

The logo for nyhart, featuring the word "nyhart" in a lowercase, sans-serif font. The text is white and is centered within a black rectangular box. To the left of this box is a thick black vertical bar, and to its right is a thin red vertical line.

nyhart

***Pension Plan of Kent County, Delaware***

*January 1, 2017*  
*Actuarial Valuation Report*

<b>Actuarial Certification</b>	<b>3</b>
<b>Executive Summary</b>	<b>5</b>
Summary Results	5
Changes Since Prior Valuation and Key Notes	6
<b>Assets and Liabilities</b>	<b>7</b>
Present Value of Future Benefits	7
Funding Liabilities	8
Asset Information	9
Reconciliation of Gain/Loss	11
<b>Contribution Requirements</b>	<b>12</b>
Development of Actuarially Determined Contribution	12
<b>Demographic Information</b>	<b>13</b>
<b>Participant Reconciliation</b>	<b>15</b>
<b>Plan Provisions</b>	<b>17</b>
<b>Actuarial Assumptions</b>	<b>22</b>

At the request of the plan sponsor, this report summarizes the Pension Plan of Kent County, Delaware as of January 1, 2017. The purpose of this report is to communicate the following results of the valuation:

- Funded Status; and
- Actuarially Determined Contribution.

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the trustee. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in economic or demographic assumptions;
- Increases/decreases expected as part of the natural operation of the methodology used for these measurements (i.e. the end of an amortization period); and
- Changes in plan provisions or applicable law.

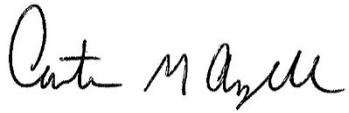
We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report.

To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart



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Carter M. Angell, FSA, EA, MAAA



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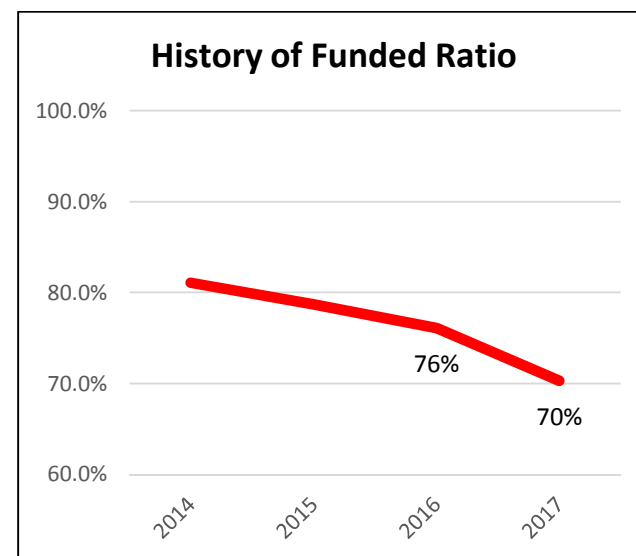
Heath W. Merlak, FSA, EA, MAAA

March 14, 2017  
Date

**Summary Results**

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percent of pay.

	January 1, 2016	January 1, 2017
<b>Funded Status Measures</b>		
Accrued Liability	\$46,186,132	\$52,233,204
Actuarial Value of Assets	<u>35,145,019</u>	<u>36,698,385</u>
Unfunded Accrued Liability	\$11,041,113	\$15,534,819
Funded Percentage (AVA)	76.1%	70.3%
Funded percentage (MVA)	71.8%	66.9%
<b>Cost Measures</b>		
Recommended Employer Contribution	\$1,983,504	\$2,544,116
Expected Employee Contribution	<u>182,956</u>	<u>199,044</u>
Total County Contribution	\$2,166,460	\$2,743,160
Total County Contribution as a percentage of payroll	15.4%	19.0%
<b>Asset Performance</b>		
Market Value of Assets (MVA)	\$33,140,779	\$34,942,834
Actuarial Value of Assets (AVA)	\$35,145,019	\$36,698,385
Actuarial Value/Market Value	106.0%	105.0%
<b>Participant Information</b>		
Active Participants	284	288
Terminated Vested Participants	109	100
Retirees, Beneficiaries, and Disabled Participants	<u>193</u>	<u>204</u>
Total	586	592
Expected Payroll	\$14,111,982	\$14,428,663



### **Changes since Prior Valuation and Key Notes**

There have been no changes to the plan provisions since the last valuation.

The Normal Cost is increased by \$35,000 to cover anticipated administrative expenses paid from the trust during the 2017 plan year. There was no load for 2016.

As the result of an experience study covering the plan's experience from January 1, 2011 through January 1, 2016, the following changes were made to better reflect anticipated plan experience:

The interest rate used to discount liabilities was changed from 8.00% per annum (net of investment expenses) to 7.75% per annum (net of investment expenses).

The mortality table has been changed from the RP-2000 Combined Healthy Mortality Table projected to 2016 with Scale AA for all participants to the RP-2014 Total Mortality Table with fully generational improvements projected from 2006 based on assumptions from the Social Security Administration's 2016 Trustee's Report for healthy participants. For disabled participants, the assumption changed to RP-2014 Disabled Mortality Table with fully generational improvements projected from 2006 based on assumptions from the Social Security Administration's 2016 Trustee's Report.

The assumed rate of annual pay increases was changed from 3.50% per annum to an age-graded scale ranging from 5.50% to 3.00% per annum.

The assumed rates of retirement and withdrawal were adjusted to better reflect anticipated experience.

The net impact of the above assumption changes resulted in increases in the Accrued Liability, Normal Cost, and Recommended Employer Contribution.

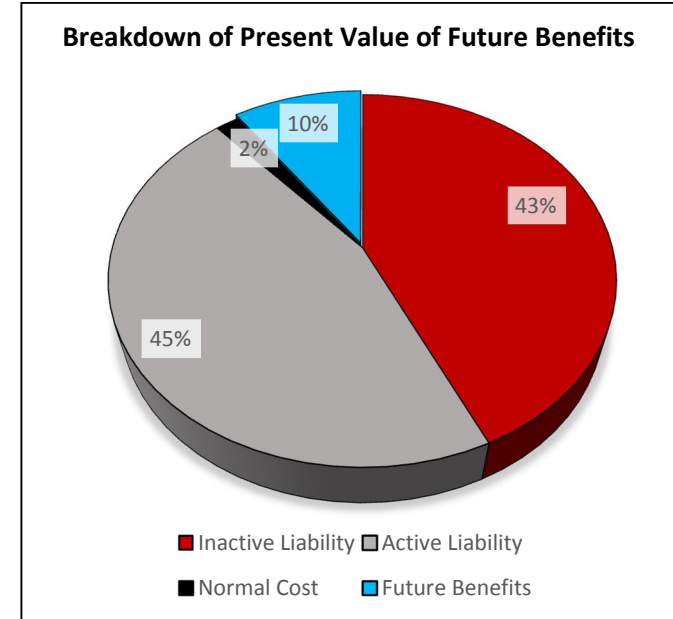
**Present Value of Future Benefits**

The Present Value of Future Benefits represents the future benefits payable to the existing participants.

**January 1, 2017**

**Present Value of Future Benefits**

Active participants	
Retirement	\$30,369,005
Disability	905,754
Death	113,410
Termination	2,199,356
Total active	\$33,587,525
Inactive participants	
Retired participants	\$21,001,163
Beneficiaries	997,361
Disabled participants	249,520
Terminated vested participants	3,147,527
Total inactive	\$25,395,571
<b>Total</b>	<b>\$58,983,096</b>
Present value of future payrolls	\$106,618,335



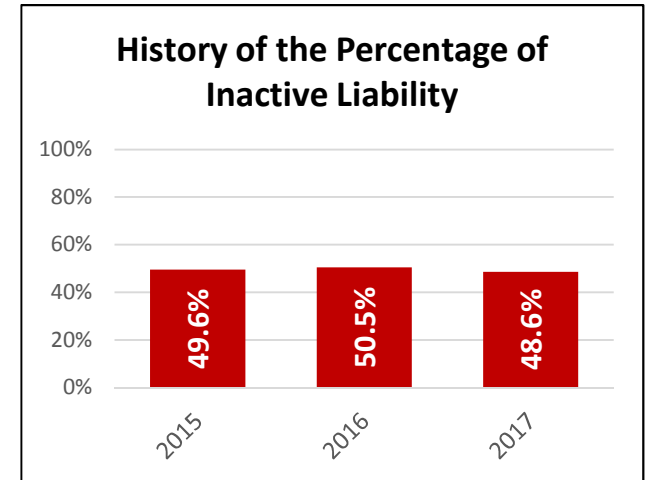
**Accrued Liability – Entry Age Level Percent of Pay**

The Funding Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions.

**January 1, 2017**

**Funding Liabilities**

Active participants	
Retirement	\$24,811,770
Disability	547,750
Death	85,294
Termination	<u>1,392,819</u>
Total Active	\$26,837,633
Inactive participants	
Retired participants	\$21,001,163
Beneficiaries	997,361
Disabled participants	249,520
Terminated vested participants	<u>3,147,527</u>
Total Inactive	\$25,395,571
Total	\$52,233,204
Total Normal Cost	\$1,022,745
Employee Normal Cost	<u>199,044</u>
Employer Normal Cost	\$823,701





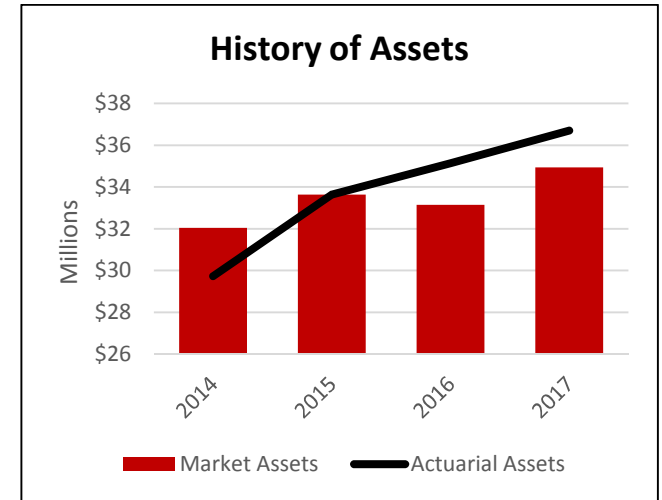
**Asset Information**

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

**January 1, 2017**

**Market Value Reconciliation**

Market value of assets, beginning of prior year	\$33,140,779
Contributions	
Employer contributions	\$1,634,883
Member contributions	187,079
Non-employer contributing entity	0
Total	\$1,821,962
Investment income	2,314,335
Benefit payments	(2,300,696)
Administrative expenses	(33,546)
Market value of asset, beginning of current year	\$34,942,834
Return on Market Value	7.0%
Market value of assets available for pension benefits	\$34,942,834
<b>Actuarial value of assets</b>	
Value at beginning of current year	\$36,698,385



**Asset Information (continued) – 5-Year Asset Smoothing**

Actuarial Value of Assets are used to develop funded percentages and contribution requirements.

	January 1, 2017
1. Market Value of assets, beginning of current year	\$34,942,834
2. Phase in recognition of investment income	
(a) Current year - 2016 (80% x \$(315,464))	\$(252,371)
(b) First prior year - 2015 (60% x \$(2,505,300))	(1,503,180)
(c) Second prior year - 2014 (40% x \$0)	0
(d) Third prior year - 2013 (20% x \$0)	0
(f) Total phase-in	\$(1,755,551)
3. Preliminary actuarial value of assets, beginning of current year [(1)-(2(f))]	\$36,698,385
4. 80% Market value of assets	\$27,954,268
5. 120% Market value of assets	\$41,931,400
6. Adjustment	\$0
7. Adjusted actuarial value of assets [(3) – (6)]	\$36,698,385
8. Return on actuarial value of assets	5.9%

**Reconciliation of Gain/Loss**

**January 1, 2017**

**Liability (gain)/loss**

Actuarial liability, beginning of prior year	\$46,186,132
Normal cost	937,737
Benefit payments	(2,300,696)
Expected interest	3,677,882
Assumption Changes	<u>3,747,942</u>
Expected actuarial liability, beginning of current year	\$52,248,997
Actual actuarial liability	\$52,233,204
Liability (gain)/loss	\$(15,793)

**Asset (gain)/loss**

Actuarial value of assets, beginning of prior year	\$35,145,019
Contributions	1,821,962
Benefit payments	(2,300,696)
Administrative Expenses	(33,546)
Expected Investment return	<u>2,791,110</u>
Expected actuarial value of assets, beginning of current year	\$37,423,849
Actual actuarial value of assets, beginning of current year	\$36,698,385
Asset (gain)/loss	\$725,464

**Total (gain)/loss**

\$709,671

**Development of Actuarially Determined Contribution**

The actuarially determined contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

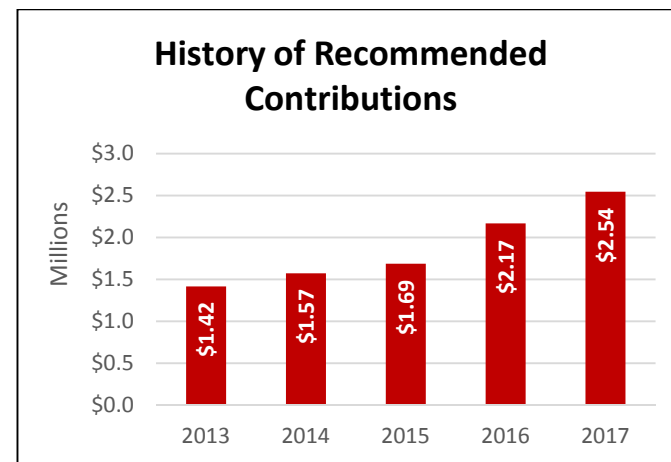
**January 1, 2017**

**Funded Position**

1. Entry age accrued liability	\$52,233,204
2. Actuarial value of assets	\$36,698,385
3. Unfunded actuarial accrued liability (UAAL)	\$15,534,819

**Employer Contributions**

1. Normal Cost	
(a) Employer normal cost	\$823,701
(b) Expected participant contributions	199,044
(c) Total normal cost	\$1,022,745
2. Administrative expenses	\$35,000
3. Amortization of UAAL	1,441,238
4. Applicable interest	244,177
5. Total recommended contribution, not less than \$0	\$2,743,160
6. Expected employee contributions	\$199,044
7. Expected employer contributions	\$2,544,116
As a percentage of expected payroll	17.6%



The accrued liability exceeds the actuarial value of assets as of January 1, 2017. The unfunded liability has been amortized over a 20-year closed period at 7.75% interest.

The total recommended contribution includes \$199,044 in expected employee contributions.

The total recommended contribution includes interest to account for actual timing of when the contribution will be made.

**Demographic Information**

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

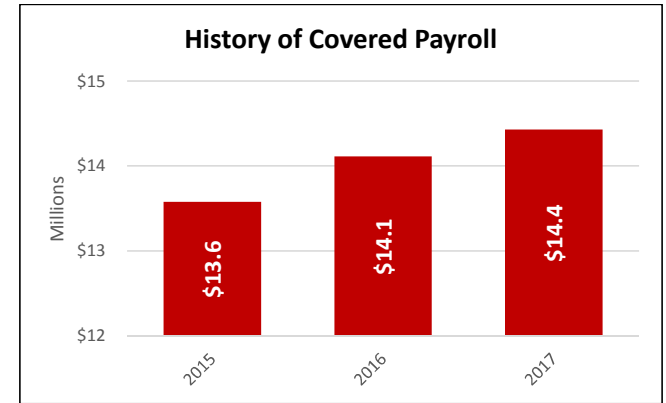
**January 1, 2017**

**Participant Counts**

Active Participants	288
Retired Participants	175
Beneficiaries	27
Disabled Participants	2
Terminated Vested Participants	100
<b>Total Participants</b>	<b>592</b>

**Active Participant Demographics**

Average Age	48.9
Average Service	12.1
Average Compensation	\$50,100
<b>Total Expected Payroll</b>	<b>\$14,428,663</b>



Demographic Information (continued)

January 1, 2017

**Retiree Statistics**

Average Age	72.4
Average Monthly Benefit	\$1,095

**Beneficiary Statistics**

Average Age	70.2
Average Monthly Benefit	\$382

**Disabled Participants Statistics**

Average Age	52.6
Average Monthly Benefit	\$1,519

**Terminated Participants Statistics**

Average Age	50.5
Average Monthly Benefit	\$509

Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
<b>Prior Year</b>	284	109	2	170	21	586
<b>Active</b>						
To Terminated Vested	(3)	3				0
To Retired	(6)			6		0
To Lump Sum Cash-Out	(8)					(8)
<b>Terminated Vested</b>						
To Retired		(8)		8		0
To Active	1	(1)				0
To Death no beneficiary		(2)				(2)
To Death with beneficiary		(1)			1	0
<b>Retired</b>						
To Death no beneficiary				(4)		(4)
To Death with beneficiary				(3)	3	0
<b>Additions</b>	20					20
<b>Departures</b>				(2)	2	0
<b>Current Year</b>	288	100	2	175	27	592

**Active Participant Schedule**

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	Average Pay
	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		
Under 25	2	2									<b>4</b>	\$41,180
25 to 29	4	15	4								<b>23</b>	\$40,951
30 to 34	2		11	2							<b>15</b>	\$45,419
35 to 39		10	4	8	2						<b>24</b>	\$49,930
40 to 44	3	4	5	6	7	6					<b>31</b>	\$53,012
45 to 49	2	4	4	9	7	5	1	1			<b>33</b>	\$55,451
50 to 54	4	8	9	8	12	3	11	2			<b>57</b>	\$49,422
55 to 59	2	7	9	12	7	8	2	4	1		<b>52</b>	\$48,933
60 to 64	1	5	5	8	10	1	3	2			<b>35</b>	\$53,606
65 to 69		1	4	3	2	1	1				<b>12</b>	\$53,604
70 & up					2						<b>2</b>	\$44,113
<b>Total</b>	<b>20</b>	<b>56</b>	<b>55</b>	<b>56</b>	<b>49</b>	<b>24</b>	<b>18</b>	<b>9</b>	<b>1</b>		<b>288</b>	\$50,100



**Plan Effective Date**

The plan was established June 18, 1957. The plan was last amended May 28, 2013.

**Plan Status**

The plan is open to new participants and all participants are eligible to accrue additional benefits.

**Eligibility for Participation**

An employee who receives a regular salary directly from Kent County will be a covered employee. The following people shall also be considered covered employees:

- Elected officials of Kent County;
- Board of Assessment members; and
- Part-time employees working more than 1,000 hours per calendar year

The following employees shall not be considered covered employees and are not eligible for the plan:

- The Mortgage Commissioner;
- Summer Youth Employment Program (or successor) employees;
- Part-time (less than 1,000 hours per year), temporary, contracted, or seasonal employees; and
- Former City of Dover paramedics having contributions made to the City pension plan by the County. Covered employment will begin when the contributions to the City pension plan cease, if the former City of Dover paramedic remains employed by the County

**Accrued Benefit**

The monthly pension payable to covered employees hired on or before December 21, 2010 shall be 2% of the Average Monthly Base Salary of the highest three consecutive years (36 consecutive months) of salary with Kent County multiplied by the number of years served in covered employment with Kent County. For covered employees hired after December 21, 2010, the multiplier shall be 1.85% instead of 2%.

**Benefits**

**Normal Retirement**

Eligibility	Age 62 and 5 years of service for those hired on or before June 29, 2010; or Age 65 and 8 years of service for those hired after June 29, 2010
Benefit	Accrued Benefit

**Early Retirement**

Eligibility      Age 55 and 20 years of service; or  
Age 60 and 15 years of service; or  
Any age and 30 years of service

Benefit          Accrued Benefit

**Late Retirement**

Eligibility      Participation continues after normal retirement date

Benefit          Accrued Benefit

**Disability**

Eligibility      A Covered Employee who shall become disabled while in Covered Employment and covered under County-provided long-term disability Insurance

Benefit          Covered employee will be considered as remaining in Covered Employment until they retire or the cessation of disability insurance, if earlier, for benefit accrual purposes

**Death before Retirement**

Eligibility      Covered employee with vested accrued benefit

Benefit          For married employees: 50% of the Accrued Benefit the covered employee would have received had they terminated employment on the date of death and survived to the earliest retirement age

For single employees: Survivor portion of the 50% Joint and Survivor Annuity if the covered employee terminated employment on the date of death and survived to the earliest retirement age

**Termination Benefit**

Eligibility      5 years of service if hired on or before June 29, 2010, 8 years of service if hired after June 29, 2010

Benefit          Accrued retirement benefit payable at participant's normal retirement date

### **Average Monthly Base Salary**

Highest 36 consecutive months of base wage pay rate compensation approved by the County government for the position held and paid over a one-year Period, excluding pay for overtime, longevity, shift differential, accrued time payouts, bonuses, or any other special pay other than base wage pay rate compensation. Payroll deductions shall not reduce the annual compensation or salary amount. Amount will be limited by 401(a)(17) of the Code.

### **Credited Service**

Years of service will be granted based on elapsed time for covered employees working more than 1,000 hours in a calendar year.

If a covered employees had similar employment with New Castle County, Sussex County, or the State of Delaware prior to June 27, 1986, such years of service shall be recognized and included for pension benefits, provided that such covered employee was employed by Kent County on or before June 27, 1986

### **Employee Contributions**

Effective July 1, 2009, employees hired on or before December 21, 2010 shall contribute 1% of base salary payable over the normal pay periods

Effective December 21, 2010, employees hired after December 21, 2010 shall contribute 3% of base salary over \$6,000, payable over the normal pay periods

### **Payment Forms**

Normal Form

Life Annuity

Optional Forms

50%, 75%, or 100% Joint and Survivor Annuity, 5 or 10-Year Certain and Life Annuity, Lump Sum (if less than \$3,500)

### **Actuarial Equivalence**

Optional forms of payment will be converted from a life annuity using the applicable mortality table and the applicable interest rate for the month of December preceding the Plan Year in which the payment begins, as specified by the Secretary of the Treasury per Section 417(e)(3)

### **Plan Provisions Not Included**

We are not aware of any plan provisions not included in the valuation

### **Adjustments Made for Subsequent Events**

We are not aware of any events following the measurement date and prior to the date of this report that would materially impact the results of this report

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the actuary. Prescribed assumptions are based on the requirements of the relevant law, the Internal Revenue Code, and applicable regulation. The actuary was not able to evaluate the prescribed assumptions for reasonableness for the purpose of the measurement.

<b>Valuation Date</b>	January 1, 2017	
<b>Participant and Asset Information Collected as of</b>	January 1, 2017	
<b>Cost Method (CO)</b>	Entry Age Cost Method – Percent of Pay	
<b>Amortization Method (CO)</b>	20-year closed amortization of Unfunded Accrued Liability (Fresh Start at 1/1/2017)	
<b>Asset Valuation Method</b>	Gains or losses on the Market Value of Assets are recognized over five years, subject to a 20% corridor around the Market Value of Assets	
<b>Interest Rates (CO)</b>	7.75%, net of investment expenses	
<b>Mortality Rates (FE)</b>		
Healthy	RP-2014 Total Mortality Table with fully generational improvements projected from 2006 based on assumptions from the Social Security Administration's 2016 Trustee's Report	
Disabled	RP-2014 Disabled Mortality Table with fully generational improvements projected from 2006 based on assumptions from the Social Security Administration's 2016 Trustee's Report	
<b>Retirement Rates (FE)</b>	<b>Age</b>	<b>Rate</b>
	55-57	10%
	58-59	0%
	60	25%
	61	10%
	62	20%
	63-64	15%
	65-69	50%
	70+	100%

**Disability Rates (FE)**

Sample rates:

<b>Age</b>	<b>Rate</b>
25	0.077%
30	0.091%
35	0.116%
40	0.203%
45	0.358%
50	0.617%
55	1.075%
60	1.397%
65+	0.000%

**Withdrawal Rates (FE)**

Rates based on age and service, select and ultimate table

<b>Age</b>	<b>Service</b>					
	<b>Under 1</b>	<b>1-2</b>	<b>2-3</b>	<b>3-4</b>	<b>4-5</b>	<b>5+</b>
20	12.00%	15.00%	18.00%	15.00%	10.00%	8.00%
25	12.00%	15.00%	18.00%	15.00%	10.00%	8.00%
30	12.00%	15.00%	15.00%	15.00%	9.50%	7.00%
35	12.00%	12.00%	15.00%	12.00%	7.50%	6.00%
40	12.00%	11.50%	12.00%	10.00%	7.50%	5.50%
45	12.00%	10.00%	12.00%	10.00%	5.00%	3.00%
50	12.00%	6.50%	10.00%	5.00%	5.00%	3.00%
55	12.00%	4.00%	5.00%	4.00%	4.00%	2.00%
60	12.00%	1.50%	2.00%	1.50%	1.50%	1.50%

**Annual Pay Increases (FE)**

Sample rates:

Age	Rate
20	5.50%
25	4.50%
30	4.00%
35	3.50%
40	3.50%
45	3.25%
50	3.25%
55+	3.00%

**Payment Form Election (FE)**

Life Annuity  
Lump Sum

100%  
0%

**Expense and/or Contingency Loading (FE)**

The Normal Cost is increased by \$35,000 to cover anticipated administrative expenses paid from the trust during the 2017 plan year.

**Marital Status and Ages (FE)**

100% of Participants assumed to be married with wives assumed to be 3 years younger than husbands.

FE indicates an assumption representing an estimate of future experience

MD indicates an assumption representing observations of estimates inherent in market data

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data