## Deloitte.

South Dakota Department of Labor, Job Service, Unemployment Division, and Office of Administrative Services Retirement Plan

Actuarial Valuation
July 1, 2009

# SOUTH DAKOTA DEPARTMENT OF LABOR JOB SERVICE, UNEMPLOYMENT DIVISION, AND OFFICE OF ADMINISTRATIVE SERVICES RETIREMENT PLAN 

## ACTUARIAL VALUATION CERTIFICATION

This report presents the results of the actuarial valuation of the South Dakota Department of Labor Job Service, Unemployment Division, and Office of Administrative Services Retirement Plan as of July 1, 2009.

This actuarial valuation has been prepared based upon participant data and asset information provided by the South Dakota Department of Labor and the Principal Financial Group as of July 1, 2009. The actuary has checked the data for reasonableness, but has not independently audited the data. The actuary has no reason to believe the data is not complete and accurate, and knows of no further information that is essential to the preparation of the actuarial valuation.

In our opinion, all costs, liabilities, rates of interest, and other factors under the Plan have been determined on the basis of actuarial assumptions and methods, which are each reasonable (or consistent with authoritative guidance) taking into account the experience of the Plan and future expectations and which, when combined, represent our best estimate of anticipated experience under the Plan.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operations of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Our scope did not include analyzing the potential range of such future measurements, and we did not perform that analysis.

The undersigned with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Any tax advice included in this written or electronic communication was not intended or written to be used, and it cannot be used by the taxpayer, for the purpose of avoiding any penalties that may be imposed by any governmental taxing authority or agency.

## DELOITTE CONSULTING LLP



Michael J. de Leon, FCA, EA, MAAA


## REPORT HIGHLIGHTS

|  | 7/1/2008 <br> Valuation | $\begin{gathered} 7 / 1 / 2009 \\ \text { Valuation } \\ \hline \end{gathered}$ | For Details Please See: |
| :---: | :---: | :---: | :---: |
| Section I. Participant Data |  |  | Page 1 |
| A. Active Participants | 42 | 40 |  |
| B. Retirees and Beneficiaries | 211 | 212 |  |
| C. Vested Terminated Participants | 7 | 5 |  |
| D. Total Participants | 260 | 257 |  |
| E. Payroll | \$ 1,695,507 | \$ 1,631,174 |  |
| Section II. Asset Information |  |  | Page 4 |
| A. Fair Market Value of Assets | \$ 68,208,947 | \$ 48,578,014 |  |
| Section III. Contribution Requirements |  |  | Page 6 |
| A. Present Value of Employer Future Cost | \$ 0 | \$ 5,572,548 |  |
| B. Recommended Contribution for Plan Year | 0 | 503,139 |  |
| C. Unfunded Actuarial Liability | \$(13,505,720) | \$5,565,544 |  |
| $\begin{array}{ll}\text { Section IV. } & \begin{array}{l}\text { Present Value of } \\ \text { Accumulated Benefits }\end{array}\end{array}$ |  |  | Page 8 |
| A. Present Value of Vested Benefits | \$ 54,150,634 | \$ 53,831,229 |  |
| B. Present Value of Nonvested Benefits | 0 | 0 |  |
| C. Total Present Value of Accumulated Benefits | \$ 54,150,634 | \$ 53,831,229 |  |

## REPORT HIGHLIGHTS

For Details Please See:

| Section V. | Governmental Accounting Standards Board | Page 9 |
| :--- | :--- | :--- |
|  | Statements Nos. 25 and 27 Disclosures |  |

A. GASB No. 25 Schedule of Funding Progress
B. GASB Nos. 25 and 27 Schedule of Employer Contributions
C. Development of NPO and Annual Pension Cost Pursuant to GASB No. 27

## APPENDIX

| Exhibit 1. | Summary of the Principal Provisions of the Plan | Page 12 |
| :--- | :--- | :--- |
| Exhibit 2. | Statement of Actuarial Assumptions | Page 16 |
| Exhibit 3. | Statement of Actuarial Funding Method | Page 18 |

## COMMENTS

## Background

The plan was frozen to new participants effective July 1, 1980.
Effective March 1, 1987, the South Dakota Department of Labor Job Service, Unemployment Division, and Office of Administrative Services Retirement Plan was separated into two plans. One plan (this plan) covered all active participants and vested terminations as of January 1, 1987, while the other covered all participants retired as of January 1, 1987. Effective April 1, 1987, the retired life plan was terminated. Annuities were purchased to cover the monthly benefit amounts for participants in the retired life plan.

This actuarial valuation report shows the liabilities and assets as of July 1, 2009 for the "active life" plan. This plan covers all participants who had not retired as of January 1, 1987, plus any cost-of-living increases granted after January 1, 1987 to pre-1987 retirees.

## Funded Status of Plan

As of July 1, 2009, the present value of projected benefits is greater than the sum of the actuarial value of assets and the present value of future employee contributions. Thus, future employer contributions are expected to be required, based on the actuarial assumptions outlined in Exhibit 2 of the Appendix.

Table 8 shows that the plan is underfunded as of July 1, 2009 by $\$ 5.6$ million, based on the actuarial assumptions and methods outlined in Exhibits 2 and 3 of the Appendix (as of July 1, 2008, the plan was overfunded by $\$ 13.5$ million). The primary reason for this decrease is an asset loss of $\$ 21.2$ million due to returns less favorable than expected (actual $(24.3 \%)$ vs. $7.5 \%$ expected). This loss was offset by a gain of approximately $\$ 1.4$ million due to a $0 \%$ (vs. $3.5 \%$ expected) COLA as of July 1,2009 , pursuant to an amendment to the plan, effective May 31, 2009. This amendment states "no increase in the amount of monthly retirement benefit payments to an Annuitant shall occur in any year in which the fair market value of the Plan's assets, determined on April 30 immediately preceding the Adjustment Date, are less than the Plan's actuarial accrued liability for such year as stated in the Plan's most recent actuarial valuation report'".

## Governmental Accounting Standards Board (GASB) Requirements

GASB Statement No. 25, which is effective for financial reporting periods beginning after June 15, 1996, requires governmental defined benefit plans to disclose supplementary information in the form of two schedules, the Schedule of Funding Progress and the Schedule of Employer Contributions. These schedules are provided on pages 9 and 10 of this report.

GASB Statement No. 27, which is effective for financial reporting periods beginning after June 15, 1997, establishes standards of accounting and financial reporting for pension expenditures/expense and related pension liabilities, pension assets, note disclosures, and required supplementary information in the financial reports of state and local governmental employers. The development of the plan's annual pension expense for the July 1, 2009 to June 30, 2010 plan year and the Net Pension Obligation is also discussed on page 10 of this report.

## I. PARTICIPANT DATA

Employees of the South Dakota Department of Labor Job Services Division, Unemployment Division, and Office of Administrative Services Division who were hired before July 1, 1980 are eligible to participate in the plan. Table 1 displays various data concerning the participant group.

## Table 1

## Comparison of Plan Participant Information

## 7/1/2008

7/1/2009

| Active participants | 42 | 40 |
| :--- | ---: | ---: |
| Vested terminated participants | 7 | 5 |
| Retired participants and <br> beneficiaries* | 211 | 212 |

Data for active participants:

| Total payroll | $\$ 1,695,507$ | $\$ 1,631,174$ |
| :--- | ---: | ---: |
| Average salary | $\$ 40,369$ | $\$ 40,779$ |
| Average age | 57.76 | 58.50 |
| Average past service | 32.12 | 33.10 |
| Average future service | 0.75 | 0.42 |
| Average expected retirement age | 58.51 | 58.92 |
| Data for retired participants and |  |  |
| beneficiaries in "new" plan: |  |  |
| Average monthly benefit including COLAs | $\$ 1,641$ | $\$ 1,664$ |
| Average age | 67.41 | 68.37 |
|  |  |  |
| Data for retired participants and <br> beneficiaries in "old" plan: |  |  |
| Average monthly COLA benefit only | $\$ 665$ | $\$ 662$ |
| Average age | 80.94 | 81.74 |

* A total of 62 ( 63 as of $7 / 1 / 2008$ ) of the retired participants and beneficiaries receive monthly payments from annuities purchased when the retired life plan was terminated in 1987. Only cost-of-living adjustments granted after January 1, 1987 are included as liabilities of this plan.

Table 2 reconciles the number of plan participants as of July 1, 2009 with the number of participants as of the previous valuation date.

## Table 2

## Reconciliation of Participants

|  | Actives | Vested <br> Terminations | Retirees | Beneficiaries |
| :--- | :---: | :---: | :---: | :---: |
| Participants as <br> of July 1, 2008 | 42 | 7 | 190 | 21 |
| Vested terminations <br> Retired | $(2)$ | $(2)$ | 4 |  |
| Deaths with beneficiary |  |  | $(2)$ | $(1)$ |
| Deaths without beneficiary | - | - | -1 | $(1)$ |
| Payments ceased |  |  |  |  |
| Data corrections |  |  |  |  |
| Participants as <br> of July 1, 2009 | 40 | 5 | 193 | - |

Table 3 displays the distribution of active participants by age and service. Table 4 displays the distribution of annual earnings of active participants by age groups.

Table 3

## Service Groups by Age Groups

| Age <br> Group | $\underline{\mathbf{0 - 2 4}}$ | $\underline{\mathbf{2 5 - 2 9}}$ | $\underline{\mathbf{3 0}+}$ | $\underline{\text { Total }}$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| $20-24$ |  |  |  | 0 |
| $25-29$ |  |  |  | 0 |
| $30-34$ |  |  |  | 0 |
| $35-39$ |  |  |  | 0 |
| $40-44$ |  |  |  | 0 |
| $45-49$ |  | 2 | 6 | 0 |
| $50-54$ |  | 3 | 17 | 8 |
| $55-59$ |  | 2 | 8 | 20 |
| $60-64$ | $\underline{0}$ | $\underline{2}$ | 10 |  |
| $65+$ | 0 | 7 | 33 | $\underline{2}$ |
| TOTAL | 0 |  |  | 40 |

## Table 4

Annual Earnings by Age Groups
$\left.\begin{array}{lcccc}\begin{array}{c}\text { Age } \\ \text { Group }\end{array} & \begin{array}{c}\text { Number } \\ \text { of }\end{array} & & \begin{array}{c}\text { Total } \\ \text { Annual } \\ \text { Earnings }\end{array} & \end{array} \begin{array}{c}\text { Average } \\ \text { Annual } \\ \text { Earnings }\end{array}\right]$

## II. ASSET INFORMATION

Table 5 shows the fair market value of assets as of June 30, 2009, as reported by Principal Life Insurance Company.

## Table 5

## Value of Assets as of June 30, 2009

(a) Real Estate Account
(b) Real Estate Investment Trust Account
(c) Bond and Mortgage Account
(d) Core Plus Bond I Account
(e) Inflation Protection Account
(f) High Yield I Account
(g) International I Account
(h) International Value I Account
(i) International Growth Account
(j) International Emerging Markets Account
(k) Large-Cap Blend I Account
(1) Large-Cap Value I Account
(m) Large-Cap Value III Account
(n) Mid-Cap Value III Account
(o) Small-Cap Value I Account
(p) Large-Cap Growth Account
(q) Large-Cap Growth I Account
(r) Mid-Cap Growth III Account
(s) Small-Cap Growth II Account
(t) Total Value of Assets as of June 30, 2009
\$ 2,841,889
1,041,534
5,980,085
5,927,617
2,494,935
2,151,621
1,996,039
2,044,016
2,042,529
681,371
4,266,954
4,483,598
2,334,593
875,630
876,034
3,392,707
3,399,231
871,481
876,150
$\$ 48,578,014$

Table 6 is a summary of the transactions of the funds from July 1, 2008 through June 30, 2009.

## Table 6

## Summary of Transactions for the Year Ended June 30, 2009

(a) Total Value of Assets as of July 1, 2008
(b) Income

| (i) | Employee contributions | $\$ 23,566$ |
| ---: | :--- | :--- |
| (ii) | Investment income | $\underline{(16,108,981)}$ |
| (iii) | Total income | $\$(16,085,415)$ |

(c) Disbursements
(i) Payments
\$ 3,514,289
(ii) Expenses
(iii) Total disbursements
$\begin{array}{r}31,229 \\ \hline \$ 3,545,518\end{array}$
\$ 68,208,947
(d) Total Value of Assets as of June 30, 2009 \$ 48,578,014

The rate of return (loss) on plan assets from July 1, 2008 through June 30, 2009 as calculated by Principal Financial Group was approximately ( $24.32 \%$ ).

## III. CONTRIBUTION REQUIREMENTS

The present value of projected benefits represents the expected cost of all benefits to be paid from the plan, based on the actuarial assumptions used in the valuation. As of July 1, 2009, the present value of projected benefits is more than the sum of the actuarial value of assets and the present value of future employee contributions. Thus, future employer contributions are expected to be required, based on the actuarial assumptions outlined in Exhibit 2 of the Appendix.

Table 7 shows the determination of the future employer obligation at the current valuation date.

## Table 7

## Plan Costs as of July 1, 2009

(a) Present Value of Projected Benefits
(i) Active participants
\$ 16,109,713
(ii) Retirees and beneficiaries
37,727,876
(iii) Vested terminations
345,606

## Total

\$ 54,183,195
(b) Actuarial Value of Assets 48,578,014
(c) Present Value of Total Future Cost:
(a) - (b), not less than $\$ 0$

5,605,181
(d) Present Value of Future Employee Contributions
(e) Present Value of Employer Future Cost:
(c) - (d), not less than $\$ 0$
\$ 5,572,548

The recommended employer contribution is the employer normal cost, plus a 25-year amortization payment toward the unfunded actuarial liability if an unfunded liability is expected as of the end of the plan year. Table 8 develops this contribution for the July 1, 2009 to June 30, 2010 plan year. The normal cost and unfunded actuarial liability are determined based on the entry age actuarial cost method, which provides for level annual costs as a percentage of payroll. This method is described in detail in Exhibit 3 of the Appendix.

## Table 8

## Recommended Contribution

## For Plan Year Ending June 30, 2010

I. Recommended employer contribution, before test of unfunded liability
(a) Total normal cost
\$ 18,994
(b) Expected employee contributions 15,413
(c) Employer normal cost (a) - (b)
(d) 25-year amortization payment toward unfunded actuarial liability
(e) Interest to June 30, 2010 on (c) + (d)

35,103
(f) Recommended employer contribution, before test of unfunded liability: $(\mathrm{c})+(\mathrm{d})+(\mathrm{e})$, but not less than $\$ 0$
\$ 503,139
II. Test of unfunded liability
(g) Unfunded actuarial liability
(i) Actuarial liability as of July 1, 2009
(ii) Actuarial value of assets as of July 1, 2009
(iii) Unfunded actuarial liability: (i) - (ii)
\$ 54,143,558
$\begin{array}{r}48,578,014 \\ \hline 55,565,544\end{array}$
(h) Interest to June 30, 2010 on (c) + (g)
(i) Expected unfunded liability as of June 30, 2010:
$(\mathrm{c})+(\mathrm{g})+(\mathrm{h})$, but not less than $\$ 0$
5,986,809
III. Recommended employer contribution:
lesser of (f) and (i)
\$ 503,139

## IV. PRESENT VALUE OF ACCUMULATED BENEFITS

The actuarially computed value of accumulated benefits as of July 1, 2009 is $\$ 53,831,229$. All participants of the plan are fully vested. When the fair market value of assets of $\$ 48,578,014$ is deducted, the unfunded vested liability is $\$ 5,253,215$. Table 9 shows the present value of vested and accumulated benefits as of July 1, 2009.

## Table 9

## Present Value of Accumulated Benefits

as of July 1, 2009

|  | Number of Vested $\underline{\text { Participants }}$ | Actuarial Present Value |
| :---: | :---: | :---: |
| Retirees and Beneficiaries* | 212 | \$ 37,727,876 |
| Terminated Participants with |  |  |
| Vested Benefits | 5 | 345,606 |
| Active Participants | 40 | 15,757,747 |
| Total Present Value of Vested |  |  |
| Benefits | 257 | \$ 53,831,229 |
| Accumulated Nonvested Benefits |  | 0 |
| Total Present Value of Accumulated Benefits |  | \$ 53,831,229 |

The present values in Table 9 were computed using the actuarial assumptions set forth in Exhibit 2, except that no future salary increases are assumed.

* A total of 62 of the retired participants receive monthly benefits from annuities purchased when the retired life plan was terminated in 1987. Only cost-of-living increases granted after January 1, 1987 are included for these participants as liabilities of this plan.


## V. GOVERNMENTAL ACCOUNTING STANDARDS BOARD STATEMENTS NOS. 25 and 27 DISCLOSURES

The Governmental Accounting Standards Board (GASB) has issued Statement No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans. This Statement superseded GASB Statement No. 5, Disclosure of Pension Information by Public Employee Retirement Systems and Local Governmental Employers. GASB No. 25 is effective for financial reporting periods beginning after June 15, 1996, and GASB No. 27, Accounting for Pensions by State and Local Governmental Employers, is effective for periods beginning after June 15, 1997. GASB No. 25 requirements include disclosure of supplementary information in the form of two schedules, the Schedule of Funding Progress and the Schedule of Employer Contributions.

GASB No. 27 establishes certain boundaries, or parameters, for determining whether the amounts measured in accordance with the plan's funding policy are acceptable for financial reporting or whether different measures are required.

The plan's funding policy is to contribute the recommended employer contribution defined as the employer's normal cost plus a 25 -year amortization of the unfunded accrued liability if an unfunded liability is expected as of the end of the plan year. We believe the plan's funding policy is determined within the parameters set forth by the Statement.

The GASB No. 27 annual pension expense is defined as the Annual Required Contribution (ARC) plus one year's interest on the Net Pension Obligation (NPO) offset by an adjustment to the ARC. The ARC, as noted above, may be defined as the recommended annual employer contribution as developed in Table 8 of this report. The NPO is defined as the cumulative difference, including interest, for the years prior to the transition date (July 1, 1997) between (a) the employer's required contributions in accordance with the plan's actuarially determined funding requirements and (b) the contributions made by the employer in relation to the required contributions. The GASB No. 27 annual pension expense for this plan is $\$ 503,139$ for the July 1, 2009 to June 30, 2010 plan year. Table 12 displays the development of the NPO and the annual pension cost assuming that there will be no employer contributions.

## Table 10

## GASB No. 25 Schedule of Funding Progress

|  | Actuarial | Entry Age Normal | Unfunded |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation |  |  | Actuarial Accrued |  |  | Percentage of |
| Date | (a) | Liability | $(b-a)$ | (a/b) | (c) | $((b-a) / c)$ |
| July 1, 1993 | 33,542,349 | 31,304,725 | $(2,237,624)$ | 107.1 | 4,096,931 | (54.6) |
| July 1, 1994 | 34,812,137 | 33,827,786 | $(984,351)$ | 102.9 | 4,123,470 | (23.9) |
| July 1, 1995 | 38,396,853 | 35,960,087 | $(2,436,766)$ | 106.8 | 3,989,811 | (61.1) |
| July 1, 1996 | 42,842,926 | 37,817,765 | $(5,025,161)$ | 113.3 | 3,482,709 | (144.3) |
| July 1, 1997 | 48,934,863 | 39,746,449 | $(9,188,414)$ | 123.1 | 3,513,334 | (261.5) |
| July 1, 1998 | 54,376,531 | 41,296,646 | $(13,079,885)$ | 131.7 | 3,386,017 | (386.3) |
| July 1, 1999 | 57,210,946 | 42,559,280 | $(14,651,666)$ | 134.4 | 3,264,009 | (448.9) |
| July 1, 2000 | 59,369,863 | 44,456,018 | $(14,913,845)$ | 133.5 | 3,035,791 | (491.3) |
| July 1, 2001 | 56,174,491 | 45,540,493 | $(10,633,998)$ | 123.4 | 2,948,124 | (360.7) |
| July 1, 2002 | 57,913,590 | 46,442,075 | $(11,471,515)$ | 124.7 | 2,956,917 | (388.0) |
| July 1, 2003 | 56,632,993 | 47,385,514 | $(9,247,479)$ | 119.5 | 2,758,316 | (335.3) |
| July 1, 2004 | 62,476,783 | 48,596,467 | $(13,880,316)$ | 128.6 | 2,717,190 | (510.8) |
| July 1, 2005 | 66,064,845 | 49,884,627 | $(16,180,218)$ | 132.4 | 2,697,784 | (599.8) |
| July 1, 2006 | 69,258,950 | 52,533,956 | $(16,724,994)$ | 131.8 | 2,253,767 | (742.1) |
| July 1, 2007 | 76,356,575 | 53,395,132 | $(22,961,443)$ | 143.0 | 2,010,245 | $(1,142.2)$ |
| July 1, 2008 | 68,208,947 | 54,703,227 | $(13,505,720)$ | 124.7 | 1,695,507 | (796.6) |
| July 1, 2009 | 48,578,014 | 54,143,558 | 5,565,544 | 89.7 | 1,631,174 | 341.2 |

## Table 11

## GASB Nos. 25 and 27 Schedule of Employer Contributions

Year<br>Ended

June 30, 1989
June 30, 1990
June 30, 1991
June 30, 1992
June 30, 1993
June 30, 1994
June 30, 1995
June 30, 1996
June 30, 1997
June 30, 1998
June 30, 1999
June 30, 2000
June 30, 2001
June 30, 2002
June 30, 2003
June 30, 2004
June 30, 2005
June 30, 2006
June 30, 2007
June 30, 2008
June 30, 2009
June 30, 2010
Annual Required
Contribution
\$ 0
0
0
-
Employer
Contribution
$\$$
\$ 0

| 0 | $100.0 \%$ |
| :--- | :--- |
| 0 | 100.0 |

100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
0.0

Table 12
Development of NPO and Annual Pension Cost Pursuant to GASB No. 27
(a)
(b)
(c)
(d)
(e)
(f)
(g)
(h)

| Year <br> Ended | Annual Required Contribution (ARC) | Employer Contribution | Interest on <br> NPO | ARC Adjustment LY (h)/(e) | Amortization Factor | Annual <br> Pension Cost $(\mathrm{a})+(\mathrm{c})-(\mathrm{d})$ | Change in NPO (f)-(b) | NPO <br> Balance <br> $\underline{\mathrm{LY}+(\mathrm{g})}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| une 30, 2009 |  |  |  |  |  |  |  | 0 |
| June 30, 2010 | \$503,139 | \$ 0 | \$ 0 | 0 | 11.147 | \$503,139 | \$503,139 | 503,139 |

Note: The change in NPO, and NPO balance items may be different if the amount of the employer contribution for 2009-2010 differs from above.

## APPENDIX

## Exhibit 1

## SUMMARY OF THE PRINCIPAL PROVISIONS OF THE PLAN

## 1. Effective Date

March 1, 1987. Last amended effective May 31, 2009.

## 2. Covered Employees

Full-time employees of the South Dakota Department of Labor, Job Service, Unemployment Insurance Division, and Office of Administrative Services hired before July 1, 1980 who had not retired before January 1, 1987. Cost of living increases granted after January 1, 1987 for retirees as of January 1, 1987 are also paid from this plan.

## 3. Credited Service

The number of years and months of service before August 1, 1961, plus the number of years and months of service after August 1, 1961.

## 4. Average Monthly Compensation

Average of monthly compensation for the five consecutive years which produce the highest average.

## 5. Participant Contributions

No required contributions shall be made on or after January 1, 1990.

## 6. Normal Retirement Benefit

Eligibility: Earliest of the following:
a) attained age 65 , or
b) attained age 62 and completed 10 years of Credited Service, or
c) attained age 60 and completed 20 years of Credited Service, or
d) attained age 55 and completed 30 years of Credited Service.

Form: Monthly annuity guaranteed for 10 years and life thereafter; optional forms may be elected in advance of retirement.

Benefit: $\quad 2.0 \%$ of the five-year Average Monthly Compensation times years of Credited Service.

## Exhibit 1 (continued)

## 7. Accrued Benefit

The accrued benefit at any date is the Normal Retirement Benefit earned through that date.

## 8. Early Retirement Benefit

Eligibility: Within 10-year period before normal retirement date.
Form: Same as Normal Retirement Benefit.
Benefit: $\quad$ Accrued Benefit on early retirement date reduced by $1 / 6$ of $1 \%$ corresponding to the number of months that the early retirement date precedes the normal retirement date.

## 9. Late Retirement Benefit

Eligibility: Anytime after normal retirement date.
Form: Same as Normal Retirement Benefit.
Benefit: Accrued benefit as of the late retirement date.

## 10. Termination Benefit

Eligibility: Less than five years of service.
Form: Lump sum.
Benefit: Return of employee contributions with interest.
Eligibility: $\quad$ Five or more years of service.
Form: $\quad$ Same as Normal Retirement Benefit with commencement deferred until normal retirement date.

Benefit: Equal to the sum of:
a) The amount of retirement annuity which could be provided at normal retirement date by the participant's contribution accumulation, and
b) The excess, if any, of the Accrued Benefit as of the date of termination over a) above.

## Exhibit 1 (continued)

## 11. Disability Benefit

Form: $\quad$ Same as Normal Retirement Benefit with commencement deferred until normal retirement date.

Benefit: Accrued Benefit assuming the participant continued to accrue Credited Service up to their normal retirement date, using monthly compensation as of date of disablement to calculate benefit.

## 12. Death Benefit

Form: Single-sum payment in addition to Spouse and/or Dependent Child Death Benefit.

Benefit: Participant's Required Contribution Account on the date he died shall be payable to the Participant's Beneficiary.

## 13. Spouse Death Benefit

Eligibility: Must have been married at least one year.
Form: Monthly annuity payable until the earlier of the death of the spouse or the remarriage of the spouse, if before age 60.

Benefit: For participants whose latest date of employment occurred before age 47, the greater of:
a) $55 \%$ of the Accrued Benefit (using the Average Monthly Compensation for the five consecutive years which produces the highest average) on the date of death, or
b) $22 \%$ of Average Monthly Compensation on date of death.

For participants whose latest date of employment occurred after age 47:
$55 \%$ of the amount which would have been paid had the participant survived and remained employed to age 60, assuming his Average Monthly Compensation did not change.

## 14. Dependent Child Death Benefit

Eligibility: Participant has at least one dependent child that has not attained age 19 (age 24 for a child who is attending school on a full-time basis).

Form: If dependent child of participant who did not have a spouse on the date of death, temporary monthly annuity until the youngest dependent child attains age 22. If dependent child of participant who did have a spouse on the date of death, temporary monthly annuity until the youngest dependent child is no longer considered a dependent child.

## Exhibit 1 (continued)

Benefit: $\quad$ For dependent children of a participant who has a spouse on the date of death, the least of:
a) $60 \%$ of Average Monthly Compensation on date of death divided by number of dependent children, or
b) $\$ 75$, or
c) $\$ 225$ divided by number of children.

For dependent children of a participant who does not have a spouse on the date of death, the least of:
a) $75 \%$ of Average Monthly Compensation on date of death divided by number of dependent children, or
b) $\$ 90$, or
c) $\$ 270$ divided by the number of dependent children.

## 15. Additional Death Benefit

Eligibility: Participant with 10 years of Credited Service as of July 1, 1976, no spouse or dependent children.

Form: Monthly annuity to beneficiary payable for 10 years.
Benefit: Accrued Benefit on June 30, 1976, using Average Monthly Compensation on July 1, 1976.

## 16. Cost of Living

Adjustments are granted to retirees and beneficiaries each July 1 in the amount of the lesser of a or b , but not less than c :
a) $4.5 \%$
b) The annual percentage change in the CPI-W, determined by dividing the CPI-W for the latest April preceding the July 1 adjustment date by the CPI-W for April of the prior year.
c) $3.1 \%$

However, effective May 31, 2009, no increase in the amount of monthly retirement benefit payments to an Annuitant shall occur in any year in which the fair market value of the Plan's assets, determined on the April 30 immediately preceding the Adjustment Date, are less than the Plan's actuarial accrued liability for such year as stated in the Plan's most recent actuarial valuation report.

## Exhibit 2

## STATEMENT OF ACTUARIAL ASSUMPTIONS

| Investment Return: | 7.5\% per annum. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Mortality: | RP-2000 Combined Healthy Mortality Table for Males and Females with generational improvements using projection Scale AA. |  |  |  |
| Termination: | Table 7 from the Actuary's Pension Handbook. Sample rates are as follows: |  |  |  |
|  | $\begin{array}{cc}  & \begin{array}{c} \text { Percentage of Participants } \\ \text { Expected to Terminate } \\ \text { in One Year } \end{array} \\ \text { Age } \quad & \end{array}$ |  |  |  |
|  | 25 | 9.67\% |  |  |
|  | 30 | 9.30 |  |  |
|  | 35 | 8.71 |  |  |
|  | 40 | 7.75 |  |  |
|  | 45 | 6.35 |  |  |
|  | 50 | 4.23 |  |  |
|  | 55 | 1.55 |  |  |
|  | 60 | 0.15 |  |  |
| Retirement: | Rates of retirement are summarized below: |  |  |  |
|  | Age | Percentage of Participants Expected to Retire in One Year | Age | Percentage of Participants Expected to Retire in One Year |
|  | 45 | 5.0\% | 55 | 2.5\% |
|  | 46 | 5.0 | 56 | 2.5 |
|  | 47 | 5.0 | 57 | 2.5 |
|  | 48 | 2.5 | 58 | 2.5 |
|  | 49 | 2.5 | 59 | 2.5 |
|  | 50 | 5.0 | 60 | 2.5 |
|  | 51 | 2.5 | 61 | 2.5 |
|  | 52 | 5.0 | 62 | 40.0 |
|  | 53 | 2.5 | 63 | 20.0 |
|  | 54 | 2.5 | $64$ | 20.0 |
|  |  |  | 65 | 100.0 |
| Salary Scale: | 3.5\% per annum. |  |  |  |
| Disability: | None. |  |  |  |
| Expenses: | None - investment return assumption is net of expenses. |  |  |  |

## Exhibit 2 (continued)

## Spouse Death Benefits:

## Dependent Death Benefits:

## Cost of Living:

## Assets:

Males are assumed to be three years older than their female spouses.

Dependent status for those children currently receiving benefits is assumed to cease at the later of age 22 and 1 year after the valuation date. Ten percent of participants are assumed to have dependent children (changed from eighty percent, effective July 1, 2009). All participants with dependent children are assumed to be survived by a spouse. Dependent status period for children is assumed to be three years from date of participant death.

Assumed to average $3.5 \%$ per annum in future years.
Market value.

## Exhibit 3

## STATEMENT OF ACTUARIAL FUNDING METHOD

The actuarial cost method used in this valuation is the entry age normal method.
This method is one of the family of projected benefit cost methods. An estimate of the projected monthly benefit payable at retirement is required initially to determine costs and liabilities under this method.

The normal cost contribution is determined as a level percent of each participant's pay from entry date to retirement date, so the accumulated contributions at retirement will equal the liability for the projected benefit. The total normal cost is equal to the sum of the individual participant costs.

The present value of future benefits is equal to the value of the projected benefit payable at retirement, discounted back to the participant's current age. Discounts include such items as interest and mortality. The present value of future normal cost contributions is equal to the discounted value of the normal costs payable from the member's current age to retirement age.

The difference between the present value of future benefits and the present value of future normal cost contributions represents the actuarial liability at the participant's current age.

When assets and the present value of future employee contributions are subtracted from the actuarial liability, the remainder represents the unfunded actuarial liability.

The annual contribution is determined by adding the employer normal cost for the plan year to an amortization payment toward the unfunded actuarial liability. If assets are projected to exceed the actuarial liability as of the end of the plan year for which the valuation is performed, no employer contribution is recommended.

