Background Information on the Actuarial Funding of Defined Benefit Retirement Plans and Actuarial Reporting

1. Purpose of Defined Benefit Retirement Plan Actuarial Funding. With the creation of defined benefit public pension plan liabilities, there arises a need to provide financing to match the liabilities and to create a trust fund for the accumulated assets. Since the obligation undertaken with a defined benefit plan is to provide a benefit of a predetermined amount at and after the time of retirement, the financing method will be more complex and will allow more variations. There are a number of possible financing budget estimation methods which have been developed by actuaries which can be utilized.

   The actual or ultimate cost of a pension plan is the total amount of any retirement annuities, disability benefits and survivor benefits eventually paid plus the total amount of any administrative costs eventually paid. The actual or ultimate cost will result no matter what method of financing is employed to fund pension benefits. The financing or actuarial funding method merely separates out the portion of the actual or ultimate cost that will be paid from investment returns from the portion to be funded from periodic contributions and affects the timing of the financing and the amount of the financing burden which will be borne by the pension plan employer or employers.

2. Minnesota Defined Benefit Retirement Plan Actuarial Reporting Requirement. Virtually every public pension plan is required to make annual financial and actuarial reports under Minnesota Statutes, Sections 356.20 and 356.215. The Standards for Actuarial Work, issued by the Commission, specify the detailed contents and format requirements for both the actuarial valuation reports and the experience studies. The public pension plans which are included in this requirement are the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Correctional State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), the Public Employees Police and Fire Retirement Plan (PERA-P&F), the Teachers Retirement Association (TRA), the State Patrol Retirement Plan, the St. Paul Teachers Retirement Fund Association (SPTRFA), the Duluth Teachers Retirement Fund Association (DTRFA), the Minneapolis Employees Retirement Fund (MERF), the University of Minnesota Faculty Retirement Plan and Supplemental Retirement Plan, the Judges Retirement Plan, and the various local police and firefighters relief associations.

   The annual actuarial valuation is required to include the determination of normal cost as a percentage of salary and accrued liability of the fund calculated according to the entry age normal cost method, with a prescribed pre- and post-retirement interest assumption, a prescribed salary assumption, and other assumptions as to mortality, disability, retirement, and withdrawal which are appropriate to the experience of the plan. A statement of administrative cost of the fund as a gross amount and as a percent of payroll is required. The actuary must also present an actuarial balance sheet, setting forth the accrued assets, the accrued liabilities (reserves for active members, deferred annuitants, inactive members without vested rights, and annuitants) and the unfunded actuarial accrued liability. The valuation is also to include a calculation of the additional rate of support required to amortize the unfunded accrued liability by the end of the applicable target full funding year. The actuary is required to provide an analysis of the increase or decrease in the unfunded accrued liability from changes in benefits, changes in actuarial assumptions, gains and losses from actual deviations from actuarial assumptions, amortization contribution, and changes in membership. An exhibit setting forth total active membership, additions and separations from active service during the year, total benefit recipients, additions to and separations from the annuity payroll, and a breakdown of benefit recipients into service annuitants, disabilitants, surviving spouses and children, and deferred annuitants is also required.

   The quadrennial experience study periodically prepared for MSRS-General, PERA-General, and TRA is required to furnish experience data and an actuarial analysis which substantiates the actuarial assumptions upon which the annual valuations are based. The quadrennial experience study is required to contain an actuarial analysis of the experience of the largest retirement plans and a comparison of that plan experience with the actuarial assumptions in force for the most recent annual actuarial experience.

   The purpose of the quadrennial experience studies is to provide the Commission and the retirement plan administrations with a periodic opportunity to review the accuracy of the current actuarial assumptions of the three largest retirement plans, compared to the experience for the most recent period and to revise those actuarial assumptions based on the recommendation of the retained consulting actuary and on input from plan administrators, their actuarial consultants, and others. The actuarial valuation process, as corrected or refined by the quadrennial experience process, is intended

to provide policymakers and others with an accurate picture of the funded condition and financial requirements of a public pension plan and the process is not aided if it relies on incorrect or inadequate assumptions. If a trend line is established in recent experience, that trend line should be reflected in a plan's actuarial assumptions, even if those assumptions make the financing position of the plan appear worse than it would under different assumptions.

3. Minnesota Public Retirement Plan Actuarial Assumptions, In General. Minnesota public pension plan actuarial assumptions are specified in part in statute (the economic assumptions of interest/investment return, individual salary increase, and payroll growth) and are determined in part by other parties, with Commission approval (the balance of all actuarial assumptions, generally, the demographic assumptions). Economic assumptions are required to project the amount of benefits that will be payable. Demographic assumptions are required to project when benefits will be payable. Demographic assumptions are used to project the development of the population covered by the pension plan and hence when the benefits to be provided will be paid. The demographic assumptions project when a member is likely to progress between the various categories of membership (active, deferred, or retired) and how long the person stays in each category. The types of economic assumptions used to measure obligations under a defined benefit pension plan include the following:

   (a) inflation;
   (b) investment return (sometimes referred to as the valuation interest rate);
   (c) compensation progression schedule; and
   (d) other economic factors (e.g., Social Security, cost-of-living adjustments, growth of individual account balances, and variable conversion factors).

   The types of demographic assumptions used to measure pension obligations include, but are not necessarily limited to, the following:

   (a) retirement;
   (b) mortality;
   (c) termination of employment;
   (d) disability and disability recovery;
   (e) election of optional forms of benefits; and
   (f) other assumptions, such as administrative expenses; household composition; marriage, divorce, and remarriage; open group assumptions; transfers; hours worked; and assumptions regarding missing or incomplete data.

   The actuarial assumption selection process should result in actuarial assumptions that are reasonable in light of the particular characteristics of the defined benefit plan that is the subject of the measurement. A reasonable actuarial assumption is one that is expected to appropriately model the contingency being measured and is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period. For any given measurement, two or more reasonable actuarial assumptions may be identified for the same contingency.

4. Economic Assumptions, Generally.

   a. Interest/Investment Rate Actuarial Assumption. Because Minnesota public pension plan benefits are paid out over time and are paid from retirement funds that are invested to obtain investment returns, future obligations are discounted for those future interest or investment earnings. In selecting the interest/investment rate actuarial assumption, the appropriate investment data should be reviewed, including the current yields to maturity of fixed income securities such as government securities and corporate bonds; any forecasts of inflation and of total returns for each asset class; historical investment data, including real risk-free returns, the inflation component of the return, and the real return or risk premium for each asset class; and the historical plan performance.

      The interest/investment rate actuarial assumptions can be arrived at using one of two methods, either the building block method or the cash-flow matching method.

      Under the building-block method, the expected future investment return of each asset class is assembled as a combination of the components of investment return. These components are factors such as inflation and the real rate of return for the class. The best-estimate investment return range is determined by identifying a best-estimate range of expected future real returns for each broad asset class applicable to the plan, such as cash and cash equivalents, fixed income securities and equities, an average weighted real-return range reflecting the plan's expected asset class mix is computed and that range is combined with the expected inflation range.

Under the cash flow matching method, the expected future investment return range is a combination of the internal rate of return on a bond portfolio with interest and principal payment approximately matching the plan's expected disbursements, and a risk adjustment range. The best-estimate investment return range is determined:

- by projecting the plan's benefit and expense disbursements to be valued in the measurement;
- by identifying a highly diversified portfolio available as of the measurement date of non-callable, high-quality corporate or U.S. government bonds with interest and principal payments approximately matching the projected disbursements;
- by computing the bond portfolio's internal rate of return;
- by establishing a risk adjustment range for the plan that reflects the uncertainties in the projected benefits and expenses, the expected returns on future contributions, the reinvestment of interest and principal payments not fully needed to pay current benefits, any mismatches between the benefit disbursement stream and the high-quality bond portfolio's interest and principal payment stream, and the current and expected future plan investments in equities or other asset classes besides high-quality bonds; and
- then by combining these figures.

b. Compensation/Salary Scale Actuarial Assumption. Compensation is a factor in determining participants' benefits in Minnesota public pension plans other than volunteer firefighter relief associations. Generally, a participant's compensation will change over the long term in accordance with inflation, productivity growth, and merit scale increases. The assumption used to measure the anticipated year-to-year change in compensation is referred to as the compensation or salary scale. It may be a single rate assumption, or, alternatively, it may be a select and ultimate rate assumption and vary by age and/or service, consistent with the merit scale component; or vary over future years, consistent with the inflation component.

In selecting the compensation or salary scale assumption, the appropriate compensation data should be reviewed, including the plan sponsor's current compensation practice and any anticipated changes in this practice; the current compensation distributions by age and/or service; historical compensation increases and the practices of the plan sponsor/sponsors; and historical national wage and productivity increases.

The compensation or salary scale assumption is generally constructed using a building-block method, which combines the best-estimate ranges for the components of compensation scale. These components include inflation, productivity growth, and merit scale.

c. Payroll Increase Assumption. Except for the Legislators Retirement Plan, the Elected State Officers Retirement Plan, and the Minneapolis Employees Retirement Fund Division of the Public Employees Retirement Association, the various statewide and major local retirement plans amortize their unfunded actuarial accrued liabilities on the basis of a level percentage of an increasing covered payroll rather than on the basis of a level dollar amount. The covered payroll increase actuarial assumption specifies the level of the annual increase in the total covered payroll from the valuation date until the amortization target date for the calculation of that level percentage of covered payroll contribution requirement. In selecting the assumption, the inflation assumption is a primary determinant, adjusted for known or expected changes in active plan membership numbers.

5. Demographic Assumptions, Generally

a. Retirement Age Assumption. With only a few exceptions, where length of service is the determining factor, Minnesota public pension plan members are required to attain a specified minimum age at which retirement benefits are payable if the member also terminates active employment. The retirement age assumptions relate to the specific age at which retirement benefits are likely to begin or the ages with a specific probability of retirement benefit commencement. In selecting the retirement age assumptions, in addition to data on the past experience of the plan membership, consideration should be given to the factors of the plan design, where specific incentives may influence when participants retire; the design of and the date of anticipated payment from Social Security and Medicare; and the availability of other employer-sponsored post-retirement benefit programs.

b. Turnover/Termination of Employment Assumptions. The termination of public employment by a Minnesota public pension plan member determines the amount of the person's accrued service credit. Minnesota public pension plans utilize service credit in determining retirement benefit amounts. The termination/withdrawal/turnover assumption predicts the amount of service credit

to be acquired by plan members and also predicts the extent of any gain expected to be accrued from plan members who terminate without vesting. In selecting the termination assumption, in addition to data on the past experience of the plan, consideration should be given to the factors of employer-specific or job-related factors such as occupation, employment policies, work environment, unionization, hazardous conditions, and location of employment; and applicable plan provisions, such as any early retirement benefits, the vesting schedule, or the payout options.

c. Mortality Assumptions. Generally, Minnesota public retirement plan benefits terminate upon the death of the recipient, or if a joint and survivor optional annuity form was chosen, upon the death of the survivor. The mortality assumption is the measure of the expected lifetimes of active members, retired members, deferred retirees, disabilitants, and survivors. In addition to data on the past experience of the plan, in selecting the mortality assumptions, consideration should be given to the likelihood and extent of mortality improvement in the future.

d. Disability Assumption. Except for the Legislators Retirement Plan, the Elected State Officers Retirement Plan, and some volunteer firefighter relief associations, Minnesota public pension plans pay disability benefits. The disability assumption is a prediction of the occurrence of disabilities, which constitute a premature commencement of benefits. In selecting the disability assumption, in addition to analyzing the data on the past experience of the plan, consideration should be given to the plan's definition of disability and the potential for recovery.

e. Optional Annuity Form Election Assumption. Most statewide and major local Minnesota public pension plans provide optional annuity forms, whereby the number adjusts the timeframe over which the benefit will be paid in return for a modification in the amount of the benefit. Many of these plans have a subsidized bounce-back joint and survivor optional annuity form, the selection of which will increase the liability of the plan. The optional annuity form election assumption implements expectations about the future selections of optional annuity forms. In addition to analyzing the data on the past experience of the plan, in selecting the optional annuity form election assumption, consideration should be given to the benefit forms and benefit commencement dates available under the plan and the degree to which particular benefit forms may be subsidized.

6. Time Horizon for Setting Actuarial Assumptions. The actuarial assumption selection or revision process should result in assumptions that are reasonable in light of the particular characteristics of the defined benefit plan that is the subject of the measurement. A reasonable assumption is one that is expected to appropriately model the contingency being measured and is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period. For any given measurement, two or more reasonable assumptions may be identified for the same contingency. At a minimum, when a revision of an actuarial assumption is considered, the new actuarial assumption should be consistent with the recent experience in that area unless experience is in flux, and then the new actuarial assumption should attempt to reasonably anticipate the progression of any identifiable trend.

   In particular with respect to mortality, in addition to data on the past experience of the plan, in selecting the mortality assumptions, consideration should be given to the likelihood and extent of mortality improvement in the future.

   Where a retirement plan is closed to new members, such as the Minneapolis Employees Retirement Fund (MERF), the Minneapolis Firefighters Relief Association (MFRA), or the Minneapolis Police Relief Association (MPRA), the consideration of an appropriate mortality table may be different because of that fact. The consideration is shaped by the fact that the total covered population is known, that the population is somewhat less susceptible to developments in longevity compared to plans with open active memberships due to a likely greater average age, and that any mortality losses will be required to be funded relatively quickly due to relatively short remaining amortization periods.

7. Context in Which Actuarial Assumptions are Set; Complications. Changing actuarial assumptions, when the quadrennial experience study indicates a need to do so, is not always an easy proposition. In the 1993-1995 round of experience studies, several assumptions that were identified for modification by the Commission actuary ultimately were not modified because of opposition from pension plan actuaries and administrators and several assumption changes were subject to dispute because of apparent stylistic disagreements among actuaries and because of the actuarial cost impact of the change on the potential for additional future benefit increases.

   Frequently in the past, actuarial assumptions have been changed in combination with benefit improvements (principally 1973 and 1989 for the statewide plans) or in combination with contribution restructurings (1984 for the statewide and major local plans; 1991 for the Minneapolis Employees Retirement Fund (MERF)).

8. Historical Development of Minnesota Defined Benefit Retirement Plan Actuarial Reporting Requirements. Since the creation of the Legislative Commission on Pensions and Retirement as an interim commission in 1955, retirement funding and actuarial data has been required to be provided to the state by or relating to the various public pension plans in the state, as follows:

- Laws 1957, Special Session, Chapter 11, was the initial actuarial reporting law enacted by the Minnesota Legislature. The 1957 actuarial reporting law was an uncoded temporary law that was applicable only to actuarial valuations prepared as of January 1, 1958. No prior generally applicable law required specific actuarial reporting to the Legislature or to any other public office or official. The 1957 actuarial reporting law required census tabulations of active members and benefit recipients, an actuarial balance sheet disclosing assets, liabilities and the actuarial full funding deficit, a statement of actuarial assumptions, an indication of the normal support rate for currently accruing liabilities and an indication of the 1997 target date amortization requirement. The 1957 actuarial reporting law was unspecific on the manner in which the actuarial calculation was to be prepared, leading to disputes when some funds prepared valuations on a basis other than the entry age normal actuarial method. The 1957 actuarial reporting law was broadly applicable to all statewide general and public safety pension plans, all local general employee plans, all local police relief associations and all local salaried firefighter relief associations. Problems with the 1957 actuarial reporting law led the Commission to refine the actuarial reporting requirements and procedures and to recommend a general ongoing actuarial reporting law in the years between 1958 and 1965. The actuarial reporting under the 1957 special law was due by January 6, 1959.
- Laws 1965, Chapters 359 and 751. Laws 1965, Chapter 359, was the initial codification of the general employee pension plan actuarial reporting law. Laws 1965, Chapter 751, was an uncoded temporary law applicable to local police and paid firefighters relief association actuarial valuations prepared as of December 31, 1964. The general employee pension plan actuarial reporting law required an indication of the level normal cost, an actuarial balance sheet disclosing assets, accrued liabilities and unfunded accrued liability as well as specific required reserve figures and an indication of the 1997 target date amortization requirement. The general employee pension plan actuarial reporting law required that the actuarial valuation normal cost and accrued liabilities to be prepared using the Entry Age Normal Cost (Level Normal Cost) Method, that the actuarial method be used to value all aspects of the benefit plan and known future benefit changes, that the actuarial valuation be prepared on the basis of a 3% interest assumption and other appropriate assumptions and that assets not include any present value of future amortization contributions. The general employee pension plan actuarial reporting law required annual actuarial valuations for the State Employees Retirement Fund, the Public Employees Retirement Fund, and the State Police Officers Retirement Fund. The general employee pension plan actuarial reporting law also required the preparation of an experience study validating the actuarial assumptions used in the valuation. The local police and paid fire actuarial reporting law was based on the 1957 actuarial reporting law with the additional clarification of a 3% interest rate assumption, the requirement of normal cost and accrued liabilities calculated on the basis of the entry age normal cost method and the reporting of the amount for the amortization of the unfunded accrued liability by the 1997 target date. The local police and paid fire actuarial reporting law was applicable to all police and paid firefighters relief associations. The actuarial reporting under the 1965 general law was due five months after the close of the fiscal year covered by the valuation. No experience studies were required by the 1965 general law.
- Laws 1967, Chapter 729, was a revision in the 1965 local police and paid fire actuarial reporting law. The 1967 local police and paid fire actuarial reporting law was a coded general statute requiring actuarial valuations as of December 31, 1967, and each four years thereafter. It was also made applicable volunteer firefighters relief associations and very small active membership police and paid firefighters relief associations. A 3% salary rate assumption was added. A 2007 target date amortization requirement replaced the prior 1997 target date amortization requirement for police and paid fire plans, leaving the 1997 requirement for volunteer and smaller active membership police and paid fire relief associations. An addition of a requirement to the calculated normal cost for amortizing net actuarial experience gains or losses was also added.
- Laws 1969, Chapter 289, revised the 1965 general employee pension plan actuarial reporting law by making the requirement applicable to the Minneapolis Employees Retirement Fund (MERF) and to the three first class city teacher retirement fund associations. It also provided for an interest rate assumption to 3.5% as well as 3.0% for comparison purposes and added a salary assumption of 3.5% for funds with a final salary based benefit plan.
- Laws 1973, Chapter 653, Section 45, modified the general employee pension plan actuarial reporting law by increasing the interest assumptions from 3.5% to 5%.

- Laws 1975, Chapter 192, recodified the general employee pension plan actuarial reporting law, previously coded as Minnesota Statutes 1974, Sections 356.21, 356.211, and 356.212, as Minnesota Statutes, Section 356.215. The actuarial valuation reports under the 1975 general law were due five months after the close of the fiscal year covered by the valuation. The experience studies under the 1975 general law were also due five months after the period covered by the experience study.
- Laws 1978, Chapter 563, Sections 9-11, and 31, repealed the separate local police and fire relief association actuarial reporting law, Minnesota Statutes 1976, Sections 69.71 to 69.76, and required the local police and fire relief associations to report under the general employee pension plan actuarial reporting law with specific adaptations, coded as Minnesota Statutes, Section 356.216. It also amended the actuarial reporting law by requiring specific reporting of entry age and retirement age assumptions and the provision of a summary of the benefit plan provisions on which the actuarial valuation is based.
- Laws 1979, Chapter 184, modified the actuarial reporting law by replacing the 1997 amortization target date with a 2009 amortization target date and establishing a procedure for extending that target date in the event of substantial unfunded actuarial accrued liabilities resulting from benefit increases, actuarial cost method changes or actuarial assumption changes.
- Laws 1981, Chapter 224, Sections 169-170. Laws 1981, Chapter 224, Section 169, largely revised the language usage and style of the actuarial reporting law. The 1981 general law also clarified that actuarial valuation reports and experience studies were due on the first day of the sixth month occurring after the end of the previous fiscal year. It also provided that actuarial valuations and experience studies were to be filed with the Legislative Reference Library rather than with the Secretary of the Minnesota Senate and with the Chief Clerk of the Minnesota House of Representatives. Additionally, the 1981 law clarified that amortization contribution requirements were required to be calculated on a level dollar basis.
- Laws 1984, Chapter 564, Section 43, substantially modified the actuarial reporting law. Actuarial valuations are required to comply with the Standards for Actuarial Work adopted by the Commission. The interest rate assumption was modified, with a post-retirement interest rate of 5% and a pre-retirement interest rate of 8% for the major, statewide plans. The actuarial balance sheet requirement was also substantially modified, and was expanded to include reporting of current and expected future benefit obligations, current and expected future assets and current and expected future unfunded liabilities. The amortization contribution requirement was also modified, with a change from a level dollar annual amortization procedure to a level percentage of future covered payroll amortization procedure for the major, statewide and local general employee plans other than MERF.
- Laws 1987, Chapter 259, Section 55, revised the language and style of the actuarial reporting provision, specified the particular interest and salary increase actuarial assumptions for the legislators retirement plan and elected state officers retirement plan, set the amortization target date for MERF at 2017 and exempted MERF from the process for automatically revising the target date upon benefit increases or assumption changes, required approval by the Legislative Commission on Pensions and Retirement for any demographic actuarial assumption changes, and reset the deadline date for experience studies from December 1 to June 1.
- Laws 1989, Chapter 319, Article 13, Sections 90-91, increased the interest rate actuarial assumption from 8.0% to 8.5% for all statewide and major local retirement plans other than MERF and extended the amortization full funding target date from 2009 to 2020 for all statewide and major local retirement plans other than MERF.
- Laws 1991, Chapter 269, Article 3, Sections 3-19, updated the actuarial valuation reporting requirements to accommodate governmental pension plan generally accepted accounting changes, required actuarial valuations or experience studies prepared by an actuary other than the actuary retained by the Legislative Commission on Pensions and Retirement to submit the document to the Commission, and modified some of the services performed by the Commission-retained actuary to reduce the cost of retirement plan-reimbursed actuarial services compensation.
- Laws 1991, Chapter 345, Article 4, Sections 3-4, reset the interest and salary actuarial assumptions for the MERF at 6% and 4% respectively and extended the MERF amortization target date from 2017 to 2020.
- Laws 1993, Chapter 336, Article 4, Section 1, defines administrative expenses for purposes of inclusion of administrative expenses as part of actuarial cost calculations.
- Laws 1993, Chapter 352, Section 7, provided, for the Public Employees Police and Fire Plan (PERA-P&F), for the reverse amortization of the amount of assets in excess of the plan's actuarial accrued liability.

- Laws 1995, Chapter 141, Article 3, Sections 14-15, implemented an age-related salary increase assumption for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the General Employees Retirement Plan of the Public Employees Retirement Association (PERA-General), and the Teachers Retirement Association (TRA), and set fund-specific payroll growth actuarial assumption rates for MSRS-General, PERA-General, and TRA.
- Laws 1997, Chapter 233, Article 1, Sections 2 and 57, required, two years after the quadrennial experience studies, that the actuary retained by the Legislative Commission on Pensions and Retirement conduct quadrennial projection valuations for MSRS-General, PERA-General, TRA, and for any other plans for which the Commission determines a study of this type would be beneficial. These quadrennial projection valuations were required to be conducted in consultation with the Commission's executive director, the retirement fund directors, the state economist, the state demographer, the Commissioner of Finance, and the Commissioner of Employee Relations. The results were required to be reported in the same manner as the quadrennial experience studies. The quadrennial projection valuation cost was required to be paid by retirement plans, with the costs allocated among all plans for which the actuary retained by the Commission performs annual actuarial valuations.
- Laws 1997, Chapter 241, Article 4, Section 1, revised the salary increase assumption for the State Patrol Retirement Plan, the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), PERA-P&F, and the first class city teacher retirement plans, and added a payroll growth assumption to the MSRS-General, MSRS-Correctional, State Patrol, Legislators, Elected State Officers, and Judges Plans; to PERA-General and PERA-P&F; to TRA; and to the first class city teacher retirement plans.
- Laws 1998, Chapter 390, Article 8, Section 2, changed the requirement for a quadrennial projection valuation from the three major statewide retirement plans to one of the statewide or major local retirement plans.
- Laws 1999, Chapter 222, Article 4, Section 14, set the calculated overfunding credit for PERA-P&F if the plan has assets in excess of its actuarial accrued liability at the 30-year level percentage of covered pay amortization requirement applicable if the excess assets were an unfunded liability and reset as a new 30-year period for each valuation year.
- Laws 2000, Chapter 461, Article 1, again substantially modified the actuarial reporting law. Salary assumptions and post-retirement interest rate assumptions were reset, and the actuarial value of assets also was changed to an approach that approaches, but smoothes, market values.
- First Special Session Laws 2001, Chapter 10, Article 11, Section 18, exempted PERA-General from the automatic amortization target date resetting provisions of Minnesota Statutes, Section 356.215, and set a 2031 amortization target date for PERA-General.
- Laws 2003, Chapter 392, Articles 9 and 11, the select and ultimate salary increase assumptions (i.e., rates varying based on both age and length of service) for MSRS-General, PERA-General, TRA, the Duluth Teachers Retirement Fund Association (DTRFA), the Minneapolis Teachers Retirement Fund Association (MTRFA) and the St. Paul Teachers Retirement Fund Association (SPTRFA) were revised based on the 2000 experience studies. The structure of Minnesota Statutes, Section 356.215, also was reorganized and revised as part of a recodification of Minnesota Statutes, Chapter 356.
- Laws 2004, Chapter 223, Section 7, replaced a single contracting consulting actuary retained by the Legislative Commission on Pensions and Retirement to prepare the annual actuarial valuations of the various statewide and major local retirement plans with a single contracting consulting actuary retained jointly by the administrators of the seven retirement systems with Commission ratification.
- First Special Session Laws 2005, Chapter 8, Article 11, Section 2, set the interest and salary actuarial assumptions for the Bloomington Fire Department Relief Association at 6% and 4% respectively.
- Laws 2008, Chapter 349, Article 10, Sections 7-15
  - The requirement that the pension funds to jointly retain an actuary to provide actuarial reports for the pension plans was revised by removing the requirement of having a joint actuary and the governing board of each pension plan system was authorized to retain its own actuary.
  - The Commission was authorized to contract with an actuarial firm to audit or review the actuarial valuations, experience studies, and actuarial cost analysis prepared by the actuaries retained by the various pension plan governing boards, with a $140,000 initial appropriation provided to cover the cost of the contract.

- The definition of approved actuary, for purposes of retaining and providing actuarial valuations, was revised by removing authority to be retained if the individual had 15 years of experience serving major public retirement plans in lieu of being a fellow in the Society of Actuaries. Obsolete language in the actuarial value of assets provision was removed.
- The provision which had required actuarial valuations to be filed with the Legislative Commission on Pensions and Retirement, Commissioner of Finance, and Legislative Reference Library no later than six months after the end of the fiscal year was revised by removing valuation reporting deadlines.
- The salary assumption and payroll growth assumption for the Elective State Officers Retirement Plan was removed (because the plan is closed and has no active members).
- The salary growth assumptions for other plans were revised by reducing the MSRS-General select period to five years rather than ten; by revising the select calculation for DTRFA to 8% per year in years one to seven, 7.25% per year for years seven and eight, and 6.5% for years eight and nine; by increasing the percentage rate from 0.3% to 0.6% for MSRS-General and PERA-General; and by reducing the ultimate salary increase assumptions for the plans, at least in some age ranges, except for the State Patrol Retirement Plan, the Local Government Correctional Service Retirement Plan (PERA-Correctional), and SPTRFA.
- The payroll growth assumptions were decreased from 5.0% to 4.5% for MSRS-General, MSRS-Correctional, the State Patrol Retirement Plan, the Legislators Retirement Plan, TRA, and DTRFA; and from 5.0% to 4.0% for the Judges Retirement Plan; and from 6.0% to 4.5% for PERA-General, PERA-P&F, and PERA-Correctional.
- After July 1, 2010, the salary and payroll growth assumptions were permitted to be revised by the governing boards of the applicable plan and become effective if the Commission does not take action to overrule the plan proposed change within one year.
- The full funding dates for MSRS-Correctional, the Judges Retirement Plan, and PERA-P&F were reset to June 30, 2038. The full funding date for SPTRFA was reset as a rolling period 25 years from the year of the valuation, and the annual actuarial valuation was required to contain an exhibit indicating the SPTRFA funding ratio and contribution deficiency/sufficiency based on market value.
- The MERF actuarial valuation, with respect to its Retirement Benefit Fund, and MSRS, PERA, and TRA plan actuarial valuations with respect to the Minnesota Post Retirement Investment Fund (Post Fund), must include an exhibit indicating the contribution necessary to amortize the unfunded liability of the Retirement Benefit Fund or the Post Fund, as applicable.

- Laws 2009, Chapter 169, Article 1, Sections 70-71
  - The actuarial value of assets computation provision is revised by redefining the actuarial value of assets to use a consistently applied 8.5% investment earnings assumptions and by incorporating a five-year phase in of market value asset recognition for the dissolved former Minnesota Post Retirement Investment Fund.
  - The provision specifying how amortization contributions are to be determined for most plans is revised by eliminating an obsolete requirement relating to the Minnesota Post Retirement Investment Fund.
- Laws 2010, Chapter 359, Article 1, Sections 68-69, and 82; Article 9, Section 1; Article 11, Sections 19-20; and Article 12, Sections 23-24
  - A service-related future salary increase assumption replaced the select and ultimate future salary increase assumption for PERA-General.
  - The amortization target date of MSRS-General was reset to 2040 and of the MERF Division of PERA was reset to 2031.
  - The deadline date for the filing actuarial valuation reports was re-imposed as the last day of the sixth month occurring after the end of the previous fiscal year.
  - The modified single rate future salary increase assumption applicable to MERF was eliminated as part of the administrative consolidation of the retirement plan with PERA.
  - MERF was removed from the requirement for filing a separate annual financial report and the PERA-General actuarial valuation was required to include a valuation of the MERF Division.
  - For as long as the applicable plan provides a reduced post-retirement adjustment, the actuary must use a post-retirement interest rate assumption equal to the difference between the pre-retirement interest rate assumption and the stated post-retirement adjustment rate.