



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*



## **Report on the Annual Valuation of the Mississippi Municipal Retirement Systems**

**Prepared as of June 30, 2016**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

November 30, 2016

Board of Trustees  
Mississippi Municipal Retirement Systems  
429 Mississippi Street  
Jackson, MS 39201-1005

Ladies and Gentlemen:

Presented in this report are the results of the annual actuarial valuation covering the participation of 17 municipalities in the Mississippi Municipal Retirement Systems (MRS). The purpose of the valuation was to measure the Systems' funding progress and to determine the contribution rates necessary for the period beginning October 1, 2017. The results may not be applicable for other purposes.

The date of the valuation was June 30, 2016.

The valuation was based upon data, furnished by the Executive Director and the PERS staff, concerning active, inactive and retired members along with pertinent financial information. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. The complete cooperation of the PERS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the presentation of contribution rates on page 7 and the comments on page 9. Please note that with the adoption by the PERS Board in 2011 of a new funding policy which extended contributions beyond 2020 and generated an ultimate asset reserve level equal to projected benefit payments, we have calculated the contribution rates based on this new policy and the old funding policy. Ultimately, the municipality has the option of which contribution rate to set as their certified millage rate.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board. We have reviewed the actuarial methods, including the asset valuation method, and continue to believe they are appropriate for the purpose of determining contribution rates.

Future actuarial results 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 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

Phone (678) 388-1700 • Fax (678) 388-1730

[www.CavMacConsulting.com](http://www.CavMacConsulting.com)

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE



Board of Trustees  
November 30, 2016  
Page 2

This actuarial valuation was performed to determine the adequacy of statutory contributions to fund the plan. The asset values used to determine unfunded liabilities and funded ratios are not market values but less volatile market related values. A smoothing technique is applied to market values to determine the market related values. The unfunded liability amounts and funded ratios using the market value of assets would be different. The interest rate used for determining liabilities is based on the expected return on assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the Systems, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the Systems. In addition, the valuation was completed in compliance with the laws governing the Systems. Those laws state, as a financing objective, that contributions will be in amounts sufficient to maintain actuarial soundness for the Systems for all future years.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Edward A. Macdonald'.

Edward A. Macdonald, ASA, FCA, MAAA  
President

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

Edward J. Koebel, EA, FCA, MAAA  
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Jonathan T. Craven'.

Jonathan T. Craven, ASA, EA, FCA, MAAA  
Senior Actuary

EAM/EJK/JTC:bdm



## **TABLE OF CONTENTS**

<b><u>Section</u></b>	<b><u>Item</u></b>	<b><u>Page No.</u></b>
I	Summary of Principal Results	1
II	Membership Data	4
III	Actuarial Present Values	5
IV	Computed Employer Contribution Rates	7
V	Comments on Valuation	9
VI	Supplemental Disclosure Information	10
 <b><u>Schedule</u></b>		
A	Development of Actuarial Value of Assets	21
B	Statement of Actuarial Assumptions and Methods	22
C	Summary of Benefit Provisions Evaluated	25
D	Detailed Tabulations of the Data	29
E	Analysis of Financial Experience	33
F	Glossary	35
G	The Nature of Actuarial Projections	36
H	Cash Flow Projections based on New Funding Policy	37



**REPORT ON THE ANNUAL VALUATION OF THE  
MISSISSIPPI MUNICIPAL RETIREMENT SYSTEMS  
PREPARED AS OF JUNE 30, 2016**

**SECTION I – SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of June 30, 2016, presents the results of the annual actuarial valuation of the 17 Systems. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below. The current valuation reflects any amendments to the Systems effective through July 1, 2016.

**SUMMARY OF PRINCIPAL RESULTS**

VALUATION DATE	June 30, 2016	June 30, 2015
Active members included in valuation		
Number	8	11
Annual compensation	\$ 419,000	\$ 579,267
Retirees		
Number	1,798	1,849
Annual allowances	\$ 34,088,404	\$ 34,478,364
Assets		
Market related actuarial value	\$ 159,159,590	\$ 162,616,440
Market value	\$ 154,628,833	\$ 169,330,940
Unfunded employer liability	\$ 171,531,720	\$ 179,000,593

2. Actuarial present values for each Municipality are shown in Section III.
3. Rates of contribution payable by employers are given in Section IV and comments on the valuation results are given in Section V.



4. There were no changes to benefit provisions or actuarial assumptions since the last valuation.
5. Schedule A of this report presents the development of the actuarial value of assets. Schedule B details the actuarial assumptions and methods employed. Schedule C gives a summary of the benefit and contribution provisions of the plan.
6. A new funding policy was adopted by the Board in February, 2011. In this new funding policy, contributions are extended past 2020 and an employer contribution rate, expressed as a millage rate tax applied to assessed property values, is established beginning in the 2011-2012 fiscal year that will generate an ultimate asset reserve level equal to a reasonable percentage (initially 100% - 150%) of the next year's projected benefit payment. At that point, employer contributions will be set equal to the fiscal year's projected benefit payments and adjusted as necessary to maintain the assets at the established reserve level. Schedule H of this report shows the projected cash flow of each municipality based on the new funding policy.
7. The table on the following page provides a ten-year history of some pertinent figures.
8. GASB 67 has replaced GASB 25 for accounting results and a separate GASB 67 report will be prepared for the Board. For continuity and informational purposes, we have included GASB 25 disclosure information in Section VIII.



## Mississippi Municipal Retirement Systems

### Comparative Schedule

Valuation Date Jun 30*	Active Members				Retired Lives				Valuation Results (\$ thousands)		
	Number	Payroll (\$ thousands)	Average Salary	% increase from previous year	Number	Active/ Retired Ratio	Annual Benefits (\$ thousands)	Benefits as % of Payroll	Employer Liability	Valuation Assets	Unfunded Employer Liability
2007	42	\$1,953	\$46,491	2.5%	2,167	.02	\$35,555.2	1,820.5%	\$380,337	\$213,432	\$166,905
2008	35	1,713	48,936	5.3	2,123	.02	35,455.8	2,069.8	368,780	208,479	160,301
2009	31	1,608	51,884	6.0	2,090	.01	35,456.7	2,205.0	381,655	191,179	190,476
2010	27	1,425	52,764	1.7	2,056	.01	35,418.6	2,485.5	373,310	175,988	197,322
2011	25	1,357	54,274	2.9	2,016	.01	35,164.6	2,591.3	363,953	167,604	196,349
2012	21	1,131	53,869	(0.7)	1,978	.01	35,097.3	3,103.2	356,829	155,484	201,345
2013	16	794	49,615	(7.9)	1,941	.01	35,105.9	4,421.4	349,737	153,241	196,496
2014	14	727	51,953	4.7	1,890	.01	34,723.5	4,776.3	340,505	157,970	182,535
2015	11	579	52,661	1.4	1,849	.01	34,478.4	5,954.8	341,617	162,616	179,001
2016	8	419	52,375	(0.5)	1,798	.00	34,088.4	8,135.7	330,691	159,160	171,531

\* Valuation date is as of September 30 for years prior to 2013.



## SECTION II – MEMBERSHIP DATA

Data regarding the membership of the Systems for use as a basis for the valuation were furnished by the PERS office. The following tables summarize the membership of the system as of June 30, 2016 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

### Active Members

Employers	Number	Payroll	Group Averages		
			Salary	Age*	Service*
Biloxi	0	\$0	\$0	0.0	0.0
Clarksdale	1	50,534	50,534	64.4	42.0
Clinton	2	101,772	50,886	60.5	36.0
Columbus	0	0	0	0.0	0.0
Greenville	0	0	0	0.0	0.0
Greenwood	2	86,117	43,059	67.7	42.4
Gulfport	0	0	0	0.0	0.0
Hattiesburg	1	51,215	51,215	65.7	38.3
Jackson	1	60,217	60,217	67.9	41.3
Laurel	0	0	0	0.0	0.0
McComb	0	0	0	0.0	0.0
Meridian	1	69,145	69,145	80.6	49.0
Natchez	0	0	0	0.0	0.0
Pascagoula	0	0	0	0.0	0.0
Tupelo	0	0	0	0.0	0.0
Vicksburg	0	0	0	0.0	0.0
Yazoo City	0	0	0	0.0	0.0
Total in MRS	8	\$419,000	\$52,375	66.8	40.9

\*Years

### Retired Lives

Employers	Retirement	Disability	Survivor	Total	Annual Benefit
Biloxi	51	5	50	106	\$2,279,662
Clarksdale	30	2	18	50	602,398
Clinton	27	0	4	31	827,594
Columbus	45	3	31	79	1,206,671
Greenville	45	0	34	79	997,921
Greenwood	33	3	20	56	763,528
Gulfport	51	9	32	92	1,982,345
Hattiesburg	104	6	37	147	3,379,955
Jackson	373	10	199	582	12,221,050
Laurel	56	3	27	86	1,096,586
McComb	13	4	11	28	355,472
Meridian	112	6	62	180	2,578,836
Natchez	26	4	22	52	746,858
Pascagoula	52	5	15	72	1,383,787
Tupelo	48	1	27	76	1,357,495
Vicksburg	33	3	32	68	2,074,499
Yazoo City	11	0	3	14	233,747
Total in MRS	1,110	64	624	1,798	\$34,088,404





### **SECTION III – ACTUARIAL PRESENT VALUES**

The following exhibit shows the assets and liabilities of each municipality's retirement system as of the current valuation date of June 30, 2016. The items shown in the exhibit are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule A.



**MISSISSIPPI MUNICIPAL RETIREMENT SYSTEMS  
ACTUARIAL PRESENT VALUES AS OF JUNE 30, 2016**

Actuarial Present Value, June 30, 2016							
Municipality	Active Members	Retired Members	Total	Portion Covered by Future Active Member Contributions	Total Employer Liability	Assets Used in Valuation	Unfunded Employer Liability
Biloxi	\$0	\$22,911,272	\$22,911,272	\$0	\$22,911,272	\$9,258,718	\$13,652,554
Clarksdale	362,251	5,577,701	5,939,952	5,053	5,934,899	1,619,942	4,314,957
Clinton	935,924	9,445,720	10,381,644	16,665	10,364,979	8,725,960	1,639,019
Columbus	0	10,981,321	10,981,321	0	10,981,321	1,078,552	9,902,769
Greenville	0	9,335,834	9,335,834	0	9,335,834	3,320,234	6,015,600
Greenwood	611,343	7,139,963	7,751,306	0	7,751,306	3,059,690	4,691,616
Gulfport	0	20,260,566	20,260,566	0	20,260,566	9,525,069	10,735,497
Hattiesburg	434,059	36,086,389	36,520,448	0	36,520,448	21,287,665	15,232,783
Jackson	484,670	112,679,902	113,164,572	0	113,164,572	57,661,991	55,502,578
Laurel	0	10,721,163	10,721,163	0	10,721,163	4,306,331	6,414,832
McComb	0	3,458,857	3,458,857	0	3,458,857	897,336	2,561,521
Meridian	359,477	23,381,857	23,741,334	0	23,741,334	11,516,290	12,225,044
Natchez	0	7,290,191	7,290,191	0	7,290,191	2,204,218	5,085,973
Pascagoula	0	12,334,146	12,334,146	0	12,334,146	7,470,716	4,863,430
Tupelo	0	12,997,175	12,997,175	0	12,997,175	5,695,426	7,301,749
Vicksburg	0	20,674,875	20,674,875	0	20,674,875	11,117,205	9,557,670
Yazoo City	0	2,248,372	2,248,372	0	2,248,372	414,247	1,834,125
<b>Total in MRS</b>	<b>\$3,187,724</b>	<b>\$327,525,304</b>	<b>\$330,713,028</b>	<b>\$21,718</b>	<b>\$330,691,310</b>	<b>\$159,159,590</b>	<b>\$171,531,720</b>



## **SECTION IV – COMPUTED EMPLOYER CONTRIBUTION RATES**

### **Mississippi Municipal Retirement Systems Computed Employer Contribution Rates^ June 30, 2016**

Municipality	Members Contributions*	Computed Rates for 2017-2018 Fiscal Year				
		Certified Rate for Fiscal Year Ending 9/30/2017	Current Millage Rate for Fiscal Year Ending 9/30/2017	Pre-2011 Funding Policy Rate^^	Post-2011 Funding Policy Rate	Certified Rate for Fiscal Year Ending 9/30/2018
Biloxi	9.00%	2.35	2.20	8.90	2.30	2.30
Clarksdale	10.00	4.84	4.84	17.80	4.81	4.81
Clinton	8.00	0.94	0.94	2.76	1.03	1.03
Columbus	10.00	5.67	5.67	17.42	5.67	5.67
Greenville	10.00	2.62	2.62	10.81	2.86	2.86
Greenwood	10.00	4.06	4.06	15.14	4.03	4.03
Gulfport	8.00	1.29	1.29	5.48	1.38	1.38
Hattiesburg	10.00	3.11	3.11	12.76	3.33	3.33
Jackson	10.00	4.22	4.22	16.79	4.46	4.46
Laurel	10.00	3.78	4.46	13.27	3.45	3.45
McComb	10.00	2.47	2.90	9.49	2.53	2.53
Meridian**	10.00	3.47	6.61	11.68	3.36	3.36
Natchez	10.00	3.75	4.00	13.89	3.50	3.50
Pascagoula	10.00	1.73	3.00	7.06	1.94	1.94
Tupelo	7.00	1.34	1.61	5.58	1.49	1.49
Vicksburg	10.00	2.66	2.53	10.57	2.83	2.83
Yazoo City	10.00	3.57	3.57	13.20	3.70	3.70

\* % of Active Member Payroll

\*\* Meridian General Employees' contribution rate is 7.00%

^ Millage rates applied to assessed property

^^ 5 year amortization

The Systems are funded through taxes levied on assessed properties located in the Municipalities.



Since, under the new funding policy, the millage rates are developed assuming 0% annual growth in assessed property values in the future, the following table provides the recent history of assessed values as a guide to the appropriateness of that assumption.

**Mississippi Municipal Retirement Systems  
Total Assessed Property Values  
Last Five Fiscal Years**

Municipality	2011	2012	2013	2014	2015	Average % Increase
Biloxi	\$535,701,881	\$536,423,314	\$543,325,163	\$539,310,113	\$546,242,975	0.5%
Clarksdale	82,426,519	82,157,872	84,299,372	84,980,872	85,157,047	0.8
Clinton	189,540,517	196,727,591	202,132,944	203,433,087	208,834,622	2.5
Columbus	188,555,406	188,229,301	188,431,654	186,886,981	201,353,637	1.7
Greenville	187,948,497	188,790,708	204,581,799	204,466,100	201,281,727	1.7
Greenwood	108,478,499	110,076,908	111,119,134	111,065,244	110,861,169	0.5
Gulfport	723,157,372	712,643,161	715,776,860	712,273,192	711,742,489	(0.4)
Hattiesburg	404,544,340	416,993,266	425,665,993	425,665,993	432,115,121	1.7
Jackson	1,197,937,482	1,201,065,685	1,204,649,630	1,196,637,968	1,196,316,148	0.0
Laurel	165,834,244	156,631,234	162,457,763	163,138,096	169,085,361	0.5
McComb	94,736,120	92,659,996	94,434,136	94,837,146	94,847,079	0.0
Meridian	318,777,866	315,367,985	321,370,611	325,553,228	331,879,752	1.0
Natchez	115,314,119	131,817,912	141,619,607	130,647,499	132,429,491	3.5
Pascagoula	258,275,296	246,977,314	253,579,334	245,711,068	234,077,905	(2.4)
Tupelo	426,120,432	428,424,384	452,942,037	464,994,834	464,811,369	2.2
Vicksburg	309,792,887	306,562,861	320,028,001	315,300,118	322,195,038	1.0
Yazoo City	46,073,238	45,329,561	46,783,202	48,493,391	49,226,333	1.7



## **SECTION V – COMMENTS ON VALUATION**

1. Based on the Board funding policy, the millage rates established by the municipalities must be set at a level which will ensure actuarial soundness of the Systems. As can be seen from the table on page 7, the current millage rate for the fiscal year ending September 30, 2017 for eight of the municipalities is less than the certified rate for the fiscal year ending September 30, 2018 under the post-2011 funding policy. Therefore the municipalities listed below need to increase their millage rate to the certified millage rate for the fiscal year ending September 30, 2018.
  - Biloxi
  - Greenville
  - Hattiesburg
  - Vicksburg
  - Clinton
  - Gulfport
  - Jackson
  - Yazoo City
2. It should be noted that there are two municipalities (Biloxi and Vicksburg) whose current millage rate is below the certified millage rate for the fiscal year ending September 30, 2017. This is not in accordance with the MRS funding policy.
3. As the analysis of experience on pages 33 and 34 shows, the System had an actuarial gain for the year. The predominant component was a gain due to more retiree deaths than expected. There was a small gain attributable to investment income which, on an actuarial basis, is due to the beginning of year market value of assets being revised higher as well as the continued recognition of gains from prior years. In addition, there was a small gain due to fewer retirements than expected. Other decrements and COLAs granted created smaller gains and losses.
4. From 2014 to 2015, the value of assessed property increased for eleven and decreased for six of the seventeen municipalities. Under the new funding policy, the value of assessed property is assumed to remain level. In general, if assessed property values grow, it contributes to a decrease in the millage rate.



## **SECTION VI – SUPPLEMENTAL DISCLOSURE INFORMATION**

1. Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 replaced Statement No. 25 and 27 for plan years beginning after June 15, 2013. The information required under the new GASB Statements will be issued in separate reports. The following supplemental disclosure information is provided for informational purposes only. One such item is a distribution of the number of employees by type of membership, as follows:

### **NUMBER OF ACTIVE AND RETIRED PARTICIPANTS AS OF JUNE 30, 2016**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	1,798
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	0
Inactive Participants	0
Active Participants	<u>8</u>
Total	1,806



2. The actuarial accrued liability is as follows:

**ACTUARIAL ACCRUED LIABILITY**

Municipality	Actives	Retirees	Total Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability
Biloxi	\$0	\$22,911,272	\$22,911,272	\$9,258,718	\$13,652,554
Clarksdale	352,551	5,577,701	5,930,252	1,619,942	4,310,310
Clinton	895,392	9,445,720	10,341,112	8,725,960	1,615,152
Columbus	0	10,981,321	10,981,321	1,078,552	9,902,769
Greenville	0	9,335,834	9,335,834	3,320,234	6,015,600
Greenwood	611,343	7,139,963	7,751,306	3,059,690	4,691,616
Gulfport	0	20,260,566	20,260,566	9,525,069	10,735,497
Hattiesburg	434,059	36,086,389	36,520,448	21,287,665	15,232,783
Jackson	484,670	112,679,902	113,164,572	57,661,991	55,502,581
Laurel	0	10,721,163	10,721,163	4,306,331	6,414,832
McComb	0	3,458,857	3,458,857	897,336	2,561,521
Meridian	359,477	23,381,857	23,741,334	11,516,290	12,225,044
Natchez	0	7,290,191	7,290,191	2,204,218	5,085,973
Pascagoula	0	12,334,146	12,334,146	7,470,716	4,863,430
Tupelo	0	12,997,175	12,997,175	5,695,426	7,301,749
Vicksburg	0	20,674,875	20,674,875	11,117,205	9,557,670
Yazoo City	0	2,248,372	2,248,372	414,247	1,834,125
<b>Totals</b>	<b>\$3,137,492</b>	<b>\$327,525,304</b>	<b>\$330,662,796</b>	<b>\$159,159,590</b>	<b>\$171,503,206</b>

During the year ended June 30, 2016, the Systems experienced a net decrease of \$10,862,225 in the actuarial accrued liability.



3. Another such item is the schedule of funding progress as shown below.

**SCHEDULE OF FUNDING PROGRESS**  
**(\$ Thousands)**

<b>Plan Year Ended</b>	<b>(1) Actuarial Value of Assets</b>	<b>(2) Actuarial Accrued Liability (AAL) Entry Age</b>	<b>(3) Percent Funded (1)/(2)</b>	<b>(4) Unfunded AAL (2) – (1)</b>	<b>(5) Annual Covered Payroll</b>	<b>(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)</b>
09/30/07	\$213,432	\$379,584	56.2%	\$166,152	\$1,953	8,507.5%
09/30/08	208,479	368,131	56.6	159,652	1,713	9,320.0
09/30/09	191,179	381,036	50.2	189,857	1,608	11,807.0
09/30/10	175,988	372,897	47.2	196,909	1,425	13,818.2
09/30/11	167,604	363,604	46.1	196,000	1,357	14,443.6
09/30/12	155,484	356,571	43.6	201,087	1,131	17,779.6
06/30/13	153,241	349,588	43.8	196,347	794	24,728.8
06/30/14	157,970	340,385	46.4	182,415	727	25,091.5
06/30/15	162,616	341,525	47.6	178,909	579	30,899.7
06/30/16	159,160	330,663	48.1	171,503	419	40,931.5

Numbers shown above reflect all changes in benefit provisions, actuarial assumptions, and/or actuarial methods, if any.





### History of Funding Progress

Municipality	Actuarial Value of Assets as Percentage of AAL									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Biloxi	47.01%	50.93%	45.80%	45.13%	43.06%	39.41%	38.18%	39.49%	39.55%	40.41%
Clarksdale	15.11	15.40	14.44	16.56	19.43	19.99	23.82	23.18	26.51	27.32
Clinton	90.69	92.34	86.80	80.83	79.26	75.02	74.38	79.09	82.74	84.38
Columbus	9.89	9.95	10.62	10.92	11.80	10.74	11.29	13.10	10.54	9.82
Greenville	42.73	44.25	40.58	39.28	36.89	34.25	34.11	36.12	36.64	35.56
Greenwood	33.77	36.46	34.24	33.94	36.63	34.72	35.05	36.61	38.27	39.47
Gulfport	49.15	50.66	48.14	46.52	49.00	46.37	45.03	46.99	47.63	47.01
Hattiesburg	67.34	68.39	62.14	59.03	57.32	54.17	53.82	56.90	58.53	58.29
Jackson	72.41	70.38	59.47	53.94	51.61	48.80	48.35	50.83	51.49	50.95
Laurel	26.30	28.86	26.77	26.79	27.31	26.79	29.51	33.03	36.20	40.17
McComb	40.34	37.07	32.66	29.72	32.26	27.48	25.52	24.99	25.49	25.94
Meridian	31.86	32.36	31.08	30.92	31.34	31.22	33.90	38.17	42.40	48.51
Natchez	24.52	27.83	26.33	27.06	28.24	28.55	30.03	30.21	29.61	30.24
Pascagoula	57.75	58.67	54.36	53.87	53.47	50.75	52.53	57.57	59.64	60.57
Tupelo	59.64	61.21	55.33	48.91	45.59	42.81	42.51	44.96	44.31	43.82
Vicksburg	63.26	67.51	57.85	53.87	52.28	47.83	49.26	52.08	53.82	53.77
Yazoo City	28.62	27.85	28.91	25.65	21.98	22.32	21.96	16.66	20.20	18.42



### History of Funding Progress

Unfunded Actuarial Accrued Liability as a Percentage of Payroll										
Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Biloxi	11,030.00%	8,832.26%	10,973.44%	10,266.41%	11,063.20%	19,963.01%	N/A	N/A	N/A	N/A
Clarksdale	15,607.32	15,126.83	15,704.88	13,639.53	12,467.44	12,162.79	10,770.71%	10,444.15%	9,409.47%	8,529.52%
Clinton	298.34	241.37	417.52	599.06	639.13	758.97	986.40	758.81	770.04	1,587.03
Columbus	22,168.52	21,715.09	20,969.09	20,494.55	17,140.63	16,083.58	15,758.80	14,649.77	N/A	N/A
Greenville	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Greenwood	5,841.67	5,209.09	5,429.46	5,367.57	7,054.55	6,927.50	6,651.70	6,243.97	5,978.71	5,447.96
Gulfport	8,110.07	7,019.87	7,133.33	7,209.70	6,559.76	12,753.41	N/A	N/A	N/A	N/A
Hattiesburg	2,781.22	4,084.43	4,814.94	6,110.38	7,778.10	11,110.90	18,172.80	16,641.41	15,736.28	29,742.82
Jackson	16,846.85	17,669.86	28,242.41	64,956.99	62,297.98	151,185.71	154,839.64	115,483.11	120,998.39	92,170.95
Laurel	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
McComb	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Meridian	10,540.43	12,080.38	12,031.71	11,550.00	11,062.72	10,638.01	14,285.66	23,079.51	21,336.86	17,680.30
Natchez	3,263.78	4,005.48	18,177.14	17,345.71	16,817.14	16,442.86	14,961.74	14,379.28	N/A	N/A
Pascagoula	6,330.78	10,610.17	14,785.11	14,182.98	13,479.59	14,578.72	13,564.67	N/A	N/A	N/A
Tupelo	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vicksburg	17,651.06	14,073.47	19,368.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Yazoo City	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



4. The annual required contributions (ARC) of the employers as a dollar amount, determined in accordance with the parameters of GASB 25/27, are shown below.

**2016/2017 FISCAL YEAR  
ANNUAL REQUIRED CONTRIBUTION (ARC)  
BASED ON THE VALUATION AS OF JUNE 30, 2016**

<b>ANNUAL REQUIRED CONTRIBUTION (ARC)</b>	
Normal	\$ 16,307
Accrued liability	<u>17,677,212</u>
Total	\$17,693,519

5. Additional information as of June 30, 2016 follows.

Valuation date	6/30/16
Actuarial cost method	Entry age
Amortization method	Level dollar closed
Remaining amortization period	18 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.75%
Projected salary increases#	4.00% - 5.50%
*Includes price inflation at	3.00%
#Includes wage inflation at	3.75%
Cost of living adjustments	2.00% - 3.75% depending upon municipality



### Schedule of Employer Contributions

Fiscal Year 10/1-9/30	Valuation date	Annual Required Contribution	Percentage Contributed
2007-08	9/30/2007	\$15,218,583	106.0%
2008-09	9/30/2008	14,764,994	114.4
2009-10	9/30/2009	17,739,274	120.8
2010-11	9/30/2010	18,576,054	122.7
2011-12	9/30/2011	18,751,144	127.0
2012-13	9/30/2012	19,511,877	102.6
2013-14	6/30/2013	19,343,836	105.4
2014-15	6/30/2014	18,337,572	105.5
2015-16	6/30/2015	18,034,182	N/A
2016-17	6/30/2016	17,693,519	N/A

### Contributions Required and Contributions Made

Municipality	Annual Required Contribution	Actual 2014 – 2015 Contribution	Percentage Contributed
Biloxi	\$1,430,885	\$1,325,049	92.6%
Clarksdale	480,729	435,882	90.7
Clinton	250,227	249,047	99.5
Columbus	988,032	979,604	99.1
Greenville	607,624	601,720	99.0
Greenwood	525,624	501,221	95.4
Gulfport	1,083,164	987,168	91.1
Hattiesburg	1,593,250	1,626,692	102.1
Jackson	5,787,470	5,544,876	95.8
Laurel	755,147	1,068,848	141.5
McComb	276,700	252,604	91.3
Meridian	1,571,006	2,539,000	161.6
Natchez	548,299	465,798	85.0
Pascagoula	543,046	695,520	128.1
Tupelo	697,537	657,090	94.2
Vicksburg	1,005,901	1,134,434	112.8
Yazoo City	192,931	281,604	146.0
Total	\$18,337,572	\$19,346,157	105.5%



**Solvency Tests**  
(\$ in Thousands)

Actuarial Accrued Liabilities for							
Date	(1) Accumulated Employee Contributions Including Allocated Investment Earnings	(2) Retirees and Beneficiaries Currently Receiving Benefits	(3) Active and Inactive Members Employer Financed Portion	Net Assets Available for Benefits	Portions of Accrued Liabilities Covered by Assets		
					(1)	(2)	(3)
9/30/07	\$3,015	\$366,139	\$10,430	\$213,432	100%	57.5%	0.0%
9/30/08	2,688	356,413	9,030	208,479	100	57.7	0.0
9/30/09	2,522	369,470	9,044	191,179	100	51.1	0.0
9/30/10	2,295	362,444	8,158	175,988	100	47.9	0.0
9/30/11	2,256	353,609	7,739	167,604	100	46.8	0.0
9/30/12	1,957	348,121	6,493	155,484	100	44.1	0.0
6/30/13	1,483	343,770	4,335	153,241	100	44.1	0.0
6/30/14	1,342	334,937	4,106	157,970	100	46.8	0.0
6/30/15	1,101	337,039	3,385	162,616	100	47.9	0.0
6/30/16	867	327,525	2,271	159,160	100	48.3	0.0



### Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Active Members			
		Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
9/30/07	17	42	\$1,952,642	\$46,491	2.5%
9/30/08	17	35	1,712,743	48,936	5.3
9/30/09	17	31	1,608,396	51,884	6.0
9/30/10	17	27	1,424,636	52,764	1.7
9/30/11	17	25	1,356,858	54,274	2.9
9/30/12	17	21	1,131,252	53,869	(0.7)
6/30/13	17	16	793,841	49,615	(7.9)
6/30/14	17	14	727,347	51,953	4.7
6/30/15	17	11	579,267	52,661	1.4
6/30/16	17	8	419,000	52,375	(0.5)

### Schedule of Retirants Added to and Removed From Rolls Last Ten Fiscal Years

Item	Fiscal Year Ended September 30									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Beginning of Year	2,200	2,167	2,123	2,090	2,056	2,016	1,978	1,941	1,890	1,849
Added	42	39	37	44	46	39	40	29	40	46
Removed	(75)	(83)	(70)	(78)	(86)	(77)	(77)	(80)	(81)	(97)
End of Year	2,167	2,123	2,090	2,056	2,016	1,978	1,941	1,890	1,849	1,798



**Schedule of Benefit Payments Added to and Removed From Rolls  
Last Six Fiscal Years**

Year Ending	2011	2012	2013	2014	2015	2016
Beginning of Year	\$35,418,572	\$35,164,599	\$35,097,293	\$35,105,891	\$34,723,473	\$34,478,364
Added	792,381	690,172	896,085	485,121	731,337	842,966
Removed	(1,233,853)	(942,832)	(1,083,209)	(1,041,083)	(1,119,680)	(1,365,194)
Benefit increase due to annual COLA	187,499	185,354	195,722	173,544	143,234	132,268
Benefit increase due to plan amendments	0	0	0	0	0	0
End of Year	\$35,164,599	\$35,097,293	\$35,105,891	\$34,723,473	\$34,478,364	\$34,088,404



Schedule of Average Benefit Payments

	Years of Credited Service								
	0-4	5-9	10-14	15-19	20-24	25	26-29	30	31+
July 1, 2015 to June 30, 2016									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,479
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$44,155
Number of Active Retirants	0	0	0	0	0	0	0	0	3
July 1, 2014 to June 30, 2015									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,898	\$2,912
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,253	\$56,520
Number of Active Retirants	0	0	0	0	0	0	0	1	2
July 1, 2013 to June 30, 2014									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,778
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,160
Number of Active Retirants	0	0	0	0	0	0	0	0	2
October 1, 2012 to June 30, 2013									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$3,490	\$0	\$4,379
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$63,310	\$0	\$72,947
Number of Active Retirants	0	0	0	0	0	0	1	0	4
October 1, 2011 to September 30, 2012									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,423
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$61,607
Number of Active Retirants	0	0	0	0	0	0	0	0	4
October 1, 2010 to September 30, 2011									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$2,222	\$0	\$0	\$2,149
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$43,366	\$0	\$0	\$38,685
Number of Active Retirants	0	0	0	0	0	1	0	0	1





**SCHEDULE A**  
**Development of Actuarial Value of Assets**

	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020
A. Actuarial Value Beginning of Year	\$157,970,063	\$162,616,440				
B. Market Value End of Year	169,330,940	154,628,833				
C. Market Value Beginning of Year	179,718,345	169,986,470*				
D. Cash Flow						
D1. Contributions	19,402,185	18,594,933				
D2. Other Revenue	0	0				
D3. Benefit Payments	(34,898,027)	(34,428,573)				
D4. Administrative Expenses	(390,699)	(370,842)				
D5. Investment Expenses	0	0				
D6. Net	(15,886,541)	(16,204,482)				
E. Investment Income						
E1. Market Total: B.-C.-D6.	5,499,136	846,845				
E2. Assumed Rate	8.00%	7.75%				
E3. Amount for Immediate Recognition	13,742,006	12,546,028				
E4. Amount for Phased-In Recognition	(8,242,870)	(11,699,183)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	(1,648,574)	(2,339,837)	0	0	0	0
F2. First Prior Year	3,799,650	(1,648,574)	(2,339,837)	0	0	0
F3. Second Prior Year	2,175,004	3,799,650	(1,648,574)	(2,339,837)	0	0
F4. Third Prior Year	(2,440,169)	2,175,004	3,799,650	(1,648,574)	(2,339,837)	0
F5. Fourth Prior Year	<u>4,905,001</u>	<u>(2,440,169)</u>	<u>2,175,004</u>	<u>3,799,650</u>	<u>(1,648,574)</u>	<u>(2,339,837)</u>
F6. Total Recognized Investment Gain	6,790,912	(453,926)	1,986,243	(188,761)	(3,988,411)	(2,339,837)
G. Adjustment:		655,530				
H. Actuarial Value End of Year:						
A.+D6.+E3.+F6.+G.	\$162,616,440	\$159,159,590				
I. Difference Between Market & Actuarial Values	6,714,500	(4,530,757)	(6,517,000)	(6,328,239)	(2,339,828)	9

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

\*Adjusted from prior year due to revised assets.



## **SCHEDULE B**

### **STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

INTEREST RATE: 7.75% per annum, compounded annually (net after investment expenses) for prior funding policy rate determination and GASB disclosure.

6.50% per annum, compounded annually (net after investment expenses) for current funding policy rate determination.

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of separation from active service are as follows:

Age	Withdrawal	Death		Disability	
		Non-Duty	Duty	Non-Duty	Duty
20	10.65%	.04%	.02%	.08%	.06%
25	8.64	.05	.03	.12	.12
30	6.87	.08	.04	.18	.26
35	4.86	.11	.05	.24	.52
40	2.97	.15	.07	.36	.60
45	1.44	.22	.09	.64	.54
50	0.24	.34	.14	1.10	.88
55		.44	.20	1.58	1.18
60		.51	.32	2.20	1.30
64		.57	.42	2.86	1.38

Service Retirement	
Years of Service	Percent
20	45.0%
21-28	17.5
29-33	35.0
34 and over	20.0
Age 65	100.0



SALARY INCREASES: 3.75% for wage inflation plus the following chart.

Ages	Merit and Seniority Salary Increase
Under 43	1.75%
43 – 47	1.25
48 – 52	0.75
53 and Over	0.25

PRICE INFLATION: 3.00% per annum, compounded annually.

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid is the RP-2014 Healthy Annuitant Blue Collar Table projected with Scale BB to 2016 with males rates set forward one year. The RP-2014 Disabled Retiree Table set forward 5 years for males and 4 years for females was used for the period after disability retirement. This assumption is used to measure the probabilities of each benefit payment being made after retirement. Mortality improvement is anticipated under this assumption.

MARRIAGE ASSUMPTION: 85% married with the husband three years older than his wife.

VALUATION METHOD: Unfunded employer liabilities are amortized over a closed 30 year period from September 30, 1990 as a level percent of each municipality's assessed property valuation.

ASSESSED PROPERTY VALUE RATE OF INCREASE: 2.0% per annum, compounded annually (used in determining the millage rate under the prior funding policy).

EXPENSE LOAD: 2.0% of employer contributions.



ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value. Actuarial assets were allocated to individual cities in the same proportion that their market value of assets was to the total market value of assets for all cities.



## **SCHEDULE C**

### **SUMMARY OF BENEFIT PROVISIONS EVALUATED**

The following summary presents the main provisions of the Systems in effect June 30, 2016, as interpreted in preparing the actuarial valuation. As used in the summary, "average compensation" means the average compensation of a member during the six month period prior to receipt of an allowance.

### **BENEFITS**

#### **Service Retirement**

##### **Condition for Retirement**

A retirement allowance is payable to any member who retires and has completed at least 20 years of creditable service, regardless of age.

Any general employee member who has attained age 70 and any fireman or policeman who has attained age 65 shall be retired forthwith.

##### **Amount of Allowance**

The annual retirement allowance payable to a retired member is equal to:

1. 50% of average compensation, plus
2. 1.7% of average compensation for each year of credited service over 20.

The aggregate amount of (1) and (2) above shall not exceed 66-2/3% (87% for Clinton) of average compensation, regardless of service.

#### **Disability Retirement**

##### **Condition for Retirement**

A retirement allowance is payable to any member who is not eligible for a service retirement benefit but who becomes totally and permanently disabled, either physically or mentally, regardless of creditable service, if the disability is due to causes in the performance of duty. If the disability is not in the performance of duty, the member must have completed at least 5 years of creditable service to be eligible for retirement.



**Amount of Allowance**

The annual disability retirement allowance payable is equal to 50% of his salary at the time of retirement, if the disability is due to causes in the performance of duty.

If the disability is not in the performance of duty, the allowance is equal to 2.5% times credited service, not in excess of 20, times his salary at the time of retirement for firemen and policemen, and average compensation for general employees.

**Death Benefit**

**Conditions for Benefit**

A benefit is payable upon the death of a member under the following conditions:

- (a) the member has retired,
- (b) the member is eligible to retire,
- (c) the death is in the line of duty, or
- (d) the death is not in the line of duty, but occurs after the member has 5 years of credited service.

The benefit is payable to the surviving spouse until remarriage and to children under age 18, to dependent children through age 23 when full time students, and to dependent children of any age if handicapped. For Clarksdale, Columbus, Gulfport, Hattiesburg, Jackson, McComb, Meridian, Vicksburg and Yazoo City, benefits payable to spouses do not cease upon remarriage.

**Amount of Benefit**

The annual benefit payable under all conditions in the case of firemen and policemen and under other than condition (c) in the case of general employees is equal to 2.5% of average compensation for each year of credited service up to 20 and 1.7% of average compensation for each year over 20, with a maximum benefit of 66-2/3% (87% for Clinton) of average compensation.

For general employee members under condition (c), the annual benefit payable is equal to 50% of salary at the time of death.

**Return of Contributions**

Upon a member's termination of employment for any reason before retirement, his accumulated contributions are refunded. Upon the death of a member who is not eligible for any other death benefit, his accumulated contributions are paid to his beneficiary.



## **Minimum Allowances**

The minimum monthly allowance paid to members from the following municipalities, for all retirement and death benefits, are:

Biloxi:	\$600
Columbus:	\$500
Gulfport:	\$500
Hattiesburg:	\$750
Jackson:	\$500
Meridian:	\$600
Tupelo:	\$750
Vicksburg:	\$1,415

## **Post-Retirement Adjustments In Allowances**

The allowances of certain retired members are adjusted annually by a cost-of-living adjustment (COLA) on the basis of the annual percentage change in each fiscal year of the Consumer Price Index.

Those adjustments are limited as follows:

Biloxi: 3% per year (not to exceed 64.4%) for each full fiscal year of retirement after June 30, 2000 for all retirees and beneficiaries with the COLA being compounded beginning with the state fiscal year in which the retired member turns age 55. This is in addition to the previously granted maximum of 3% per year (not to exceed 9%) for all members who retired on or before December 31, 1995.

Clarksdale: Maximum of 2-1/2% per year for all retirees and beneficiaries.

Clinton: Maximum of 2-1/2% per year (not to exceed 10%) for service retirements only.

Columbus: Maximum of 2-1/2% per year (not to exceed 25%) for all retirees and beneficiaries.

Greenville: Maximum of 2-1/2% per year (not to exceed 25%) for all retirees and beneficiaries.

Gulfport: Maximum of 3% per year (not to exceed 27%) for each fiscal year of retirement after June 30, 2002 for all retirees and beneficiaries. This is in addition to the previously granted COLA of 2% per year (not to exceed 6%) for those retired before July 1, 2001.

Hattiesburg: 2-1/2% per year for all retirees and beneficiaries (not to exceed 30%).

Jackson: Maximum aggregate increase of 19.5% for service and disability retirements only.



Laurel: 2% per year, compounded annually (maximum of 3 years) for each fiscal year of retirement after June 30, 2002 for all retirees and beneficiaries. COLA increases begin at the later of age 60 or after one full fiscal year of retirement.

McComb: Maximum of 2-1/2% per year for all retirees and beneficiaries (not to exceed 10%).

Pascagoula: Maximum of 2-1/2% per year for all retirees and beneficiaries (not to exceed 15%).

Vicksburg: 3% per year for all retirees and beneficiaries.

Yazoo City: Maximum of 2-1/2% per year (not to exceed 25%) for all retirees and beneficiaries.

Post-retirement adjustments are included in System liabilities for future increases for Biloxi, Clinton, Columbus, Greenville, Gulfport, Hattiesburg, Jackson, Laurel, McComb, Pascagoula, Vicksburg, and Yazoo City.

All Meridian retirees and beneficiaries who were receiving a retirement allowance as of June 30, 1999 were granted a 3.9% ad-hoc benefit increase.

All Tupelo retirees and beneficiaries received an increase of 5% in allowances effective December 1, 1991. Additional 3% ad-hoc benefit increases were granted to members retired at least 1 full fiscal year as of September 30, 1995, as of September 30, 1997, as of September 30, 1998, and as of September 30, 2000. Furthermore, a 2% ad-hoc benefit increase was granted to members retired at least 1 full fiscal year as of September 30, 1999 and a 2.34% ad-hoc benefit increase was granted to members retired at least 1 full fiscal year as of September 30, 2001. Furthermore, a 2% ad-hoc benefit increase was granted to members retired at least 1 full fiscal year as of September 30, 2010. Furthermore, a 2% ad-hoc benefit increase was granted to members retired at least 1 full fiscal year as of September 30, 2014. Furthermore, a 3% ad-hoc benefit increase was granted to members retired at least 1 full fiscal year as of September 30, 2015.

All Gulfport retirees and beneficiaries who were receiving a retirement allowance as of June 30, 2002 were granted a monthly ad-hoc benefit increase of \$2 per month for each year of service plus \$2 per month for each full fiscal year retired.





**SCHEDULE D**

**DETAILED TABULATIONS OF THE DATA**

**Retirants & Beneficiaries as of June 30, 2016  
Tabulated by Year of Retirement**

Year of Retirement	No.	Annual Benefits excluding COLA		COLA	Total Annual Benefits	Average Monthly Benefit
2016	3	\$	125,260	\$ 0	\$ 125,260	\$ 3,479
2015	1		25,335	0	25,335	2,111
2014	3		111,086	1,221	112,307	3,120
2013	9		364,151	20,445	384,596	3,561
2012	4		164,423	12,541	176,964	3,687
2011	1		25,791	0	25,791	2,149
2010	5		156,183	18,566	174,749	2,912
2009	3		79,418	4,637	84,055	2,335
2008	7		177,630	12,798	190,428	2,267
2007	8		250,897	46,050	296,947	3,093
2006	14		371,190	54,943	426,133	2,537
2005	29		744,570	131,793	876,363	2,518
2004	21		459,023	89,893	548,916	2,178
2003	33		866,765	187,452	1,054,217	2,662
2002	41		1,142,239	259,794	1,402,033	2,850
2001	25		710,322	139,831	850,153	2,834
2000	39		968,674	230,517	1,199,191	2,562
1999	38		897,147	193,437	1,090,584	2,392
1998	43		1,016,346	200,607	1,216,953	2,358
1997	53		1,138,114	199,401	1,337,515	2,103
1996	59		1,152,921	204,914	1,357,835	1,918
1995	106		1,833,544	282,622	2,116,166	1,664
1994	138		2,370,662	448,643	2,819,305	1,702
1993	98		1,647,316	319,815	1,967,131	1,673
1992	93		1,549,267	274,935	1,824,202	1,635
1991	78		1,320,449	222,282	1,542,731	1,648
1990	69		1,032,758	166,748	1,199,506	1,449
1989	50		654,053	158,936	812,989	1,355
1988	84		1,245,987	241,648	1,487,635	1,476
1987	50		624,616	135,472	760,088	1,267
1986	60		806,857	179,283	986,140	1,370
1985	51		665,613	133,559	799,172	1,306
1984	50		531,335	93,500	624,835	1,041
1983	44		433,417	67,870	501,287	949
1982 & Prior	388		2,958,423	732,469	3,690,892	793
Totals	1,798	\$	28,621,782	\$ 5,466,622	\$ 34,088,404	\$ 1,580



### Schedule of Retired Members by Type of Benefit

Benefits Payable June 30, 2016

Amount of Monthly Benefit	Number of Rets.	Ret. Type 1*	Ret. Type 2*	Ret. Type 3*
\$1 - \$300	18	1	2	15
301 - 600	102	17	5	80
601 - 900	240	98	23	119
901 - 1,200	361	181	21	159
1,201 - 1,500	234	161	9	64
1,501 - 1,800	229	176	1	52
1,801 - 2,100	166	130		36
2,101 - 2,400	158	125	1	32
2,401 - 2,700	114	71	2	41
Over 2,700	176	150		26
Totals	1,798	1,110	64	624

\*Type of Retirement

1 – Retirement for Age & Service

2 – Disability Retirement

3 – Survivor Payment



# **MISSISSIPPI MUNICIPAL RETIREMENT SYSTEMS**

## **Retirant and Beneficiary Information June 30, 2016 Tabulated by Attained Ages**

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20								
20 – 24					1	\$18,170	1	\$18,170
25 – 29								
30 – 34								
35 – 39								
40 – 44					1	22,130	1	22,130
45 – 49					2	30,569	2	30,569
50 – 54	11	\$325,132			3	51,181	14	376,313
55 – 59	32	906,993			19	362,739	51	1,269,732
60 – 64	122	3,137,377	11	\$148,956	35	684,234	168	3,970,567
65 – 69	305	7,125,634	13	171,100	76	1,313,205	394	8,609,939
70 – 74	222	4,783,249	8	76,875	112	1,882,648	342	6,742,772
75 – 79	188	3,744,896	18	208,107	131	2,090,371	337	6,043,374
80 – 84	139	2,453,357	7	77,748	123	1,702,632	269	4,233,737
85 – 89	71	1,140,849	4	30,522	86	1,026,504	161	2,197,875
90 – 94	19	221,063	2	17,977	26	247,209	47	486,249
95	1	7,950			4	28,175	5	36,125
96			1	5,892	4	37,760	5	43,652
97								
98								
99								
100 & Over					1	7,200	1	7,200
Totals	1,110	\$23,846,500	64	\$737,177	624	\$9,504,727	1,798	\$34,088,404



# MISSISSIPPI MUNICIPAL RETIREMENT SYSTEMS

Total Active Members as of June 30, 2016  
Tabulated by Attained Ages and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30+	No.	Valuation Payroll
Under 20									
20 – 24									
25 – 29									
30 – 34									
35 – 39									
40 – 44									
45 – 49									
50 – 54							1	1	\$50,886
55 – 59									
60 & Over							7	7	368,114
Totals							8	8	\$419,000

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

Age: 66.8 years  
Service: 40.9 years  
Annual Pay: \$52,375



## **SCHEDULE E**

### **ANALYSIS OF FINANCIAL EXPERIENCE**

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2016 is shown below.

		\$ Thousands
(1)	UEL * as of 6/30/15	\$179,000.6
(2)	Actual employer contributions**	18,171.3
(3)	Interest accrual: $[(1) \times .0775] - [(2) \times .03875]$	13,168.4
(4)	Expected UEL before changes: $(1) - (2) + (3)$	173,997.7
(5)	Change due to plan amendments	0.0
(6)	Change due to new actuarial assumptions or methods	0.0
(7)	Expected UEL after changes: $(4) + (5) + (6)$	173,997.7
(8)	Actual UEL as of 6/30/16	171,531.7
(9)	Gain/(loss): $(7) - (8)$	2,466.0

\*Unfunded employer liability.

\*\*Net of administrative expenses.



**Gains & Losses in Liabilities Resulting from Differences  
Between Assumed Experience & Actual Experience  
(\$ Thousands)**

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/16	\$ Gain (or Loss) For Year Ending 6/30/15
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ 71.1	\$ 272.7
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	0.0	0.0
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	1.4	1.4
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	0.0	0.0
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	19.9	56.7
<b>Investment Income.</b> If there is greater investment income than assumed, there is a gain. If less income, a loss.	66.4	8,530.8
<b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	2,307.4	716.0
<b>Other.</b> Miscellaneous gains and losses resulting from data adjustments, COLAs, etc.	<u>(0.2)</u>	<u>(1,128.8)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	<b>\$2,466.0</b>	<b>\$8,448.8</b>
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, or method changes.	<u>0.0</u>	<u>(10,025.6)</u>
<b>Composite Gain (or Loss) During Year</b>	<b>\$2,466.0</b>	<b>\$(1,576.8)</b>



## **SCHEDULE F**

### **GLOSSARY**

**Actuarial Accrued Liability.** The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability”.

**Accrued Service.** The service credited under the plan which was rendered before the date of the actuarial valuation.

**Actuarial Assumptions.** Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**Actuarial Cost Method.** A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method”.

**Actuarial Equivalent.** A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

**Actuarial Present Value.** The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Amortization.** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

**Experience Gain (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

**Normal Cost.** The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost”. Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

**Reserve Account.** An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

**Unfunded Actuarial Accrued Liability.** The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability”.

**Valuation Assets.** The value of current plan assets recognized for valuation purposes. Generally based on a market-related smoothing method.



## **SCHEDULE G**

### **THE NATURE OF ACTUARIAL PROJECTIONS**

Regular actuarial valuations measure the Retirement System's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding future changes in the makeup of the covered group or the amounts of benefits to be paid or investment income to be received – actuarial projections do.

Whereas valuations provide a snapshot of the retirement system as of a given date, projections provide a moving picture. Projected active and retired groups are developed from year to year by the application of assumptions regarding pre-retirement withdrawal from service, retirement, deaths and disabilities. Projected information regarding the retired life group leads to assumed future benefit payout. Combining future benefit payments with assumed contributions and expected investment earnings produces the net cash flow of the System each year, and thus end of year asset levels.

Projections are used for many purposes. Among them are (i) developing cash flow patterns for investment policy and asset mix consideration, (ii) exploring the effect of alternative assumptions about future experience, (iii) analyzing the impact on system funding progress of changes in the workforce, and (iv) examining the potential effect of changes in benefits on system financial activity.

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example: how benefits payable and system assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flow projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changed relationships between future benefit payout and future investment income can be very useful.





**SCHEDULE H**

**CASH FLOW PROJECTIONS BASED ON NEW FUNDING POLICY**



**Mississippi Municipal Retirement Systems  
City of Biloxi**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

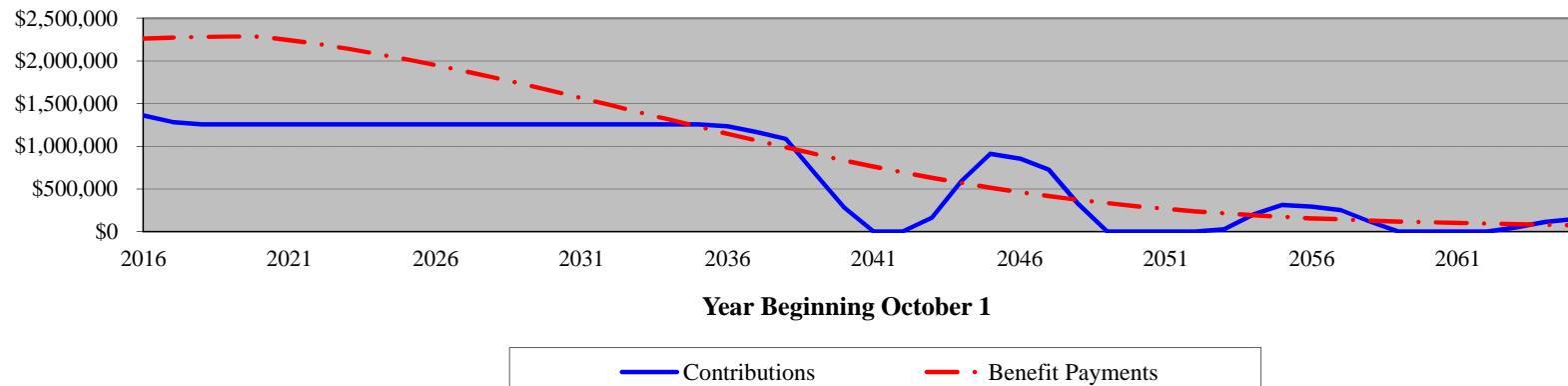
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$546,242,975	\$8,995,152	0.00230	\$1,361,274	\$2,260,791	\$555,911	(\$343,606)	\$8,651,546	2017
2017	546,242,975	8,651,546	0.00230	1,283,671	2,273,256	530,695	(458,890)	8,192,655	2018
2018	546,242,975	8,192,655	0.00230	1,256,359	2,281,716	499,723	(525,634)	7,667,021	2019
2019	546,242,975	7,667,021	0.00230	1,256,359	2,286,105	465,416	(564,330)	7,102,691	2020
2020	546,242,975	7,102,691	0.00230	1,256,359	2,283,125	428,830	(597,936)	6,504,756	2021
2021	546,242,975	6,504,756	0.00230	1,256,359	2,244,775	391,191	(597,225)	5,907,531	2022
2022	546,242,975	5,907,531	0.00230	1,256,359	2,197,915	353,871	(587,685)	5,319,845	2023
2023	546,242,975	5,319,845	0.00230	1,256,359	2,142,537	317,443	(568,735)	4,751,110	2024
2024	546,242,975	4,751,110	0.00230	1,256,359	2,082,921	282,382	(544,180)	4,206,930	2025
2025	546,242,975	4,206,930	0.00230	1,256,359	2,019,241	249,047	(513,835)	3,693,095	2026
2030	546,242,975	2,061,593	0.00230	1,256,359	1,648,412	121,462	(270,591)	1,791,002	2031
2035	546,242,975	1,441,734	0.00225	1,256,359	1,229,253	94,580	121,686	1,563,421	2036
2040	546,242,975	2,116,300	0.00153	283,245	834,974	119,911	(431,818)	1,684,482	2041
2045	546,242,975	(99,413)	0.00094	911,249	515,920	6,184	401,513	302,100	2046
2050	546,242,975	840,437	0.00054	0	297,326	45,117	(252,209)	588,228	2051
2055	546,242,975	(47,191)	0.00032	312,282	172,361	1,408	141,329	94,139	2056
2060	546,242,975	281,181	0.00020	0	109,268	14,781	(94,487)	186,694	2061
2065	546,242,975	2,638	0.00014	147,896	74,038	2,534	76,392	79,030	2066



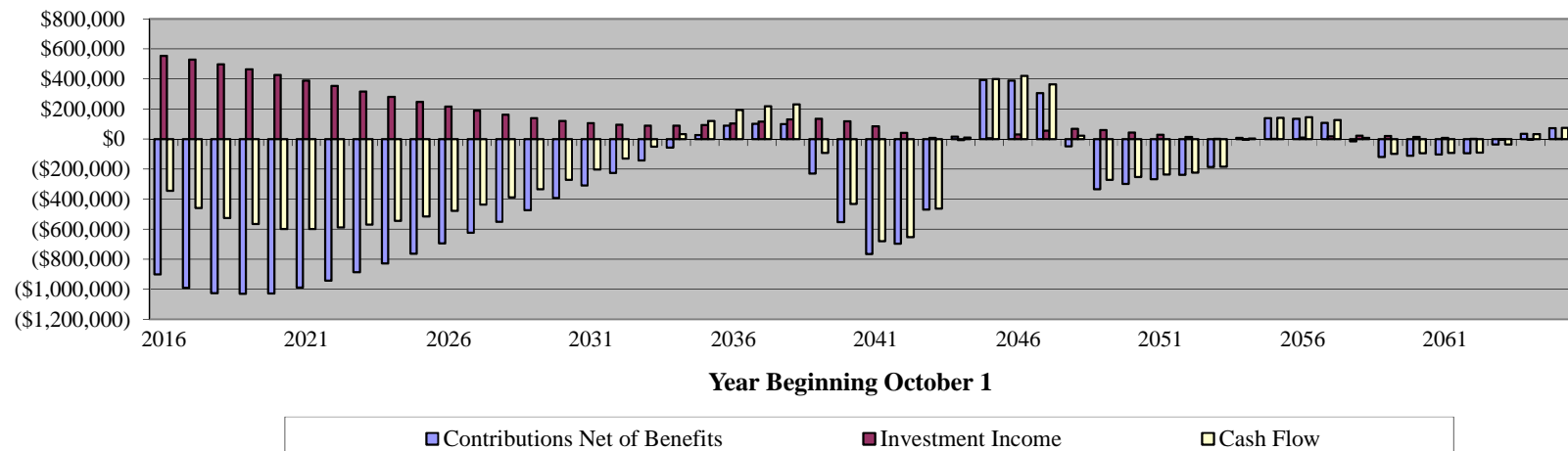
Mississippi Municipal Retirement Systems  
City of Biloxi

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of Clarksdale**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments)**

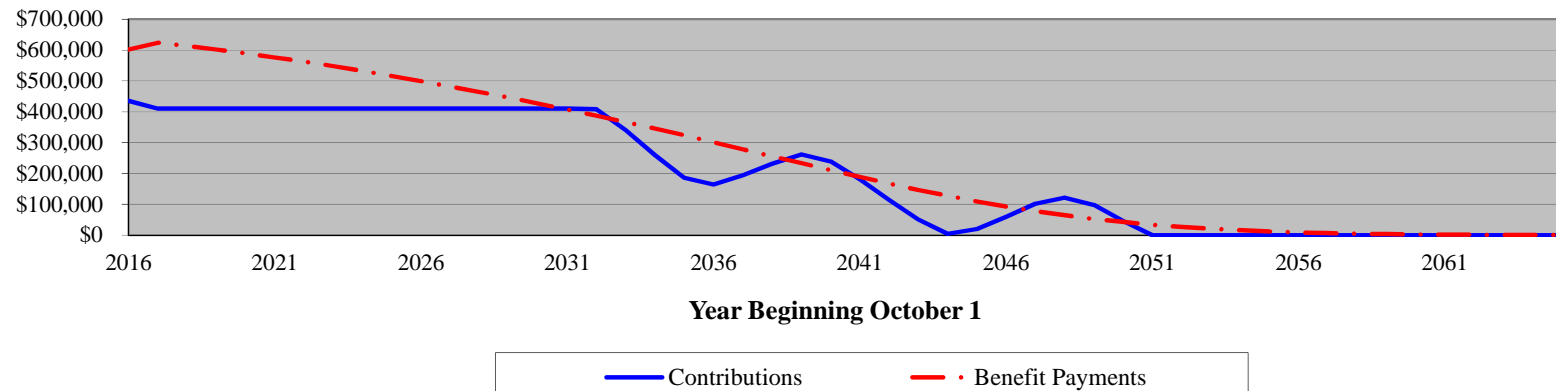
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$85,157,047	\$1,573,828	0.00481	\$435,453	\$601,916	\$96,974	(\$69,489)	\$1,504,339	2017
2017	85,157,047	1,504,339	0.00481	410,244	623,945	90,946	(122,755)	1,381,584	2018
2018	85,157,047	1,381,584	0.00481	409,605	613,517	83,280	(120,632)	1,260,952	2019
2019	85,157,047	1,260,952	0.00481	409,605	602,115	75,804	(116,706)	1,144,246	2020
2020	85,157,047	1,144,246	0.00481	409,605	589,773	68,613	(111,555)	1,032,691	2021
2021	85,157,047	1,032,691	0.00481	409,605	576,541	61,785	(105,151)	927,539	2022
2022	85,157,047	927,539	0.00481	409,605	562,490	55,400	(97,485)	830,054	2023
2023	85,157,047	830,054	0.00481	409,605	547,694	49,536	(88,553)	741,502	2024
2024	85,157,047	741,502	0.00481	409,605	532,220	44,275	(78,340)	663,162	2025
2025	85,157,047	663,162	0.00481	409,605	516,122	39,698	(66,819)	596,343	2026
2030	85,157,047	472,538	0.00481	409,605	427,006	30,158	12,757	485,295	2031
2035	85,157,047	534,543	0.00380	186,155	323,491	30,352	(106,984)	427,559	2036
2040	85,157,047	283,151	0.00248	238,957	210,773	19,306	47,490	330,641	2041
2045	85,157,047	122,234	0.00128	20,034	109,304	5,090	(84,180)	38,053	2046
2050	85,157,047	144,493	0.00050	46,158	42,445	9,511	13,224	157,717	2051
2055	85,157,047	90,423	0.00014	0	11,997	5,494	(6,503)	83,921	2056
2060	85,157,047	80,280	0.00003	0	2,417	5,141	2,724	83,004	2061
2065	85,157,047	102,012	0.00000	0	316	6,621	6,305	108,317	2066



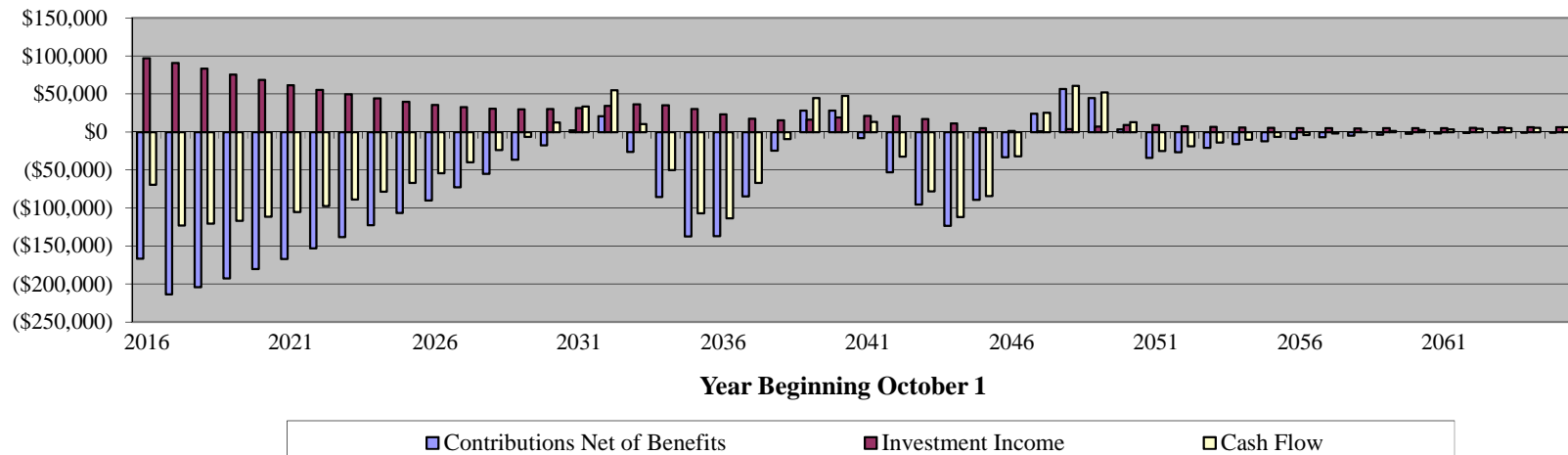
Mississippi Municipal Retirement Systems  
City of Clarksdale

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of Clinton**

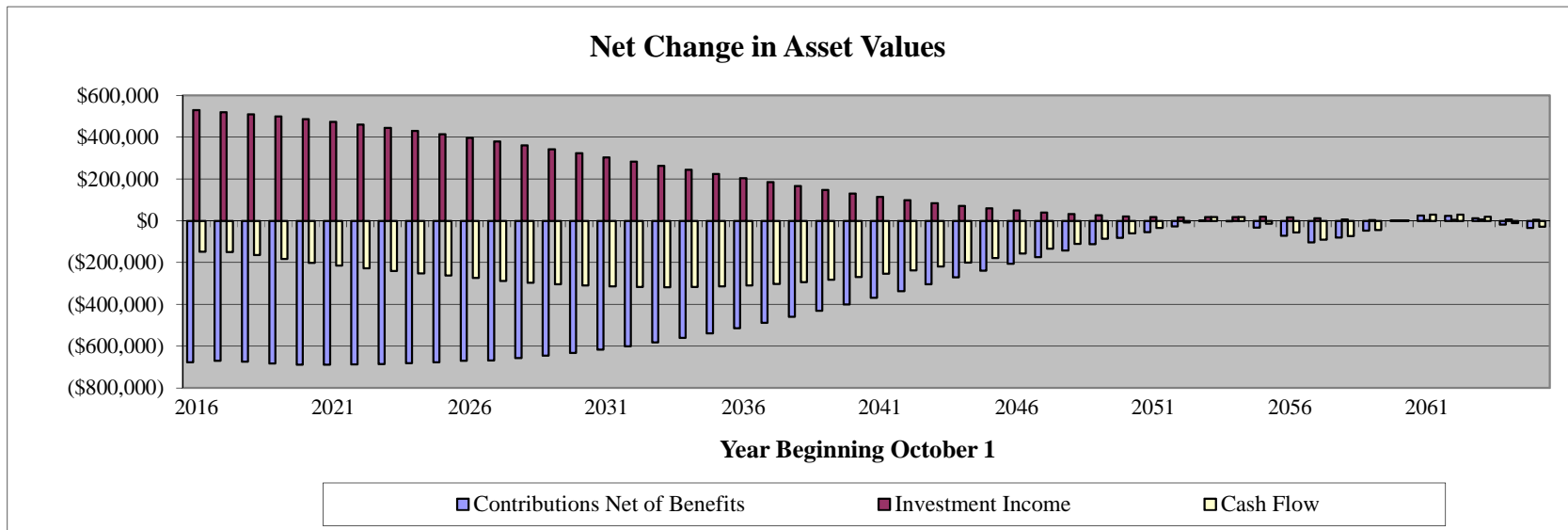
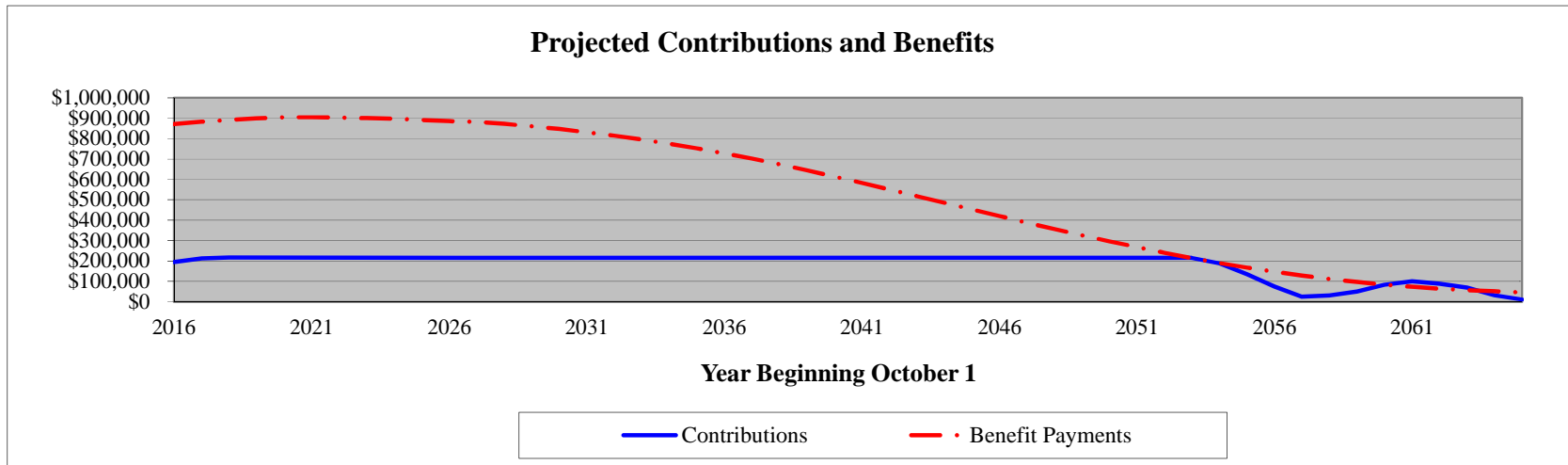
**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$208,834,622	\$8,477,560	0.00103	\$194,853	\$871,278	\$529,404	(\$147,021)	\$8,330,539	2017
2017	208,834,622	8,330,539	0.00103	213,203	882,055	520,090	(148,762)	8,181,777	2018
2018	208,834,622	8,181,777	0.00103	217,423	891,519	510,252	(163,844)	8,017,932	2019
2019	208,834,622	8,017,932	0.00103	217,025	899,217	499,343	(182,849)	7,835,083	2020
2020	208,834,622	7,835,083	0.00103	216,694	904,603	487,275	(200,634)	7,634,449	2021
2021	208,834,622	7,634,449	0.00103	216,420	904,636	474,224	(213,992)	7,420,457	2022
2022	208,834,622	7,420,457	0.00103	216,192	903,391	460,347	(226,852)	7,193,605	2023
2023	208,834,622	7,193,605	0.00103	216,003	900,876	445,676	(239,197)	6,954,409	2024
2024	208,834,622	6,954,409	0.00103	215,846	897,069	430,245	(250,978)	6,703,431	2025
2025	208,834,622	6,703,431	0.00103	215,717	891,932	414,092	(262,123)	6,441,308	2026
2030	208,834,622	5,282,811	0.00103	215,100	846,739	323,178	(308,461)	4,974,350	2031
2035	208,834,622	3,712,203	0.00103	215,100	752,842	224,092	(313,650)	3,398,553	2036
2040	208,834,622	2,213,567	0.00103	215,100	614,493	131,106	(268,287)	1,945,280	2041
2045	208,834,622	1,038,427	0.00103	215,100	452,990	59,888	(178,002)	860,425	2046
2050	208,834,622	376,153	0.00103	215,100	296,959	21,831	(60,028)	316,125	2051
2055	208,834,622	309,647	0.00080	135,851	167,878	19,103	(12,924)	296,724	2056
2060	208,834,622	35,732	0.00041	85,056	84,910	2,327	2,473	38,205	2061
2065	208,834,622	105,040	0.00022	12,137	46,047	5,743	(28,167)	76,873	2066



Mississippi Municipal Retirement Systems  
City of Clinton

50 Year Cash Flow Projection  
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems  
City of Columbus**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$201,353,637	\$1,047,849	0.00567	\$1,097,808	\$1,198,619	\$64,885	(\$35,926)	\$1,011,923	2017
2017	201,353,637	1,011,923	0.00567	1,141,675	1,183,442	64,439	22,672	1,034,595	2018
2018	201,353,637	1,034,595	0.00567	1,141,675	1,164,584	66,516	43,607	1,078,203	2019
2019	201,353,637	1,078,203	0.00567	1,141,675	1,142,072	70,070	69,673	1,147,876	2020
2020	201,353,637	1,147,876	0.00555	1,141,675	1,116,881	75,405	100,199	1,248,074	2021
2021	201,353,637	1,248,074	0.00541	1,123,080	1,089,347	82,204	115,937	1,364,011	2022
2022	201,353,637	1,364,011	0.00526	1,096,231	1,059,574	89,833	126,490	1,490,501	2023
2023	201,353,637	1,490,501	0.00510	1,067,018	1,027,681	98,141	137,478	1,627,979	2024
2024	201,353,637	1,627,979	0.00494	1,035,654	993,797	107,158	149,015	1,776,993	2025
2025	201,353,637	1,776,993	0.00476	797,537	958,070	110,369	(50,164)	1,726,830	2026
2030	201,353,637	326,140	0.00374	766,483	752,898	21,634	35,219	361,359	2031
2035	201,353,637	990,055	0.00264	372,149	530,637	59,284	(99,204)	890,851	2036
2040	201,353,637	90,192	0.00160	370,343	322,273	7,400	55,470	145,662	2041
2045	201,353,637	423,808	0.00080	16,111	160,129	22,941	(121,077)	302,732	2046
2050	201,353,637	(32,613)	0.00033	115,059	65,828	(545)	48,686	16,073	2051
2055	201,353,637	149,650	0.00013	0	27,053	8,862	(18,191)	131,459	2056
2060	201,353,637	79,193	0.00007	0	15,033	4,667	(10,366)	68,827	2061
2065	201,353,637	30,396	0.00005	0	11,062	1,622	(9,440)	20,956	2066

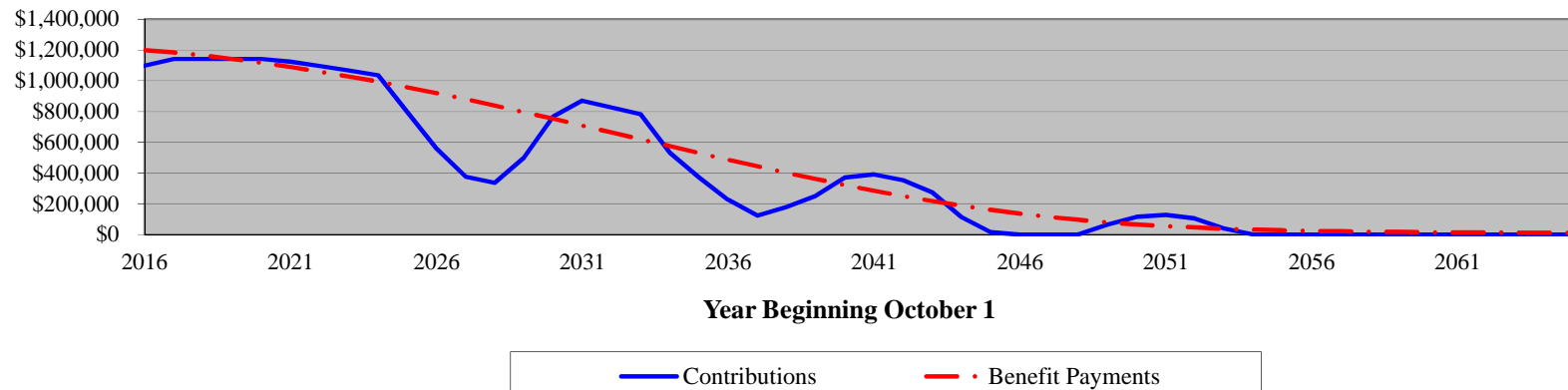




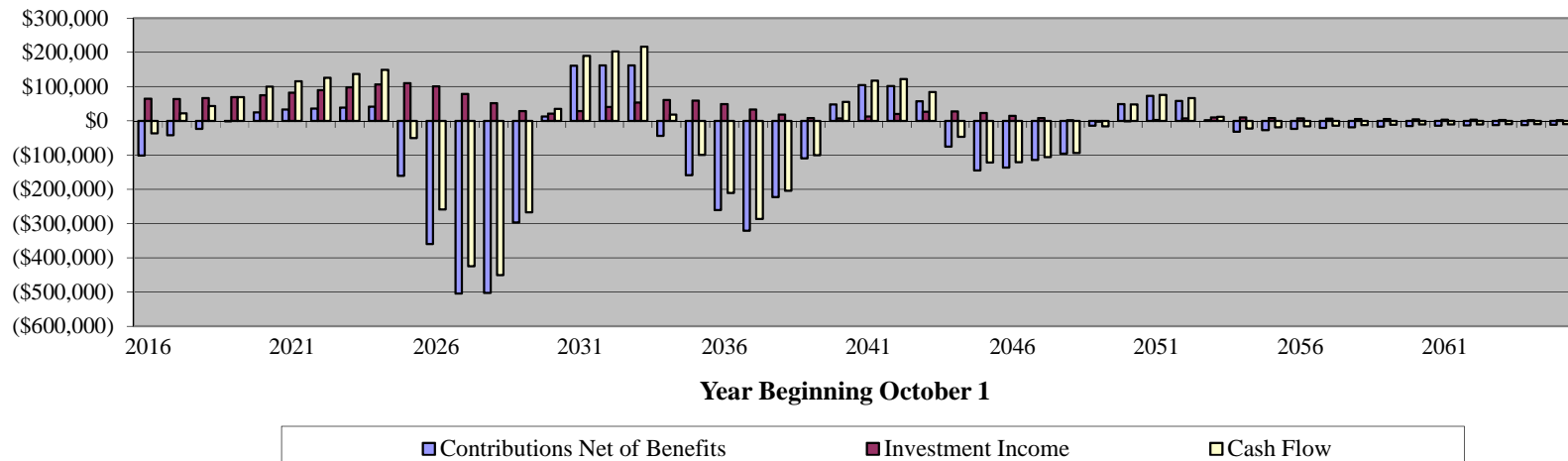
Mississippi Municipal Retirement Systems  
City of Columbus

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of Greenville**

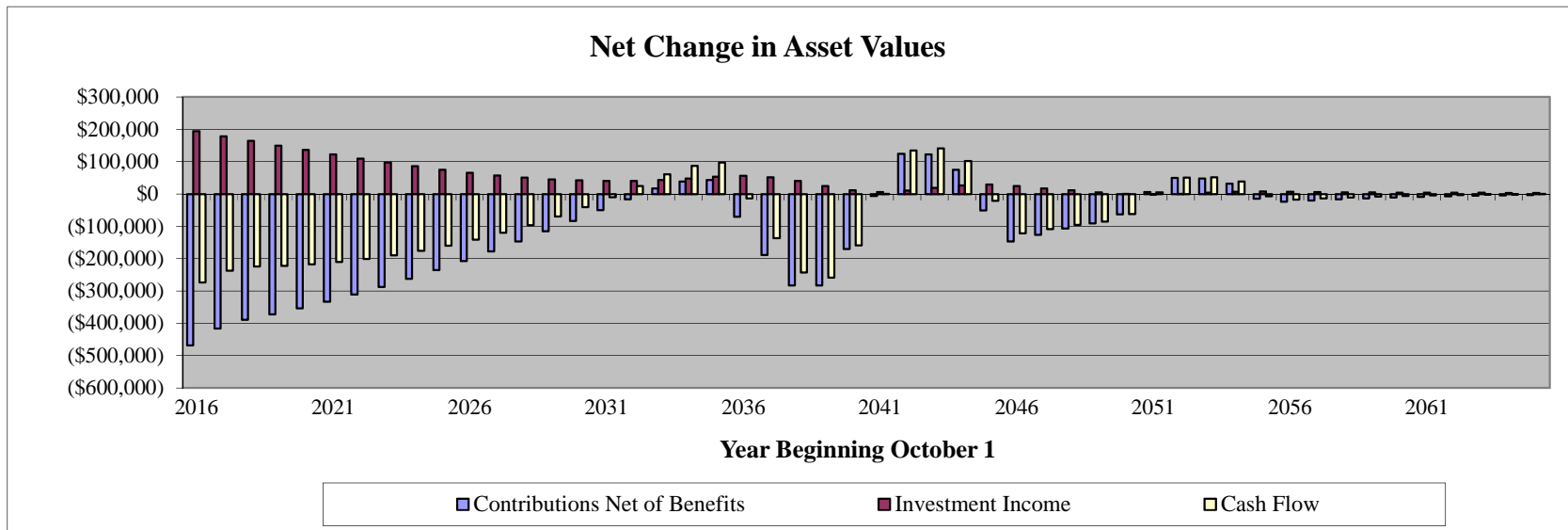
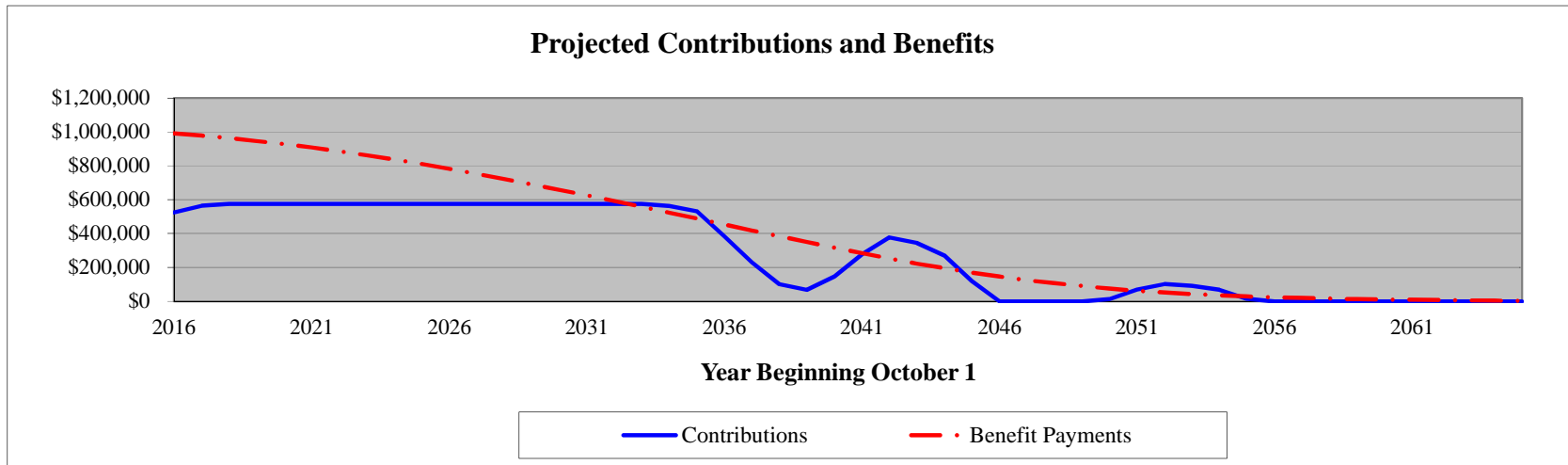
**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$201,281,727	\$3,225,718	0.00286	\$524,332	\$992,266	\$194,703	(\$273,231)	\$2,952,487	2017
2017	201,281,727	2,952,487	0.00286	563,589	979,116	178,620	(236,907)	2,715,580	2018
2018	201,281,727	2,715,580	0.00286	575,666	964,188	164,085	(224,437)	2,491,143	2019
2019	201,281,727	2,491,143	0.00286	575,666	947,468	150,031	(221,771)	2,269,372	2020
2020	201,281,727	2,269,372	0.00286	575,666	928,957	136,208	(217,083)	2,052,289	2021
2021	201,281,727	2,052,289	0.00286	575,666	908,670	122,747	(210,257)	1,842,032	2022
2022	201,281,727	1,842,032	0.00286	575,666	886,646	109,784	(201,196)	1,640,836	2023
2023	201,281,727	1,640,836	0.00286	575,666	862,938	97,465	(189,807)	1,451,029	2024
2024	201,281,727	1,451,029	0.00286	575,666	837,623	85,937	(176,020)	1,275,008	2025
2025	201,281,727	1,275,008	0.00286	575,666	810,803	75,354	(159,783)	1,115,225	2026
2030	201,281,727	688,492	0.00286	575,666	658,703	42,096	(40,941)	647,550	2031
2035	201,281,727	810,856	0.00243	532,252	488,960	54,090	97,382	908,238	2036
2040	201,281,727	257,499	0.00157	146,550	316,825	11,291	(158,984)	98,515	2041
2045	201,281,727	477,096	0.00085	120,046	170,320	29,403	(20,871)	456,225	2046
2050	201,281,727	45,785	0.00038	12,554	75,849	951	(62,344)	(16,559)	2051
2055	201,281,727	130,219	0.00015	14,758	29,494	7,993	(6,743)	123,476	2056
2060	201,281,727	74,597	0.00005	0	10,547	4,511	(6,036)	68,562	2061
2065	201,281,727	59,051	0.00002	0	3,446	3,728	282	59,333	2066



Mississippi Municipal Retirement Systems  
City of Greenville

50 Year Cash Flow Projection  
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems  
City of Greenwood**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments)**

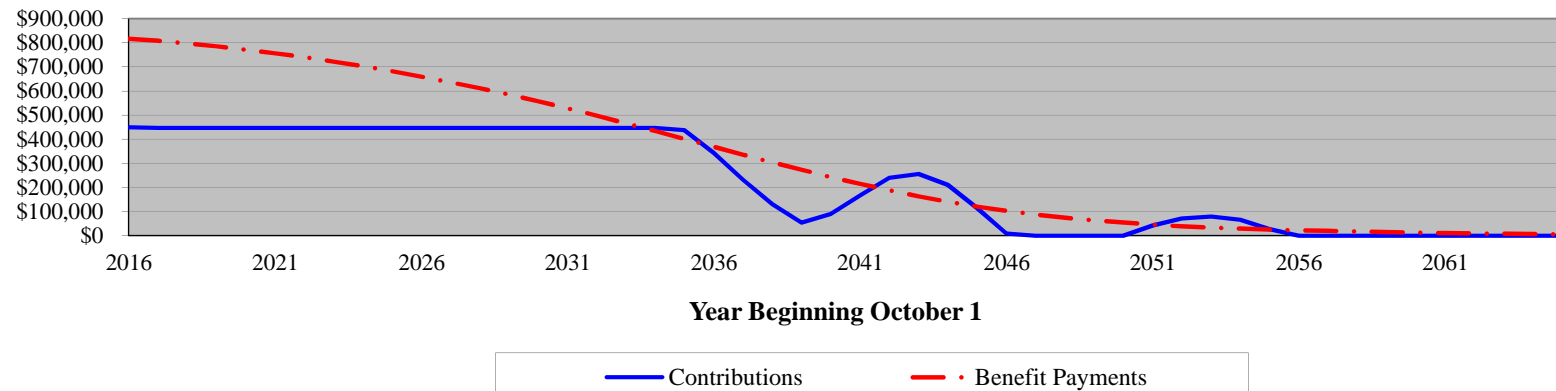
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$110,861,169	\$2,972,591	0.00403	\$449,470	\$817,355	\$181,450	(\$186,435)	\$2,786,156	2017
2017	110,861,169	2,786,156	0.00403	447,602	808,611	169,552	(191,457)	2,594,699	2018
2018	110,861,169	2,594,699	0.00403	446,771	798,019	157,420	(193,828)	2,400,871	2019
2019	110,861,169	2,400,871	0.00403	446,771	785,839	145,210	(193,858)	2,207,013	2020
2020	110,861,169	2,207,013	0.00403	446,771	772,199	133,046	(192,382)	2,014,631	2021
2021	110,861,169	2,014,631	0.00403	446,771	757,153	121,022	(189,360)	1,825,271	2022
2022	110,861,169	1,825,271	0.00403	446,771	740,706	109,240	(184,695)	1,640,575	2023
2023	110,861,169	1,640,575	0.00403	446,771	722,845	97,806	(178,268)	1,462,307	2024
2024	110,861,169	1,462,307	0.00403	446,771	703,556	86,836	(169,949)	1,292,358	2025
2025	110,861,169	1,292,358	0.00403	446,771	682,829	76,452	(159,606)	1,132,752	2026
2030	110,861,169	643,252	0.00403	446,771	557,582	38,267	(72,544)	570,708	2031
2035	110,861,169	563,067	0.00363	437,628	401,964	37,740	73,404	636,471	2036
2040	110,861,169	245,389	0.00220	89,916	243,350	11,042	(142,392)	102,997	2041
2045	110,861,169	304,300	0.00110	114,563	121,629	19,554	12,488	316,788	2046
2050	110,861,169	36,628	0.00049	0	54,207	647	(53,560)	(16,932)	2051
2055	110,861,169	97,355	0.00023	27,538	25,560	6,391	8,369	105,724	2056
2060	110,861,169	50,720	0.00012	0	13,212	2,874	(10,338)	40,382	2061
2065	110,861,169	9,376	0.00005	0	5,936	420	(5,516)	3,860	2066



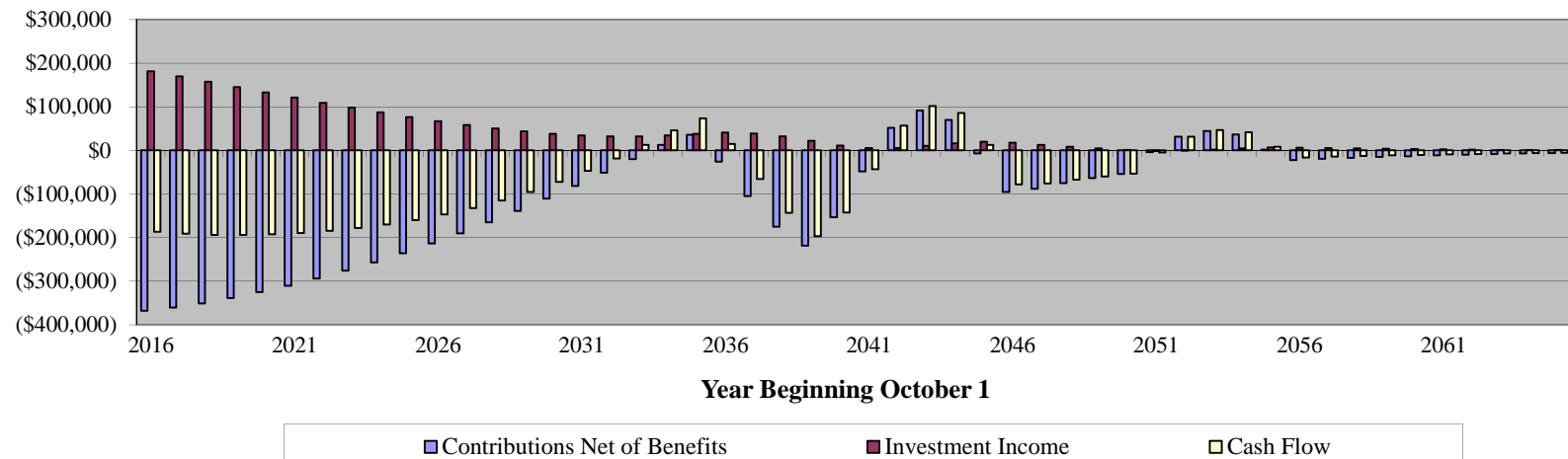
Mississippi Municipal Retirement Systems  
City of Greenwood

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of Gulfport**

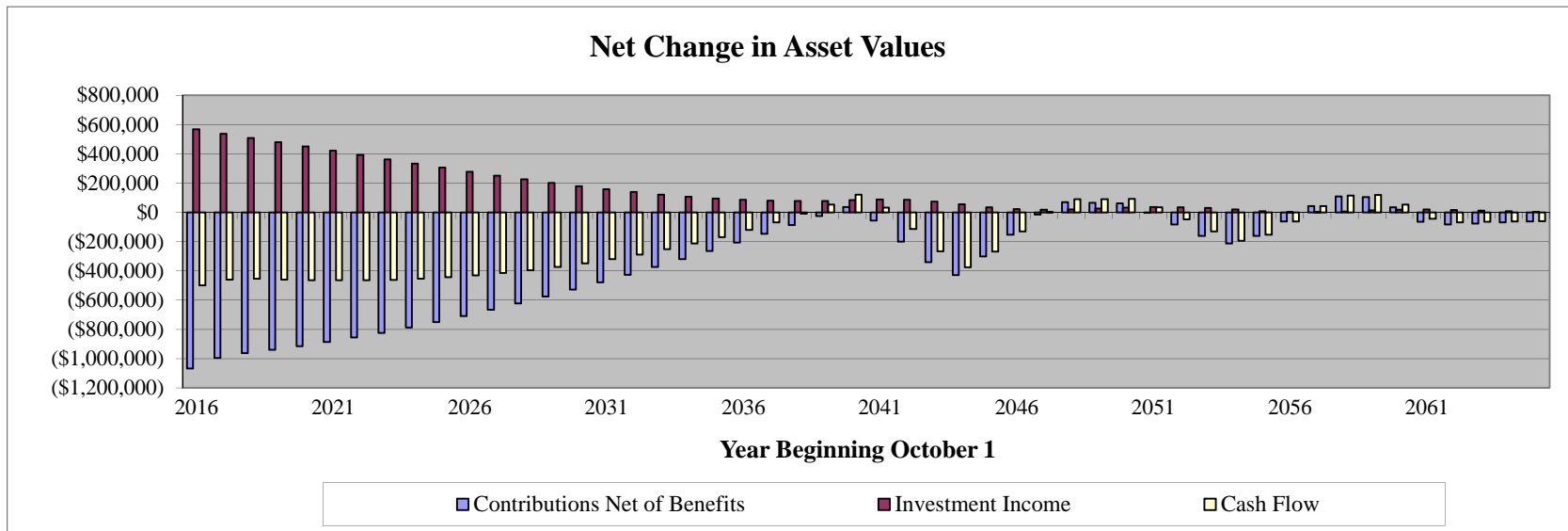
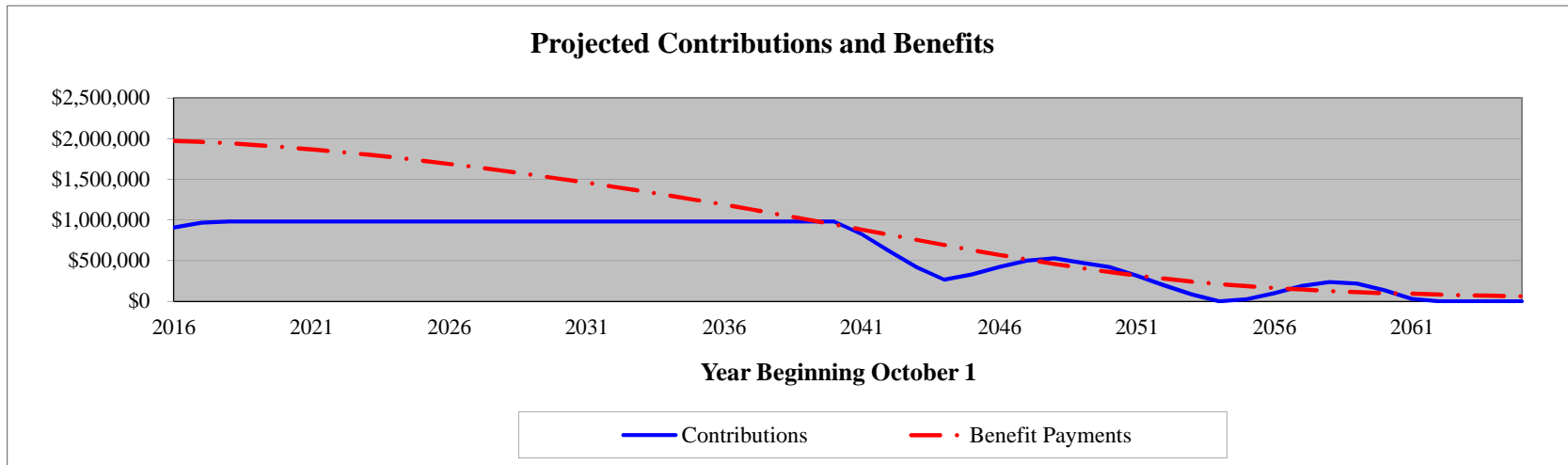
**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments)**

<b>Year Beginning <u>July 1</u></b>	<b>Value of Assessed Property</b>	<b>MVA Balance <u>July 1</u></b>	<b>Millage Rate</b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b>MVA Balance <u>June 30</u></b>	<b>Year Ending <u>June 30</u></b>
2016	\$711,742,489	\$9,253,922	0.00138	\$905,854	\$1,973,276	\$567,360	(\$500,062)	\$8,753,860	2017
2017	711,742,489	8,753,860	0.00138	966,190	1,962,617	537,127	(459,300)	8,294,560	2018
2018	711,742,489	8,294,560	0.00138	982,205	1,944,428	508,366	(453,857)	7,840,703	2019
2019	711,742,489	7,840,703	0.00138	982,205	1,921,943	479,585	(460,153)	7,380,550	2020
2020	711,742,489	7,380,550	0.00138	982,205	1,896,452	450,490	(463,757)	6,916,793	2021
2021	711,742,489	6,916,793	0.00138	982,205	1,868,532	421,239	(465,088)	6,451,705	2022
2022	711,742,489	6,451,705	0.00138	982,205	1,838,434	391,971	(464,258)	5,987,447	2023
2023	711,742,489	5,987,447	0.00138	982,205	1,806,304	362,822	(461,277)	5,526,170	2024
2024	711,742,489	5,526,170	0.00138	982,205	1,770,657	333,980	(454,472)	5,071,698	2025
2025	711,742,489	5,071,698	0.00138	982,205	1,731,644	305,687	(443,752)	4,627,946	2026
2030	711,742,489	3,013,093	0.00138	982,205	1,510,162	178,963	(348,994)	2,664,098	2031
2035	711,742,489	1,588,771	0.00138	982,205	1,246,205	94,825	(169,175)	1,419,596	2036
2040	711,742,489	1,273,894	0.00133	982,205	945,617	83,974	120,562	1,394,456	2041
2045	711,742,489	672,338	0.00089	329,703	632,144	34,027	(268,414)	403,925	2046
2050	711,742,489	454,538	0.00051	421,293	360,757	31,481	92,017	546,555	2051
2055	711,742,489	208,017	0.00026	25,217	186,152	8,373	(152,562)	55,455	2056
2060	711,742,489	269,770	0.00014	135,825	102,319	18,607	52,113	321,882	2061
2065	711,742,489	81,657	0.00009	0	63,039	3,291	(59,748)	21,909	2066



Mississippi Municipal Retirement Systems  
City of Gulfport

50 Year Cash Flow Projection  
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems  
City of Hattiesburg**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments)**

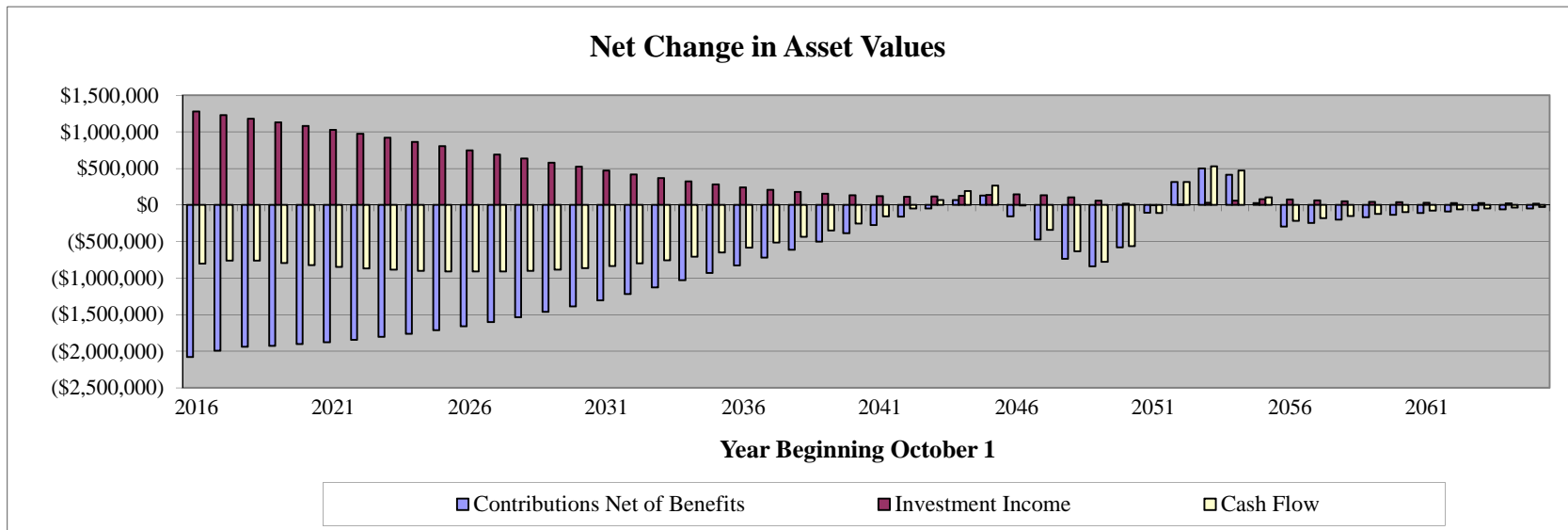
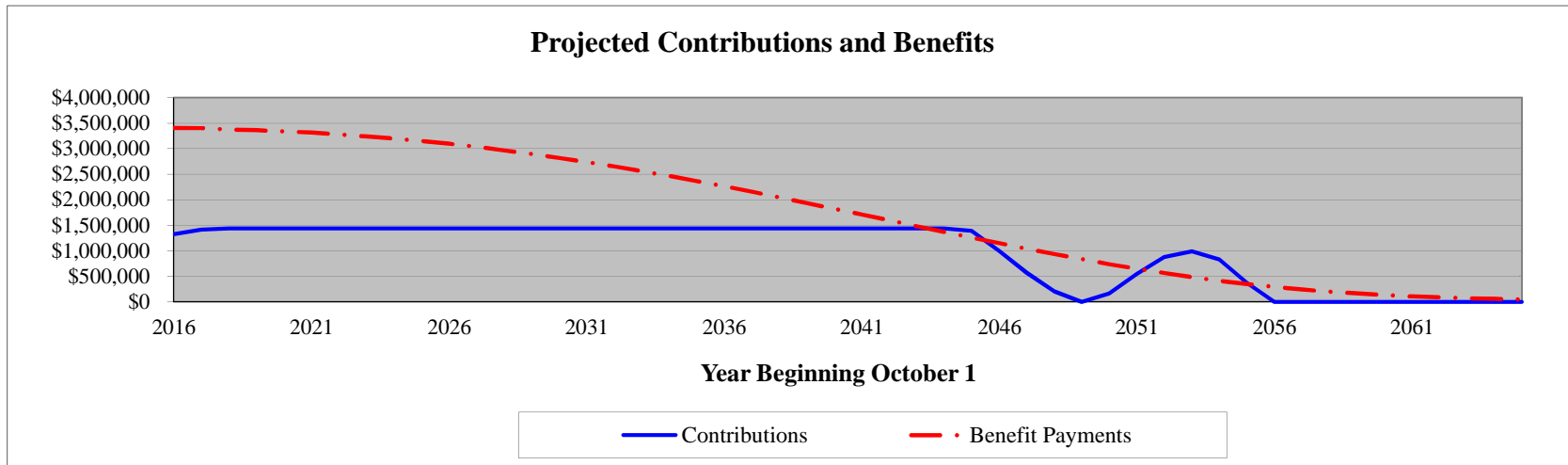
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$432,115,121	\$20,681,674	0.00333	\$1,323,966	\$3,404,648	\$1,277,751	(\$802,931)	\$19,878,743	2017
2017	432,115,121	19,878,743	0.00333	1,415,177	3,405,643	1,228,447	(762,019)	19,116,724	2018
2018	432,115,121	19,116,724	0.00333	1,438,943	3,378,819	1,180,534	(759,342)	18,357,382	2019
2019	432,115,121	18,357,382	0.00333	1,438,943	3,364,339	1,131,640	(793,756)	17,563,626	2020
2020	432,115,121	17,563,626	0.00333	1,438,943	3,342,547	1,080,743	(822,861)	16,740,765	2021
2021	432,115,121	16,740,765	0.00333	1,438,943	3,315,348	1,028,127	(848,278)	15,892,487	2022
2022	432,115,121	15,892,487	0.00333	1,438,943	3,281,627	974,067	(868,617)	15,023,870	2023
2023	432,115,121	15,023,870	0.00333	1,438,943	3,243,701	918,820	(885,938)	14,137,932	2024
2024	432,115,121	14,137,932	0.00333	1,438,943	3,200,480	862,617	(898,920)	13,239,012	2025
2025	432,115,121	13,239,012	0.00333	1,438,943	3,151,970	805,739	(907,288)	12,331,724	2026
2030	432,115,121	8,730,232	0.00333	1,438,943	2,824,224	523,152	(862,129)	7,868,103	2031
2035	432,115,121	4,774,419	0.00333	1,438,943	2,368,376	280,606	(648,827)	4,125,592	2036
2040	432,115,121	2,247,764	0.00333	1,438,943	1,826,577	133,705	(253,929)	1,993,835	2041
2045	432,115,121	2,052,303	0.00292	1,389,180	1,260,689	137,510	266,001	2,318,304	2046
2050	432,115,121	563,086	0.00172	162,254	741,818	18,061	(561,503)	1,583	2051
2055	432,115,121	1,210,597	0.00081	377,933	351,958	79,520	105,495	1,316,092	2056
2060	432,115,121	646,204	0.00031	0	134,663	37,696	(96,967)	549,237	2061
2065	432,115,121	326,670	0.00011	0	48,339	19,687	(28,652)	298,018	2066





Mississippi Municipal Retirement Systems  
City of Hattiesburg

50 Year Cash Flow Projection  
Based on Valuation Assumptions



**Mississippi Municipal Retirement Systems  
City of Jackson**



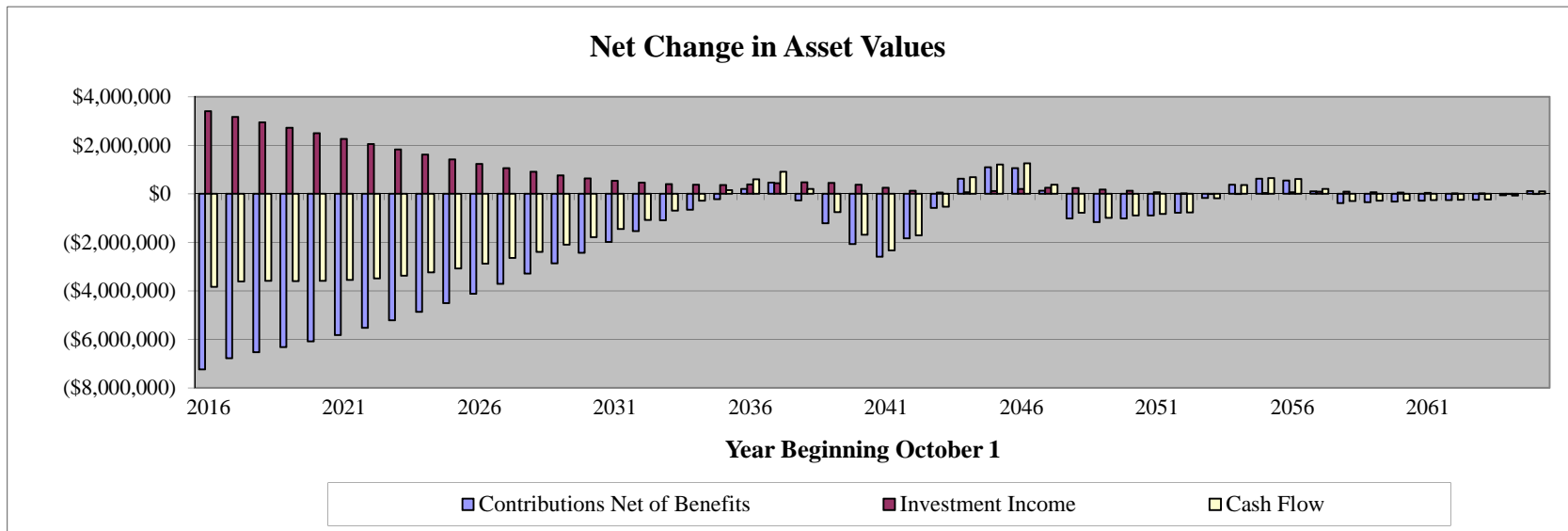
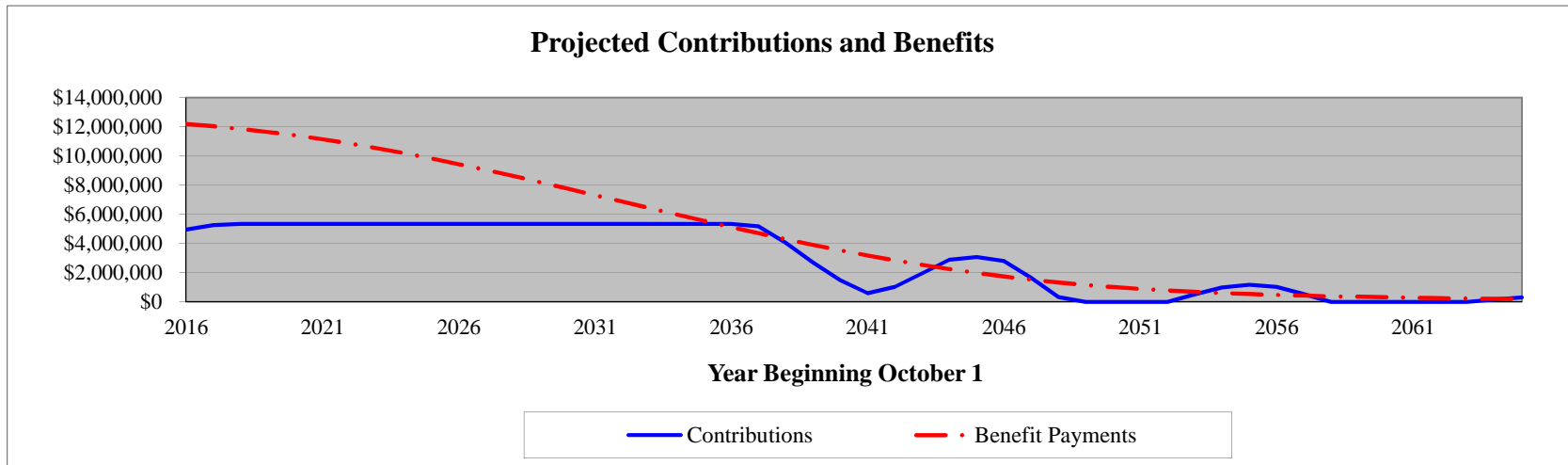
**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<b>Year Beginning <u>July 1</u></b>	<b>Value of Assessed Property</b>	<b>MVA Balance <u>July 1</u></b>	<b>Millage Rate</b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b>MVA Balance <u>June 30</u></b>	<b>Year Ending <u>June 30</u></b>
2016	\$1,196,316,148	\$56,020,543	0.00446	\$4,950,071	\$12,195,306	\$3,409,572	(\$3,835,663)	\$52,184,881	2017
2017	1,196,316,148	52,184,881	0.00446	5,263,791	12,046,094	3,175,062	(3,607,241)	48,577,640	2018
2018	1,196,316,148	48,577,640	0.00446	5,335,570	11,868,080	2,948,582	(3,583,928)	44,993,712	2019
2019	1,196,316,148	44,993,712	0.00446	5,335,570	11,660,776	2,722,258	(3,602,948)	41,390,764	2020
2020	1,196,316,148	41,390,764	0.00446	5,335,570	11,423,742	2,495,649	(3,592,523)	37,798,241	2021
2021	1,196,316,148	37,798,241	0.00446	5,335,570	11,159,071	2,270,601	(3,552,900)	34,245,341	2022
2022	1,196,316,148	34,245,341	0.00446	5,335,570	10,865,930	2,049,040	(3,481,320)	30,764,021	2023
2023	1,196,316,148	30,764,021	0.00446	5,335,570	10,546,838	1,832,961	(3,378,307)	27,385,714	2024
2024	1,196,316,148	27,385,714	0.00446	5,335,570	10,203,296	1,624,361	(3,243,365)	24,142,349	2025
2025	1,196,316,148	24,142,349	0.00446	5,335,570	9,837,253	1,425,251	(3,076,432)	21,065,917	2026
2030	1,196,316,148	11,049,478	0.00446	5,335,570	7,762,241	640,591	(1,786,080)	9,263,398	2031
2035	1,196,316,148	5,764,298	0.00446	5,335,570	5,554,416	367,679	148,833	5,913,131	2036
2040	1,196,316,148	6,866,446	0.00296	1,476,107	3,541,330	380,256	(1,684,967)	5,181,479	2041
2045	1,196,316,148	1,299,528	0.00166	3,077,765	1,982,679	119,499	1,214,585	2,514,113	2046
2050	1,196,316,148	2,379,714	0.00085	0	1,018,811	122,091	(896,720)	1,482,993	2051
2055	1,196,316,148	85,444	0.00045	1,160,478	538,046	25,464	647,896	733,340	2056
2060	1,196,316,148	966,638	0.00026	0	316,353	52,712	(263,641)	702,997	2061
2065	1,196,316,148	(91,515)	0.00017	311,075	200,801	(2,421)	107,853	16,338	2066



Mississippi Municipal Retirement Systems  
City of Jackson

50 Year Cash Flow Projection  
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems  
City of Laurel**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

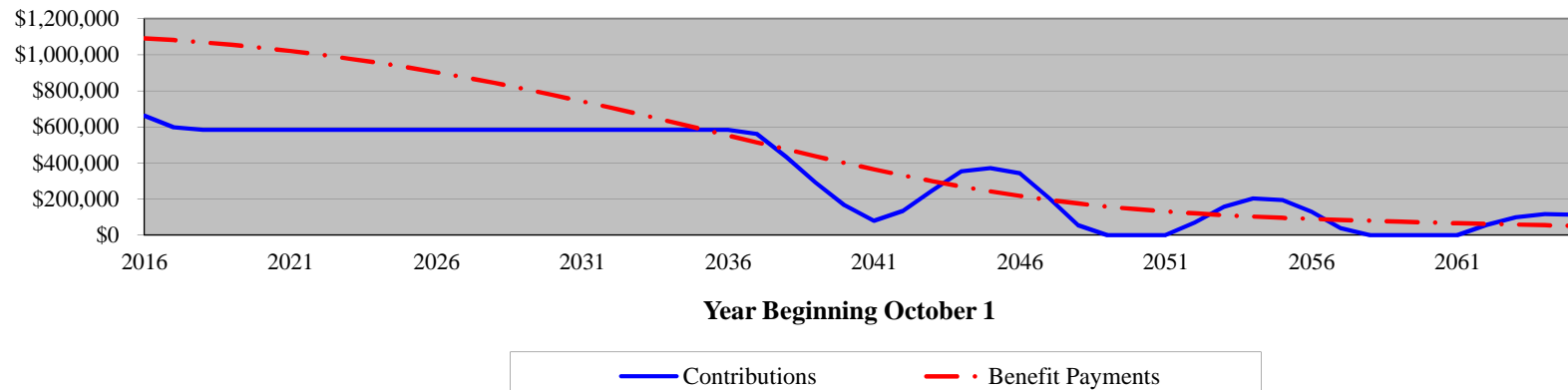
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$169,085,361	\$4,183,743	0.00345	\$661,256	\$1,092,199	\$258,158	(\$172,785)	\$4,010,959	2017
2017	169,085,361	4,010,959	0.00345	597,294	1,082,190	245,201	(239,695)	3,771,264	2018
2018	169,085,361	3,771,264	0.00345	583,344	1,069,942	229,567	(257,031)	3,514,233	2019
2019	169,085,361	3,514,233	0.00345	583,344	1,055,807	213,312	(259,151)	3,255,082	2020
2020	169,085,361	3,255,082	0.00345	583,344	1,039,765	196,980	(259,441)	2,995,640	2021
2021	169,085,361	2,995,640	0.00345	583,344	1,021,811	180,691	(257,776)	2,737,865	2022
2022	169,085,361	2,737,865	0.00345	583,344	1,001,950	164,571	(254,035)	2,483,830	2023
2023	169,085,361	2,483,830	0.00345	583,344	980,200	148,754	(248,102)	2,235,728	2024
2024	169,085,361	2,235,728	0.00345	583,344	956,579	133,383	(239,852)	1,995,877	2025
2025	169,085,361	1,995,877	0.00345	583,344	931,114	118,607	(229,163)	1,766,714	2026
2030	169,085,361	1,009,707	0.00345	583,344	778,064	59,402	(135,318)	874,389	2031
2035	169,085,361	637,467	0.00345	583,344	592,655	41,137	31,826	669,292	2036
2040	169,085,361	754,669	0.00237	165,205	400,984	41,511	(194,268)	560,400	2041
2045	169,085,361	163,324	0.00143	371,613	242,168	14,757	144,202	307,526	2046
2050	169,085,361	269,618	0.00085	0	143,904	12,922	(130,982)	138,636	2051
2055	169,085,361	107,028	0.00057	194,808	96,008	10,117	108,917	215,945	2056
2060	169,085,361	107,701	0.00042	0	70,728	4,738	(65,990)	41,710	2061
2065	169,085,361	70,265	0.00030	112,720	51,165	6,536	68,091	138,357	2066



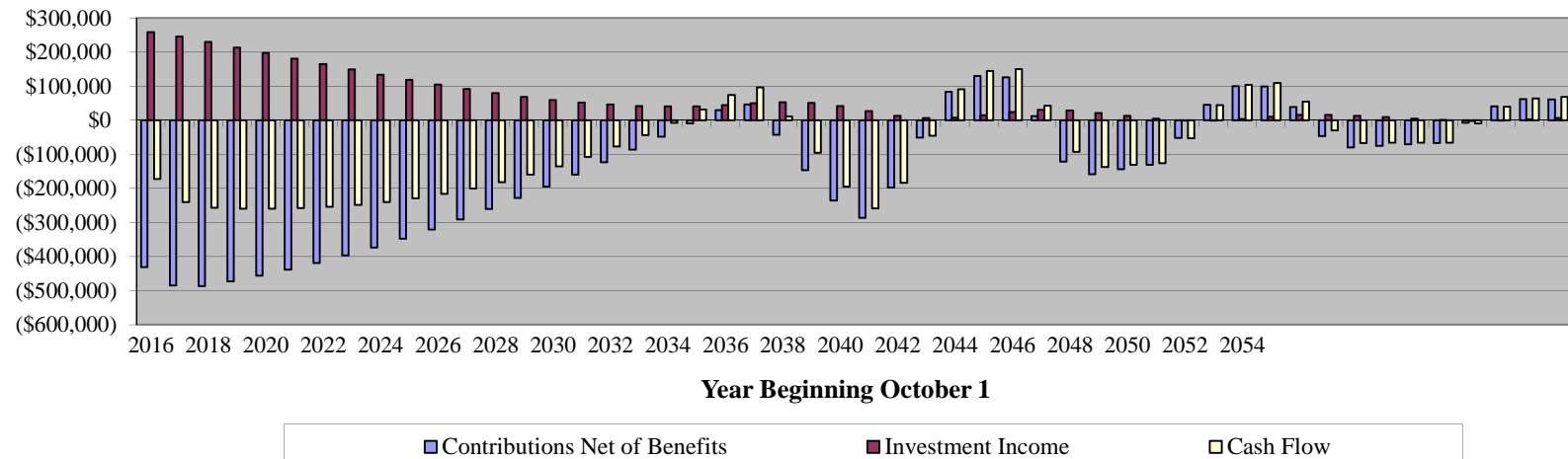
Mississippi Municipal Retirement Systems  
City of Laurel

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of McComb**

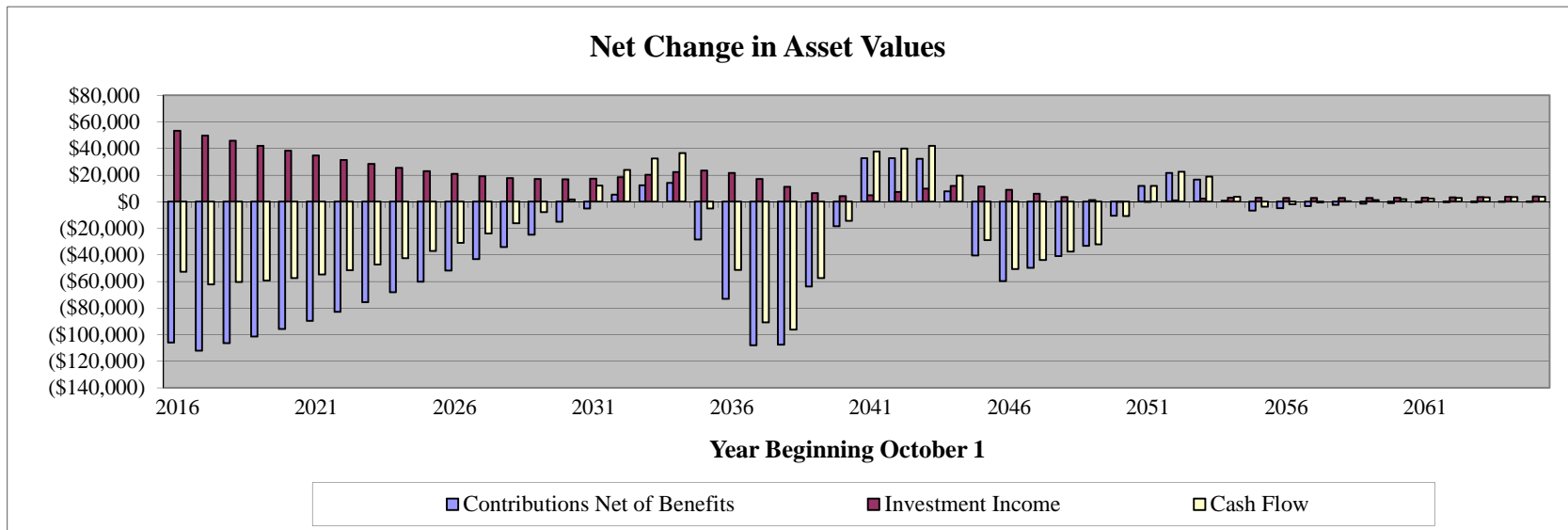
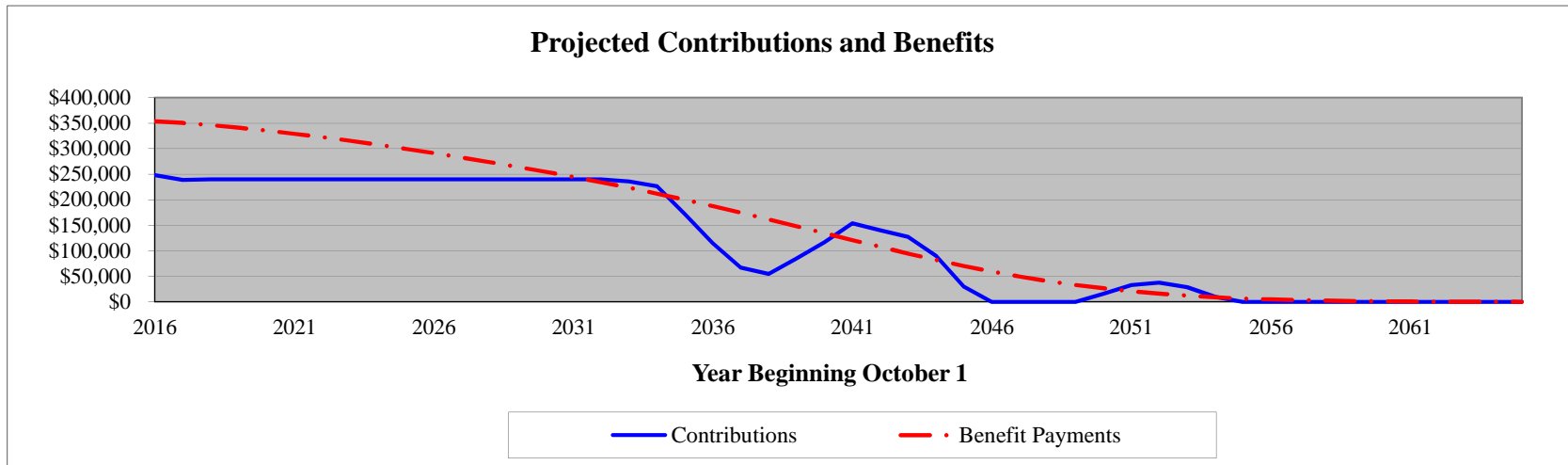
**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$94,847,079	\$871,792	0.00253	\$248,018	\$354,020	\$53,276	(\$52,726)	\$819,065	2017
2017	94,847,079	819,065	0.00253	238,540	350,507	49,658	(62,309)	756,756	2018
2018	94,847,079	756,756	0.00253	239,963	346,276	45,788	(60,525)	696,230	2019
2019	94,847,079	696,230	0.00253	239,963	341,353	42,012	(59,378)	636,852	2020
2020	94,847,079	636,852	0.00253	239,963	335,777	38,330	(57,484)	579,368	2021
2021	94,847,079	579,368	0.00253	239,963	329,598	34,792	(54,843)	524,525	2022
2022	94,847,079	524,525	0.00253	239,963	322,874	31,442	(51,469)	473,055	2023
2023	94,847,079	473,055	0.00253	239,963	315,670	28,327	(47,380)	425,675	2024
2024	94,847,079	425,675	0.00253	239,963	308,043	25,491	(42,589)	383,086	2025
2025	94,847,079	383,086	0.00253	239,963	300,043	22,979	(37,101)	345,985	2026
2030	94,847,079	267,022	0.00253	239,963	255,142	16,871	1,692	268,713	2031
2035	94,847,079	373,633	0.00211	171,799	200,347	23,373	(5,175)	368,458	2036
2040	94,847,079	72,469	0.00142	116,371	134,872	4,119	(14,382)	58,087	2041
2045	94,847,079	197,097	0.00074	30,091	70,638	11,514	(29,033)	168,064	2046
2050	94,847,079	3,924	0.00028	15,881	26,548	(86)	(10,753)	(6,829)	2051
2055	94,847,079	50,132	0.00007	0	6,720	3,044	(3,676)	46,457	2056
2060	94,847,079	45,485	0.00001	0	1,057	2,923	1,866	47,351	2061
2065	94,847,079	59,108	0.00000	0	92	3,839	3,747	62,855	2066



Mississippi Municipal Retirement Systems  
City of McComb

50 Year Cash Flow Projection  
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems  
City of Meridian**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

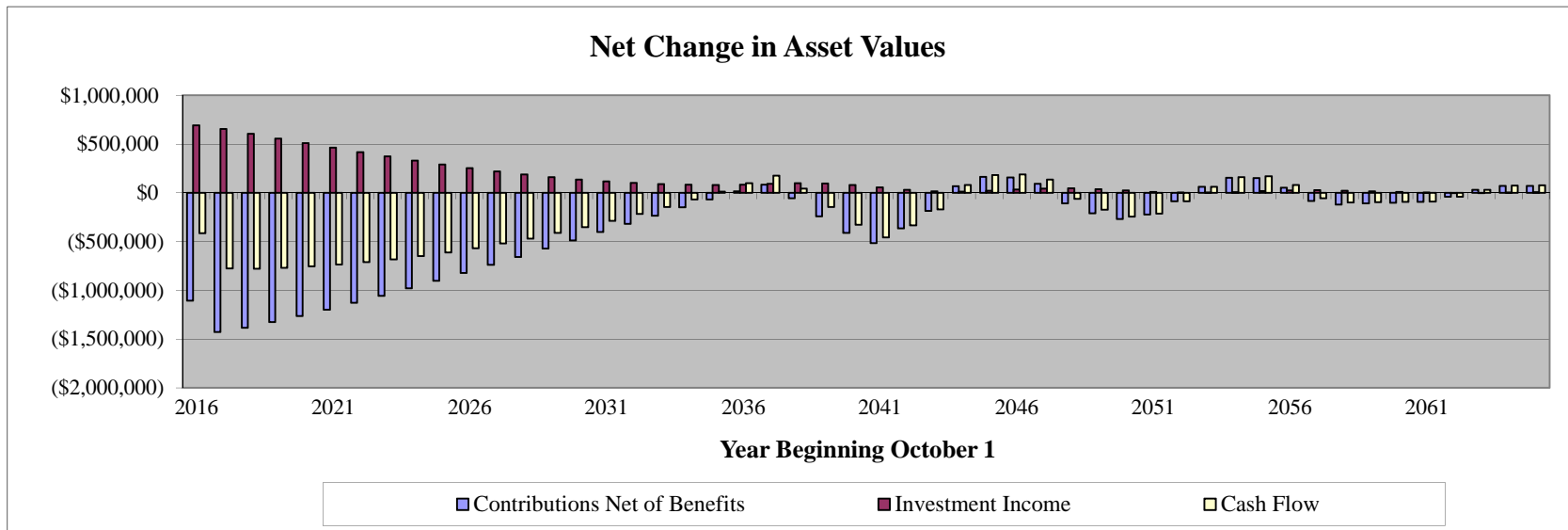
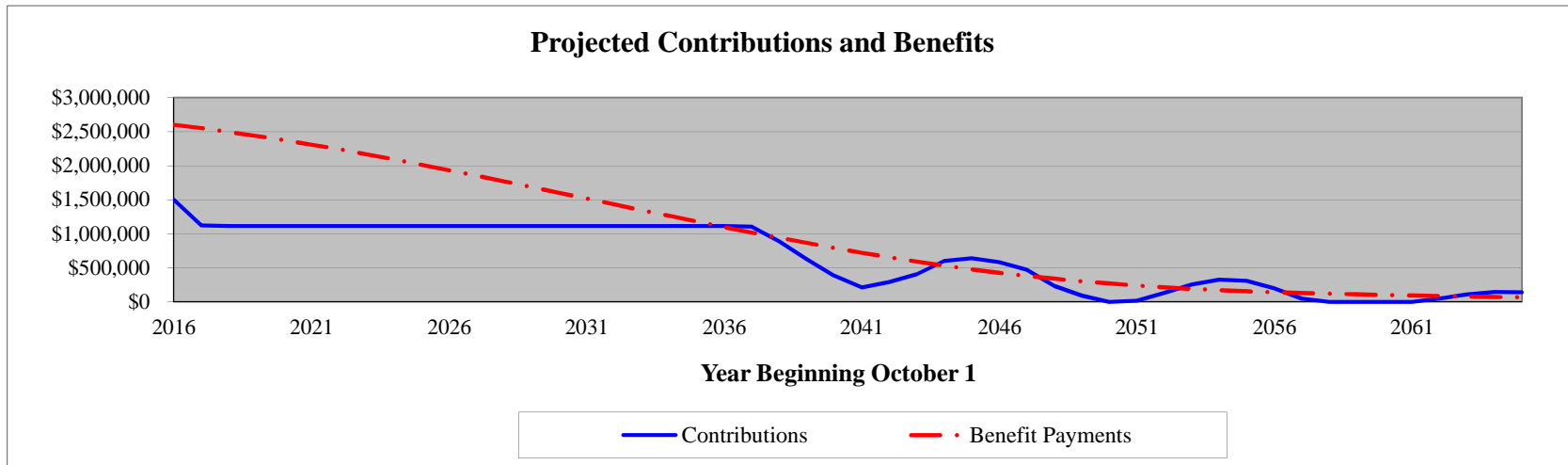
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$331,879,752	\$11,188,458	0.00336	\$1,497,732	\$2,603,064	\$691,892	(\$413,440)	\$10,775,019	2017
2017	331,879,752	10,775,019	0.00336	1,124,243	2,553,339	654,662	(774,434)	10,000,585	2018
2018	331,879,752	10,000,585	0.00336	1,115,116	2,499,296	605,760	(778,420)	9,222,165	2019
2019	331,879,752	9,222,165	0.00336	1,115,116	2,441,066	557,026	(768,924)	8,453,242	2020
2020	331,879,752	8,453,242	0.00336	1,115,116	2,378,825	509,037	(754,672)	7,698,570	2021
2021	331,879,752	7,698,570	0.00336	1,115,116	2,312,795	462,095	(735,584)	6,962,986	2022
2022	331,879,752	6,962,986	0.00336	1,115,116	2,243,258	416,507	(711,635)	6,251,351	2023
2023	331,879,752	6,251,351	0.00336	1,115,116	2,170,544	372,576	(682,852)	5,568,499	2024
2024	331,879,752	5,568,499	0.00336	1,115,116	2,095,013	330,607	(649,290)	4,919,209	2025
2025	331,879,752	4,919,209	0.00336	1,115,116	2,017,037	290,898	(611,023)	4,308,186	2026
2030	331,879,752	2,338,239	0.00336	1,115,116	1,603,209	136,372	(351,721)	1,986,519	2031
2035	331,879,752	1,269,654	0.00336	1,115,116	1,182,083	80,385	13,418	1,283,072	2036
2040	331,879,752	1,455,564	0.00239	383,264	793,747	81,481	(329,002)	1,126,562	2041
2045	331,879,752	244,212	0.00144	640,941	478,672	21,065	183,334	427,547	2046
2050	331,879,752	516,393	0.00081	0	269,715	24,938	(244,777)	271,616	2051
2055	331,879,752	195,347	0.00047	308,134	157,317	17,522	168,339	363,686	2056
2060	331,879,752	193,892	0.00030	0	101,178	9,366	(91,812)	102,080	2061
2065	331,879,752	75,148	0.00021	139,418	68,350	7,158	78,226	153,374	2066





**Mississippi Municipal Retirement Systems  
City of Meridian**

**50 Year Cash Flow Projection  
Based on Valuation Assumptions**





**Mississippi Municipal Retirement Systems  
City of Natchez**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

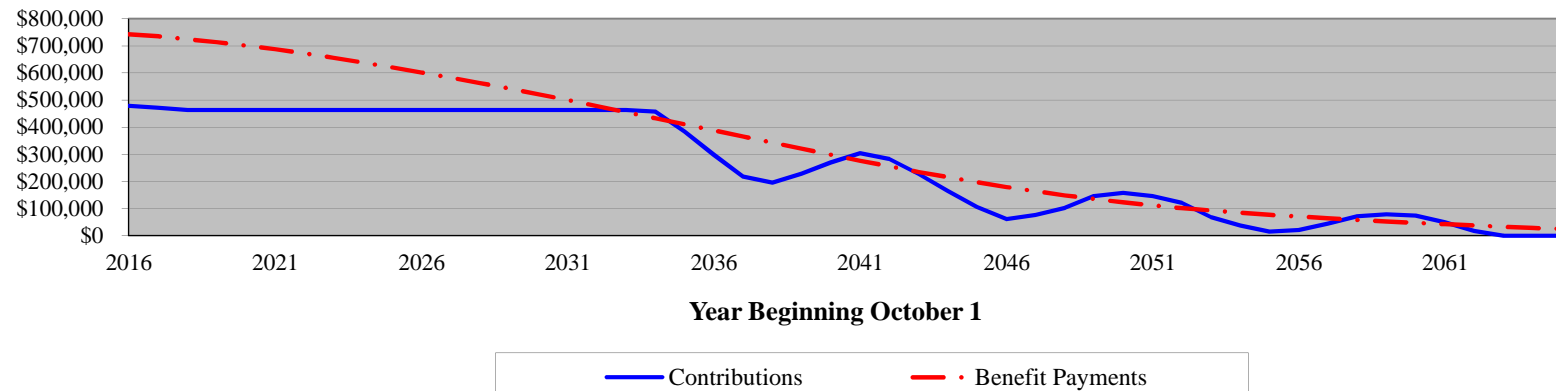
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$132,429,491	\$2,141,471	0.00350	\$478,609	\$743,440	\$130,724	(\$134,107)	\$2,007,364	2017
2017	132,429,491	2,007,364	0.00350	471,780	735,278	122,050	(141,448)	1,865,916	2018
2018	132,429,491	1,865,916	0.00350	463,503	725,580	112,901	(149,176)	1,716,740	2019
2019	132,429,491	1,716,740	0.00350	463,503	714,397	103,562	(147,332)	1,569,408	2020
2020	132,429,491	1,569,408	0.00350	463,503	701,803	94,389	(143,911)	1,425,496	2021
2021	132,429,491	1,425,496	0.00350	463,503	687,892	85,479	(138,910)	1,286,586	2022
2022	132,429,491	1,286,586	0.00350	463,503	672,775	76,934	(132,338)	1,154,248	2023
2023	132,429,491	1,154,248	0.00350	463,503	656,577	68,850	(124,224)	1,030,025	2024
2024	132,429,491	1,030,025	0.00350	463,503	639,421	61,324	(114,594)	915,430	2025
2025	132,429,491	915,430	0.00350	463,503	621,423	54,451	(103,469)	811,961	2026
2030	132,429,491	539,341	0.00350	463,503	521,769	33,193	(25,073)	514,268	2031
2035	132,429,491	631,141	0.00311	384,498	411,257	40,168	13,409	644,550	2036
2040	132,429,491	286,078	0.00225	269,588	298,626	17,666	(11,372)	274,707	2041
2045	132,429,491	357,273	0.00149	105,420	197,551	20,276	(71,855)	285,418	2046
2050	132,429,491	73,271	0.00093	158,230	123,357	5,878	40,751	114,022	2051
2055	132,429,491	133,586	0.00058	14,848	77,428	6,681	(55,899)	77,687	2056
2060	132,429,491	56,750	0.00036	73,490	47,286	4,527	30,731	87,481	2061
2065	132,429,491	29,578	0.00019	0	25,340	1,112	(24,228)	5,350	2066



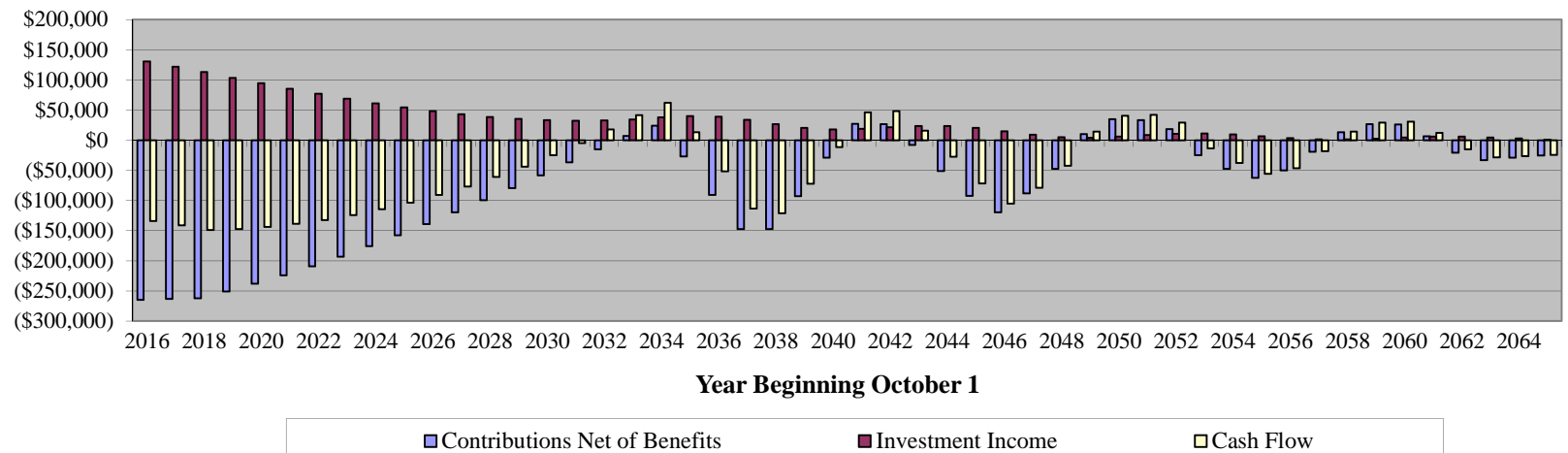
Mississippi Municipal Retirement Systems  
City of Natchez

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of Pascagoula**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments)**

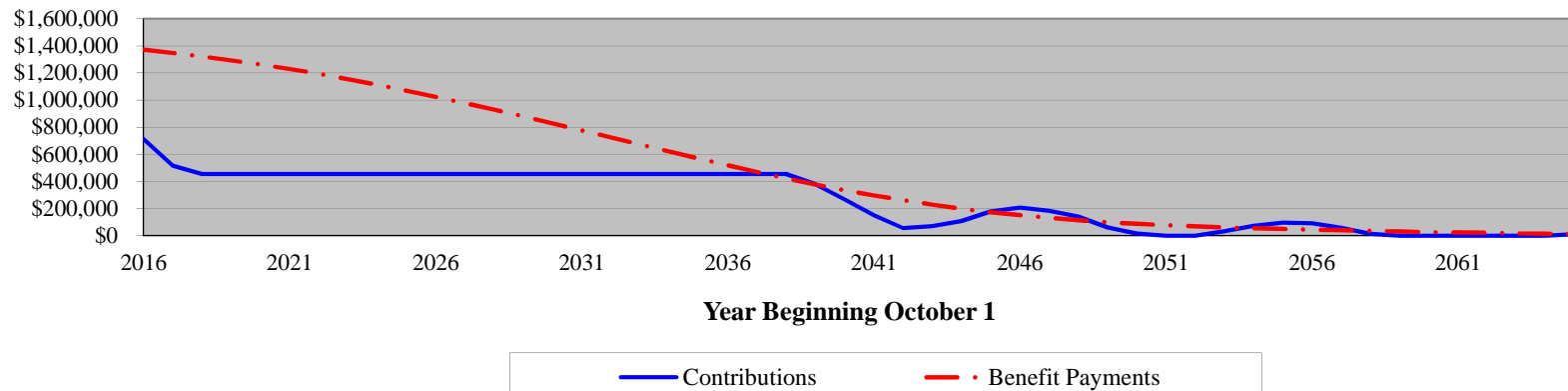
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$234,077,905	\$7,258,049	0.00194	\$710,959	\$1,372,648	\$450,607	(\$211,082)	\$7,046,967	2017
2017	234,077,905	7,046,967	0.00194	516,142	1,349,492	431,395	(401,955)	6,645,011	2018
2018	234,077,905	6,645,011	0.00194	454,111	1,323,171	404,126	(464,934)	6,180,077	2019
2019	234,077,905	6,180,077	0.00194	454,111	1,294,444	374,824	(465,509)	5,714,568	2020
2020	234,077,905	5,714,568	0.00194	454,111	1,263,461	345,557	(463,793)	5,250,774	2021
2021	234,077,905	5,250,774	0.00194	454,111	1,230,161	316,476	(459,574)	4,791,201	2022
2022	234,077,905	4,791,201	0.00194	454,111	1,194,011	287,760	(452,140)	4,339,061	2023
2023	234,077,905	4,339,061	0.00194	454,111	1,155,257	259,610	(441,536)	3,897,525	2024
2024	234,077,905	3,897,525	0.00194	454,111	1,114,253	232,222	(427,920)	3,469,605	2025
2025	234,077,905	3,469,605	0.00194	454,111	1,071,105	205,788	(411,206)	3,058,398	2026
2030	234,077,905	1,643,618	0.00194	454,111	829,668	94,822	(280,735)	1,362,884	2031
2035	234,077,905	617,454	0.00194	454,111	570,257	36,419	(79,727)	537,727	2036
2040	234,077,905	623,947	0.00144	267,098	336,859	38,325	(31,436)	592,511	2041
2045	234,077,905	70,788	0.00074	178,081	173,669	4,742	9,154	79,942	2046
2050	234,077,905	217,861	0.00038	14,555	88,722	11,789	(62,378)	155,484	2051
2055	234,077,905	4,530	0.00021	96,570	49,752	1,792	48,610	53,139	2056
2060	234,077,905	89,880	0.00012	0	27,471	4,963	(22,508)	67,372	2061
2065	234,077,905	(2,578)	0.00005	10,259	12,629	(243)	(2,613)	(5,191)	2066



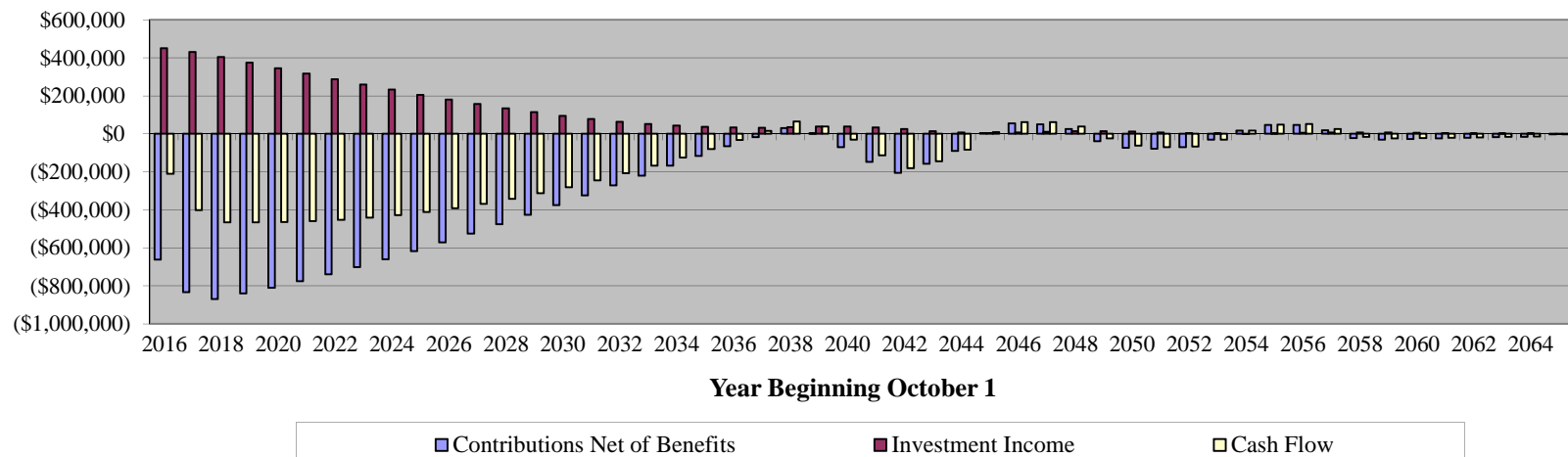
Mississippi Municipal Retirement Systems  
City of Pascagoula

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of Tupelo**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

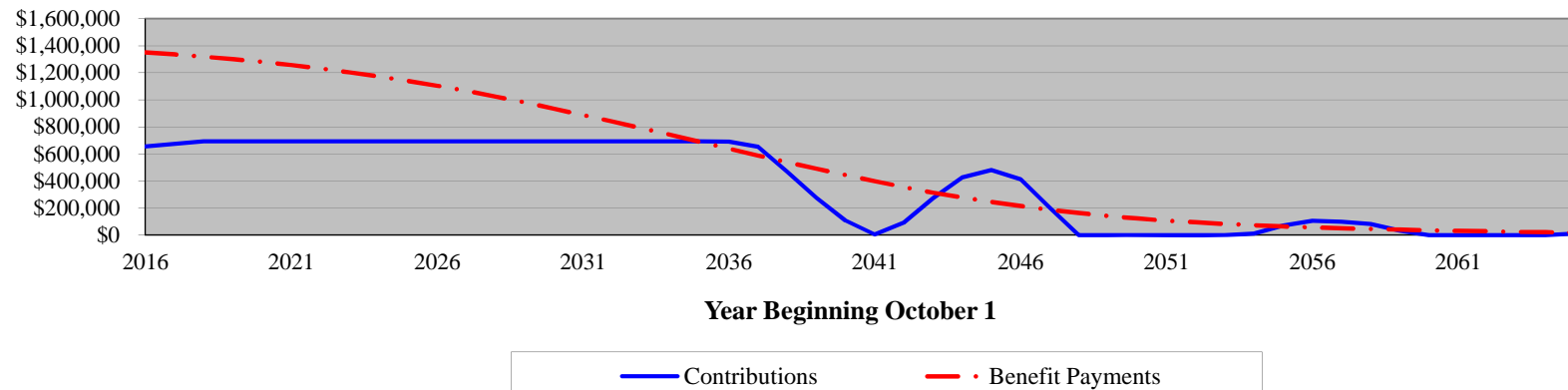
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$464,811,369	\$5,533,296	0.00149	\$654,296	\$1,351,202	\$337,371	(\$359,535)	\$5,173,760	2017
2017	464,811,369	5,173,760	0.00149	675,139	1,336,688	315,133	(346,416)	4,827,344	2018
2018	464,811,369	4,827,344	0.00149	692,569	1,320,378	293,695	(334,114)	4,493,231	2019
2019	464,811,369	4,493,231	0.00149	692,569	1,302,080	272,563	(336,948)	4,156,283	2020
2020	464,811,369	4,156,283	0.00149	692,569	1,281,610	251,316	(337,725)	3,818,558	2021
2021	464,811,369	3,818,558	0.00149	692,569	1,258,789	230,094	(336,126)	3,482,432	2022
2022	464,811,369	3,482,432	0.00149	692,569	1,233,460	209,056	(331,835)	3,150,596	2023
2023	464,811,369	3,150,596	0.00149	692,569	1,205,493	188,381	(324,543)	2,826,053	2024
2024	464,811,369	2,826,053	0.00149	692,569	1,174,804	168,268	(313,967)	2,512,086	2025
2025	464,811,369	2,512,086	0.00149	692,569	1,141,370	148,929	(299,872)	2,212,214	2026
2030	464,811,369	1,229,625	0.00149	692,569	936,426	72,125	(171,732)	1,057,893	2031
2035	464,811,369	783,851	0.00148	692,569	690,200	51,026	53,395	837,246	2036
2040	464,811,369	914,186	0.00095	107,730	443,516	48,681	(287,105)	627,081	2041
2045	464,811,369	106,387	0.00053	481,491	244,944	14,482	251,029	357,416	2046
2050	464,811,369	397,043	0.00027	0	123,796	21,848	(101,948)	295,094	2051
2055	464,811,369	(19,508)	0.00014	69,205	64,332	(1,112)	3,761	(15,747)	2056
2060	464,811,369	128,364	0.00008	0	35,966	7,193	(28,773)	99,591	2061
2065	464,811,369	4,253	0.00004	9,774	19,308	(29)	(9,563)	(5,310)	2066



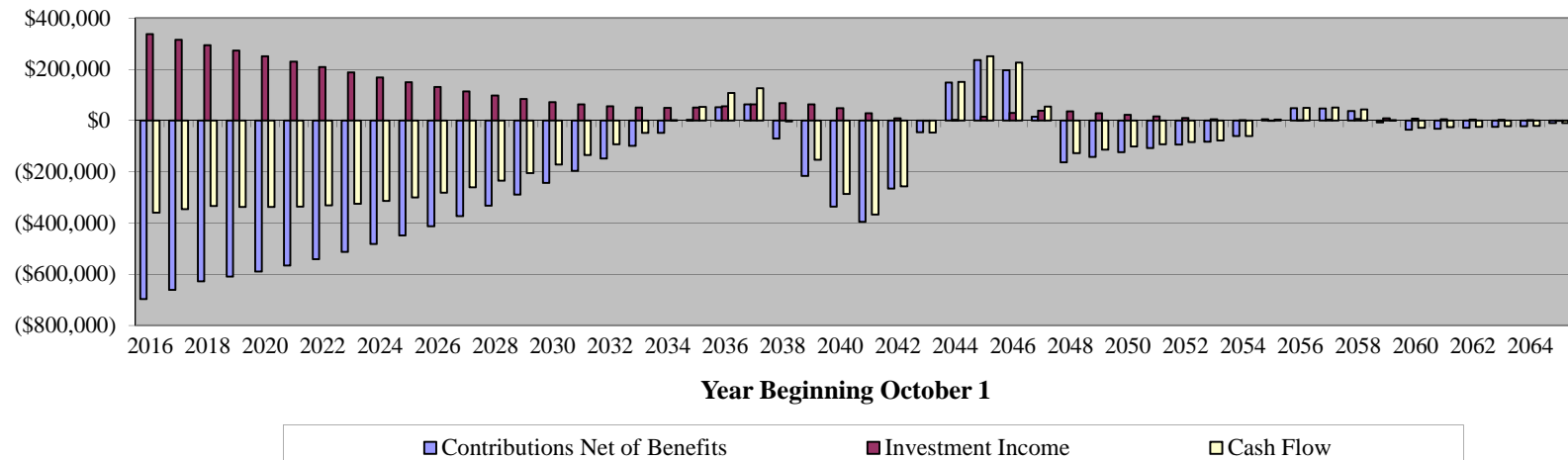
Mississippi Municipal Retirement Systems  
City of Tupelo

50 Year Cash Flow Projection  
Based on Valuation Assumptions

Projected Contributions and Benefits



Net Change in Asset Values





**Mississippi Municipal Retirement Systems  
City of Vicksburg**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

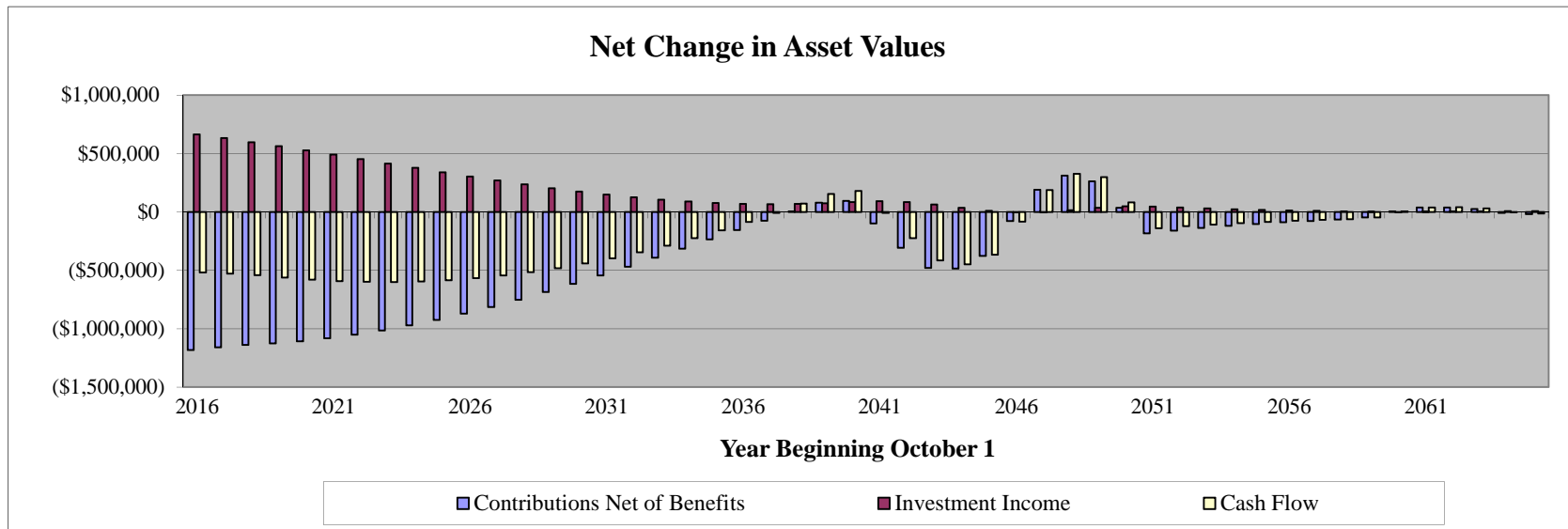
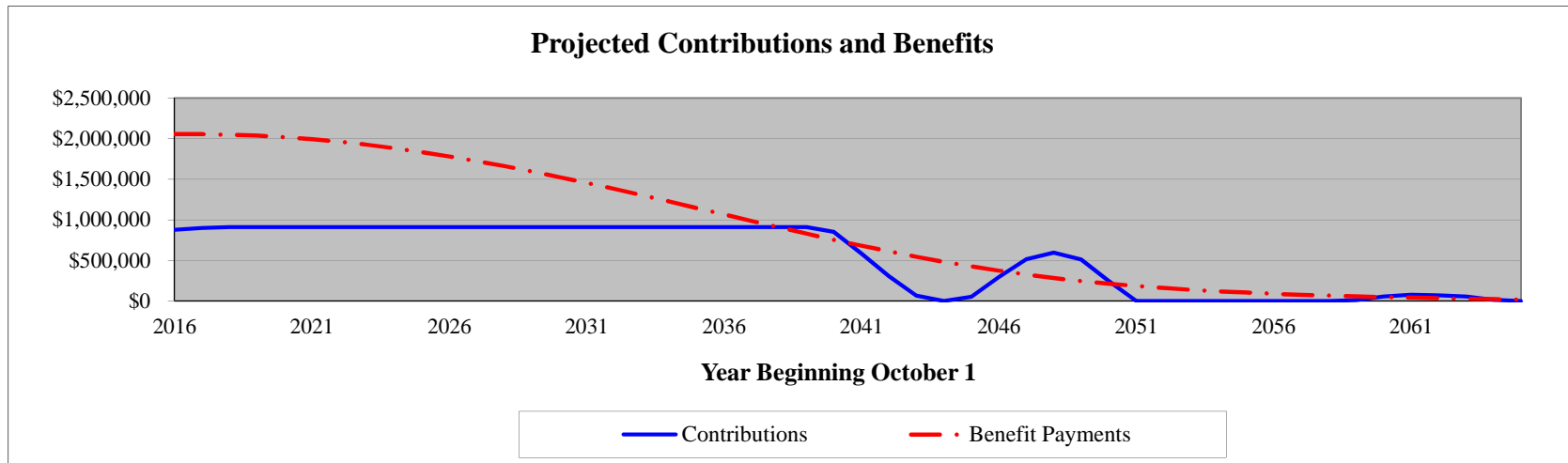
<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$322,195,038	\$10,800,734	0.00283	\$876,101	\$2,057,666	\$664,251	(\$517,314)	\$10,283,420	2017
2017	322,195,038	10,283,420	0.00283	898,119	2,056,877	631,356	(527,402)	9,756,018	2018
2018	322,195,038	9,756,018	0.00283	911,812	2,050,298	597,723	(540,763)	9,215,256	2019
2019	322,195,038	9,215,256	0.00283	911,812	2,037,726	562,975	(562,939)	8,652,317	2020
2020	322,195,038	8,652,317	0.00283	911,812	2,019,042	526,982	(580,248)	8,072,069	2021
2021	322,195,038	8,072,069	0.00283	911,812	1,994,222	490,060	(592,350)	7,479,719	2022
2022	322,195,038	7,479,719	0.00283	911,812	1,963,331	452,545	(598,974)	6,880,745	2023
2023	322,195,038	6,880,745	0.00283	911,812	1,926,520	414,790	(599,918)	6,280,828	2024
2024	322,195,038	6,280,828	0.00283	911,812	1,884,023	377,154	(595,057)	5,685,771	2025
2025	322,195,038	5,685,771	0.00283	911,812	1,836,139	340,007	(584,320)	5,101,451	2026
2030	322,195,038	2,989,318	0.00283	911,812	1,528,807	174,569	(442,426)	2,546,892	2031
2035	322,195,038	1,291,592	0.00283	911,812	1,146,508	76,446	(158,250)	1,133,342	2036
2040	322,195,038	1,262,805	0.00234	849,626	754,610	85,122	180,138	1,442,943	2041
2045	322,195,038	347,068	0.00132	49,794	426,851	10,498	(366,559)	(19,491)	2046
2050	322,195,038	708,962	0.00066	247,810	213,419	47,183	81,574	790,537	2051
2055	322,195,038	325,941	0.00032	0	103,056	17,890	(85,166)	240,775	2056
2060	322,195,038	(13,223)	0.00015	52,539	48,265	(723)	3,551	(9,672)	2061
2065	322,195,038	95,392	0.00006	0	18,189	5,619	(12,570)	82,822	2066





Mississippi Municipal Retirement Systems  
City of Vicksburg

50 Year Cash Flow Projection  
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems  
City of Yazoo City**

**Cash Flow Projection (Based on Post-2011 Funding Policy)  
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<b><u>Year Beginning July 1</u></b>	<b><u>Value of Assessed Property</u></b>	<b><u>MVA Balance July 1</u></b>	<b><u>Millage Rate</u></b>	<b><u>Contributions</u></b>	<b><u>Benefit Payments</u></b>	<b><u>Investment Income</u></b>	<b><u>Cash Flow</u></b>	<b><u>MVA Balance June 30</u></b>	<b><u>Year Ending June 30</u></b>
2016	\$49,226,333	\$402,454	0.00370	\$179,206	\$232,819	\$24,445	(\$29,168)	\$373,287	2017
2017	49,226,333	373,287	0.00370	180,538	231,389	22,637	(28,214)	345,073	2018
2018	49,226,333	345,073	0.00370	182,137	229,056	20,929	(25,990)	319,083	2019
2019	49,226,333	319,083	0.00370	182,137	226,175	19,332	(24,706)	294,377	2020
2020	49,226,333	294,377	0.00370	182,137	222,895	17,831	(22,927)	271,450	2021
2021	49,226,333	271,450	0.00370	182,137	219,183	16,459	(20,587)	250,863	2022
2022	49,226,333	250,863	0.00370	182,137	215,009	15,255	(17,617)	233,246	2023
2023	49,226,333	233,246	0.00370	182,137	210,349	14,258	(13,954)	219,291	2024
2024	49,226,333	219,291	0.00370	182,137	205,187	13,517	(9,533)	209,758	2025
2025	49,226,333	209,758	0.00370	182,137	199,510	13,079	(4,294)	205,464	2026
2030	49,226,333	256,787	0.00332	173,641	163,594	17,013	27,060	283,847	2031
2035	49,226,333	159,075	0.00241	17,429	118,619	7,103	(94,087)	64,988	2036
2040	49,226,333	129,402	0.00151	113,466	74,111	9,670	49,025	178,428	2041
2045	49,226,333	43,476	0.00078	0	38,354	1,599	(36,755)	6,722	2046
2050	49,226,333	56,165	0.00031	20,395	15,107	3,820	9,108	65,273	2051
2055	49,226,333	44,469	0.00008	0	4,008	2,762	(1,246)	43,223	2056
2060	49,226,333	47,109	0.00001	0	612	3,042	2,430	49,539	2061
2065	49,226,333	62,722	0.00000	0	48	4,075	4,027	66,749	2066



Mississippi Municipal Retirement Systems  
City of Yazoo City

50 Year Cash Flow Projection  
Based on Valuation Assumptions

