

Alaska Ironworkers Pension Plan

July 1, 2015 Actuarial Valuation

Prepared by:

Mark C. Olleman

FSA, EA, MAAA

Kelly S. Coffing

FSA, EA, MAAA

Milliman, Inc.

1301 Fifth Avenue, Suite 3800

Seattle WA 98101-2605

Tel +1 206 624 7940

Fax +1 206 623 3485

milliman.com

July 1, 2015 Actuarial Valuation of the Alaska Ironworkers Pension Plan

The 2015 actuarial valuation of the Alaska Ironworkers Pension Plan (the “Plan”) has been completed in accordance with our understanding of IRS minimum funding requirements as amended by the Pension Protection Act of 2006 (PPA), reflecting all regulations and guidance issued to date. The results are contained in this report, including a summary of the underlying actuarial assumptions (Appendix A), a description of the principal plan provisions (Appendix B), and a summary of actuarial methods (Appendix C).

Purpose of the Valuation

In general, the annual actuarial valuation determines the current level of employer contributions which, considering prior funding, will accumulate assets sufficient to meet benefit payments when due under the terms of the Plan. More specifically, the valuation determines the minimum contribution for the current plan year required to support the Plan under the funding requirements of the Employee Retirement Income Security Act of 1974 (ERISA) and the maximum deductible contribution for the current fiscal year. The valuation also includes:

- Operational information that is required either for inclusion in financial statements or in forms to be filed with regulatory governmental agencies.
- A review of plan experience for the plan year ending on June 30, 2015.
- An assessment of the relative funded position of the Plan through a comparison of plan assets and projected plan liabilities.

Limited Distribution

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Reliance

In preparing the report, we relied, without audit, on information (some oral and some in writing) supplied by the Plan’s administrator and auditor. This information includes, but is not limited to, plan documents and provisions, participant data, and draft financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is incomplete or inaccurate, our results may be different and our calculations may need to be revised.

Limited Use

Actuarial computations under ERISA are for the purposes of determining the minimum required and maximum deductible funding amounts for an ongoing plan. Actuarial computations under FASB ASC Topic 960 are to fulfill plan financial accounting requirements. The calculations in this report are based on our understanding of:

- ERISA and the related sections of the tax code.
- IRS minimum funding requirements as amended by subsequent legislation, including the Pension Protection Act of 2006, and reflecting all regulations and guidance issued to date.
- FASB ASC Topic 960.

Determinations for other purposes may be significantly different than the results in this report. Other calculations may be needed for other purposes, such as judging benefit security at termination.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, 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 operation 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. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurement.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

Certification

In our opinion, each assumption used (other than those assumptions mandated directly by the Internal Revenue Code and its regulations) is individually reasonable (taking into account the experience of the Plan and reasonable expectations) and, in combination, offer our best estimate of anticipated experience under the Plan.

On the basis of the foregoing, we hereby certify that to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Respectfully submitted,

Mark C. Olleman, FSA, EA, MAAA
Principal and Consulting Actuary
Enrolled Actuary Number [REDACTED]

Kelly S. Coffing, FSA, EA, MAAA
Principal and Consulting Actuary
Enrolled Actuary Number [REDACTED]

April 1, 2016
Date

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Summary of Results

A. Overview

	Actuarial Valuation for Plan Year Beginning	
	July 1, 2014	July 1, 2015
Assets		
Market Value of Assets (MVA)	\$61,268,718	\$56,786,143
Actuarial Value of Assets (AVA)	\$55,193,938	\$55,701,125
Return for Prior Plan Year		
Market Value of Assets	16.3%	0.9%
Actuarial Value of Assets	11.8%	10.5%
Funded Status		
Present Value of Accrued Benefits	\$93,844,780	\$94,886,295
Market Funded Percentage	65.3%	59.8%
Actuarial (Pension Protection Act) Funded Percentage	58.8%	58.7%
Withdrawal Liability		
Present Value of Vested Benefits for Withdrawal Liability	\$89,968,699	\$91,352,139
Value of Unamortized Affected Benefit Reductions	1,850,336	1,728,363
Market Value of Assets for Withdrawal Liability	<u>(61,268,718)</u>	<u>(56,786,143)</u>
Unfunded Present Value of Vested Benefits (UVB)	\$30,550,317	\$36,294,359
Credit Balance and Contribution Requirements		
Actuarial Accrued Liability	\$93,844,780	\$94,886,295
Reserve for Expenses	\$0	\$0
Actuarial Value of Assets	\$(55,193,938)	\$(55,701,125)
Unfunded Actuarial Accrued Liability	\$38,650,842	\$39,185,170
Credit Balance at End of Prior Plan Year	\$965,246	\$(4,792,391)
Normal Cost (including expenses)	\$757,830	\$781,860
Plan Year Employer Contributions	\$3,123,859	Not Available
Maximum Deductible Contribution	\$121,535,537	\$123,204,751
Participant Data		
Active participants	130	160
Inactive participants with deferred benefits	91	95
Retired participants	473	461
Disabled participants	34	31
Beneficiaries	<u>76</u>	<u>77</u>
Total participants	804	824
Certification		
PPA Zone Status	Critical (Red)	Critical (Red)
Scheduled Progress	Forestall Insolvency	Forestall Insolvency

B. Purpose of This Report

This report has been prepared for the Alaskan Ironworkers Pension Plan as of July 1, 2015 to:

- Review the experience for the plan year ending June 30, 2015, including the investment return on the Plan's assets and changes in the Plan's participant demographics that impact liabilities.
- Review the Plan's funded status.
- Calculate the Plan's funding requirements under ERISA for the plan year beginning July 1, 2015.
- Determine the Plan's unfunded vested benefit liability as of June 30, 2015 for withdrawal liability purposes calculated in accordance with the requirements of the Multiemployer Pension Plan Amendments Act of 1980.
- Determine the actuarial present value of accumulated plan benefits as of June 30, 2015 for purposes of disclosing the Plan's liabilities under FASB ASC Topic 960.
- Provide operational information required for governmental agencies and other interested parties.

C. Changes to Plan Provisions

The valuation reflects the plan provisions in effect on July 1, 2015. There were no changes to the plan provisions during the 2014-2015 plan year that impacted the Plan's liabilities.

See Appendix B for a detailed description of the plan provisions.

D. Changes to Actuarial Methods and Assumptions

Other than the assumptions mandated by the IRS, the following changes were made for this valuation:

- The demographic assumptions were updated based on the Demographic Assumptions Study prepared concurrently with this valuation. This increased the present value of accrued benefits by approximately \$3.3 million. The changes included:
 - The rates of termination were revised.
 - The rates of retirement for terminated participants were revised.
 - The mortality assumptions were updated to the gender specific blue collar RP-2014 Mortality Tables, adjusted to factor out Scale MP-2014 to the 2006 base year, then projected forward using Scale MP-2015 on a generational basis. Employee rates are used before benefit commencement and Healthy Annuitant rates are used after benefit commencement.
- Effective July 1, 2015, the current liability interest rate was re-established within the statutory interest rate corridor, effective July 1, 2015.
- Effective July 1, 2015, the statutory current liability mortality basis was re-established based on the RP-2000 Combined Mortality Table projected as set forth in Treasury Regulation §1.412(l)(7)-1.
- The annual operating expense assumption was changed from \$470,000 to \$490,000 to better reflect expected future expenses.

Details on the assumptions and methods can be found in Appendices A and C of this report.

E. Plan Assets

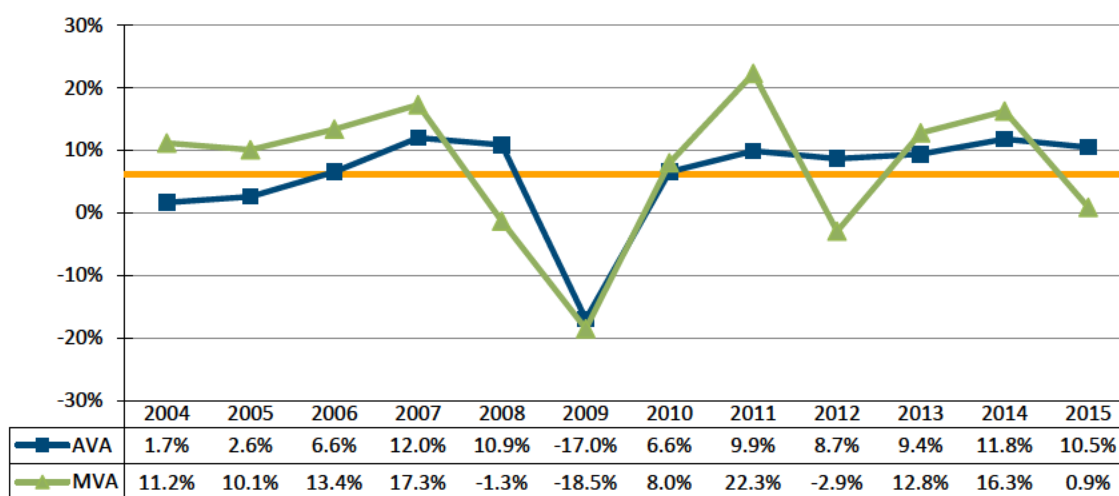
The Plan's Market Value of Assets (MVA) is the net asset value available for benefits as shown on the Plan's financial statements. For funding calculations under ERISA, the Plan uses an asset-smoothing method, which recognizes market value investment gains and losses over a period of five years. The resulting asset value is called the Actuarial Value of Assets (AVA), and is used for determining the Pension Protection Act funded percentage and the minimum and maximum contributions under ERISA. The table below shows these values along with the Plan's rate of investment return, net of investment expenses, over the past five years.

July 1,	Prior Year Rate of Return		Market Value of Assets (in millions)	Actuarial Value of Assets (in millions)	Gain / (Loss) on Market Value (in millions)
	Market	Actuarial			
2011	22.3%	9.9%	\$65.4	\$57.6	\$9.0
2012	-2.9	8.7	57.0	55.8	(5.7)
2013	12.8	9.4	57.9	54.7	3.6
2014	16.3	11.8	61.3	55.2	5.5
2015	0.9	10.5	56.8	55.7	(3.1)

The Plan's investment return of 0.91% last year was 5.34% less than anticipated by the actuarial assumption of 6.25%.

Over the past 10 years, the Plan's assets have averaged a 6.1% return on a market-value basis, net of investment expenses. The graph below shows the Plan's annual returns over this time period, compared to the Plan's current 6.25% investment return assumption. Returns on both the Actuarial Value of Assets (AVA) and the Market Value of Assets (MVA) are shown.

Returns in Plan Years Ended June 30

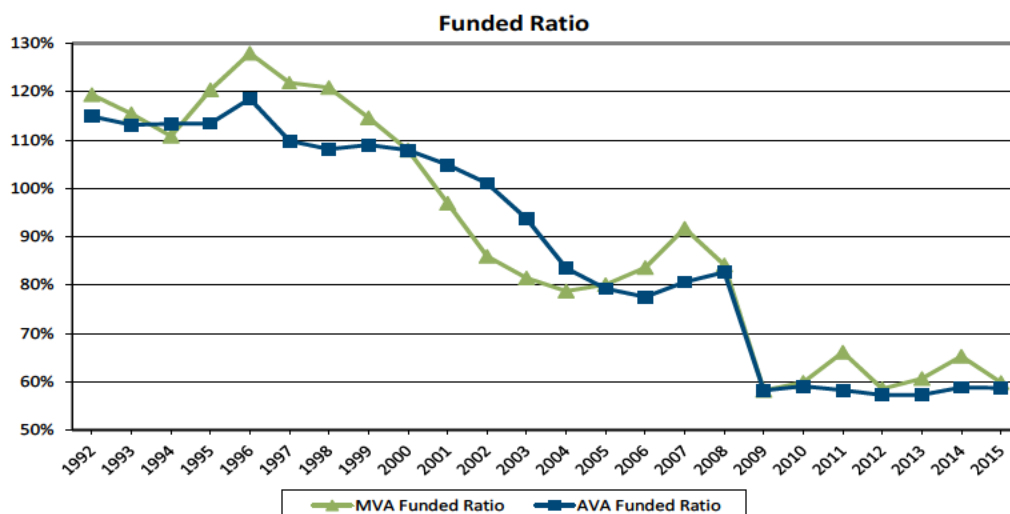


F. Funded Status

An important indicator of the Plan's funded status is the ratio of the Plan's market value of assets to the Plan's liability for all benefits earned to date, called the present value of accrued benefits. For purposes of determining the Plan's zone status under the Pension Protection Act, the Plan's actuarial value of assets is compared to this liability measurement. The table below shows these measurements, along with the comparable figures for previous valuations.

		(A)	(B)	(C)	(A) - (C)	(A) / (C)	(B) - (C)	(B) / (C)
July 1,	Prior Year Investment Return	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Present Value of Accrued Benefits*	MVA Funding Reserve/ (Shortfall)	MVA Funded Ratio	AVA Funding Reserve/ (Shortfall)	AVA Funded Ratio
1992	11.8%	50,680,603	48,766,817	42,438,445	8,242,158	119.4%	6,328,372	114.9%
1993	7.7%	52,611,578	51,568,871	45,578,859	7,032,719	115.4%	5,990,012	113.1%
1994	2.8%	51,854,710	53,031,846	46,781,764	5,072,946	110.8%	6,250,082	113.4%
1995	19.0%	59,359,652	55,940,940	49,301,462	10,058,190	120.4%	6,639,478	113.5%
1996	14.5%	65,490,745	60,685,228	51,180,077	14,310,668	128.0%	9,505,151	118.6%
1997	21.7%	76,776,012	69,195,291	62,997,164	13,778,848	121.9%	6,198,127	109.8%
1998	19.2%	87,168,448	77,982,682	72,122,771	15,045,677	120.9%	5,859,911	108.1%
1999	9.5%	91,751,351	87,270,758	80,064,024	11,687,327	114.6%	7,206,734	109.0%
2000	3.3%	89,456,389	89,456,389	82,879,180	6,577,209	107.9%	6,577,209	107.9%
2001	-2.7%	82,167,419	88,908,815	84,765,653	(2,598,234)	96.9%	4,143,162	104.9%
2002	-5.1%	72,744,957	85,494,836	84,614,473	(11,869,516)	86.0%	880,363	101.0%
2003	4.2%	71,109,460	81,822,944	87,282,994	(16,173,534)	81.5%	(5,460,050)	93.7%
2004	11.2%	73,590,426	78,023,604	93,435,180	(19,844,754)	78.8%	(15,411,576)	83.5%
2005	10.1%	75,539,302	74,774,121	94,344,998	(18,805,696)	80.1%	(19,570,877)	79.3%
2006	13.4%	80,119,881	74,300,010	95,787,476	(15,667,595)	83.6%	(21,487,466)	77.6%
2007	17.3%	87,908,584	77,263,935	95,845,630	(7,937,046)	91.7%	(18,581,695)	80.6%
2008	-1.3%	81,279,274	79,830,278	96,550,409	(15,271,135)	84.2%	(16,720,131)	82.7%
2009	-18.5%	60,775,802	60,775,802	104,391,737	(43,615,935)	58.2%	(43,615,935)	58.2%
2010	8.0%	59,320,761	58,536,169	99,086,581	(39,765,820)	59.9%	(40,550,412)	59.1%
2011	22.3%	65,393,938	57,622,322	98,935,066	(33,541,128)	66.1%	(41,312,744)	58.2%
2012	-2.9%	57,001,715	55,750,892	97,360,483	(40,358,768)	58.5%	(41,609,591)	57.3%
2013	12.8%	57,890,426	54,654,071	95,423,016	(37,532,590)	60.7%	(40,768,945)	57.3%
2014	16.3%	61,268,718	55,193,938	93,844,780	(32,576,062)	65.3%	(38,650,842)	58.8%
2015	0.9%	56,786,143	55,701,125	94,886,295	(38,100,152)	59.8%	(39,185,170)	58.7%

* Present Value of Accrued Benefits are valued at a 6.25% discount rate beginning in 2009. From 1997 to 2008, a 7.00% discount rate was used. For 1996 and before, a discount rate of 7.25% was used.



The annual funding notice to participants must be distributed within 120 days of the end of the plan year (October 28, 2016) and will include the AVA funded ratio for 2013, 2014, and 2015, as shown above.

G. Plan Experience

Impact of Plan Experience during Prior Plan Year

The following table shows how the Plan's experience affected the unfunded present value of accrued benefits on a market value of assets basis during the prior plan year.

Prior Year Changes in the Funding Reserve/(Shortfall)		
(all values in millions)		
July 1, 2014 Funding Reserve / (Shortfall)		\$ (32.58)
Interest on Unfunded	\$(2.04)	
Contributions with Interest	3.22	
Value of Benefit Accruals with Interest	(0.35)	
Expenses with Interest	<u>(0.50)</u>	
Expected Change in the Reserve / (Shortfall)		0.33
Asset Gain / (Loss)	\$ (3.14)	
Assumption Changes	(3.25)	
Experience Gain / (Loss) on Liabilities		
(Experience different than assumed)	<u>0.54</u>	
Combined Impact of Gains, Losses, and Changes		<u>\$ (5.85)</u>
July 1, 2015 Funding Reserve / (Shortfall)		\$ (38.10)

The funding shortfall was expected to decrease by \$0.33 million due to the value of benefit accruals, expenses, and interest on the beginning of year funding shortfall being less than contributions. However, the net impact of earning 5.34% less than the actuarial assumption of 6.25%, combined with a liability increase due to assumption changes, resulted in an increase in the shortfall. In total, the Plan now has a funding shortfall of \$38.10 million.

Expected Plan Experience in Next Plan Year

The following table shows how the Plan's unfunded accrued liability on a market value of assets basis is projected to change in the next year.

Projected Changes in the Funding Reserve/(Shortfall)		
(all values in millions)		
July 1, 2015 Funding Reserve / (Shortfall)		\$ (38.10)
Interest on Unfunded	\$(2.38)	
Expected Contributions with Interest	3.15	
Value of Benefit Accruals with Interest	(0.33)	
Expenses with Interest	<u>(0.50)</u>	
Expected Change in the Reserve / (Shortfall)		<u>\$ (0.06)</u>
Projected January 1, 2016 Funding Reserve / (Shortfall)		\$ (38.16)

The table above shows that if the actuarial assumptions are realized, the Plan's funding shortfall is projected to increase by \$60,000 during the plan year. This means that the contributions expected to come into the Plan during 2015/2016 are less than the expected cost of benefit accruals, expenses, and interest on the funding shortfall.

H. Withdrawal Liability

The Plan's unfunded vested benefit liability for withdrawal liability is determined by subtracting the Plan's assets for withdrawal liability purposes (market value of assets) from the liability for all vested benefits earned to date. The table below shows the Plan's unfunded vested benefit liability used to determine withdrawal liability for withdrawing employers June 30, 2015 and the preceding four plan year ends.

June 30,	Vested Benefit Liability (VBL)	Value of "Affected Benefits" Removed by Rehab Plan	Market Assets for Withdrawal Liability	Unfunded Vested Benefit Liability
2010	\$94,274,434	\$2,174,867	\$(65,393,938)	\$31,055,363
2012	93,132,576	2,073,178	(57,001,715)	38,204,039
2013	91,387,290	1,965,133	(57,890,426)	35,461,997
2014	89,968,699	1,850,336	(61,268,718)	30,550,317
2015	91,352,139	1,728,363	(56,786,143)	36,294,359

As of June 30, 2015, the interest assumption for determining vested benefit liability is based on the valuation rate of 6.25%.

I. Zone Status

The following chart shows the Plan's zone status that was reported in the actuarial certification for the past several years.

Year	Zone Status
2011	Critical (Red)
2012	Critical (Red)
2013	Critical (Red)
2014	Critical (Red)
2015	Critical (Red)

As shown above, the Plan is in the red zone (critical) for the plan year beginning July 1, 2015. Please see our separate certification letters for details.

J. Contributions for the 2015/2016 Plan Year

Minimum Required Contribution and Credit Balance

The Plan's minimum required contribution, prior to the application of the credit balance, consists of two components:

- Gross normal cost, which consists of the cost of benefits allocated to the next plan year and administrative expenses expected to be paid in the next plan year (see Exhibit 9 for details).
- Amortization payment to pay for past liabilities (see Exhibit 13 for details).

If contributions do not meet these costs, the Plan's credit balance, which was built up through contributions in excess of the minimum required contributions in past years, may be used to offset the costs.

The Plan's contribution requirements and expected contributions for the current year and preceding plan years are shown below:

Plan Year Beginning July 1,	Normal Cost at End of Plan Year	Net Amortization Payment at End of Plan Year	Minimum Required Contribution		Employer Contributions (Actual)	Credit Balance at End of Plan Year
			Before Credit Balance	After Credit Balance		
2009	\$ 761,571	\$ 5,094,130	\$ 5,855,701	\$ 0	\$ 1,749,934	\$ 17,344,573
2010	443,310	4,456,879	4,900,189	0	1,933,723	15,511,254
2011	334,018	4,489,272	4,823,290	0	1,810,073	13,513,642
2012	245,044	9,257,168	9,502,212	0	2,166,310	7,077,361
2013	231,499	9,053,946	9,285,445	1,765,749	2,663,353	965,246
2014	805,194	8,215,967	9,021,161	7,995,587	3,123,859	(4,792,391)
2015	830,726	8,270,042	14,192,683	14,192,683	3,055,120*	(11,100,000)*

* Expected based on hours assumption of 236,000 in 2015/2016 (including 200,000 hours tied to benefits and 36,000 reciprocal hours for funding only) and average contribution rates.

The contribution of \$3,123,859 for the plan year ended June 30, 2015 did not satisfy ERISA minimum funding standards and is allowable in full by the IRS as a tax deduction. The Plan has a funding deficiency.

K. Summary

Investment Return: At July 1, 2014, the Plan's market assets covered 65.3% of the value of its accrued benefits. Due primarily to investment return during 2014/2015 of 0.91%, which was 5.34% below the 6.25% investment return assumption, the funded ratio has decreased from 65.3% to 59.8% at July 1, 2015.

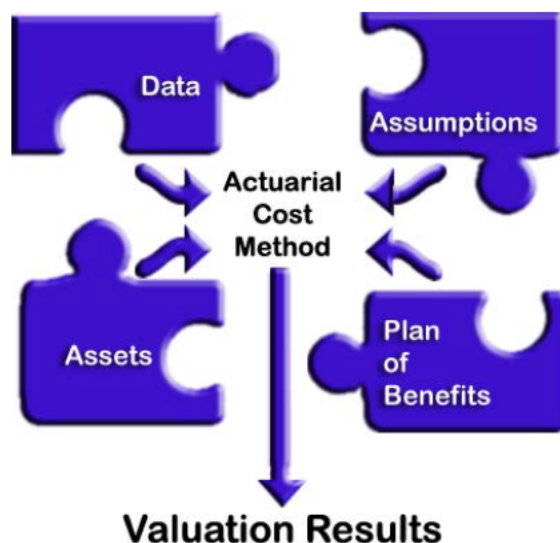
Uncertain Future: Despite a rehabilitation plan that is designed to take all reasonable measures by making large contribution increases and benefit reductions, the Plan still needs experience more favorable than assumed to return to health. Based on experience through July 1, 2015, the Plan's funded percentage is projected to decrease slowly.

Volatility: The Plan's funding remains heavily dependent on future contributory hours and investment returns.

Actuarial Valuation Process

A. Four Necessary Elements of an Actuarial Valuation

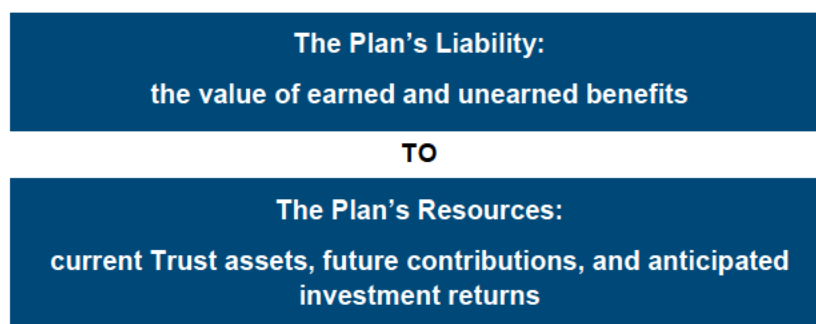
There are four necessary elements of an actuarial valuation: data, assumptions, assets, and a plan of benefits. Those elements, combined with an actuarial cost method, produce the actuarial valuation results.



B. Purpose of the Actuarial Valuation

The purpose of the actuarial valuation is to take the four elements above and determine whether the Plan's resources and liabilities are in balance for purposes of benefit security and legal funding standards.

This report compares:



In the actuarial valuation, we start by projecting the future benefit payments that will be made from the Trust for current participants. These are used to determine the value of the Plan's liability. We then determine the value of the Plan's resources based on the current asset information and the actuarial assumptions. The rest of this section briefly describes how we make the projections of future benefit payments and determine the value of the Plan's resources based on the data provided by the Trust Office and the actuarial assumptions.

C. Plan Assets

The illustration below represents the financial function of a pension trust. Ultimately, all benefits and expenses must be provided for by current assets, future contributions, and future investment returns.

The chart below shows the change in the net assets available for benefits for the prior two plan years.

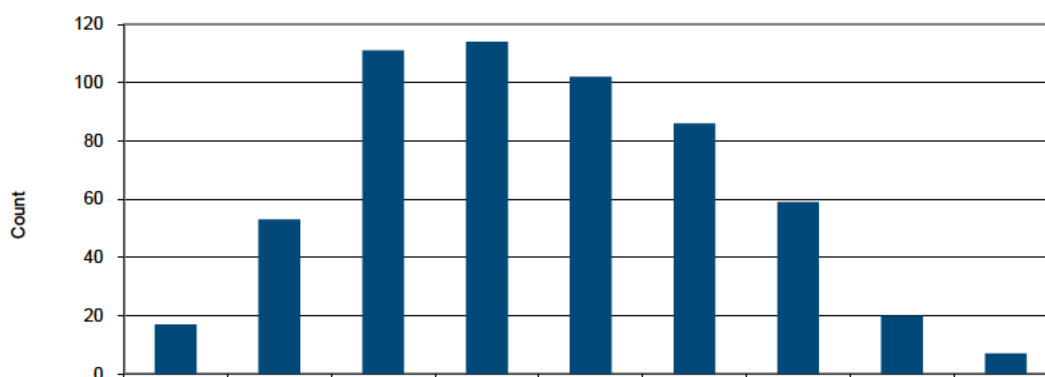
Change in Net Assets Available for Benefits		
	June 30, 2014	June 30, 2015
Beginning of Year Market Value	\$57,890,426	\$61,268,718
Contributions	2,663,353	3,123,859
Investment Earnings	8,958,256	534,270
Benefit Payments	(7,777,462)	(7,654,800)
Operating Expenses	<u>(465,855)</u>	<u>(485,904)</u>
Net Change in Assets	\$3,378,292	\$(4,482,575)
End of Year Market Value	\$61,268,718	\$56,786,143
Market Value Investment Return	16.3%	0.9%

D. Retirees and Beneficiaries

To place a value on the liability for current retirees, disabilities, and beneficiaries we started with the data provided by the Trust and used actuarial assumptions for mortality to project future benefit payments for this group.

Data

Distribution of Retirees, Disabilities, and Beneficiaries



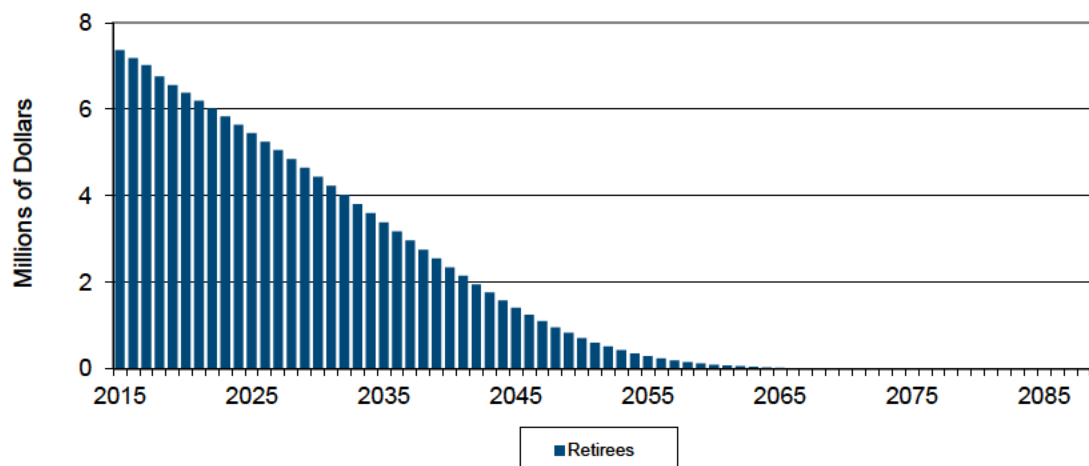
Age	54 & Less	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90 & Over	Total
Count	17	53	111	114	102	86	59	20	7	569
Avg Mo Ben	1,112	1,129	1,661	1,136	816	768	868	852	1,347	1,089

Assumptions

Mortality: Benefit payments are projected based on the probability that the participant or his beneficiary is still alive. Detail is provided in Appendix A.

Projected Benefit Payments for Retirees

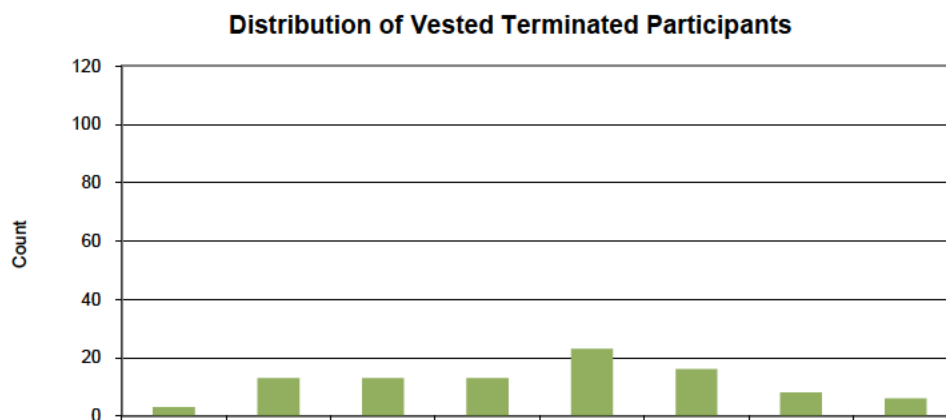
Based on the data and assumptions used in this valuation, the Trust will need to have assets to pay for the following stream of benefit payments due to current retirees (including disabilities and beneficiaries).



E. Terminated and Inactive Participants

This group includes vested terminated participants. To place a value on their liabilities, we started with the data provided by the Trust and used actuarial assumptions to project future benefit payments for this group.

Data



Age	34 & Less	35-39	40-44	45-49	50-54	55-59	60-64	65 & Over	Total
Count	3	13	13	13	23	16	8	6	95
Avg Mo Ben	446	789	1,374	1,128	2,256	643	668	156	1,185

In addition to the 95 vested terminated participants represented above, there are 718 non-vested participants who may still vest due to reciprocity or returning as an active.

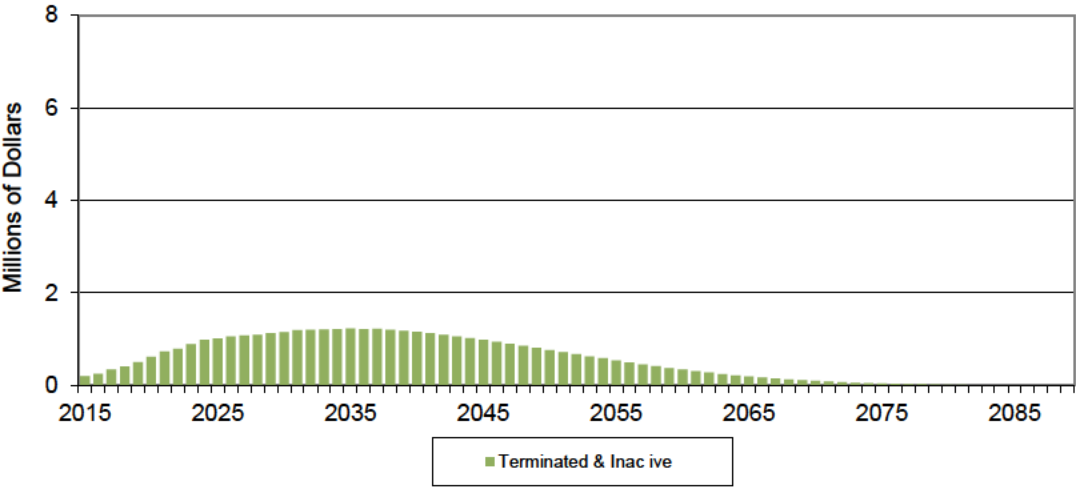
Assumptions

Benefit payments are projected based on the following assumptions. Detail is in Appendix A.

- **Benefit Commencement** – Participants who have 10 or more years of service are assumed to retire between the ages of 50 and 62 according to rates in Appendix A. All other participants are assumed to retire at “Normal Retirement Age.”
- **Mortality** – Participants receive benefits as long as they are alive.
- **Vesting** – We assume 45% of the non-vested participants under age 65 will eventually become vested.

Projected Benefit Payments for Terminated and Inactive Participants

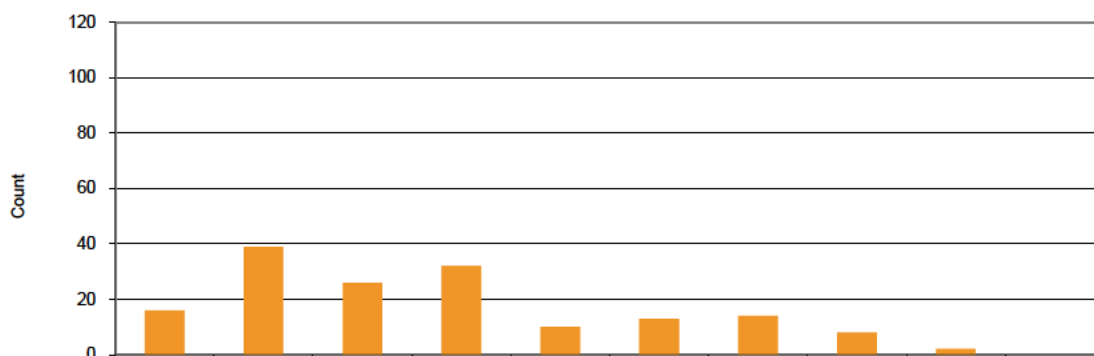
Based on the data and assumptions used in this valuation, the Trust will need to have assets to pay for the following stream of benefit payments due to terminated and inactive participants.



F. Active Participants

To place a value on the liability for the active participants, we started with the data provided by the Trust and used actuarial assumptions to project future benefit payments for this group.

Data



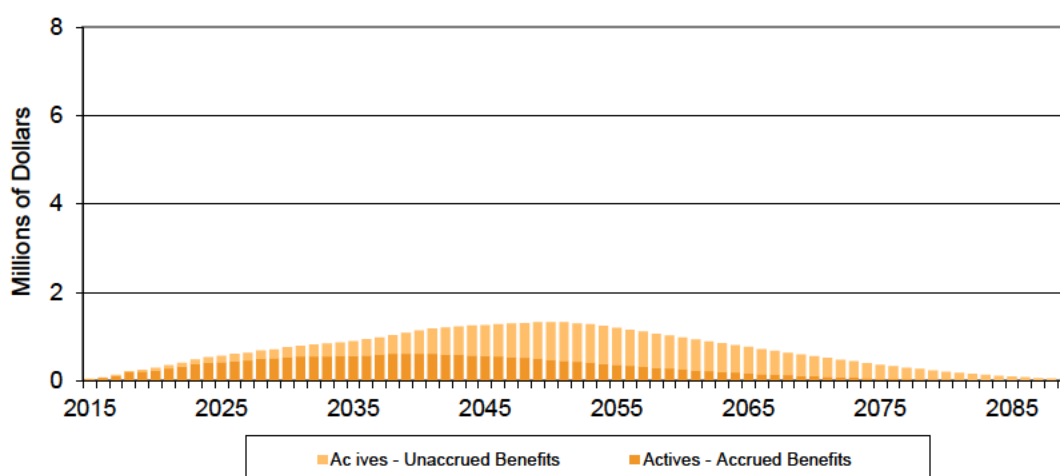
Age	24 & Less	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 & Over	Total
Count	16	39	26	32	10	13	14	8	2	0	160
Avg Mo Ben	96	261	426	620	956	1,476	1,790	1,755	1,595	0	711
Avg Svc Credit	1.4	3.5	5.4	6.7	8.2	10.4	12.0	11.8	12.3	0.0	6.4

Assumptions

Benefit payments are projected based on the Plan of benefits and the assumptions for future contributions, termination, retirement, death, and disability. Detail is provided in Appendix A.

Projected Benefit Payments for Active Participants

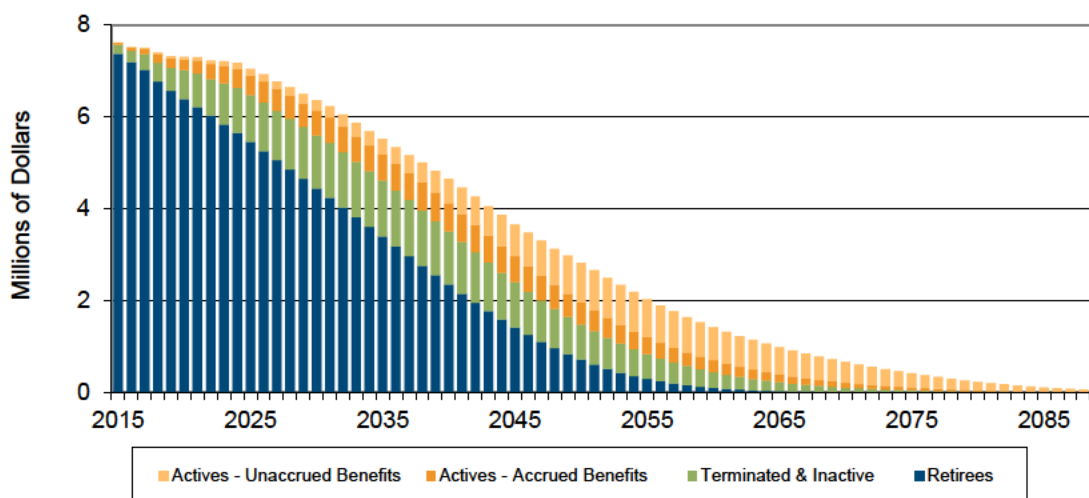
Based on the data, plan of benefits, and assumptions used in this valuation, the Trust will need to have assets to pay for the following stream of benefit payments due to the participants that are currently active. Benefits earned in the past and anticipated to be earned in the future are both included.



G. Plan Requirements

Projected Benefit Payments for All Current Participants

We estimate that the following stream of payments will be made on account of all benefits defined in the Plan for the current active, retired, terminated and inactive members. This includes benefits earned in the past and future for current actives. Our calculations are based on the participant data provided by the Trust, and the assumptions shown in this report.



The Investment Return Assumption and Actuarial Present Values

The investment return assumption used in the actuarial valuation is 6.25%. If a fund of investments earned a level annual return of 6.25%, net of investment expenses, a balance of \$97.7 million on July 1, 2015 would be sufficient to provide for all benefit payments shown above; the Actuarial Present Value of Future Benefits is \$97.7 million (see Exhibit 8 for details). Current assets plus the present value of future contributions must provide for this requirement.

The actuarial valuation also measures the Actuarial Present Value of Accrued Benefits. In this case, the active participants' unearned benefits (benefits that will be credited for future contributions) are excluded. If a fund of investments earned a level annual return of 6.25%, net of all expenses, a balance of \$94.9 million on July 1, 2015 would be sufficient to provide for all accrued benefits.

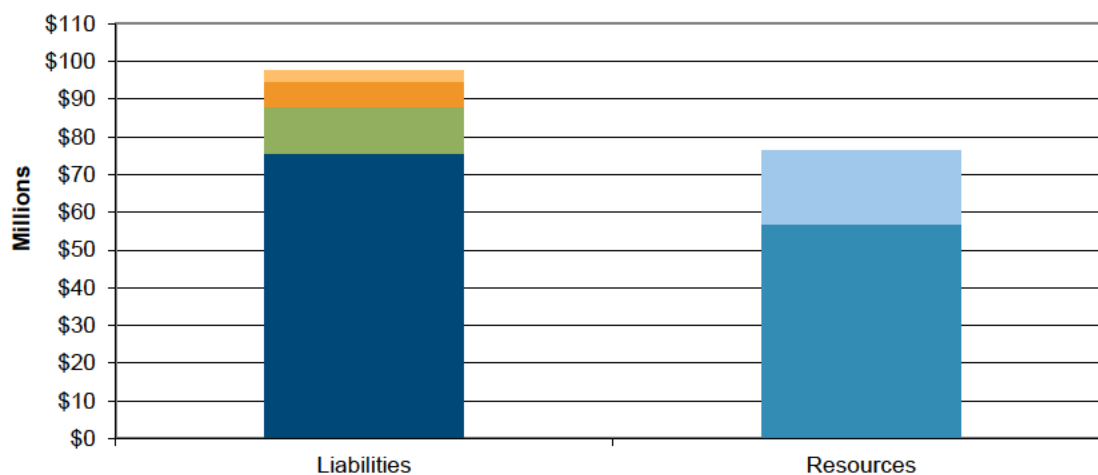
Summary of Plan Requirements	
Actuarial Present Value of All Future Benefits (all benefits shown above)	\$97.7 million
Actuarial Present Value of Accrued Benefits (Retirees, Terminated Vested, and Active Accrued)	\$94.9 million
Actuarial Value of Assets	\$55.7 million
Market Value of Assets	\$56.8 million

H. Actuarial Methodology and Results

Detail of Actuarial Present Value of Future Benefits		
	July 1, 2014 (in millions)	July 1, 2015 (in millions)
Retired Participants, Disabilities, and Beneficiaries	\$ 75.2	\$ 75.5
Terminated Vested Participants	7.9	9.1
Parity and Reciprocity Reserves	<u>3.5</u>	<u>3.3</u>
Total Inactive Liability	\$ 86.6	\$ 87.9
Active Accrued Benefits	7.2	7.0
Active Unaccrued Benefits	<u>2.6</u>	<u>2.8</u>
Total Active Liability	\$ 9.8	\$ 9.8
Total Plan Requirements	\$ 96.4	\$ 97.7

Comparing Liabilities to Resources as of July 1, 2015

- The Plan's liabilities, \$97.7 million, are the sum of the actuarial present value of accrued benefits, \$94.9 million, and the actuarial present value of unaccrued benefits, \$2.8 million.
- The Plan's resources, \$76.4 million, are the sum of the market value of assets, \$56.8 million, and the actuarial present value of future contributions for current participants, \$19.6 million.



- The Plan's resources of \$76.4 million are less than the Plan's liabilities of \$97.7 million.

Funding Benefits

Funding can be examined by focusing on benefits. There are two primary measures:

1. Does the market value of assets cover the Actuarial Present Value of Accrued Benefits?
2. Does the market value of assets cover the Actuarial Present Value of Vested Benefits (sometimes called Vested Benefit Liability)?

Funding as of		
	July 1, 2014	July 1, 2015
Present Value of Accrued Benefits	\$93.8 million	\$94.9 million
Vested Benefit Liability	\$90.0 million	\$91.4 million
Market Value of Assets (MVA)	\$61.3 million	\$56.8 million
MVA / Present Value of Accrued Benefits	65.3%	59.8%
MVA / Vested Benefit Liability	68.1%	62.2%

Historical Statistics and Projections

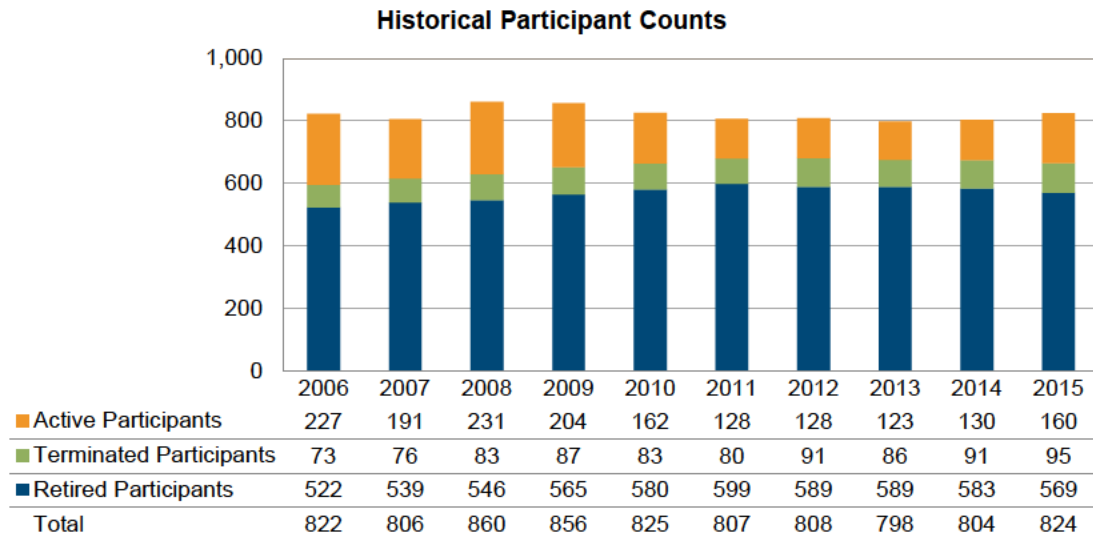
A. Historical Investment Return

Period Ended	1 Year	5 Years ⁽¹⁾	10 Years ⁽¹⁾	Since 1992 ⁽¹⁾
06/30/2015	0.9	9.5	6.1	7.7
06/30/2014	16.3	11.0	7.1	
06/30/2013	12.8	3.3	6.6	
06/30/2012	-2.9	0.6	5.8	
06/30/2011	22.3	4.5	5.5	
06/30/2010	8.0	2.9	3.1	
06/30/2009	-18.5	3.3	2.7	
06/30/2008	-1.3	10.0	5.8	
06/30/2007	17.3	11.2	7.8	
06/30/2006	13.4	6.5	8.2	
06/30/2005	10.1	3.3	8.3	
06/30/2004	11.2	2.0	9.1	
06/30/2003	4.2	1.7	8.3	
06/30/2002	-5.1	4.5	8.6	
06/30/2001	-2.7	9.8	10.4	
06/30/2000	3.3	13.4		
06/30/1999	9.5	16.7		
06/30/1998	19.2	15.2		
06/30/1997	21.7	12.9		
06/30/1996	14.5	11.0		
06/30/1995	19.0			
06/30/1994	2.8			
06/30/1993	7.7			
06/30/1992	11.8			

(1) Annualized time weighted average based on market value.

B. Historical Participant Statistics

The following chart shows the participant counts by status over the last several plan years.



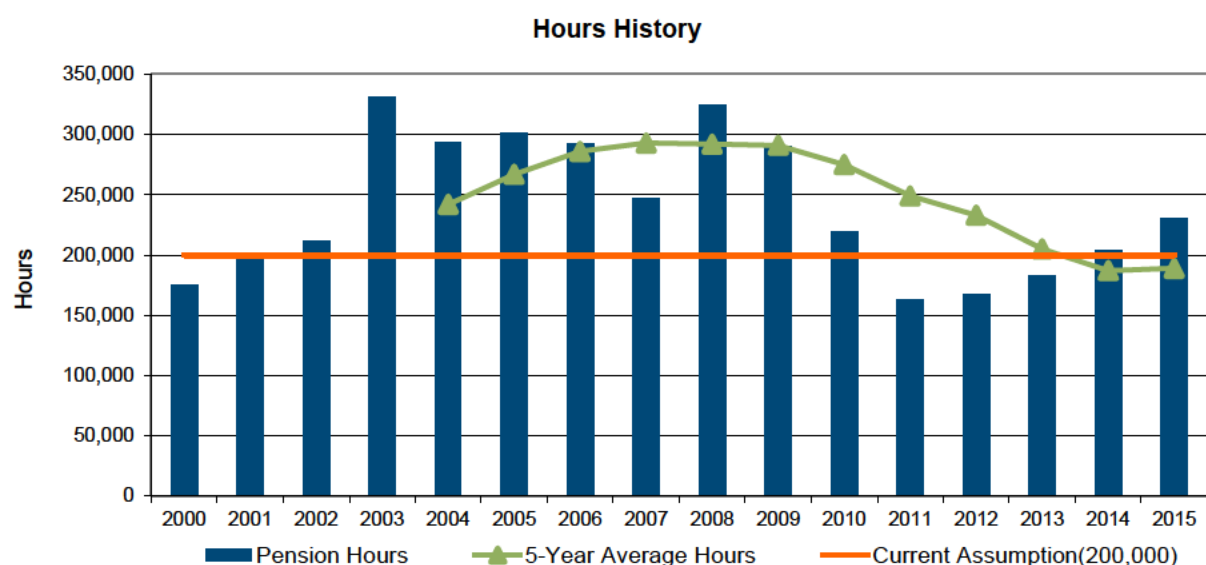
C. Historical Hours and Contributions

The following table shows the total contributory hours as reported by the Trust Office.

Plan Year Ending June 30,	Number of Actives at Plan Year End	Total Contributory Hours ⁽¹⁾	Rounded 5-Year Average Hours	Reciprocal Hours ⁽¹⁾	Total Contribution ⁽²⁾
2000	181	174,901			\$737,730
2001	173	197,788			863,228
2002	174	211,183			895,003
2003	256	331,406			1,361,630
2004	234	294,046	242,000		1,132,752
2005	216	301,025	267,000		1,218,698
2006	227	292,005	286,000		1,286,458
2007	191	247,228	293,000	23,526	1,239,139
2008	231	323,913	292,000	32,606	1,607,470
2009	204	290,399	291,000	34,888	1,607,445
2010	162	219,681	275,000	33,099	1,749,934
2011	128	163,184	249,000	25,302	1,933,723
2012	128	166,922	233,000	31,901	1,810,073
2013	123	184,980	205,000	28,054	2,166,310
2014	130	204,616	188,000	36,954	2,663,353
2015	160	238,000	192,000	32,433	3,123,859

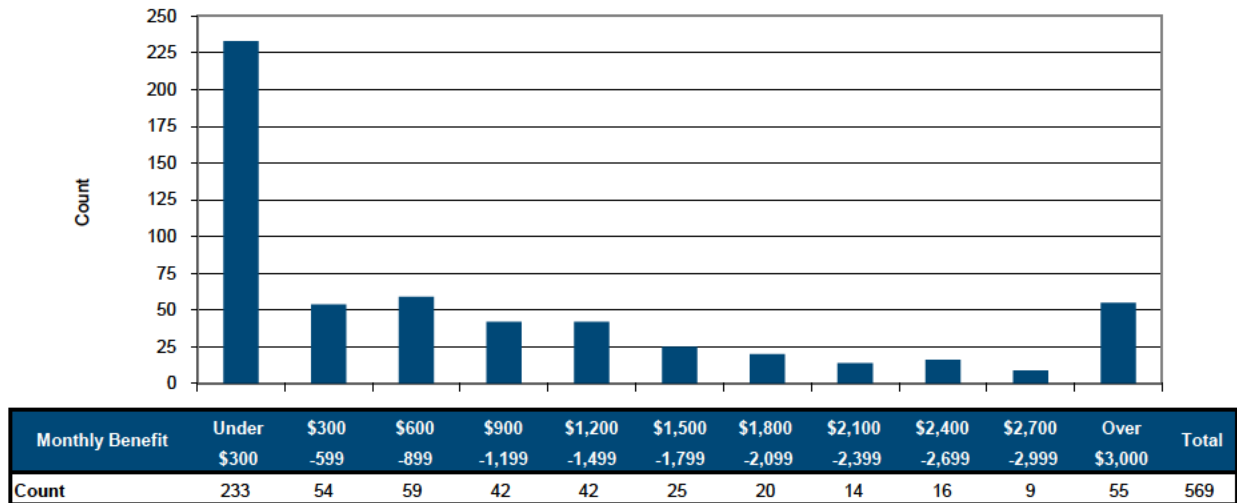
(1) Based on total hours reported in WPAS summary reports.

(2) Includes withdrawal liability payments.



D. Retired Participant Statistics

Current Distribution of Retirees, Beneficiaries, and Disabilities by Monthly Benefit Amount

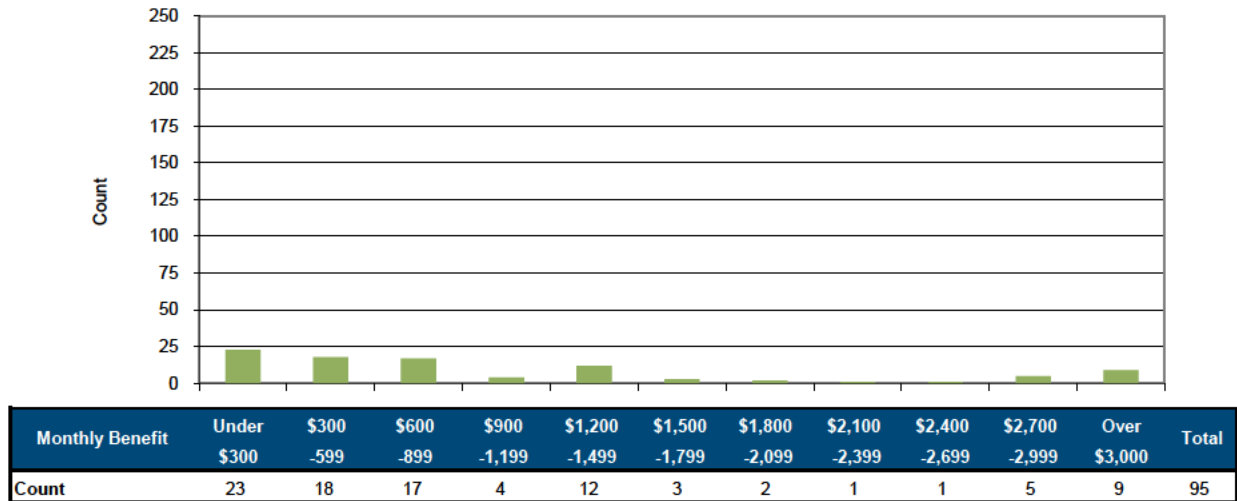


Retired Participant Historical Information

Plan Year	Number of Retirees	Total Annual Benefits	Average Annual Benefits
2006	522	\$6,156,726	\$11,794
2007	539	6,471,346	12,006
2008	546	6,790,124	12,436
2009	565	7,067,791	12,509
2010	580	7,290,239	12,569
2011	599	7,839,631	13,088
2012	589	7,739,241	13,140
2013	589	7,677,765	13,035
2014	583	7,616,676	13,065
2015	569	7,434,968	13,067

E. Vested Terminated Participant Statistics

Current Distribution of Vested Terminated Participants by Monthly Benefit Amount

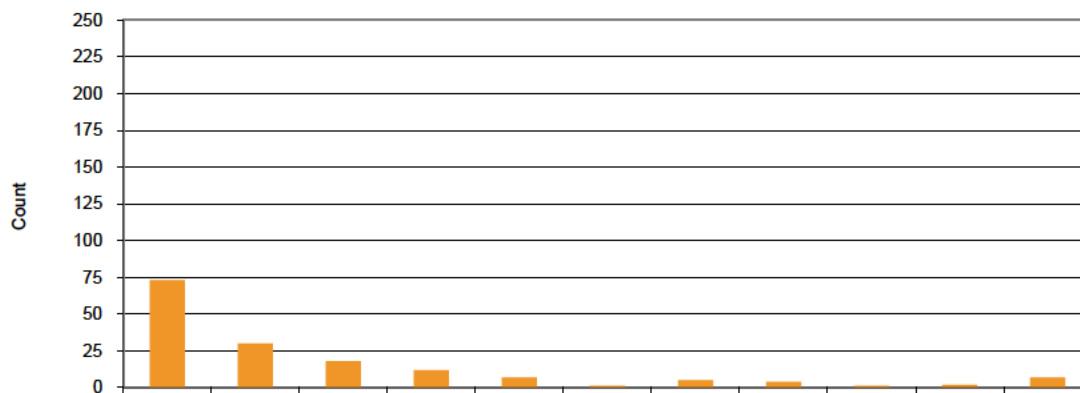


Vested Terminated Participant Historical Information

Plan Year	Number of Vested Terminees	Total Annual Benefits	Average Annual Benefits
2006	73	\$1,818,346	\$24,909
2007	76	1,618,003	21,290
2008	83	1,454,495	17,524
2009	87	1,449,813	16,665
2010	83	1,494,187	18,002
2011	80	1,229,970	15,375
2012	91	1,302,353	14,312
2013	86	1,269,715	14,764
2014	91	1,253,941	13,780
2015	95	1,351,187	14,223

F. Active Participant Statistics

Current Distribution of Active Participants by Accrued Monthly Benefit Amount



Monthly Benefit	Under \$300	\$300 - \$599	\$600 - \$899	\$900 - \$1,199	\$1,200 - \$1,499	\$1,500 - \$1,799	\$1,800 - \$2,099	\$2,100 - \$2,399	\$2,400 - \$2,699	\$2,700 - \$2,999	Over \$3,000	Total
Count	73	30	18	12	7	1	5	4	1	2	7	160

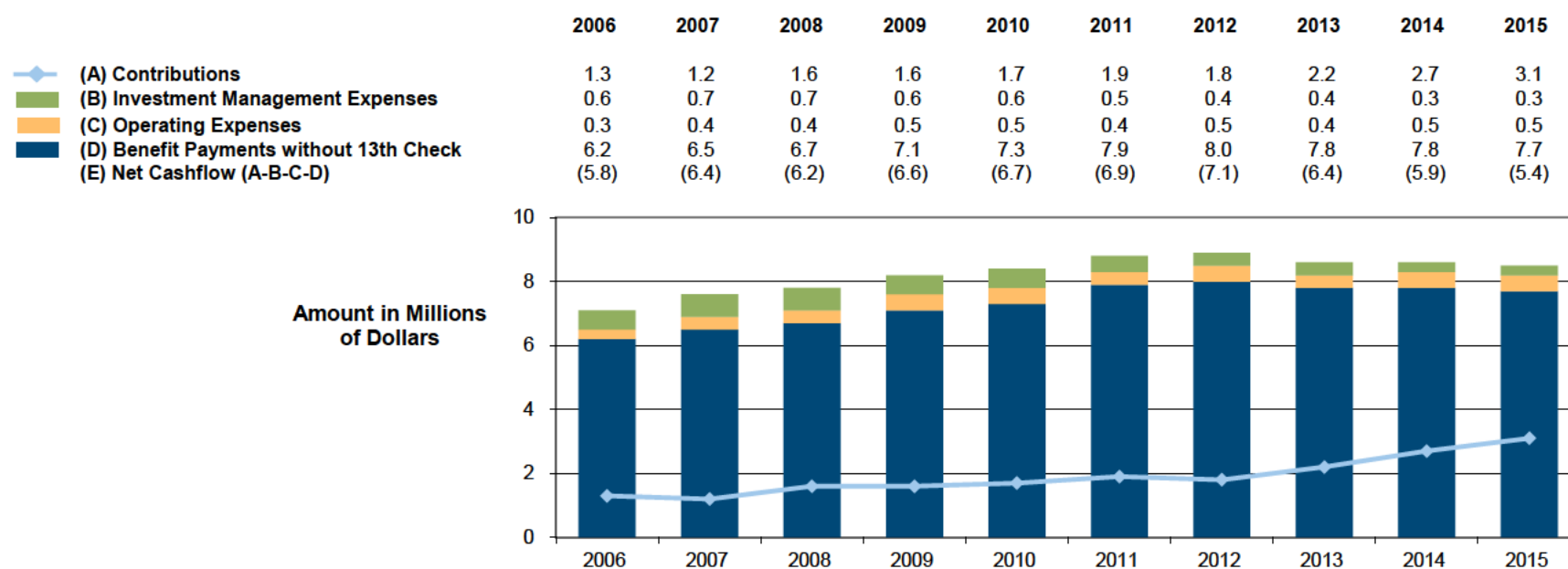
Active Participant Historical Information

Plan Year Beginning July 1,	Number of Actives	Average Age	Average Years of Service
2006	227	40.7	6.4
2007	191	40.4	7.1
2008	231	38.5	6.1
2009	204	38.0	6.3
2010	162	37.0	7.0
2011	128	37.6	7.0
2012	128	38.1	7.4
2013	123	38.1	7.8
2014	130	38.0	7.7
2015	160	36.2	6.4

G. Historical Net Cash Flow ⁽¹⁾

The chart shows the relationship between contributions, investment management expenses, operating expenses, and benefit payments for the past 10 plan years. Net cash flow is equal to contributions minus benefit payments, operating expenses and investment management expenses.

The amounts shown are based on the Auditor's Report for 2006-2015.

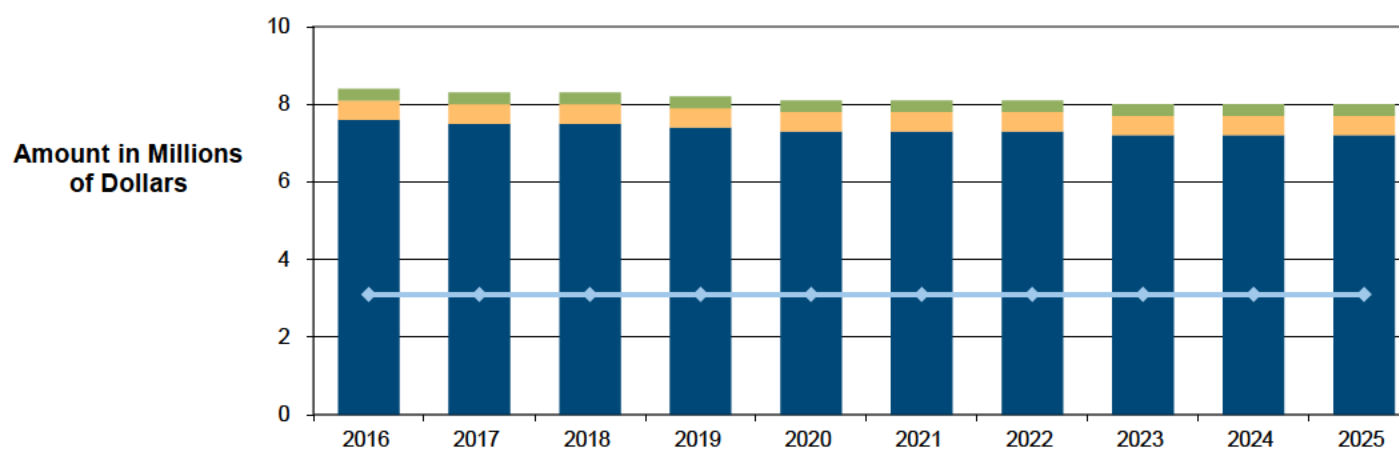


(1) Based on draft Auditor's Report.

H. Projected Net Cash Flow

The following chart shows the relationship between contributions⁽¹⁾, investment management expenses⁽²⁾, operating expenses⁽³⁾, and benefit payments⁽⁴⁾ on a projected basis for 10 plan years. Net cash flow is equal to contributions minus benefit payments, operating expenses, and investment management expenses.

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
(A) Contributions ⁽¹⁾	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
(B) Investment Management Expenses ⁽²⁾	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
(C) Operating Expenses ⁽³⁾	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
(D) Benefit Payments without 13th Check ⁽⁴⁾	7.6	7.5	7.5	7.4	7.3	7.3	7.3	7.2	7.2	7.2
(E) Net Cashflow (A-B-C-D)	(5.3)	(5.2)	(5.2)	(5.1)	(5.0)	(5.0)	(5.0)	(4.9)	(4.9)	(4.9)



(1) The contribution assumption used in the valuation is projected forward with no inflation.

(2) Investment expenses are projected as last year's actual amount with no inflation.

(3) Operating expenses are projected as last year's actual amount with no inflation.

(4) Benefit payments are projected based on the actuarial valuation calculations and assume no 13th check.

I. Historical Summary of Hourly Employer Contribution Rates

Effective Date		Master Hourly Contribution Rate		
Year	Month	Included in Benefits	Funding Only	Total Contribution
1966	July	\$0.15	\$0.00	\$0.15
1968	July	0.55	0.00	0.55
1969	August	0.70	0.00	0.70
1970	August	0.85	0.00	0.85
1971	August	1.00	0.00	1.00
1973	August	1.25	0.00	1.25
1975	February	1.75	0.00	1.75
1977	February	2.25	0.00	2.25
1977	August	2.75	0.00	2.75
1978	August	3.00	0.00	3.00
1983	August	3.25	0.00	3.25
1991	August	3.75	0.00	3.75
1997	March	3.90	0.00	3.90
1997	August	4.40	0.00	4.40
2005	August	4.75	0.00	4.75
2006	August	4.75	1.00	5.75
2007	September	4.75	2.00	6.75
2009	July	4.75	3.00	7.75
2009	August	4.75	4.00	8.75
2010	August	4.75	5.00	9.75
2011	August	4.75	6.00	10.75
2012	August	4.75	7.00	11.75
2013	August	4.75	8.00	12.75
2015	August	4.75	9.00	13.75

Appendix A

Summary of Actuarial Assumptions

The following details the principal actuarial assumptions used in our valuation. The rationale for all significant economic assumptions is noted below. All significant demographic assumptions are based on analysis of the Plan's experience, in particular, a study of all demographic assumptions was performed in conjunction with our July 1, 2015 Actuarial Valuation

Investment Return (Interest)

Funding: 6.25% per year (adopted July 1, 2009). The investment return assumption represents the expected long-term return on assets based on the Plan's investment policy, asset allocation, and the capital market assumptions.

Withdrawal Liability: 6.25% per year (adopted July 1, 2009).

Current Liability: 3.34% per year (adopted July 1, 2015).

Inflation

No explicit assumption.

Administrative Expenses

The annual operating expense assumption is \$490,000 (adopted July 1, 2015).

Pay Increases

Not applicable.

Rates for Active Participants

Death: The RP-2014 Mortality Table with Blue Collar adjustment, adjusted to factor out Scale MP-2014 from the 2006 base year, then projected forward using Scale MP-2015 on a generational basis, with gender-specific Employee rates (adopted July 1, 2015):

Age	Sex	Future Life Expectancy (in years)			
		2015	2025	2035	2045
60	Male	24.2	25.2	26.1	27.0
65	Male	19.9	20.7	21.6	22.5

Withdrawal: Sample termination rates are shown in the following table (adopted July 1, 2015).

Duration from Hire	Termination Rate
0	25.00%
1	25.00
2	15.00
3	12.00
4	10.00
7	8.00
12	7.00
17	7.00
22	5.00
27+	3.00

Retirement: Sample retirement rates are shown in the following table (adopted July 1, 2011). These rates apply for those retiring from active and vested terminated status.

Age	Retirement	
	Pre-July, 1 2011 Benefits	Post-July, 1 2011 Benefits
20	0.00%	0.00%
25	0.00	0.00
30	0.00	0.00
35	0.00	0.00
40	0.00	0.00
45	0.00	0.00
50	5.00	5.00
51	5.00	5.00
52	5.00	5.00
53	5.00	5.00
54	5.00	5.00
55	5.00	5.00
56	10.00	10.00
57	15.00	10.00
58	20.00	10.00
59	20.00	15.00
60	100.00	20.00
61	100.00	20.00
62	100.00	100.00

Marriage: Survivor benefits are provided for all Plan participants. 100% of active and terminated vested participants are assumed to be married. Wives are assumed to be three years younger than husbands.

Lump Sum – A lump-sum distribution option is provided upon retirement for benefits valued under \$5,000. However, there is no explicit assumption for this. These benefits are valued as annuities.

Weighted Average Retirement Age

The weighted average retirement age for participants' benefits earned prior to July 1, 2011 is 57. This equals the sum, over all retirement ages, of the retirement age multiplied by the probability of retiring at that age, as shown below.

(a)	(b)	(c)	(b) x (c) = (d)	(a) x (d) = (e)
Possible Retirement Age "r"	Assumed Rate of Retirement at Age "r"	Probability of Person Age 55 Still Working at "r"	Probability of Person Age 55 Retiring at "r"	Component of Weighted Average Retirement Age
50	0.0500	1.0000	0.0500	2.5000
51	0.0500	0.9500	0.0475	2.4225
52	0.0500	0.9025	0.0451	2.3465
53	0.0500	0.8574	0.0429	2.2720
54	0.0500	0.8174	0.0407	2.1992
55	0.0500	0.7738	0.0387	2.1279
56	0.1000	0.7351	0.0735	4.1165
57	0.1500	0.6616	0.0992	5.6565
58	0.2000	0.5623	0.1125	6.5232
59	0.2000	0.4499	0.0900	5.3085
60	1.0000	0.3599	0.3599	21.5941
Weighted Average Retirement Age:				57.0670
Rounded to Nearest Age:				57

The weighted average retirement age for participants' benefits earned after July 1, 2011 is 58. This equals the sum, over all retirement ages, of the retirement age multiplied by the probability of retiring at that age, as shown below.

(a)	(b)	(c)	(b) x (c) = (d)	(a) x (d) = (e)
Possible Retirement Age "r"	Assumed Rate of Retirement at Age "r"	Probability of Person Age 55 Still Working at "r"	Probability of Person Age 55 Retiring at "r"	Component of Weighted Average Retirement Age
50	0.0500	1.0000	0.0500	2.5000
51	0.0500	0.9500	0.0475	2.4225
52	0.0500	0.9025	0.0451	2.3465
53	0.0500	0.8574	0.0429	2.2720
54	0.0500	0.8145	0.0407	2.1992
55	0.0500	0.7738	0.0387	2.1279
56	0.1000	0.7351	0.0735	4.1165
57	0.1000	0.6616	0.0662	3.7710
58	0.1000	0.5954	0.0595	3.4535
59	0.1500	0.5359	0.0804	4.7426
60	0.2000	0.4555	0.0911	5.4660
61	0.2000	0.3644	0.0729	4.4457
62	0.1750	0.2915	0.2915	18.0742
Weighted Average Retirement Age:				57.9376
Rounded to Nearest Age:				58

Assumed Form of Payment

Future retirees are assumed to elect a single life annuity form of payment.

Mortality Rates after Leaving Active Participation

Healthy and Disabled Lives: The RP-2014 Mortality Table with Blue Collar adjustment, adjusted to factor out Scale MP-2014 from the 2006 base year, then projected forward using Scale MP-2015 on a generational basis, with gender-specific Healthy Annuitant rates (adopted July 1, 2015).

Mortality for Current Liability

RP-2000 Combined Mortality Table projected as set forth in Treasury Regulation §1.412(l)(7)-1.

Postretirement Benefit Increases

None. (The Plan does not provide for any future postretirement benefit increases.)

Inactive Partially Vested Members

No liability was retained for contingently vested former participants currently age 65 or over, based on the assumption that they are either currently retired or will never apply for benefits; 45% of the liability was retained for those under age 65 to account for reciprocity agreements with related trusts. The retained contingent liability is reflected in the present value of accrued nonvested benefits.

Records with No Birth Date

New records with no birth date are assumed to be 41 years old. Records that are not new and have no birth date used the same birth date as the prior year's valuation.

Activity Assumption

This valuation uses an assumption of 200,000 contributory hours per year (adopted July 1, 2014).

Benefits Not Valued

None.

Changes in Actuarial Assumptions Since Prior Valuation

- The demographic assumptions were updated based on the Demographic Assumptions Study prepared concurrently with this valuation. This increased the present value of accrued benefits by approximately \$3.3 million. The changes included:
 - The rates of termination were revised.
 - The rates of retirement for terminated participants were revised.
 - The mortality assumptions were updated to the gender specific blue collar RP-2014 Mortality Tables, adjusted to factor out Scale MP-2014 to the 2006 base year, then projected forward using Scale MP-2015 on a generational basis. Employee rates are used before benefit commencement and Healthy Annuitant rates are used after benefit commencement.
- Effective July 1, 2015, the current liability interest rate was re-established within the statutory interest rate corridor, effective July 1, 2015.
- Effective July 1, 2015, the statutory current liability mortality basis was re-established based on the RP-2000 Combined Mortality Table projected as set forth in Treasury Regulation §1.412(l)(7)-1.
- The annual operating expense assumption was changed from \$470,000 to \$490,000 to better reflect expected future expenses.

Appendix B

Summary of Basic Benefit Structure

Plan Identification

EIN: 91-6123695
Plan Number: 001
Plan Year: July 1 to June 30

Normal Retirement Benefits

Pre-July 1, 2011

Benefits: 1.2% x contributions made for the participant as a monthly benefit
= 14.4% x contributions per year

Eligibility: Normal Retirement Age is age 60 with five pension credits.

Post-July 1, 2011

Benefits: 1.0% x contributions made for the participant as a monthly benefit
= 12.0% x contributions per year

Eligibility: Normal Retirement Age is age 62 with five pension credits.

Early Retirement Benefits

Benefits: The normal retirement benefit (based on contributions to date) reduced by age according to the following scale:

Age at Retirement	Benefits earned prior to July 1, 2011	Benefits earned on or after July, 2011
62	1.0000	1.0000
61	1.0000	0.9200
60	1.0000	0.8400
59	0.9200	0.7600
58	0.8400	0.6800
57	0.7600	0.6000
56	0.6800	0.5600
55	0.6000	0.5200
54	0.5600	0.4800
53	0.5200	0.4400
52	0.4800	0.4000
51	0.4400	0.3600
50	0.4000	0.3200

Eligibility: Age 50 with five pension credits.

Vesting (Withdrawal before Retirement)

A participant who leaves with five pension credits is 100% vested in his normal and early retirement benefits based on contributions to date.

Disability Benefits

Benefits: None.

Eligibility: N/A.

Death Benefits

Benefits: A 50% joint and survivor annuity payable any time after the participant's early retirement date.

Eligibility: Five pension credits and married at death.

Forms of Pension Payment

The normal form of payment for a single employee is a life annuity. A participant may elect to receive a reduced benefit payable for life with 50%, 66⅔%, 75% or 100% of such reduced benefit continued to his or her spouse upon the death of the employee. In addition, a participant may elect to receive a further reduced benefit in order to receive the normal form benefit amount if the spouse predeceases the employee.

Plan Changes Since Prior Valuation

None.

Ad Hoc Benefit Increases

(Improvements that do not change the "Basic Benefit Structure")

None.

Benefit Structure of the Plan

Effective Date	Description
Prior to July 1, 1974	\$37.56 per year of pension credit.
July 1, 1974	5.4% of yearly contributions for benefits.
July 1, 2001	2.1% of yearly contributions for benefits.
July 1, 2003	1.2% of yearly contributions for benefits.
July 1, 2011	1.0% of yearly contributions for benefits. The normal retirement age was also changed to 62 on a prospective basis.

Appendix C

Summary of Actuarial Cost Methods

Background

Before we explain our cost method, we must first define the term "actuarial present value".

An actuarial present value is the value, on a given date, of a series of future benefit payments, future compensation payments or future contributions, where each amount in the series is:

- adjusted for the probability of increase (or decrease) due to such events as death, changes in marital status, etc.;
- multiplied by the probability of the event occurring on which the payment is conditioned, such as the probability of survival, retirement, death, disability, termination of employment, etc.; and
- discounted at an assumed rate of investment return.

Our actuarial assumptions estimate these probabilities and the investment return.

Actuarial Cost Method

The actuarial cost method used to calculate the funding requirements of the Plan is called the **traditional unit credit** actuarial cost method.

The actuarial cost method is used to calculate the normal cost and unfunded actuarial accrued liability, which in turn determine the funding requirements of the Plan (minimum amount required and maximum amount deductible). The cost method allocates the total cost of the Plan over time: the **normal cost** is that portion of the cost allocated to the current year, and the **actuarial accrued liability** is the actuarial present value of costs allocated to prior years. The **unfunded actuarial accrued liability** (UAAL) is equal to the excess, if any, of the actuarial accrued liability over the actuarial value of assets.

Under the traditional unit credit cost method, the normal cost is the actuarial present value of all benefits expected to be earned during the plan year; for active employees, these earned benefits are generally due to additional covered hours worked. The actuarial accrued liability is the actuarial present value of all benefits accrued to date, generally based on service to date.

Funding Requirements

Each year contributions must fund the normal cost and amortize a portion of the unfunded actuarial accrued liability. IRS minimum and maximum funding rules specify amortization schedules for the unfunded actuarial accrued liability, depending on the source of increase or decrease (Plan improvements, assumption changes, gains/losses, etc.).

Another factor can also affect funding requirements. The excess, if any, of past contributions over the accumulated minimum required amount creates a **credit balance**, which may be used to offset the minimum required contribution.

Asset Valuation Method

The **actuarial value of assets** is the asset value used to determine funding requirements. The actuarial asset method is a part of the Plan's cost method and may include smoothing to reduce large year-to-year swings in funding requirements due to asset gains and losses.

The method used recognizes market value gains and losses in relation to the investment assumption over the five-year periods following the occurrence of the gains or losses. However, this method cannot produce an asset value that varies from market value more than 20%.

Withdrawal Liability

The market value of assets is used for determining unfunded vested benefit liability for withdrawal liability.

The PBGC Technical Update 10-3 Simplified Method is used to determine the value of adjustable benefits that were removed under the rehabilitation plan that are included for withdrawal liability purposes.

Only the vested benefits are valued for withdrawal liability calculations.

Death benefits offered by the Plan are not considered vested for withdrawal liability calculations.

Changes in Actuarial Methods Since Prior Valuation

None.

Appendix D

Glossary of Actuarial Terms

The following definitions are from a glossary adopted by the Actuarial Standards Board. In some cases, the definitions have been modified for specific applicability to the Alaska Ironworkers Pension Plan. Defined terms are capitalized throughout this Appendix.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of this value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

Actuarial Accrued Liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Actuarial Present Value

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuarial Value of Assets

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date, with each value based on the same set of Actuarial Assumptions.

Amortization Payment

That portion of the pension plan contribution that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Experience Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Funding Reserve (Deficit)

The amount by which the Market Value of Assets exceeds the Present Value of Accrued Benefits may be referred to as the Funding Reserve. If the Market Value of Assets is smaller it may be referred to as the Deficit.

Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Present Value of Accrued Benefits

The expected discounted value of projected benefits corresponding to benefits accrued as of the valuation date.

Present Value of Future Benefits

The expected discounted value of projected benefits corresponding to both the accrued benefits and the unaccrued benefits.

Projected Benefits

Those pension plan benefit amounts which are expected to be paid at various future times to current participants under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.

Unaccrued Benefits

Projected Benefits that have not yet been earned as of the valuation date.

Unfunded Actuarial Accrued Liability

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

Appendix E

Supporting Actuarial Calculations July 1, 2015

The exhibits in this section provide detail of the actuarial calculations on which this report is based. The calculations reflect draft financial statements provided by the Auditor on February 15, 2016.

There were no changes to the draft asset information provided by the auditor last year that had any impact on the supporting actuarial calculations provided in our July 1, 2014 Actuarial Valuation Report.

Exhibit 1

Market Assets June 30, 2015

Assets:

Investments at fair value:

Short term funds	\$ 4,465,484
U.S. securities	605,387
Corporate bonds	418,957
Foreign bonds	40,828
Common stocks	24,758,561
Common/collective funds	2,491,746
Partnerships	4,152,277
Mutual Funds	6,093,066
Exchange traded funds	12,875,063
Total investments	<u>55,901,369</u>

Receivables:

Employer contributions	308,747
Accrued interest and dividends	56,799
Securities transactions	308,440
Other receivables	100
Total receivables	<u>674,086</u>

Cash:

Checking	883,224
Total cash	<u>883,224</u>

Total assets 57,458,679

Liabilities:

Accounts payable	111,463
Security transactions payable	561,073
Total liabilities	<u>672,536</u>

Net assets available for benefits \$ 56,786,143

Exhibit 2

Receipts and Disbursements (Year Ended June 30, 2015)

Additions:

Investment Income:

Net appreciation (depreciation) in fair value	\$ (248,512)
Interest and dividends	1,063,876
Security lending	-
	<u>815,364</u>

Less investment expenses:

Custodial fees	15,000
Investment manager fees	276,339
Investment performance fees	206
	<u>291,545</u>

Net investment income (loss)	523,819
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Employer contributions	3,123,859
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Other income	10,451
	<u>3,134,310</u>

Total additions	3,658,129
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Deductions:

Benefits paid	7,654,800
Administrative expenses	485,904
	<u>8,140,704</u>

Total deductions	8,140,704
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Net increase (decrease)	(4,482,575)
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Net assets available for benefits:

Beginning of year	<u>61,268,718</u>
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End of year	\$ <u>56,786,143</u>
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Exhibit 3

Actuarial Assets July 1, 2015

Determination of Recognized Investment Gains and Losses - Five-Year Smoothing

1. Expected investment return – Year Ended 6/30/2015	\$	3,674,894
2. Actual investment return – Year Ended 6/30/2015	\$	534,270
3. Gains/(losses) – 2015 (Actual – Expected)	\$	(3,140,624)
4. Gains/(losses) for prior years		
2010-2011	\$	8,978,965
2011-2012		(5,661,065)
2012-2013		3,556,575
2013-2014		5,511,835
2014-2015		(3,140,625)
	\$	9,245,685
5. Gains/(losses) recognized at 7/1/2015	\$	1,849,138

Determination of Actuarial Assets

Actuarial value of assets 7/1/2014	\$	55,193,938
Net cash flow during year	\$	(5,016,845)
Expected investment return		3,674,894
Recognized investment gains/(losses)	\$	507,187
Actuarial value of assets 7/1/2015 before corridor*	\$	55,701,125
Actuarial value of assets 7/1/2015 after corridor*	\$	55,701,125
Unrecognized gain/(loss)		1,085,018
Market value of assets 7/1/2015		
(Actuarial value before corridor + unrecognized gain)	\$	56,786,143

* Actuarial value must be between 80% and 120% of market value. For July 1, 2015, the market value of assets equals \$56,786,143, and the initial actuarial value of assets falls within this required corridor.

Exhibit 4

Schedule of Investment Gain / (Loss) Recognition (in millions)

Year Ending 6/30	Market Value Investment Gain/ (Loss)	Investment Gain/(Loss) Recognized in Past Years				Investment Gain/(Loss) Recognized in Current Year 2015*	Investment Gain/(Loss) to be Recognized in Future Years			
		2011	2012	2013	2014		2016	2017	2018	2019
2007	\$8.0	\$0.0								
2008	(\$7.1)	\$0.0	\$0.0							
2009	(\$20.0)	\$0.0	\$0.0	\$0.0						
2010	\$1.0	\$0.2	\$0.2	\$0.2	\$0.2					
2011	\$9.0	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8				
2012	(\$5.7)		(\$1.1)	(\$1.1)	(\$1.1)	(\$1.1)	(\$1.1)			
2013	\$3.6			\$0.7	\$0.7	\$0.7	\$0.7	\$0.7		
2014	\$5.5				\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	
2015	(\$3.1)					(\$0.6)	(\$0.6)	(\$0.6)	(\$0.6)	(\$0.6)
2016	\$0.0						\$0.0	\$0.0	\$0.0	\$0.0
2017	\$0.0							\$0.0	\$0.0	\$0.0
2018	\$0.0								\$0.0	\$0.0
2019	\$0.0									\$0.0

Total Gain/(Loss) Recognized at Each Valuation Date									
Recognized					Scheduled to be Recognized*				
\$2.0	\$0.9	\$1.6	\$2.7		\$1.8	\$0.1	\$1.2	\$0.5	(\$0.6)

Unrecognized Gain/(Loss) Remaining				
\$1.1	\$1.0	(\$0.2)	(\$0.6)	(\$0.0)

* The total gain/(loss) actually recognized in each future year will include additional amortizations of future gains and/or losses.

Exhibit 5

Funding Standard Account for Prior Plan Year

The Funding Standard Account for the plan year ending June 30, 2015 is determined below.

1. Outstanding balances as of July 1, 2014	
a. Amortization charges	\$61,996,378
b. Amortization credits	22,380,289
c. Accumulated Additional Funding Charges with interest	0
d. Accumulated Additional Interest Charges with interest	0
2. Charges to Funding Standard Account	
a. Funding Deficiency as of July 1, 2014	0
b. Normal Cost as of July 1, 2014	757,830
c. Amortization charges as of July 1, 2014	10,295,907
d. Interest on (a), (b), and (c) to end of plan year	690,859
e. Additional Interest Charge for plan year	0
f. Additional Funding Charge for plan year	<u>0</u>
g. Total	11,744,596
3. Credits to Funding Standard Account	
a. Credit Balance as of July 1, 2014	965,246
b. Employer contributions for plan year	3,123,859
c. Amortization credits as of July 1, 2014	2,563,232
d. Interest on (a), (b), and (c) to end of plan year	299,868
e. Full Funding Credit	<u>0</u>
f. Total	6,952,205
4. Credit Balance / (Funding Deficiency) as of June 30, 2015	\$(4,792,391)

Exhibit 6

Application of Employer Contributions to Maximum Deductible Contribution Limit

The amount of undeducted employer contributions, if any, as of June 30, 2015 is determined below.

1. Employer contributions for tax year ending June 30, 2015	\$3,123,859
2. Undeducted employer contributions as of July 1, 2014	0
3. Maximum Deductible Contribution for tax year ending June 30, 2015	121,535,537
4. Undeducted employer contributions as of June 30, 2015 to be carried over to future tax years	
[(1) + (2) - (3), but not less than \$0]	\$0

Exhibit 7

Summary of Active Participants by Age and Service

Number of Participants by Age and Service Groups

Age	Years of Vesting Service										Total
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40&Up	
0-24	7	9	-	-	-	-	-	-	-	-	16
25-29	11	14	14	-	-	-	-	-	-	-	39
30-34	5	6	11	4	-	-	-	-	-	-	26
35-39	5	8	9	9	1	-	-	-	-	-	32
40-44	3	-	3	2	2	-	-	-	-	-	10
45-49	1	3	2	4	2	1	-	-	-	-	13
50-54	-	3	2	3	5	-	1	-	-	-	14
55-59	-	2	2	1	2	-	1	-	-	-	8
60-64	-	-	-	2	-	-	-	-	-	-	2
65-69	-	-	-	-	-	-	-	-	-	-	-
70&Up	-	-	-	-	-	-	-	-	-	-	-
Total	32	45	43	25	12	1	2	-	-	-	160

Exhibit 8

Actuarial Balance Sheet

The total plan requirements compared to the total value of plan resources as of July 1, 2015 is shown below.

Plan Requirements

1. Present value of active participant benefits	
a. Withdrawal	\$1,642,018
b. Early Retirement	4,338,072
c. Unreduced Retirement	3,740,323
d. Death	<u>77,377</u>
e. Total	9,797,790
2. Present value of inactive participant benefits	
a. Terminated vested participants	9,116,215
b. Contingent vested participants	3,343,842
c. Retired participants	67,187,293
d. Disabled participants	2,289,965
e. Beneficiaries	<u>6,000,818</u>
f. Total	87,938,133
3. Reserve for expenses	0
4. Total plan requirements	
[(1e) + (2f) + (3)]	97,735,923

Plan Resources

5. Actuarial Value of Assets	55,701,125
6. Unfunded Actuarial Accrued Liability	39,185,170
7. Present Value of Future Normal Costs	2,849,628
8. Total plan resources	
[(4) + (5) + (6)]	\$97,735,923

Exhibit 9

Normal Cost

The Normal Cost is the amount allocated to the current plan year under the plan's actuarial cost method. The employer Normal Cost as of July 1, 2015 is determined below.

1. Normal Cost for benefits	
a. Withdrawal	\$91,734
b. Early Retirement	127,024
c. Unreduced Retirement	85,120
d. Death	<u>2,612</u>
e. Total	306,490
2. Loading for expenses	475,370
3. Total Employer Normal Cost	
[(1e) + (2)]	\$781,860

Exhibit 10

Unfunded Actuarial Accrued Liability

The Actuarial Accrued Liability represents that portion of the Present Value of Benefits that is not provided by the Present Value of Future Normal Costs. The Unfunded Actuarial Accrued Liability is the excess (deficiency) of the Actuarial Accrued Liability over the Actuarial Value of Assets. The Unfunded Actuarial Accrued Liability as of July 1, 2014 and July 1, 2015 is determined below.

	7/1/2014	7/1/2015
1. Present Value of Benefits		
a. Active participants	\$9,779,480	\$9,797,790
b. Terminated vested participants	7,871,981	9,116,215
c. Contingent vested participants	3,569,849	3,343,842
d. Retired participants	67,482,384	67,187,293
e. Disabled participants	1,906,050	2,289,965
f. Beneficiaries	<u>5,772,517</u>	<u>6,000,818</u>
g. Total	96,382,261	97,735,923
2. Present Value of Future Normal Costs	2,537,481	2,849,628
3. Actuarial Accrued Liability [(1g) - (2)]	93,844,780	94,886,295
4. Actuarial Value of Assets	55,193,938	55,701,125
5. Reserve for expenses	0	0
6. Unfunded Actuarial Accrued Liability [(3) - (4) + (5)]	\$38,650,842	\$39,185,170

Exhibit 11

Actuarial (Gain) / Loss for Prior Plan Year

The Actuarial (Gain) / Loss for the prior plan year is the difference between the expected and actual Unfunded Actuarial Accrued Liability as of the beginning of the current plan year. The Actuarial (Gain) / Loss for the plan year ending June 30, 2015 is determined below.

1. Unfunded Actuarial Accrued Liability as of July 1, 2014	\$38,650,842
2. Normal Cost as of July 1, 2014	757,830
3. Interest on (1) and (2) to end of plan year	<u>2,463,042</u>
4. Subtotal [(1) + (2) + (3)]	41,871,714
5. Employer contributions for plan year	3,123,859
6. Interest on (5) to end of plan year	<u>79,338</u>
7. Subtotal [(5) + (6)]	3,203,197
8. Changes in Actuarial Accrued Liability	
a. Plan amendments	0
b. Changes in actuarial assumptions	3,254,301
c. Changes in cost method	<u>0</u>
d. Total	3,254,301
9. Expected Unfunded Actuarial Accrued Liability as of July 1, 2015 [(4) - (7) + (8d)]	41,922,818
10. Actual Unfunded Actuarial Accrued Liability as of July 1, 2015	39,185,170
11. Actuarial (Gain) / Loss for prior plan year [(10) - (9)]	\$(2,737,648)

Exhibit 12

Current Annual Cost and Minimum Required Contribution

The Current Annual Cost is the plan's cost under the minimum funding requirements prior to the recognition of the Full Funding Limitation and any Credit Balance. The Minimum Required Contribution is the amount needed to avoid a Funding Deficiency in the Funding Standard Account. These amounts for the plan year beginning July 1, 2015 are determined below.

1. Charges for plan year	
a. Funding Deficiency as of July 1, 2015	\$4,792,391
b. Normal Cost	781,860
c. Amortization charges (on \$58,186,053)	10,616,445
d. Interest on (a), (b), and (c) to end of plan year	1,011,919
e. Additional Funding Charge	<u>0</u>
f. Total	17,202,615
2. Credits for plan year	
a. Amortization credits (on \$23,793,272)	2,832,877
b. Other credits	0
c. Interest on (a) and (b) to end of plan year	<u>177,055</u>
d. Total	3,009,932
3. Current Annual Cost for plan year	
[(1f) - (2d)]	14,192,683
4. Full Funding Credit for plan year	
a. Full Funding Limitation	61,047,636
b. Full Funding Credit	
[(3) - (4a), but not less than \$0]	0
5. Credit Balance for plan year	
a. Credit Balance as of July 1, 2015	0
b. Interest on (a) to end of plan year	<u>0</u>
c. Total	0
6. Minimum Required Contribution for plan year	
[(3) - (4b) - (5c), but not less than \$0]	\$14,192,683

Exhibit 13

Charges and Credits for Funding Standard Account

The amortization charges and credits for the Funding Standard Account for the plan year beginning July 1, 2015 are determined below.

1. Charges as of July 1, 2015

	Date Established	Description *	Amortization Amount	Remaining Years	Outstanding Balance
a.	July 1, 2000	Combination of bases	\$4,560,950	7.2	\$27,469,936
b.	July 1, 2001	Actuarial loss (1)	173,490	1.0	173,490
c.	July 1, 2002	Actuarial loss (1)	438,175	2.0	850,575
d.	July 1, 2003	Actuarial loss (1)	715,782	3.0	2,023,509
e.	July 1, 2004	Actuarial loss (1)	628,481	4.0	2,300,677
f.	July 1, 2004	Change in assumptions (4)	265,703	19.0	3,089,386
g.	July 1, 2005	Actuarial loss (1)	348,883	5.0	1,550,910
h.	July 1, 2006	Actuarial loss (1)	20,354	6.0	105,516
i.	July 1, 2006	Change in assumptions (4)	68,396	21.0	837,226
j.	July 1, 2008	Change in assumptions (4)	39,929	8.0	260,861
k.	July 1, 2009	Actuarial loss (1)	673,892	9.0	4,817,530
l.	July 1, 2009	Change in assumptions (4)	741,360	9.0	5,299,842
m.	July 1, 2009	Change in cost method (5)	1,572,812	4.0	5,757,591
n.	July 1, 2011	Change in assumptions (4)	47,705	11.0	394,703
o.	July 1, 2015	Change in assumptions (4)	320,533	15.0	3,254,301
p.	Total		10,616,445		58,186,053

2. Credits as of July 1, 2015

	Date Established	Description *	Amortization Amount	Remaining Years	Outstanding Balance
a.	July 1, 2002	Change in assumptions (4)	\$43,644	17.0	\$477,222
b.	July 1, 2003	Plan amendment (3)	77,346	18.0	873,351
c.	July 1, 2007	Actuarial gain (1)	391,543	7.0	2,301,853
d.	July 1, 2007	Change in assumptions (4)	25,210	22.0	315,649
e.	July 1, 2008	Actuarial gain (1)	225,088	8.0	1,470,528
f.	July 1, 2010	Actuarial gain (1)	99,763	10.0	770,994
g.	July 1, 2010	Plan amendment (3)	472,658	10.0	3,652,845
h.	July 1, 2010	Change in assumptions (4)	27,344	10.0	211,325
i.	July 1, 2011	Actuarial gain (1)	64,125	11.0	530,554
j.	July 1, 2012	Actuarial gain (1)	120,617	12.0	1,059,862
k.	July 1, 2012	Change in assumptions (4)	35,940	12.0	315,810
l.	July 1, 2013	Actuarial gain (1)	184,026	13.0	1,705,948
m.	July 1, 2013	Change in assumptions (4)	7,242	13.0	67,135

n.	July 1, 2014	Actuarial gain (1)	253,671	14.0	2,466,903
o.	July 1, 2014	Change in assumptions (4)	392,438	14.0	3,816,387
p.	July 1, 2014	Change in cost method (5)	142,577	9.0	1,019,258
q.	July 1, 2015	Actuarial gain (1)	269,645	15.0	2,737,648
r.	Total		2,832,877		23,793,272
3.	Net outstanding balance [(1p) - (2r)]				34,392,781
4.	Funding Deficiency as of July 1, 2015				4,792,391
5.	Accumulated reconciliation account as of July 1, 2015				
a.	Additional Funding Charges				0
b.	Additional Interest Charges				0
c.	Due to Waived Funding Deficiencies				<u>0</u>
d.	Total [(a) + (b) + (c)]				0
6.	Balance test result [(3) + (4) - (5d)]				39,185,172
7.	Unfunded Actuarial Accrued Liability as of July 1, 2015, minimum \$0				\$39,185,170

* The numbers following the descriptions identify the type of base according to Schedule MB line 7 instructions.

Exhibit 14

Current Liability

In accordance with IRS requirements, the Current Liability has been calculated at 3.34%. The Current Liability as of July 1, 2015 is determined below.

1. Current Liability

	Count	Vested Benefits	All Benefits
a. Participants in pay status	569	\$95,307,862	\$95,307,862
b. Participants with deferred benefits	95	14,619,317	19,827,907
c. Active participants	<u>160</u>	<u>11,609,480</u>	<u>12,026,676</u>
d. Total	824	121,536,659	127,162,445

2. Expected increase in Current Liability for benefit accruals during year	621,995
3. Expected distributions during year	7,612,128
4. Market Value of Assets	\$56,786,143
5. Current Liability Funded Percentage [(4) ÷ (1d)]	44.66%

Exhibit 15

Full Funding Limitation

The Full Funding Limitation for the plan year ending June 30, 2016 and the tax year ending June 30, 2016 is determined below. The bracketed numbers are as of the beginning of the plan year. The other numbers are as of the end of the plan year.

		Minimum Required Contribution	Maximum Deductible Contribution
1. ERISA Actuarial Accrued Liability	6.25%		
a. Actuarial Accrued Liability	[\$94,886,295]	\$100,816,688	\$100,816,688
b. Normal Cost	[781,860]	830,726	830,726
c. Expected distributions	[7,856,255]	8,347,270	8,347,270
d. Subtotal [(a) + (b) - (c)]		93,300,144	93,300,144
2. Current Liability	3.34%		
a. Current Liability	[127,162,445]	131,409,671	131,409,671
b. Normal Cost	[1,097,365]	1,134,017	1,134,017
c. Expected distributions	[7,963,474]	8,229,455	8,229,455
d. Subtotal [(a) + (b) - (c)]		124,314,233	124,314,233
3. Adjusted Plan Assets	6.25%		
a. Actuarial Value of Assets	[55,701,125]	59,182,445	59,182,445
b. Market Value of Assets	[56,786,143]	60,335,277	60,335,277
c. Credit Balance	[0]	0	n/a
d. Undeducted employer contributions	[0]	n/a	0
e. Expected distributions	[7,856,255]	8,347,270	8,347,270
f. ERISA assets [min{(a), (b)} - (c) - (d) - (e)]		50,835,175	50,835,175
g. Current Liability assets [(a) - (d) - (e)]		50,835,175	50,835,175
4. Full Funding Limitation			
a. ERISA [max{(1d) - (3f), \$0}]		42,464,969	42,464,969
b. Current Liability [max{90% × (2d) - (3g), \$0}]		61,047,635	61,047,635
c. Full Funding Limitation [max{(a), (b)}]		\$61,047,635	\$61,047,635

Exhibit 16

Maximum Deductible Contribution under IRC Section 404

The Maximum Deductible Contribution under IRC Section 404 for the tax year beginning July 1, 2015 is determined below.

1. Minimum Required Contribution for plan year beginning July 1, 2015	\$14,192,683
2. Preliminary Maximum Deductible Contribution under IRC Section 404 for tax year	
a. Normal Cost	781,860
b. Amortization payment on ten-year limitation bases	5,070,350
c. Interest to earlier of tax year end or plan year end	<u>365,763</u>
d. Total	6,217,973
3. Full Funding Limitation for tax year	61,047,635
4. Unfunded 140% of Current Liability as of June 30, 2016	
a. Current Liability (for IRC Section 404 purposes) projected to end of year	124,314,233
b. Actuarial Value of Assets (for IRC Section 404 purposes) projected to end of year	50,835,175
c. Unfunded 140% of Current Liability [140% × (a) - (b), but not less than \$0]	123,204,751
5. Maximum Deductible Contribution under IRC Section 404 for tax year [greater of (1) and (2d), but not more than (3), nor less than (4c)]	\$123,204,751

There are alternative calculations of the Maximum Deductible Contribution under IRC Section 404 that may produce a different amount than illustrated above. Additionally, deductibility of contributions to a defined contribution plan maintained for the same employees may be affected by the 25% of pay limitation for defined benefit and defined contribution plans combined. Please consult your tax advisors regarding the deductibility of cash contributions.

Exhibit 17

Charges and Credits for Maximum Deductible Contribution

The ten-year limitation bases for the preliminary Maximum Deductible Contribution as of July 1, 2015 are determined below.

1. Ten-year limitation bases

	Date Established	Amortization Amount	Remaining Years	Outstanding Balance
a.	July 1, 2015	\$5,070,350	10.0	\$39,185,170
b.	Total	5,070,350		39,185,170
2.	Net outstanding balance			39,185,170
3.	Undeducted employer contributions			0
4.	Balance test [(2) - (3)]			39,185,170
5.	Unfunded Actuarial Accrued Liability as of July 1, 2015			\$39,185,170

Exhibit 18

Present Value of Accumulated Plan Benefits

Accumulated Plan Benefits are benefits earned to date, based on pay history and service rendered to date, expected to be paid in the future to retired, terminated vested, and active participants, and beneficiaries of active or former participants. The Present Value of Accumulated Plan Benefits (determined on a plan continuation basis in accordance with FASB ASC Topic 960) as of July 1, 2014 and July 1, 2015 is shown below.

	7/1/2014	7/1/2015
1. Present Value of vested Accumulated Plan Benefits		
a. Retired participants	\$67,482,384	\$67,187,293
b. Disabled participants	1,906,050	2,289,965
c. Beneficiaries	5,772,517	6,000,818
d. Terminated vested participants	7,823,054	9,116,215
e. Active participants	<u>6,984,694</u>	<u>6,757,848</u>
f. Total	89,968,699	91,352,139
2. Present Value of non-vested Accumulated Plan Benefits	3,876,081	3,534,156
3. Present Value of all Accumulated Plan Benefits [(1f) + (2)]	93,844,780	94,886,295
4. Market Value of Assets	61,268,718	56,786,143
5. Funded percentage on Market Value of Assets		
a. Vested benefits [(4) ÷ (1f)]	68.10%	62.16%
b. All benefits [(4) ÷ (3)]	65.29%	59.85%
6. Actuarial Value of Assets	\$55,193,938	\$55,701,125
7. Funded percentage on Actuarial Value of Assets		
a. Vested benefits [(6) ÷ (1f)]	61.35%	60.97%
b. All benefits [(6) ÷ (3)]	58.81%	58.70%

Exhibit 19**Change in Present Value of Accumulated Plan Benefits**

The change in the Present Value of Accumulated Plan Benefits (determined on a plan continuation basis in accordance with FASB ASC Topic 960) from July 1, 2014 to July 1, 2015 is shown below.

1. Present Value of all Accumulated Plan Benefits as of July 1, 2014	\$93,844,780
2. Changes	
a. Reduction in discount period	5,629,712
b. Benefits accumulated	320,729
c. Benefit payments	7,654,800
d. Plan amendments	0
e. Change in assumptions	3,254,301
f. Actuarial (gain) / loss	(508,427)
g. Total	
[(a) + (b) - (c) + (d) + (e) + (f)]	1,041,515
3. Present Value of all Accumulated Plan Benefits as of July 1, 2015	
[(1) + (2g)]	\$94,886,295

Exhibit 20

Unfunded Vested Benefit Liability for Withdrawal Liability Calculations

Withdrawal liability payments are based on unfunded vested benefit liability. Vested benefit liability is the present value of benefits earned to date, excluding benefits for non-vested participants and certain benefits such as death and disability benefits which are not considered vested. These liabilities have been determined as of June 30, 2014 and June 30, 2015. However, if there is a termination by mass withdrawal during the year, a separate calculation would have to be performed.

	6/30/2014	6/30/2015
1. Present value of vested accumulated plan benefits		
a. Retired participants	\$67,482,384	\$67,187,293
b. Disabled participants	1,906,050	2,289,965
c. Beneficiaries	5,772,517	6,000,818
d. Terminated vested participants	7,823,054	9,116,215
e. Active participants	<u>6,984,694</u>	<u>6,757,848</u>
f. Total vested benefits	89,968,699	91,352,139
2. Additional Vested Benefit Liability for Unamortized Benefit Reductions	<u>1,850,336</u>	<u>1,728,363</u>
3. Total Vested Benefit Liability	91,819,035	93,080,502
4. Market Value of Assets	61,268,718	56,786,143
5. Funded ratio [(4) ÷ (3)]	66.73%	61.01%
6. Unfunded Vested Benefit Liability [(3) - (4), but not less than \$0]	\$30,550,317	\$36,294,359