

**BAY COUNTY EMPLOYEES' RETIREMENT SYSTEM
ANNUAL ACTUARIAL VALUATION REPORT
FOR COUNTY EMPLOYERS OTHER THAN BABH
DECEMBER 31, 2015**

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September 23, 2016

Board of Trustees
Bay County Employees'
Retirement System
Bay City, Michigan

**Re: Bay County Employees' Retirement System - excluding BABH Actuarial Valuation
as of December 31, 2015**

Dear Board Members:

The results of the December 31, 2015 Annual Actuarial Valuation of the Bay County Employees' Retirement System - excluding BABH are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The computed contribution rate shown on page A-1 may be considered as a minimum contribution rate that complies with the Board's funding policy. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered.

The purposes of the valuation are to measure the System's funding progress, and to determine the employer contribution rate for the fiscal year ending December 31, 2017. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The findings in this report are based on data and other information through December 31, 2015. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The valuation was based upon information furnished by the County, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the County.

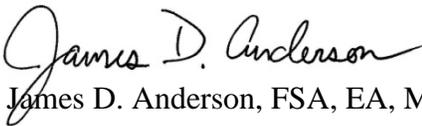
In addition, this report was prepared using certain assumptions approved by the Board, as described in the section of this report entitled Actuarial Cost Methods and Actuarial Assumptions.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Bay County Employees' Retirement System - excluding BABH as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

James D. Anderson and Shana M. Neeson are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,



James D. Anderson, FSA, EA, MAAA



Shana M. Neeson, ASA, MAAA

JDA/SMN:sc

SECTION A
EXECUTIVE SUMMARY

1. Required Employer Contributions - Fiscal Year Beginning January 1, 2017

The computed employer contributions **exclusive of employer paid "member" contributions** are as follows:

Division	Valuation Year Fiscal Year	Contribution Rate [#]	
		12/31/2014 1/1/2016	12/31/2015 1/1/2017
General County		0.00 %	0.00 %
DWS		14.16	12.83
Library*		\$ 34,265	\$ 57,008
Medical Care Facility		2.87 %	0.27 %
Sheriff's Department		0.00	0.00
Road Commission		18.09	19.19

* Beginning with the 2013 valuation, the Library contribution is calculated as a level dollar amount, since the Library is closed to future hires.

Beginning with the 2015 valuation, BABH results are provided in a separate report.

It is important to remember that the current contribution rates for General County, Library, Medical Care Facility, and Sheriff's Department are lower than the long-term cost of the plan (the normal cost). This is because these divisions have overfunding credits. The credits reduce the required contributions below the normal costs until the overfunding is eliminated. ***If future experience were to exactly match each of the assumptions, the employer contribution rates would not remain level. Increases would occur over time and contribution rates would increase towards the normal cost or long-term cost of the benefits.***

2. Funded Ratio Comparison

The funding percentage for each of the valuation groups are shown below.

Division	Funded Ratio	
	12/31/2014	12/31/2015
General County	112 %	116 %
DWS	81	82
Library	106	105
Medical Care Facility	108	112
Sheriff's Department	123	123
Road Commission	86	86

This year for all employment divisions combined, excluding BABH, valuation assets represent 108.7% of accrued liabilities; last year the ratio was 106.4%. If the valuation results were based on market value of assets instead of smoothed funding value, the funded percent of the plan would be 110.5%.

3. Reasons for Change

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

There were no changes to valuation assumptions or methods for the 2015 valuation. The Sheriff's Department first reported, for this valuation, a correction to the benefit multiplier for Road Patrol Supervisory Unit members hired before 1/1/2012. There were no other changes in benefit provision reported.

4. 2015 Plan Experience

The aggregate experience during 2015 was favorable, with an overall gain/(loss) of \$5,125,396. The gain/(loss) information is shown separately for each group on page B-7.

Investment return on the market value of assets for calendar year 2015 was less than the assumed rate of return for the valuation. However, the asset smoothing method only recognizes 20% of a given year's investment gain or loss. Partial recognition of gains from prior years were enough to completely offset this year's loss along with the continued phase-in of investment losses from prior years, resulting in the investment gain on the smoothed value of assets as shown below. The experience gain on investments and all other experience is quantified below (for County Employers other than BABH). The non-investment experience gain was due to more retiree deaths than expected and greater member termination than expected. This gain was partially offset by a loss on pay (due to actual pay increases being greater than assumed) for all groups but the Medical Care Facility.

Experience for County Employers other than BABH

Investment Gain/(Loss)	\$2,202,020
Non-investment Gain/(Loss)	<u>2,923,376</u>
Gain/(Loss) from all causes	\$5,125,396

5. Retiree Reserve Balance

The retiree accrued liabilities for all divisions are larger than the reported retiree reserve balances. For detail see Comment A on page B-5.

6. Looking Ahead

Investment income greater than or less than expected based on the investment return assumption, is recognized over a 5-year period under the current asset valuation method. Due to favorable investment performance during three of the previous five years, unrecognized investment gains exist that are scheduled to be recognized over the next four years. As a result, the funding value of assets was 98% of market value as of December 31, 2015. Furthermore, absent future actuarial losses, this is expected to put downward pressure on the required contribution amounts in the near term.

SECTION B

VALUATION RESULTS AND COMMENTS

Financial Objective

The financial objective of the Retirement System is to establish and receive contributions, expressed as a percentage of active member payroll, which will remain approximately level from year-to-year and will not have to be increased for future generations of citizens.

Your annual actuarial valuations determine how well the objective is being met.

The Board of Trustees of the Bay County Employees' Retirement System confirms that the System provides for payment of the required employer contribution as described in Section 20m of Michigan Public Act No. 728 of 2002.

Contribution Rates

The Retirement System is supported by contributions from the employers, by member contributions and by the investment income earned on System assets. For some divisions, the required member contributions are paid by the Employer either through contributions to the System or by transferring funds from the employer reserves to the employee reserves. In addition, the Employer provides an actuarially determined contribution.

Member and Employer contributions cover both (i) normal cost, and (ii) the financing of the unfunded accrued liability over a period of future years. The normal cost is the portion of System costs allocated to the current year by the valuation method described on page D-1. The unfunded accrued liability is the portion of System costs not covered by present System assets and future normal costs.

The contribution requirements for the fiscal year beginning January 1, 2017 are presented on page B-2.

**Contributions to Provide Benefits
Member Portion and Employer Portion
Fiscal Year Beginning January 1, 2017**

Contributions for	% of Active Payroll						
	General County	DWS	Library*	Medical Care Facility	Sheriff's Department	Road Commission	Total
Normal cost of benefits:							
Age & service	9.46 %	10.50 %	\$ 155,639	9.66 %	13.27 %	13.09 %	10.38 %
Disability	0.29	0.27	3,521	0.38	1.50	0.76	0.48
Death-in-service	0.25	0.28	4,547	0.16	0.32	0.50	0.26
Total	10.00	11.05	163,707	10.20	15.09	14.35	11.12
Member contributions#:							
Total	4.18	4.00	58,676	4.00	5.60	4.76	4.35
Future refunds	0.11	0.08	7,041	0.03	0.16	0.18	0.11
Available for pensions	4.07	3.92	51,635	3.97	5.44	4.58	4.24
Administrative expenses	0.40	0.40	5,868	0.40	0.40	0.40	0.40
Employer normal cost	6.33	7.53	117,940	6.63	10.05	10.17	7.28
Unfunded accrued liability	(11.08)	5.30	(60,932)	(6.36)	(18.69)	9.02	
Computed Employer Rate	0.00	12.83		0.27	0.00	19.19	
Computed Employer \$ Contribution Amount			\$ 57,008				\$ 1,088,320

For certain divisions, the member contributions are paid by the employer, either by directly contributing to the Retirement System or by transferring funds from employer reserves to employee reserves.

* Beginning with the 2013 valuation, the Library contribution is calculated as a level dollar amount, since the Library is closed to future hires.

Unfunded actuarial accrued liabilities were amortized as a level dollar amount for the Library and as a level percent of member payroll for all other groups over a closed period of 27 years and asset surpluses were amortized over an open period of 10 years.

The procedure for determining dollar contribution amounts is shown on page B-3.

Page B-4 displays the unfunded accrued liabilities (asset surpluses) that are amortized by the contribution rates shown above.

Determining Dollar Contributions

For any period of time, the percent-of-payroll contribution rates need to be converted to dollar amounts. We recommend one of the following procedures:

- (1) Contribute dollar amounts for a period which are equal to the employer's percent-of-payroll contribution requirement multiplied by the covered active member payroll for the period. Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Retirement System benefits and to include non-payroll payments that are covered compensation; or
- (2) Contribute the dollars for each group based on the table shown below.

Group:	General County	DWS	Library	Medical Care Facility	Sheriff's Department	Road Commission	Total
Contribution:	\$ -	\$ 400,420	\$ 57,008	\$ 28,937	\$ -	\$ 601,955	\$ 1,088,320

These amounts are based on the payroll information provided for the valuation.

Timing of Contribution Payments

The contribution requirements in this report anticipate regular payments throughout the year. Examples would be at each payroll date or in 12 monthly installments. If the employer contribution pattern is significantly different, an adjustment to the costs may be appropriate. For example, a lump sum contribution at the beginning of the year is available for investment throughout the year and, therefore, ought to be somewhat smaller than 12 monthly payments. Similarly, a lump sum contribution at the end of the year will not generate any investment income that year.

Determination of Unfunded Accrued Liability

	General County	DWS	Library	Medical Care Facility	Sheriff's Department	Road Commission	Total
A. Accrued liability							
1. For retirees and beneficiaries	\$ 53,273,471	\$ 9,606,595	\$ 6,365,927	\$ 28,699,569	\$ 15,108,455	\$ 23,287,573	\$ 136,341,590
2. For vested terminated members	2,613,289	21,832	302,576	592,030	313,776	98,976	3,942,479
3. For present active members							
a. Value of expected future benefit payments	49,419,550	7,922,188	5,512,921	26,476,254	19,202,463	12,863,230	121,396,606
b. Value of future normal costs	11,201,490	2,452,420	1,320,257	7,818,843	5,499,369	4,245,683	32,538,062
c. Active member liability: (a) - (b)	<u>38,218,060</u>	<u>5,469,768</u>	<u>4,192,664</u>	<u>18,657,411</u>	<u>13,703,094</u>	<u>8,617,547</u>	<u>88,858,544</u>
4. Total actuarial accrued liability	94,104,820	15,098,195	10,861,167	47,949,010	29,125,325	32,004,096	229,142,613
B. Valuation assets	108,740,536	12,349,491	11,349,968	53,512,212	35,812,264	27,399,419	249,163,890
C. Unfunded accrued liability (Excess assets): (A.4) - (B)							
	(14,635,716)	2,748,704	(488,801)	(5,563,202)	(6,686,939)	4,604,677	(20,021,277)
D. Funding ratio: (B) / (A.4)	115.6%	81.8%	104.5%	111.6%	123.0%	85.6%	108.7%

Comments

COMMENT A: We developed the value of anticipated future benefit payments to retired members and their beneficiaries. We then compared this accrued liability to the reported value of the retirement reserve account. The figures below compare the retired liabilities and reserves for each division.

Division	Retiree Accrued Liability	Reported Retiree Reserve	Unfunded Retiree Liability
General County	\$ 53,273,471	\$ 51,973,294	\$ 1,300,177
DWS	9,606,595	9,172,562	434,033
Library	6,365,927	5,923,767	442,160
Medical Care Facility	28,699,569	26,777,096	1,922,473
Sheriff's Department	15,108,455	14,850,209	258,246
Road Commission	23,287,573	19,839,730	3,447,843
Total	\$136,341,590	\$128,536,658	\$7,804,932

As of the valuation date, there is a shortfall in the retiree reserve for all groups. This valuation anticipates that the difference between the accrued liability and the reported reserve will be transferred from the Retirement System employer reserve to the retiree reserve effective January 1, 2016 to fully fund the retiree accrued liability.

COMMENT B: Contribution rates changed during the year for various reasons. In particular, all divisions experienced the impact of favorable investment performance. Demographic experience varied by division, but overall there was a mortality gain due to more retiree deaths/benefit terminations than expected. In addition, there was an overall pay loss, from higher than expected payroll increases.

Four groups in the Retirement System are anticipated to come out of an overfunded position (assets exceeding liabilities) in the coming years. When this happens, contribution rates can increase significantly from one year to the next as they approach the long-term cost of the plan. In the long run, as the overfunding is used up the contributions will increase towards the normal cost or long-term cost of the benefits. One prudent practice to dampen contribution volatility is to lengthen the period for amortizing credits from the current period of 10 years, before the credit disappears.

Comments

COMMENT C: The chart on page B-8 shows the experience gain/(loss) for 2015. While overall experience was favorable, the employer contributions increased for the Library and the Road Commission. The increases were primarily attributable to the following items:

Library

- A loss on pay (due to actual pay increases being greater than assumed); and
- A loss on new retirements from larger than expected service credits at retirement.

Road Commission

- A loss on pay (due to actual pay increases being greater than assumed).

The employer contribution decreased for DWS and the Medical Care Facility. The decreases were primarily attributable to the following items:

DWS

- A significant number of new hires, which in turn increased the total payroll for the group. As a result, the portion of the contribution associated with the unfunded accrued liability was significantly reduced on a percent of payroll basis.

Medical Care Facility

- A gain on pay (due to actual pay increases being less than assumed); and
- A gain on retired member mortality (due to more retiree deaths than expected).

The development of the investment gain/(loss) is shown on page B-8.

COMMENT D: The introduction of GASB Statements No. 67 and No. 68 served to completely disconnect pension accounting from pension funding. This means that the Annual Required Contribution is no longer applicable. As part of good governance, we would be happy to supply the Board with a draft funding policy for consideration. In particular, this document would codify methods, assumptions and other key items related to pension funding, including perhaps a minimum contribution equal to a percentage of the normal cost for plans that are currently overfunded.

COMMENT E: This valuation completely separates Bay-Arenac Behavioral Health Authority (BABH) results from those for the other County groups for the first time -- reflecting the County provided legal opinion in 2015 that the Retirement System is an Agent Multiple Employer plan with separate assets for two agent employers: 1) BABH and 2) all other County groups.

Disclosures

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the DWS and Road Commission contribution allocation procedures, if all actuarial assumptions are met (including the assumption of the plan earning 7.5% on the actuarial value of assets), then the following outcomes are expected, for the above mentioned groups:

1. The employer normal cost as a percentage of pay is expected to remain level as a percentage of payroll.
2. The unfunded liability is expected to be paid off in approximately 27 years, which is the number of years remaining in the closed amortization schedule of the unfunded liability. The funded status of the plan is expected to reach a 100% funded ratio in approximately 27 years, which is the number of years remaining in the closed amortization schedule of the unfunded liability.
3. The funded status of the plan is expected to decrease gradually towards a 100% funded ratio

Given the General, Library, Medical Care Facility, and Sheriff's contribution allocation procedures, if all actuarial assumptions are met (including the assumption of the plan earning 7.5% on the actuarial value of assets), then the following outcomes are expected, for the above mentioned groups:

1. For General, Medical Care Facility and Sheriff groups -- the employer normal cost as a percentage of pay is expected to remain level as a percentage of payroll.
2. For the Library, the Normal cost is calculated as a level dollar amount due to the closure of the plan to future Library active members.
3. The funded status of the plan is expected to decrease gradually towards a 100% funded ratio.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regards to any funded status measurements presented in this report:

1. The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.
2. The measurement is inappropriate for assessing the need for or the amount of future employer contributions.
3. The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

Determination of Experience Gain/(Loss) Year Ended December 31, 2015

Actual experience will never (except by coincidence) exactly match assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the determination of the experience gain/(loss) is shown below:

	General County	DWS	Library	Medical Care Facility	Sheriff's Department	Road Commission	Total
(1) UAAL at start of year	\$ (11,006,822)	\$ 2,838,639	\$ (636,789)	\$ (3,584,106)	\$ (6,405,940)	\$ 4,455,066	\$ (14,339,952)
(2) Normal cost for the year 2015	1,616,629	321,354	188,828	1,071,505	624,560	434,553	4,257,429
(3) Actual employer & employee contributions	(1,219,540)	(527,597)	(196,284)	(859,625)	(228,768)	(724,610)	(3,756,424)
(4) Net interest accrual on (1), (2) and (3)	(810,800)	205,257	(48,035)	(260,958)	(465,782)	323,384	(1,056,934)
(5) Expected UAAL before changes: (1) + (2) + (3) + (4)	(11,420,533)	2,837,653	(692,280)	(3,633,184)	(6,475,930)	4,488,393	(14,895,881)
(6) Change from benefit changes	-	-	-	-	-	-	-
(7) Change from revised actuarial assumptions or methods	-	-	-	-	-	-	-
(8) Expected UAAL after changes: (5) + (6) + (7)	(11,420,533)	2,837,653	(692,280)	(3,633,184)	(6,475,930)	4,488,393	(14,895,881)
(9) Actual UAAL at end of year	(14,635,716)	2,748,704	(488,801)	(5,563,202)	(6,686,939)	4,604,677	(20,021,277)
(10) Gain/(Loss): (8) - (9)	3,215,183	88,949	(203,479)	1,930,018	211,009	(116,284)	5,125,396
(11) Actuarial accrued liabilities at start of year	93,450,950	14,574,768	10,253,476	47,726,386	27,793,066	31,276,038	225,074,684
(12) Gain/(Loss) as a percent of actuarial accrued liabilities at start of year: (10)/(11)	3.4%	0.6%	(2.0)%	4.0%	0.8%	(0.4)%	2.3%
(13) Investment Gain/(Loss)	960,884	108,554	100,236	472,436	315,540	244,370	2,202,020
(14) Gain/(Loss) from all other causes	2,254,299	(19,605)	(303,715)	1,457,582	(104,531)	(360,654)	2,923,376

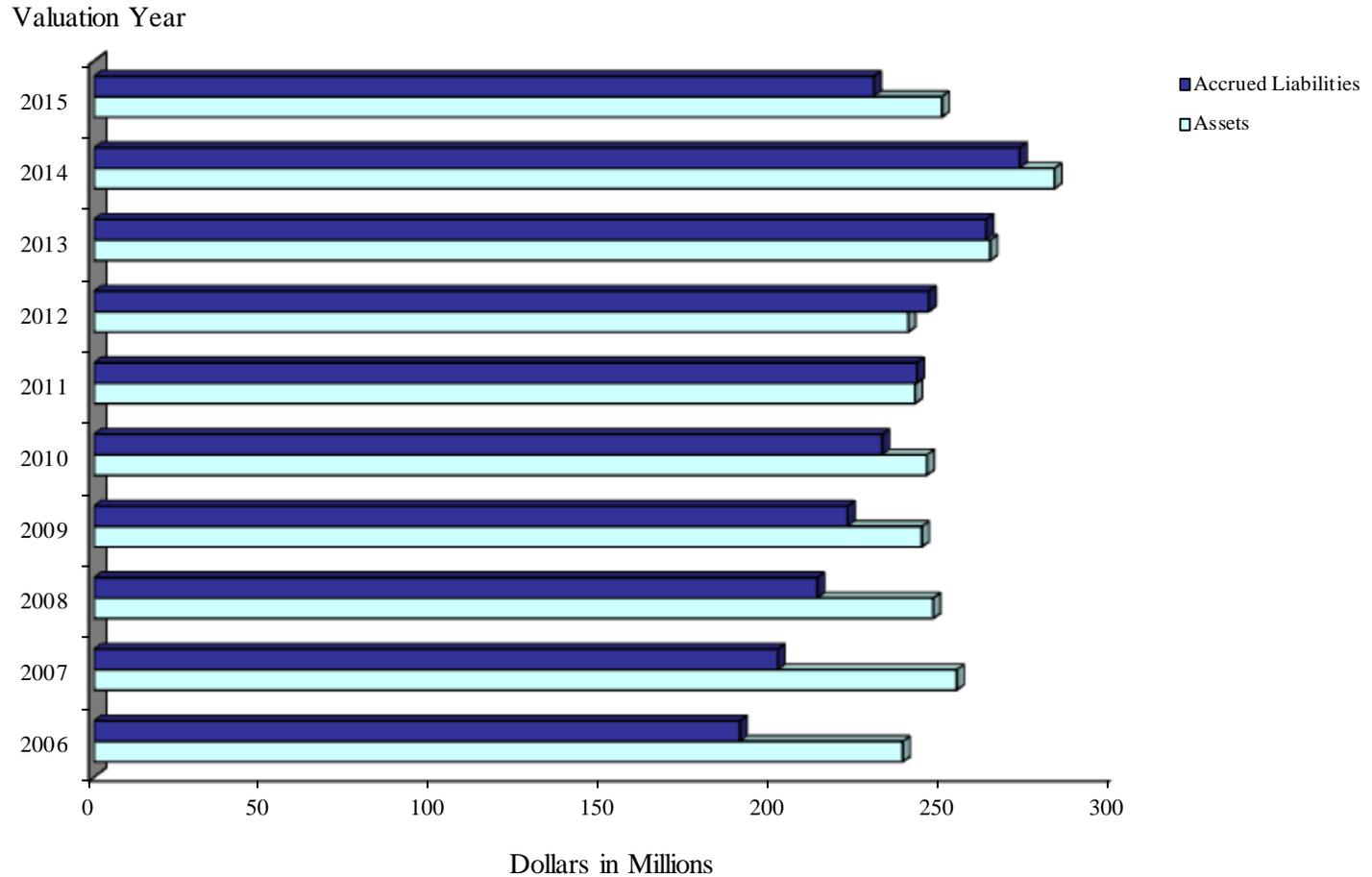
Development of Valuation Investment Gain/(Loss) Year Ended December 31, 2015

We anticipate an average return on valuation assets of 7.5% for future years. The chart below details the development of the investment gain/(loss) for the entire Bay County Employees' Retirement System, including BABH.

(1) Total 2015 valuation investment income:	\$ 23,411,545
(2) Average valuation assets:	277,406,544
(3) Expected investment income: $(.075) \times (2)$	20,805,491
(4) Gain/(Loss): $(1) - (3)$	2,606,054
(5) Valuation rate of return for 2015: $(1) / (2)$	8.44 %

Please note that this analysis uses asset values and investment income as defined for the actuarial valuation. It is not, therefore, appropriate as a measure of manager performance.

Assets & Accrued Liabilities



For Valuation Years prior to 2015, the results displayed are for the entire Retirement System (including BABH). Beginning with the Valuation Year 2015, the results displayed are for the Retirement System (excluding BABH).

2006 assets equaled 125.2% of accrued liabilities.

2015 assets equaled 108.7% of accrued liabilities.

Computed Contributions - Comparative Statement

Valuation Date	Valuation Payroll			Annual Dollar Requirement	Employer Requirements as Percents of Valuation Payroll@						
	Total	Average	% Incr.		General County	DWS+	Library+	BABH+	Medical Care Facility	Sheriff's Department	Road Commission
12/31/1996 #	\$30,646,324	\$27,835	3.4 %	\$ 430,513	0.00 %				1.69 %	0.00 %	12.76 %
12/31/1997 #	32,216,234	28,739	3.2	248,762	0.00				0.00	0.00	9.15
12/31/1998 #	34,308,505	29,885	4.0	45,010	0.00				0.00	0.00	1.67
12/31/1999 #	35,763,978	31,072	4.0	0	0.00				0.00	0.00	0.00
12/31/2000 #	38,314,967	32,090	3.3	0	0.00				0.00	0.00	0.00
12/31/2001 #*	39,761,644	33,218	3.5	0	0.00	0.00 %	0.00 %	0.00 %	0.00	0.00	0.00
12/31/2002	41,331,916	33,658	1.3	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/31/2003 *	43,053,950	35,175	4.5	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/31/2004 #	43,550,999	36,202	2.9	405,110	0.00	0.00	0.68	1.11	0.00	0.00	8.19
12/31/2005	43,104,046	36,010	(0.5)	588,948	0.00	0.00	1.60	2.53	0.00	0.00	9.34
12/31/2006 #	42,024,045	37,455	4.0	644,945	0.00	0.00	0.00	3.24	0.00	0.00	10.82
12/31/2007 #	44,687,752	39,269	4.8	688,871	0.00	0.00	0.00	3.70	0.00	0.00	9.17
12/31/2008	46,482,897	39,695	1.1	1,578,548	0.00	4.44	0.00	6.95	2.32	0.00	14.13
12/31/2009 ^	47,244,573	40,208	1.3	2,443,118	0.00	7.40	2.74	8.83	5.05	0.00	17.64
12/31/2010	47,090,560	40,771	1.4	3,074,891	1.19	11.71	6.91	9.08	7.36	0.00	18.05
12/31/2011 #	48,583,176	41,702	2.3	4,289,438	4.08	13.77	9.89	10.17	9.57	0.00	20.78
12/31/2012 *	48,571,798	41,444	(0.6)	4,038,100	3.87	15.75	9.26	10.01	7.22	0.55	21.32
12/31/2013 #	44,535,708	39,447	(4.8)	4,477,504	0.03	15.72	\$ 89,491	27.04	4.20	0.00	19.14
12/31/2014	46,494,417	40,081	1.6	2,535,295	0.00	14.16	34,265	11.36	2.87	0.00	18.09
12/31/2015	36,658,462	39,760	N/A	1,088,320	0.00	12.83	57,008		0.27	0.00	19.19

For Valuation Dates prior to 2015, the results displayed are for the entire Retirement System (including BABH). Beginning with the 2015 Valuation Date, the results displayed are for the Retirement System (excluding BABH).

+ Prior to 12/31/2001 included with General County.

Retirement System amended.

* Revised actuarial assumptions or methods.

^ Implementation of a one-year lag between valuation date and first day of the fiscal year to which the contributions apply.

@ Beginning with the 2013 valuation, the Library contribution is calculated as a level dollar amount, since the Library is closed to future hires.

\$ Contribution reflects an advanced payment of the BABH unfunded ERIP liability.

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

Brief Summary of Plan Provisions as of December 31, 2015

Division		Retirement Eligibility		
No.	Name	Normal	Early	Deferred
1	Elected Officials and Department Heads	Age 55 with 30 yrs of svc or age 60 with 8/10* yrs of svc	Age 55 with 8/10* yrs of svc	8/10* yrs of svc
2	Judges			
3	General County			
4	General Circuit Court			
5	General District Court			
6	General Probate Court			
7	BCAMPS			
8	USWA General			
9	USWA Part-Time Employees			
15	District Court AFSCME			
10	Nurses	Age 55 with 30 yrs of svc or age 60 with 8/10# yrs of svc	Age 55 with 8/10# yrs of svc	8/10# yrs of svc
16	Probate Court USWA	Age 55 with 30 yrs of svc or age 60 with 8 yrs of svc	Age 55 with 8 yrs of svc	8 yrs of svc
18	Library - Employee Members of UWUA Local 542	Age 55 with 30 yrs of svc or age 60 with 8/10! yrs of svc	Age 55 with 8/10! yrs of svc	8/10! yrs of svc
19	General Library			
30	ICEA/PERA 1203			
31	ICEA/PERA 612			
14	Circuit Court Govt. Employees Labor Council (GELC)	Age 55 with 30 yrs of svc or age 60 with 8/10@ yrs of svc	Age 55 with 8/10@ yrs of svc	8/10@ yrs of svc
32	Road Patrol Supervisory Unit	25 yrs of svc regardless of age or age 60 with 8/10@ yrs of svc	Age 55 with 8/10@ yrs of svc	8/10@ yrs of svc
11	Sheriff - Road Patrol	25 yrs of svc regardless of age or age 60 with 8/10* yrs of svc	Age 55 with 8/10* yrs of svc	8/10* yrs of svc
12	Sheriff Correctional Facility Officers	Age 55 with 25 yrs of svc or age 60 with 8/10* yrs of svc	25 yrs of svc regardless of age or age 55 with 8/10* yrs of svc	8/10* yrs of svc
13	Dispatchers	30 yrs of svc regardless of age, age 55 with 25 yrs of svc, or age 60 with 8/10* yrs of svc	25 yrs of svc regardless of age or age 55 with 8/10* yrs of svc	8/10* yrs of svc
20	Medical Care Facility United Steel Workers Local 15301	30 yrs of svc regardless of age, age 55 with 25+ yrs of svc, or age 60 with 8/10\$ yrs of svc	Age 55 with 8/10\$ yrs of svc	8/10\$ yrs of svc
21	Medical Care Facility RN & LPN Nursing Council - USW 15301-01			
22	General Medical Care Facility			
25	Road Commission AFSCME Local 1096	30 yrs of svc regardless of age or age 60 with 8/10* yrs of svc	Age 55 with 8/10* yrs of svc	8 yrs of svc
26	Road Commission Class I Supervisory and Admin. Employees			
28	Water and Sewer UWUA Local 546	30 yrs of svc regardless of age or age 60 with 8/10^ yrs of svc	Age 55 with 8/10^ yrs of svc	8/10^ yrs of svc
29	Water and Sewer General			

@ 10 yrs of svc for members hired after 1/1/2006.

* 10 yrs of svc for members hired after 1/1/2007.

10 yrs of svc for members hired after 3/1/2007.

^ 10 yrs of svc for members hired after 7/1/2008.

! 10 yrs of svc for members hired after 3/1/2008.

\$ 10 yrs of svc for members hired on or after 7/30/2015.

+ Members hired before 7/30/2015 only.

Brief Summary of Plan Provisions as of December 31, 2015 (Continued)

Eligibility	Amount
NORMAL RETIREMENT	
See prior page.	<p>Total service times FAC times:</p> <ul style="list-style-type: none"> 2.25% for divisions 1-10, 14, 16 hired before 1/1/2012 2.25% for divisions 18, 19, and 28-31 2.25% for divisions 20-22 hired before 7/30/2015 2.50% for divisions 12, 13, and 15 hired before 1/1/2012 2.80% for divisions 11 and 32 hired before 1/1/2012 1.60% for divisions 1-16, and 32 hired on or after 1/1/2012* 1.75% for division 20-22 hired on or after 7/30/2015 2.50% for division 26 hired before 1/1/1996 2.50% for division 26 hired on or after 1/1/1996 for service through 3/31/2011 and 2.25% for service after 3/31/2011 2.50% for division 25 hired before 1/1/2011 2.25% for division 25 hired on or after 1/1/2011 <p>Maximum County-financed is 75% of FAC.</p> <p>Type of FAC - Highest 5 years. Some lump sums included.</p>
EARLY RETIREMENT	
See prior page.	Normal retirement reduced to the actuarial equivalent of a pension at normal retirement age.
DEFERRED RETIREMENT	
Service condition as indicated on page C-1. Benefit begins at age 60 or reduced at age 55.	Computed as a normal retirement but based on service and final average compensation at time of termination.
NON-DUTY DEATH IN SERVICE	
10 or more years of credited service at any age.	Computed as a normal retirement but actuarially reduced in accordance with a 100% joint and survivor election.
DUTY DEATH IN SERVICE	
No age or service requirements. Benefits begin upon termination of Worker's Compensation.	To the spouse, a refund of accumulated contributions plus a benefit equal to the Worker's Compensation amount. Unmarried children under 18 and parents receive a benefit equal to the Worker's Compensation amount.

* Three members hired after 1/1/2012 continue to be eligible for the multiplier and member contribution rate in effect prior to the implementation of the 1.60% multiplier and 4% member contribution rate for members hired after 1/1/2012.

Brief Summary of Plan Provisions as of December 31, 2015 (Concluded)

Eligibility	Amount
NON-DUTY DISABILITY	
10 or more years of credited service.	Computed as a normal retirement. Worker's Compensation payments may be offset.
DUTY DISABILITY	
No age or service requirements.	Computed as a normal retirement with additional service credit granted to age 55. Worker's Compensation payments may be offset.
POST-RETIREMENT COST-OF-LIVING ADJUSTMENTS	
One-time increases have been granted.	
MEMBER CONTRIBUTIONS	
For members hired before 1/1/2012, 6% of annual compensation for: Sheriff-Road Patrol (div. 11) Sheriff Correctional Facility Officers (div. 12) Road Patrol Supervisory Unit (div. 32) Dispatchers (div. 13) District Court AFSCME (div. 15) 4% of annual compensation for groups 11-13, 15, and 32 hired on or after 1/1/2012*. 5% of annual compensation for Road Commission local 1096 (div. 25). 4% of annual compensation for remaining groups. For certain employee groups, the employer pays the member contribution either by directly contributing to the Retirement System or by transferring funds from the employer to the employee reserves.	
EMPLOYER CONTRIBUTIONS	
Actuarially determined amounts which, together with member contributions, are sufficient to cover both (i) normal costs of the plan, and (ii) financing of unfunded accrued liabilities over a selected period of future years.	
RETIREMENT SYSTEM ELIGIBILITY	
Library members hired on or after January 1, 2012 are no longer eligible to participate in the Bay County Employees' Retirement System - excluding BABH.	
* <i>Three members hired after 1/1/2012 continue to be eligible for the multiplier and member contribution rate in effect prior to the implementation of the 1.60% multiplier and 4% member contribution rate for members hired after 1/1/2012.</i>	

Reported Financial Information
Year Ended December 31, 2015
Bay County Employees' Retirement System (in Total)
(Market Value)

Revenues and Disbursements during 2015

Revenues:

a. Employee contributions	\$ 2,011,545	
b. Employer contributions	5,175,435	
c. Investment income	4,145,569	
d. Miscellaneous income	<u>200,782</u>	
e. Total		\$11,533,331

Disbursements:

a. Benefits paid	\$ 16,234,642	
b. Refunds of member contributions	191,002	
c. Administrative expenses	280,388	
d. Investment expenses	<u>2,019,963</u>	
e. Total		<u>\$18,725,995</u>

Reserve Increase:

Total revenues minus total disbursements	<u><u>\$ (7,192,664)</u></u>
--	------------------------------

Assets and Reserves as of December 31, 2015

Assets:

a. Cash & equivalents [#]	\$ (1,446,265)
b. Short term investments	9,294,022
c. Stocks	202,479,541
d. Bonds	71,868,081
e. Real Estate	18,369,420
f. Other [^]	<u>383,430</u>
Total	<u><u>\$300,948,229</u></u>

Reserve Accounts:

a. Employee contributions	\$ 28,067,302
b. Reserve for benefits now being paid	157,024,010
c. Reserve for future benefits	115,856,917
Total	<u><u>\$300,948,229</u></u>

[#] Adjusted for accruals net of payables and deferred inflows of resources.

[^] Adjusted for deferred outflow of resources.

Development of Valuation Assets
Bay County Employees' Retirement System (in Total)
December 31, 2015

	2014	2015	2016	2017	2018	2019
1. Beginning of Year Assets						
a) Market Value	\$295,388,098	\$308,140,893				
b) Valuation Assets	263,364,669	282,166,070				
2. End of Year Market Value Assets	308,140,893	300,948,229				
3. Net Additions to Market Value						
a) Net Contributions	5,732,872	7,186,980				
b) Net Investment Income = (3d) - (3a) - (3c)	23,163,865	2,326,388				
c) Benefit Payments, Refunds, and Admin. Expenses	(16,143,942)	(16,706,032)				
d) Total Additions to Market Value = (2) - (1a)	12,752,795	(7,192,664)				
4. Average Valuation Assets =						
(1b) + .5 x [(3a) + (3c)]	258,159,134	277,406,544				
5. Expected Income at Valuation Rate = 7.5% x (4)	19,361,935	20,805,491				
6. Gain/(Loss) = (3b) - (5)	3,801,930	(18,479,103)				
7. Phased-In Recognition of Investment Return						
a) Current Year: 0.2 x (6)	760,386	(3,695,821)				
b) First Prior Year	7,666,474	760,386	\$ (3,695,821)			
c) Second Prior Year	2,058,840	7,666,474	760,386	\$ (3,695,821)		
d) Third Prior Year	(4,183,827)	2,058,840	7,666,474	760,386	\$ (3,695,821)	
e) Fourth Prior Year	3,548,663	(4,183,825)	2,058,841	7,666,475	760,386	\$ (3,695,819)
f) Total Recognized Investment Gain	9,850,536	2,606,054	6,789,880	4,731,040	(2,935,435)	(3,695,819)
8. Change in Valuation Assets						
(3a) + (3c) + (5) + (7f)	18,801,401	13,892,493				
9. End of Year Assets						
a) Market Value = (2)	308,140,893	300,948,229				
b) Valuation Assets = (1b) + (8)	282,166,070	296,058,563				
c) Difference Between Market & Valuation Assets	25,974,823	4,889,666	(1,900,214)	(6,631,254)	(3,695,819)	0
10. Recognized Rate of Return = [(5) + (7f)] / (4)	11.32 %	8.44 %				
11. Market Rate of Return = 2 x (3b) / [(1a) + (2) - (3b)]	7.98 %	0.77 %				
12. Market Value of Assets for County Employers Other Than BABH		253,279,049				
13. Funding Value of Assets for County Employers Other Than BABH		249,163,890				

Retirees and Beneficiaries Comparative Schedule

Year Ended	Added to Rolls*		Removed from Rolls		Rolls End of Year		% Incr. in Annual Allowances	Average Allowance	Discounted Value of Allowances	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances [#]			Total	Average
12/31/1991	29	\$ 358,208	15	\$ 43,361	334	\$ 1,741,147	22.1	\$ 5,213	\$ 16,803,661	\$ 50,310
12/31/1992	15	157,350	4	8,780	345	1,889,717	8.5	5,477	18,909,686	54,811
12/31/1993	27	306,059	3	16,365	369	2,179,407	15.3	5,906	21,666,249	58,716
12/31/1994	18	131,596	14	50,875	373	2,260,128	3.7	6,059	22,112,422	59,283
12/31/1995	24	261,820	12	31,551	386	2,490,397	10.2	6,452	24,080,999	62,386
12/31/1996	29	404,810	7	55,615	408	2,839,592	14.0	6,960	27,838,060	68,231
12/31/1997	28	392,818	8	44,327	428	3,188,083	12.3	7,449	31,558,085	73,734
12/31/1998	24	393,550	7	46,973	445	3,534,660	10.9	7,943	34,794,848	78,191
12/31/1999	23	295,915 @	29	83,717	439	3,746,858	6.0	8,535	36,670,326	83,531
12/31/2000	46	645,474	27	201,656	458	4,190,676	11.8	9,150	40,970,172	89,455
12/31/2001	31	732,306 @	13	45,724	476	4,877,258	16.4	10,246	46,616,261	97,933
12/31/2002	34	464,636	18	126,234	492	5,215,660	6.9	10,601	49,634,941	100,884
12/31/2003	37	514,935	17	72,960	512	5,657,635	8.5	11,050	53,369,747	104,238
12/31/2004	95	2,073,773	16	133,099	591	7,598,309	34.3	12,857	74,362,328	125,825
12/31/2005	43	786,641	26	170,645	608	8,214,306	8.1	13,510	80,594,476	132,557
12/31/2006	39	844,464	24	579,276	623	8,479,494	3.2	13,611	85,797,333	137,716
12/31/2007	29	423,246	14	93,660	638	8,809,080	3.9	13,807	88,063,580	138,031
12/31/2008	47	725,060	26	204,104	659	9,330,036	5.9	14,158	92,573,860	140,476
12/31/2009	58	1,303,182	34	338,544	683	10,294,674	10.3	15,073	102,921,818	150,691
12/31/2010	46	1,166,301	24	210,133	705	11,250,842	9.3	15,959	112,893,161	160,132
12/31/2011	51	953,802	16	199,264	740	12,005,380	6.7	16,223	119,532,453	161,530
12/31/2012	58	1,114,368	12	127,382	786	12,992,366	8.2	16,530	126,736,278	161,242
12/31/2013	98	2,545,500	1	20,928	883	15,516,938	19.4	17,573	153,936,777	174,334
12/31/2014	35	826,083	2	10,254	916	16,332,767	5.3	17,831	159,912,340	174,577
12/31/2015	59	1,175,838	48	599,270	808	14,182,023	N/A	17,552	136,341,590	168,740

For Years Ended prior to 2015, the results displayed are for the entire Retirement System (including BABH). Beginning with the Year Ended 2015, the results displayed are for the Retirement System (excluding BABH).

* Includes survivors of deceased retirees and annual allowance adjustments.

@ Includes one-time benefit increases.

Annual Allowances based on pre-change age amount for members with applicable pension benefit types.

Retirees and Beneficiaries December 31, 2015
Tabulated by Type of Pension Paid

Type of Pensions Being Paid	Group						Total
	General	DWS	Library	MCF	Sheriff	Road	
Regular	137	5	23	93	14	14	286
A - 10-Year Certain	16	1	3	6	2	1	29
B - 100% J & S	100	21	9	57	18	50	255
C - 50% J & S	36	5	5	39	5	5	95
Social Security Equated							
- Regular	9			4	7	1	21
- 10-Year Certain				1	2		3
- 100% J & S	7			5	5	5	22
- 50% J & S	3			3	1		7
Survivor	32	1	2	13	17	25	90
Total Pensions Being Paid	340	33	42	221	71	101	808

Retirees and Beneficiaries December 31, 2015 Tabulated by Attained Age*

Attained Age	General		DWS		Library		MCF		Sheriff		Road		Total	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
35 - 39							1	\$ 13,111			1	\$ 3,960	2	\$ 17,071
40 - 44	1	\$ 13,645							1	\$ 13,389			2	27,034
45 - 49							2	26,800	3	83,972			5	110,772
50 - 54	4	54,468					5	101,472	4	124,122	7	228,071	20	508,133
55 - 59	35	778,883	1	\$ 36,903			28	584,571	7	195,649	10	403,579	81	1,999,585
60 - 64	64	1,275,007	15	543,776	6	\$ 108,042	42	619,243	14	402,737	15	527,680	156	3,476,485
65 - 69	80	1,727,418	4	78,841	16	279,327	57	806,527	15	405,713	20	510,907	192	3,808,733
70 - 74	49	825,151	6	136,449	7	183,457	30	386,479	12	208,591	8	167,900	112	1,908,027
75 - 79	43	439,742	3	42,811	7	90,371	24	219,082	4	86,617	10	162,788	91	1,041,411
80	4	38,237					5	38,861	2	32,525	4	81,081	15	190,704
81	5	41,170	1	4,468			1	3,714	2	17,523	3	38,272	12	105,147
82	7	91,041					1	3,687	1	10,996			9	105,724
83	7	66,973			1	8,045	5	39,755	2	15,631	4	60,758	19	191,162
84	4	14,648	1	15,502			2	10,400	1	17,019	5	85,750	13	143,319
85	4	27,178			1	1,715	2	10,539					7	39,432
86	3	52,972	1	8,314			1	4,715	1	14,062	2	11,806	8	91,869
87	4	54,331			2	12,386	2	19,859			3	27,407	11	113,983
88	5	26,694					3	20,713	1	9,887			9	57,294
89	7	51,342	1	16,256			2	6,488	1	10,047	1	2,937	12	87,070
90	5	26,591					1	4,944			2	8,601	8	40,136
91	3	12,177					2	13,952					5	26,129
92							1	3,259			3	20,767	4	24,026
93	1	11,816			1	3,694					2	6,257	4	21,767
94	2	8,339					1	3,517					3	11,856
95	2	6,927					1	3,964			1	12,550	4	23,441
98							1	3,355					1	3,355
99	1	2,955					1	3,161					2	6,116
103					1	2,242							1	2,242
Totals	340	\$5,647,705	33	\$883,320	42	\$689,279	221	\$2,952,168	71	\$1,648,480	101	\$2,361,071	808	\$14,182,023

* Annual Allowances based on pre-change age amount for members with applicable pension benefit types.

Average Age at Retirement: 58.3 years

Average Age Now: 70.3 years

Inactive Members

An inactive member is a person who has left County employment with entitlement to a retirement allowance after attaining voluntary retirement age. There were 57 inactive members as of December 31, 2015:

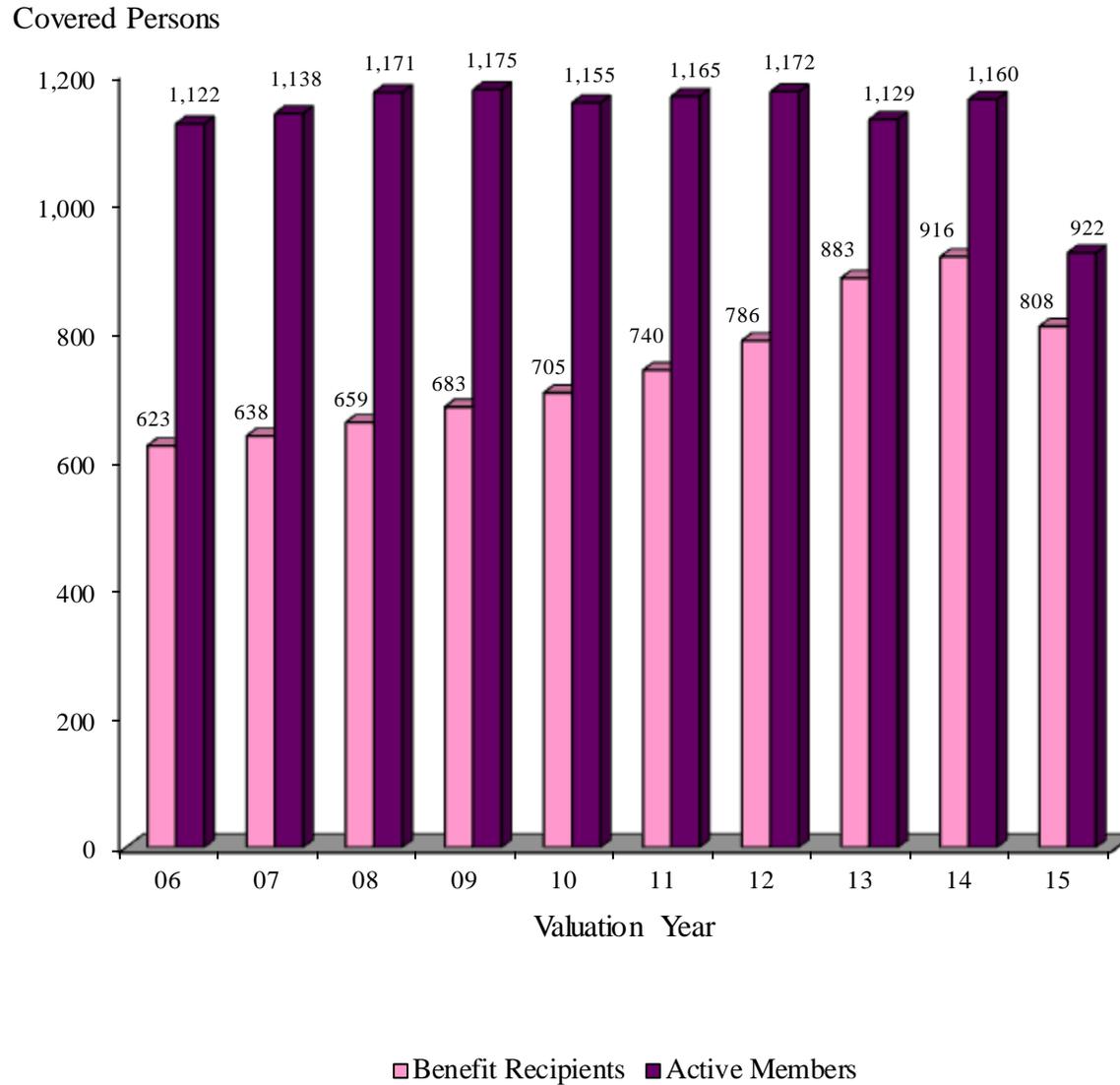
Valuation Division	Number	Estimated Annual Deferred Pensions
General County	32	\$363,013
DWS	1	4,494
Library	7	39,430
Medical Care Facility	12	105,048
Sheriff's Department	4	59,925
Road Commission	1	13,999
Total	57	\$585,909

The schedule on the next page is an age distribution of the inactive members.

**Inactive Members December 31, 2015
Tabulated by Attained Age**

Attained Age	No.	Estimated Deferred Allowances
37	2	\$ 18,828
38	2	22,176
43	1	13,998
45	5	53,966
46	1	19,056
49	6	60,757
50	4	67,409
51	2	14,234
52	2	22,851
53	5	27,708
54	5	36,427
55	3	38,218
56	4	39,280
57	2	20,073
58	3	24,551
59	4	79,182
60	4	18,939
61	1	6,216
62	1	2,040
Total	57	\$585,909

Active Members & Benefit Recipients



For Valuation Years prior to 2015, the results displayed are for the entire Retirement System (including BABH). Beginning with the 2015 Valuation Year, the results displayed are for the Retirement System (excluding BABH).

Active Members December 31, 2015 Tabulated by Valuation Division

Valuation Division	Number	Annual Payroll
General County	359	\$15,136,977
DWS	51	2,913,457
Library	34	1,557,990
Medical Care Facility	345	10,004,714
Sheriff's Department	77	4,117,072
Road Commission	56	2,928,252
Total Active Members	922	\$36,658,462

Comparative Schedule

Valuation Date	Active Members								Valuation Payroll	Average Age	Average	
	Gen.	DWS	Library	BABH	M.C.F.	Sheriff's	Road	Total			Service	Pay
12/31/1996	676				279	73	73	1,101	\$30,677,224	42.8	10.0	\$27,835
12/31/1997	688				283	76	74	1,121	32,216,234	43.1	10.0	28,739
12/31/1998	713				286	77	72	1,148	34,308,505	43.4	10.1	29,885
12/31/1999	718				284	76	73	1,151	35,763,978	43.7	10.4	31,072
12/31/2000	742				300	77	75	1,194	38,314,967	43.4	10.0	32,090
12/31/2001	465	40	63	180	296	78	75	1,197	39,761,644	43.8	10.3	33,218
12/31/2002	465	42	64	195	308	80	74	1,228	41,331,916	44.0	10.5	33,658
12/31/2003	456	41	67	206	302	76	76	1,224	43,053,950	44.7	10.7	35,175
12/31/2004	427	41	72	208	303	76	76	1,203	43,550,999	44.3	10.3	36,202
12/31/2005	429	41	74	211	293	75	74	1,197	43,104,046	44.7	10.5	36,010
12/31/2006	412	41	30	205	292	75	67	1,122	42,024,045	45.0	11.1	37,455
12/31/2007	415	39	39	216	288	74	67	1,138	44,687,752	45.3	11.3	39,269
12/31/2008	410	38	42	235	305	75	66	1,171	46,482,897	45.3	11.4	39,695
12/31/2009	407	39	45	253	297	76	58	1,175	47,244,573	45.1	11.3	40,208
12/31/2010	389	37	45	261	295	74	54	1,155	47,090,560	45.4	11.4	40,771
12/31/2011	378	38	44	274	298	77	56	1,165	48,583,176	45.3	11.2	41,702
12/31/2012	365	39	42	276	319	75	56	1,172	48,571,798	45.0	11.1	41,444
12/31/2013	351	36	41	219	350	76	56	1,129	44,535,708	44.1	10.6	39,447
12/31/2014	365	40	36	220	361	79	59	1,160	46,494,417	43.8	10.4	40,081
12/31/2015	359	51	34		345	77	56	922	36,658,462	44.2	10.9	39,760

For Valuation Dates prior to 2015, the results displayed are for the entire Retirement System (including BABH). Beginning with the 2015 Valuation Date, the results displayed are for the Retirement System (excluding BABH).

General County Active Members December 31, 2015 by Age and Years of Service

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	4							4	\$ 93,254
25-29	16	1						17	623,096
30-34	17	4	7					28	1,059,221
35-39	15	12	9	2				38	1,679,460
40-44	8	8	5	9	1			31	1,349,627
45-49	7	6	17	16	5	1		52	2,417,656
50-54	13	5	10	16	9	15	8	76	3,308,615
55-59	8	7	15	11	6	10	4	61	2,625,743
60	1			1	3		1	6	316,957
61	2			3	2	2		9	357,289
62			3		1		1	5	304,125
63		2	2		2	1		7	198,366
64	1		2	1	1		1	6	299,974
65			4		1		1	6	161,098
66	4	1	1					6	119,801
67	1	1		1				3	148,526
69			1					1	12,544
70			1	1				2	52,618
73							1	1	9,007
Totals	97	47	77	61	31	29	17	359	\$15,136,977

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 48.4 years

Service: 12.9 years

Annual Pay: \$42,164

**DWS Active Members December 31, 2015
by Age and Years of Service**

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
25-29	1							1	\$ 55,029
30-34	7	1						8	442,355
35-39	6							6	293,005
40-44	2	1	1	1				5	255,503
45-49	4	1				4		9	507,422
50-54	2	1	4	2		2		11	610,451
55-59	3			1	1		2	7	518,460
60	1		1					2	93,398
61		1						1	98,954
64		1						1	38,880
Totals	26	6	6	4	1	6	2	51	\$2,913,457

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.4 years

Service: 9.3 years

Annual Pay: \$57,127

Library Active Members December 31, 2015 by Age and Years of Service

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34	1	1						2	\$ 52,321
35-39		3		1				4	183,049
40-44		2						2	91,150
45-49		2	1	1				4	206,172
50-54		2	2		1		1	6	282,763
55-59			3	3			1	7	324,568
60				1			2	3	134,166
61		1		1				2	109,427
62				2				2	73,587
63				1				1	38,626
66			1					1	62,161
Totals	1	11	7	10	1		4	34	\$1,557,990

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 51.7 years

Service: 15.1 years

Annual Pay: \$45,823

**Medical Care Facility Active Members December 31, 2015
by Age and Years of Service**

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
15-19	16							16	\$ 188,927
20-24	48	1						49	1,125,025
25-29	32	19						51	1,335,747
30-34	24	12	5					41	970,150
35-39	13	6	4	4	1			28	936,566
40-44	14	9	2	6	6			37	1,228,336
45-49	12	5	1	3		2	2	25	848,522
50-54	8	8	6	6	4	6	2	40	1,508,807
55-59	7	5	8	6	4	3	3	36	1,190,924
60			2					2	62,556
61	2		1	1				4	82,816
62	1			1				2	49,106
63	3		1					4	103,000
64		2		1				3	199,798
65		2						2	78,303
66		1		1				2	28,806
67	1		1					2	49,882
73	1							1	17,443
Totals	182	70	31	29	15	11	7	345	\$10,004,714

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 38.7 years

Service: 7.7 years

Annual Pay: \$28,999

**Sheriff's Department Active Members December 31, 2015
by Age and Years of Service**

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-15	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	2							2	\$ 82,038
25-29	6							6	278,373
30-34	6	6						12	608,217
35-39	1	3	6	1				11	575,176
40-44	2	1	3	7	1			14	768,783
45-49	2	1	2	7	4			16	936,738
50-54			1	2	2	3		8	417,519
55-59						1		1	53,558
60			1	1				2	92,778
61					1	1		2	124,286
63						1		1	40,895
65							1	1	59,831
66							1	1	78,880
Totals	19	11	13	18	8	6	2	77	\$4,117,072

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 42.0 years

Service: 13.5 years

Annual Pay: \$53,469

**Road Commission Active Members December 31, 2015
by Age and Years of Service**

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-15	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
25-29	3	1						4	\$ 154,598
30-34	4	1	1					6	234,921
35-39	3		1					4	177,680
40-44	1	2		1				4	259,638
45-49	2	1	3	2	5	1		14	845,438
50-54	1		2	2	5	1		11	612,816
55-59		1	2	4	2	2		11	583,263
61				1				1	46,479
72		1						1	13,419
Totals	14	7	9	10	12	4		56	\$2,928,252

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.6 years

Service: 13.1 years

Annual Pay: \$52,290

SECTION D

ACTUARIAL COST METHODS AND ACTUARIAL ASSUMPTIONS

Valuation Methodology

Normal Cost/Accrued Liability. Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

- (i) the annual normal costs for each individual active member, payable from date of hire to the member's projected date of retirement, are sufficient to accumulate the actuarial present value of the member's anticipated benefit at the time of retirement; and
- (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Amortization of Unfunded Actuarial Accrued Liabilities. Unfunded Actuarial Accrued Liabilities (UAAL) or asset surpluses were amortized as a level dollar amount for the Library and as level percent-of-payroll contributions (principal and interest combined) for all other groups as follows: If the liabilities exceed the assets (unfunded liabilities), the difference is amortized over a closed period of 27 years; if the assets exceed the liabilities (overfunding) the difference is amortized over an open period of 10 years. The amortization method was first adopted for the December 31, 2012 actuarial valuation. The UAAL payment reflects any payments expected to be made between the valuation date and the date contributions determined by this report are scheduled to begin. For all divisions except Library, active member payroll was assumed to increase 3.5% for the purpose of determining the level-percent contributions.

Asset valuation method. The actuarial value equals:

- (a) Actuarial value of assets from the previous valuation, plus
- (b) employer and member contributions since the last valuation, minus
- (c) benefit payments and refunds since the last valuation, plus
- (d) estimated investment income at the assumed investment return, plus
- (e) portion of gain/(loss) recognized in the current valuation.

For the above purpose, gain/(loss) is defined as the excess during the period of the investment return on the market value of assets over the expected investment income. Twenty percent of the difference is recognized over a 5-year period in the actuarial value of assets.

This method was first adopted for the December 31, 2003 actuarial valuation.

Actuarial Assumptions Used for the Valuation

The rationale for the assumptions used in this valuation is included in the 5-year experience study ending December 31, 2011, issued July 3, 2013. All assumptions are expectations of future experience, not market measures. There were no assumption changes from the prior valuation.

Investment Return (net of investment expenses).

4.0% per year in excess of pay inflation. If pay inflation matches the assumption of 3.5%, this implies a 7.5% rate of return. This assumption was first adopted for the December 31, 2012 actuarial valuation and is used to equate the value of payments due at different points in time. Approximate rates of investment return, for the purpose of comparisons with assumed rates, are shown below for the Bay County Employees' Retirement System (in total). Actual increases in average active member pay for the Bay County Employees' Retirement System (in total) are also shown for comparative purposes.

	<u>Year Ended December 31</u>					<u>5-Year Average*</u>
	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	
Rate of Investment Return	8.4 %	11.3 %	13.4 %	2.1 %	1.4 %	7.2 %
Average Increase in Pay [#]	<u>7.1</u>	<u>8.0</u>	<u>2.5</u>	<u>2.4</u>	<u>4.0</u>	<u>4.8</u>
Real Rate of Return	1.3	3.3	10.9	(0.3)	(2.6)	2.4

* *Compound rate of increase.*

Based on employees active during both years, for the Bay County Employees' Retirement System (in total).

The nominal rate of return was computed using the approximate formula $i = I$ divided by $1/2 (A + B - I)$, where I is actual investment income net of expenses, A is the beginning of year asset value, and B is the end of year asset value.

Please note that this analysis uses asset values and investment income as defined for the actuarial valuation which deals with market value changes on a gradual basis.

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other systems.

Rates of price inflation are not specifically used for this valuation. However, a rate of price inflation of 2.75% would be consistent with other assumptions in this report.

Pay Projections. These assumptions are used to project current pays to those upon which benefits will be based. In addition to the Merit and Longevity rates shown in the table, members are also assumed to receive a base increase of 3.5%.

Years of Service	Annual Rate of Pay Increase for Merit & Longevity					
	General	DWS	Library	MCF	Sheriff's	Road Commission
1	3.75%	3.75%	3.75%	0.75%	6.00%	6.00%
2	3.00%	3.00%	3.00%	0.75%	5.25%	3.75%
3	2.25%	2.25%	2.25%	0.75%	5.25%	3.75%
4	2.25%	2.25%	2.25%	0.75%	4.50%	3.75%
5	0.75%	0.75%	0.75%	0.75%	3.75%	0.75%
6+	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%

If the number of active members remains constant, the total active member payroll will increase by about the level of pay inflation (assumed to be 3.5% per year). This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities for all groups except for the Library, which is closed to future hires. The payroll growth assumptions were first adopted for the December 31, 2012 actuarial valuation.

Changes actually experienced in pays have averaged as follows, for the Bay County Employees' Retirement System (in total):

Year Ended December 31					5-Year Average*
2015	2014	2013	2012	2011	
7.1%	8.0%	2.5%	2.4%	4.0%	4.8%

* Compound rate of increase.

Lump sum payments. Lump sum payments for unused sick leave and vacation were assumed to increase final average compensation by 4.5% for the General and Library groups, 6% for the Sheriff's group, 7.0% for the DWS group, 7.5% for the Medical Care Facility, and 9.0% for the Road Commission. The lump sum payment assumptions were first adopted for the December 31, 2012 actuarial valuation.

Mortality. This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. The RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Population Scale BB (multiplied by 75% for pre-retirement mortality and 110% for post-retirement mortality for both males and females) were used for healthy lives. The present values and the life expectancy at various ages under this mortality table are shown below:

Sample Ages	Actuarial Present Value of \$1 Monthly for Life*		Future Life Expectancy (Years)^	
	Men	Women	Men	Women
50	\$143.50	\$146.82	32.15	34.70
55	136.00	140.26	27.56	30.04
60	126.67	131.76	23.16	25.50
65	115.39	121.27	19.01	21.19
70	102.07	109.03	15.16	17.19
75	86.95	95.23	11.66	13.58
80	70.84	80.10	8.62	10.36

* These present value amounts were calculated using a 7.5% interest rate and post-retirement mortality.

^ These life expectancies are based on post-retirement mortality.

The RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Population Scale BB with ages set forward 10 years was used for disabled lives.

The mortality assumptions were first adopted for the December 31, 2012 actuarial valuation. The mortality rates were adjusted to include margin for future mortality improvements as described in the table shown above.

Administration Expenses. Non-investment administration expenses are assumed to average 0.4% of payroll annually. This assumption is unchanged from previous valuations. This assumption was not changed as a result of the experience study.

Active Member Group Size. The number of active members was assumed to remain constant for all groups except the Library which is closed to future hires. This assumption is unchanged from the previous valuation for all groups.

Rates of separation from active membership. The rates do not apply to members eligible to retire and do not include separation on account of death or disability. This assumption measures the probabilities of members remaining in employment. This assumption was first adopted for the December 31, 2012 actuarial valuation.

Sample Ages	Years of Service	% of Active Members Separating within Next Year				Road	
		General	DWS	Library	MCF	Sheriff's*	Commission*
ALL	0	15.00%	15.00%	15.00%	25.00%	N/A	N/A
	1	9.00	9.00	9.00	25.00	N/A	N/A
	2	9.00	9.00	9.00	15.00	N/A	N/A
	3	8.00	8.00	8.00	12.50	N/A	N/A
	4	8.00	8.00	8.00	8.75	N/A	N/A
20	5 & Over	7.50	7.50	7.50	7.50	4.50	4.50
25		7.50	7.50	7.50	7.50	4.50	4.50
30		7.00	7.00	7.00	5.00	3.75	3.90
35		7.00	7.00	7.00	5.00	2.25	2.30
40		4.00	4.00	4.00	3.75	1.50	0.90
45		3.00	3.00	3.00	2.50	1.50	0.50
50		2.00	2.00	2.00	2.00	1.25	0.50
55		2.00	2.00	2.00	2.00	0.75	0.50
60		2.00	2.00	2.00	2.00	0.75	0.50

* These groups do not have service based rates of separation. All rates of separation are based on ages.

Rates of Disability. These rates represent the probabilities of active members becoming disabled. This assumption was first adopted for the December 31, 2012 actuarial valuation.

Sample Ages	Percent Becoming Disabled within Next Year	
	Sheriff	All Other Groups
20	0.12 %	0.06 %
25	0.12	0.06
30	0.12	0.06
35	0.12	0.06
40	0.30	0.15
45	0.40	0.20
50	0.74	0.37
55	1.34	0.67
60	2.12	1.06

We assumed that 50% of disabilities are duty related and 50% are non-duty related for Sheriffs. For all other groups, we assumed 85% of disabilities are non-duty related and 15% are duty related.

Rates of Retirement. These rates are used to measure the probabilities of an eligible member retiring during the next year.

Retirement Ages	Percent of Active Members Retiring within Next Year					
	General	DWS	Library	MCF	Sheriff's	Road Commission
50				20 %		15 %
51				20		15
52				20		25
53				20		25
54				20		25
55	20 %	25 %	15 %	30		25
56	15	20	10	40		15
57	15	20	10	50		15
58	15	20	10	50		15
59	15	20	10	50		15
60	30	35	25	30	15 %	15
61	25	30	20	30	15	15
62	15	20	10	50	30	35
63	15	20	10	25	15	35
64	15	20	10	25	15	35
65	30	35	25	100	100	100
66	15	20	10			
67	15	20	10			
68	15	20	10			
69	15	20	10			
70	100	100	100			

The following table shows the rates of retirement used for the Road Patrol and Road Patrol Supervisory Unit 25 & Out provision and the Correctional Facility Officers 55 & 25 provision.

25 & Out		55 & 25	
Years of Service	Sheriff's Road Patrol and Road Patrol Supervisory Unit	Age	Correctional Facility Officers
25	40%	55	40%
26	40	56	40
27	40	57	40
28	25	58	25
29	25	59	25
30	25	60	25
31	25	61	25
32	25	62	25
33	25	63	25
34	100	64	100

The following table shows the rates of retirement for the 55 & 8 and/or 55 & 10 Early Retirement provision:

Retirement	<u>55 & 8 and/or 55 & 10 Early Retirement</u>			
	Ages	General	DWS	Library
	55	10 %	15 %	5 %
	56	10	15	5
	57	10	15	5
	58	10	15	5
	59	10	15	5

** These rates do not apply to MCF, Sheriff and Road Commission.*

The retirement assumptions were first adopted for the December 31, 2012 actuarial valuation.

Miscellaneous and Technical Assumptions

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing:	Six months after the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and death-in-service decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is straight life form.
Loads:	Lump sum payments for unused sick leave and vacation. For current retirees who elected a joint and survivor form of payment with a pop-up and retired prior to January 1, 2013 or who elected a social security equated joint and survivor form of payment with a pop-up the liabilities are loaded 2% because the pop-up benefits are not provided in the data.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent-of-payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
Data Adjustment:	Payroll was annualized for new entrants.

SECTION E
FINANCIAL REPORTING

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)
12/31/2006 *	\$237,681,108	\$189,810,766	\$(47,870,342)	125.2	\$42,024,045	none
12/31/2007 *	253,492,248	200,933,482	(52,558,766)	126.2	44,687,752	none
12/31/2008	246,577,567	212,530,757	(34,046,810)	116.0	46,482,897	none
12/31/2009	243,271,514	221,407,973	(21,863,541)	109.9	47,244,573	none
12/31/2010 *	244,728,050	231,625,254	(13,102,796)	105.7	47,090,560	none
12/31/2011 *	241,207,722	241,791,817	584,095	99.8	48,583,176	1.20 %
12/31/2012 #	239,280,740	245,269,867	5,989,127	97.6	48,571,798	12.33
12/31/2013 *	263,364,669	262,118,015	(1,246,654)	100.5	44,535,708	none
12/31/2014	282,166,070	271,995,030	(10,171,040)	103.7	46,494,417	none
12/31/2015	249,163,890	229,142,613	(20,021,277)	108.7	36,658,462	none

For Actuarial Valuation Dates prior to 2015, the results displayed are for the entire Retirement System (including BABH). Beginning with the 2015 Actuarial Valuation Date, the results displayed are for the Retirement System (excluding BABH).

* *Plan amended.*

Certain assumptions or methods revised.

Actuarial Cost Method

Individual Entry Age Normal Cost.

Amortization Method

Level dollar amount for Library
Level percent-of-payroll for all other groups

Amortization Periods

27 years closed for groups that are underfunded (unfunded accrued liability is positive). 10 years open for groups that are overfunded (unfunded accrued liability is negative).

Asset Valuation Method

Market value with 5-year smoothing of gains and losses.

Principal Actuarial Assumptions
(last revised for the 12/31/12 valuation):

- Net Investment Return 7.5%
- Projected Salary Increases 3.5% pay inflation plus merit and longevity
- Cost-of-Living Adjustments None

Schedule of Employer Contributions

Plan Year Ended December 31	Fiscal Year Ended December 31	Annual Required Contribution
2006	2007	\$ 644,945
2007	2008	688,871
2008	2009	1,578,548
2009 [^]	2011	2,443,118
2010	2012	3,074,891
2011	2013	4,289,438
2012	2014	4,038,100
2013 ^{\$}	2015	4,477,504
2014	2016	2,535,295
2015	2017	1,088,320

For Plan Years Ended prior to December 31, 2015, the results displayed are for the entire Retirement System (including BABH). Beginning with the Plan Year Ended December 31, 2015, the results displayed are for the Retirement System (excluding BABH).

[^] *Implementation of a one year lag between valuation date and first day of the calendar year to which the contributions apply.*

^{\$} *Annual Required Contribution reflects an advanced payment of the BABH unfunded ERIP liability.*