



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



PERS
of MISSISSIPPI

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

Prepared as of June 30, 2018





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

September 26, 2018

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). MRS is a closed defined benefit pension plan that was closed to new members beginning July 1, 1987. 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, 2019. The results may not be applicable for other purposes.

The date of the valuation was June 30, 2018.

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 8 and the comments on page 10. 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.



Board of Trustees
September 26, 2018
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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 Macdonald', written in a cursive style.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel', written in a cursive style.

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

A handwritten signature in blue ink, appearing to read 'Jonathan T. Craven', written in a cursive style.

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

EAM/EJK/JTC:bdm



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**REPORT ON THE ANNUAL VALUATION OF THE
MISSISSIPPI MUNICIPAL RETIREMENT SYSTEMS
PREPARED AS OF JUNE 30, 2018**

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2018, 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, 2018.

SUMMARY OF PRINCIPAL RESULTS

VALUATION DATE	June 30, 2018	June 30, 2017
Active members included in valuation		
Number	4	6
Annual compensation	\$ 199,742	\$ 321,243
Retirees		
Number	1,694	1,754
Annual allowances	\$ 32,997,690	\$ 33,751,528
Assets		
Market related actuarial value	\$ 154,748,504	\$ 157,674,330
Market value	\$ 154,277,003	\$ 158,569,612
Unfunded employer liability	\$ 152,722,486	\$ 164,087,160

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. The current funding policy was adopted by the Board in February, 2011. In this funding policy, contributions were extended past 2020 and an employer contribution rate, expressed as a millage rate tax applied to assessed property values, is established 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 are set equal to the fiscal year's projected benefit payments (basically on a pay as you go basis) and adjusted as necessary to maintain the assets at the established reserve level. This calculation is performed using projected cash flow analysis using the current market value of assets as of the valuation date, a 6.50% assumption on investment earnings and an assumption that assessed property values will remain level over time. Schedule H of this report shows the projected cash flow of each municipality, including the certified millage rates, based on the funding policy.
5. Although the development of the certified millage rates assume a 6.50% investment rate on cash flow, the development of liabilities and funding progress assume the Board-adopted investment return rate of 7.75%. Since the trust fund assets are commingled with the PERS trust fund assets, it has the same investment portfolio as the PERS System.
6. Since the previous valuation, the following changes were made to the benefit provisions:
 - The City of Tupelo granted a 2% ad-hoc benefit increase for members who were retired for at least one full fiscal year as of September 30, 2017.
7. There were no changes in actuarial assumptions since the last valuation.
8. 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.



9. GASB 67 replaced GASB 25 for accounting results and a separate GASB 67 report is prepared for the Board. For continuity and informational purposes, we have included disclosure information in Section VIII. In the development of this disclosure information and the Actuarially Determined Employer Contribution (ADEC) rate, we have assumed the current Board adopted investment return rate of 7.75% and a closed amortization period of 16 years, which was established in the prior funding policy.
10. The table on the following page provides a ten-year history of some pertinent figures.



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
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
2017	6	321	53,541	2.2	1,754	.00	33,751.5	10,514.5	321,761	157,674	164,087
2018	4	200	49,936	(6.7)	1,694	.00	32,997.7	16,498.9	307,471	154,749	152,722

* 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, 2018 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	0	0	0	0.0	0.0
Clinton	2	101,772	50,886	62.5	38.0
Columbus	0	0	0	0.0	0.0
Greenville	0	0	0	0.0	0.0
Greenwood	1	42,567	42,567	68.3	45.8
Gulfport	0	0	0	0.0	0.0
Hattiesburg	1	55,403	55,403	67.7	40.3
Jackson	0	0	0	0.0	0.0
Laurel	0	0	0	0.0	0.0
McComb	0	0	0	0.0	0.0
Meridian	0	0	0	0.0	0.0
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	4	\$199,742	\$49,936	65.3	40.5

* Years

Retired Lives

Employers	Retirement	Disability	Survivor	Total	Annual Benefit
Biloxi	43	5	46	94	\$2,166,211
Clarksdale	27	2	19	48	611,385
Clinton	27	0	4	31	829,668
Columbus	41	3	28	72	1,136,161
Greenville	41	0	33	74	974,807
Greenwood	29	2	24	55	760,759
Gulfport	50	9	29	88	1,893,779
Hattiesburg	101	6	36	143	3,353,707
Jackson	333	8	208	549	11,693,916
Laurel	50	3	29	82	1,041,382
McComb	10	4	8	22	314,872
Meridian	107	3	57	167	2,456,341
Natchez	24	4	21	49	715,416
Pascagoula	43	5	18	66	1,299,579
Tupelo	47	1	27	75	1,415,605
Vicksburg	31	2	32	65	2,099,938
Yazoo City	10	0	4	14	234,164
Total in MRS	1,014	57	623	1,694	\$32,997,690



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, 2018. 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, 2018**

Actuarial Present Value, June 30, 2018							
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	\$20,240,860	\$20,240,860	\$0	\$20,240,860	\$8,939,761	\$11,301,099
Clarksdale	0	5,600,554	5,600,554	0	5,600,554	1,462,013	4,138,541
Clinton	936,228	9,345,207	10,281,435	15,501	10,265,934	8,939,617	1,326,317
Columbus	0	10,045,651	10,045,651	0	10,045,651	980,930	9,064,721
Greenville	0	8,772,163	8,772,163	0	8,772,163	3,033,205	5,738,958
Greenwood	301,840	6,800,662	7,102,502	0	7,102,502	2,940,247	4,162,255
Gulfport	0	19,074,212	19,074,212	0	19,074,212	9,263,044	9,811,168
Hattiesburg	457,289	34,881,167	35,338,456	0	35,338,456	21,153,482	14,184,974
Jackson	0	103,632,757	103,632,757	0	103,632,757	54,144,234	49,488,523
Laurel	0	9,873,368	9,873,368	0	9,873,368	4,267,764	5,605,604
McComb	0	3,048,193	3,048,193	0	3,048,193	922,979	2,125,214
Meridian	0	21,401,986	21,401,986	0	21,401,986	12,806,317	8,595,669
Natchez	0	6,770,440	6,770,440	0	6,770,440	1,881,680	4,888,760
Pascagoula	0	11,271,046	11,271,046	0	11,271,046	7,446,340	3,824,706
Tupelo	0	13,060,668	13,060,668	0	13,060,668	5,538,948	7,521,720
Vicksburg	0	19,773,777	19,773,777	0	19,773,777	10,607,620	9,166,157
Yazoo City	0	2,198,423	2,198,423	0	2,198,423	420,323	1,778,100
Total in MRS	\$1,695,357	\$305,791,134	\$307,486,491	\$15,501	\$307,470,990	\$154,748,504	\$152,722,486



SECTION IV – COMPUTED EMPLOYER CONTRIBUTION RATES

**Mississippi Municipal Retirement Systems
Computed Employer Contribution Rates¹
June 30, 2018**

Municipality	Members Contributions ²	Certified Rate for Fiscal Year Ending 9/30/2019	Current Millage Rate for Fiscal Year Ending 9/30/2019	Computed Rates for 2019-2020 Fiscal Year		
				Pre-2011 Funding Policy Rate ⁴	Post-2011 Funding Policy Rate ⁵	Certified Rate for Fiscal Year Ending 9/30/2020
Biloxi	9.00%	2.03	2.12	18.91	1.73	1.73
Clarksdale	10.00	4.75	4.75	50.38	4.81	4.81
Clinton	8.00	0.80	0.80	6.06	0.84	0.84
Columbus	10.00	5.82	5.82	42.63	5.82	5.82
Greenville	10.00	2.76	2.76	30.09	2.83	2.83
Greenwood	10.00	3.73	3.73	36.67	3.46	3.46
Gulfport	8.00	1.23	1.23	13.18	1.17	1.17
Hattiesburg	10.00	3.08	3.08	30.23	2.75	2.75
Jackson	10.00	4.10	4.10	41.35	3.87	3.87
Laurel	10.00	3.29	4.46	29.99	2.67	2.67
McComb	10.00	2.16	2.90	20.25	1.82	1.82
Meridian ³	10.00	2.36	3.66	22.92	2.18	2.18
Natchez	10.00	3.21	3.90	31.53	2.82	2.82
Pascagoula	10.00	1.67	3.00	14.98	1.43	1.43
Tupelo	7.00	1.36	1.61	15.21	1.40	1.40
Vicksburg	10.00	2.79	2.79	28.51	2.63	2.63
Yazoo City	10.00	3.67	3.67	36.44	3.57	3.57

¹ Millage rates applied to assessed property

² % of Active Member Payroll

³ Meridian General Employees' contribution rate is 7.00%

⁴ 2 year amortization

⁵ Calculated using cash flow projections and 6.50% investment return assumption (see Schedule H)

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	2013	2014	2015	2016	2017	Average % Increase
Biloxi	\$543,325,163	\$539,310,113	\$546,242,975	\$574,544,932	\$592,181,786	2.2%
Clarksdale	84,299,372	84,980,872	85,157,047	85,193,003	83,414,667	(0.3)
Clinton	202,132,944	203,433,087	208,834,622	208,729,466	207,772,348	0.7
Columbus	188,431,654	186,886,981	201,353,637	199,814,257	208,552,785	2.6
Greenville	204,581,799	204,466,100	201,281,727	198,785,980	193,778,841	(1.3)
Greenwood	111,119,134	111,065,244	110,861,169	110,569,319	113,719,820	0.6
Gulfport	715,776,860	712,273,192	711,742,489	737,909,261	749,196,904	1.1
Hattiesburg	425,665,993	425,665,993	432,115,121	437,346,637	470,026,110	2.5
Jackson	1,204,649,630	1,196,637,968	1,196,316,148	1,197,598,015	1,201,390,327	(0.1)
Laurel	162,457,763	163,138,096	169,085,361	166,322,618	180,736,668	2.7
McComb	94,434,136	94,837,146	94,847,079	100,951,928	102,003,113	1.9
Meridian	321,370,611	325,553,228	331,879,752	342,244,755	341,865,756	1.6
Natchez	141,619,607	130,647,499	132,429,491	139,808,455	153,395,477	2.0
Pascagoula	253,579,334	245,711,068	234,077,905	234,224,731	235,913,098	(1.8)
Tupelo	452,942,037	464,994,834	464,811,369	497,690,205	497,231,537	2.4
Vicksburg	320,028,001	315,300,118	322,195,038	326,807,260	327,183,714	0.6
Yazoo City	46,783,202	48,493,391	49,226,333	49,956,737	49,268,781	1.3



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 8, the current millage rate for the fiscal year ending September 30, 2019 for three of the municipalities is less than the certified rate for the fiscal year ending September 30, 2020 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, 2020.

- Clarksdale
- Greenville
- Clinton

2. As shown in the analysis of experience on pages 36 and 37, the System had an actuarial gain for the year. The gain was primarily due to the investment return on an actuarial value basis for the year being more than expected (8.96% vs. 7.75%). In addition, there was a gain due to more retiree and beneficiary deaths than expected. These gains were partially offset due to the change in benefit provisions for the City of Tupelo.

3. From 2016 to 2017, the value of assessed property increased for eleven and decreased for six of the seventeen municipalities. Under the 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. 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, 2018**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	1,694
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	0
Inactive Participants	0
Active Participants	<u>4</u>
Total	1,698



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	\$20,240,860	\$20,240,860	\$8,939,761	\$11,301,099
Clarksdale	0	5,600,554	5,600,554	1,462,013	4,138,541
Clinton	906,235	9,345,207	10,251,442	8,939,617	1,311,825
Columbus	0	10,045,651	10,045,651	980,930	9,064,721
Greenville	0	8,772,163	8,772,163	3,033,205	5,738,958
Greenwood	301,840	6,800,662	7,102,502	2,940,247	4,162,255
Gulfport	0	19,074,212	19,074,212	9,263,044	9,811,168
Hattiesburg	457,289	34,881,167	35,338,456	21,153,482	14,184,974
Jackson	0	103,632,757	103,632,757	54,144,234	49,488,523
Laurel	0	9,873,368	9,873,368	4,267,764	5,605,604
McComb	0	3,048,193	3,048,193	922,979	2,125,214
Meridian	0	21,401,986	21,401,986	12,806,317	8,595,669
Natchez	0	6,770,440	6,770,440	1,881,680	4,888,760
Pascagoula	0	11,271,046	11,271,046	7,446,340	3,824,706
Tupelo	0	13,060,668	13,060,668	5,538,948	7,521,720
Vicksburg	0	19,773,777	19,773,777	10,607,620	9,166,157
Yazoo City	0	2,198,423	2,198,423	420,323	1,778,100
Totals	\$1,665,364	\$305,791,134	\$307,456,498	\$154,748,504	\$152,707,994

During the year ended June 30, 2018, the Systems experienced a net decrease of \$14,290,632 in the actuarial accrued liability.



3. Another such item is the schedule of funding progress as shown below. As can be seen in column 3 of the table below, the funded ratio decreased over the first four years of the 10-year period but the funded ratio has begun to slowly improve in recent years. As this is a closed plan, the funded ratio should continue to increase to 100% when all the cities reach a pay-as-you-go status.

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

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2) – (1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
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
06/30/17	157,674	321,747	49.0	164,073	321	51,113.1
06/30/18	154,749	307,457	50.3	152,707	200	76,354.0

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



History of Funding Progress

Actuarial Value of Assets as Percentage of AAL										
Municipality	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Biloxi	45.80%	45.13%	43.06%	39.41%	38.18%	39.49%	39.55%	40.41%	41.27%	44.17%
Clarksdale	14.44	16.56	19.43	19.99	23.82	23.18	26.51	27.32	26.80	26.10
Clinton	86.80	80.83	79.26	75.02	74.38	79.09	82.74	84.38	87.19	87.20
Columbus	10.62	10.92	11.80	10.74	11.29	13.10	10.54	9.82	9.49	9.76
Greenville	40.58	39.28	36.89	34.25	34.11	36.12	36.64	35.56	35.41	34.58
Greenwood	34.24	33.94	36.63	34.72	35.05	36.61	38.27	39.47	40.56	41.40
Gulfport	48.14	46.52	49.00	46.37	45.03	46.99	47.63	47.01	47.60	48.56
Hattiesburg	62.14	59.03	57.32	54.17	53.82	56.90	58.53	58.29	58.68	59.86
Jackson	59.47	53.94	51.61	48.80	48.35	50.83	51.49	50.95	51.24	52.25
Laurel	26.77	26.79	27.31	26.79	29.51	33.03	36.20	40.17	40.07	43.23
McComb	32.66	29.72	32.26	27.48	25.52	24.99	25.49	25.94	27.40	30.28
Meridian	31.08	30.92	31.34	31.22	33.90	38.17	42.40	48.51	55.76	59.84
Natchez	26.33	27.06	28.24	28.55	30.03	30.21	29.61	30.24	29.45	27.79
Pascagoula	54.36	53.87	53.47	50.75	52.53	57.57	59.64	60.57	62.75	66.07
Tupelo	55.33	48.91	45.59	42.81	42.51	44.96	44.31	43.82	43.26	42.41
Vicksburg	57.85	53.87	52.28	47.83	49.26	52.08	53.82	53.77	53.02	53.64
Yazoo City	28.91	25.65	21.98	22.32	21.96	16.66	20.20	18.42	17.25	19.12



History of Funding Progress

Unfunded Actuarial Accrued Liability as a Percentage of Payroll										
Municipality	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Biloxi	10,973.44%	10,266.41%	11,063.20%	19,963.01%	N/A	N/A	N/A	N/A	N/A	N/A
Clarksdale	15,704.88	13,639.53	12,467.44	12,162.79	10,770.71%	10,444.15%	9,409.47%	8,529.52%	7,777.62%	N/A
Clinton	417.52	599.06	639.13	758.97	986.40	758.81	770.04	1,587.03	1,293.51	1,288.98%
Columbus	20,969.09	20,494.55	17,140.63	16,083.58	15,758.80	14,649.77	N/A	N/A	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	5,429.46	5,367.57	7,054.55	6,927.50	6,651.70	6,243.97	5,978.71	5,447.96	10,658.06	9,778.13
Gulfport	7,133.33	7,209.70	6,559.76	12,753.41	N/A	N/A	N/A	N/A	N/A	N/A
Hattiesburg	4,814.94	6,110.38	7,778.10	11,110.90	18,172.80	16,641.41	15,736.28	29,742.82	27,810.09	25,603.26
Jackson	28,242.41	64,956.99	62,297.98	151,185.71	154,839.64	115,483.11	120,998.39	92,170.95	N/A	N/A
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	12,031.71	11,550.00	11,062.72	10,638.01	14,285.66	23,079.51	21,336.86	17,680.30	14,260.50	N/A
Natchez	18,177.14	17,345.71	16,817.14	16,442.86	14,961.74	14,379.28	N/A	N/A	N/A	N/A
Pascagoula	14,785.11	14,182.98	13,479.59	14,578.72	13,564.67	N/A	N/A	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	19,368.00	N/A	N/A	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. Under the prior funding policy, the accrued liability amount was based on the amortization of the unfunded actuarial accrued liability over a closed period from the valuation date. The period as of June 30, 2018 is 16 years. The calculation of this amount is shown below.

**2018/2019 FISCAL YEAR
ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)
BASED ON THE VALUATION AS OF JUNE 30, 2018**

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)	
Normal	\$ 7,613
Accrued liability	<u>16,687,286</u>
Total	\$ 16,694,899

5. Additional information as of June 30, 2018 follows.

Valuation date	6/30/18
Actuarial cost method	Entry age
Amortization method	Level dollar closed
Remaining amortization period	16 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	3.25%
Cost of living adjustments	2.00% - 3.75% depending upon municipality



Schedule of Employer Contributions

Fiscal Year 10/1-9/30	Valuation date	Actuarially Determined Contribution	Percentage Contributed
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	102.8
2016-17	6/30/2016	17,693,519	100.2
2017-18	6/30/2017	17,393,028	N/A
2018-19	6/30/2018	16,694,899	N/A

Contributions Required and Contributions Made

Municipality	Actuarially Determined Contribution	Actual 2016 – 2017 Contribution	Percentage Contributed
Biloxi	\$1,406,965	\$1,256,483	89.3%
Clarksdale	449,322	397,460	88.5
Clinton	180,572	182,528	101.1
Columbus	1,020,531	1,043,215	102.2
Greenville	619,938	589,633	95.1
Greenwood	483,495	444,143	91.9
Gulfport	1,106,347	943,358	85.3
Hattiesburg	1,569,815	1,346,302	85.8
Jackson	5,719,822	5,247,946	91.8
Laurel	661,081	597,342	90.4
McComb	263,978	276,947	104.9
Meridian	1,259,853	2,288,315	181.6
Natchez	524,135	468,000	89.3
Pascagoula	501,201	677,726	135.2
Tupelo	752,482	813,384	108.1
Vicksburg	984,966	987,105	100.2
Yazoo City	189,016	171,575	90.8
Total	\$17,693,519	\$17,731,462	100.2%



**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)
9/30/09	\$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
6/30/17	667	319,346	1,734	157,674	100	49.2	0.0
6/30/18	442	305,791	1,223	154,749	100	50.5	0.0

As can be seen from the table above, the MRS plan assets currently covers 100% of the active member contribution account balances as of the valuation date but only covers about 50.5% of the retiree liability. There remains zero assets to cover any employer financed active liabilities.



Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Active Members			
		Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
9/30/09	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)
6/30/17	17	6	321,243	53,541	2.2
6/30/18	17	4	199,742	49,936	(6.7)

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

Item	Fiscal Year Ended September 30									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beginning of Year	2,123	2,090	2,056	2,016	1,978	1,941	1,890	1,849	1,798	1,754
Added	37	44	46	39	40	29	40	46	34	36
Removed	(70)	(78)	(86)	(77)	(77)	(80)	(81)	(97)	(78)	(96)
End of Year	2,090	2,056	2,016	1,978	1,941	1,890	1,849	1,798	1,754	1,694

*See Schedule D for a breakdown by type of retirement.



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

Year Ending	2013	2014	2015	2016	2017	2018
Beginning of Year	\$35,097,293	\$35,105,891	\$34,723,473	\$34,478,364	\$34,088,404	\$33,751,528
Added	896,085	485,121	731,337	842,966	712,490	674,428
Removed	(1,083,209)	(1,041,083)	(1,119,680)	(1,365,194)	(1,174,872)	(1,530,600)
Benefit increase due to annual COLA	195,722	173,544	143,234	132,268	125,506	102,334
Benefit increase due to plan amendments	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
End of Year	\$35,105,891	\$34,723,473	\$34,478,364	\$34,088,404	\$33,751,528	\$32,997,690



Schedule of Average Benefit Payments

	Years of Credited Service								TOTAL
	0-9	10-14	15-19	20-24	25	26-29	30	31+	
July 1, 2017 to June 30, 2018									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,738	\$3,738
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$67,277	\$67,277
Number of Active Retirants	0	0	0	0	0	0	0	2	2
July 1, 2016 to June 30, 2017									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,424	\$2,424
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,631	\$43,631
Number of Active Retirants	0	0	0	0	0	0	0	2	2
July 1, 2015 to June 30, 2016									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,479	\$3,479
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$44,155	\$44,155
Number of Active Retirants	0	0	0	0	0	0	0	3	3
July 1, 2014 to June 30, 2015									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$2,898	\$2,912	\$2,907
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$51,253	\$56,520	\$54,764
Number of Active Retirants	0	0	0	0	0	0	1	2	3
July 1, 2013 to June 30, 2014									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,778	\$2,778
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,160	\$47,160
Number of Active Retirants	0	0	0	0	0	0	0	2	2
October 1, 2012 to June 30, 2013									
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0	\$3,490	\$0	\$4,379	\$4,201
Average Final Salary	\$0	\$0	\$0	\$0	\$0	\$63,310	\$0	\$72,947	\$71,020
Number of Active Retirants	0	0	0	0	0	1	0	4	5



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

	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
A. Actuarial Value Beginning of Year	\$159,159,590	\$157,674,330				
B. Market Value End of Year	158,569,612	154,277,003				
C. Market Value Beginning of Year	154,628,833	158,569,612				
D. Cash Flow						
D1. Contributions	17,762,547	17,635,443				
D2. Other Revenue	0	0				
D3. Benefit Payments	(34,070,549)	(33,604,454)				
D4. Administrative Expenses	(354,630)	(352,205)				
D5. Investment Expenses	0	0				
D6. Net	(16,662,632)	(16,321,216)				
E. Investment Income						
E1. Market Total: B.-C.-D6.	20,603,411	12,028,607				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	11,338,058	11,656,698				
E4. Amount for Phased-In Recognition	9,265,353	371,909				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	1,853,071	74,382	0	0	0	0
F2. First Prior Year	(2,339,837)	1,853,071	74,382	0	0	0
F3. Second Prior Year	(1,648,574)	(2,339,837)	1,853,071	74,382	0	0
F4. Third Prior Year	3,799,650	(1,648,574)	(2,339,837)	1,853,071	74,382	0
F5. Fourth Prior Year	<u>2,175,004</u>	<u>3,799,650</u>	<u>(1,648,574)</u>	<u>(2,339,837)</u>	<u>1,853,071</u>	<u>74,382</u>
F6. Total Recognized Investment Gain	3,839,314	1,738,692	(2,060,958)	(412,384)	1,927,453	74,382
G. Adjustment:	0	0				
H. Actuarial Value End of Year:						
A.+D6.+E3.+F6.+G.	\$157,674,330	\$154,748,504				
I. Difference Between Market & Actuarial Values	895,282	(471,501)	1,589,457	2,001,841	74,388	6

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.



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.

PRICE INFLATION: 3.00% per annum, compounded annually.

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: 3.25% for wage inflation plus the following chart.

Ages	Merit and Seniority Salary Increase
Under 43	1.50%
43 – 47	1.00
48 – 52	0.50
53 and Over	0.00

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the RP-2014 Healthy Annuitant Blue Collar Mortality Table projected with Scale BB to 2022 with male rates set forward one year and adjusted by 106% for males at all ages and as follows for females: 90% for ages less the 76, 95% for age 76, 105% for age 78, and 1.10% for ages 79 and greater. The RP-2014 Disabled Retiree Mortality Table set forward 4 years for males and 3 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 as recent mortality experience shows actual deaths 11.2% greater than expected under the selected table for non-disability mortality and 10.5% greater than expected under the selected table for disability mortality.

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, 2018, 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:	\$1,515

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. 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.



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%).

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

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

Tupelo: All retirees and beneficiaries received an increase of 5% in allowances effective December 1, 1991. Additional 3% ad-hoc benefit increases were granted to members who were retired for at least one 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 who were retired for at least one full fiscal year as of September 30, 1999 and a 2.34% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2001. Furthermore, a 2% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2010. Furthermore, a 2% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2014. Furthermore, a 3% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2015. Furthermore, a 3% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2016. Furthermore, a 2% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2017.

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, Tupelo, Vicksburg, and Yazoo City.



SCHEDULE D

DETAILED TABULATIONS OF THE DATA

RECONCILIATION OF DATA RECEIVED FROM PERS

Reconciliation of Data received from PERS	Active File			Pensioner File			Total
	Active	Inactive NonVested	Inactive Vested	Retirees	Disableds	Survivors	
From PERS	6	0	0	1,071	59	657	1,793
Refunded Deceased Retired*	(2)			(58)	(2)	(36)	(96)
Added				1		2	(2)
For Valuation	4	0	0	1,014	57	623	1,698

*Also included in Pensioner File

STATUS RECONCILIATION FROM 2017 TO 2018

	Actives	Retirees	Disability	Survivor	Total
As of June 30, 2017	6	1,070	59	625	1,760
Retirements	(2)	2			0
Disabilities					
Death with Survivors		(32)	(2)	34	0
Deaths with no Survivors		(26)		(35)	(61)
Benefits Expired				(1)	(1)
Data Corrections					
As of June 30, 2018	4	1,014	57	623	1,698



SCHEDULE D

Retirants & Beneficiaries as of June 30, 2018

Tabulated by Year of Retirement

Year of Retirement	No.	Annual Benefits excluding COLA	COLA	Total Annual Benefits	Average Monthly Benefit
2018	1	\$ 43,396	\$ 0	\$ 43,396	\$ 3,616
2017	2	76,266	345	76,611	3,192
2016	4	153,667	1,468	155,135	3,232
2015	1	25,335	0	25,335	2,111
2014	3	111,086	2,776	113,862	3,163
2013	9	364,151	29,730	393,881	3,647
2012	4	164,423	19,519	183,942	3,832
2011	1	25,791	0	25,791	2,149
2010	5	156,183	26,147	182,330	3,039
2009	3	79,418	5,816	85,234	2,368
2008	6	172,898	15,366	188,264	2,615
2007	8	250,897	56,200	307,097	3,199
2006	14	371,190	61,910	433,100	2,578
2005	27	684,572	125,696	810,268	2,501
2004	21	459,023	97,733	556,756	2,209
2003	33	870,365	200,677	1,071,042	2,705
2002	41	1,142,239	268,824	1,411,063	2,868
2001	25	710,322	147,281	857,603	2,859
2000	38	944,014	229,439	1,173,453	2,573
1999	35	834,580	183,497	1,018,077	2,424
1998	41	976,595	200,395	1,176,990	2,392
1997	52	1,130,189	201,452	1,331,641	2,134
1996	56	1,097,164	183,360	1,280,524	1,906
1995	103	1,765,089	278,160	2,043,249	1,653
1994	135	2,342,330	462,207	2,804,537	1,731
1993	96	1,617,328	320,555	1,937,883	1,682
1992	90	1,511,177	280,584	1,791,761	1,659
1991	74	1,248,664	208,725	1,457,389	1,641
1990	65	982,288	149,515	1,131,803	1,451
1989	48	651,331	155,858	807,189	1,401
1988	75	1,097,325	217,101	1,314,426	1,460
1987	46	571,323	135,903	707,226	1,281
1986	57	780,243	183,497	963,740	1,409
1985	46	602,426	133,090	735,516	1,332
1984 & Prior	429	3,569,255	832,321	4,401,576	855
Totals	1,694	\$ 27,582,543	\$ 5,415,147	\$ 32,997,690	\$ 1,623



SCHEDULE D

Schedule of Retired Members by Type of Benefit

Benefits Payable June 30, 2018

Amount of Monthly Benefit	Number of Rets.	Ret. Type 1*	Ret. Type 2*	Ret. Type 3*
\$1 - \$300	13	1	2	10
301 - 600	89	15	5	69
601 - 900	213	80	21	112
901 - 1,200	339	160	19	160
1,201 - 1,500	213	144	7	62
1,501 - 1,800	230	161	1	68
1,801 - 2,100	151	117		34
2,101 - 2,400	143	107		36
2,401 - 2,700	128	82	2	44
Over 2,700	175	147		28
Totals	1,694	1,014	57	623

***Type of Retirement**

- 1 – Retirement for Age & Service
- 2 – Disability Retirement
- 3 – Survivor Payment



SCHEDULE D

**Retirant and Beneficiary Information June 30, 2018
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								
25 – 29								
30 – 34								
35 – 39								
40 – 44					1	\$22,130	1	\$22,130
45 – 49					2	30,569	2	30,569
50 – 54	2	\$51,910			1	24,554	3	76,464
55 – 59	29	820,314			13	233,801	42	1,054,115
60 – 64	63	1,776,371	2	\$23,783	31	567,681	96	2,367,835
65 – 69	239	5,795,342	16	216,305	63	1,225,261	318	7,236,908
70 – 74	251	5,659,150	9	108,263	111	1,935,301	371	7,702,714
75 – 79	173	3,792,907	15	139,414	145	2,443,221	333	6,375,542
80 – 84	149	2,819,914	6	88,199	119	1,805,594	274	4,713,707
85 – 89	81	1,301,520	4	28,768	89	1,166,743	174	2,497,031
90 – 94	24	344,637	3	23,598	39	413,710	66	781,945
95					2	38,924	2	38,924
96	2	25,470	1	10,777	1	5,702	4	41,949
97	1	7,950			2	10,033	3	17,983
98			1	5,892	3	26,782	4	32,674
99								
100 & Over					1	7,200	1	7,200
Totals	1,014	\$22,395,485	57	\$644,999	623	\$9,957,206	1,694	\$32,997,690



SCHEDULE D

**Total Active Members as of June 30, 2018
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									
55 – 59							1	1	\$50,886
60 & Over							3	3	148,856
Totals							4	4	\$199,742

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

Age: 65.3 years
 Service: 40.5 years
 Annual Pay: \$49,936



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, 2018 is shown below.

		\$ Thousands
(1)	UAAL* as of beginning of year	\$ 164,072.8
(2)	Total normal cost from last valuation	7.8
(3)	Total contributions**	17,283.2
(4)	Interest accrual: $\{[(1) + (2)] \times .0775\} - [(3) \times .03803]$	<u>12,059.0</u>
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 158,856.4
(6)	Change due to plan amendments	253.0
(7)	Change due to new actuarial assumptions or methods	<u>0.0</u>
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 159,109.4
(9)	Actual UAAL as of end of year	\$ 152,708.0
(10)	Gain/(loss): (8) – (9)	\$ 6,401.4

*Unfunded actuarial accrued 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 6/30/18	\$ Gain (or Loss) For Year Ending 6/30/17
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ 42.2	\$ 401.2
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	0.0	0.0
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.5	0.3
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	0.0	0.0
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	14.3	5.3
Investment Income. If there is greater investment income than assumed, there is a gain. If less income, a loss.	1,796.3	3,476.1
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	4,562.2	871.2
Other. Miscellaneous gains and losses resulting from data adjustments, COLAs, etc.	<u>(14.1)</u>	<u>(304.5)</u>
Gain (or Loss) During Year From Financial Experience	\$6,401.4	\$4,449.6
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	<u>(253.0)</u>	<u>(1,776.5)</u>
Composite Gain (or Loss) During Year	\$6,148.4	\$2,673.1



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 CURRENT FUNDING POLICY



**Mississippi Municipal Retirement Systems
City of Biloxi**

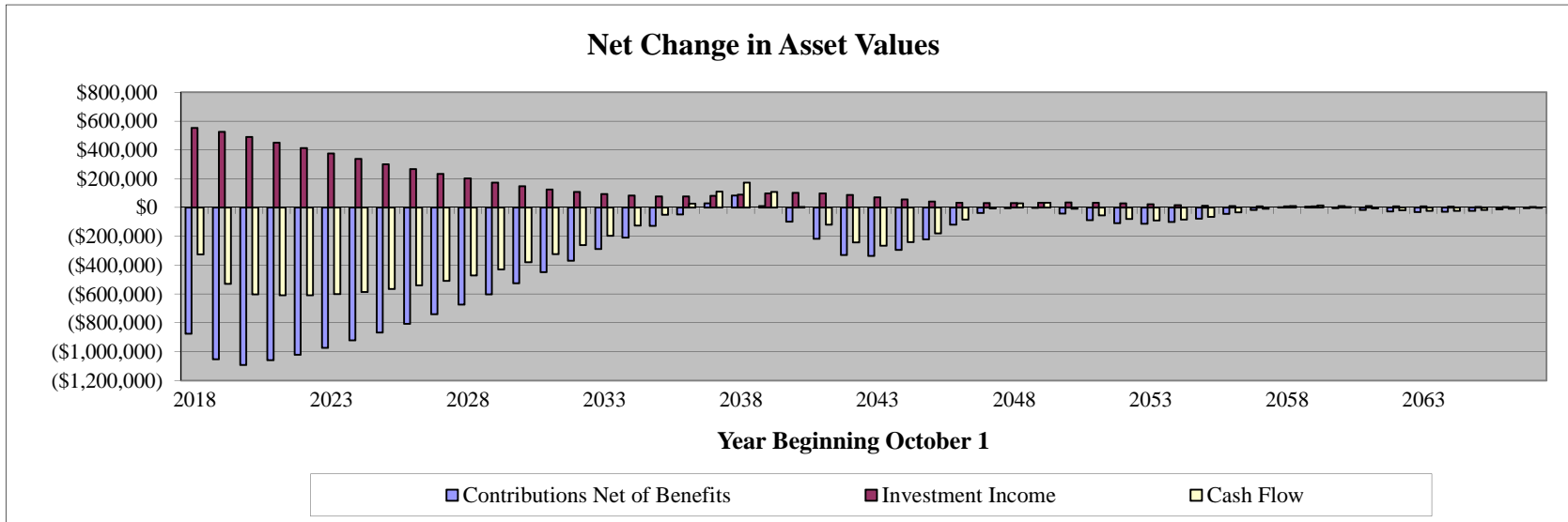
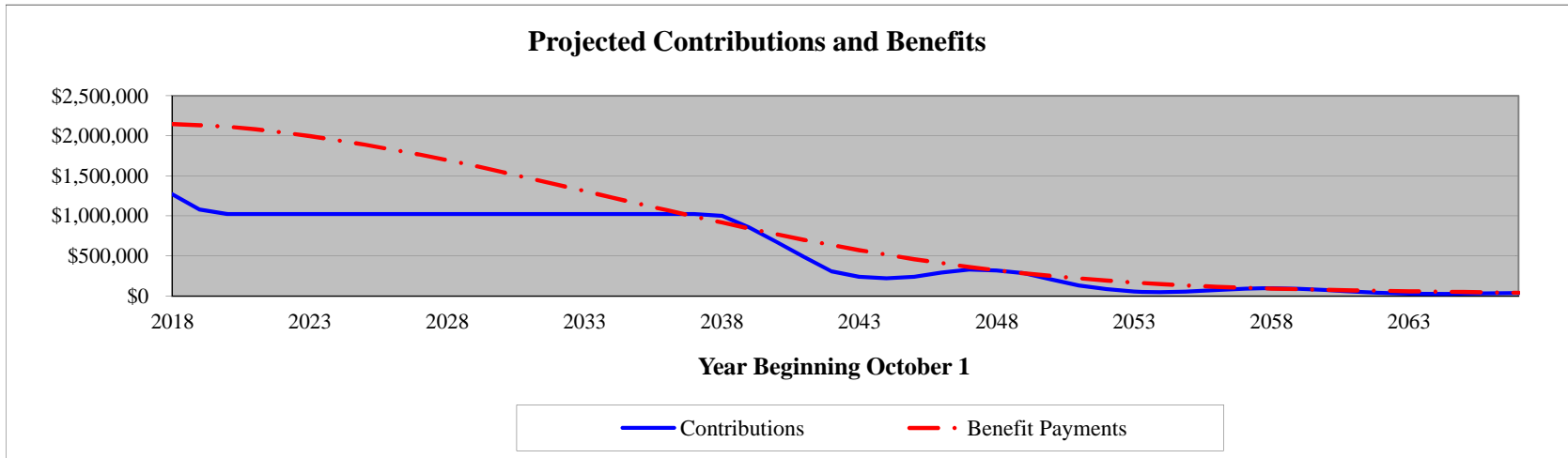
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$592,181,786	\$8,912,523	0.00173	\$1,271,932	\$2,148,536	\$551,273	(\$325,331)	\$8,587,192	2019
2019	592,181,786	8,587,192	0.00173	1,082,212	2,136,181	524,453	(529,516)	8,057,676	2020
2020	592,181,786	8,057,676	0.00173	1,024,474	2,116,107	488,829	(602,804)	7,454,872	2021
2021	592,181,786	7,454,872	0.00173	1,024,474	2,084,690	450,652	(609,564)	6,845,308	2022
2022	592,181,786	6,845,308	0.00173	1,024,474	2,045,951	412,270	(609,207)	6,236,101	2023
2023	592,181,786	6,236,101	0.00173	1,024,474	1,998,731	374,182	(600,075)	5,636,027	2024
2024	592,181,786	5,636,027	0.00173	1,024,474	1,946,732	336,840	(585,418)	5,050,609	2025
2025	592,181,786	5,050,609	0.00173	1,024,474	1,891,033	300,570	(565,989)	4,484,620	2026
2026	592,181,786	4,484,620	0.00173	1,024,474	1,830,410	265,720	(540,216)	3,944,404	2027
2027	592,181,786	3,944,404	0.00173	1,024,474	1,765,710	232,675	(508,561)	3,435,843	2028
2032	592,181,786	1,832,861	0.00173	1,024,474	1,393,385	107,335	(261,576)	1,571,285	2033
2037	592,181,786	1,226,558	0.00168	1,024,474	994,938	80,671	110,207	1,336,765	2038
2042	592,181,786	1,503,320	0.00108	309,412	638,474	87,190	(241,872)	1,261,449	2043
2047	592,181,786	494,638	0.00062	328,684	366,257	30,950	(6,623)	488,014	2048
2052	592,181,786	485,686	0.00033	85,823	194,060	28,107	(80,130)	405,557	2053
2057	592,181,786	134,544	0.00018	89,405	106,242	8,207	(8,630)	125,914	2058
2062	592,181,786	147,272	0.00011	39,128	66,748	8,689	(18,931)	128,341	2063
2067	592,181,786	55,660	0.00007	38,837	43,401	3,472	(1,092)	54,568	2068



Mississippi Municipal Retirement Systems City of Biloxi

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Clarksdale**

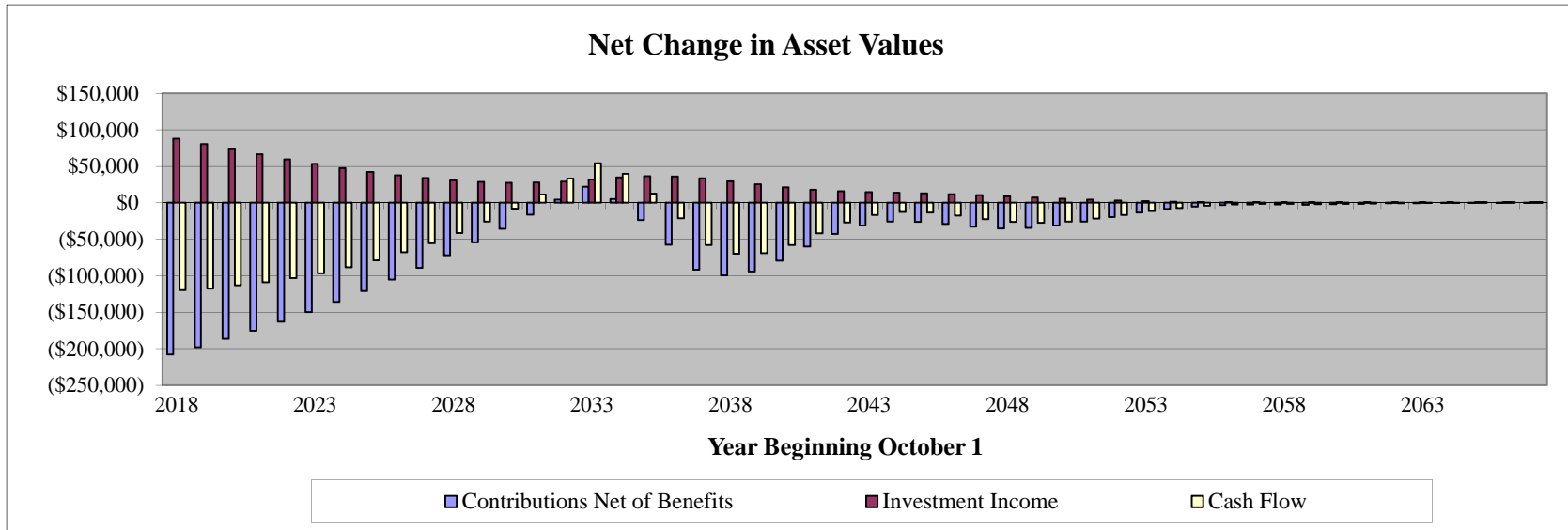
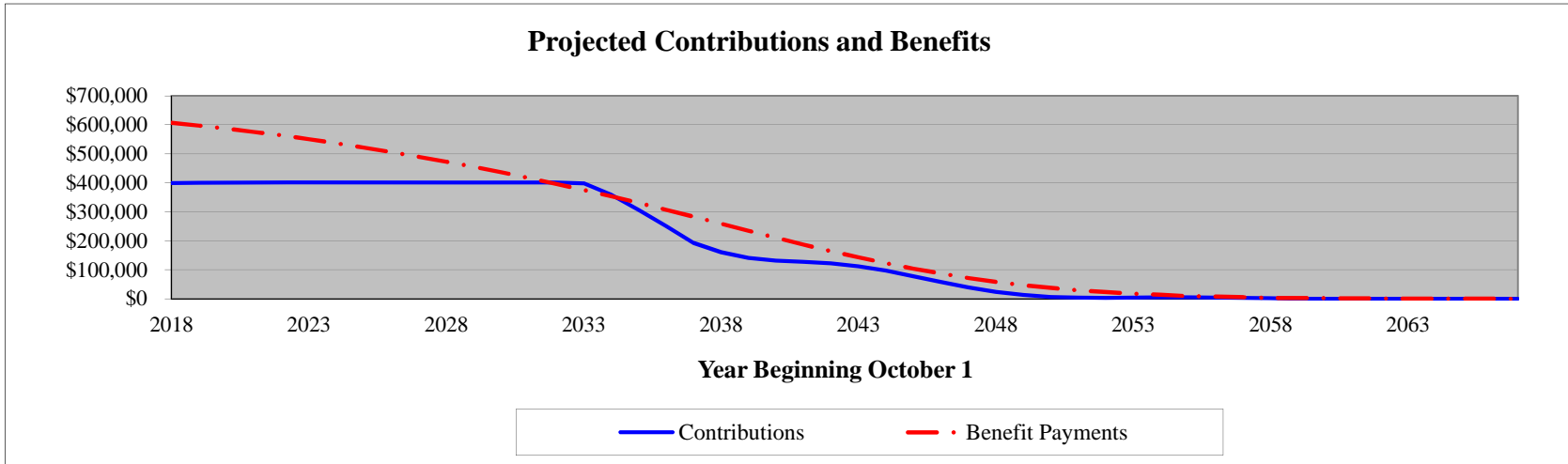
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$83,414,667	\$1,457,559	0.00481	\$399,609	\$607,351	\$88,096	(\$119,646)	\$1,337,913	2019
2019	83,414,667	1,337,913	0.00481	399,973	598,098	80,627	(117,498)	1,220,415	2020
2020	83,414,667	1,220,415	0.00481	401,225	587,838	73,357	(113,256)	1,107,158	2021
2021	83,414,667	1,107,158	0.00481	401,225	576,575	66,356	(108,994)	998,165	2022
2022	83,414,667	998,165	0.00481	401,225	564,329	59,663	(103,441)	894,723	2023
2023	83,414,667	894,723	0.00481	401,225	551,152	53,361	(96,566)	798,157	2024
2024	83,414,667	798,157	0.00481	401,225	537,110	47,533	(88,352)	709,805	2025
2025	83,414,667	709,805	0.00481	401,225	522,262	42,266	(78,771)	631,035	2026
2026	83,414,667	631,035	0.00481	401,225	506,659	37,645	(67,789)	563,246	2027
2027	83,414,667	563,246	0.00481	401,225	490,331	33,761	(55,345)	507,901	2028
2032	83,414,667	444,238	0.00476	401,225	397,099	29,007	33,133	477,372	2033
2037	83,414,667	562,137	0.00340	192,170	283,824	33,607	(58,047)	504,090	2038
2042	83,414,667	265,062	0.00197	121,811	164,667	15,858	(26,998)	238,064	2043
2047	83,414,667	178,094	0.00086	38,880	71,837	10,522	(22,435)	155,659	2048
2052	83,414,667	54,836	0.00027	3,248	22,898	2,936	(16,714)	38,122	2053
2057	83,414,667	13,530	0.00006	3,040	5,340	806	(1,494)	12,037	2058
2062	83,414,667	6,211	0.00001	0	863	376	(487)	5,724	2063
2067	83,414,667	5,870	0.00000	0	75	379	304	6,175	2068



Mississippi Municipal Retirement Systems City of Clarksdale

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Clinton**

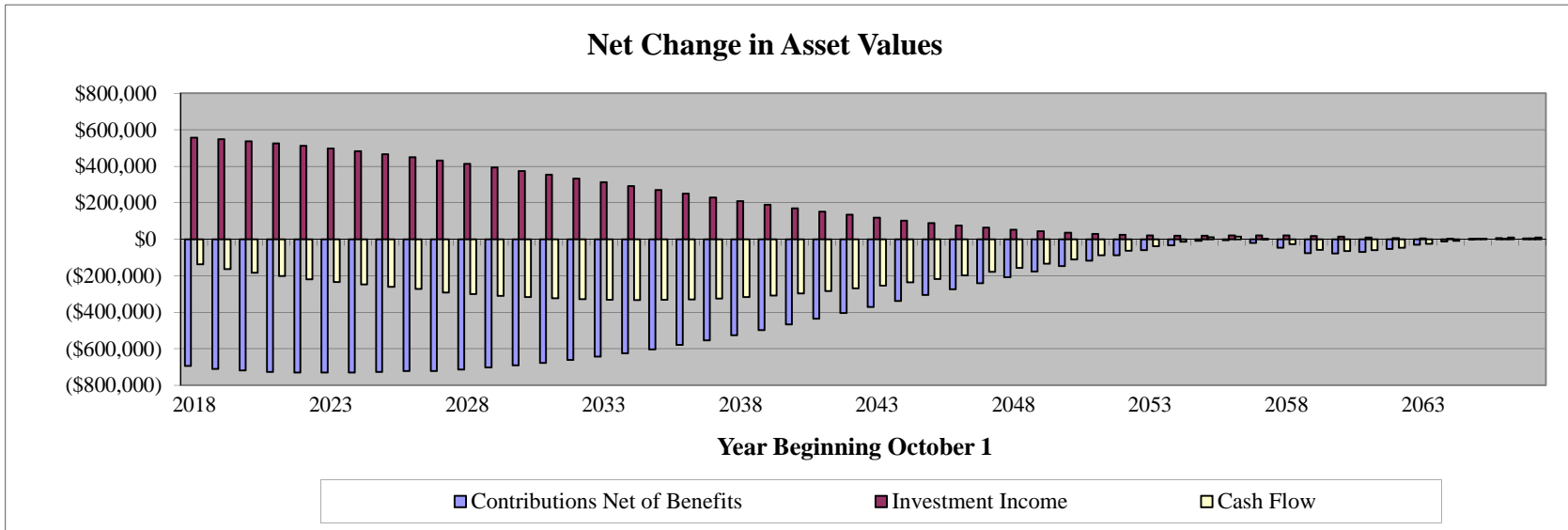
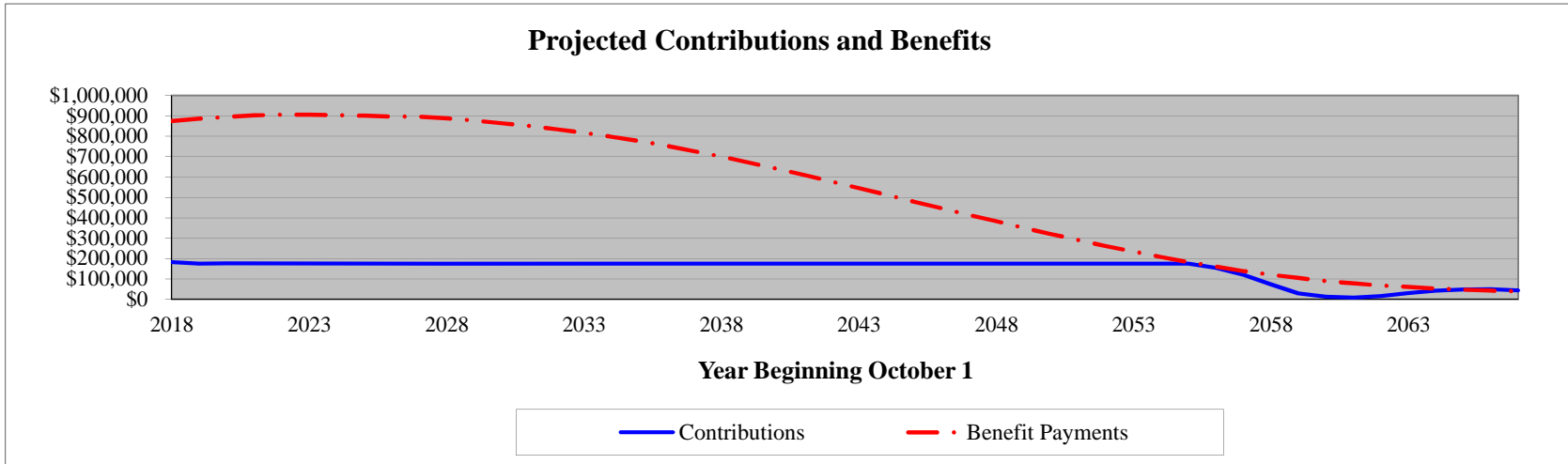
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$207,772,348	\$8,912,379	0.00084	\$181,745	\$875,268	\$557,120	(\$136,403)	\$8,775,976	2019
2019	207,772,348	8,775,976	0.00084	175,180	886,391	547,688	(163,523)	8,612,453	2020
2020	207,772,348	8,612,453	0.00084	176,762	896,058	536,800	(182,496)	8,429,957	2021
2021	207,772,348	8,429,957	0.00084	176,355	902,891	524,707	(201,829)	8,228,128	2022
2022	207,772,348	8,228,128	0.00084	176,022	907,110	511,442	(219,646)	8,008,483	2023
2023	207,772,348	8,008,483	0.00084	175,748	906,873	497,164	(233,961)	7,774,521	2024
2024	207,772,348	7,774,521	0.00084	175,525	905,145	482,005	(247,615)	7,526,906	2025
2025	207,772,348	7,526,906	0.00084	175,342	901,914	466,007	(260,565)	7,266,341	2026
2026	207,772,348	7,266,341	0.00084	175,192	897,159	449,218	(272,749)	6,993,592	2027
2027	207,772,348	6,993,592	0.00084	174,529	897,300	431,463	(291,308)	6,702,284	2028
2032	207,772,348	5,451,280	0.00084	174,529	835,993	333,174	(328,290)	5,122,990	2033
2037	207,772,348	3,797,222	0.00084	174,529	728,176	229,109	(324,538)	3,472,684	2038
2042	207,772,348	2,265,120	0.00084	174,529	578,613	134,307	(269,777)	1,995,343	2043
2047	207,772,348	1,089,455	0.00084	174,529	415,264	63,114	(177,621)	911,835	2048
2052	207,772,348	423,717	0.00084	174,529	262,203	24,737	(62,937)	360,781	2053
2057	207,772,348	334,419	0.00067	119,785	139,726	21,099	1,158	335,577	2058
2062	207,772,348	125,730	0.00033	15,675	68,644	6,478	(46,491)	79,240	2063
2067	207,772,348	57,895	0.00019	44,263	39,243	3,924	8,944	66,839	2068



Mississippi Municipal Retirement Systems City of Clinton

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Columbus**

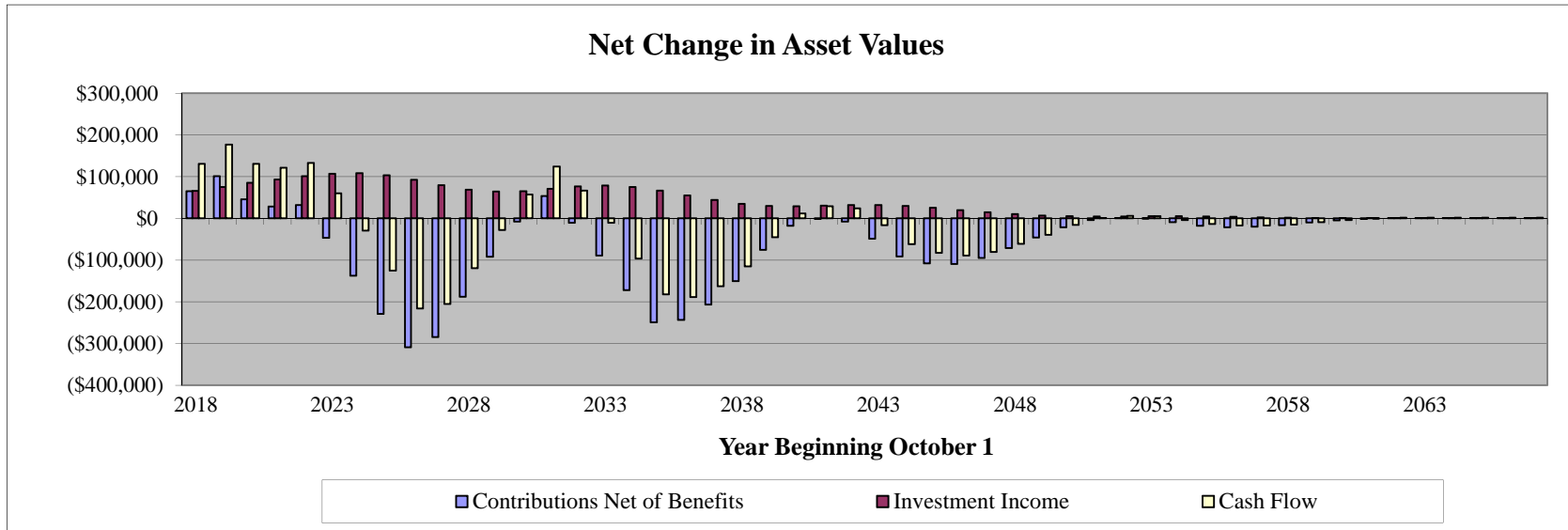
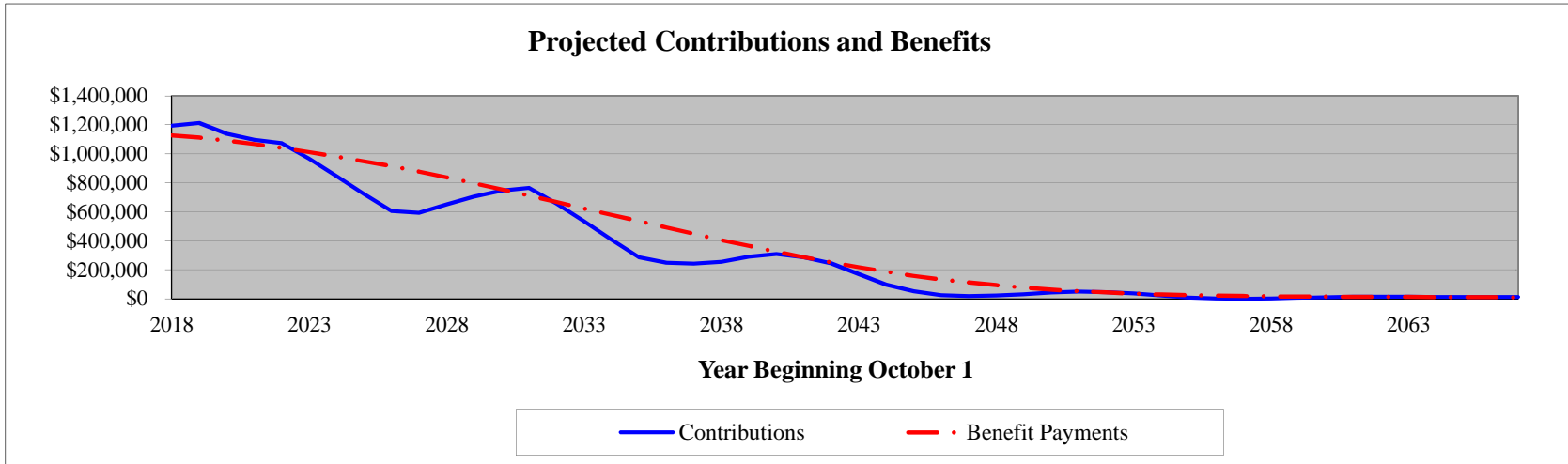
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$208,552,785	\$977,942	0.00582	\$1,193,570	\$1,128,282	\$65,655	\$130,943	\$1,108,885	2019
2019	208,552,785	1,108,885	0.00533	1,213,777	1,112,496	75,317	176,598	1,285,483	2020
2020	208,552,785	1,285,483	0.00524	1,137,816	1,092,277	85,013	130,552	1,416,034	2021
2021	208,552,785	1,416,034	0.00512	1,097,332	1,068,804	92,955	121,483	1,537,517	2022
2022	208,552,785	1,537,517	0.00500	1,074,673	1,042,642	100,963	132,994	1,670,511	2023
2023	208,552,785	1,670,511	0.00486	967,115	1,013,978	107,084	60,221	1,730,732	2024
2024	208,552,785	1,730,732	0.00471	845,608	982,980	108,103	(29,269)	1,701,463	2025
2025	208,552,785	1,701,463	0.00455	721,241	949,849	103,282	(125,326)	1,576,137	2026
2026	208,552,785	1,576,137	0.00439	605,975	914,787	92,570	(216,242)	1,359,895	2027
2027	208,552,785	1,359,895	0.00421	593,194	877,746	79,291	(205,261)	1,154,633	2028
2032	208,552,785	1,189,721	0.00320	657,652	668,233	76,993	66,412	1,256,133	2033
2037	208,552,785	778,642	0.00215	241,808	448,382	44,004	(162,570)	616,072	2038
2042	208,552,785	496,500	0.00121	243,728	251,523	32,023	24,228	520,728	2043
2047	208,552,785	271,164	0.00054	17,185	112,216	14,586	(80,445)	190,719	2048
2052	208,552,785	75,200	0.00021	44,542	43,252	4,929	6,219	81,419	2053
2057	208,552,785	52,309	0.00009	0	19,657	2,771	(16,886)	35,423	2058
2062	208,552,785	6,952	0.00006	14,011	12,959	485	1,537	8,488	2063
2067	208,552,785	14,303	0.00005	10,786	10,164	950	1,572	15,875	2068



Mississippi Municipal Retirement Systems City of Columbus

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Greenville**

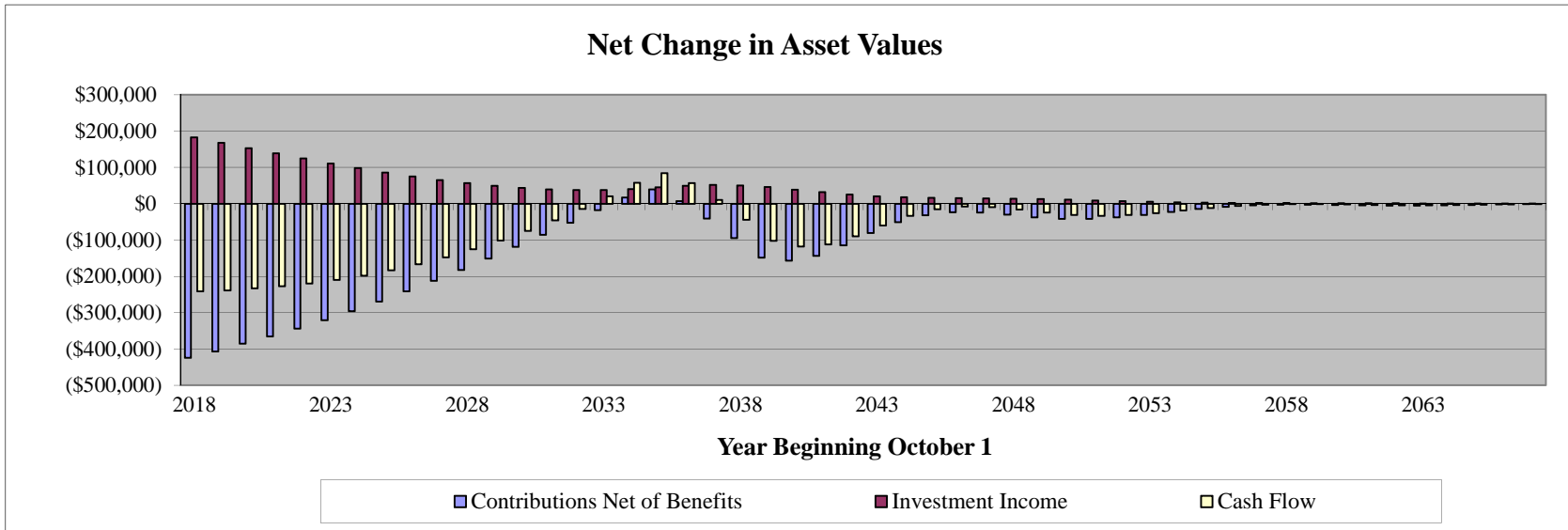
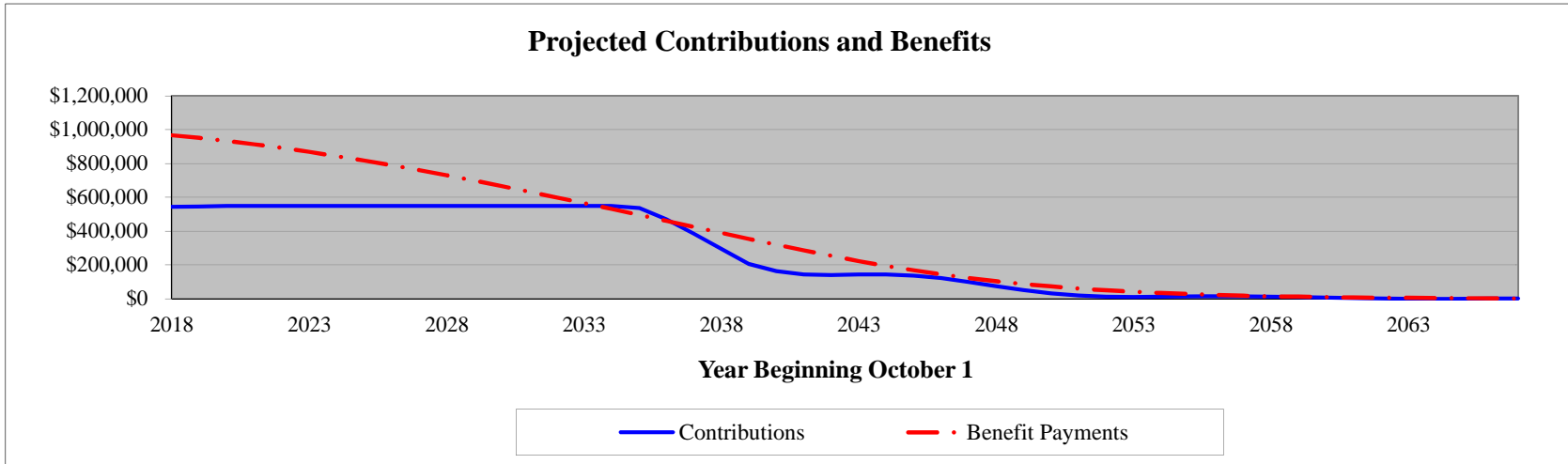
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$193,778,841	\$3,023,963	0.00283	\$543,254	\$967,945	\$182,972	(\$241,719)	\$2,782,244	2019
2019	193,778,841	2,782,244	0.00283	545,003	952,033	167,826	(239,204)	2,543,040	2020
2020	193,778,841	2,543,040	0.00283	548,394	934,119	152,959	(232,766)	2,310,274	2021
2021	193,778,841	2,310,274	0.00283	548,394	914,293	138,463	(227,436)	2,082,839	2022
2022	193,778,841	2,082,839	0.00283	548,394	892,657	124,372	(219,891)	1,862,948	2023
2023	193,778,841	1,862,948	0.00283	548,394	869,315	110,826	(210,095)	1,652,853	2024
2024	193,778,841	1,652,853	0.00283	548,394	844,351	97,968	(197,989)	1,454,864	2025
2025	193,778,841	1,454,864	0.00283	548,394	817,881	85,946	(183,541)	1,271,323	2026
2026	193,778,841	1,271,323	0.00283	548,394	790,018	74,907	(166,717)	1,104,606	2027
2027	193,778,841	1,104,606	0.00283	548,394	760,880	65,002	(147,484)	957,121	2028
2032	193,778,841	608,371	0.00283	548,394	600,562	37,875	(14,293)	594,078	2033
2037	193,778,841	812,604	0.00219	384,458	425,252	51,514	10,720	823,324	2038
2042	193,778,841	446,459	0.00131	139,185	254,162	25,342	(89,635)	356,823	2043
2047	193,778,841	239,443	0.00064	98,905	123,329	14,783	(9,641)	229,802	2048
2052	193,778,841	124,694	0.00026	12,501	50,469	6,891	(31,077)	93,617	2053
2057	193,778,841	30,911	0.00010	14,142	18,747	1,862	(2,743)	28,168	2058
2062	193,778,841	19,896	0.00003	1,283	6,554	1,125	(4,146)	15,750	2063
2067	193,778,841	3,060	0.00001	1,048	2,053	167	(838)	2,222	2068



Mississippi Municipal Retirement Systems
City of Greenville

50 Year Cash Flow Projection
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Greenwood**

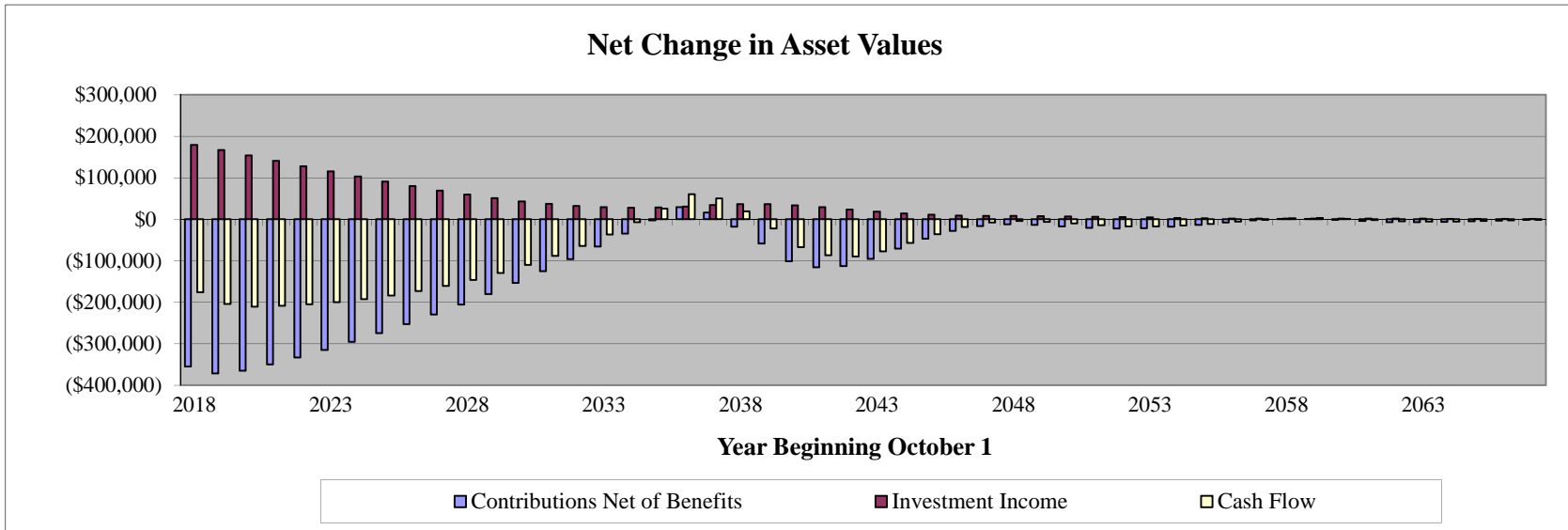
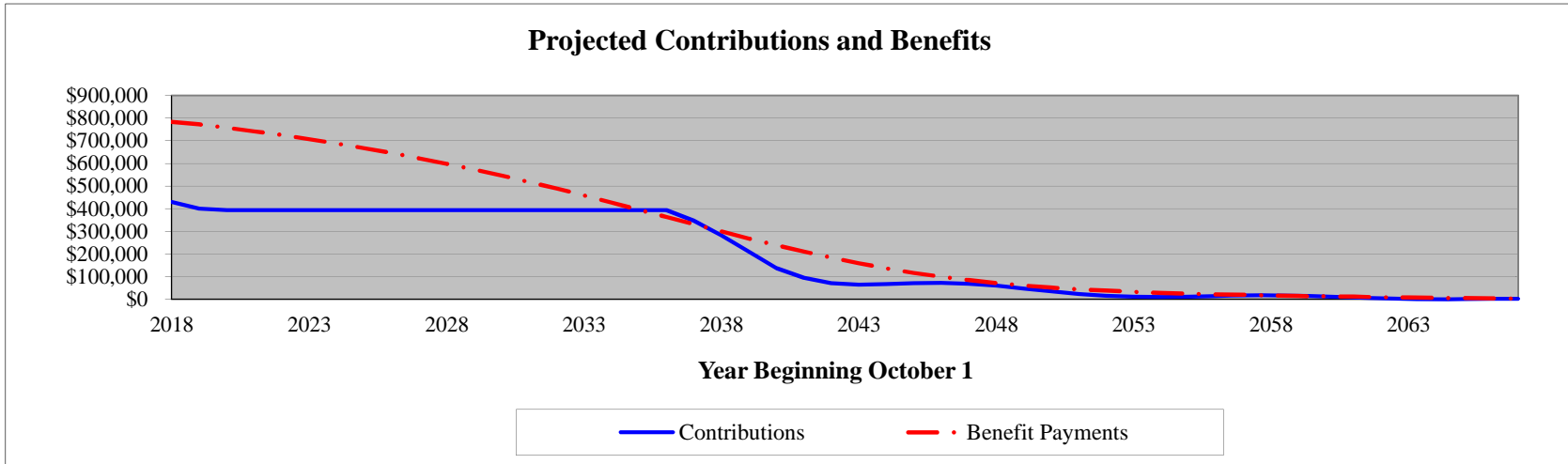
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$113,719,820	\$2,931,288	0.00346	\$429,530	\$784,238	\$179,187	(\$175,521)	\$2,755,767	2019
2019	113,719,820	2,755,767	0.00346	401,147	772,475	167,247	(204,081)	2,551,686	2020
2020	113,719,820	2,551,686	0.00346	393,471	758,645	154,178	(210,996)	2,340,690	2021
2021	113,719,820	2,340,690	0.00346	393,471	743,192	140,958	(208,763)	2,131,927	2022
2022	113,719,820	2,131,927	0.00346	393,471	726,328	127,928	(204,929)	1,926,998	2023
2023	113,719,820	1,926,998	0.00346	393,471	708,178	115,188	(199,519)	1,727,479	2024
2024	113,719,820	1,727,479	0.00346	393,471	688,794	102,839	(192,484)	1,534,996	2025
2025	113,719,820	1,534,996	0.00346	393,471	668,184	90,987	(183,726)	1,351,269	2026
2026	113,719,820	1,351,269	0.00346	393,471	646,369	79,743	(173,155)	1,178,115	2027
2027	113,719,820	1,178,115	0.00346	393,471	623,340	69,224	(160,645)	1,017,470	2028
2032	113,719,820	543,865	0.00346	393,471	489,682	32,274	(63,937)	479,928	2033
2037	113,719,820	521,283	0.00292	347,930	332,084	34,390	50,236	571,519	2038
2042	113,719,820	414,079	0.00162	71,721	184,313	23,314	(89,278)	324,801	2043
2047	113,719,820	135,718	0.00075	68,957	85,235	8,301	(7,977)	127,741	2048
2052	113,719,820	92,771	0.00034	15,927	38,284	5,315	(17,042)	75,729	2053
2057	113,719,820	27,013	0.00017	16,944	19,645	1,669	(1,032)	25,981	2058
2062	113,719,820	29,448	0.00009	3,501	10,190	1,700	(4,989)	24,459	2063
2067	113,719,820	5,892	0.00003	2,487	3,979	335	(1,157)	4,735	2068



Mississippi Municipal Retirement Systems
City of Greenwood

50 Year Cash Flow Projection
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Gulfport**

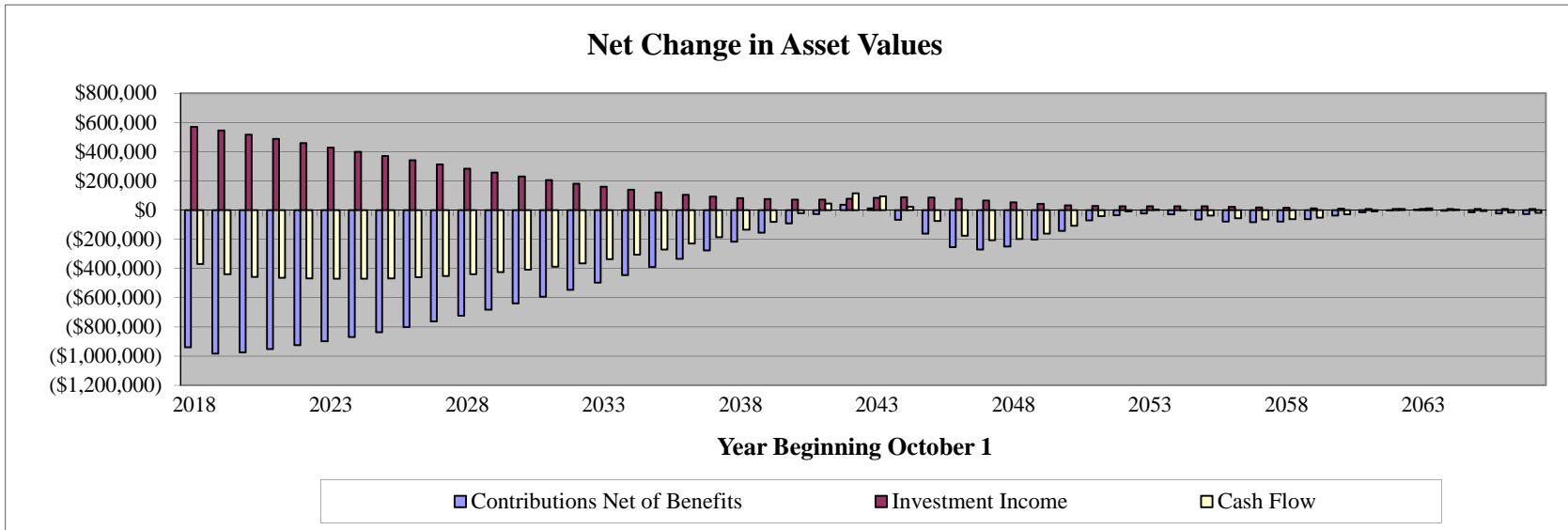
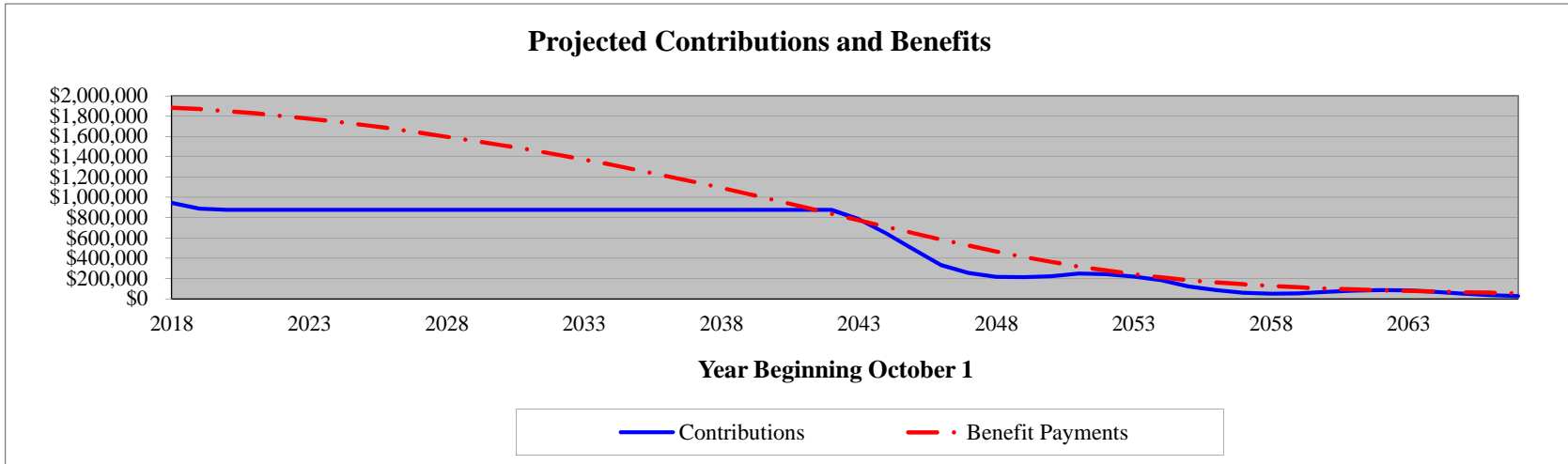
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$749,196,904	\$9,234,821	0.00117	\$945,713	\$1,884,837	\$570,222	(\$368,902)	\$8,865,918	2019
2019	749,196,904	8,865,918	0.00117	887,798	1,871,232	544,826	(438,608)	8,427,310	2020
2020	749,196,904	8,427,310	0.00117	876,560	1,851,537	516,587	(458,390)	7,968,921	2021
2021	749,196,904	7,968,921	0.00117	876,560	1,828,436	487,531	(464,345)	7,504,576	2022
2022	749,196,904	7,504,576	0.00117	876,560	1,802,823	458,168	(468,095)	7,036,481	2023
2023	749,196,904	7,036,481	0.00117	876,560	1,775,157	428,627	(469,970)	6,566,511	2024
2024	749,196,904	6,566,511	0.00117	876,560	1,745,691	399,021	(470,110)	6,096,402	2025
2025	749,196,904	6,096,402	0.00117	876,560	1,713,332	369,499	(467,273)	5,629,129	2026
2026	749,196,904	5,629,129	0.00117	876,560	1,677,506	340,272	(460,674)	5,168,455	2027
2027	749,196,904	5,168,455	0.00117	876,560	1,639,547	311,543	(451,444)	4,717,010	2028
2032	749,196,904	3,054,878	0.00117	876,560	1,422,398	181,107	(364,731)	2,690,147	2033
2037	749,196,904	1,545,760	0.00117	876,560	1,153,534	91,614	(185,360)	1,360,401	2038
2042	749,196,904	1,167,503	0.00112	876,560	839,829	77,063	113,794	1,281,296	2043
2047	749,196,904	1,145,828	0.00070	253,027	524,579	65,792	(205,760)	940,068	2048
2052	749,196,904	432,117	0.00037	242,856	278,495	26,948	(8,691)	423,426	2053
2057	749,196,904	330,825	0.00019	59,617	143,415	18,823	(64,975)	265,850	2058
2062	749,196,904	114,080	0.00011	84,867	85,131	7,407	7,143	121,223	2063
2067	749,196,904	115,049	0.00007	26,928	53,498	6,628	(19,942)	95,107	2068



Mississippi Municipal Retirement Systems City of Gulfport

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Hattiesburg**

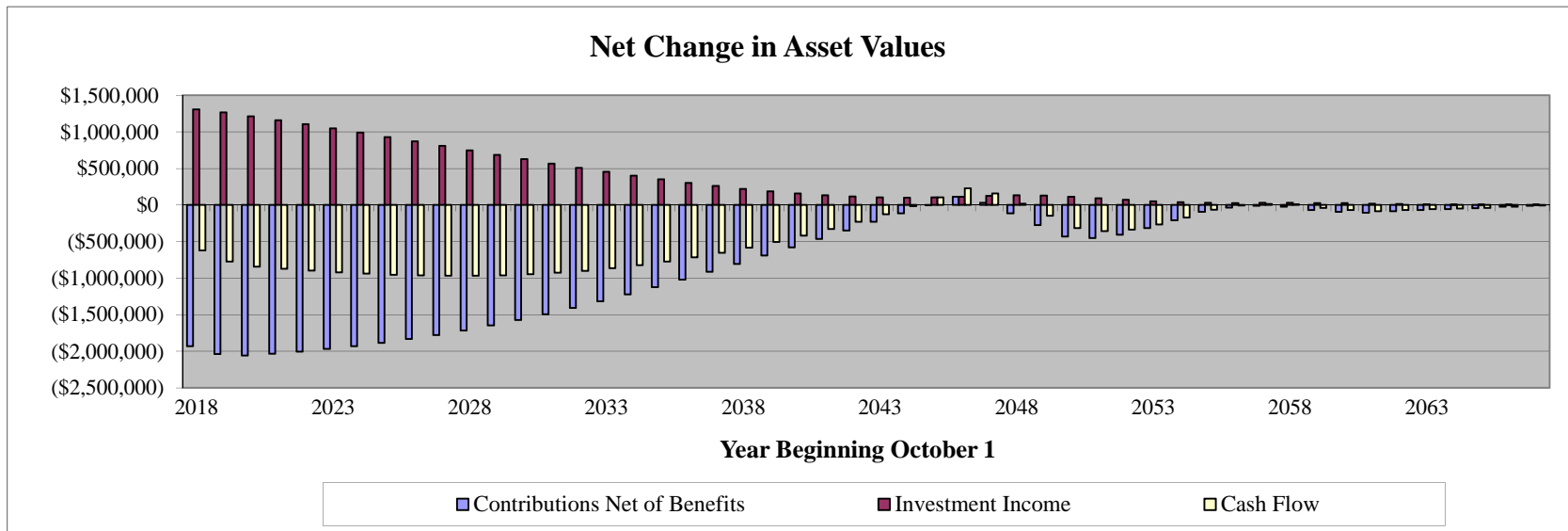
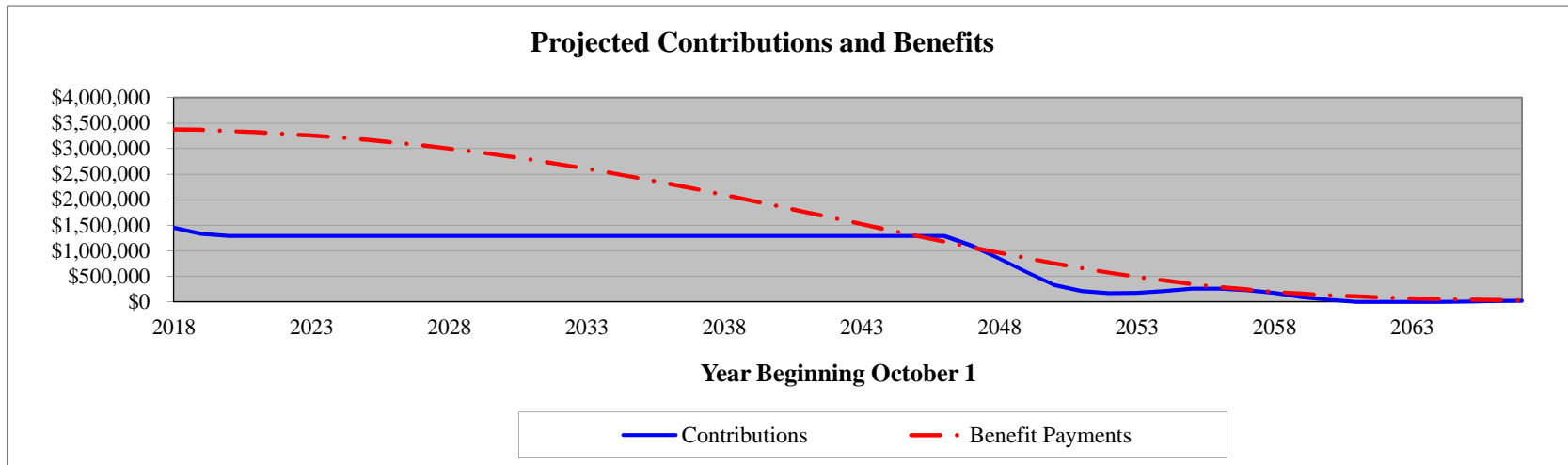
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<u>Year Beginning July 1</u>	<u>Value of Assessed Property</u>	<u>MVA Balance July 1</u>	<u>Millage Rate</u>	<u>Contributions</u>	<u>Benefit Payments</u>	<u>Investment Income</u>	<u>Cash Flow</u>	<u>MVA Balance June 30</u>	<u>Year Ending June 30</u>
2018	\$470,026,110	\$21,089,030	0.00275	\$1,449,851	\$3,379,894	\$1,309,048	(\$620,995)	\$20,468,035	2019
2019	470,026,110	20,468,035	0.00275	1,331,349	3,368,436	1,265,259	(771,828)	19,696,207	2020
2020	470,026,110	19,696,207	0.00275	1,292,572	3,349,745	1,214,448	(842,725)	18,853,482	2021
2021	470,026,110	18,853,482	0.00275	1,292,572	3,325,714	1,160,439	(872,703)	17,980,779	2022
2022	470,026,110	17,980,779	0.00275	1,292,572	3,295,265	1,104,688	(898,005)	17,082,775	2023
2023	470,026,110	17,082,775	0.00275	1,292,572	3,260,736	1,047,422	(920,742)	16,162,033	2024
2024	470,026,110	16,162,033	0.00275	1,292,572	3,221,016	988,844	(939,600)	15,222,432	2025
2025	470,026,110	15,222,432	0.00275	1,292,572	3,176,024	929,210	(954,242)	14,268,190	2026
2026	470,026,110	14,268,190	0.00275	1,292,572	3,125,384	868,804	(964,008)	13,304,182	2027
2027	470,026,110	13,304,182	0.00275	1,292,572	3,068,695	807,957	(968,166)	12,336,016	2028
2032	470,026,110	8,533,919	0.00275	1,292,572	2,701,375	509,639	(899,164)	7,634,755	2033
2037	470,026,110	4,457,373	0.00275	1,292,572	2,206,304	260,500	(653,232)	3,804,142	2038
2042	470,026,110	1,968,569	0.00275	1,292,572	1,639,777	116,850	(230,355)	1,738,214	2043
2047	470,026,110	1,928,885	0.00227	1,100,457	1,068,737	126,392	158,112	2,086,997	2048
2052	470,026,110	1,287,047	0.00122	167,045	574,143	70,636	(336,462)	950,585	2053
2057	470,026,110	444,775	0.00051	229,172	241,846	28,505	15,831	460,606	2058
2062	470,026,110	274,079	0.00018	0	84,886	15,100	(69,786)	204,293	2063
2067	470,026,110	36,140	0.00007	22,676	32,672	2,029	(7,967)	28,172	2068



Mississippi Municipal Retirement Systems City of Hattiesburg

50 Year Cash Flow Projection Based on Valuation Assumptions



**Mississippi Municipal Retirement Systems
City of Jackson**



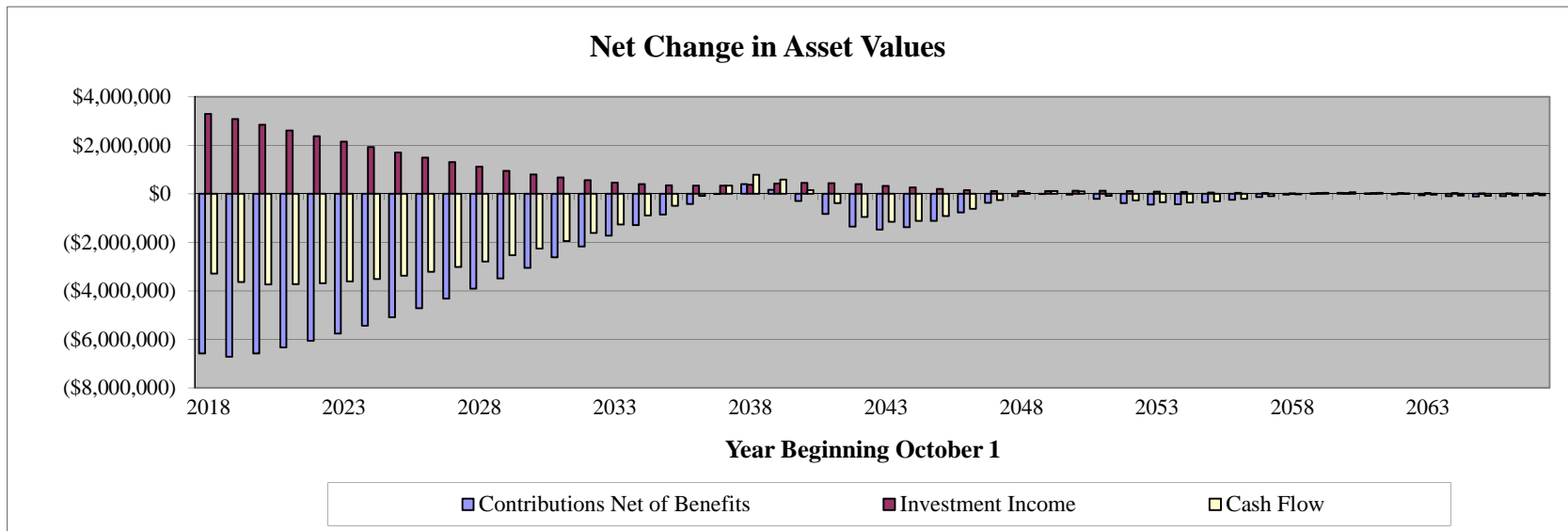
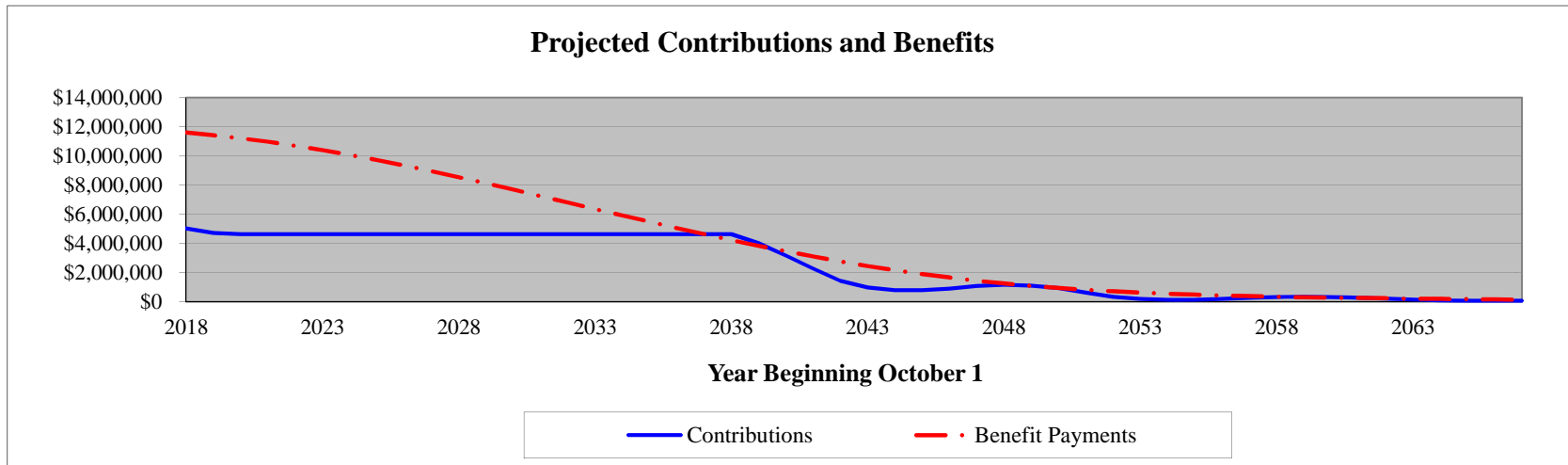
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$1,201,390,327	\$53,979,262	0.00387	\$5,029,597	\$11,616,217	\$3,297,957	(\$3,288,663)	\$50,690,598	2019
2019	1,201,390,327	50,690,598	0.00387	4,718,461	11,437,633	3,079,954	(3,639,218)	47,051,380	2020
2020	1,201,390,327	47,051,380	0.00387	4,649,381	11,226,976	2,847,933	(3,729,662)	43,321,718	2021
2021	1,201,390,327	43,321,718	0.00387	4,649,381	10,985,068	2,613,243	(3,722,444)	39,599,275	2022
2022	1,201,390,327	39,599,275	0.00387	4,649,381	10,714,395	2,379,943	(3,685,071)	35,914,204	2023
2023	1,201,390,327	35,914,204	0.00387	4,649,381	10,415,751	2,149,966	(3,616,404)	32,297,800	2024
2024	1,201,390,327	32,297,800	0.00387	4,649,381	10,089,573	1,925,334	(3,514,858)	28,782,942	2025
2025	1,201,390,327	28,782,942	0.00387	4,649,381	9,738,576	1,708,096	(3,381,099)	25,401,843	2026
2026	1,201,390,327	25,401,843	0.00387	4,649,381	9,364,937	1,500,277	(3,215,279)	22,186,564	2027
2027	1,201,390,327	22,186,564	0.00387	4,649,381	8,971,448	1,303,871	(3,018,196)	19,168,368	2028
2032	1,201,390,327	9,644,736	0.00387	4,649,381	6,819,761	557,481	(1,612,899)	8,031,837	2033
2037	1,201,390,327	5,311,558	0.00387	4,649,381	4,650,628	345,211	343,964	5,655,522	2038
2042	1,201,390,327	6,803,117	0.00232	1,428,568	2,782,489	398,893	(955,028)	5,848,089	2043
2047	1,201,390,327	2,051,907	0.00121	1,085,148	1,459,177	121,409	(252,620)	1,799,286	2048
2052	1,201,390,327	1,961,502	0.00061	350,982	731,193	115,335	(264,876)	1,696,626	2053
2057	1,201,390,327	467,030	0.00033	271,456	399,271	26,268	(101,547)	365,483	2058
2062	1,201,390,327	494,936	0.00020	219,038	243,331	31,394	7,101	502,037	2063
2067	1,201,390,327	242,320	0.00013	81,998	152,860	13,484	(57,378)	184,942	2068



Mississippi Municipal Retirement Systems City of Jackson

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Laurel**

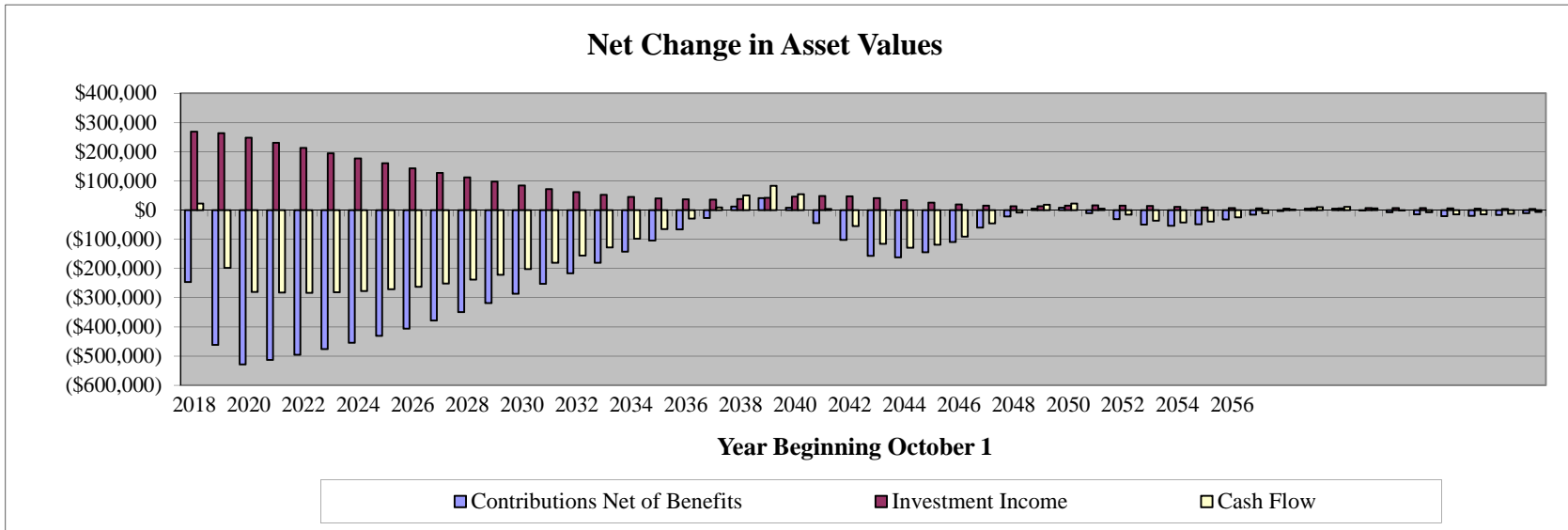
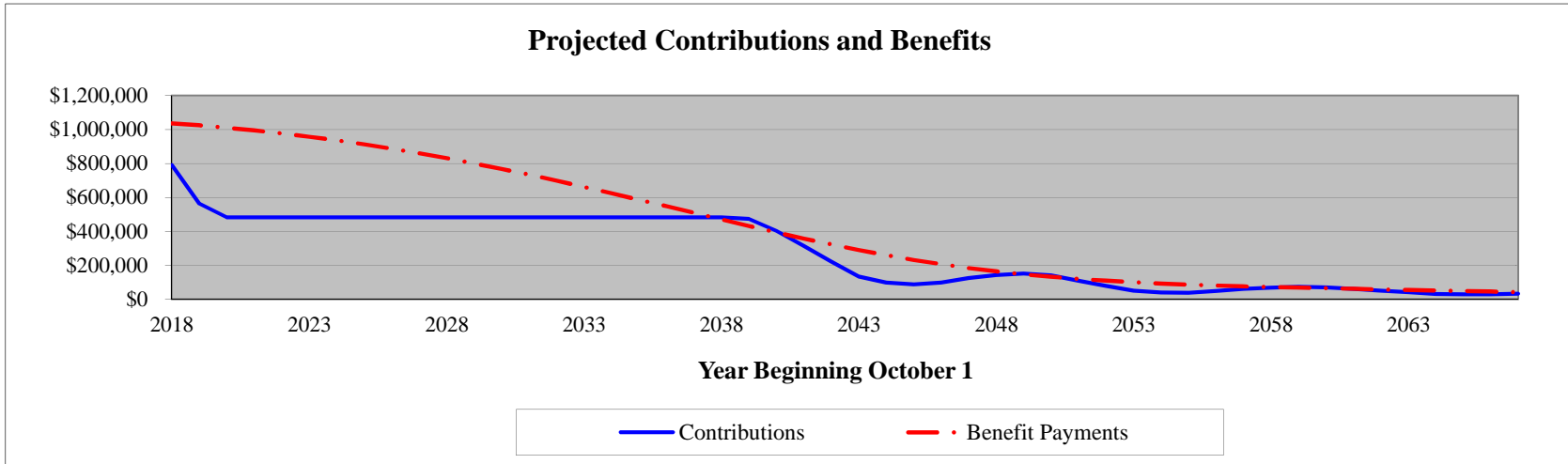
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$180,736,668	\$4,254,761	0.00267	\$790,014	\$1,036,612	\$268,671	\$22,073	\$4,276,834	2019
2019	180,736,668	4,276,834	0.00267	563,447	1,025,201	263,223	(198,531)	4,078,303	2020
2020	180,736,668	4,078,303	0.00267	482,567	1,011,608	248,167	(280,874)	3,797,429	2021
2021	180,736,668	3,797,429	0.00267	482,567	995,923	230,411	(282,945)	3,514,484	2022
2022	180,736,668	3,514,484	0.00267	482,567	978,240	212,586	(283,087)	3,231,396	2023
2023	180,736,668	3,231,396	0.00267	482,567	958,618	194,813	(281,238)	2,950,159	2024
2024	180,736,668	2,950,159	0.00267	482,567	937,074	177,221	(277,286)	2,672,873	2025
2025	180,736,668	2,672,873	0.00267	482,567	913,619	159,948	(271,104)	2,401,769	2026
2026	180,736,668	2,401,769	0.00267	482,567	888,251	143,138	(262,546)	2,139,223	2027
2027	180,736,668	2,139,223	0.00267	482,567	860,992	126,944	(251,481)	1,887,742	2028
2032	180,736,668	1,045,340	0.00267	482,567	699,475	61,009	(155,899)	889,441	2033
2037	180,736,668	568,993	0.00267	482,567	509,644	36,118	9,041	578,033	2038
2042	180,736,668	768,735	0.00179	222,001	324,124	46,701	(55,422)	713,313	2043
2047	180,736,668	259,681	0.00102	124,604	184,995	14,947	(45,444)	214,236	2048
2052	180,736,668	251,236	0.00061	78,689	109,676	15,339	(15,648)	235,588	2053
2057	180,736,668	91,784	0.00042	60,806	76,717	5,457	(10,454)	81,330	2058
2062	180,736,668	109,899	0.00032	51,018	58,652	6,899	(735)	109,164	2063
2067	180,736,668	58,920	0.00024	32,935	43,117	3,504	(6,678)	52,242	2068



Mississippi Municipal Retirement Systems
City of Laurel

50 Year Cash Flow Projection
Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of McComb**

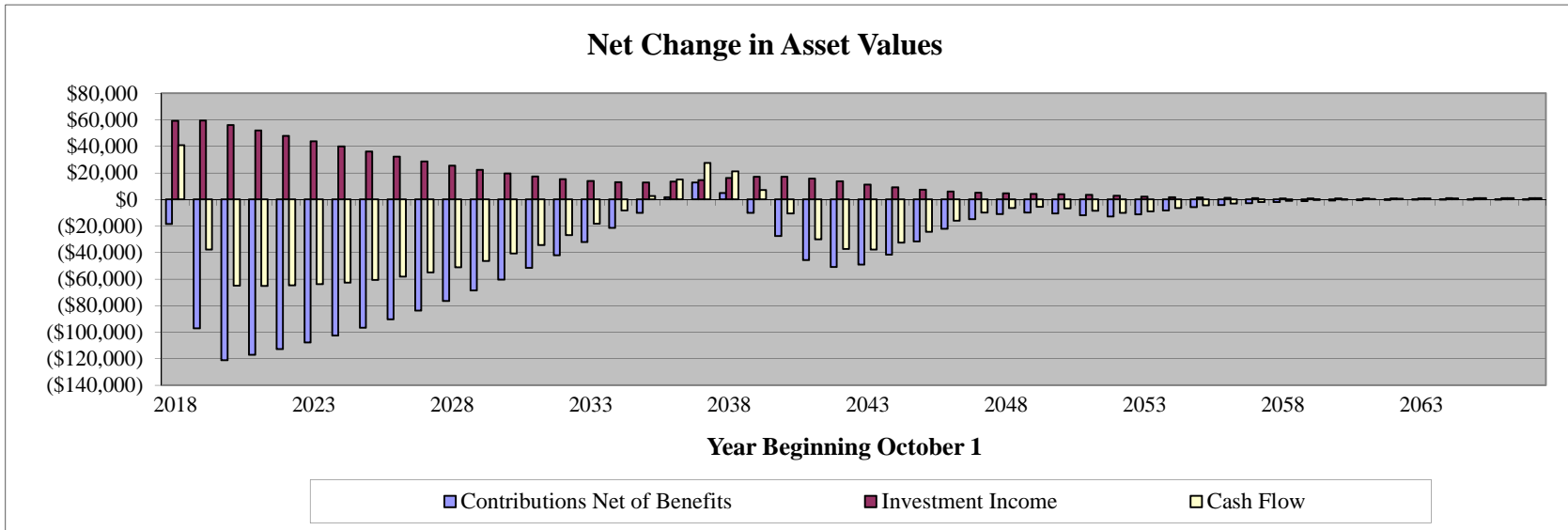
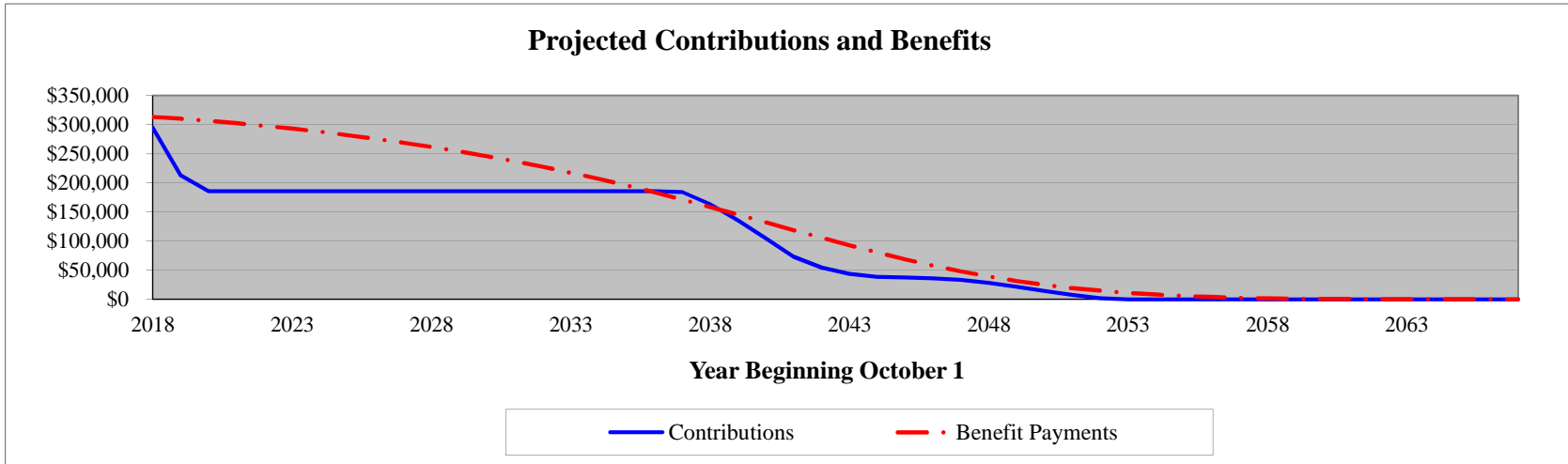
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$102,003,113	\$920,167	0.00182	\$295,047	\$313,513	\$59,220	\$40,754	\$960,921	2019
2019	102,003,113	960,921	0.00182	213,187	310,352	59,352	(37,813)	923,108	2020
2020	102,003,113	923,108	0.00182	185,646	306,784	56,127	(65,011)	858,097	2021
2021	102,003,113	858,097	0.00182	185,646	302,782	52,029	(65,107)	792,990	2022
2022	102,003,113	792,990	0.00182	185,646	298,338	47,940	(64,752)	728,238	2023
2023	102,003,113	728,238	0.00182	185,646	293,460	43,887	(63,927)	664,311	2024
2024	102,003,113	664,311	0.00182	185,646	288,132	39,902	(62,584)	601,726	2025
2025	102,003,113	601,726	0.00182	185,646	282,330	36,019	(60,665)	541,061	2026
2026	102,003,113	541,061	0.00182	185,646	276,051	32,277	(58,128)	482,933	2027
2027	102,003,113	482,933	0.00182	185,646	269,287	28,715	(54,926)	428,008	2028
2032	102,003,113	255,503	0.00182	185,646	227,730	15,261	(26,823)	228,680	2033
2037	102,003,113	219,764	0.00168	184,383	171,601	14,694	27,476	247,240	2038
2042	102,003,113	234,694	0.00104	54,731	105,732	13,624	(37,377)	197,317	2043
2047	102,003,113	86,448	0.00047	33,199	48,149	5,141	(9,809)	76,639	2048
2052	102,003,113	49,129	0.00015	2,056	14,880	2,783	(10,041)	39,088	2053
2057	102,003,113	16,026	0.00003	0	2,864	950	(1,914)	14,112	2058
2062	102,003,113	12,874	0.00000	0	300	827	527	13,401	2063
2067	102,003,113	16,818	0.00000	0	14	1,093	1,079	17,896	2068



Mississippi Municipal Retirement Systems City of McComb

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Meridian**

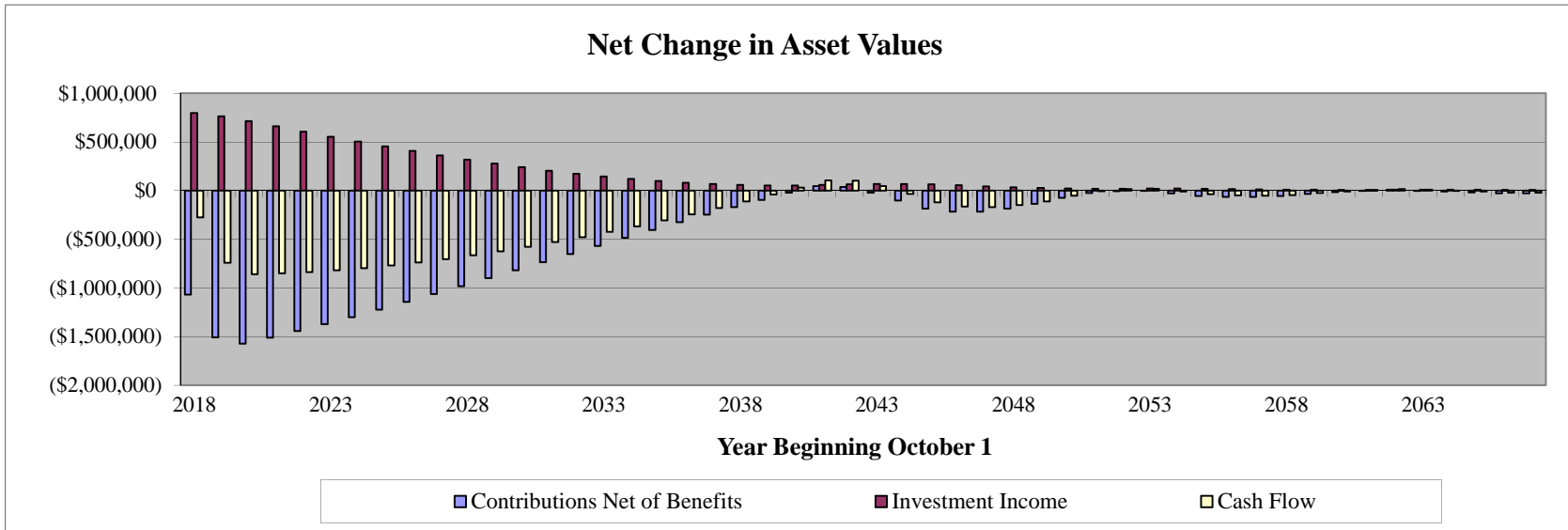
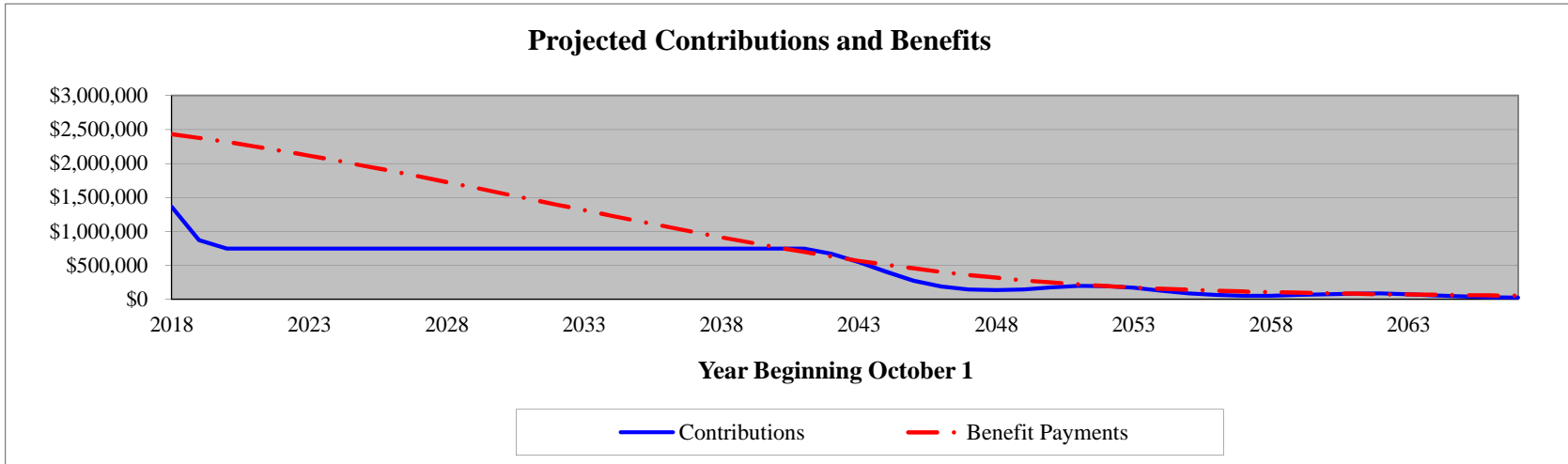
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<u>Year Beginning July 1</u>	<u>Value of Assessed Property</u>	<u>MVA Balance July 1</u>	<u>Millage Rate</u>	<u>Contributions</u>	<u>Benefit Payments</u>	<u>Investment Income</u>	<u>Cash Flow</u>	<u>MVA Balance June 30</u>	<u>Year Ending June 30</u>
2018	\$341,865,756	\$12,767,298	0.00218	\$1,362,805	\$2,432,503	\$795,656	(\$274,042)	\$12,493,256	2019
2019	341,865,756	12,493,256	0.00218	871,758	2,378,251	763,871	(742,622)	11,750,634	2020
2020	341,865,756	11,750,634	0.00218	745,267	2,319,323	713,440	(860,616)	10,890,018	2021
2021	341,865,756	10,890,018	0.00218	745,267	2,256,115	659,522	(851,326)	10,038,692	2022
2022	341,865,756	10,038,692	0.00218	745,267	2,188,987	606,333	(837,387)	9,201,305	2023
2023	341,865,756	9,201,305	0.00218	745,267	2,118,373	554,161	(818,945)	8,382,360	2024
2024	341,865,756	8,382,360	0.00218	745,267	2,044,715	503,286	(796,162)	7,586,198	2025
2025	341,865,756	7,586,198	0.00218	745,267	1,968,445	453,975	(769,203)	6,816,994	2026
2026	341,865,756	6,816,994	0.00218	745,267	1,890,020	406,486	(738,267)	6,078,727	2027
2027	341,865,756	6,078,727	0.00218	745,267	1,809,862	361,063	(703,532)	5,375,195	2028
2032	341,865,756	2,978,505	0.00218	745,267	1,396,494	172,771	(478,456)	2,500,050	2033
2037	341,865,756	1,157,961	0.00218	745,267	991,822	67,381	(179,174)	978,787	2038
2042	341,865,756	959,853	0.00185	669,052	631,861	63,580	100,771	1,060,623	2043
2047	341,865,756	789,070	0.00105	143,580	358,974	44,399	(170,995)	618,075	2048
2052	341,865,756	300,371	0.00057	191,290	196,148	19,369	14,511	314,882	2053
2057	341,865,756	239,601	0.00034	51,150	116,415	13,486	(51,779)	187,821	2058
2062	341,865,756	112,997	0.00023	85,267	77,575	7,591	15,283	128,281	2063
2067	341,865,756	104,813	0.00016	26,188	53,430	5,941	(21,301)	83,513	2068



**Mississippi Municipal Retirement Systems
City of Meridian**

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





**Mississippi Municipal Retirement Systems
City of Natchez**

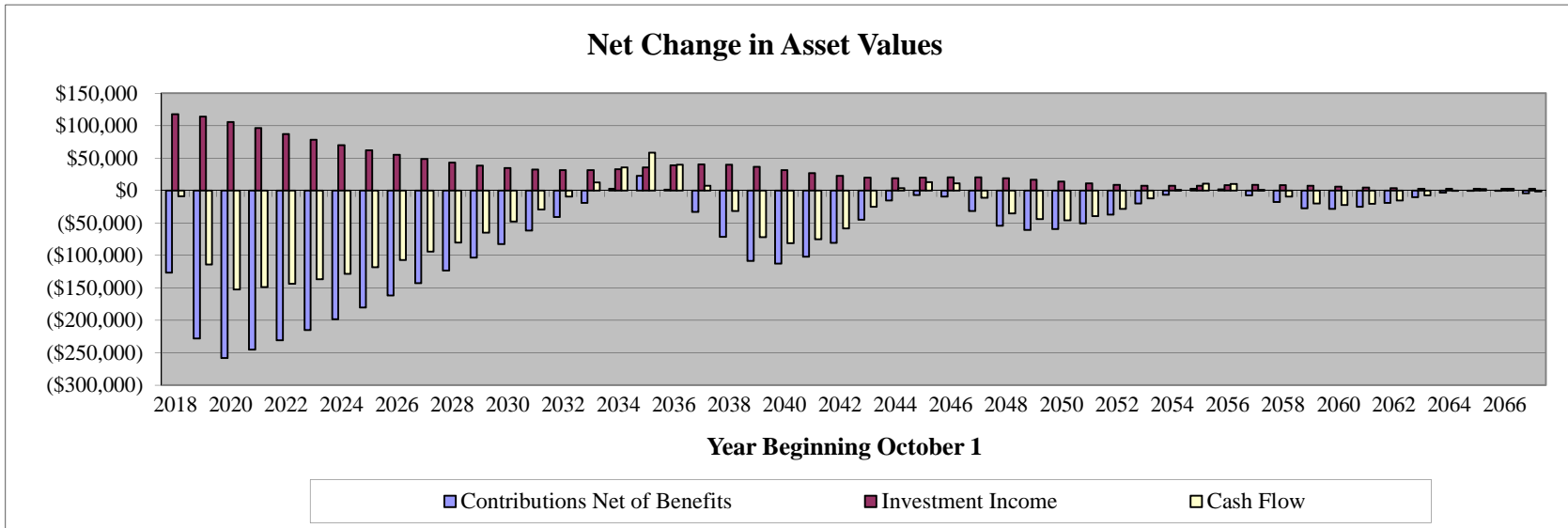
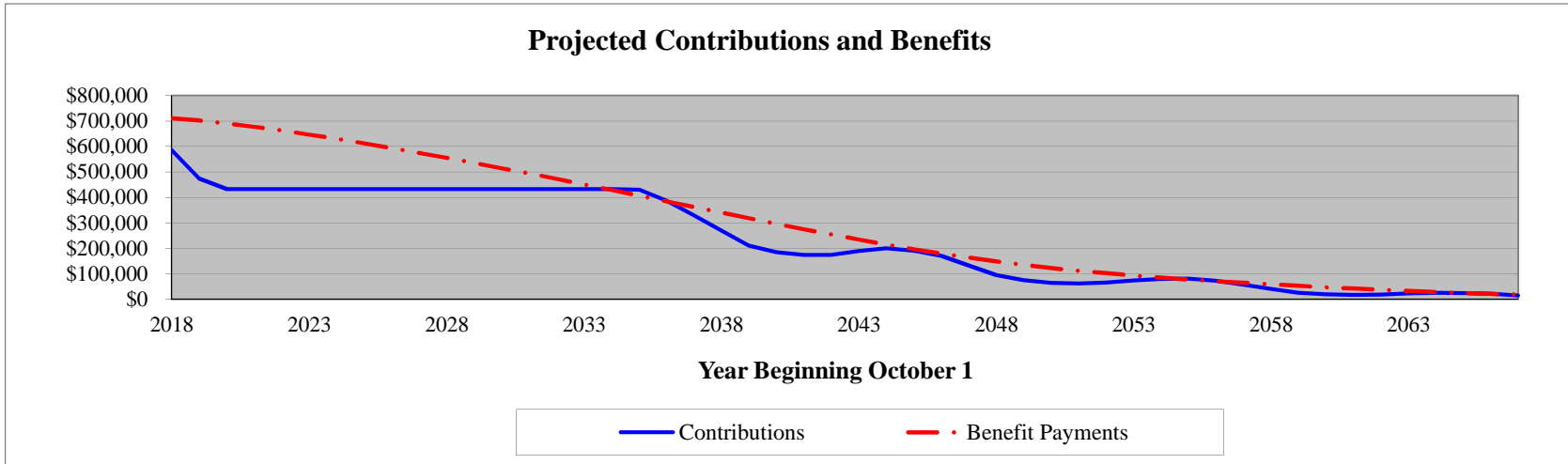
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$153,395,477	\$1,875,946	0.00282	\$584,995	\$711,503	\$117,890	(\$8,618)	\$1,867,328	2019
2019	153,395,477	1,867,328	0.00282	473,992	702,077	114,080	(114,005)	1,753,323	2020
2020	153,395,477	1,753,323	0.00282	432,575	690,786	105,706	(152,505)	1,600,818	2021
2021	153,395,477	1,600,818	0.00282	432,575	677,812	96,208	(149,029)	1,451,789	2022
2022	153,395,477	1,451,789	0.00282	432,575	663,339	86,985	(143,779)	1,308,010	2023
2023	153,395,477	1,308,010	0.00282	432,575	647,577	78,143	(136,859)	1,171,151	2024
2024	153,395,477	1,171,151	0.00282	432,575	630,734	69,786	(128,373)	1,042,778	2025
2025	153,395,477	1,042,778	0.00282	432,575	612,996	62,009	(118,412)	924,366	2026
2026	153,395,477	924,366	0.00282	432,575	594,523	54,903	(107,045)	817,321	2027
2027	153,395,477	817,321	0.00282	432,575	575,440	48,556	(94,309)	723,012	2028
2032	153,395,477	500,846	0.00282	432,575	473,170	31,256	(9,339)	491,507	2033
2037	153,395,477	638,200	0.00237	330,010	363,176	40,422	7,256	645,456	2038
2042	153,395,477	385,911	0.00166	173,941	254,812	22,497	(58,374)	327,537	2043
2047	153,395,477	330,277	0.00107	132,493	164,021	20,460	(11,068)	319,209	2048
2052	153,395,477	154,480	0.00067	65,580	102,630	8,856	(28,194)	126,287	2053
2057	153,395,477	135,594	0.00042	57,536	65,048	8,573	1,061	136,655	2058
2062	153,395,477	64,693	0.00025	18,755	37,874	3,593	(15,526)	49,167	2063
2067	153,395,477	45,865	0.00012	14,566	18,748	2,847	(1,335)	44,530	2068



Mississippi Municipal Retirement Systems City of Natchez

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Pascagoula**

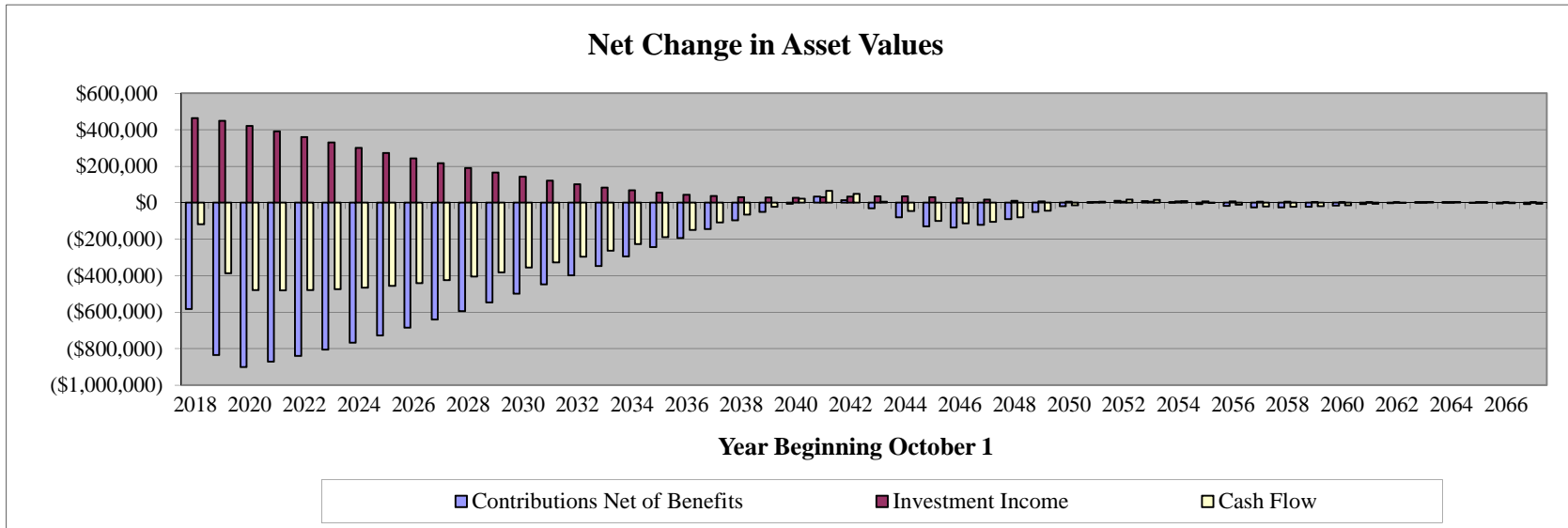
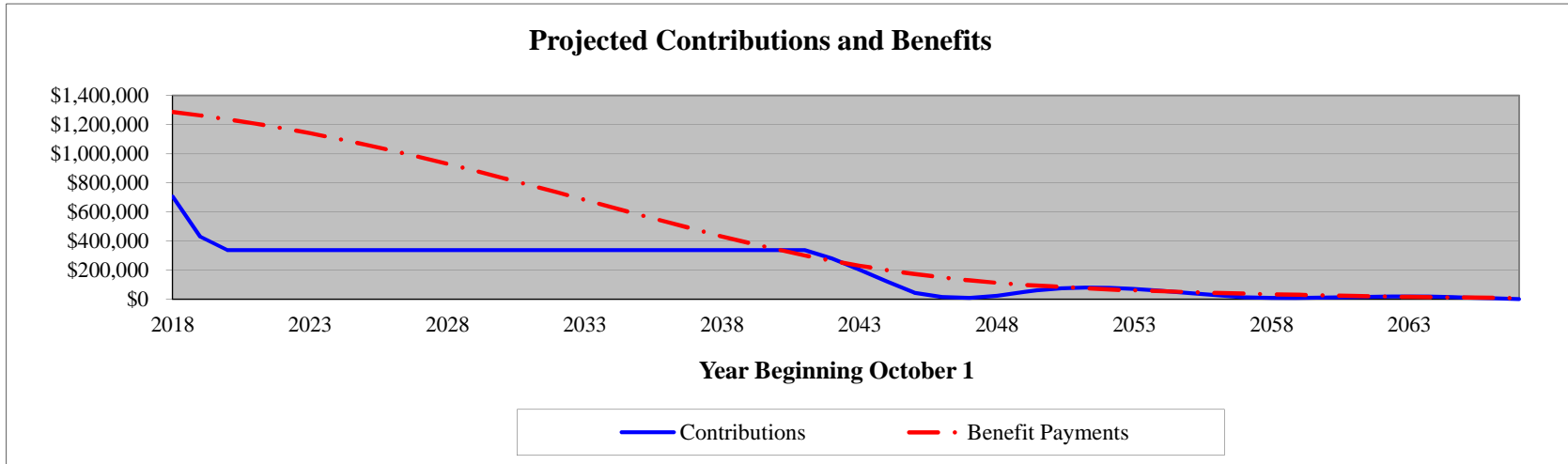
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

<u>Year Beginning July 1</u>	<u>Value of Assessed Property</u>	<u>MVA Balance July 1</u>	<u>Millage Rate</u>	<u>Contributions</u>	<u>Benefit Payments</u>	<u>Investment Income</u>	<u>Cash Flow</u>	<u>MVA Balance June 30</u>	<u>Year Ending June 30</u>
2018	\$235,913,098	\$7,423,652	0.00143	\$706,473	\$1,288,587	\$463,917	(\$118,197)	\$7,305,455	2019
2019	235,913,098	7,305,455	0.00143	429,952	1,264,616	448,155	(386,509)	6,918,946	2020
2020	235,913,098	6,918,946	0.00143	337,356	1,237,799	420,928	(479,515)	6,439,431	2021
2021	235,913,098	6,439,431	0.00143	337,356	1,208,439	390,698	(480,385)	5,959,046	2022
2022	235,913,098	5,959,046	0.00143	337,356	1,176,506	360,495	(478,655)	5,480,391	2023
2023	235,913,098	5,480,391	0.00143	337,356	1,141,905	330,489	(474,060)	5,006,331	2024
2024	235,913,098	5,006,331	0.00143	337,356	1,104,261	300,879	(466,026)	4,540,305	2025
2025	235,913,098	4,540,305	0.00143	337,356	1,064,295	271,866	(455,073)	4,085,232	2026
2026	235,913,098	4,085,232	0.00143	337,356	1,022,136	243,635	(441,145)	3,644,087	2027
2027	235,913,098	3,644,087	0.00143	337,356	977,964	216,374	(424,234)	3,219,853	2028
2032	235,913,098	1,750,388	0.00143	337,356	734,914	101,058	(296,500)	1,453,887	2033
2037	235,913,098	625,839	0.00143	337,356	481,179	36,079	(107,744)	518,095	2038
2042	235,913,098	517,255	0.00113	280,098	265,508	34,088	48,678	565,933	2043
2047	235,913,098	313,214	0.00056	9,844	131,509	16,467	(105,198)	208,016	2048
2052	235,913,098	76,332	0.00030	80,778	69,667	5,317	16,428	92,760	2053
2057	235,913,098	106,811	0.00017	13,802	40,117	6,101	(20,214)	86,597	2058
2062	235,913,098	25,417	0.00009	18,726	20,945	1,581	(638)	24,779	2063
2067	235,913,098	31,057	0.00004	1,442	8,564	1,791	(5,331)	25,726	2068



Mississippi Municipal Retirement Systems City of Pascagoula

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Tupelo**

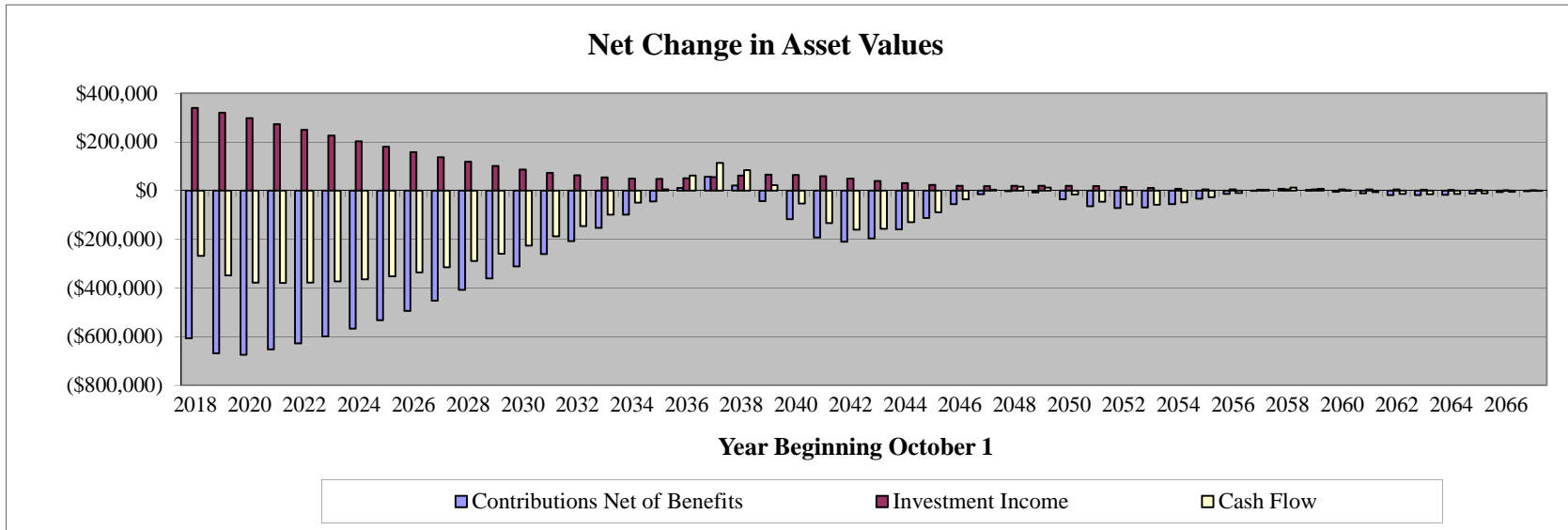
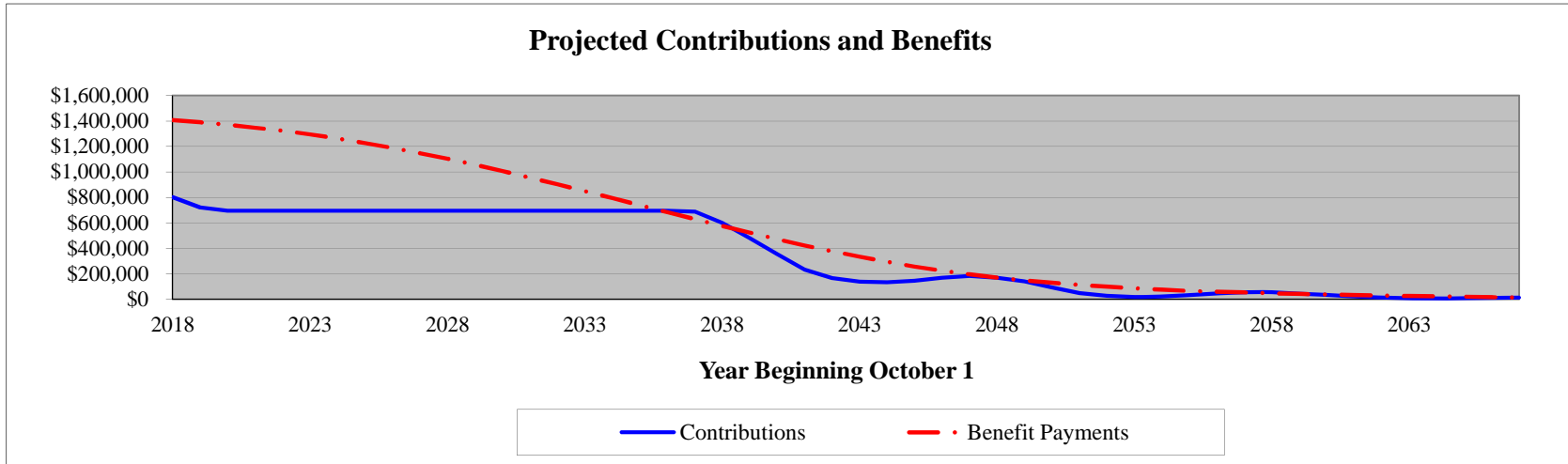
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$497,231,537	\$5,522,071	0.00140	\$800,727	\$1,408,217	\$339,502	(\$267,988)	\$5,254,083	2019
2019	497,231,537	5,254,083	0.00140	722,229	1,391,053	320,121	(348,703)	4,905,381	2020
2020	497,231,537	4,905,381	0.00140	696,124	1,371,497	297,246	(378,127)	4,527,254	2021
2021	497,231,537	4,527,254	0.00140	696,124	1,349,259	273,379	(379,756)	4,147,497	2022
2022	497,231,537	4,147,497	0.00140	696,124	1,324,054	249,501	(378,429)	3,769,069	2023
2023	497,231,537	3,769,069	0.00140	696,124	1,295,647	225,812	(373,711)	3,395,358	2024
2024	497,231,537	3,395,358	0.00140	696,124	1,263,916	202,535	(365,257)	3,030,100	2025
2025	497,231,537	3,030,100	0.00140	696,124	1,228,859	179,915	(352,820)	2,677,280	2026
2026	497,231,537	2,677,280	0.00140	696,124	1,190,517	158,208	(336,185)	2,341,095	2027
2027	497,231,537	2,341,095	0.00140	696,124	1,149,028	137,683	(315,221)	2,025,874	2028
2032	497,231,537	1,062,227	0.00140	696,124	903,976	62,396	(145,456)	916,772	2033
2037	497,231,537	833,851	0.00127	688,015	630,636	56,036	113,415	947,266	2038
2042	497,231,537	865,939	0.00076	167,746	377,982	49,561	(160,675)	705,264	2043
2047	497,231,537	292,879	0.00040	182,154	196,506	18,578	4,226	297,105	2048
2052	497,231,537	263,571	0.00020	26,845	98,930	14,826	(57,259)	206,311	2053
2057	497,231,537	62,957	0.00011	53,230	53,790	4,074	3,514	66,471	2058
2062	497,231,537	80,110	0.00006	12,576	30,748	4,626	(13,546)	66,564	2063
2067	497,231,537	21,387	0.00003	13,315	15,365	1,325	(725)	20,663	2068



Mississippi Municipal Retirement Systems City of Tupelo

50 Year Cash Flow Projection Based on Valuation Assumptions





**Mississippi Municipal Retirement Systems
City of Vicksburg**

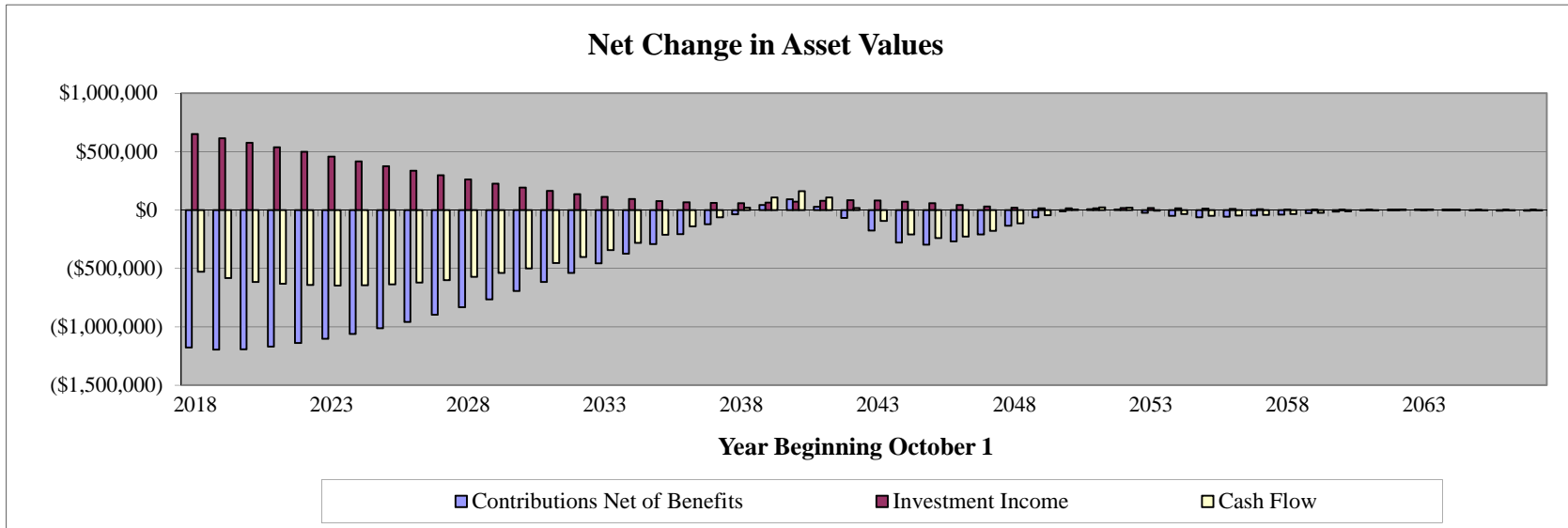
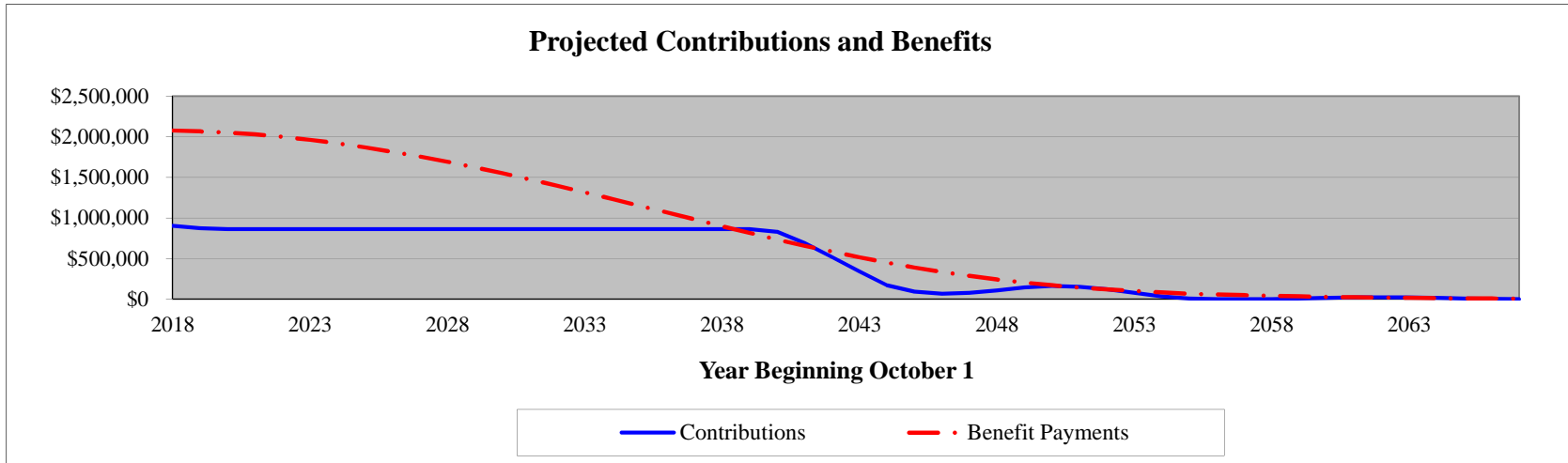
**Cash Flow Projection (Based on Post-2011 Funding Policy)
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 6.5% on Investments**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$327,183,714	\$10,575,300	0.00263	\$901,959	\$2,079,500	\$649,727	(\$527,814)	\$10,047,486	2019
2019	327,183,714	10,047,486	0.00263	873,581	2,069,895	614,818	(581,496)	9,465,991	2020
2020	327,183,714	9,465,991	0.00263	860,493	2,053,508	577,127	(615,888)	8,850,103	2021
2021	327,183,714	8,850,103	0.00263	860,493	2,030,297	537,837	(631,967)	8,218,135	2022
2022	327,183,714	8,218,135	0.00263	860,493	2,000,387	497,715	(642,179)	7,575,956	2023
2023	327,183,714	7,575,956	0.00263	860,493	1,963,945	457,140	(646,312)	6,929,644	2024
2024	327,183,714	6,929,644	0.00263	860,493	1,921,200	416,497	(644,210)	6,285,435	2025
2025	327,183,714	6,285,435	0.00263	860,493	1,872,464	376,182	(635,789)	5,649,645	2026
2026	327,183,714	5,649,645	0.00263	860,493	1,818,106	336,594	(621,019)	5,028,626	2027
2027	327,183,714	5,028,626	0.00263	860,493	1,758,501	298,135	(599,873)	4,428,754	2028
2032	327,183,714	2,365,010	0.00263	860,493	1,398,864	136,504	(401,867)	1,963,143	2033
2037	327,183,714	984,111	0.00263	860,493	982,359	60,069	(61,797)	922,315	2038
2042	327,183,714	1,320,120	0.00179	516,954	584,725	83,640	15,869	1,335,989	2043
2047	327,183,714	566,544	0.00087	76,928	286,004	30,137	(178,939)	387,605	2048
2052	327,183,714	253,819	0.00037	122,534	119,484	16,596	19,646	273,465	2053
2057	327,183,714	133,053	0.00015	0	48,128	7,109	(41,019)	92,035	2058
2062	327,183,714	19,757	0.00006	21,513	19,088	1,362	3,787	23,543	2063
2067	327,183,714	27,155	0.00002	0	5,929	1,575	(4,354)	22,801	2068



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**

Year Beginning July 1	Value of Assessed Property	MVA Balance July 1	Millage Rate	Contributions	Benefit Payments	Investment Income	Cash Flow	MVA Balance June 30	Year Ending June 30
2018	\$49,268,781	\$419,042	0.00357	\$181,822	\$233,143	\$25,596	(\$25,725)	\$393,317	2019
2019	49,268,781	393,317	0.00357	177,121	231,251	23,834	(30,296)	363,021	2020
2020	49,268,781	363,021	0.00357	175,890	228,465	21,915	(30,660)	332,360	2021
2021	49,268,781	332,360	0.00357	175,890	225,257	20,024	(29,343)	303,017	2022
2022	49,268,781	303,017	0.00357	175,890	221,592	18,234	(27,468)	275,549	2023
2023	49,268,781	275,549	0.00357	175,890	217,435	16,582	(24,963)	250,586	2024
2024	49,268,781	250,586	0.00357	175,890	212,767	15,108	(21,769)	228,817	2025
2025	49,268,781	228,817	0.00357	175,890	207,573	13,860	(17,823)	210,994	2026
2026	49,268,781	210,994	0.00357	175,890	201,847	12,884	(13,073)	197,921	2027
2027	49,268,781	197,921	0.00357	175,890	195,591	12,235	(7,466)	190,455	2028
2032	49,268,781	233,903	0.00318	167,472	156,699	15,548	26,321	260,224	2033
2037	49,268,781	212,378	0.00223	57,455	109,757	12,132	(40,170)	172,208	2038
2042	49,268,781	106,115	0.00132	64,737	65,201	6,883	6,419	112,534	2043
2047	49,268,781	81,767	0.00062	6,539	30,737	4,541	(19,657)	62,110	2048
2052	49,268,781	17,600	0.00021	7,147	10,114	1,049	(1,918)	15,682	2053
2057	49,268,781	10,693	0.00004	0	1,953	633	(1,320)	9,373	2058
2062	49,268,781	8,581	0.00000	0	181	552	371	8,952	2063
2067	49,268,781	11,278	0.00000	0	7	733	726	12,004	2068



Mississippi Municipal Retirement Systems City of Yazoo City

50 Year Cash Flow Projection Based on Valuation Assumptions

