



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

Actuarial Valuation
July 1, 2015

April 2016

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

ACTUARIAL VALUATION OPINION

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 (“the Plan”) as of July 1, 2015. In our opinion, this report is complete and accurate and represents fairly the actuarial position of the Plan for the purposes stated herein.

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, 2015. The actuary has analyzed the data and other information provided for reasonableness, but has not independently audited the data. The actuary has no reason to believe the data or other information provided 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 underlying these actuarial computations 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.

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.

This report was prepared solely for the benefit and internal use of the plan sponsor. This report is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party other than the plan sponsor.

To the best of our knowledge, no employee of the Deloitte U.S. Firms is an officer or director of the employer. In addition, we are not aware of any relationship between the Deloitte U.S. Firms and the employer that may impair or appear to impair the objectivity of the work detailed in this report.

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REPORT HIGHLIGHTS

	<u>7/1/2014 Valuation</u>	<u>7/1/2015 Valuation</u>	For Details Please See:
Section I. Participant Data			Page 1
A. Active Participants	14	12	
B. Retirees and Beneficiaries	222	220	
C. Vested Terminated Participants	<u> 2</u>	<u> 1</u>	
D. Total Participants	238	233	
E. Payroll	\$ 602,866	\$ 556,033	
Section II. Asset Information			Page 4
A. Fair Market Value of Assets	\$ 63,462,608	\$ 60,683,664	
Section III. Contribution Requirements			Page 6
A. Present Value of Employer Future Cost	\$ 0	\$ 0	
B. Recommended Contribution for Plan Year	\$ 0	\$ 0	
C. Unfunded Actuarial Liability	\$ 0	\$ 0	
Section IV. Present Value of Accumulated Benefits			Page 8
A. Present Value of Vested Accumulated Benefits	\$ 61,128,290	\$ 58,916,510	
B. Present Value of Nonvested Accumulated Benefits	\$0	\$0	
C. Total Present Value of Accumulated Benefits	\$ 61,128,290	\$ 58,916,510	

REPORT HIGHLIGHTS

**For Details
Please See:**

Section V.	Determination of Cost of Living Adjustment for July 1, 2016	Page 9
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APPENDIX

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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, 2015 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.

The plan was amended, effective February 20, 2013, to grant asset-based annual cost of living adjustments (COLAs), subject to Employee Retirement Board approval, with a maximum annual COLA of 3.5%.

Funded Status of Plan

As of July 1, 2015, the present value of projected benefits is less than the sum of the actuarial value of assets and the present value of future employee contributions. Thus, no 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 assets exceeded plan liabilities as of July 1, 2015 by \$0.8 million, based on the actuarial assumptions and methods outlined in Exhibits 2 and 3 of the Appendix (as of July 1, 2014, the plan assets exceeded plan liabilities by \$1.2 million). The reasons for this \$0.4 million loss are:

- A loss of \$2.3 million due to asset returns less favorable than expected (actual 2.64% vs. 6.50% expected);
- A gain of \$1.5 million due to the change in mortality assumption from **RP-2014 Mortality Table** with generational improvements using projection scale MP-2014 to **RP-2014 Mortality Table adjusted back to 2006 with MP-2014 and generational projection of mortality improvement using MP-2015 to reflect the most current publicly available mortality table;**
- A gain of \$0.4 million due to the change in COLA assumption (this change is a function of the COLA methodology, which is expected to pay lower COLAs when liabilities increase).

Governmental Accounting Standards Board (GASB) Requirements

GASB Statement Nos. 67 and 68, which are effective for fiscal years beginning after June 15, 2013 and 2014, respectively, replace GASB Statement Nos. 25 and 27 and require governmental defined benefit plans and employers to disclose additional information in both the footnote and required supplementary information sections of their financial statements.

GASB information is no longer provided in this report as the plan does not issue stand-alone financial statements. Furthermore, the State has informed us that they do not intend to disclose any information for this plan under GASB 67/68 because **“SDCL 61-2-15 specifies that no obligation may be incurred against the State's General Fund to pay for this program.** The assets of the plan are not included in the State’s financial statements because the assets are remitted to a third-party who administers the plan for the participants. **The State has no liability for losses under the plan.”**

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

	<u>7/1/2014</u>	<u>7/1/2015</u>
Active participants	14	12
Vested terminated participants	2	1
Retired participants and beneficiaries*	222	220
Data for active participants:		
Total payroll	\$602,866	\$556,033
Average salary	\$43,062	\$46,336
Average age	61.41	61.88
Average past service	36.88	37.38
Data for retired participants and beneficiaries in "new" plan:		
Average monthly benefit including COLAs	\$1,830	\$1,849
Average age	70.80	71.53
Data for retired participants and beneficiaries in "old" plan:		
Average monthly COLA benefit only	\$829	\$877
Average age	85.61	85.93

* A total of 45 (49 as of 7/1/2014) 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.

I. PARTICIPANT DATA

Table 2 reconciles the number of plan participants as of July 1, 2015 with the number of participants as of the previous valuation date.

Table 2

Reconciliation of Participants

	<u>Actives</u>	<u>Vested Terminations</u>	<u>Retirees</u>	<u>Beneficiaries</u>
Participants as of July 1, 2014	14	2	189	33
Vested terminations				
Retired	(2)	(1)*	2	1*
Deaths with beneficiary			(1)	1
Deaths			(4)	(1)
Data corrections	—	—	—	—
Participants as of July 1, 2015	12	1	186	34

* Vested beneficiary

I. PARTICIPANT DATA

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 Group	30+
55-59	5
60-64	4
65+	3
<hr/>	<hr/>
Total	12

Table 4

Annual Earnings by Age Groups

<u>Age Group</u>	<u>Number of Participants</u>	<u>Total Annual Earnings</u>	<u>Average Annual Earnings</u>
55-59	5	217,470	43,494
60-64	4	181,147	45,287
65 +	3	157,416	52,472
<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	12	\$ 556,033	\$ 46,336

II. ASSET INFORMATION

Table 5 shows the fair market value of assets as of June 30, 2015, as reported by Principal Life Insurance Company.

Table 5

Value of Assets as of June 30, 2015

Large U.S. Equity

Equity Income Account	\$ 3,787,037
Large-Cap Value Account	3,795,258
Large-Cap S&P 500	3,453,221
Large-Cap Growth I Account	7,992,534

Small/Mid U.S. Equity

Mid-Cap Value III Account	1,212,243
Mid-Cap Growth III Account	1,238,058
Small-Cap Value II Account	1,263,602
Small-Cap Growth I Account	1,331,784

International Equity

International Emerging Markets Account	1,578,901
Overseas Account	6,277,857

Balanced/Asset Allocation

Diversified Real Asset Account	3,044,955
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Fixed Income

High Yield I Account	2,525,099
Core Plus Bond I Account	0
Bond Market Index Account	4,942,829
Bond and Mortgage Account	14,934,221
U.S. Property Account	<u>3,306,065</u>

Total Value of Assets as of June 30, 2015 **\$ 60,683,664**

II. ASSET INFORMATION

Table 6 is a summary of the transactions of the funds from July 1, 2014 through June 30, 2015.

Table 6
Summary of Transactions for the Year Ended June 30, 2015

(a)	Total Value of Assets as of July 1, 2014		\$ 63,462,608
(b)	Income		
	(i) Employer contributions	\$	0
	(ii) Payment refunds and other additions		21,965
	(iii) Investment income		<u>1,614,572</u>
	(iv) Total income	\$	1,636,537
(c)	Disbursements		
	(i) Payments	\$	4,345,766
	(ii) Expenses		<u>69,715</u>
	(iii) Total disbursements	\$	4,415,481
(d)	Total Value of Assets as of June 30, 2015		\$ 60,683,664

The rate of return on plan assets from July 1, 2014 through June 30, 2015 as calculated by Principal Financial Group was 2.64%.

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, 2015, the present value of projected benefits is less than the sum of the actuarial value of assets and the present value of future employee contributions. Thus, no 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, 2015

(a)	Present Value of Projected Benefits	
	(i) Active participants	\$ 6,354,415
	(ii) Retirees and beneficiaries	53,599,858
	(iii) Vested terminations	<u>98,412</u>
	Total	\$ 60,052,685
(b)	Actuarial Value of Assets	60,683,664
(c)	Present Value of Total Future Cost: (a) - (b), not less than \$0	0
(d)	Present Value of Future Employee Contributions	0
(e)	Present Value of Employer Future Cost: (c) - (d), not less than \$0	\$ 0

III. CONTRIBUTION REQUIREMENTS

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, 2015 to June 30, 2016 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, 2016

I.	Recommended employer contribution, before test of unfunded liability		
(a)	Total normal cost	\$	42,109
(b)	Expected employee contributions		<u>0</u>
(c)	Employer normal cost (a) – (b)	\$	42,109
(d)	25-year amortization payment toward unfunded actuarial liability		N/A*
(e)	Interest to June 30, 2016 on (c) + (d)		<u>2,737</u>
(f)	Recommended employer contribution, before test of unfunded liability: (c) + (d) + (e), but not less than \$0	\$	44,846
II.	Test of unfunded liability		
(g)	Unfunded actuarial liability		
(i)	Actuarial liability as of July 1, 2015	\$	59,884,540
(ii)	Actuarial value of assets as of July 1, 2015		<u>60,683,664</u>
(iii)	Unfunded actuarial liability: (i) - (ii)	\$	(799,124)
(h)	Interest to June 30, 2016 on (c) + (g)		<u>(49,206)</u>
(i)	Expected unfunded liability as of June 30, 2016: (c) + (g) + (h), but not less than \$0	\$	0
III.	Recommended employer contribution: lesser of (f) and (i)	\$	0

*Not applicable since there is no unfunded actuarial liability.

IV. PRESENT VALUE OF ACCUMULATED BENEFITS

The actuarially computed value of accumulated benefits as of July 1, 2015 is \$58,916,510. All participants of the plan are fully vested. When the fair market value of assets of \$60,683,664 is deducted, the unfunded vested liability is \$0. Table 9 shows the present value of vested and accumulated benefits as of July 1, 2015.

Table 9

**Present Value of Accumulated Benefits
as of July 1, 2015**

	<u>Number of Vested Participants</u>	<u>Actuarial Present Value</u>
Retirees and Beneficiaries*	220	\$ 53,599,858
Terminated Participants with Vested Benefits	1	98,412
Active Participants	<u>12</u>	<u>5,218,240</u>
Total Present Value of Vested Accumulated Benefits	233	\$ 58,916,510
Present Value of Nonvested Accumulated Benefits		<u>0</u>
Total Present Value of Accumulated Benefits		<u>\$ 58,916,510</u>

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 45 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. DETERMINATION OF COST OF LIVING ADJUSTMENT FOR JULY 1, 2016

The plan was amended, effective February 20, 2013, to grant asset-based annual cost of living adjustments (COLAs), subject to Employee Retirement Board approval, with a maximum annual COLA of 3.5%.

Table 10 provides the Present Value of Future Benefits (PVFB) using the Settlement-Based Discount Rate (5.0%) and projected to April 15, 2016 under all possible COLAs from 0.1% to 3.5%. If the Employee Retirement Board approves, the COLA to be paid on July 1, 2016 will be the largest rate for which the average of the Plan's asset value as of the close of market for each day of the month of April 2016 exceeds the PVFB shown.

Table 10

**Present Value of Future Benefits for
Related Cost of Living Adjustments
as of April 15, 2016**

<u>COLA</u>	<u>PVFB</u>	<u>COLA</u>	<u>PVFB</u>
0.1%	49,854,000	1.9%	59,636,000
0.2%	50,332,000	2.0%	60,261,000
0.3%	50,817,000	2.1%	60,896,000
0.4%	51,309,000	2.2%	61,541,000
0.5%	51,809,000	2.3%	62,196,000
0.6%	52,315,000	2.4%	62,861,000
0.7%	52,829,000	2.5%	63,537,000
0.8%	53,351,000	2.6%	64,224,000
0.9%	53,881,000	2.7%	64,921,000
1.0%	54,418,000	2.8%	65,630,000
1.1%	54,963,000	2.9%	66,351,000
1.2%	55,517,000	3.0%	67,083,000
1.3%	56,079,000	3.1%	67,826,000
1.4%	56,650,000	3.2%	68,582,000
1.5%	57,229,000	3.3%	69,351,000
1.6%	57,817,000	3.4%	70,132,000
1.7%	58,414,000	3.5%	70,926,000
1.8%	59,020,000		

APPENDIX

Exhibit 1

SUMMARY OF THE PRINCIPAL PROVISIONS OF THE PLAN

1. Effective Date

March 1, 1987. Last amended effective February 20, 2013.

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 by participants on or after January 1, 1990. These contributions are considered picked-up by the employer under IRC section 414(h)(2).

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: 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: 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: Any time 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: Five or more years of service.

Form: 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: 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: 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

Effective February 20, 2013, the plan was amended to grant cost of living adjustments to retirees and beneficiaries each July 1, subject to Employee Retirement Board approval, in the amount of the lesser of a or b rounded down to the nearest 0.1%, but not less than 0%:

- a) 3.5%
- b) The adjustment factor determined such that the following two items are equal:
 - i) The average of the Plan's asset value as of the close of market for each day of the month of April immediately preceding the July 1 adjustment date.
 - ii) The Plan's present value of future benefits as of the April 15 immediately preceding the Adjustment Date, which is determined by adjusting the present value of future benefits from the Plan's most recent actuarial valuation report to the April 15 immediately preceding the Adjustment Date for interest and expected benefit payments, and by using the Settlement-Based Discount Rate from the most recent actuarial valuation report and a future cost of living adjustment assumption, which is determined in order to equate the liabilities to the assets.

Exhibit 2

STATEMENT OF ACTUARIAL ASSUMPTIONS

Investment Return: 6.5% until July 1, 2027 and 5% thereafter.

**Settlement-Based
Discount Rate:** 5.0%.

Mortality: Mortality rates are based on RP-2014 Employees and Healthy Annuitants tables for males and females without collar or amount adjustments, using RP-2014 rates published in the final RP-2014 report adjusted to the 2006 base year by factoring out the projection under Scale MP-2014 as described in Section 8.3 of the Society of Actuaries' Retirement Plans Experience Committee ("RPEC") Response to Comments on RP-2014 Mortality Tables Exposure Draft, with generational mortality improvements using Scale MP-2015.

Termination: Table 7 from the Actuary's Pension Handbook. Sample rates are as follows:

<u>Age</u>	<u>Percentage of Participants Expected to Terminate in One Year</u>
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: 100% on the expected retirement date as provided by SDDOL for each active employee and 2.5% in each year prior to the expected retirement date. The expected retirement ages range from age 64 to age 67, with an average expected retirement age of 66.

Salary Scale: 3.5% per annum.

Disability: None.

Expenses: None – investment return assumption is net of expenses.

**Spouse Death
Benefits:** Males are assumed to be three years older than their female spouses.

Exhibit 2 (continued)

Dependent Death Benefits:

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. 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.

Cost of Living:

Assumed adjustments are as follows:

<u>July 1st</u>	<u>Expected COLA in each year</u>
2016	1.9%
2017	2.1
2018	2.2
2019	2.4
2020	2.5
2021	2.7
2022	2.8
2023	3.0
2024	3.2
2025	3.3
2026	3.5
2027+	3.5

Assets:

Market value.

Return on Employee Contributions:

4.0% per annum.

Data Adjustments:

Principal Financial Group provides census data annually as of July 1 before inclusion of the current year's COLA, if applicable. On May 26, 2015, the Employee Retirement Board approved a COLA adjustment of 1.8% effective July 1, 2015. We applied this COLA adjustment to the appropriate benefit payment amounts provided to us.

Exhibit 3

RATIONALE FOR ASSUMPTIONS

Rationale for significant assumptions is described below.

- Investment Return:** July 1, 2027 and before: The investment return was determined using the weighted average of the expected return of the Plan's target asset allocation, provided by the Plan's investment advisor, Principal Financial Group.
After July 1, 2027: The plan is expected to be settled by July 1, 2027. The investment return is assumed to be the expected settlement rate.
- Settlement-Based Discount Rate:** The settlement-based discount rate was determined using a building block approach with a 3.0% long-term inflation assumption and a 2.0% long-term risk premium (mid-term government bonds).
- Mortality:** The RP-2014 and MP-2014 tables were released by the Retirement Plans Experience Committee ("RPEC") of the Society of Actuaries in October 2014. The RP-2014 report states: "RPEC maintains that, as of their release date, the RP-2014 tables presented in this report represent the most current and complete benchmarks of U.S. private pension plan mortality experience, and the Committee recommends consideration of their use for the measurement of private pension plan obligations, effective immediately. The Committee also recommends generational projection of mortality rates using Scale MP-2014." The plan is not sufficiently large to have fully credible mortality experience. RPEC released Mortality Improvement Scale MP-2015 in October 2015 as an update to the MP-2014 scale. The MP-2015 scale includes two additional years (2010 and 2011) of Social Security Administration experience compared to the experience considered in the development of Scale MP-2014, and therefore incorporates the most current available information from the Social Security Administration. The base RP-2014 mortality rates implicitly reflect Scale MP-2014 assumptions for years 2007 through 2014 as such, we have adjusted the RP-2014 tables back to 2006 with scale MP-2014 before reflecting the update mortality improvement rates of Scale MP-2015.
- Retirement:** The expected retirement date was provided by SDDOL for each active employee.
- Cost of Living:** The cost of living adjustment in each year was determined as the minimum of 3.5% or the adjustment factor such that the projected present value of future benefits after adjustment is equal to projected asset value on April 15th of each year, in accordance with the plan provisions.

Exhibit 4

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.