* Twelve-month period ending December 31st.
3. *Administration:* The Systems are administered by a Board of Trustees (which also administers the other Utah Retirement Systems). The Board of Trustees is responsible for both administration of the Systems and investment of the fund assets.
4. *Type of Plan:* These are qualified governmental defined benefit retirement plans. Under GASB 25, they are considered to be a combination of agent and cost-sharing multiple-employer plans.
5. *Eligibility:* These Systems cover eligible public safety employees of the State of Utah and some local governments. Eligible employees become participants immediately when hired, and are required to participate. The employer-selected plan determines whether new employees participate in the Contributory or Noncontributory System. Employees who were members of the Contributory System at the time their employer selected the Noncontributory System had an option to remain in the Contributory System.
6. *Employee Contributions:* Members of the Contributory System contribute a percentage of salary, as shown below. Employers may "pick-up" employee contributions under Section 414(h) of the Internal Revenue Code. No contributions are made by members of the Noncontributory System. Rates in the Contributory System vary by employer as follows:

| | |
|--|--------|
| Fund 22 - State of Utah | 12.29% |
| Fund 23 - Other Division A (2.5% COLA) | 12.29% |
| Fund 77 - Other Division A (4.0% COLA) | 12.29% |
| Fund 27 - Logan | 11.13% |
| Fund 29 - Other Division B (2.5% COLA) | 10.50% |
| Fund 74 - Other Division B (4.0% COLA) | 10.50% |

7. *Employer Contributions:* The current contribution rates differ between the Contributory and Noncontributory Systems, and also differ depending on which fund (employer or group of employers) the member belongs to. Rates are set by the Board of Trustees, based upon the actuarial valuation report for the preceding year. The Funds included in these Systems are:

Contributory System

Fund 22 - State of Utah (Div A)
Fund 23 - Other Division A (2.5% COLA)
Fund 77 - Other Division A (4.0% COLA)
Fund 27 - Logan (Div B)
Fund 29 - Other Division B (2.5% COLA)
Fund 74 - Other Division B (4.0% COLA)

Noncontributory System

Fund 42 - State of Utah (Div A)
Fund 43 - Other Division A (2.5% COLA)
Fund 75 - Other Division A (4.0% COLA)
Fund 44 - Salt Lake City (Div B)
Fund 45 - Ogden (Div B)
Fund 46 - Provo (Div B)
Fund 47 - Logan (Div B)
Fund 48 - Bountiful (Div A)
Fund 49 - Other Division B (2.5% COLA)
Fund 76 - Other Division B (4.0% COLA)

The division designation (A or B) distinguishes between those employers covered by Social Security (A) and those not covered (B). Some plan provisions differ depending on the member's division.

8. *Final Average Monthly Salary (FAMS):* The monthly average of the member's highest three salaries preceding retirement.
9. *Service Retirement:*
- Eligibility: A member may retire with an unreduced benefit at age 65 with four years of service or at age 60 with 10 years of service or at any age with 20 years of service.
 - Monthly Benefit: 2.50% of Final Average Monthly Salary (FAMS) times years of service up to 20 years, plus 2.00% of FAMS times years of service in excess of 20.
 - Payment Form: For married members benefits are paid as an automatic unreduced Joint and 65% Survivor Annuity. A life annuity is payable to unmarried members (although children's benefits may also be due following the member's death).

10. Disability Retirement:

- a. Eligibility: Member must be eligible for retirement under the Disability Act (or a substantially equivalent program) and must not be eligible for a 20-year service retirement at time of disability. Note that not all political subdivisions cover their members under a disability program.
- b. Monthly Benefits Payable Prior to Retirement: A separate fund established under the Disability Act (or an equivalent program) provides benefits from the time of disability until the age specified in 49-21-403. Benefits from this separate fund are not covered by these Systems.
- c. Monthly Benefits Payable after Retirement: An unreduced service retirement benefit is payable. The member receives service credit for time while disabled (both for computing the benefit amount and for determining whether the member is eligible for an unreduced service retirement benefit). Final Average Monthly Salary is increased by the same factors used for automatic cost-of-living benefit increases. I.e., the FAMS is adjusted by a cost-of-living increase up to 2.5% per year (simple interest).
- d. Payment Form: Same as for Service Retirement.
- e. Death while Disabled: A disabled member is treated as an active member for purposes of determining a death benefit for the period prior to retirement.

11. *Vesting and Refunds*:

- a. Eligibility: All members who are not vested are eligible for a refund when they terminate service. Members are vested after four years of service. Vested members may also elect to receive a refund in lieu of the deferred termination benefit described below. (Noncontributory System members hired after July 1, 1989, are ineligible for a refund.)
- b. Amount: The refund benefit is the accumulated value of the member's contributions credited by the fund. Interest is credited on the member's contribution account, beginning July 1, 1996. The amount of interest credited each year is set annually by the Board of Trustees.

12. *Deferred Termination Benefit*:

- a. Eligibility: Member must be vested (4 years of service) and must elect to leave his/her contributions on deposit.
- b. Monthly Benefit: Same as the service retirement benefit, based on service and FAMS at retirement, and commencing once the member is eligible.
- c. Payment Form: Same as for service retirement.
- d. Death Benefit: The beneficiary of an inactive member who dies is entitled to receive a refund benefit (or \$500 if larger). The spouse of an inactive member with 20 years of

service receives a monthly annuity equal to 50% of the service retirement benefit that would have been paid had the member died immediately prior to retirement. (An actuarial reduction factor is applied if the member was under age 50 at death.)

13. *Death while an Active Member (On Duty)*: If death occurs in the line of duty, the lump-sum and annuity benefits described below will be paid to the spouse. (The benefits are not applicable to unmarried members, although children's benefits may be due.)
 - a. Lump-sum (Division A members): \$1,000.
 - b. Annuity (Division A members): 30% of member's FAMS.*
 - c. Lump-sum (Division B members): \$1,500.
 - d. Annuity (Division B members): 37.5% of member's FAMS.

14. *Death of an Active Member (Off Duty)*: If death occurs from a cause not related to the member's duties, the lump-sum and annuity benefits described below will be paid to the spouse. (The benefits are not applicable to unmarried members, although children's benefits may be due.)
 - a. Lump-sum (Division A members): If the member has less than 10 years of service, the benefit is \$1,000 or a refund benefit, whichever is larger. If the member has 10 or more years of service, the benefit is \$500.
 - b. Annuity (Division A members): If the member has less than 10 years of service, no annuity is due. For members with 10 or more years of service, the benefit is 2% of FAMS per year of service, to a maximum of 30% of FAMS.*
 - c. Lump-sum (Division B members): If the member does not have two years of service, the benefit is the sum of 50% of the member's salary plus a refund benefit. If the member has two or more years of service, the benefit is \$1,500.
 - d. Annuity (Division B members): If the member has fewer than two years of service, no annuity is due. If the member has two or more years of service, the annuity is 37.5% of the member's FAMS.

*(For members of the Noncontributory System, not less than the benefit payable to the surviving spouse if the member had retired the day before the member's date of death.)

15. *Optional Forms of Benefit*: Married members may elect an optional Joint & 75% Survivor option in lieu of the standard Joint & 65% option. The amount of the Joint & 75% Survivor option is determined actuarially.

16. *Postretirement Death Benefit*: None, except for survivor benefit applicable to married members.

17. *Postretirement Benefit Increases*: Benefits are increased annually to take into account changes in the cost of living. Most funds have a maximum annual increase of 2.50% of the

original benefit (i.e., a maximum 2.50% simple interest increase). A window was opened in 2008 to allow employers to make an election to provide a 4.00% maximum COLA. If elected, the 4.00% maximum applies to both current and future annuitants. The legislation opening the window mandated that the State public safety members would receive the 4.00% maximum COLA. The window was originally scheduled to close at the end of 2009, but it was extended in 2009 to December 2012.

In years in which the cost of living increases more than the maximum COLA, the excess increase is accumulated and used in later years in which the cost-of-living increase is less than the maximum COLA. This calculation is made separately for each individual. In addition, a closed group of retirees also receives a second special increase amount paid as a level annuity under whichever form of payment is applicable. This is the Restoration of Purchasing Power (ROPP) payment.

The table below shows which funds provide the 2.5% maximum COLA and which ones provide the 4.0% maximum COLA:

2.50% Maximum COLA

Funds 23 & 43 - Other Division A
Fund 44 - Salt Lake City (Div B)
Fund 45 - Ogden (Div B)
Fund 46 - Provo (Div B)
Funds 27 & 47 - Logan (Div B)
Fund 48 - Bountiful (Div A)
Funds 29 & 49 - Other Division B

4.00% Maximum COLA

Funds 22 & 42 - State of Utah (Div A)
Funds 75 & 77 - Other Division A
Funds 74 & 76 - Other Division B

18. *3% Substantial Substitute*: All members whose service began before January 1, 1989, receive an additional annual payment equal to 3% of their benefit. These payments are made to offset the taxability of the retirement benefits under the State income tax provisions. Prior to July 1, 1995, this benefit was funded by annual appropriations made by the State on a pay-as-you go basis. Beginning July 1, 1995, this benefit is funded on an actuarial basis by increasing the employer contribution rate for those Funds which are funded by the State.

**SUMMARY OF BENEFIT PROVISIONS FOR
FIREFIGHTERS RETIREMENT SYSTEM**

1. *Effective Date:* July 1, 1971.
2. *Plan Year:* Twelve-month period ending December 31st.
3. *Administration:* The System is administered by a Board of Trustees (which also administers the other Utah Retirement Systems). The Board of Trustees is responsible for both administration of the System and investment of the fund assets.
4. *Type of Plan:* This is a qualified governmental defined benefit retirement plan. Under GASB 25, it is considered to be a cost-sharing multiple-employer plan.
5. *Eligibility:* This System covers eligible firefighters employed by participating local governments in Utah. Eligible employees become participants immediately when hired, and are required to participate. Employers are designated as either Division A (employers with Social Security coverage) or Division B (employers without Social Security coverage). Benefit provisions and contribution rates differ for members of different divisions.
6. *Employee Contributions:* Members contribute a percentage of salary, as shown below. Employers may "pick-up" employee contributions under Section 414(h) of the Internal Revenue Code.

Fund 31 - Division A 15.05%

Fund 32 - Division B 16.71%

Contribution rates shown may be reduced by expected income from a tax on fire insurance premiums.

7. *Employer Contributions:* The current employer contribution rates depend on the Fund. Division A covers employers covered by Social Security and Division B covers other employers. The contribution rates are set by the Board of Trustees, based on the actuarial valuation for the preceding year. Contribution rates are reduced by expected income from a tax on fire insurance premiums. The Funds in this System are:

Fund 31 - Division A

Fund 32 - Division B

8. *Final Average Monthly Salary (FAMS):* The monthly average of the member's highest three salaries preceding retirement.

9. *Service Retirement:*

- a. Eligibility: A member may retire with an unreduced benefit at age 65 with four years of service or at age 60 with 10 years of service or at any age with 20 years of service.
- b. Monthly Benefit: 2.50% of Final Average Monthly Salary (FAMS) times years of service up to 20 years, plus 2.00% of FAMS times years of service in excess of 20. There is a minimum benefit of \$500 per month.
- c. Payment Form: For married members benefits are paid as an automatic unreduced Joint and 75% Survivor Annuity. A life annuity is payable to unmarried members (although children's benefits may also be due following the member's death).

10. *Disability Retirement:*

- a. Eligibility: Member must have five or more years of service or the disability must be related to the member's duties. In addition, the member must not be eligible for a 20-year service retirement at time of disability.
- b. Monthly Benefits: 50% of FAMS.
- c. Payment Form: Benefits are payable as long as the member is disabled. Upon reaching 20 years of service, including time while disabled, or at age 65 if earlier, benefits are converted to a retirement benefit. There are special rules governing when benefits must be converted for members who become disabled after age 60.
- d. Death while Disabled: Upon the death of a disabled firefighter, the spouse shall receive 75% of the benefit currently being paid.

11. *Vesting and Refunds:*

- a. Eligibility: All members who are not vested are eligible for a refund when they terminate service. Members are vested after four years of service. Vested members may also elect to receive a refund in lieu of the deferred termination benefit described below.
- b. Amount: The refund benefit is the accumulated value of the member's contributions credited by the fund. Interest is not credited on member contributions.

12. *Deferred Termination Benefit:*

- a. Eligibility: Member must be vested (4 years of service) and must elect to leave his/her contributions on deposit.
- b. Monthly Benefit: Same as the service retirement benefit, based on service and FAMS at termination, and commencing once the member is eligible.
- c. Payment Form: Same as for service retirement.

- d. Death Benefit: The beneficiary of an unmarried inactive member who dies with 20 or more years of service prior to retirement is entitled to receive a refund benefit (or \$500 if larger). The spouse of an inactive member with 20 years of service receives a monthly annuity equal to 50% of the service retirement benefit that would have been paid had the member died immediately prior to retirement. (An actuarial reduction factor is applied if the member was under age 50 at death.) If the inactive member had less than 20 years of service, no death benefit is due.
13. *Death while an Active Member (On Duty)*: If death occurs in the line of duty, the lump-sum and annuity benefits described below will be paid to the spouse. (The benefits are not applicable to unmarried members, although children's benefits may be due.)
- a. Lump-sum (Division A members): \$1,500.
- b. Annuity (Division A members): 30% of member's FAMS. For members with more than 20 years of service, the annuity is 75% of the retirement benefit earned by the member as of his/her date of death.
- c. Lump-sum (Division B members): \$1,500.
- d. Annuity (Division B members): 37.5% of member's FAMS. For members with more than 20 years of service, the annuity is 75% of the retirement benefit earned by the member as of his/her date of death.
14. *Death of an Active Member (Off Duty)*: If death occurs from a cause not related to the member's duties, the lump-sum and annuity benefits described below will be paid to the spouse. (The benefits are not applicable to unmarried members, although children's benefits may be due.)
- a. Lump-sum (Division A members): If the member has less than 10 years of service, the benefit is \$1,000 or a refund benefit, whichever is larger. If the member has 10 or more years of service, the benefit is \$500.
- b. Annuity (Division A members): If the member has less than 10 years of service, no annuity is due. For members with 10 or more years of service, the benefit is 2% of FAMS per year of service, to a maximum of 30% of FAMS.
- c. Lump-sum (Division B members): If the member does not have five years of service, the benefit is the sum of 50% of the member's salary plus a refund benefit. If the member has five or more years of service, the benefit is \$1,500.
- d. Annuity (Division B members): If the member has fewer than five years of service, no annuity is due. If the member has five or more years of service, the annuity is 37.5% of the member's FAMS. For members with more than 20 years of service, the annuity is 75% of the retirement benefit earned by the member as of his/her date of death.

15. *Optional Forms of Benefit:* None.
16. *Postretirement Death Benefit:* None, except for survivor benefit applicable to married members.
17. *Postretirement Benefit Increases:* Benefits are increased annually to take into account changes in the cost of living, with a maximum annual increase of 4% of the original benefit (i.e., a maximum 4% simple interest increase). In years in which the cost of living increases more than 4%, the excess increase is accumulated and used in later years in which the cost-of-living increase is less than 4%. This calculation is made separately for each individual. In addition, a closed group of retirees also receives a second special increase amount paid as a level annuity under whichever form of payment is applicable. This is the Restoration of Purchasing Power (ROPP) payment.
18. *3% Substantial Substitute:* All members whose service began before January 1, 1989, receive an additional annual payment equal to 3% of their benefit. These payments are made to offset the taxability of the retirement benefits under the State income tax provisions. Prior to July 1, 1995, this benefit was funded by annual appropriations made by the State on a pay-as-you go basis. Beginning July 1, 1995, this benefit is funded on an actuarial basis by increasing the employer contribution rate for those Funds which are funded by the State.

**SUMMARY OF BENEFIT PROVISIONS FOR
JUDGES' NONCONTRIBUTORY RETIREMENT SYSTEM**

1. *Effective Date:* July 1, 1963.
2. *Plan Year:* Twelve-month period ending December 31st.
3. *Administration:* The System is administered by a Board of Trustees (which also administers the other Utah Retirement Systems). The Board of Trustees is responsible for both administration of the System and investment of the fund assets.
4. *Type of Plan:* This is a qualified governmental defined benefit retirement plan. Under GASB 25, it is considered to be a single-employer plan.
5. *Eligibility:* This System covers judges of the State of Utah, including Supreme Court justices and appellate, district, circuit and juvenile court judges.
6. *Employee Contributions:* None. There are no longer any members in the Judges' Contributory Retirement System.
7. *Employer Contributions:* Fund 37 (Judges) has a contribution rate which is set by the Board of Trustees, based on the actuarial valuation for the preceding year. The rate is reduced by estimated court fees which are earmarked for this fund.
8. *Final Average Monthly Salary (FAMS):* The monthly average of the member's highest two salaries preceding retirement.
9. *Service Retirement (Unreduced):*
 - a. Eligibility: A member may retire with an unreduced benefit at age 70 with six years of service or after age 62 with 10 years of service or after 25 years of service.
 - b. Monthly Benefit: 5.00% times Final Average Monthly Salary (FAMS) times years of service up to 10, plus 2.25% of FAMS times years of service in excess of 10 but less than 20, plus 1.00% times FAMS times years of service in excess of 20. There is a minimum benefit equal to 110% of the formula benefit (but not greater than \$1,000 per month).
 - c. Payment Form: Married members receive an automatic, unreduced Joint and 65% Survivor annuity. Unmarried members receive a life annuity.

10. *Service Retirement (Reduced):*

- a. Eligibility: A member may retire with a reduced benefit upon attaining age 55 with 20 years of service.
- b. Reduction: An actuarial reduction from age 65. The reduction factors are shown in the following table:

| Age | Factor | Age | Factor |
|-----|--------|-----|--------|
| 64 | 89.92% | 59 | 54.19% |
| 63 | 81.00% | 58 | 49.18% |
| 62 | 73.09% | 57 | 44.69% |
| 61 | 66.05% | 56 | 40.66% |
| 60 | 59.78% | 55 | 37.03% |

- c. Payment Form: Same as for unreduced service retirement.

11. *Disability Retirement*: This System has no provisions applying to disability retirement.

12. *Vesting and Refunds*:

- a. Eligibility: All members who are not vested are eligible for a refund when they terminate service. Members are vested after six years of service. Vested members may also elect to receive a refund in lieu of the deferred termination benefit described below. (Although all judges are now members in the noncontributory system, some retain member contribution accounts from their participation in the Judges' Contributory Retirement System.)
- b. Amount: The refund benefit is the accumulated value of the member's contributions plus interest credited by the fund. The amount of interest credited each year is set annually by the Board of Trustees.

13. *Deferred Termination Benefit*:

- a. Eligibility: Member must be vested (6 years of service) and must elect to leave his/her contributions on deposit.
- b. Monthly Benefit: Same as the unreduced or reduced service retirement benefit, based on service and FAMS at termination, and commencing once the member is eligible.
- c. Payment Form: Same as for unreduced service retirement.
- d. Death Benefit: Same as for an active member.

14. *Death while an Active Member:* A refund of the member's accumulated contributions (with interest) is paid to the beneficiary of a deceased member. In addition, 65% of the member's FAMS (annualized) is paid to the spouse if the member was married. Alternatively, the spouse may waive these benefits and elect instead an annuity. The annuity is equal to 65% of the benefit determined using the unreduced service retirement formula, and based on current service and FAMS at the time of death.
15. *Optional Forms of Benefit:* The System permits married members to elect a reduced Joint and 75% Survivor annuity in lieu of the automatic Joint and 65% Survivor annuity. No other optional payment forms are available.
16. *Postretirement Death Benefit:* None, except for the Joint and Survivor annuities available to married members.
17. *Postretirement Benefit Increases:* Benefits are increased annually to take into account changes in the cost of living, with a maximum annual increase of 4% of the current benefit (i.e., a maximum 4% compound interest increase). In years in which the cost of living increases more than 4%, the excess increase is accumulated and used in later years in which the cost-of-living increase is less than 4%. This calculation is made separately for each individual. In addition, judges retired prior to July 1, 1983 received an increase of \$120 per month (\$60 for beneficiaries).
18. *3% Substantial Substitute:* All members whose service began before January 1, 1989, receive an additional annual payment equal to 3% of their benefit. These payments are made to offset the taxability of the retirement benefits under the State income tax provisions. Prior to July 1, 1995, this benefit was funded by annual appropriations made by the State on a pay-as-you go basis. Beginning July 1, 1995, this benefit is funded on an actuarial basis by increasing the employer contribution rate for those Funds which are funded by the State.

SUMMARY OF BENEFIT PROVISIONS FOR THE GOVERNORS AND LEGISLATIVE PENSION PLAN

1. *Effective Date:* July 1, 1967.
2. *Plan Year:* Twelve-month period ending December 31st.
3. *Administration:* The System is administered by a Board of Trustees (which also administers the other Utah Retirement Systems). The Board of Trustees is responsible for both administration of the System and investment of the fund assets.
4. *Type of Plan:* This is a qualified governmental defined benefit retirement plan. Under GASB 25, it is considered to be a single-employer plan.
5. *Eligibility:* This System covers state legislators with four or more years of service, and governors of the state.
6. *Employee Contributions:* None.
7. *Employer Contributions:* The state annually appropriates an actuarially determined contribution.
8. *Benefit base:* The benefit base is used to determine the benefits payable at retirement.
 - a. Legislators: The base was \$10.00 per month per year of service as of July 1, 1967. The base is increased 2% each six months after that date. As of January 1, 2011, the benefit base is therefore \$27.40.
 - b. Governors: The base was \$500.00 per month per term as of July 1, 1973. The base is increased 2% each six months after that date. As of January 1, 2011, the benefit base is therefore \$1,240.00.
 - c. Supplemental Benefit: An additional benefit of \$3.50 per month per year of service. This benefit is not indexed nor are COLAs granted on it. This benefit only applies to members of the System on March 1, 2000 and is effective March 1, 2000.
9. *Service Retirement (Unreduced):*
 - a. Eligibility: Age 65.
 - b. Monthly Benefit: Legislators receive the benefit base (see above) per year of service, while former governors receive the benefit base (see above) for each term served (maximum of two terms).
 - c. Payment Form: For married members, a Joint and 50% Survivor annuity. For unmarried members, a life annuity.

10. *Service Retirement (Reduced):*
 - a. Eligibility: A member may retire with a reduced benefit upon attaining age 62 with 10 years of service.
 - b. Reduction: 3% per year that retirement is prior to age 65.
 - c. Payment Form: Same as for unreduced service retirement.
11. *Disability Retirement*: This System has no provisions applying to disability retirement.
12. *Vesting and Refunds*: A vested member who made contributions in another System and withdraws them forfeits all benefits under this System.
13. *Deferred Termination Benefit*:
 - a. Eligibility: Same as for reduced or unreduced service retirement. The member must not have withdrawn his/her contributions under another System.
 - b. Monthly Benefit: Same as the unreduced or reduced service retirement benefit, based on service at termination, and commencing once the member is eligible.
 - c. Payment Form: Same as for unreduced service retirement.
 - d. Death Benefit: Same as for an active member.
14. *Death while an Active Member*:
 - a. Eligibility: Four years of service as a legislator or governor.
 - b. Monthly Benefit: 50% of the unreduced service retirement benefit that the member would have been entitled to upon reaching age 65 based on the current benefit base. Benefit is paid to surviving spouse only.
15. *Optional Forms of Benefit*: None.
16. *Postretirement Death Benefit*: None, except for the Joint and Survivor annuity available to married members.
17. *Postretirement Benefit Increases*: Benefits are increased annually to take into account changes in the cost of living, with a maximum annual increase of 4% of the original benefit (i.e., a maximum 4% simple interest increase). In years in which the cost of living increases more than 4%, the excess increase is accumulated and used in later years in which the cost-of-living increase is less than 4%. This calculation is made separately for each individual. Note that the supplemental \$3.50 per month per year of service benefit is not eligible for these increases.

18. *3% Substantial Substitute*: All members whose service began before January 1, 1989, receive an additional annual payment equal to 3% of their benefit. These payments are made to offset the taxability of the retirement benefits under the State income tax provisions. Prior to July 1, 1995, this benefit was funded by annual appropriations made by the State on a pay-as-you go basis. Beginning July 1, 1995, this benefit is funded on an actuarial basis by increasing the employer contribution rate for those Funds which are funded by the State.

APPENDIX 3

GLOSSARY

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or Funding Method: A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

Actuarial Gain or Actuarial Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will decrease the calculated contribution rates while actuarial losses will increase the calculated contribution rates.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.

Actuarial Value of Assets or Valuation Assets: The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Annual Required Contribution (ARC): The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment

Closed Amortization Period: A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA.

Funding Period or Amortization Period: The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: Governmental Accounting Standards Board.

GASB 25 and GASB 27: Governmental Accounting Standards Board Statements No. 25 and No. 27. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting

rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.