

United Furniture Workers Pension Fund

Actuarial Valuation Report as of March 1, 2016

Produced by Cheiron

January 2017

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January 18, 2017

Board of Trustees c/o Ms. Dee Anne Walker, Secretary-Treasurer/Director United Furniture Workers Pension Fund A 1910 Air Lane Drive Nashville, Tennessee 37210

Dear Trustees:

At your request, we have performed the March 1, 2016 Actuarial Valuation of the United Furniture Workers Pension Fund A (the "Plan"). The purpose of this report is to present information on the Plan's assets and liabilities and also discloses contribution levels, including the minimum required amount as mandated by Federal law. This report is for the use of the Plan and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

In the Foreword we refer to the general approach employed in the preparation of this report. The Summary section discusses the longterm funded status and emerging issues facing the Trustees. We also comment on the sources and reliability of both the data and the actuarial assumptions. The results of this report are only applicable to the 2016 Plan Year and rely on future Plan experience conforming to the underlying assumptions. Future valuation results may differ significantly from the results presented in this report due to such factors as the following: Plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in Plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Board of Trustees United Furniture Workers Pension Plan A January 18, 2017

This report was prepared exclusively for the Plan for the purposes described herein. Other users of this valuation report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely, Cheiron

Redacted by the U.S. Department of the Treasury

Christian E. Benjaminson, FSA, EA, MAAA Principal Consulting Actuary Redacted by the U.S. Department of the Treasury

Principal Consulting Actuary



FOREWORD

Cheiron has performed the Actuarial Valuation of the United Furniture Workers Pension Fund A as of March 1, 2016. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the Plan;
- 2) **Provide specific information** and documentation required by the Federal Government and the auditors of the Plan; and
- 3) **Review past and expected trends** in the financial condition of the Plan.

An actuarial valuation establishes and analyzes Plan assets, liabilities and contributions on a consistent basis, and traces their progress from one year to the next. It includes measurement of the Plan's investment performance as well as an analysis of Actuarial Liability gains and losses. This valuation report is organized as follows:

Section I – Summary presents a summary of the key valuation results, general comments about the results, and a review of historical trends and projection scenarios.

Section II – **Assets** contains exhibits relating to the valuation of assets.

Section III – Liabilities shows the various measures of liabilities.

Section IV – **Contributions** shows the development of the minimum and maximum contributions.

Section V – Unfunded Vested Benefits (UVB) shows the development of the UVB as of March 1, 2016 that would be allocated to employers that withdraw before February 28, 2017.

Section VI – FASB ASC Topic #960 Disclosure provides information required by the Plan's auditor.

Finally, the appendices at the end of this report contain a summary of the Plan's membership at the valuation date, a summary of the major provisions of the Plan, and the actuarial methods and assumptions used in the valuation.

In preparing our report, we relied on information (some oral and some written) supplied by the Fund Office and Joseph Warren & Co, a division of Rogoff & Company P.C. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23.

The actuarial assumptions, taken individually, reflect our understanding and best estimate of the likely future experience of the Plan. The results in this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the Plan could vary from our results.

Finally, in preparing this report, we have conformed to generally accepted actuarial principles and practices which are consistent with the Code of Professional Conduct, and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board.

This valuation was prepared using census data and financial information as of March 1, 2016. Events following that date are not, and should not be, reflected in this report. The next valuation will reflect all membership and investment experience changes through February 28, 2017.



SECTION I -SUMMARY

The table below sets out the principal results of this year's valuation and compares them to last year's results.

Table 1-4 Summary of Principal Results								
Participant Counts Actives Terminated Vesteds In Pay Status Total		3/1/2015 1,029 3,471 <u>5,563</u> 10,063		3/1/2016 1,076 3,323 <u>5,497</u> 9,896	% Change 4,6 % (4.3)% (1.2)% (1.7)%			
Financial Information Market Value of Assets Actuarial Value of Assets	\$	70,887,468 69,965,653	\$	55,263,192 59,571,556	(22.0)% (14.9)%			
Present Value of Future Benefits	\$	187,800,158	\$	186,904,934	(0.5)%			
Actuarial / PPA Liability Surplus / (Unfunded) based on Actuarial Value of Assets Funded Ratio based on Actuarial Value of Assets Funded Ratio based on Market Value of Assets	\$ \$	181,564,343 (111,598,690) 38,5% 39.0%	\$	180,326,943 (120,755,387) 33.0% 30.6%	(0.7)% 8.2 %			
Present Value of Vested Benefits for Withdrawal Liability Surplus / (Unfunded) based on Market Value of Assets	5	189,927,695 (121,540,178)	5 5	188,527,070 (133,263,878)	(0.7)% 9.6 %			
Gain / (Loss), Minimum Funding, and Cash Flows Actuarial Asset Gain / (Loss) Liability Gain / (Loss)	\$	1,357,542 (1,125,905)	5	(1,596,480) 379,824				
Total Normal Cost (Unit Credit plus Admin. Expenses) ERISA Minimum Funding before Funding Deficiency ERISA Funding Deficiency (Beginning of Year)	\$	2,064,551 18,183,029 29,886,971	\$	2,243,933 17,173,241 48,290,593	8,7 % (5,6)% 61.6 %			
Prior Year Contributions (net from all sources) Prior Year Benefit Payments Prior Year Administrative Expenses Prior Year Total Investment Income (net of expenses)	5	3,958,319 13,604,248 1,198,244 4,506,559	5	4,276,739 13,603,642 1,372,735 (2,426,887)	8.0 % (0.0)% 14.6 %			



SECTION I – SUMMARY

Following is an analysis of the Plan's results for the prior year followed by historical results for the last ten years. After that, a projection of future results is shown.

Prior Year Results

Investment and liability experience and their effect on future costs traditionally have been the focus of year to year analyses.

- The Market Value of Assets returned -3.77% for the Plan Year ending February 29, 2016. For long-term planning the Plan applies a smoothing method to develop an Actuarial Value of Assets which phases in actuarial investment gains and losses over five years. On this basis the Actuarial Value of Assets returned 4.11%. Comparing this return to the prior year's long-term investment assumption of 6.75% results in an actuarial asset loss of \$1.60 million.
- The Plan experienced a liability gain totaling \$0.38 million. Combined with the actuarial investment loss of \$1.60 million, the Plan had a net actuarial experience loss of \$1.22 million.
- The funded ratio (Actuarial Value of Assets as a percentage of Actuarial Liability) decreased from 38.5% to 33.0%. Based on Market Value of Assets, the funded ratio decreased from 39.0% to 30.6%. The decline in the funded ratios is mainly due to the investment loss and significant negative cash flow.

The Pension Protection Act of 2006 (PPA) added a significant layer of new considerations for the Plan.

- The Plan was certified as "Critical and Declining" status under the Pension Protection Act (PPA) as amended by the Multiemployer Pension Reform Act of 2014 (MPRA) for the 2016 Plan Year because of the current Funding Deficiency and is projected insolvent within the next 19 years. The PPA status is re-determined annually.
- A Rehabilitation Plan was prepared in December 2008 modifying adjustable benefits and requiring annual contribution increases of 5.5% beginning March 1, 2009. This Rehabilitation Plan is based on the reasonable measures (exhaustion) method and is annually monitored.
- The funded ratio is an important measure that is used in determining the PPA zone, which as noted, has declined over the past year.
- The period of time until a Funding Deficiency occurs is usually an important measure that is used for PPA testing. The Plan already has a Funding Deficiency which increased from \$29.9 million as of March 1, 2015 to \$48.3 million as of March 1, 2016 and is projected to grow. However, under PPA there is no excise tax due as long as the Plan has a valid Rehabilitation Plan.
- Effective with this valuation only current year contributions are being applied for Minimum Funding. As a result, the contributions shown in this report reflect a partial year (actual contributions for the year ending 2/29/2016 less the amount already reflected on the 2015 Form 5500).



SECTION I – SUMMARY

In addition, please note that:

- Active membership increased by 4.6% over last year reversing a trend of active membership declines. In fact, this is only the second time in the last 15 years when the active membership increased.
- The Plan received \$4.28 million in contributions (including Withdrawal Liability payments of \$0.49 million) and paid \$14.98 million in benefits and expenses for the year ending February 29, 2016. Comparing these two amounts shows a negative net cash flow of \$10.70 million, which means the Plan is currently using invested assets to pay for benefits and expenses not covered by contributions.
- The Plan assesses Withdrawal Liability based on a 6.25% interest rate assumption which is 0.5% less than the discount rate assumption used for funding. The Unfunded Vested Benefits increased from \$121.5 million as of March 1, 2015 to \$133.3 million as of March 1, 2016.

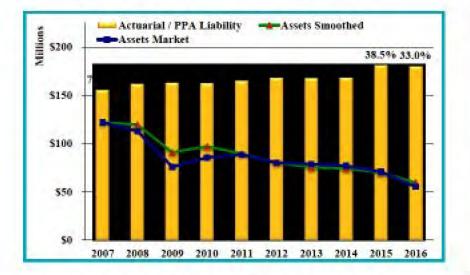
Historical Review:

We think it is important to take a step back from the current year's results and view them in the context of the Plan's recent history. On the next few pages, we present a series of graphs which display key valuation results for the last ten years.



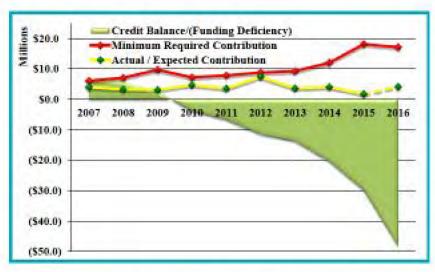
SECTION I -SUMMARY

Assets & Liabilities: The following graph compares historical assets and liabilities. The bars represent the Actuarial Liability (the value of benefits already earned) and the two lines represent the Actuarial Value of Assets and Market Value of Assets. The percentages shown are the funded ratios (Actuarial Value of Assets as a percent of the Actuarial Liability).



- The funded ratio has decreased over the period shown due to assumption changes and actuarial losses on investments and liabilities.
- The five-year average compounded investment return is on the Market Value and 8.61% on the Actuarial Value; as compared to the long-term 6.75% assumption.

<u>Minimum Funding</u>: The next graph shows the Credit Balance (green area) which represents accumulated contributions in excess of the Minimum Required Contribution (red line), and the actual contributions (yellow line). The Credit Balance decreases whenever the red line is more than the yellow line. A Funding Deficiency occurs when the Credit Balance becomes negative.

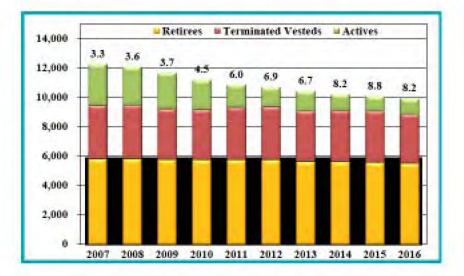


- Contributions have been less than the Minimum Required Contribution for the entire nine year period shown.
- A Funding Deficiency occurred at the end of the 2009 Plan Year and has grown every year since. However, under the PPA there is no excise tax due as long as the Plan has a valid Rehabilitation Plan.



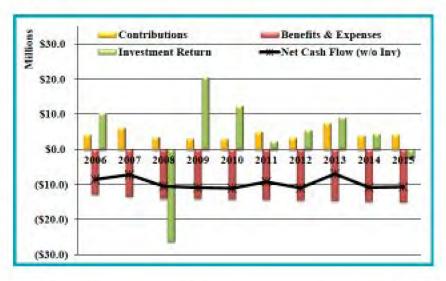
SECTION I -SUMMARY

<u>Participation:</u> The following graph shows the Plan participants at successive valuations. The numbers above each bar represents the support ratio; the number of inactive participants (retirees and terminated vested) to active participants.



- The support ratio has more than doubled over this nine-year period. However, the ratio did decrease from 8.8 to 8.2 during the past year as a result of an increase in the Plan's active participants.
- The active population has declined steadily over the period shown, with an average annual decline of 10.1% per year during the nine-year period shown and 7.5% per year for the prior three years. However, over the past year the active population increased 4.6%.

<u>Cash Flow:</u> Plan net cash flow (contributions less benefits and expenses) is a critical measure, as it reflects the ability to have funds available to meet benefit payments without having to make difficult investment decisions, especially during volatile markets.



- The Plan's net cash flow has averaged negative \$9.7 million per year for the period shown, which represents almost 18% of the current Market Value of Assets.
- Negative cash flow is expected for a mature plan such as this one. The implications of a plan in negative cash flow are that the impact of market fluctuations can be more severe. This is because as assets are being depleted to pay benefits in down markets, there is less principal that is available to be reinvested during favorable return periods.



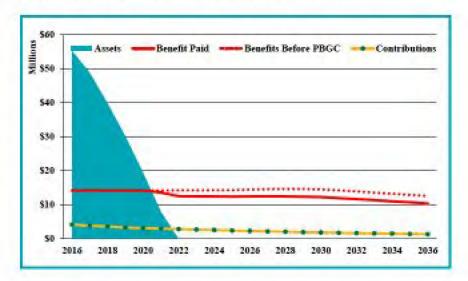
SECTION I -SUMMARY

Future Outlook:

In this section, we move away from viewing a single year's results or historical trends and focus on the future of the Plan. The following graph provides a projection of the Plan's assets, contributions, and benefit payments over the next 20 years.

This projection scenario assumes the assets earn exactly 6.75% each year on their market value, including the current Plan Year, and all other assumptions are met. We also factor in the current Rehabilitation Plan with annual 5.5% contribution increases and the Trustees' industry assumption of 10% annual membership declines.

Under this scenario, the Plan is projected to be insolvent shortly after December 1, 2021. This is a few months earlier than last year's projection which had the insolvency date around March 1, 2022. The impact is mainly due to the investment returns and negative cash flow. Upon insolvency the benefit payments would drop to the PBGC guarantee level and the PBGC would provide financial assistance to the Plan. The drop in benefit payments is illustrated in the graph; the solid red line represents the benefit actually paid which are cut to the PBGC guarantee at the point of insolvency. The dotted red line represents the benefit payments prior to reduction to the PBGC guarantee.





SECTION II – ASSETS

Assets at Market Value:

Market values represent "snap-shot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next.

Table II - Statement of Assets at Mar	Value, Mar	ch	1
Assets	2015		2016
Short Term Obligations	\$ 264,333	\$	242,895
Common Stocks	5,234,786		3,199,259
Intech Institutional Large Cap Growth Fund	5,772,886		0
Fidelity Growth International Fund	5,083,707		0
Fidelity Emerging Markets Fund	582,499		0
Rothchild SMID Fund	4,564,317		3,218,540
Pimco Bond Fund	6,421,005		4,133,425
BPIF Non-Taxable LP	8,231,939		8,202,128
State Street Global - MSCI	3,032,140		4,282,529
Wellington Global Total Return Fund	3,272,743		2,157,366
JPMCB Strategic Property Fund	8,828,137		8,369,863
State Street Global - Daily	3,235,289		4,941,275
Robeco BP - All Cap Value Fund	5,215,651		3,616,237
Loomis Sayles Credit Long/Short	5,901,800		6,390,235
Investment in UFW Building Corporation	1,260,000		1,350,000
Vanguard Growth Index Fund Admiral	0		3,837,697
Cash	1,292,443		1,089,377
Property & equipment	28,701		23,336
Receivables			
Employer Contributions	\$ 2,827,951	\$	324,000
Accrued Interest & Dividends	13,475		10,004
Liabilities			
Accrued Expenses and payroll taxes	\$ (176,334)	\$	(124,974)
Total Market Value	\$ 70,887,468	\$	55,263,192

Assets at Actuarial Value:

For long-term planning, actuaries commonly use smoothing techniques to mitigate the short-term volatility exhibited by the capital markets. The Plan currently phases in investment gains and losses over five years. The Actuarial Value of Assets is also constrained so that it cannot exceed 120% of the Market Value and cannot be less than 80% of the Market Value. The table below shows the development of the Actuarial Value of Assets.

Dev	Table II - 2 Development of Actuarial Value of Assets as of March 1, 2016							
Market Va	alue of	Assets as of Ma	arch 1, 2016		\$	55,263,192		
Plan <u>Year</u>		Investment uns / (Losses)	Percent <u>Recognized</u>	Percent Deferred		Amount Deferred		
2011 2012 2013 2014 2015 Total Preliminary	\$ 7 Actus	(3,803,566) (4,321) 3,791,415 (738,241) (6,726,401) arial value as of M	100% 80% 60% 40% 20%	0% 20% 40% 60% 80%	\$ \$ \$	$0 \\ (864) \\ 1,516,566 \\ (442,945) \\ (5,381,121) \\ (4,308,364) \\ 59,571,556$		
Corridor for Actuarial Value 80% of Market Value 120% of Market Value					\$ \$ \$	44,210,554 66,315,830 59,571,556 107.8%		



SECTION II -ASSETS

Changes in Market Value:

The components of change in market value are:

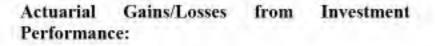
- Contributions
- Benefit payments
- Expenses
- Investment income (realized and unrealized)

The specific changes since the prior valuation are presented below:

Table II – 3 Changes in Market Values						
Total Value of Assets — March 1, 2015	\$	70,887,468				
Contributions	s	1.776,788				
Investment Return (Net)		(2,426,887)				
Benefit Payments		(13,603,642)				
Other Income / Adjustments		2,200				
Administrative Expenses	-	(1.372.735)				
Total Value of Assets — March 1, 2016	5	55,263,192				

Market Value for valuation purposes was determined as follows:

Table II - 4 Reconciliation with Market Value from Fi	nancial	Statement
	M	arch 1, 2016
Market Value of Assets on Financial Statement	\$	55,798,192
Additional Employer Contributions	s	Ő
Withdrawal Liability Payments Receivable		(535,000)
Net	-	(535,000)
Market Value of Assets for Valuation Purposes	s	55,263,192



The following table calculates the actuarial gain/loss and the return for the Plan Year on both a Market Value and Actuarial Value basis. Because the Actuarial Value of Assets is used to establish the Minimum Required Contribution and the Internal Revenue Code limits and contribution requirements, the actuarial gain/loss on the Actuarial Value of Assets most directly impacts the valuation results.

Table Asset Ga		5 Loss)		
A CONTRACTOR OF	1	Market Value	Ac	marial Value
March 1, 2015 Value	s	70,887,468	s	69,965,653
Contributions		1,776,788		1,776,788
Benefit Payments		(13,603,642)		(13,603,642)
Administrative Expenses		(1,372,735)		(1,175,000) *
Expected Investment Earnings (6.75%)		4,299,514		4,204,237
Other		2,200		N/A
Expected Value on February 29, 2016	S	61,989,593	\$	61,168,036
Investment Gam / (Lose)		(6.726.401)		(1,596,480)
March 1, 2016 Value	S	55,263,192	S	59,571,556
Return		-3.77%		4.11%

*Assumed Expenses, payable beginning of year

In this section, we present detailed information on the Plan's liabilities including:

- Disclosure of Plan liabilities at March 1, 2015 and March 1, 2016;
- Statement of changes in these liabilities during the year, and
- Development of the actuarial liability gain/loss during the year.



SECTION III – LIABILITIES

Disclosure:

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which they are being used. Note that these liabilities are not appropriate for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for analyzing the financial outlook of the Plan, this represents the amount of money needed today to fully pay off all future benefits assuming participants continue to accrue benefits.
- Actuarial Liabilities: Used in determining Minimum Funding Requirements, maximum tax deductible contributions, and long-term funding targets. These liabilities represent the total amount of money needed to fully pay off all obligations of the Plan using funding assumptions and assuming no further accrual of benefits. For this Plan, the Trustee's chose the Unit Credit Cost Method to determine this liability.

- Accrued Liabilities: These liabilities are also required for determining PPA funded status and for accounting disclosures (ASC Topic No. 960). For that purpose, they are referred to as the Present Value of Accumulated Benefits. They can also be used to establish comparative benchmarks with other plans. These liabilities are determined using the Unit Credit Cost Method, and therefore for this Plan will equal the Actuarial Liabilities.
- Vested Liabilities: Required for accounting purposes, this liability represents the portion of the Accrued Liabilities which are vested.
- **Current Liabilities:** Used for Federal Government compliance purposes, the calculation of this liability is defined by the Internal Revenue Code and regulations and is used to determine maximum allowable tax deductible contributions.

The table on the following page discloses most of these liabilities for the current and prior valuation. With respect to each disclosure, a subtraction of the appropriate value of Plan assets yields an **unfunded liability** for each respective type.



SECTION III – LIABILITIES

Table III - 1 Liabilities/Net Surplus (Unfunded)								
FUNDING DISCOUNT RATE ASSUMPTION		3/1/2015 6.75%		3/1/2016 6.75%				
ACTUARIAL / PPA LIABILITY								
Actuarial / PPA Liability	\$	181,564,343	\$	180,326,943				
Actuarial Value of Assets		69,965,653		59,571,556				
Net Surplus (Unfunded)	\$	(111,598,690)	\$	(120,755,387)				
VESTED LIABILITY								
Actuarial / PPA Liability	\$	181,564,343	\$	180,326,943				
Less Present Value of Non-Vested Benefits		505,890		466,640				
Vested Liability	\$	181,058,453	\$	179,860,303				
Market Value of Assets		70,887,468		55,263,192				
Net Surplus (Unfunded)	\$	(110,170,985)	\$	(124,597,111)				
RPA DISCOUNT RATE		3.44%		3.25%				
CURRENT LIABILITY (RPA 1994)	\$	290,549,936	\$	293,946,648				
Market Value of Assets		70,887,468		55,263,192				
Net Surplus (Unfunded)	\$	(219,662,468)	\$	(238,683,456)				



SECTION III – LIABILITIES

Allocation of Liabilities by Type:

The Plan participants may qualify for a benefit upon death, termination, and disability as well as upon retirement. The value of the liabilities arising from each of these sources is shown in the following table:

Table III - 2 Allocation of Liabilities by Type March 1, 2016										
Benefit Type	1	Retirement]	Fermination	_	Death		Disability	_	Total
Unit Credit Normal Cost	\$	781,472	\$	126,755	\$	19,917	\$	30,789	\$	958,933
Actuarial / PPA Liability										
Actives	\$	24,036,360	\$	2,260,244	\$	561,787	\$	657,421	\$	27,515,812
Terminated Vesteds		0		43,715,200		0		0		43,715,200
Retirees and Beneficiaries		89,548,197		0		7,409,961		12,137,773		109,095,931
Total	\$	113,584,557	\$	45,975,444	\$	7,971,748	\$	12,795,194	\$	180,326,943
RPA Current Liability Normal Cost	\$	1,516,951	\$	424,719	\$	15,409	\$	62,466	\$	2,019,545
RPA Current Liability										
Actives	\$	43,749,962	\$	6,657,801	\$	400,379	\$	1,261,392	\$	52,069,534
Terminated Vesteds		0		87,964,284		0		0		87,964,284
Retirees and Beneficiaries		124,106,685		0		10,069,791		19,736,354		153,912,830
Total	\$	167,856,647	\$	94,622,085	\$	10,470,170	\$	20,997,746	\$	293,946,648
Vested RPA Current Liability										
Actives	\$	33,092,110	\$	16,900,667	\$	396,156	\$	1,233,370	\$	51,622,303
Terminated Vesteds		0		87,964,284		0		0		87,964,284
Retirees and Beneficiaries		124,106,685		0		10,069,791		19,736,354		153,912,830
Total	\$	157,198,795	\$	104,864,951	\$	10,465,947	\$	20,969,724	\$	293,499,417



SECTION III – LIABILITIES

Changes in Liabilities:

The Actuarial Liability shown in the preceding table changes at successive valuations based on the experience of the Plan. The liability may change for any of several reasons, including:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments
- Interest on Actuarial Liability
- Benefits paid to retirees and beneficiaries
- Participants leaving employment at rates different than expected
- Changes in actuarial assumptions
- Changes in actuarial methods

The following table shows the change in the Actuarial Liability measure since the last valuation. There were no changes to assumptions, methods, or Plan provisions since last year.

Table III - 3Actuarial (PPA) Liability							
Liabilities 3/1/2015	\$	181,564,343					
Liabilities 3/1/2016		180,326,943					
Liability Increase (Decrease)		(1,237,400)					
Change due to:							
Plan Amendment	\$	0					
Assumption Change		0					
Accrual of Benefits		889,551					
Actual Benefits		(13,603,642)					
Passage of Time		11,856,515					
Other Sources		0					
Actuarial (Gain)/Loss		(379,824)					



SECTION IV – CONTRIBUTIONS

In this section, we present detailed information on the Plan's contributions from two perspectives:

- **Minimum Required Contributions**, based on the Unit Credit Cost Method; and
- **Government Limitations** which could affect the above.

Minimum Required Contributions:

For the Plan, the funding method used is the Unit Credit Cost Method. The Minimum Required Contribution is determined in two parts.

The first part is the Unit Credit Normal Cost. This is the cost for the benefits expected to be earned in the current year for each active participant. The Normal Cost includes a provision for Plan administrative expenses.

The second part is an amortization payment to pay off the Unfunded Actuarial Liability. The Unfunded Actuarial Liability is the difference between the Actuarial Value of Assets at the valuation date and the Actuarial Liability determined by the actuarial cost method. The amortization payment is determined using the amortization schedule required by the minimum funding rules in the Internal Revenue Code.

Government Limitations:

ERISA and the Internal Revenue Code place various limits on the contributions made to qualified pension plans. The limits impact the minimum that must be paid, the maximum that can be deducted, and the timing of contributions. To ensure that Minimum Required Contributions are met, pension plans are required to retain an Enrolled Actuary to complete Schedule MB to Form 5500 on an annual basis. In the past, bargained contributions exceeded the Minimum Required Contribution and the Plan built up a Credit Balance. The Credit Balance can be used in the future to make up the difference between the Minimum Required Contribution and the bargained contribution. However, for the past several years the Plan has exhausted the Credit Balance and has a Funding Deficiency (i.e. a negative Credit Balance) for the current Plan Year.

The Minimum Required Contribution for 2016 is shown below compared to the Government Limitations and the estimated employer contributions. The table also shows the per capita Minimum Required Contribution and contribution.

Table IV - 1					
Contributions for 2016					
Minimum Required Contribution					
Unit Credit Normal Cost (with Expenses)	\$	2,243,933			
Amortization Payment		13,843,412			
Interest to End of Year		1,085,896			
Total	\$	17,173,241			
Government Limitations					
Maximum Deductible Contribution	\$	360,093,849			
Minimum Contribution (before Funding Deficiency)		17,173,241			
Funding Deficiency with Interest		51,550,208			
Estimated Employer Contributions with Interest	\$	4,339,435			
Count of Active Participants		1,076			
Per Capita Minimum Required Contribution	\$	15,960			
Per Capita Contribution	\$	4,033			



SECTION IV - CONTRIBUTIONS

The tables on the following pages show the IRS Funding Standard Account, as well as the development of the minimum and maximum contributions for the 2016 Plan Year.

Table IV - 2 Funding Standard Account for Pla	n 1	ears Ending	
the state of the s		2/29/2016	2/28/2017
1. Charges for Plan Year			
 Prior Year Funding Deficiency 	S	29,886,971	\$ 48,290,593
 b. Normal Cost with Expenses 		2,064,551	2,243,933
c. Amortization Charges		17,562,499	16,437,180
d. Interest on a., b., and c. to Year End		3,342,196	4,520,590
e. Additional Funding Charge		N/A	N/A
f. Interest Charge due to Late Quarterly Contributions		N/A	N/A
g. Total Charges	\$	52,856,217	\$ 71,492,296
2. Credits for Plan Year			
a. Prior Year Credit Balance	\$	0	\$ 0
b. Contributions for Minimum Funding (actual / expected)		1,776,788 *	4,200,000
c. Amortization Credits		2,593,768	2,593,768
d. Interest on a., b., and c. to Year End		195,068	316,829
e. Full Funding Limit Credit		0	0
f. Total Credits	\$	4,565,624	\$ 7,110,597
3. Credit Balance / (Funding Deficiency) at End of Year [2 1.]	s	(48,290,593)	\$ (64,381,699)

* Effective with this valuation only current year contributions are being applied for Minimum Funding. As a result, the contributions shown in this report reflect a partial year (actual contributions for the year ending 2/29/2016 less the amount already reflected on the 2015 Form 5500).



Table IV - 3 Calculation of the Maximum Deductible Contribution For the Plan Year Beginning March 1, 2016										
1. "Fresh Start" Method										
a. Unit Credit Normal Cost with Expenses	\$	2,243,933								
b. Net Charge to Amortize Unfunded Actuarial Liability Over 10 Years		15,920,098								
c. Interest on a. and b. to Year End		1,226,072								
d. Total		19,390,103								
e. Minimum Required Contribution at Year End		68,723,449								
f. Larger of d. and e.		68,723,449								
g. Full Funding Limit		214,483,580								
h. Preliminary Maximum Deductible Contribution [lesser of f. and g.]	\$	68,723,449								
2. 140% of Current Liability Calculation										
a. RPA 1994 Current Liability at Start of Year	\$	293,946,648								
b. Present Value of Benefits Estimated to Accrue during Year		2,019,545								
c. Expected Benefit Payments		14,136,672								
d. Net Interest on a., b. and c. at Current Liability Interest Rate (3.25%)		9,391,017								
e. Expected Current Liability at End of Year $[a. + b c. + d.]$		291,220,538								
f. 140% of e.		407,708,753								
g. Actuarial Value of Assets		59,571,556								
h. Expected Expenses		1,285,000								
i. Net Interest on c., g., and h. at Valuation Interest Rate (6.75%)		3,465,020								
j. Estimated Value of Assets $[g c h. + i.]$		47,614,904								
k. Unfunded Current Liability at Year End $[f j.]$, not less than \$0	\$	360,093,849								
3. Maximum Deductible Contribution at Year End, greater of 1.h. and 2.k.	\$	360,093,849								



Table IV - 4Development of Actuarial Gain / (Loss)For the Year Ended February 29, 2016	
1. Unfunded Actuarial Liability at Start of Year (not less than zero)	\$ 111,598,690
2. Normal Cost and Expenses at Start of Year	2,064,551
3. Interest on 1. and 2. to End of Year	7,672,267
4. Contributions for Prior Year	1,776,788
5. Interest on 4. to End of Year	19,989
6. Change in Unfunded Actuarial Liability Due to Changes in Methods	0
7. Change in Unfunded Actuarial Liability Due to Changes in Assumptions	0
8. Change in Unfunded Actuarial Liability Due to Changes in Plan Design	0
9. Expected Unfunded Actuarial Liability at End of Year [1. + 2. + 3 4 5. + 6. + 7. + 8.]	\$ 119,538,731
10. Actual Unfunded Actuarial Liability at End of Year (not less than zero)	120,755,387
11. Actuarial Gain / (Loss) [9. – 10.]	\$ (1,216,656)
12. Amortization Factor for Actuarial Gain / (Loss)	9.8781
13. Amortization Credit / (Charge) for Actuarial Gain / (Loss)	\$ (123,167)



		Table	IV - 5			
Sch	edule of Amortizat	-		Required Contri	bution	
		as of Mar	ch 1, 2016			
			Initial	3/1/2016	Remaining	Beg of Yr
	Date	Initial	Amortization	Outstanding	Amortization	
Type of Base	Established	Amount	Years	Balance	Years	Amount
CHARGES						
1. Initial Unfunded	3/1/1978	\$ 16,575,006	40	\$ 2,283,728	2	\$ 1,179,144
2. Plan Amendment	3/1/1989	63,848	30	13,711	3	4,872
3. Method Change	3/1/1989	15,842,844	30	3,402,580	3	1,209,031
4. Plan Amendment	3/1/1993	5,282,693	30	2,326,287	7	400,839
5. Actuarial Loss	3/1/2000	7,511,951	30	5,348,203	14	564,313
6. Actuarial Loss	3/1/2002	13,842,899	15	1,442,045	1	1,442,045
7. Actuarial Loss	3/1/2003	22,582,575	15	4,656,058	2	2,404,035
8. Actuarial Loss	3/1/2005	3,018,172	15	1,138,102	4	312,980
9. Actuarial Loss	3/1/2006	2,642,095	15	1,205,401	5	273,556
10. Assumption Change	3/1/2007	8,194,633	30	7,211,734	21	611,008
11. Actuarial Loss	3/1/2007	2,180,614	15	1,156,093	6	225,456
12. Actuarial Loss	3/1/2008	15,092,752	15	9,029,954	7	1,555,936
13. Actuarial Loss	3/1/2009	28,127,155	15	18,611,327	8	2,891,493
14. Actuarial Loss	3/1/2011	7,919,489	15	6,141,864	10	809,729
15. Assumption Change	3/1/2012	2,075,229	15	1,715,374	11	211,632
16. Actuarial Loss	3/1/2012	6,035,275	15	4,988,732	11	615,477
17. Actuarial Loss	3/1/2013	3,242,769	15	2,834,511	12	329,865
18. Assumption Change	3/1/2015	12,570,893	15	12,060,926	14	1,272,602
19. Actuarial Loss	3/1/2016	1,216,656	15	<u>1,216,656</u>	15	123,167
TOTAL CHARGES				\$ 86,783,286		\$ 16,437,180



Table IV - 6 Schedule of Amortizations Required for Minimum Required Contribution as of March 1, 2016											
Type of Base	Date Established		Initial Amount	Initial Amortization Years	c	3/1/2016 Jutstanding Balance	Remaining Amortization Years		Beg of Yr mortization Amount		
CREDITS											
1. Funding Method Change	3/1/2008	s	6,945,571	10	\$	1,810,897	2	s	935,010		
2. Plan Amendment	3/1/2009		590,517	15		390,735	2 8		60,705		
3. Actuarial Gain	3/1/2010		11,371,471	15		8,195,000	9		1,165,787		
4. Actuarial Gain	3/1/2014		4,028,752	15		3,699,620	13		408,816		
5. Actuarial Gain	3/1/2015		231,637	15		222,240	14	-	23,450		
TOTAL CREDITS					\$	14,318,492		\$	2,593,768		
NET CHARGE					\$	72,464,794		\$	13,843,412		



Table IV - 7Accumulated Reconciliation Account and Balance Testas of March 1, 2016	
1. Amount due to Additional Interest Charges in prior years	\$ 0
2. Amount due to Additional Funding Charges in prior years	 NA
3. Reconciliation Account at Start of Year [1. + 2.]	\$ 0
4. Net Outstanding Amortization Bases	\$ 72,464,794
5. Funding Deficiency at Start of Year	\$ 48,290,593
6. Unfunded Actuarial Liability at Start of Year from Funding Equation [4 3. + 5.]	\$ 120,755,387
7. Actuarial Liability at Start of Year	\$ 180,326,943
8. Actuarial Value of Assets at Start of Year	\$ 59,571,556
9. Unfunded Actuarial Liability at Start of Year from Liability Calculation [7 8.]	\$ 120,755,387
The Plan passes the Balance Test because line 6. equals line 9.	



Table IV - 8 Development of Full Funding Limitation for the Year Beginning March 1, 2016			
	Minimum		Maximum
1. Actuarial / PPA Liability Full Funding Limit Calculation			
a. Actuarial / PPA Liability	\$ 180,326,943	\$	180,326,943
b. Normal Cost with Expenses	2,243,933		2,243,933
c. Lesser of Market Value and Actuarial Value of Assets	55,263,192		55,263,192
d. Credit Balance at Start of Year, not less than zero	0		N/A
e. Net Interest on a., b., c., and d. at Funding Interest Rate (6.75%)	 8,593,269		8,593,269
f. Actuarial / PPA Liability Full Funding Limit [a. + b. – c. + d. + e.], limited to zero	\$ 135,900,953	\$	135,900,953
2. Full Funding Limit Override (RPA 1994)			
a. RPA 1994 Current Liability at Start of Year	\$ 293,946,648	\$	293,946,648
b. Present Value of Benefits Estimated to Accrue during Year	2,019,545		2,019,545
c. Expected Benefit Payments	14,136,672		14,136,672
d. Net Interest on a., b. and c. at Current Liability Interest Rate (3.25%)	9,391,017		9,391,017
e. Expected Current Liability at End of Year $[a. + b c. + d.]$	291,220,538		291,220,538
f. 90% of e.	262,098,484		262,098,484
g. Actuarial Value of Assets	59,571,556		59,571,556
h. Expected Expenses	1,285,000		1,285,000
i. Net Interest on c., g., and h. at Valuation Interest Rate (6.75%)	3,465,020		3,465,020
j. Estimated Value of Assets $[g c h. + i.]$	 47,614,904	_	47,614,904
k. RPA 1994 Full Funding Limit Override [f. – j.], limited to zero	\$ 214,483,580	\$	214,483,580
3. Full Funding Limitation at End of Plan Year, greater of 1.f. and 2.k.	\$ 214,483,580	\$	214,483,580



SECTION V – UNFUNDED VESTED BENEFITS

The allocation of the Unfunded Vested Benefits (UVB) is determined under the Presumptive method as defined in the Multiemployer Pension Plan Amendments Act of 1980 (MEPPA). If an employer withdraws between March 1, 2016 and February 28, 2017, they will be assessed Withdrawal Liability based on their share of the UVB. The Present Value of Vested Benefits (PVVB) is valued using a 6.25% interest rate assumption, and the same provisions as disclosed in Appendix B with the exception that disability benefits are excluded.

Under the Presumptive method, "pools" are created each year based on the change in the Plan's UVB. The UVB is calculated as the difference between the PVVB and the Market Value of Assets (MVA). In addition, the pools may include an adjustment for uncollectible Withdrawal Liability for prior withdrawn employers and statutory limits. Each pool is then written down over 20 years and allocated among the employers based on their proportional share of contributions.

Table V Unfunded Veste		
	2/28/2015	2/29/2016
1. Present Value of Vested Benefits		
a. Retirees and Beneficiaries	\$ 113,139,696	\$ 112,785,487
b. Terminated Vested Participants	49,471,348	47,197,262
c. Active Participants	27,316,651	28,544,321
d. Total	\$ 189,927,695	\$ 188,527,070
2. Interest Rate	6.25%	6.25%
3. Market Value of Assets on Financial Statement (wi	thout the	
Withdrawal Liability Payments Receivable)	\$ 68,387,517	\$ 55,263,192
4. Unfunded Vested Benefits [1.d - 3.]	\$ 121,540,178	\$ 133,263,878
5. Funded Ratio $[3. \div 1.d]$	36.0%	29.3%



SECTION VI – FASB ASC TOPIC #960

Table V Present Value of Accumulated in Accordance with A	Benefits as of March 1, 2	2016
1. Actuarial Present Value of Vested Benefits	Amounts	Counts
For Retirees and Beneficiaries	\$ 109,095,931	5,497
Terminated Vesteds	43,715,200	3,323
Active Participants	27,049,172	<u>693</u>
Total Vested Benefits	\$ 179,860,303	9,513
2. Non-Vested Benefits	<u>\$ 466,640</u>	<u>383</u>
3. Accumulated Benefits	\$ 180,326,943	9,896
4. Market Value of Assets on Financial Statement	nt (without the	
Withdrawal Liability Payments Receivable)	\$ 55,263,192	
5. Funded Ratios Vested Benefits Accumulated Benefits	30.7% 30.6%	
Reconciliation of Present Val	ue of Accumulated Bene	fits
1. Actuarial Present Value at Start of Prior Plan	Year	\$ 181,564,343
2. Increase (Decrease) over Prior Year due to:		
Benefit Accruals		\$ 889,551
Benefit Payments		(13,603,642)
Increase for Interest		11,856,515
Experience (Gains)/Losses		(379,824)
Changes in Assumptions		0
Plan Amendments		0
Total		\$ (1,237,400)
3. Actuarial Present Value at End of Prior Year		\$ 180,326,943



APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the Fund Office as of March 1, 2016. Cheiron did not audit any of the data. However, we did perform an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The following is a list of data charts contained in this section:

- Summary of Participant Data
- Changes in Plan Membership
- > Age/Service Distribution for Active Participants
- Counts and Average Benefit Amount by Age for Retirees, Beneficiaries, and Disabled Participants
- Counts and Average Benefit Amount by Age for Terminated Vested Participants

Summary of Participant Data											
Active Participants	N	<u>farch 1, 2015</u>	\mathbf{M}	larch 1, 2016							
Count		1,029		1,076							
Average Age		47.1		46.9							
Average Benefit Service		13.1		12.8							
Retirees and Beneficiaries Recei	iving Pa	ayments									
Count		5,563		5,497							
Annual Benefits	\$	13,462,349	\$	13,466,391							
Average Annual Benefit		2,420		2,450							
Terminated Vested Participants											
Count		3,471		3,323							
Annual Benefits	\$	9,913,931	\$	9,274,054							
Average Annual Benefit		2,856		2,791							



APPENDIX A – MEMBERSHIP INFORMATION

			Terminated				
		Actives	Vested	Retired	Disabled	Beneficiaries	Total
1. March 1, 2015 Valuation		1,029	3,471	4,464	332	767	10,063
2. Add	litions						
a.	New entrants	145	0	0	0	0	145
b.	Inactive but not in prior year's data	0	1	11	0	8	20
c.	New QDRO	0	0	0	0	0	(
d.	Total	145	1	11	0	8	16
3. Red	uctions						
a.	Terminated Nonvested	(62)	0	0	0	0	(6
b.	Benefits expired	0	(2)	0	0	0	(
c.	Died without beneficiary	(1)	(8)	(178)	(15)	(64)	(26
d.		0	(3)	0	0	0	(.
e.	Total	(63)	(13)	(178)	(15)	(64)	(33)
4. Cha	nges in Status						
a.	Terminated Vested	(28)	28	0	0	0	
b.	Returned to work	8	(8)	0	0	0	
c.	Retired	(14)	(144)	158	0	0	
d.	Disabled	(1)	(4)	(1)	6	0	
e.	Beneficiary commencing	0	(2)	0	0	2	
f.	Died with beneficiary	0	(7)	(39)	(7)	53	
g.	Data Correction	0	1	(7)	(2)	9	
h.	Total	(35)	(136)	111	(3)	64	
5 Mar	ch 1, 2016 Valuation	1,076	3,323	4,408	314	775	9,890



APPENDIX A – MEMBERSHIP INFORMATION

	Age / Service Distribution of Active Participants as of March 1, 2016 Service													
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total			
Under 25	29	34	0	0	0	0	0	0	0	0	63			
25 to 29	21	44	7	1	0	0	0	0	0	0	73			
30 to 34	20	37	13	6	1	0	0	0	0	0	77			
35 to 39	14	31	15	28	25	1	0	0	0	0	114			
40 to 44	15	32	9	22	26	7	1	0	0	0	112			
45 to 49	12	33	22	19	41	11	8	1	0	0	147			
50 to 54	11	16	17	22	32	23	25	8	1	0	155			
55 to 59	3	16	9	21	40	23	30	19	7	1	169			
60 to 64	4	7	7	17	24	15	14	15	12	5	120			
65 to 69	0	4	0	3	9	5	4	7	3	5	40			
70 & up	0	0	0	2	0	0	0	2	2	0	б			
Total	129	254	99	141	198	85	82	52	25	11	1,076			

Average Age = 46.9

Average Service = 12.8



APPENDIX A – MEMBERSHIP INFORMATION

	Age Distribution of Inactive Participants Pensioners and Beneficiaries Receiving Benefits as of March 1, 2016													
				Nor	mal,	Early	Surviv	ing	Spouses,					
	D	isat	oility	Defe	rred	Vested	Beneficiari	es, a	and Alternat	e				
	Re	tire	ments	Re	tiren	nents	Payees Re	ceiv	ing Benefits	5	Tot	al		
A go			Monthly			Monthly			Monthly			Monthly		
<u>Age</u>	Number		Benefit	Number		Benefit	Number		Benefit	Number		Benefit		
Under 55	36	\$	15,194	0	\$	0	29	\$	3,409	65	\$	18,603		
55-59	47		18,750	203		48,712	28		2,841	278		70,303		
60-64	61		25,623	517		112,279	63		9,012	641		146,914		
65-69	49		24,696	838		195,350	88		9,126	975		229,172		
70-74	47		13,377	834		188,057	118		12,945	999		214,379		
75-79	30		6,939	730		151,342	145		13,926	905		172,207		
80 & Over	44		8,886	1,286		232,793	304		28,942	1,634		270,621		
Total	314	\$	113,465	4,408	\$	928,533	775	\$	80,201	5,497	\$	1,122,199		

Deferred Vested Participants and Surviving Spouses Entitled to Future Benefits as of March 1, 2016					
	Monthly Benefit Payable at				
Age	Number	Normal Retirement Date			
Under 45	610	\$ 143,564			
45-49	423	103,848			
50-54	680	204,380			
55-59	697	166,248			
60-64	559	110,125			
65 & Over	354	44,672			
Total	3,323	\$ 772,837			



APPENDIX B - SUMMARY OF MAJOR PLAN PROVISIONS

The following is a summary of the major provisions. Please refer to the Plan document for a more complete description.

1. Effective Date

The Plan was established on March 1, 1962. The most recent amendment was effective March 1, 2009.

2. Participation

Employees become Participants as of the date their employer is obligated to begin contributions to the Plan on their behalf.

3. Past Service

Participants shall, after 36 months of contributions have been made, be credited with a year of Past Service during any calendar year prior to the employer's applicable effective date in which they were employed for at least six months.

4. Effective Service

Participants on July 1, 1974 shall be credited with Effective Service for each month for which contributions were made on their behalf through January 1, 1971.

5. Future Eligibility Service

A Participant shall be credited with a year of Future Eligibility Service for each calendar year beginning January 1, 1971 during which contributions were made on their behalf and they worked at least 1,000 hours.

6. Normal Retirement

<u>Eligibility:</u> The later of age 65 and 5th anniversary of Plan participation.

<u>Benefit:</u> The monthly benefit is equal to the sum of the following, but not less than \$50:

- (A) Multiply the average annual contribution made on the Participant's behalf after January 1, 1971 by the number of years of Past Service by the applicable percentage. The percentage ranges from 1.8% to 2.2% depending on when participation began and how many months employer contributions were made.
- (B) Multiply the average annual contribution made on the Participant's behalf after January 1, 1971 by the Effective Service Credit by 3.0%.
- (C) Multiply the total amount contributed on behalf of the participant from January 1, 1971 to August 31, 2003 by 3%.
- (D) Multiply the total amount contributed on behalf of the participant from September 1, 2003 to August 31, 2006 by 2%.
- (E) Multiply the total amount contributed on behalf of the participant after August 31, 2006 by 1%.

Effective March 1, 2009, the monthly benefit for participants not yet retired will have no 36-month guarantee feature.



APPENDIX B - SUMMARY OF MAJOR PLAN PROVISIONS

7. Early Retirement

<u>Eligibility:</u> Age 55 and five years of service (ten years of service if the participant did not have at least one hour of service after March 1, 1998).

<u>Benefit:</u> The normal retirement benefit described above reduced by 5/9 of 1% for each month the Participant is less than 65 and by 5/12 of 1% for each month the Participant is less than 62.

Effective March 1, 2009, the subsidized reduction described above is only applied to Participants retiring directly from active status. All other retirements will be actuarially reduced to reflect early commencement of benefits.

8. Disability Retirement

<u>Eligibility:</u> Five years of service (ten years of service if the participant did not have at least one hour of service after March 1, 1998) and awarded a Social Security Disability Award.

<u>Benefit:</u> The normal retirement benefit earned to date will be payable without reduction for age.

9. Deferred Vested Pension

<u>Eligibility:</u> Five years of service (ten years of service if the participant did not have at least one hour of service after March 1, 1998).

Benefit: Accrued benefit payable at normal retirement.

10. Joint & Survivor Annuity Benefit

<u>Eligibility:</u> Participant must be eligible for early, normal or disability pension on their date of death.

<u>Benefit:</u> The actuarial equivalence of 50% or 75% of the accrued benefit with reduction for early retirement if applicable.

11. Normal Form

If Single: Straight Life Annuity

If Married: 50% Joint & Survivor, actuarial equivalence

12. Changes to Plan Provisions Since Last Valuation

None



APPENDIX C - ACTUARIAL ASSUMPTIONS AND METHONDS

A. Actuarial Assumptions

1. Investment Return (net of investment expenses)

Funding & Accounting purposes6.75% per yearCurrent Liability under RPA 19943.25% per yearWithdrawal Liability purposes6.25% per year

2. Administrative Expenses

Average expenses from the most recent two years rounded to the nearest \$5,000; this year the assumption is \$1,285,000.

3. Rates of Mortality

Funding & ASC 960:

- Healthy Lives:	RP2000 with blue	collar
	adjustment, projected 5 with Scale AA	5-years
- Disabled Lives:	same with ages set-forwar years	rd five

RPA '94 Current Liability:

- 2016 Current Liability Combined Mortality Table

Terminated Vested Participants over age 80 are assumed to be deceased.

In accordance with Actuarial Standard of Practice #35, we have considered the effect of mortality improvement prior to and subsequent to the measurement date in developing this assumption.

4. Rates of Turnover

		Ser	vice	
Age	0 - 1	1 - 2	2 - 3	3+
25	20.5%	20.5%	19.0%	15.0%
35	16.9	16.9	16.9	11.3
45	15.0	15.0	12.4	7.8
55	15.0	15.0	7.0	7.0
62	15.0	15.0	7.0	7.0

5. Rates of Disability

Age	Rate
25	0.050%
35	0.065
45	0.244
55	0.406
65	0.000

6. Rates of Retirement

Age	Rate	
55 - 59	3.00%	
60	5.00	
61	10.00	
62 - 64	15.00	
65 - 69	50.00	
70	100.00	

7. Normal Form

Life Annuity



APPENDIX C - ACTUARIAL ASSUMPTIONS AND METHONDS

8. Marriage Assumption

We assume 70% of participants are married and wives are three years younger than husbands.

9. Justification for Assumptions

In accordance with Actuarial Standard of Practice No. 27, the rationale for our 6.75% discount rate is based on the Trustees risk preference, the Fund's current asset allocation, and the investment managers capital market outlook. Based on the current asset allocation, the investment manager's projected long-term return exceeds the discount rate.

For the demographic assumptions, rates of retirement and termination are based on Plan experience. The mortality table remains appropriate based on recent experience.

10. Changes in Assumptions Since the Last Valuation

The RPA '94 current liability interest rate was changed from 3.44% to 3.25% to comply with appropriate guidance.

The RPA '94 current liability mortality table changed from the 2015 static mortality table to the 2016 static mortality table to comply with appropriate guidance.

The expense assumption remains the average expenses from the most recent two years rounded to the nearest \$5,000. However, the resulting amount increased from \$1,175,000 to 1,285,000.



APPENDIX C - ACTUARIAL ASSUMPTIONS AND METHONDS

B. Actuarial Methods

1. Actuarial Cost Method

The cost method for determining liabilities for this valuation is the Unit Credit Cost method. This is one of a family of valuation methods known as accrued benefit methods. The chief characteristic of accrued benefit methods is that the funding pattern follows the pattern of benefit accrual. The normal cost is determined as that portion of each participant's benefit attributable to service expected to be earned in the upcoming plan year. The Actuarial Liability, which is determined for each participant as of each valuation date, represents the actuarial present value of the portion of each participant's benefit attributable to service earned prior to the valuation date.

2. Asset Valuation Method

The actuarial value of assets is determined in accordance with Section 3.16 of Revenue Procedure 2000-40 using a five-year smoothing period. Specifically, the actuarial value of assets as of March 1, 2007 is set equal to the market value of assets. For each subsequent plan year, the actuarial value shall be the market value minus a decreasing fraction (4/5, 3/5, 2/5, 1/5) of each gain or loss for each of the preceding four plan years. Gains or losses prior to March 1, 2007 are ignored. The resulting actuarial value of assets is then limited to be no greater than 120% and no less than 80% of the market value of assets on the valuation date.

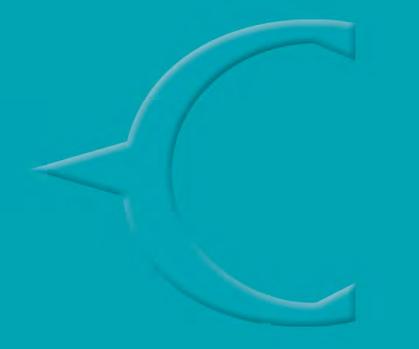
3. Withdrawal Liability Method

The Plan uses the Presumptive method with the Unfunded Vested Benefits calculated as the difference between the Market Value of Assets and the present value of nonforfeitable benefits valued at 6.25%.

4. Changes in Actuarial Methods Since the Last Valuation

None.





United Furniture Workers Pension Fund

Actuarial Valuation Report as of March 1, 2015

Produced by Cheiron

April 2016

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April 20, 2016

Board of Trustees c/o Ms. Dee Anne Walker, Secretary-Treasurer/Director United Furniture Workers Pension Fund A 1910 Air Lane Drive Nashville, Tennessee 37210

Dear Trustees:

At your request, we have performed the March 1, 2015 Actuarial Valuation of the United Furniture Workers Pension Fund A (the "Plan"). The purpose of this report is to present information on the Plan's assets and liabilities and to disclose contribution levels, including the minimum required amount as mandated by Federal law to the Trustees. This report is for the use of the Plan and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

In the Foreword we refer to the general approach employed in the preparation of this report. The Summary section discusses the longterm funded status and emerging issues facing the Trustees. We also comment on the sources and reliability of both the data and the actuarial assumptions. The results of this report are only applicable to the 2015 Plan Year and rely on future Plan experience conforming to the underlying assumptions. Future valuation reports may differ significantly from the current results presented in this report due to such factors as the following: Plan experience differing from that anticipated by the assumptions, changes in assumptions, and changes in Plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Board of Trustees United Furniture Workers Pension Plan A April 20, 2016

This report was prepared exclusively for the Plan for the purposes described herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely, Cheiron

Redacted by the U.S. Department of the Treasury

A

Principal Consulting Actuary

Redacted by the U.S. Department of the Treasury

> Gene M. Kalwarski, FSA, EA, MAAA Principal Consulting Actuary



FOREWORD

Cheiron has performed the Actuarial Valuation of the United Furniture Workers Pension Fund A as of March 1, 2015. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the Plan;
- 2) **Provide specific information** and documentation required by the Federal Government and the auditors of the Plan; and
- 3) **Review past and expected trends** in the financial conditions of the Plan.

An actuarial valuation establishes and analyzes Plan assets, liabilities and contributions on a consistent basis, and traces the progress of each from one year to the next. It includes measurement of the Plan's investment performance as well as an analysis of actuarial liability gains and losses. This valuation report is organized as follows:

Section I – **Summary** presents key valuation results and compares this year's results to last year's results. It also provides the historical summary and future outlook of the Plan.

Section II – Assets contains exhibits relating to the valuation of assets.

Section III – Liabilities shows the various measures of liabilities.

Section IV – Contributions shows the development of the minimum and maximum contributions.

Section V – Unfunded Vested Benefits (UVB) shows the development of the UVB as of March 1, 2015 that would be allocated to employers that withdraw before February 29, 2016.

Section VI – FASB ASC Topic #960 Disclosure provides information required by the Plan's auditor.

Finally, at the end of this report we present appendices that contain a summary of the Plan's membership at the valuation date, a summary of the major provisions of the Plan, and the actuarial methods and assumptions used in the valuation.

In preparing our report, we relied on information (some oral and some written) supplied by the Fund Office and Joseph Warren & Co, A Division of Rogoff and Company PC. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23.

The actuarial assumptions, taken individually, reflect our understanding and best estimate of the likely future experience of the Plan. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the Plan could vary from our results.

Finally, in preparing this report, we have conformed to generally accepted actuarial principles and practices which are consistent with the Code of Professional Conduct, and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board.



SECTION I -SUMMARY

The table below sets out the principal results of this year's valuation and compares them to last year's results.

Table I-1 Summary of Principal Results							
Participant Counts		3/1/2014		3/1/2015	% Change		
Actives		1,105		1,029	(6.9)%		
Terminated Vesteds		3,487		3,471	(0.5)%		
In Pay Status		5,596		5,563	(0.6)%		
Total		10,188		10.063	(1.2)%		
Financial Information							
Market Value of Assets	\$	77,060,732	\$	70,887,468	(8.0)%		
Actuarial Value of Assets		74,249,342		69,965,653	(5.8)%		
Present Value of Future Benefits	\$	174,603,761	\$	187,800,158	7.6 %		
Actuarial / PPA Liability	\$	168,388,149	\$	181,564,343	7.8%		
Surplus / (Unfunded) based on Actuarial Value of Assets	\$	(94,138,807)	\$	(111,598,690)	18.5 %		
Funded Ratio based on Actuarial Value of Assets		44.1%		38.5%			
Present Value of Vested Benefits	\$	167.900.413	\$	181,058,453	7.8 %		
Surplus / (Unfunded) based on Market Value of Assets	\$	(90,839,681)	\$	(110,170,985)	21.3 %		
Gain / (Loss), Minimum Funding, and Cash Flows							
Actuarial Asset Gain / (Loss)	\$	4,596,770	\$	1,357,542			
Liability Gain / (Loss)		(568,018)		(1.125.905)			
Total Normal Cost (Unit Credit plus Admin. Expenses)	\$	2.047.388	\$	2,064,551	0.8 %		
ERISA Minimum Funding before Funding Deficiency		12,080,801		18,183,029	50.5 %		
ERISA Funding Deficiency (Beginning of Year)		20,415,717		29,886,971	46.4 %		
Prior Year Contributions (net from all sources)	\$	7,552,748	\$	3,958,319	(47.6)%		
Prior Year Benefit Payments		13,367,997		13,604,248	1.8 %		
Prior Year Administrative Expenses		1,155,762		1,198,244	3.7 %		
Prior Year Total Investment Income (net of expenses)		9,170,731		4,506,559			



SECTION I –SUMMARY

General Comments

Following is an analysis of the Plan's results for the prior year followed by historical results for the last ten years. After that, a projection of future results is shown. Please note this valuation was prepared using census data and financial information as of the valuation date, March 1, 2015. Therefore, events following that date are not, and should not be, reflected in this report. The next valuation will reflect all membership and investment experience changes through February 29, 2016.

Prior Year Results:

Investment and liability experience and their effect on future costs traditionally have been the focus of year to year analyses.

- The Market Value of Assets returned 6.28% for the Plan Year ending February 28, 2015. For long-term planning the Plan develops an Actuarial Value of Assets using a smoothing method which phases in investment gains and losses over five years. On this basis the Actuarial Value of Assets returned 9.21%. Comparing this return to the prior year's long-term investment assumption of 7.50% results in an actuarial asset gain of \$1.36 million.
- The Plan experienced a liability loss totaling \$1.13 million. Combined with the actuarial investment gain of \$1.36 million, the Plan had a net actuarial experience gain of \$0.23 million.
- Effective with this valuation, we made an assumption change to reduce the discount rate from 7.50% to 6.75%. This change resulted in a \$12.6 million increase in the liability as well as an increase in the Minimum Required Contribution. Please refer to Appendix C for more details on the actuarial assumptions.

The funding ratio (Actuarial Value of Assets as a percentage of Actuarial Liability) decreased from 44.1% to 38.5%. Based on Market Value of Assets, the funding ratio decreased from 45.8% to 39.0%.

The Pension Protection Act of 2006 (PPA) added a significant layer of new considerations related to the Plan's PPA Funded status.

- The Plan was certified as "Critical and Declining" status under the Pension Protection Act (PPA) as amended by the Multiemployer Pension Reform Act of 2014 (MPRA) for the 2015 Plan Year because of the current Funding Deficiency and is projected insolvent within the next 19 years. The PPA status is re-determined annually.
- A Rehabilitation Plan was prepared in December 2008 modifying adjustable benefits and requiring annual contribution increases of 5.5% beginning March 1, 2009. This Rehabilitation Plan is based on the reasonable measures (exhaustion) method and is annually monitored.
- The funding ratio is an important measure that is used in determining the PPA zone, which as noted, has declined over the past year.
- The period of time until a Funding Deficiency occurs is usually an important measure that is used for PPA testing. The Plan already has a Funding Deficiency which increased from \$20.4 million as of March 1, 2014 to \$29.9 million as of March 1, 2015 and is projected to grow. However, under PPA there is no excise tax due as long as the Plan has a valid Rehabilitation Plan.



SECTION I –SUMMARY

In addition, please note that:

- Active membership declined by 6.9% over last year, mainly due to the withdrawal of Sealy Components.
- The Plan received \$3.96 million in contributions (including Withdrawal Liability payments of \$0.30 million) and paid \$14.80 million in benefits and expenses for the year ending February 28, 2015. Comparing these two amounts shows a negative net cash flow of \$10.84 million, which means the Plan is currently using investment returns to pay for benefits and expenses not covered by contributions.
- The increase in the Minimum Required Contribution was partially due to (1) a large credit base being completely recognized last year and no longer available for the current Plan Year, and (2) the decrease in the investment return assumption.
- The Plan assesses Withdrawal Liability based on a 6.25% interest rate assumption (7.00% last year) which is 0.5% less than the discount rate assumption used for funding. The Unfunded Vested Benefits increased from \$100.3 million as of March 1, 2014 to \$121.5 million as of March 1, 2015.

Historical Review:

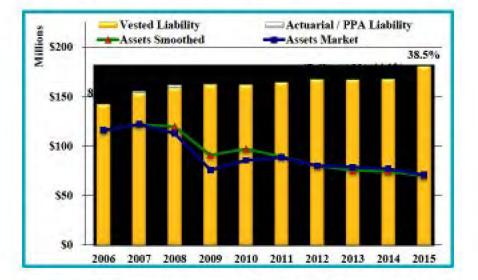
It is important to take a step back from the results and view them in the context of the Plan's recent history. On the next few pages, we present a series of charts which display key results in the valuations of the last ten years.



SECTION I -SUMMARY

Assets & Liabilities:

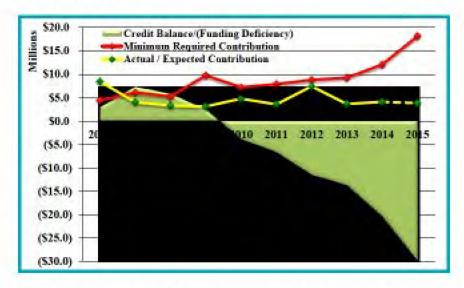
In this graph, the gold bars represent the present value of vested benefits while the gray bars add the additional non-vested benefits making up the Actuarial Liability. The blue line is the Market Value of Assets and the green line is the Actuarial Value of Assets. The percentages shown are the funding ratios (Actuarial Value of Assets as a percent of the Actuarial Liability).



- The funding ratio has decreased every year except 2010 and is now 38.5% funded. This decline is projected to continue.
- The increase in the Actuarial Liability for 2015 is due to the change in the discount rate, from 7.50% to 6.75%.
- The five-year average compounded investment return is 8.72% on the Market Value and 5.75% on the Actuarial Value; as compared to our 6.75% assumption.

Minimum Funding:

The next graph shows the contributions paid to the Plan (yellow line), the Minimum Required Contribution before the Credit Balance (red line) and the Credit Balance (green area). When the red line is greater than the yellow line the Credit Balance generally decreases. A Funding Deficiency occurs when the Credit Balance becomes negative.

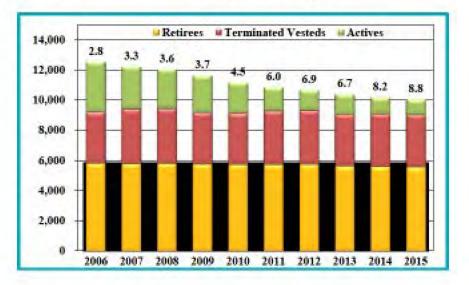


- Contributions have been less than the Minimum Required Contribution since 2007.
- A Funding Deficiency occurred at the end of the 2009 Plan Year and has grown every year since. However, under the PPA there is no excise tax due as long as the Plan has a valid Rehabilitation Plan.

SECTION I -SUMMARY

Participation:

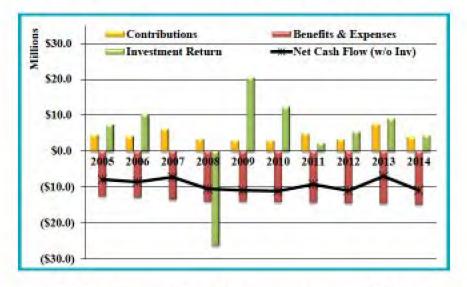
The graph below shows the participants of the Plan at successive valuations. The numbers above each bar represent the number of inactive members (retirees and terminated vested) to active members at each valuation date (called the support ratio).



- The support ratio has more than tripled over this nine-year period. Primarily due to employer withdrawals the ratio jumped to 8.8 inactives to every one active in the Plan.
- The active population has declined steadily over the period shown, with an average annual decline of 12.2% per year during the nine-year period shown and 8.6% per year for the prior three years.

Cash Flow:

Plan cash flow is a critical measure, as it reflects the ability to have funds available to meet benefit payments without having to make difficult investment decisions, especially during volatile markets.



- The Plan's net cash flow has averaged negative \$9.4 million per year for the period shown, which represents almost 14% of the current Market Value of Assets.
- The implications of a plan in negative cash flow are that the impact of market fluctuations can be more severe. This is because as assets are being depleted to pay benefits in down markets, there is less principal that is available to be reinvested during favorable return periods.

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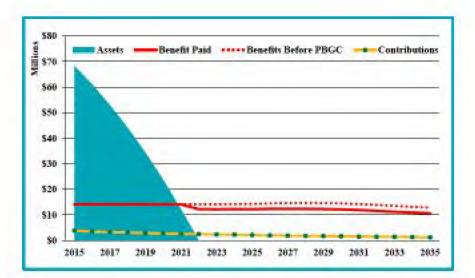
SECTION I -SUMMARY

Future Outlook:

In this section we focus on the future of the Plan and provide a projection of the Plan's assets, contributions, and benefit payments over the next 20 years.

This projection scenario assumes the assets earn exactly 6.75% each year on their market value, including the current plan year, and all other assumptions are met. We also factor in the current Rehabilitation Plan with annual 5.5% contribution increases and the Trustees' industry assumption of 10% annual membership declines.

Under this scenario, the Plan is projected to be insolvent shortly after March 1, 2022. At that time the benefit payments would drop to the PBGC guarantee level and the PBGC would provide financial assistance to the Plan. The drop in benefit payments is illustrated in the graph; the solid red line represents the benefit actually paid which are cut to the PBGC guarantee at the point of insolvency. The dotted red line represents the benefit payments prior to reduction to the PBGC guarantee.



SECTION II – ASSETS

Assets at Market Value:

Market values represent "snap-shot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next.

Table II - 1 Statement of Assets at Market Value, March 1								
Assets		2014		2015				
Short Term Obligations	\$	521,691	\$	264,333				
Common Stocks		5,479,771		5,234,786				
Intech Institutional Large Cap Growth Fund		6,344,495		5,772,886				
Fidelity Growth International Fund		6,175,892		5,083,707				
Fidelity Emerging Markets Fund		696,793		582,499				
Rothchild SMID Fund		6,063,210		4,564,317				
Pimco Bond Fund		14,597,028		6,421,005				
BPIF Non-Taxable LP		7,847,418		8,231,939				
State Street Global - MSCI		3,078,000		3,032,140				
Wellington Global Total Return Fund		4,369,390		3,272,743				
JPMCB Strategic Property Fund		8,339,847		8,828,137				
State Street Global - Daily		2,922,000		3,235,289				
Robeco BP - All Cap Value Fund		5,736,405		5,215,651				
Loomis Sayles Credit Long/Short		0		5,901,800				
Mortgage Receivable		1,260,000		1,260,000				
Cash		1,136,951		1,292,443				
Fixed Assets less accumulated depreciation		34,066		28,701				
Receivables								
Employer Contributions	\$	2,592,801	\$	2,827,951				
Accrued Interest & Dividends		15,452		13,475				
Liabilities								
Accrued Expenses and payroll taxes	\$	(150,478)	\$	(176,334)				
Total Market Value	\$	77,060,732	\$	70,887,468				

Assets at Actuarial Value:

For long-term planning, actuaries commonly use smoothing techniques to mitigate the short-term volatility exhibited by the capital markets. The Plan currently phases in investment gains and losses over five years. The Actuarial Value of Assets is also constrained so that it cannot exceed 120% of the Market Value and cannot be less than 80% of the Market Value. The table below shows the development of the Actuarial Asset Value.

Table II - 2 Development of Actuarial Value of Assets as of March 1, 2015								
Market Va	alue of	Assets as of Ma		\$	70,887,468			
Plan <u>Year</u>		Investment ins / (Losses)	Percent <u>Recognized</u>	Percent Deferred		Amount <u>Deferred</u>		
2010 2011 2012 2013 2014 Total Preliminary	\$ v Actua	6,511,385 (3,803,566) (4,321) 3,791,415 (738,241) rrial value as of M	100% 80% 60% 40% 20%	0% 20% 40% 60% 80%	\$ \$ \$	$0 \\ (760,713) \\ (1,728) \\ 2,274,849 \\ (590,593) \\ 921,815 \\ 69,965,653$		
Corridor fo 80% of Ma 120% of M Actuarial	arial Value alue		\$ \$ \$	56,709,975 85,064,961 69,965,653 98.7%				



SECTION II - ASSETS

Changes in Market Value:

The components of change in market value are:

- Contributions
- Benefit payments
- Expenses
- · Investment income (realized and unrealized)

The specific changes since the prior valuation are presented below:

Changes in Market Va	iues	
Total Value of Assets — March 1, 2014	5	77,060,732
Contributions	\$	4,120,469
Investment Return (Net)		4,506,559
Benefit Payments		(13,604,248)
Other Income / Adjustments		2,200
Administrative Expenses	-	(1,198,244)
Total Value of Assets — March 1, 2015	s	70,887,468

Market Value for valuation purposes was determined as follows:

Reconciliation with Market Value from Fi	nuncial	Statement
	M	arch 1, 2015
Market Value of Assets on Financial Statement	\$	69,335,517
Additional Employer Contributions	5	2,499,951
Withdrawal Liability Payments Receivable		(948,000)
Net	-	1,551,951
Market Value of Assets for Valuation Purposes	5	70,887,468

Actuarial Gains/Losses from Investment Performance:

The following table calculates the investment related actuarial gain/loss for the plan year on both a Market Value and Actuarial Value basis. Because the Actuarial Value of Assets is used to establish the Minimum Required Contribution and the Internal Revenue Code limits and contribution requirements, the actuarial gain/loss on the Actuarial Value of Assets most directly impacts the valuation results. We derive the gain/(loss) on both values of assets in the following table:

Table Asset Ga				
	1	Market Value	Ac	tuarial Value
March 1, 2014 Value	5	77,060,732	\$	74,249,342
Contributions		4,120,469		4,120,469
Benefit Payments		(13,604,248)		(13,604,248)
Administrative Expenses		(1,198,244)		(1,150,000) *
Expected Investment Earnings (7.50%)		5,244,800		4,992,548
Other		2,200		N/A
Expected Value on February 28, 2015	5	71,625,709	\$	68,608,111
Investment Gain / (Loss)		(738,241)		1.357.542
March 1, 2015 Value	5	70,887,468	5	69,965,653
Return		6.28%		9.21%

*Assumed Expenses, payable beginning of year



SECTION III – LIABILITIES

In this section, we present detailed information on Plan liabilities including:

- **Disclosure of Plan liabilities** at March 1, 2014 and March 1, 2015;
- Statement of **changes** in these liabilities during the year; and
- **Development** of the actuarial liability gain/loss during the year.

Disclosure:

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Future Benefits:** Used for analyzing the financial outlook of the Plan, this represents the amount of money needed today to fully pay off all future benefits assuming participants continue to accrue benefits.
- Actuarial Liabilities: Used in determining Minimum Funding Requirements, maximum tax deductible contributions, and long-term funding targets. These liabilities represent the total amount of money needed to fully pay off all obligations of the Plan using funding assumptions and assuming no further accrual of benefits. For this Plan, the Trustee's chose the Unit Credit Cost Method to determine the liability.

- Accrued Liabilities: These liabilities are required for determining PPA funded status and for accounting disclosure purposes (FASB ASC 960). For that purpose they are referred to as the present value of accumulated benefits. These liabilities are determined using the Unit Credit Cost Method, and so, for the Plan will equal the Actuarial Liabilities.
- Vested Liabilities: Required for accounting purposes, this liability represents the portion of the Accrued Liabilities which are vested.
- **Current Liabilities:** Used for Federal Government compliance purposes, the calculation of this liability is defined by the Internal Revenue Code and regulations to determine maximum allowable tax deductible contributions.

The table on the following page discloses most of these liabilities for the current valuation and the prior one. With respect to each disclosure, a subtraction of the appropriate value of Plan assets yields an **unfunded liability** for each respective type.



SECTION III – LIABILITIES

Table III - 1 Liabilities/Net Surplus (Unfunded)								
FUNDING DISCOUNT RATE ASSUMPTION		3/1/2014 7.50%		3/1/2015 6.75%				
ACTUARIAL / PPA LIABILITY Actuarial / PPA Liability Actuarial Value of Assets	\$	168,388,149 74,249,342	\$	181,564,343 69,965,653				
Net Surplus (Unfunded)	\$	(94,138,807)	\$	(111,598,690)				
VESTED LIABILITY Actuarial / PPA Liability Less Present Value of Non-Vested Benefits	\$	168,388,149 487,736	\$	181,564,343 505,890				
Vested Liability Market Value of Assets	\$	167,900,413 77,060,732	\$	181,058,453 70,887,468				
Net Surplus (Unfunded)	\$	(90,839,681)	\$	(110,170,985)				
RPA DISCOUNT RATE		3.63%		3.44%				
CURRENT LIABILITY (RPA 1994)	\$	283,826,417	\$	290,549,936				
Market Value of Assets Net Surplus (Unfunded)	\$	77,060,732 (206,765,685)	\$	70,887,468 (219,662,468)				



SECTION III – LIABILITIES

Allocation of Liabilities by Type:

The Plan participants may qualify for a benefit upon death, termination, and disability as well as upon retirement. The value of the liabilities arising from each of these sources is shown in the following table:

Table III - 2 ALLOCATION OF LIABILITIES BY TYPE										
Deres Ch Terres		D - 4 : 4		March 1, 2015		Deedle		Disc. 1, 11:4		T -4-1
Benefit Type Unit Credit Normal Cost	\$	Retirement 728,023	\$	Termination	\$	Death 18,650	\$	Disability 28,638	\$	Total 889,551
	\$	728,025	Э	114,240	Э	18,030	Э	28,038	Э	889,331
Actuarial / PPA Liability										
Actives	\$	22,737,823	\$	2,392,125	\$	553,878	\$	689,013	\$	26,372,839
Terminated Vesteds		0		45,764,390		0		0		45,764,390
Retirees and Beneficiaries		89,542,664		0		7,348,683		12,535,767		109,427,114
Total	\$	112,280,487	\$	48,156,515	\$	7,902,561	\$	13,224,780	\$	181,564,343
RPA Current Liability Normal Cost	\$	1,355,813	\$	344,027	\$	13,963	\$	55,077	\$	1,768,880
RPA Current Liability										
Actives	\$	40,570,196	\$	6,684,322	\$	390,461	\$	1,279,745	\$	48,924,724
Terminated Vesteds		0		89,993,573		0		0		89,993,573
Retirees and Beneficiaries		121,890,937		0		9,799,733		19,940,969		151,631,639
Total	\$	162,461,133	\$	96,677,895	\$	10,190,194	\$	21,220,714	\$	290,549,936
Vested RPA Current Liability										
Actives	\$	30,107,072	\$	16,634,292	\$	385,454	\$	1,247,852	\$	48,374,670
Terminated Vesteds		0		89,993,573		0		0		89,993,573
Retirees and Beneficiaries		121,890,937		0		9,799,733		19,940,969		<u>151,631,639</u>
Total	\$	151,998,009	\$	106,627,865	\$	10,185,187	\$	21,188,821	\$	289,999,882



SECTION III – LIABILITIES

Changes in Liabilities:

The Actuarial Liability shown in the preceding table changes at successive valuations based on as the experience of the Plan. The liability may change for any of several reasons, including:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments
- Interest on Actuarial Liability
- Benefits paid to retirees and beneficiaries
- Participants leaving employment at rates different than expected
- Changes in actuarial assumptions
- Changes in actuarial methods

The following table shows the change in the Actuarial Liability measure since the last valuation. There were no changes to methods or Plan provisions since last year. However, we made an assumption change to reduce the discount rate from 7.50% to 6.75% per annum resulting in a \$12.6 million increase in the liability. Please refer to Appendix C for more details on the actuarial assumptions.

Table III - 3 Actuarial (PPA) Liability							
Liabilities 3/1/2014	\$	168,388,149					
Liabilities 3/1/2015		181,564,343					
Liability Increase (Decrease)		13,176,194					
Change due to:							
Plan Amendment	\$	0					
Assumption Change		12,570,893					
Accrual of Benefits		897,388					
Actual Benefits		(13,604,248)					
Passage of Time		12,186,256					
Other Sources		0					
Actuarial (Gain)/Loss		1,125,905					

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SECTION IV – CONTRIBUTIONS

In this section, we present detailed information on Plan contributions from two perspectives:

- **Minimum Required Contributions**, based on the Unit Credit Cost Method; and
- Government Limitations which could affect the above.

Minimum Required Contributions:

For this Plan, the funding method used is the **Unit Credit** Cost Method. The Minimum Required Contribution is determined in two parts.

The first part is the Unit Credit Normal Cost. This is the cost for the benefits expected to be earned in the current year for each active participant. The Normal Cost includes a provision for administrative expenses.

The second part is an amortization payment to pay off the Unfunded Actuarial Liability (UAL). The UAL is the difference between the Actuarial Value of Assets at the valuation date and the Actuarial Liability determined by the actuarial cost method. The amortization payment is determined using the amortization schedule required by the minimum funding rules in the Internal Revenue Code.

Government Limitations:

ERISA and the Internal Revenue Code place various limits on the contributions made to qualified pension plans. The limits impact the minimum that must be paid, the maximum that can be deducted, and the timing of contributions.

To ensure that Minimum Required Contributions are met, pension plans are required to retain an Enrolled Actuary to complete Schedule MB to Form 5500 on an annual basis. In the past, bargained contributions exceeded the Minimum Required Contribution and the Plan built up a Credit Balance. The Credit Balance can be used to make up the difference between the Minimum Required Contribution and the bargained contribution. However, for the past several years the Plan has exhausted the Credit Balance and has a Funding Deficiency (i.e. a negative Credit Balance) for the current Plan Year.

The Minimum Required Contribution for 2015 is shown below compared to the Government Limitations and the estimated employer contributions. The table also shows the per capita cost and contribution.

Table IV - 1Contributions for 2015							
Minimum Required Contribution							
Unit Credit Normal Cost (with Expenses)	\$	2,064,551					
Amortization Payment		14,968,731					
Interest to End of Year		1,149,747					
Total	\$	18,183,029					
Government Limits							
Maximum Deductible Contribution	\$	344,395,488					
Minimum Contribution (before Funding Deficiency)		18,183,029					
Funding Deficiency with Interest		31,904,342					
Estimated Employer Contributions with Interest	\$	3,977,816					
Count of Active Participants		1,029					
Per Capita Minimum Required Contribution	\$	17,671					
Per Capita Contribution	\$	3,866					



SECTION IV – CONTRIBUTIONS

The tables on the following pages show the IRS Funding Standard Account, as well as the development of the minimum and maximum contributions for the 2015 Plan Year.

Table IV - 2 FUNDING STANDARD ACCOUNT FOR PLAN YEARS ENDING								
		<u>2/28/2015</u>		<u>2/29/2016</u>				
1. Charges for Plan Year								
a. Prior Year Funding Deficiency	\$	20,415,717	\$	29,886,971				
b. Normal Cost with Expenses		2,047,388		2,064,551				
c. Amortization Charges		16,762,867		17,562,499				
d. Interest on a., b., and c. to Year End		2,941,948		3,342,196				
e. Additional Funding Charge		N/A		N/A				
f. Interest Charge due to Late Quarterly Contributions		N/A		N/A				
g. Total Charges	\$	42,167,920	\$	52,856,217				
2. Credits for Plan Year								
a. Prior Year Credit Balance	\$	0	\$	0				
b. Contributions for Minimum Funding (actual / <i>expected</i>)		4,120,469		3,850,000				
c. Amortization Credits		7,572,301		2,593,768				
d. Interest on a., b., and c. to Year End		588,179		190,267				
e. Full Funding Limit Credit		0		0				
f. Total Credits	\$	12,280,949	\$	6,634,035				
3. Credit Balance / (Funding Deficiency) at End of Year [2 1.]	\$	(29,886,971)	\$	(46,222,182)				



SECTION IV – CONTRIBUTIONS

Table IV - 3CALCULATION OF THE MAXIMUM DEDUCTIBLE CONTRIBUTIONFOR THE PLAN YEAR STARTING MARCH 1, 2015

1. "Fresh Start" Method	
a. Unit Credit Normal Cost with Expenses	\$ 2,064,551
b. Net Charge to Amortize Unfunded Actuarial Liability Over 10 Years	14,712,901
c. Interest on a. and b. to Year End	1,132,478
d. Total	17,909,930
e. Minimum Required Contribution at Year End	50,087,371
f. Larger of d. and e.	50,087,371
g. Full Funding Limit	 200,360,669
h. Preliminary Maximum Deductible Contribution [lesser of f. and g.]	\$ 50,087,371
2. 140% of Current Liability Calculation	
a. RPA 1994 Current Liability at Start of Year	\$ 290,549,936
b. Present Value of Benefits Estimated to Accrue during Year	1,768,880
c. Expected Benefit Payments	14,065,072
d. Net Interest on a., b. and c. at Current Liability Interest Rate (3.44%)	9,815,894
e. Expected Current Liability at End of Year $[a. + b c. + d.]$	288,069,638
f. 140% of e.	403,297,493
g. Actuarial Value of Assets	69,965,653
h. Expected Expenses	1,175,000
i. Net Interest on c., g., and h. at Valuation Interest Rate (6.75%)	4,176,424
j. Estimated Value of Assets $[g c h. + i.]$	 58,902,005
k. Unfunded Current Liability at Year End $[f j.]$, not less than \$0	\$ 344,395,488
3. Maximum Deductible Contribution at Year End, greater of 1.h. and 2.k.	\$ 344,395,488



SECTION IV – CONTRIBUTIONS

Table IV - 4 DEVELOPMENT OF ACTUARIAL GAIN / (LOSS) FOR THE YEAR ENDED FEBRUARY 28, 2015	
1. Unfunded Actuarial Liability at Start of Year (not less than zero)	\$ 94,138,807
2. Normal Cost and Expenses at Start of Year	2,047,388
3. Interest on 1. and 2. to End of Year	7,213,964
4. Contributions for Prior Year	4,120,469
5. Interest on 4. to End of Year	20,256
6. Change in Unfunded Actuarial Liability Due to Changes in Methods	0
7. Change in Unfunded Actuarial Liability Due to Changes in Assumptions	12,570,893
8. Change in Unfunded Actuarial Liability Due to Changes in Plan Design	0
9. Expected Unfunded Actuarial Liability at End of Year [1. + 2. + 3 4 5. + 6. + 7. + 8.]	\$ 111,830,327
10. Actual Unfunded Actuarial Liability at End of Year (not less than zero)	111,598,690
11. Actuarial Gain / (Loss) [9. – 10.]	\$ 231,637
12. Amortization Factor for Actuarial Gain / (Loss)	9.8781
13. Amortization Credit / (Charge) for Actuarial Gain / (Loss)	\$ 23,450



SECTION IV – CONTRIBUTIONS

SCHEDULE OF A	MORTIZATIO			UM REQUIREI	O CONTRIBUT	TION
Type of Base	Date Established	AS OF MAI Initial Amount	Initial Amortization Years	3/1/2015 Outstanding Balance	Remaining Amortization Years	Beg of Yr Amortization Amount
CHARGES						
1. Initial Unfunded	3/1/1978	\$ 16,575,006	40	\$ 3,318,468	3	\$ 1,179,144
2. Plan Amendment	3/1/1989	63,848	30	17,716	4	4,872
3. Method Change	3/1/1989	15,842,844	30	4,396,460	4	1,209,031
4. Plan Amendment	3/1/1993	5,282,693	30	2,580,031	8	400,839
5. Actuarial Loss	3/1/2000	7,511,951	30	5,574,339	15	564,313
6. Actuarial Loss	3/1/2001	11,966,014	15	1,248,486	1	1,248,486
7. Actuarial Loss	3/1/2002	13,842,899	15	2,792,907	2	1,442,045
8. Actuarial Loss	3/1/2003	22,582,575	15	6,765,682	3	2,404,035
9. Actuarial Loss	3/1/2005	3,018,172	15	1,379,118	5	312,980
10. Actuarial Loss	3/1/2006	2,642,095	15	1,402,737	6	273,556
11. Assumption Change	3/1/2007	8,194,633	30	7,366,731	22	611,008
12. Actuarial Loss	3/1/2007	2,180,614	15	1,308,447	7	225,456
13. Actuarial Loss	3/1/2008	15,092,752	15	10,014,909	8	1,555,936
14. Actuarial Loss	3/1/2009	28,127,155	15	20,325,991	9	2,891,493
15. Actuarial Loss	3/1/2011	7,919,489	15	6,563,232	11	809,729
16. Assumption Change	3/1/2012	2,075,229	15	1,818,540	12	211,632
17. Actuarial Loss	3/1/2012	6,035,275	15	5,288,762	12	615,477
18. Actuarial Loss	3/1/2013	3,242,769	15	2,985,145	13	329,865
19. Assumption Change	3/1/2015	12,570,893	15	<u>12,570,893</u>	15	1,272,602
TOTAL CHARGES				\$ 97,718,594		\$ 17,562,499



SECTION IV – CONTRIBUTIONS

Table IV - 6SCHEDULE OF AMORTIZATIONS REQUIRED FOR MINIMUM REQUIRED CONTRIBUTION
AS OF MARCH 1, 2015

Type of Base	Date Established	Initial Amount	Initial Amortization Years	0	3/1/2015 Outstanding Balance	Remaining Amortization Years	Beg of Yr nortization Amount
CREDITS	Listablished	Amount	i cars		Darance	Itals	mount
1. Funding Method Change	3/1/2008	\$ 6,945,571	10	\$	2,631,401	3	\$ 935,010
2. Plan Amendment	3/1/2009	590,517	15		426,733	9	60,705
3. Actuarial Gain	3/1/2010	11,371,471	15		8,842,602	10	1,165,787
4. Actuarial Gain	3/1/2014	4,028,752	15		3,874,502	14	408,816
5. Actuarial Gain	3/1/2015	231,637	15		231,637	15	 23,450
TOTAL CREDITS				\$	16,006,875		\$ 2,593,768
NET CHARGE				\$	81,711,719		\$ 14,968,731



SECTION IV – CONTRIBUTIONS

Table IV - 7 ACCUMULATED RECONCILIATION ACCOUNT AND BALANCE TE AS OF MARCH 1, 2015	ST	
1. Amount due to Additional Interest Charges in prior years	\$	0
2. Amount due to Additional Funding Charges in prior years		NA
3. Reconciliation Account at Start of Year [1. + 2.]	\$	0
4. Net Outstanding Amortization Bases	\$	81,711,719
5. Funding Deficiency at Start of Year	\$	29,886,971
6. Unfunded Actuarial Liability at Start of Year from Funding Equation [4 3 5.]	\$	111,598,690
7. Actuarial Liability at Start of Year	\$	181,564,343
8. Actuarial Value of Assets at Start of Year	\$	69,965,653
9. Unfunded Actuarial Liability at Start of Year from Liability Calculation [7 8.]	\$	111,598,690
The Plan passes the Balance Test because line 6. equals line 9.		



SECTION IV – CONTRIBUTIONS

Table IV - 8DEVELOPMENT OF FULL FUNDING LIMITATIONFOR THE YEAR BEGINNING MARCH 1, 2015

	Minimum	Maximum
1. Actuarial / PPA Liability Full Funding Limit Calculation		
a. Actuarial / PPA Liability	\$ 181,564,343	\$ 181,564,343
b. Normal Cost with Expenses	2,064,551	2,064,551
c. Lesser of Market Value and Actuarial Value of Assets	69,965,653	69,965,653
d. Credit Balance at Start of Year, not less than zero	0	N/A
e. Net Interest on a., b., c., and d. at Funding Interest Rate (6.75%)	 7,672,269	 7,672,269
f. Actuarial / PPA Liability Full Funding Limit [a. + b. – c. + d. + e.], limited to zero	\$ 121,335,510	\$ 121,335,510
2. Full Funding Limit Override (RPA 1994)		
a. RPA 1994 Current Liability at Start of Year	\$ 290,549,936	\$ 290,549,936
b. Present Value of Benefits Estimated to Accrue during Year	1,768,880	1,768,880
c. Expected Benefit Payments	14,065,072	14,065,072
d. Net Interest on a., b. and c. at Current Liability Interest Rate (3.44%)	9,815,894	9,815,894
e. Expected Current Liability at End of Year [a. + b c. + d.]	288,069,638	288,069,638
f. 90% of e.	259,262,674	259,262,674
g. Actuarial Value of Assets	69,965,653	69,965,653
h. Expected Expenses	1,175,000	1,175,000
i. Net Interest on c., g., and h. at Valuation Interest Rate (6.75%)	4,176,424	4,176,424
j. Estimated Value of Assets $[g c h. + i.]$	 58,902,005	 58,902,005
k. RPA 1994 Full Funding Limit Override [f. – j.], limited to zero	\$ 200,360,669	\$ 200,360,669
3. Full Funding Limitation at End of Plan Year, greater of 1.f. and 2.k.	\$ 200,360,669	\$ 200,360,669



SECTION V – UNFUNDED VESTED BENEFITS

The allocation of the Unfunded Vested Benefits (UVB) is determined under the Presumptive method as defined in the Multiemployer Pension Plan Amendments Act of 1980 (MEPPA). If an employer withdraws between March 1, 2015 and February 29, 2016, they will be assessed Withdrawal Liability based on their share of the UVB. The Present Value of Vested Benefits (PVVB) is valued using a 6.25% interest rate assumption (7.00% for Plan Year ending 2/28/2014), and the same provisions as disclosed in Appendix B with the exception that disability benefits are excluded.

Under the Presumptive method, "pools" are created each year based on the change in the Plan's Unfunded Vested Benefits (UVB). The UVB is calculated as the difference between the PVVB and the Market Value of Assets (MVA). In addition, the pools may include an adjustment for uncollectible Withdrawal Liability for prior withdrawn employers and statutory limits. Each pool is then written down over 20 years and allocated among the employers based on their proportional share of contributions.

Table V - UNFUNDED VESTE		
	2/28/2014	2/28/2015
1. Present Value of Vested Benefits		
a. Retirees and Beneficiaries	\$ 105,541,627	\$ 113,139,696
b. Terminated Vested Participants	41,569,783	49,471,348
c. Active Participants	27,901,834	27,316,651
d. Total	\$ 175,013,244	\$ 189,927,695
2. Interest Rate	7.00%	6.25%
3. Market Value of Assets on Financial Statement (with	hout the	
Withdrawal Liability Payments Receivable)	\$ 74,722,931	\$ 68,387,517
4. Unfunded Vested Benefits [1.d - 3.]	\$ 100,290,313	\$ 121,540,178
5. Funded Ratio [3. ÷ 1.d]	42.7%	36.0%



SECTION VI – FASB ASC TOPIC #960

Table V PRESENT VALUE OF ACCUMULATEI) BE			CH 1, 2015
IN ACCORDANCE WITH	IASC	C TOPIC NO. 960		
1. Actuarial Present Value of Vested Benefits		Amounts	V	Vested Counts
For Retirees and Beneficiaries	\$	109,427,114		5,563
Terminated Vesteds		45,764,390		3,471
Active Participants		25,866,949		<u>713</u>
Total Vested Benefits	\$	181,058,453		9,747
2. Non-Vested Benefits	\$	505,890		<u>316</u>
3. Accumulated Benefits	\$	181,564,343		10,063
4. Market Value of Assets on Financial Statement	t (witl	nout the		
Withdrawal Liability Payments Receivable)	\$	68,387,517		
5. Funded Ratios				
Vested Benefits		37.8%		
Accumulated Benefits		37.7%		
RECONCILIATION OF PRESENT VAL	UE O	F ACCUMULAT	ED B	ENEFITS
1. Actuarial Present Value at Start of Prior Plan Y	<i>'ear</i>		\$	168,388,149
2. Increase (Decrease) over Prior Year due to:				
Benefit Accruals			\$	897,388
Benefit Payments				(13,604,248)
Increase for Interest				12,186,256
Experience (Gains)/Losses				1,125,905
Changes in Assumptions				12,570,893
Plan Amendments				0
Total			\$	13,176,194
3. Actuarial Present Value at End of Prior Year			\$	181,564,343



APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the Fund Office as of March 1, 2015. Cheiron did not audit any of the data. However, we did perform an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The following is a list of data charts contained in this section:

- Summary of Participant Data
- Changes in Plan Membership
- Age/Service Distribution for Active Participants
- Counts and Average Benefit Amount by Age for Retirees, Beneficiaries, and Disabled Participants
- Counts and Average Benefit Amount by Age for Terminated Vested Participants

SUMMAR	SUMMARY OF PARTICIPANT DATA									
Active Participants	N	<u>Iarch 1, 2014</u>	N	<u> Iarch 1, 2015</u>						
Count		1,105		1,029						
Average Age		47.7		47.1						
Average Benefit Service		14.9		13.1						
Retirees and Beneficiaries Recei	ving Pa	yments								
Count		5,596		5,563						
Annual Benefits	\$	13,206,363	\$	13,462,349						
Average Annual Benefit		2,360		2,420						
Terminated Vested Participants										
Count		3,487		3,471						
Annual Benefits	\$	9,441,383	\$	9,913,931						
Average Annual Benefit		2,708		2,856						



APPENDIX A – MEMBERSHIP INFORMATION

PARTICIPANT RECONCILIATION FROM MARCH 1, 2014 TO MARCH 1, 2015										
	r	Ferminated								
	Actives	Vested	Retired	Disabled	Beneficiaries	Total				
1. March 1, 2014 valuation	1,105	3,487	4,491	337	768	10,188				
2. Additions										
a. New entrants	152	0	0	0	0	152				
b. Inactive but not in prior year's data	0	6	17	0	2	25				
c. New QDRO	0	0	0	0	1	1				
d. Total	152	6	17	0	3	178				
3. Reductions										
a. Terminated Nonvested	(41)	0	0	0	0	(41)				
b. Benefits expired	0	0	0	0	0	0				
c. Died without beneficiary	0	(13)	(179)	(8)	(51)	(251)				
d. Assumed deceased	0	(6)	0	0	0	(6)				
e. Total	(41)	(19)	(179)	(8)	(51)	(298)				
4. Changes in Status										
a. Terminated Vested	(168)	168	0	0	0	0				
b. Returned to work	5	(3)	0	0	0	2				
c. Retired	(21)	(155)	176	0	0	0				
d. Disabled	(3)	(4)	0	7	0	0				
e. Beneficiary commencing	0	(2)	0	0	2	0				
f. Died with beneficiary	0	(5)	(41)	(3)	49	0				
g. Data Correction	0	(2)	0	(1)	(4)	(7)				
h. Total	(187)	(3)	135	3	47	(5)				
5. March 1, 2015 Valuation	1,029	3,471	4,464	332	767	10,063				





APPENDIX A – MEMBERSHIP INFORMATION

	AGE / SERVICE DISTRIBUTION OF ACTIVE PARTICIPANTS AS OF MARCH 1, 2015 Service												
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total		
Under 25	32	19	0	0	0	0	0	0	0	0	51		
25 to 29	31	31	8	0	0	0	0	0	0	0	70		
30 to 34	11	28	16	12	0	0	0	0	0	0	67		
35 to 39	12	22	17	36	22	3	0	0	0	0	112		
40 to 44	16	27	13	18	28	7	2	0	0	0	111		
45 to 49	13	19	20	24	33	11	14	1	0	0	135		
50 to 54	10	18	15	26	32	17	29	7	2	0	156		
55 to 59	8	11	7	25	45	23	29	21	6	1	176		
60 to 64	2	4	11	17	24	15	11	18	7	5	114		
65 to 69	0	2	1	6	6	3	4	3	5	6	36		
70 & up	0	0	0	1	0	0	0	0	0	0	1		
Total	135	181	108	165	190	79	89	50	20	12	1,029		

Average Age = 47.1

Average Service = 13.1



APPENDIX A – MEMBERSHIP INFORMATION

	AGE DISTRIBUTION OF INACTIVE PARTICIPANTS PENSIONERS AND BENEFICIARIES RECEIVING BENEFITS AS OF MARCH 1, 2015												
	Normal, Early Su												
	D	isat	oility	Defe	red	Vested	and	Bene	ficiaries				
	Re	tire	nents	Re	tiren	nents	Rece	eiving	Benefits		Tot	al	
A			Monthly			Monthly			Monthly			Monthly	
<u>Age</u>	Number		Benefit	Number		Benefit	Numbe	er	Benefit	Number		Benefit	
Under 55	45	\$	19,171	0	\$	0	23	\$	2,641	68	\$	21,812	
55-59	53		21,592	220		48,472	24		2,552	297		72,616	
60-64	57		24,209	527		119,143	69		9,297	653		152,649	
65-69	47		19,640	822		185,687	91		9,733	960		215,060	
70-74	56		15,398	849		188,377	110		11,910	1,015		215,685	
75-79	31		7,284	760		157,237	144		15,894	935		180,415	
80 & Over	43		8,440	1,286		227,224	306		27,961	1,635		263,625	
Total	332	\$	115,734	4,464	\$	926,140	767	\$	79,988	5,563	\$	1,121,862	

DEFERRED VESTED PARTICIPANTS AND SURVIVING SPOUSES ENTITLED TO FUTURE BENEFITS

Age	Number	Monthly Benefit Payable at Normal Retirement Date
Under 45	691	\$ 165,774
45-49	441	107,567
50-54	735	230,569
55-59	734	165,332
60-64	553	112,170
65 & Over	317	44,749
Total	3,471	\$ 826,161



APPENDIX B - SUMMARY OF MAJOR PLAN PROVISIONS

The following is a summary of the major provisions. Please refer to the Plan document for a more complete description.

1. Effective Date

The Plan was established on March 1, 1962. The most recent amendment was effective March 1, 2009.

2. Participation

Employees become Participants as of the date their employer is obligated to begin contributions to the Plan on their behalf.

3. Past Service

Participants shall, after 36 months of contributions have been made, be credited with a year of Past Service during any calendar year prior to the employer's applicable effective date in which they were employed for at least six months.

4. Effective Service

Participants on July 1, 1974 shall be credited with Effective Service for each month for which contributions were made on their behalf through January 1, 1971.

5. Future Eligibility Service

A Participant shall be credited with a year of Future Eligibility Service for each calendar year beginning January 1, 1971 during which contributions were made on their behalf and they worked at least 1,000 hours.

6. Normal Retirement

<u>Eligibility:</u> The later of age 65 and 5th anniversary of Plan participation.

<u>Benefit:</u> The monthly benefit is equal to the sum of the following, but not less than \$50:

- (A) Multiply the average annual contribution made on the Participant's behalf after January 1, 1971 by the number of years of Past Service by the applicable percentage. The percentage ranges from 1.8% to 2.2% depending on when participation began and how many months employer contributions were made.
- (B) Multiply the average annual contribution made on the Participant's behalf after January 1, 1971 by the Effective Service Credit by 3.0%.
- (C) Multiply the total amount contributed on behalf of the participant from January 1, 1971 to August 31, 2003 by 3%.
- (D) Multiply the total amount contributed on behalf of the participant from September 1, 2003 to August 31, 2006 by 2%.
- (E) Multiply the total amount contributed on behalf of the participant after August 31, 2006 by 1%.

Effective March 1, 2009, the monthly benefit for participants not yet retired will have no 36-month guarantee feature.



APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

7. Early Retirement

<u>Eligibility:</u> Age 55 and five years of service (ten years of service if the participant did not have at least one hour of service after March 1, 1998).

<u>Benefit:</u> The normal retirement benefit described above reduced by 5/9 of 1% for each month the Participant is less than 65 and by 5/12 of 1% for each month the Participant is less than 62.

Effective March 1, 2009, the subsidized reduction described above is only applied to Participants retiring directly from active status. All other retirements will be actuarially reduced to reflect early commencement of benefits.

8. Disability Retirement

<u>Eligibility:</u> Five years of service (ten years of service if the participant did not have at least one hour of service after March 1, 1998) and awarded a Social Security Disability Award.

<u>Benefit:</u> The normal retirement benefit earned to date will be payable without reduction for age.

9. Deferred Vested Pension

<u>Eligibility</u>: Five years of service (ten years of service if the participant did not have at least one hour of service after March 1, 1998).

Benefit: Accrued benefit payable at normal retirement.

10. Joint & Survivor Annuity Benefit

<u>Eligibility:</u> Participant must be eligible for early, normal or disability pension on their date of death.

<u>Benefit:</u> The actuarial equivalence of 50% or 75% of the accrued benefit with reduction for early retirement if applicable.

11. Normal Form

If Single: Straight Life Annuity

If Married: 50% Joint & Survivor, actuarial equivalence

12. Changes to Plan Provisions Since Last Valuation

None.



APPENDIX C - ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Investment Return (net of investment expenses)

Funding & ASC 960 purposes	6.75% per year
Current Liability under RPA 1994	3.44% per year
Withdrawal Liability purposes	6.25% per year

2. Administrative Expenses

Average expenses from the most recent two years rounded to the nearest \$5,000; this year the assumption is \$1,175,000.

3. Rates of Mortality

Funding & ASC 960:

- Healthy Lives: RP2000 with blue collar adjustment, projected 5-years with Scale AA
- Disabled Lives: same with ages set-forward five years

RPA '94 Current Liability:

- 2015 Current Liability Combined Mortality Table

Terminated Vested Participants over age 80 are assumed to be deceased.

In accordance with Actuarial Standard of Practice #35, we have considered the effect of mortality improvement prior to and subsequent to the measurement date in developing this assumption.

4. Rates of Turnover

		Ser	vice	
Age	0 - 1	1 - 2	2 - 3	3+
25	20.5%	20.5%	19.0%	15.0%
35	16.9	16.9	16.9	11.3
45	15.0	15.0	12.4	7.8
55	15.0	15.0	7.0	7.0
62	15.0	15.0	7.0	7.0

5. Rates of Disability

Age	Rate
25	0.050%
35	0.065
45	0.244
55	0.406
65	0.000

6. Rates of Retirement

Age	Rate	
55 - 59	3.00%	
60	5.00	
61	10.00	
62 - 64	15.00	
65 - 69	50.00	
70	100.00	

7. Normal Form

Life Annuity



APPENDIX C - ACTUARIAL ASSUMPTIONS AND METHODS

8. Justification for Economic Assumptions

In accordance with Actuarial Standard of Practice No. 27, the rationale for our 6.75% discount rate is based on the Trustees risk preference, the Fund's current asset allocation, and the investment managers capital market outlook.

Based on the current asset allocation, the investment manager's 10-year projected real return is 3.46%. Using Cheiron's long term price inflation of 3.25% increases the expected return to 6.71%. Furthermore, it is expected that a 30-year forecast may provide for higher returns.

9. Changes in Assumptions Since the Last Valuation

The RPA '94 current liability interest rate was changed from 3.63% to 3.44% to comply with appropriate guidance.

The RPA '94 current liability mortality table changed from the 2014 static mortality table to the 2015 static mortality table to comply with appropriate guidance.

The investment return assumption was reduced from 7.50% to 6.75% to better reflect future investment expectation given the current risk tolerance.

The investment return assumption for withdrawal liability purposes was reduced from 7.00% to 6.25%.



APPENDIX C - ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Actuarial Cost Method

The cost method for determining liabilities for this valuation is the Unit Credit Cost method. This is one of a family of valuation methods known as accrued benefit methods. The chief characteristic of accrued benefit methods is that the funding pattern follows the pattern of benefit accrual. The normal cost is determined as that portion of each participant's benefit attributable to service expected to be earned in the upcoming plan year. The Actuarial Liability, which is determined for each participant as of each valuation date, represents the actuarial present value of the portion of each participant's benefit attributable to service earned prior to the valuation date.

2. Asset Valuation Method

The actuarial value of assets is determined in accordance with Section 3.16 of Revenue Procedure 2000-40 using a five-year smoothing period. Specifically, the actuarial value of assets as of March 1, 2007 is set equal to the market value of assets. For each subsequent plan year, the actuarial value shall be the market value minus a decreasing fraction (4/5, 3/5, 2/5, 1/5) of each gain or loss for each of the preceding four plan years. Gains or losses prior to March 1, 2007 are ignored. The resulting actuarial value of assets is then limited to be no greater than 120% and no less than 80% of the market value of assets on the valuation date.

3. Withdrawal Liability Method

The Plan uses the Presumptive method with the Unfunded Vested Benefits calculated as the difference between the market value of assets and the present value of nonforfeitable benefits valued at 6.25%.

4. Changes in Actuarial Methods Since the Last Valuation

None.

