

# Mississippi Municipal Retirement Systems



## Actuarial Valuation Report

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Prepared as of June 30, 2024



December 7, 2024

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 is to measure the Systems' funding progress and to certify the employer contribution rates (millage rates) necessary for the period beginning October 1, 2025. The results may not be applicable for other purposes.

The date of the valuation was June 30, 2024.

The valuation was based upon data, furnished by the Executive Director and the PERS staff, concerning retired members along with pertinent financial information. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete, our results may be different and our calculations may need to be revised. 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 certified millage rates on page 5 and the comments on page 7.** The calculations of these millage rates are based on the funding policy which generates an ultimate asset reserve level equal to projected benefit payments.

Since the previous valuation, there have been no changes to assumptions but there was a change 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, 2023.

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 employer contribution levels.



In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

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.

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 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 system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the System.

Respectfully submitted,

Edward J. Koebel, EA, FCA, MAAA  
Chief Executive Officer

Ben Mobley, ASA, FCA, MAAA  
Consulting Actuary

# TABLE OF CONTENTS



Section	
I.	Summary of Principal Results..... 1
II.	Membership Data.....4
III.	Computed Employer Contribution Rate ..... 5
IV.	Comments on Valuation..... 7
V.	Supplemental Disclosure Information ..... 8
VI.	Risk Assessment ..... 16
Schedule	
A.	Development of Actuarial Value of Assets..... 18
B.	Statement of Actuarial Assumptions and Methods ..... 19
C.	Summary of Benefit Provisions Evaluation..... 21
D.	Detailed Tabulations of the Data..... 26
E.	Analysis of Financial Experience ..... 30
F.	Glossary ..... 32
G.	The Nature of Actuarial Projections ..... 33
H.	Cash Flow Projections Based on Funding Policy ..... 34



## SECTION I – SUMMARY OF PRINCIPAL RESULTS



1. This report, prepared as of June 30, 2024, presents the results of the annual actuarial valuation of the 17 Systems. For convenience of reference, the principal aggregate 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, 2024. Please note that the Plan has only retired members remaining.

VALUATION DATE	June 30, 2024	June 30, 2023
<b>Retirees</b>		
Number	1,337	1,391
Annual allowances	\$ 28,680,604	\$ 29,355,805
Accrued Liability	\$ 252,227,061	\$ 264,337,047
<b>Assets</b>		
Market related actuarial value	\$ 123,152,648	\$ 129,391,882
Market value	\$ 121,808,924	\$ 124,878,975
Unfunded Accrued Liability	\$ 129,074,413	\$ 134,945,165
Aggregate Funded Ratio	48.83%	48.95%

2. Rates of contribution payable by employers are given in Section III and comments on the valuation results are given in Section IV.





3. The current funding policy was adopted by the Board in February 2011. In this funding policy, an employer contribution rate, expressed as a millage rate tax applied to assessed property values, is established for each municipality 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 5.50% assumption on investment earnings and an assumption that assessed property values will remain level over time. The 5.50% assumption is 1.50% less than the assumption used by the Public Employees Retirement System of Mississippi (PERS). As MRS is closed to new members, we are assuming a more conservative assumption even though assets are commingled with PERS' assets. Schedule H of this report shows the projected cash flow of each municipality, including the certified millage rates, based on the funding policy.
4. Schedule A of this report presents the development of the actuarial value of assets. The estimated investment return for the plan year ending June 30, 2024 on a market value of assets basis was 9.96% and on an actuarial value of assets basis was 6.99%. These can be compared to the assumed rate of return for the same period of 7.00%. The market value of assets basis return may be slightly different than what PERS reports as this estimated return is assuming cash flow as of the middle of the year.
5. Schedule B details the actuarial assumptions and methods employed. Since the previous valuation, there have been no assumption changes.
6. Schedule C details the summary of benefit and contribution provisions of the Plan. Since the previous valuation, the following change was 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, 2023.
7. The table on the following page provides a ten-year history of some pertinent figures.



# SECTION I – SUMMARY OF PRINCIPAL RESULTS



## Mississippi Municipal Retirement Systems Comparative Schedule

Valuation Date June 30	Active Members				Retired Lives			Valuation Results (\$ thousands)		
	Number	Payroll (\$ in thousands)	Average Salary	% increase from previous year	Number	Annual Benefits (\$ in thousands)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	Unfunded Accrued Liability
2015	11	\$579	\$52,661	1.4%	1,849	\$34,478.4	5,954.8%	\$341,525	\$162,616	\$178,909
2016	8	419	52,375	(0.5)	1,798	34,088.4	8,135.7	330,663	159,160	171,503
2017	6	321	53,541	2.2	1,754	33,751.5	10,514.5	321,747	157,674	164,073
2018	4	200	49,936	(6.7)	1,694	32,997.7	16,498.9	307,456	154,749	152,707
2019	2	95	47,436	(5.0)	1,634	32,423.3	34,129.8	296,006	147,671	148,335
2020	0	0	0	N/A	1,585	31,819.4	N/A	286,436	140,731	145,705
2021	0	0	0	N/A	1,510	30,845.5	N/A	274,426	140,258	134,168
2022	0	0	0	N/A	1,444	29,977.6	N/A	265,490	136,246	129,244
2023	0	0	0	N/A	1,391	29,355.8	N/A	264,337	129,392	134,945
2024	0	0	0	N/A	1,337	28,680.6	N/A	252,227	123,153	129,074



## 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. There are no more remaining active members in the closed System. However, there is still a total of 1,337 retirees, disability retirees and survivors collecting benefits from the System as of the valuation date. The following table summarizes the retirement membership of the system as of June 30, 2024 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

### Retired Lives

Employers	Retirement	Disability	Survivor	Total	Annual Benefit
Biloxi	31	4	32	67	\$1,919,320
Clarksdale	22	1	19	42	545,924
Clinton	26	0	5	31	907,260
Columbus	31	2	28	61	1,017,500
Greenville	28	0	27	55	787,137
Greenwood	20	0	18	38	565,827
Gulfport	36	5	27	68	1,631,258
Hattiesburg	81	4	42	127	3,149,173
Jackson	231	3	211	445	9,865,804
Laurel	32	1	26	59	798,837
McComb	8	0	6	14	220,762
Meridian	71	1	47	119	2,028,970
Natchez	19	2	12	33	544,354
Pascagoula	26	2	20	48	1,085,849
Tupelo	39	0	28	67	1,449,888
Vicksburg	21	2	32	55	2,015,834
Yazoo City	6	0	2	8	146,907
<b>Total in MRS</b>	<b>728</b>	<b>27</b>	<b>582</b>	<b>1,337</b>	<b>\$28,680,604</b>



## SECTION III – COMPUTED EMPLOYER CONTRIBUTION RATE



### Mississippi Municipal Retirement Systems Computed Employer Contribution Rates<sup>1</sup> As of June 30, 2024 for the 2026 Fiscal Year End

Municipality	Certified Rate for Fiscal Year Ending 9/30/2025	Current Millage Rate for Fiscal Year Ending 9/30/2025	Calculated Rate for Fiscal Year Ending 9/30/2026	Certified Rate <sup>2</sup> for Fiscal Year Ending 9/30/2026
Biloxi	1.65	1.65	1.56	1.56
Clarksdale	4.72	4.72	4.93	4.93
Clinton	0.81	0.81	0.76	0.76
Columbus	3.69	3.70	3.32	3.32
Greenville	2.24	2.24	2.01	2.01
Greenwood	2.33	2.76	2.28	2.28
Gulfport	0.81	0.91	0.76	0.76
Hattiesburg	2.63	2.63	2.19	2.19
Jackson	3.29	3.29	3.07	3.07
Laurel	1.29	2.60	0.74	0.74
McComb	1.67	1.67	1.28	1.28
Meridian	2.20	2.20	2.01	2.01
Natchez	1.25	1.25	1.17	1.17
Pascagoula	1.22	1.22	0.91	0.91
Tupelo	1.39	1.61	1.27	1.27
Vicksburg	2.73	2.73	1.70	1.70
Yazoo City	2.33	3.03	2.38	2.38

<sup>1</sup> Millage rates applied to assessed property

<sup>2</sup> Calculated using cash flow projections and 5.50% investment return assumption (see Schedule H)

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



## SECTION III – COMPUTED EMPLOYER CONTRIBUTION RATE



Since 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	2019	2020	2021	2022	2023	Average % Increase
Biloxi	\$585,246,074	\$593,305,051	\$639,344,542	\$662,733,865	\$673,514,757	3.6%
Clarksdale	83,760,178	82,849,209	84,031,457	83,042,644	84,397,955	0.2
Clinton	216,824,192	215,400,746	219,766,379	238,190,869	238,704,997	2.4
Columbus	207,384,299	207,520,472	212,207,682	219,835,360	219,188,566	1.4
Greenville	201,216,099	205,375,459	203,364,186	207,650,264	223,866,331	2.7
Greenwood	115,862,323	106,864,240	108,802,717	104,333,810	106,334,642	(2.1)
Gulfport	805,811,344	816,814,675	842,676,090	856,464,936	896,764,815	2.7
Hattiesburg	473,044,936	482,280,326	493,705,826	505,342,123	543,307,810	3.5
Jackson	1,252,499,510	1,251,727,960	1,240,883,060	1,240,485,705	1,253,350,551	0.0
Laurel	188,151,450	197,898,826	209,600,233	213,686,120	226,039,433	4.7
McComb	106,190,926	102,885,698	104,961,127	105,338,858	110,059,087	0.9
Meridian	355,154,627	365,967,586	356,225,680	366,810,051	374,469,534	1.3
Natchez	124,775,441	133,225,319	199,737,420	278,349,768	258,346,030	20.0
Pascagoula	228,725,988	227,131,210	244,627,789	256,612,126	309,592,933	7.9
Tupelo	520,896,796	545,794,918	557,017,501	577,164,739	607,092,925	3.9
Vicksburg	288,172,230	308,408,615	310,753,836	351,588,059	533,298,230	16.6
Yazoo City	54,792,825	55,250,160	54,418,371	55,418,778	55,937,302	0.5





1. Based on the Board's 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 5, the current millage rate for the fiscal year ending September 30, 2025 for one of the municipalities is less than the certified rate for the fiscal year ending September 30, 2026 under the funding policy. **Therefore, Clarksdale needs to increase their millage rate to the certified millage rate for the fiscal year ending September 30, 2026.**
2. As shown in the analysis of experience on pages 31 and 32, the System had an actuarial gain for the year. The gain was primarily due to more retiree deaths than expected.
3. From 2022 to 2023, the value of assessed property increased for fifteen and decreased for two 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 V – 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, 2024

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	1,337
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	0
Inactive Participants	0
Active Participants	<u>0</u>
Total	1,337





2. The actuarial accrued liability is as follows:

**ACTUARIAL ACCRUED LIABILITY**

Municipality	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio
Biloxi	\$19,429,989	\$7,869,787	\$11,560,202	40.50%
Clarksdale	4,527,413	797,808	3,729,605	17.62%
Clinton	10,114,494	8,687,059	1,427,435	85.89%
Columbus	8,288,511	1,493,976	6,794,535	18.02%
Greenville	6,436,435	1,962,176	4,474,259	30.49%
Greenwood	4,651,497	2,155,229	2,496,268	46.33%
Gulfport	15,998,336	8,266,052	7,732,284	51.67%
Hattiesburg	31,192,620	17,785,618	13,407,002	57.02%
Jackson	78,994,527	38,998,519	39,996,008	49.37%
Laurel	7,020,628	4,857,055	2,163,573	69.18%
McComb	2,042,656	558,735	1,483,921	27.35%
Meridian	19,298,693	10,887,238	8,411,455	56.41%
Natchez	4,788,468	1,469,975	3,318,493	30.70%
Pascagoula	9,090,976	6,193,111	2,897,865	68.12%
Tupelo	12,025,942	4,005,144	8,020,798	33.30%
Vicksburg	16,904,432	6,937,768	9,966,664	41.04%
Yazoo City	1,421,444	227,397	1,194,047	16.00%
<b>Totals</b>	<b>\$252,227,061</b>	<b>\$123,152,648</b>	<b>\$129,074,413</b>	<b>48.83%</b>

During the year ended June 30, 2024, the Systems experienced a net decrease of \$12,109,986 in the actuarial accrued liability.



## SECTION V – SUPPLEMENTAL DISCLOSURE INFORMATION



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 aggregate funded ratio has begun to slowly improve in recent years expect it was slightly lower last year due to the change in the investment return assumption.

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

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Aggregate Funded Ratio (1)/(2)	(4) Unfunded AAL (2) – (1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(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
06/30/19	147,671	296,006	49.9	148,335	95	156,142.1
06/30/20	140,731	286,436	49.1	145,705	N/A	N/A
06/30/21	140,258	274,426	51.1	134,168	N/A	N/A
06/30/22	136,246	265,490	51.3	129,244	N/A	N/A
06/30/23	129,392	264,337	49.0	134,945	N/A	N/A
06/30/24	123,153	252,227	49.0	129,074	N/A	N/A

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	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Biloxi	39.55%	40.41%	41.27%	44.17%	44.50%	42.30%	40.53%	41.54%	40.34%	40.50%
Clarksdale	26.51	27.32	26.80	26.10	22.74	20.74	20.67	21.00	19.57	17.62
Clinton	82.74	84.38	87.19	87.20	87.00	87.03	88.91	89.59	87.16	85.89
Columbus	10.54	9.82	9.49	9.76	10.09	11.35	13.52	15.39	16.16	18.02
Greenville	36.64	35.56	35.41	34.58	34.19	32.93	36.11	35.98	32.13	30.49
Greenwood	38.27	39.47	40.56	41.40	41.18	40.60	44.29	45.79	48.47	46.33
Gulfport	47.63	47.01	47.60	48.56	49.64	46.86	43.86	53.33	51.81	51.67
Hattiesburg	58.53	58.29	58.68	59.86	58.67	58.27	60.15	56.92	56.59	57.02
Jackson	51.49	50.95	51.24	52.25	51.17	49.89	52.98	53.98	50.64	49.37
Laurel	36.20	40.17	40.07	43.23	45.54	48.56	58.44	60.68	60.11	69.18
McComb	25.49	25.94	27.40	30.28	31.83	32.85	42.60	36.73	27.18	27.35
Meridian	42.40	48.51	55.76	59.84	62.08	61.95	65.46	58.79	55.51	56.41
Natchez	29.61	30.24	29.45	27.79	30.54	29.98	30.87	29.81	20.85	30.70
Pascagoula	59.64	60.57	62.75	66.07	67.89	68.11	68.31	69.37	68.26	68.12
Tupelo	44.31	43.82	43.26	42.41	39.79	37.49	37.82	36.59	33.88	33.30
Vicksburg	53.82	53.77	53.02	53.64	49.63	50.22	50.84	48.74	43.25	41.04
Yazoo City	20.20	18.42	17.25	19.12	17.49	16.95	10.04	14.13	13.20	16.00



## SECTION V – SUPPLEMENTAL DISCLOSURE INFORMATION



4. In determining the Actuarially Determined Employer Contribution (ADEC) for GASB purposes, the contribution is based on the anticipated employer contributions as calculated using the current funding policy. The ADEC for the plan year ending June 30, 2024 was determined in the 2022 valuation and is the contribution amount for each municipality shown in Schedule H of the 2022 valuation report.

### Contributions Required and Contributions Made

Municipality	Actuarially Determined Employer Contribution	Actual 2023 – 2024 Contribution*	Percentage Contributed
Biloxi	\$1,102,869	\$1,142,721	103.6%
Clarksdale	399,780	379,582	94.9
Clinton	157,682	2,460	1.6
Columbus	1,126,292	1,020,546	90.6
Greenville	433,166	459,831	106.2
Greenwood	306,824	246,328	80.3
Gulfport	777,369	787,405	101.3
Hattiesburg	1,187,363	1,082,123	91.1
Jackson	3,753,671	4,093,817	109.1
Laurel	351,604	550,722	156.6
McComb	149,307	126,036	84.4
Meridian	823,772	939,266	114.0
Natchez	360,027	944,598	262.4
Pascagoula	320,462	361,870	112.9
Tupelo	817,423	956,077	117.0
Vicksburg	815,729	977,584	119.8
Yazoo City	170,330	185,124	108.7
<b>Total</b>	<b>\$ 13,053,670</b>	<b>\$ 14,256,090</b>	<b>109.2%</b>

\* Net of administrative expenses.





**Schedule of Employer Contributions\***

<b>Fiscal Year 10/1-9/30</b>	<b>Valuation date</b>	<b>Actuarially Determined Employer Contribution</b>	<b>Percentage Contributed</b>
2016-17	6/30/2016	\$17,693,519	100.2%
2017-18	6/30/2017	17,393,028	101.2
2018-19	6/30/2018	16,694,899	102.5
2019-20	6/30/2019	16,777,608	99.0
2020-21	6/30/2020	17,118,242	87.1
2021-22	6/30/2020	14,825,865	104.0
2022-23	6/30/2021	12,191,674	115.4
2023-24	6/30/2022	13,053,670	109.2
2024-25	6/30/2023	13,427,492	N/A
2025-26	6/30/2024	12,826,335	N/A

\* Methodology for ADEC determination was changed to match cash flow projections that calculate the certified millage rates beginning with the fiscal year ending in 2022.





**Schedule of Active Member Valuation Data**

Valuation Date	Number of Employers	Active Members			
		Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
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)
6/30/19	17	2	94,871	47,436	(5.0)
6/30/20	17	0	0	0	N/A
6/30/21	17	0	0	0	N/A
6/30/22	17	0	0	0	N/A
6/30/23	17	0	0	0	N/A
6/30/24	17	0	0	0	N/A

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

Item	Fiscal Year Ended September 30									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning of Year	1,890	1,849	1,798	1,754	1,694	1,634	1,585	1,510	1,444	1,391
Added	40	46	34	36	37	34	34	31	30	35
Removed	(81)	(97)	(78)	(96)	(97)	(83)	(109)	(97)	(83)	(89)
End of Year	1,849	1,798	1,754	1,694	1,634	1,585	1,510	1,444	1,391	1,337

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



## SECTION V – SUPPLEMENTAL DISCLOSURE INFORMATION



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

Year Ending	2019	2020	2021	2022	2023	2024
Beginning of Year	\$32,997,690	\$32,423,308	\$31,819,367	\$30,845,547	\$29,977,629	\$29,355,805
Added	736,820	654,407	633,039	613,357	588,260	763,328
Removed	(1,441,224)	(1,386,860)	(1,724,751)	(1,612,065)	(1,433,618)	(1,634,784)
Benefit increase due to annual COLA	130,022	128,512	117,892	130,790	223,534	196,255
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	\$32,423,308	\$31,819,367	\$30,845,547	\$29,977,629	\$29,355,805	\$28,680,604



## SECTION VI – RISK ASSESSMENT

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Measuring pension obligations and actuarially determined contributions requires the use of assumptions regarding future economic and demographic experience. Whenever assumptions are made about future events, there is risk that actual experience will differ from expected. Actuarial valuations include the risk that actual future measurements will deviate from expected future measurements due to actual experience that is different than the actuarial assumptions. The primary areas of risk in this actuarial valuation are.

- Investment Risk – the potential that actual investment returns will be different than expected.
- Longevity Risks – the potential that mortality will be different than expected.
- Contribution Risk – The potential that actual contributions are different than the actuarially determined contribution rates based on different assessed property rates

The table on the next page shows the sensitivity that the millage rates could have each year based on the risk measures listed above.



## SECTION VI – RISK ASSESSMENT



<b>Municipality</b>	<b>Baseline Millage Rate for Fiscal Year Ending 9/30/2026</b>	<b>Investment Risk (4.5% Returns) Millage Rate for Fiscal Year Ending 9/30/2026</b>	<b>Longevity Risk (10% Reduction in Mortality Rates) Millage Rate for Fiscal Year Ending 9/30/2026</b>	<b>Contribution Risk (Assessed Property Drops 5%) Millage Rate for Fiscal Year Ending 9/30/2026</b>
Biloxi	1.56	1.63	1.62	1.64
Clarksdale	4.93	5.02	5.01	5.19
Clinton	0.76	0.97	0.82	0.80
Columbus	3.32	3.37	3.38	3.48
Greenville	2.01	2.07	2.08	2.12
Greenwood	2.28	2.40	2.40	2.40
Gulfport	0.76	0.81	0.79	0.80
Hattiesburg	2.19	2.37	2.30	2.31
Jackson	3.07	3.24	3.26	3.24
Laurel	0.74	0.86	0.82	0.78
McComb	1.28	1.31	1.31	1.34
Meridian	2.01	2.16	2.16	2.11
Natchez	1.17	1.20	1.21	1.23
Pascagoula	0.91	1.01	1.00	0.96
Tupelo	1.27	1.31	1.31	1.33
Vicksburg	1.70	1.77	1.80	1.79
Yazoo City	2.38	2.41	2.41	2.51

Under the revised Actuarial Standards of Practice (ASOP) No. 4 effective for valuations after February 15, 2023, we include a low-default-risk obligation measure of the System’s liability in our funding valuation report. This is an informational disclosure as described below and would not be appropriate for assessing the funding progress or health of the plan. This measure uses the unit credit cost method and reflects all the assumptions and provisions of the funding valuation except that the discount rate is derived from considering low-default-risk fixed income securities.

We considered the FTSE Pension Discount Curve based on market bond rates published by the Society of Actuaries as of June 30, 2024 and with the 30-year spot rate used for all durations beyond 30. Using these assumptions, we calculate a liability of \$286.8 million. This amount approximates the termination liability if the plan (or all covered employment) ended on the valuation date and all of the accrued benefits had to be paid with cash-flow matched bonds. This assurance of funded status and benefit security is typically more relevant for corporate plans than for governmental plans since governments rarely have the need or option to completely terminate a plan.



# SCHEDULE A – DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS



	6/30/2023	6/30/2024	6/30/2025	6/30/2026	6/30/2027	6/30/2028
A. Actuarial Value Beginning of Year	\$136,245,810	\$129,391,882				
B. Market Value End of Year	124,878,975	121,808,924				
C. Market Value Beginning of Year	131,677,650	124,878,975				
D. Cash Flow						
D1. Contributions	14,356,849	14,547,031				
D2. Other Revenue	0	0				
D3. Benefit Payments	(29,686,570)	(29,024,807)				
D4. Administrative Expenses	(287,137)	(290,941)				
D5. Net	(15,616,858)	(14,768,717)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	8,818,183	11,698,666				
E2. Assumed Rate	7.55%	7.00%				
E3. Amount for Immediate Recognition	9,352,126	8,224,623				
E4. Amount for Phased-In Recognition	(533,943)	3,474,043				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	(106,789)	694,809	0	0	0	0
F2. First Prior Year	(4,858,005)	(106,789)	694,809	0	0	0
F3. Second Prior Year	5,913,409	(4,858,005)	(106,789)	694,809	0	0
F4. Third Prior Year	(1,338,564)	5,913,409	(4,858,005)	(106,789)	694,809	0
F5. Fourth Prior Year	<u>(199,247)</u>	<u>(1,338,564)</u>	<u>5,913,409</u>	<u>(4,858,005)</u>	<u>(106,789)</u>	<u>694,809</u>
F6. Total Recognized Investment Gain	(589,196)	304,860	1,643,424	(4,269,985)	588,020	694,809
G. Adjustment:	0	0				
H. Actuarial Value End of Year:						
A.+D5.+E3.+F6.+G.	\$129,391,882	\$123,152,648				
I. Difference Between Market & Actuarial Values	(4,512,907)	(1,343,724)	(2,987,148)	1,282,837	694,817	8

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



The assumptions and methods used in the valuation are based on the results of the experience investigation for the four-year period ending June 30, 2022, dated April 21, 2023, and adopted by the Board on August 22, 2023. The combined effect of the assumptions is expected to have no significant bias.

INTEREST RATE: 7.00% per annum, compounded annually (net after investment expenses) for liabilities.

5.50% per annum, compounded annually (net after investment expenses) for employer contribution rate determination.

PRICE INFLATION: 2.40% per annum, compounded annually.

ASSESSED PROPERTY: For the purposes of developing employer contribution rates, assessed property values are assumed to have 0% future annual growth.

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 B – STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS



## DEATH AFTER RETIREMENT:

### Service Retirees\*

<u>Membership Table</u>	<u>Adjustment to Rates</u>	<u>Projection Scale</u>
PubS.H-2010(B) Retiree	Male: 95% up to age 60, 110% for ages 61 to 75, and 101% for ages above 77 Female: 84% up to age 72, 100% for ages above 76	MP-2020

### Contingent Annuitants\*

<u>Membership Table</u>	<u>Adjustment to Rates</u>	<u>Projection Scale</u>
PubS.H-2010(B) Contingent Annuitant	Male: 97% for all ages Female: 110% for all ages	MP-2020

### Disabled Retirees\*

<u>Membership Table</u>	<u>Adjustment to Rates</u>	<u>Projection Scale</u>
PubG.H-2010 Disabled	Male: 134% for all ages Female: 121% for all ages	MP-2020

\* Please note that none of the recommended tables have any setbacks or setforwards.

Representative values of the assumed rates of death after retirement are as follows:

AGE	Rates of Death After Retirement*					
	Service Retirees		Contingent Annuitants		Disabled Retirees	
	Male	Female	Male	Female	Male	Female
45	0.2983%	0.0983%	0.7692%	0.5104%	1.4660%	1.1919%
50	0.4190%	0.1638%	0.8837%	0.6556%	2.2780%	1.7956%
55	0.5197%	0.2738%	1.0156%	0.7843%	2.9855%	2.1078%
60	0.7771%	0.4578%	1.2397%	1.0131%	3.6475%	2.4684%
65	1.3211%	0.7652%	1.6286%	1.4157%	4.5426%	2.9730%
70	2.1758%	1.2785%	2.4153%	1.9998%	5.8129%	3.8127%
75	3.8566%	2.3659%	3.7209%	3.0052%	7.6661%	5.2683%
80	6.2640%	4.2530%	5.7734%	4.7289%	10.8125%	7.7779%
85	11.0605%	7.3240%	9.2228%	7.8562%	15.7785%	11.9947%
90	17.6902%	12.6470%	14.6577%	13.4530%	22.7224%	17.5353%

\*Adjusted Base Rates





The following summary presents the main provisions of the Systems in effect June 30, 2024, 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 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 32%).

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. 2% per year for all retirees beginning in fiscal year 2022.





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. 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, 2018. 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, 2019. Furthermore, a 1% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2020. Furthermore, a 1% ad-hoc benefit increase was granted to members who were retired for at least one





full fiscal year as of September 30, 2021. 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, 2022. 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, 2023.

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, Meridian, Pascagoula, Vicksburg, and Yazoo City.





**RECONCILIATION OF DATA RECEIVED FROM PERS**

Reconciliation of Data received from PERS	Pensioner File			Total
	Retirees	Disableds	Survivors	
From PERS	775	33	613	1,421
Refunded				
Deceased	(49)	(6)	(32)	(87)
Retired				
Added	2		1	3
For Valuation	728	27	582	1,337

**STATUS RECONCILIATION FROM 2023 TO 2024**

	Retirees	Disability	Survivor	Total
As of June 30, 2023	779	34	578	1,391
Death with Survivors	(31)	(2)	35	2
Deaths with no Survivors	(20)	(5)	(31)	(56)
Benefits Expired				
Data Corrections				
As of June 30, 2024	728	27	582	1,337





**Retirants & Beneficiaries as of June 30, 2024  
Tabulated by Year of Retirement**

Year of Retirement	No.	Annual Benefits excluding COLA	COLA	Total Annual Benefits	Average Monthly Benefit
2020	2	\$ 72,566	2,461	\$ 75,027	\$ 3,126
2019	3	97,605	7,387	104,992	2,916
2018	1	43,396	0	43,396	3,616
2017	2	80,083	5,842	85,925	3,580
2016	4	153,667	15,002	168,669	3,514
2015	1	25,335	0	25,335	2,111
2014	3	111,086	15,013	126,099	3,503
2013	8	349,766	61,218	410,984	4,281
2012	4	164,423	44,345	208,768	4,349
2011	0	0	0	0	0
2010	5	156,183	44,160	200,343	3,339
2009	3	79,418	6,048	85,466	2,374
2008	5	135,030	19,835	154,865	2,581
2007	7	224,464	71,309	295,773	3,521
2006	14	373,810	74,905	448,715	2,671
2005	26	680,230	132,619	812,849	2,605
2004	19	445,272	99,760	545,032	2,390
2003	29	761,136	199,042	960,178	2,759
2002	40	1,117,226	297,135	1,414,361	2,947
2001	22	635,046	147,735	782,781	2,965
2000	31	792,897	217,708	1,010,605	2,717
1999	33	804,157	204,150	1,008,307	2,546
1998	36	861,114	191,880	1,052,994	2,437
1997	47	1,037,194	198,333	1,235,527	2,191
1996	47	907,785	160,307	1,068,092	1,894
1995	92	1,608,080	261,238	1,869,318	1,693
1994	117	2,037,541	422,490	2,460,031	1,752
1993	86	1,465,701	316,804	1,782,505	1,727
1992	71	1,214,676	248,370	1,463,046	1,717
1991	65	1,119,259	192,504	1,311,763	1,682
1990	51	777,825	115,934	893,759	1,460
1989	39	551,124	130,292	681,416	1,456
1988 & Prior	424	4,656,096	1,237,587	5,893,683	1,158
<b>Totals</b>	<b>1,337</b>	<b>\$ 23,539,191</b>	<b>\$ 5,141,413</b>	<b>\$ 28,680,604</b>	<b>\$ 1,788</b>





**Schedule of Retired Members by Type of Benefit  
Benefits Payable June 30, 2024**

<b>Amount of Monthly Benefit</b>	<b>Number of Rets.</b>	<b>Ret. Type 1*</b>	<b>Ret. Type 2*</b>	<b>Ret. Type 3*</b>
\$1 - \$500	22	2	1	19
501 - 1,000	225	65	11	149
1,001 - 1,500	339	170	13	156
1,501 - 2,000	305	190	0	115
2,001 - 2,500	187	125	0	62
2,501 - 3,000	144	91	2	51
3,001 - 3,500	57	40	0	17
Over 3,500	58	45	0	13
<b>Totals</b>	<b>1,337</b>	<b>728</b>	<b>27</b>	<b>582</b>

\*Type of Retirement

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



# SCHEDULE D – DETAILED TABULATIONS OF DATA



## Retirant and Beneficiary Information June 30, 2024 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 45								
45 – 49					1	\$22,130	1	\$22,130
50 – 54					1	35,633	1	35,633
55 – 59					3	46,709	3	46,709
60 – 64	26	\$768,696			12	261,123	38	1,029,819
65 – 69	40	1,262,644			33	706,025	73	1,968,669
70 – 74	199	5,223,834	7	\$110,682	76	1,582,133	282	6,916,649
75 – 79	213	5,002,848	7	87,762	140	2,700,030	360	7,790,640
80 – 84	121	2,776,651	7	70,281	147	2,719,626	275	5,566,558
85 – 89	87	1,664,877	5	83,180	99	1,710,886	191	3,458,943
90 – 94	35	694,878	1	9,001	57	928,437	93	1,632,316
95	3	54,461			4	49,282	7	103,743
96	1	11,812			4	35,215	5	47,027
97	2	25,403			1	5,064	3	30,467
98					1	7,794	1	7,794
99	1	2,826					1	2,826
100 & Over					3	20,681	3	20,681
<b>Totals</b>	<b>728</b>	<b>\$17,488,930</b>	<b>27</b>	<b>\$360,906</b>	<b>582</b>	<b>\$10,830,768</b>	<b>1,337</b>	<b>\$28,680,604</b>



## 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, 2024 is shown below.

		\$ Thousands
(1)	UAAL* as of beginning of year	\$ 134,945.2
(2)	Total normal cost from last valuation	0.0
(3)	Total contributions**	14,256.1
(4)	Interest accrual: $\{[(1) + (2)] \times .07\} - [(3) \times .03441]$	<u>8,955.6</u>
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 129,644.7
(6)	Change due to plan amendments	235.8
(7)	Change due to new actuarial assumptions or methods	<u>0.0</u>
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 129,880.5
(9)	Actual UAAL as of end of year	\$ 129,074.4
(10)	Gain/(loss): (8) – (9)	\$ 806.1

\*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 6/30/2024	\$ Gain (or Loss) For Year Ending 6/30/2023
<b>Investment Income.</b> If there is greater investment income than assumed, there is a gain. If less income, a loss.	\$ (19.8)	\$ (944.8)
<b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	1,106.0	942.6
<b>Other.</b> Miscellaneous gains and losses resulting from data adjustments, software programming, COLAs, etc.	<u>(280.1)</u>	<u>(199.3)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	<b>\$ 806.1</b>	<b>\$ (201.5)</b>
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, or method changes.	<u>(235.8)</u>	<u>(10,332.6)</u>
<b>Composite Gain (or Loss) During Year</b>	<b>\$ 570.3</b>	<b>\$ (10,534.1)</b>





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.





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.







**Mississippi Municipal Retirement Systems  
City of Biloxi**

**Cash Flow Projection**

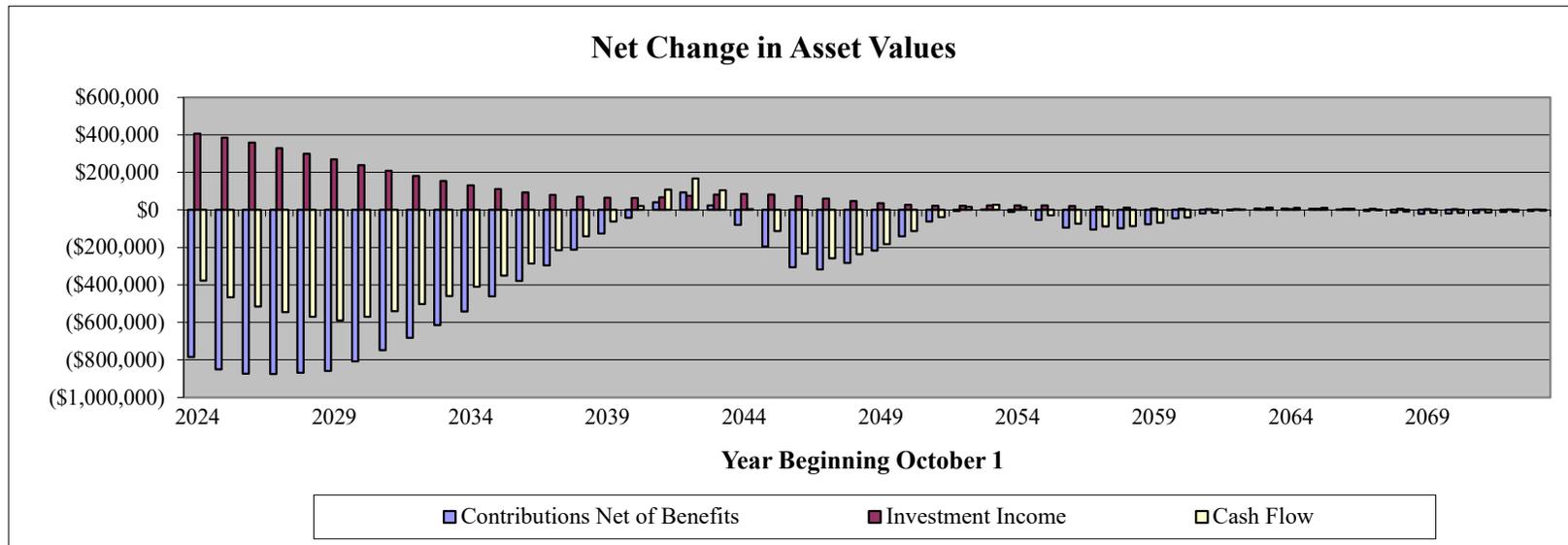
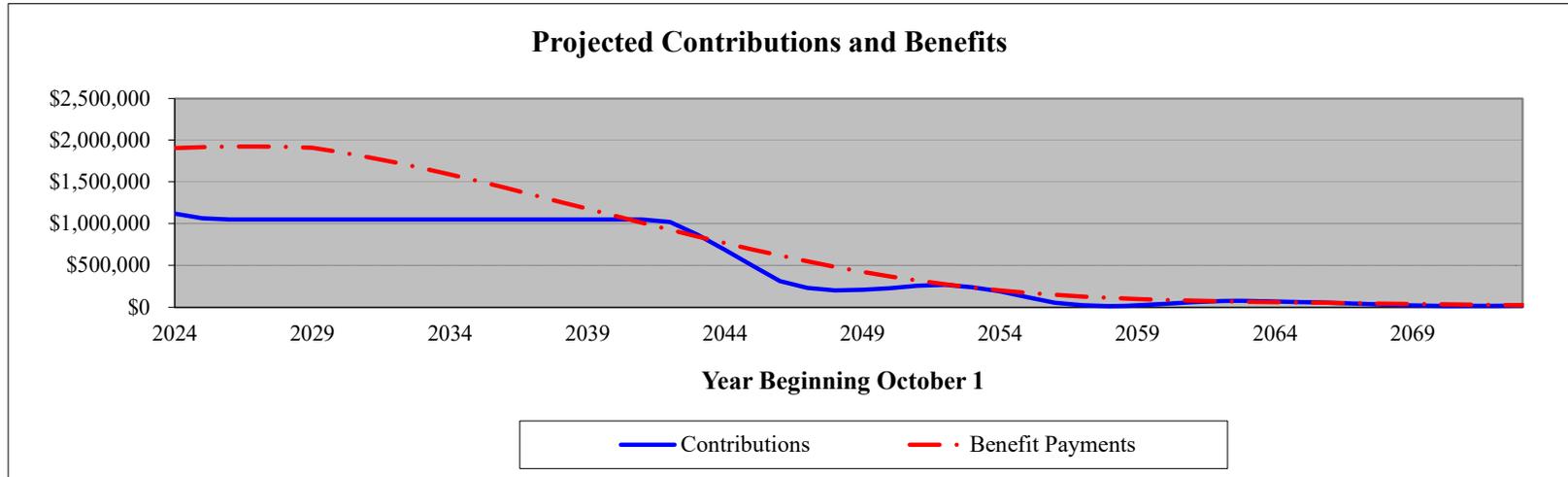
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$673,514,757	\$7,783,920	0.00156	\$1,120,107	\$1,904,579	\$406,831	(\$377,641)	\$7,406,279	2025
2025	673,514,757	7,406,279	0.00156	1,065,837	1,916,956	384,253	(466,866)	6,939,413	2026
2026	673,514,757	6,939,413	0.00156	1,050,683	1,924,649	357,955	(516,011)	6,423,402	2027
2027	673,514,757	6,423,402	0.00156	1,050,683	1,925,167	329,561	(544,923)	5,878,479	2028
2028	673,514,757	5,878,479	0.00156	1,050,683	1,920,159	299,726	(569,750)	5,308,729	2029
2029	673,514,757	5,308,729	0.00156	1,050,683	1,909,214	268,686	(589,845)	4,718,883	2030
2030	673,514,757	4,718,883	0.00156	1,050,683	1,857,706	237,642	(569,381)	4,149,502	2031
2031	673,514,757	4,149,502	0.00156	1,050,683	1,798,404	207,936	(539,785)	3,609,718	2032
2032	673,514,757	3,609,718	0.00156	1,050,683	1,733,723	180,002	(503,038)	3,106,680	2033
2033	673,514,757	3,106,680	0.00156	1,050,683	1,665,057	154,198	(460,176)	2,646,504	2034
2038	673,514,757	1,382,764	0.00156	1,050,683	1,262,352	70,309	(141,360)	1,241,404	2039
2043	673,514,757	1,474,665	0.00126	869,697	846,735	81,730	104,692	1,579,357	2044
2048	673,514,757	978,314	0.00072	201,317	484,268	46,130	(236,821)	741,493	2049
2053	673,514,757	422,548	0.00035	237,891	234,989	23,319	26,221	448,769	2054
2058	673,514,757	270,522	0.00017	12,906	112,005	12,190	(86,909)	183,614	2059
2063	673,514,757	60,795	0.00010	73,605	65,648	3,560	11,517	72,312	2064
2068	673,514,757	98,048	0.00006	29,433	43,247	5,018	(8,796)	89,252	2069
2073	673,514,757	34,107	0.00004	19,800	25,275	1,727	(3,748)	30,360	2074



# 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**

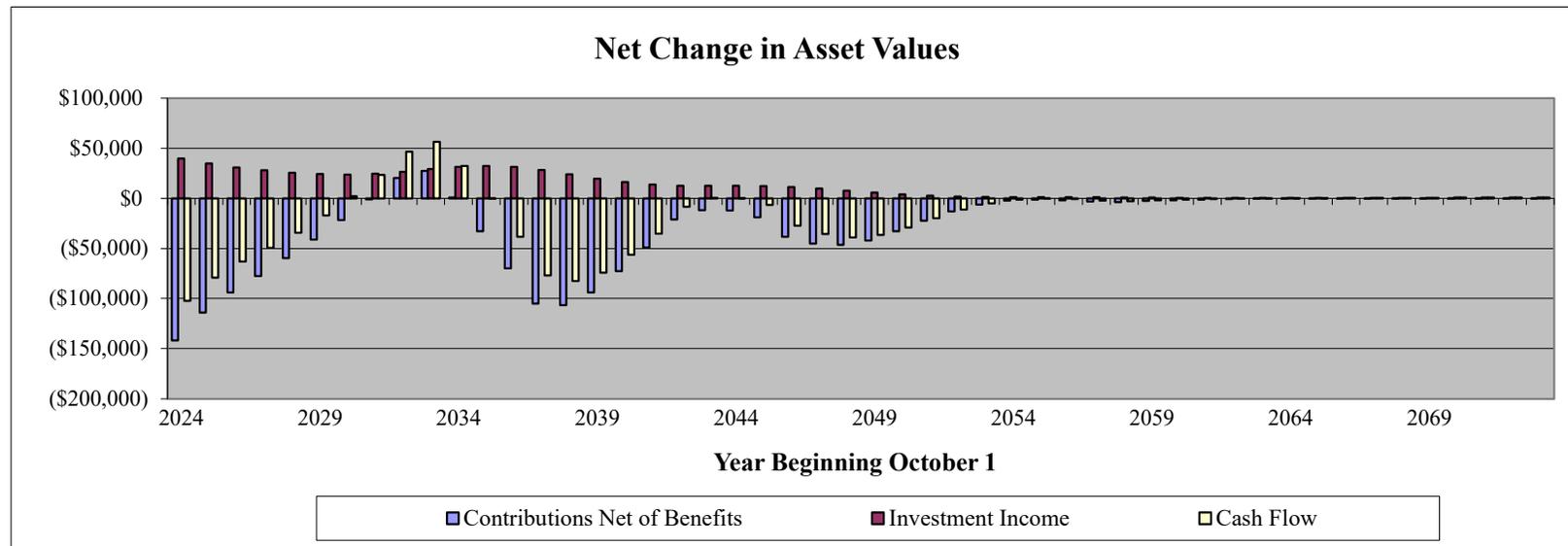
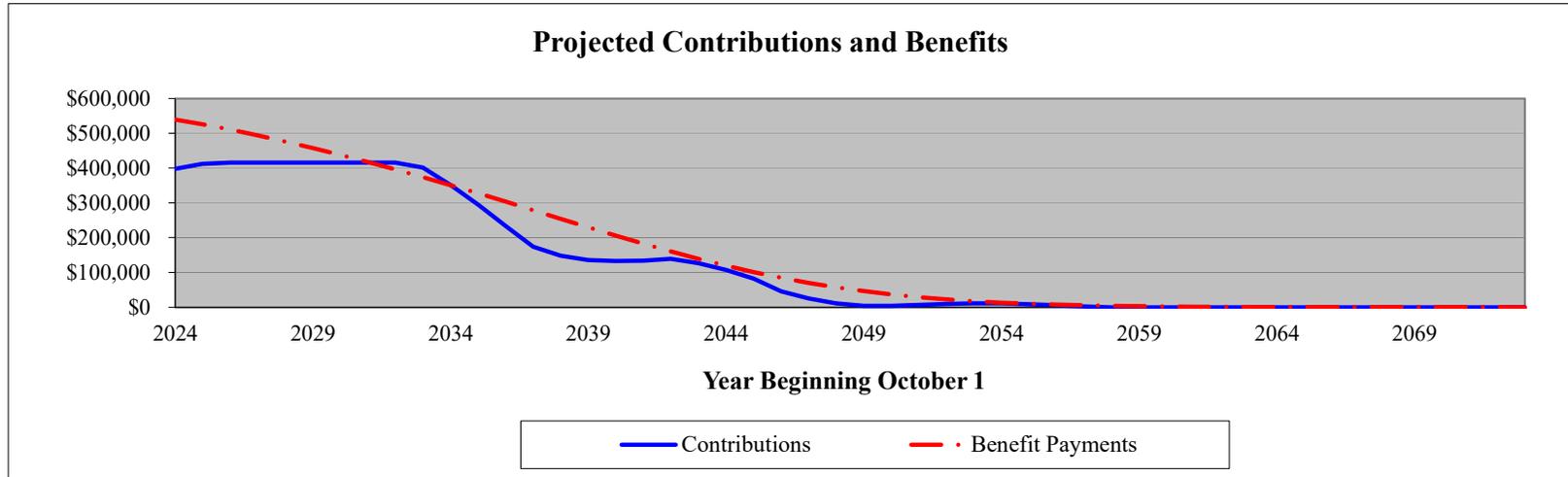
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$84,397,955	\$789,104	0.00493	\$397,797	\$539,725	\$39,550	(\$102,378)	\$686,725	2025
2025	84,397,955	686,725	0.00493	411,651	525,590	34,679	(79,260)	607,465	2026
2026	84,397,955	607,465	0.00493	416,082	510,168	30,858	(63,228)	544,237	2027
2027	84,397,955	544,237	0.00493	416,082	493,587	27,830	(49,675)	494,563	2028
2028	84,397,955	494,563	0.00493	416,082	475,939	25,577	(34,280)	460,282	2029
2029	84,397,955	460,282	0.00493	416,082	457,300	24,197	(17,021)	443,262	2030
2030	84,397,955	443,262	0.00493	416,082	437,718	23,792	2,156	445,417	2031
2031	84,397,955	445,417	0.00493	416,082	417,225	24,467	23,324	468,742	2032
2032	84,397,955	468,742	0.00469	416,082	395,852	26,330	46,561	515,302	2033
2033	84,397,955	515,302	0.00443	400,909	373,652	29,081	56,338	571,641	2034
2038	84,397,955	488,035	0.00301	147,478	254,045	23,951	(82,616)	405,419	2039
2043	84,397,955	230,980	0.00164	126,815	138,813	12,378	380	231,360	2044
2048	84,397,955	162,289	0.00068	10,587	57,155	7,662	(38,906)	123,383	2049
2053	84,397,955	26,650	0.00020	10,841	17,072	1,297	(4,934)	21,716	2054
2058	84,397,955	16,988	0.00004	0	3,753	832	(2,921)	14,066	2059
2063	84,397,955	9,725	0.00001	0	587	519	(68)	9,656	2064
2068	84,397,955	10,981	0.00000	0	50	603	553	11,535	2069
2073	84,397,955	14,228	0.00000	0	2	783	781	15,010	2074



# 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**

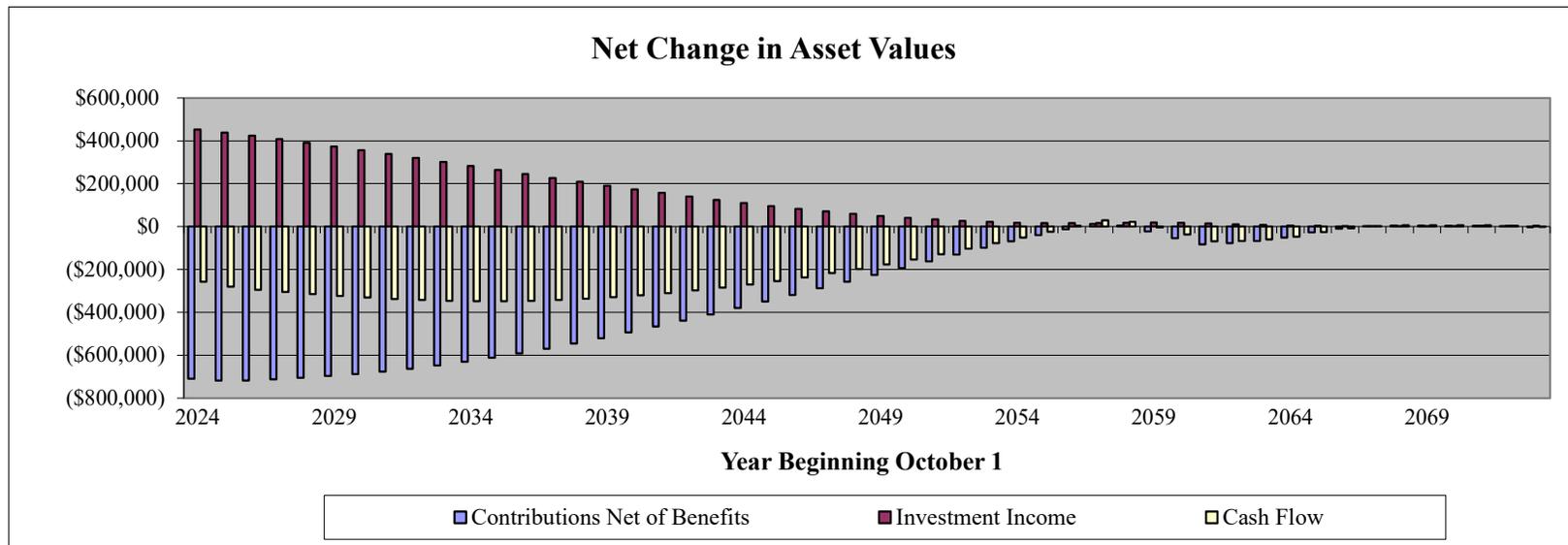
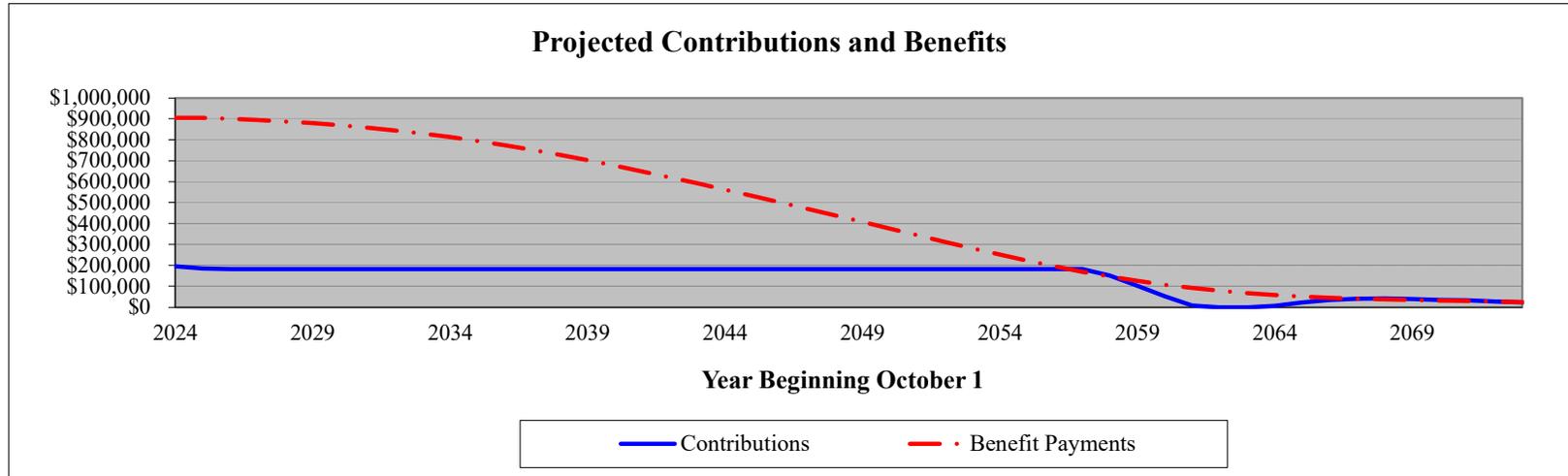
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$238,704,997	\$8,592,275	0.00076	\$195,033	\$905,722	\$453,293	(\$257,396)	\$8,334,879	2025
2025	238,704,997	8,334,879	0.00076	184,400	903,921	438,896	(280,625)	8,054,254	2026
2026	238,704,997	8,054,254	0.00076	181,416	900,064	423,486	(295,162)	7,759,092	2027
2027	238,704,997	7,759,092	0.00076	181,416	894,313	407,408	(305,489)	7,453,603	2028
2028	238,704,997	7,453,603	0.00076	181,416	887,370	390,794	(315,160)	7,138,444	2029
2029	238,704,997	7,138,444	0.00076	181,416	879,086	373,685	(323,985)	6,814,458	2030
2030	238,704,997	6,814,458	0.00076	181,416	869,312	356,131	(331,765)	6,482,693	2031
2031	238,704,997	6,482,693	0.00076	181,416	857,915	338,193	(338,306)	6,144,387	2032
2032	238,704,997	6,144,387	0.00076	181,416	844,779	319,943	(343,420)	5,800,967	2033
2033	238,704,997	5,800,967	0.00076	181,416	829,821	301,461	(346,944)	5,454,023	2034
2038	238,704,997	4,066,578	0.00076	181,416	727,755	208,839	(337,500)	3,729,078	2039
2043	238,704,997	2,468,741	0.00076	181,416	591,211	124,662	(285,133)	2,183,608	2044
2048	238,704,997	1,203,870	0.00076	181,416	438,602	59,235	(197,951)	1,005,919	2049
2053	238,704,997	442,559	0.00076	181,416	281,008	21,639	(77,953)	364,607	2054
2058	238,704,997	320,085	0.00061	150,440	145,945	17,727	22,222	342,307	2059
2063	238,704,997	164,178	0.00028	0	66,938	7,214	(59,724)	104,453	2064
2068	238,704,997	23,967	0.00016	41,859	37,126	1,447	6,180	30,148	2069
2073	238,704,997	49,428	0.00010	22,068	24,854	2,643	(143)	49,285	2074



# 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**

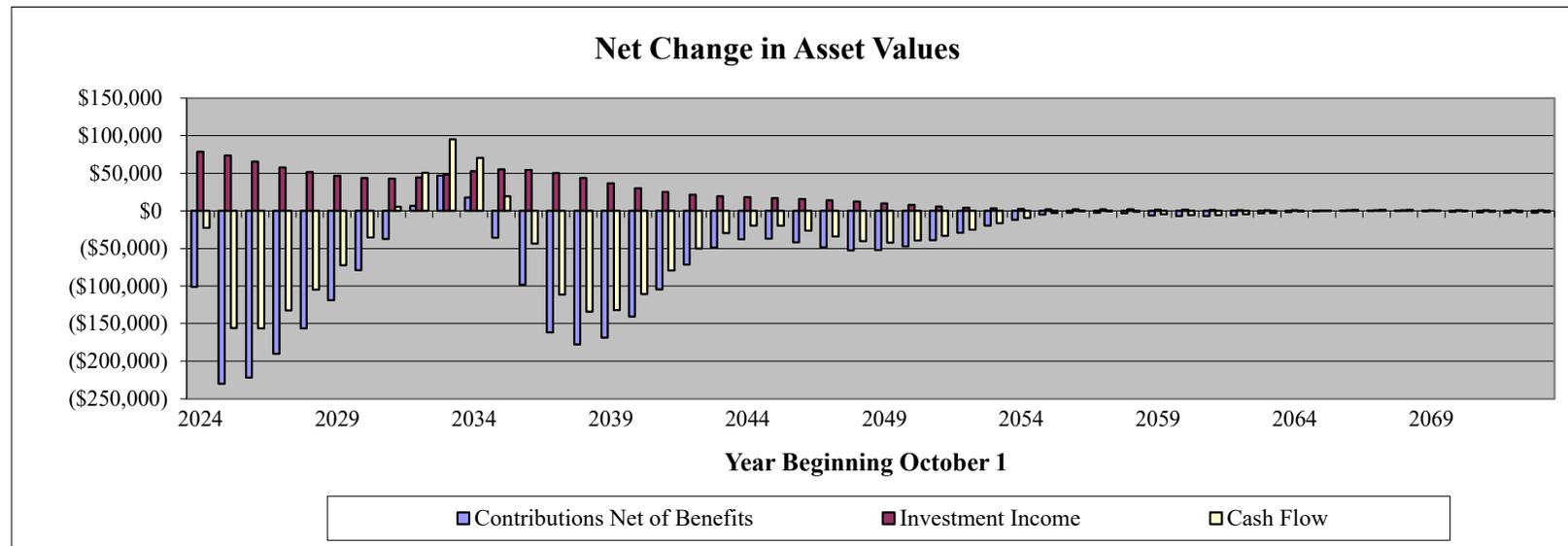
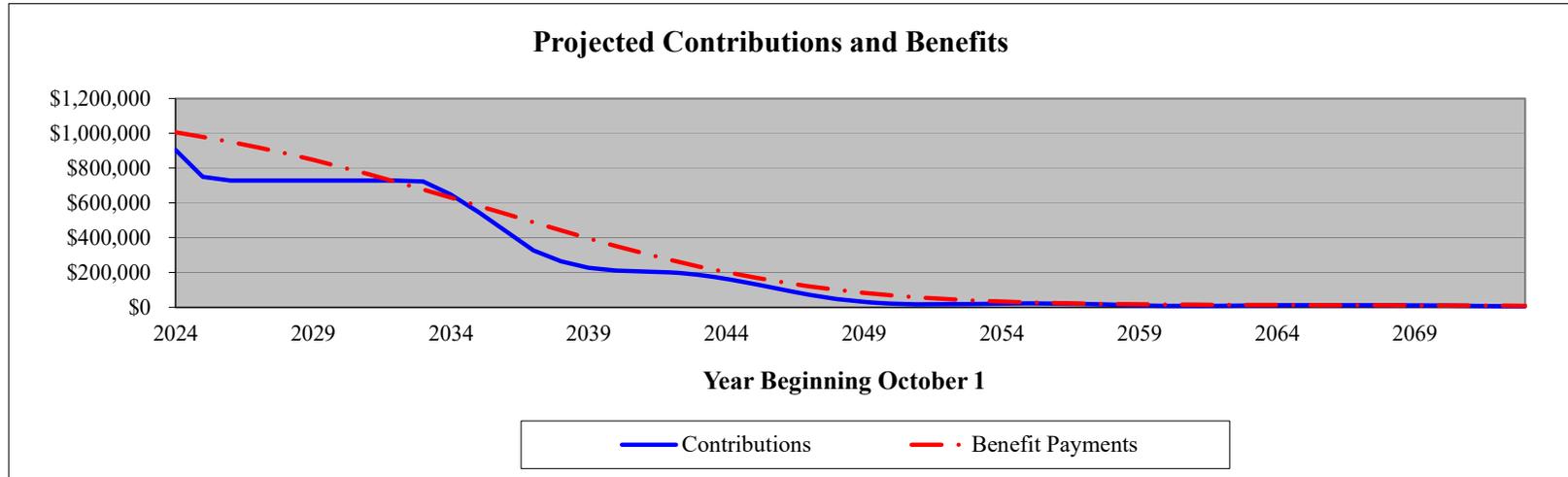
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$219,188,566	\$1,477,676	0.00332	\$903,927	\$1,005,213	\$78,524	(\$22,762)	\$1,454,913	2025
2025	219,188,566	1,454,913	0.00332	748,529	978,483	73,781	(156,173)	1,298,740	2026
2026	219,188,566	1,298,740	0.00332	727,706	949,433	65,415	(156,312)	1,142,428	2027
2027	219,188,566	1,142,428	0.00332	727,706	917,960	57,672	(132,582)	1,009,847	2028
2028	219,188,566	1,009,847	0.00332	727,706	883,945	51,302	(104,937)	904,910	2029
2029	219,188,566	904,910	0.00332	727,706	846,516	46,546	(72,264)	832,645	2030
2030	219,188,566	832,645	0.00332	727,706	806,796	43,650	(35,440)	797,206	2031
2031	219,188,566	797,206	0.00332	727,706	764,961	42,836	5,581	802,787	2032
2032	219,188,566	802,787	0.00329	727,706	721,263	44,328	50,771	853,558	2033
2033	219,188,566	853,558	0.00308	722,874	676,017	48,217	95,074	948,632	2034
2038	219,188,566	883,493	0.00201	263,203	441,037	43,767	(134,067)	749,426	2039
2043	219,188,566	376,730	0.00107	185,234	234,090	19,395	(29,461)	347,268	2044
2048	219,188,566	247,420	0.00046	47,300	99,828	12,183	(40,345)	207,075	2049
2053	219,188,566	66,809	0.00017	18,636	38,335	3,140	(16,559)	50,249	2054
2058	219,188,566	36,899	0.00008	14,951	18,171	1,942	(1,278)	35,621	2059
2063	219,188,566	15,300	0.00006	9,171	12,610	748	(2,691)	12,609	2064
2068	219,188,566	14,394	0.00005	10,990	10,553	804	1,241	15,635	2069
2073	219,188,566	13,268	0.00004	6,225	8,651	664	(1,762)	11,505	2074



## 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**

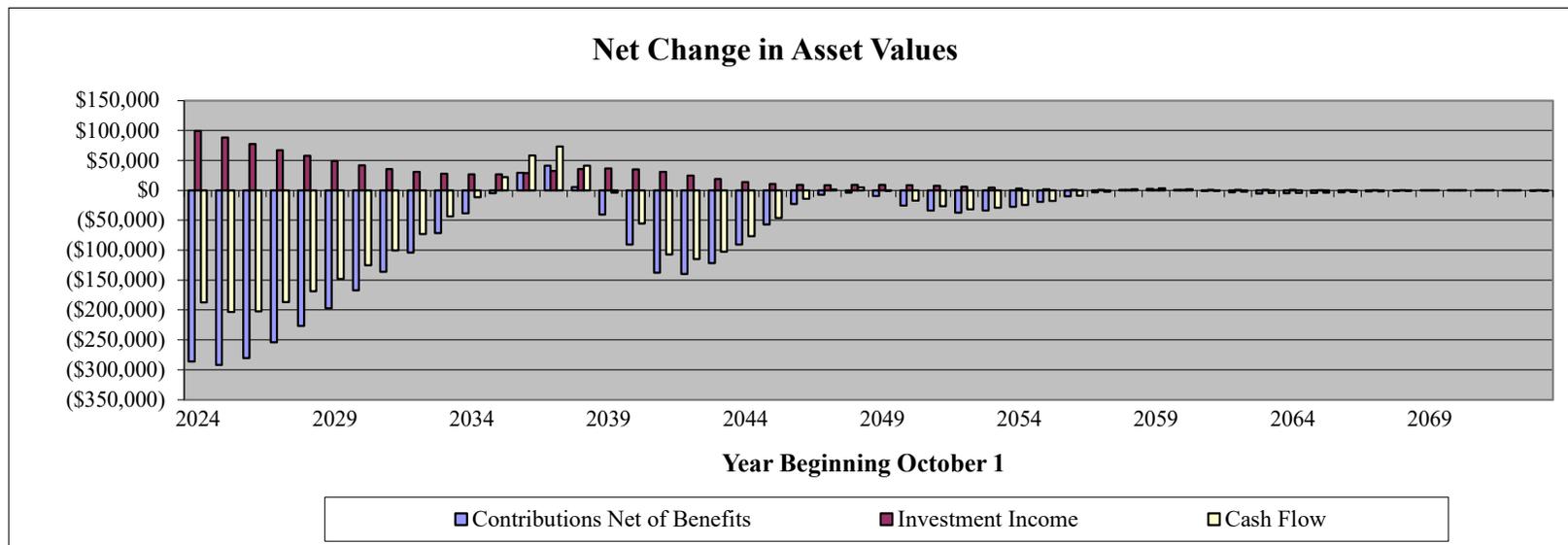
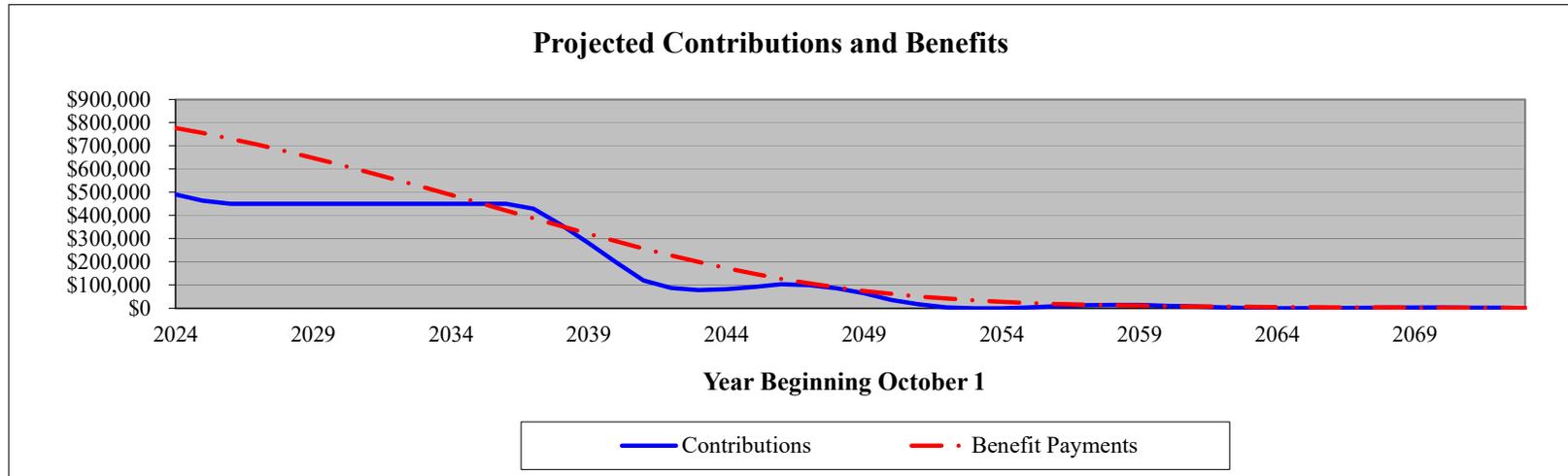
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$223,866,331	\$1,940,767	0.00201	\$490,822	\$777,199	\$98,972	(\$187,405)	\$1,753,362	2025
2025	223,866,331	1,753,362	0.00201	462,844	754,638	88,518	(203,276)	1,550,086	2026
2026	223,866,331	1,550,086	0.00201	449,971	730,219	77,651	(202,597)	1,347,489	2027
2027	223,866,331	1,347,489	0.00201	449,971	704,088	67,217	(186,900)	1,160,589	2028
2028	223,866,331	1,160,589	0.00201	449,971	676,423	57,688	(168,764)	991,825	2029
2029	223,866,331	991,825	0.00201	449,971	647,407	49,194	(148,242)	843,583	2030
2030	223,866,331	843,583	0.00201	449,971	617,221	41,859	(125,391)	718,193	2031
2031	223,866,331	718,193	0.00201	449,971	586,044	35,809	(100,264)	617,929	2032
2032	223,866,331	617,929	0.00201	449,971	554,045	31,162	(72,912)	545,017	2033
2033	223,866,331	545,017	0.00201	449,971	521,375	28,039	(43,365)	501,652	2034
2038	223,866,331	643,855	0.00158	359,188	353,487	35,567	41,268	685,123	2039
2043	223,866,331	403,742	0.00089	77,261	198,887	18,906	(102,720)	301,022	2044
2048	223,866,331	165,612	0.00040	85,341	89,289	9,002	5,055	170,666	2049
2053	223,866,331	95,490	0.00015	0	33,537	4,342	(29,195)	66,296	2054
2058	223,866,331	13,360	0.00006	13,515	12,586	760	1,689	15,049	2059
2063	223,866,331	18,448	0.00003	577	5,621	878	(4,166)	14,282	2064
2068	223,866,331	2,023	0.00001	2,179	2,642	99	(364)	1,659	2069
2073	223,866,331	3,224	0.00000	598	921	169	(154)	3,070	2074



# 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**

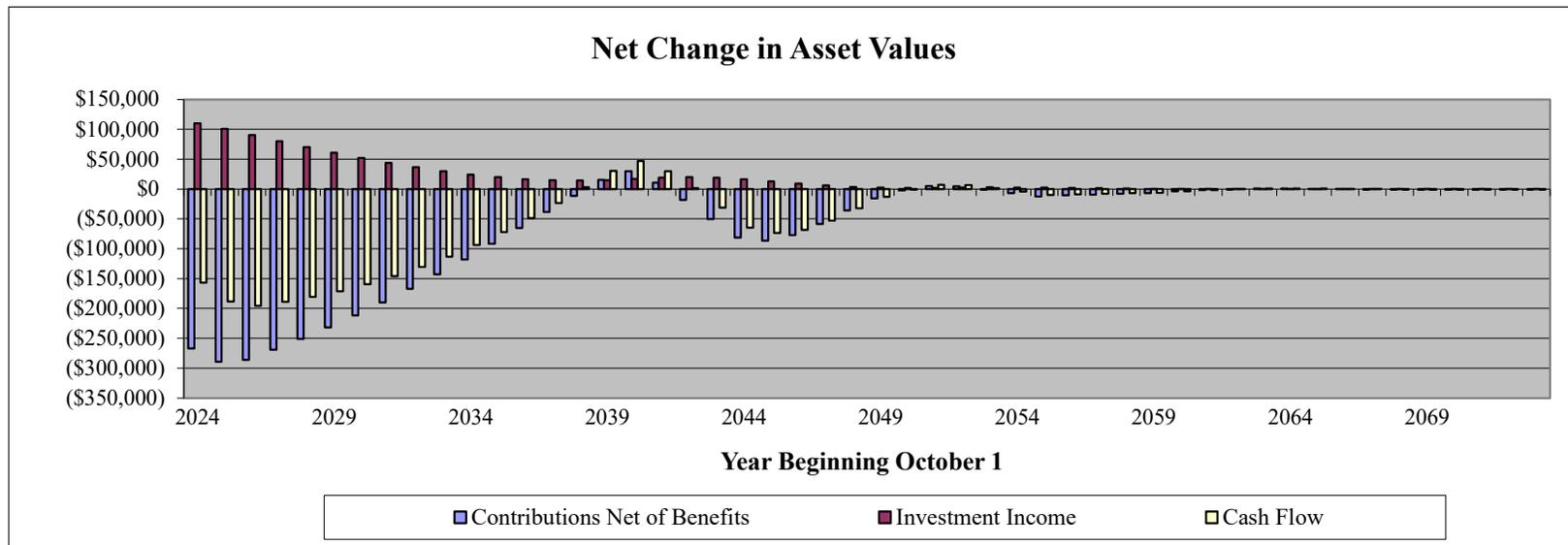
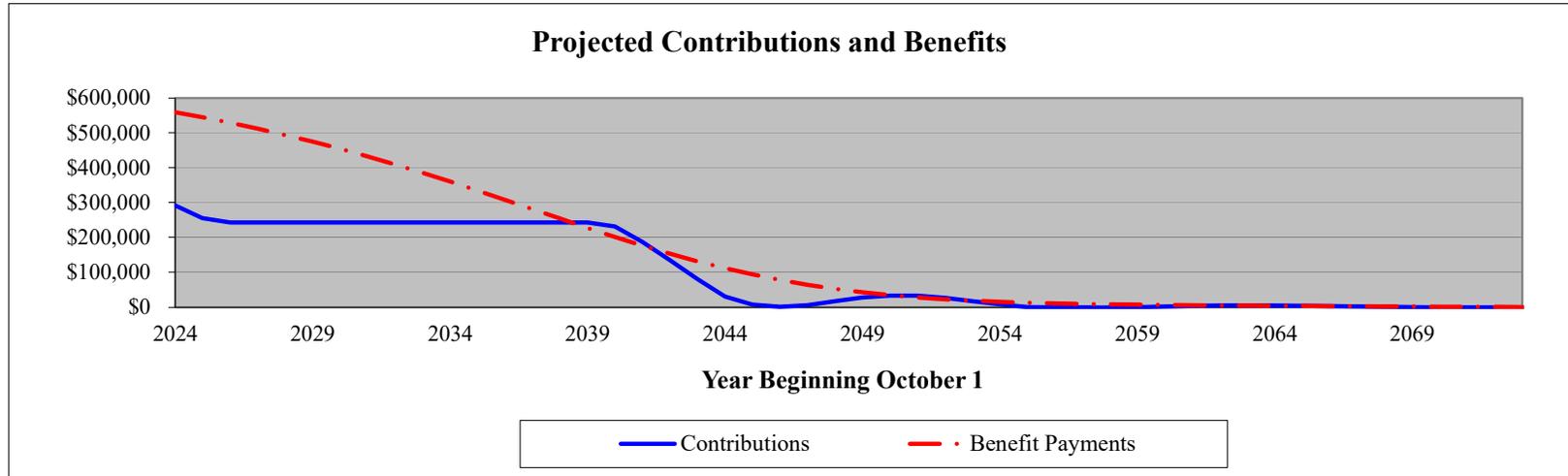
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$106,334,642	\$2,131,713	0.00228	\$292,103	\$559,211	\$109,997	(\$157,111)	\$1,974,602	2025
2025	106,334,642	1,974,602	0.00228	255,203	544,336	100,758	(188,375)	1,786,226	2026
2026	106,334,642	1,786,226	0.00228	242,443	528,484	90,482	(195,559)	1,590,667	2027
2027	106,334,642	1,590,667	0.00228	242,443	511,596	80,184	(188,969)	1,401,698	2028
2028	106,334,642	1,401,698	0.00228	242,443	493,609	70,279	(180,887)	1,220,812	2029
2029	106,334,642	1,220,812	0.00228	242,443	474,453	60,850	(171,160)	1,049,651	2030
2030	106,334,642	1,049,651	0.00228	242,443	454,069	51,989	(159,637)	890,015	2031
2031	106,334,642	890,015	0.00228	242,443	432,423	43,796	(146,184)	743,831	2032
2032	106,334,642	743,831	0.00228	242,443	409,530	36,377	(130,710)	613,121	2033
2033	106,334,642	613,121	0.00228	242,443	385,456	29,841	(113,172)	499,949	2034
2038	106,334,642	262,034	0.00228	242,443	253,815	14,103	2,731	264,766	2039
2043	106,334,642	373,000	0.00124	80,860	131,399	19,144	(31,395)	341,604	2044
2048	106,334,642	82,350	0.00049	16,608	52,557	3,554	(32,395)	49,954	2049
2053	106,334,642	50,719	0.00017	17,342	18,510	2,758	1,590	52,309	2054
2058	106,334,642	21,167	0.00008	0	7,984	948	(7,036)	14,131	2059
2063	106,334,642	2,634	0.00004	5,048	4,335	164	877	3,510	2064
2068	106,334,642	5,980	0.00002	1,326	2,030	310	(394)	5,585	2069
2073	106,334,642	1,963	0.00001	0	590	92	(498)	1,465	2074



# 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

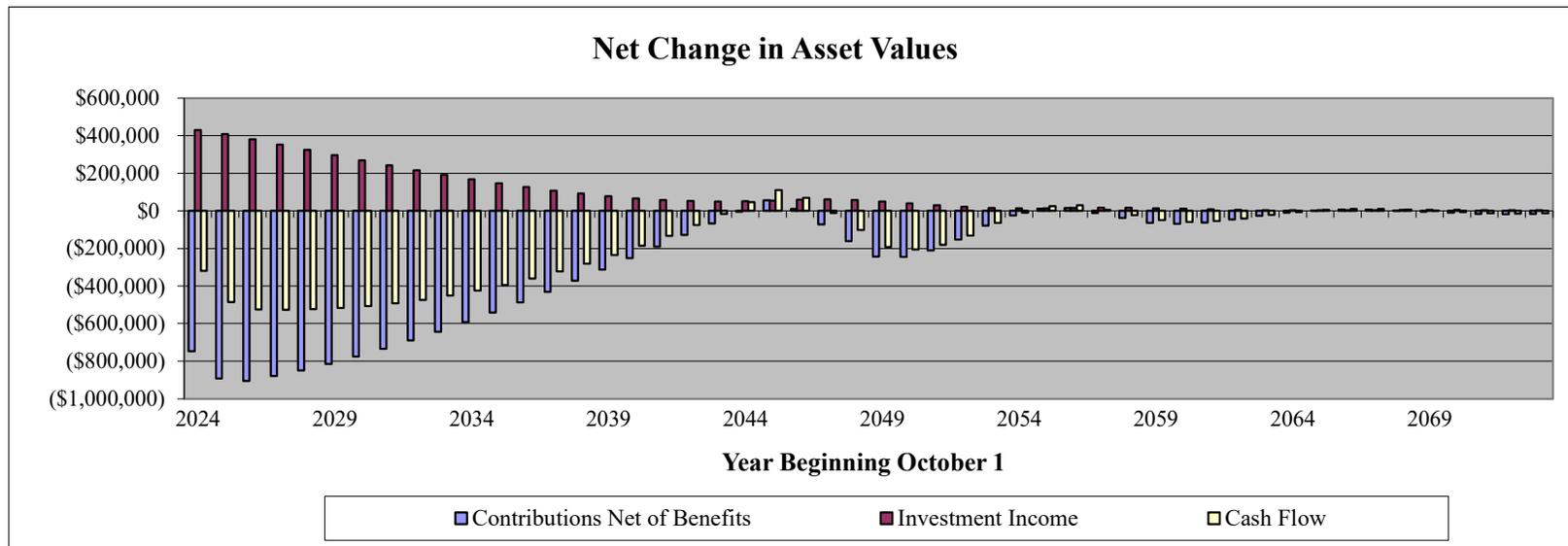
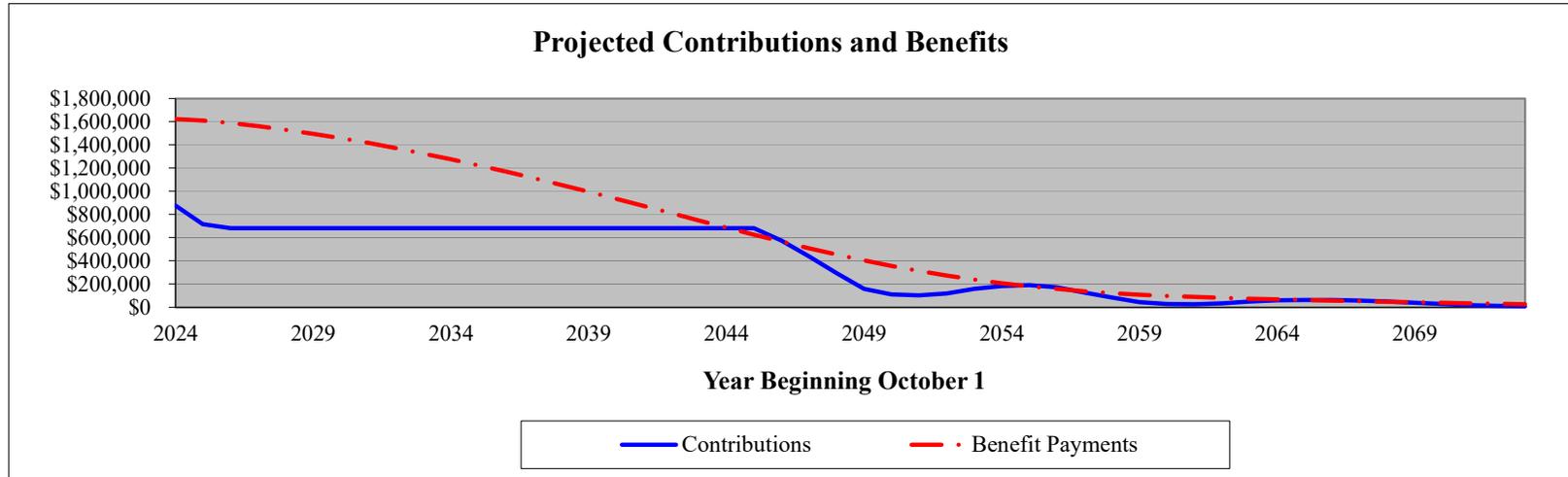
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$896,764,815	\$8,175,861	0.00076	\$875,405	\$1,623,466	\$429,376	(\$318,685)	\$7,857,176	2025
2025	896,764,815	7,857,176	0.00076	715,170	1,607,968	407,921	(484,877)	7,372,299	2026
2026	896,764,815	7,372,299	0.00076	681,541	1,587,558	380,894	(525,123)	6,847,176	2027
2027	896,764,815	6,847,176	0.00076	681,541	1,561,356	352,724	(527,091)	6,320,085	2028
2028	896,764,815	6,320,085	0.00076	681,541	1,530,412	324,573	(524,298)	5,795,787	2029
2029	896,764,815	5,795,787	0.00076	681,541	1,495,744	296,677	(517,526)	5,278,260	2030
2030	896,764,815	5,278,260	0.00076	681,541	1,457,579	269,249	(506,789)	4,771,471	2031
2031	896,764,815	4,771,471	0.00076	681,541	1,416,172	242,499	(492,132)	4,279,339	2032
2032	896,764,815	4,279,339	0.00076	681,541	1,371,778	216,636	(473,601)	3,805,738	2033
2033	896,764,815	3,805,738	0.00076	681,541	1,324,626	191,867	(451,218)	3,354,520	2034
2038	896,764,815	1,851,113	0.00076	681,541	1,054,223	91,700	(280,982)	1,570,131	2039
2043	896,764,815	939,662	0.00076	681,541	748,172	49,874	(16,757)	922,905	2044
2048	896,764,815	1,137,572	0.00051	293,652	454,233	58,210	(102,371)	1,035,201	2049
2053	896,764,815	323,560	0.00026	157,421	237,031	15,636	(63,974)	259,586	2054
2058	896,764,815	310,203	0.00014	83,772	121,992	16,024	(22,196)	288,007	2059
2063	896,764,815	83,698	0.00008	47,717	73,340	3,908	(21,715)	61,984	2064
2068	896,764,815	81,012	0.00005	48,561	46,964	4,499	6,096	87,108	2069
2073	896,764,815	54,620	0.00003	10,595	26,312	2,578	(13,139)	41,481	2074



## 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

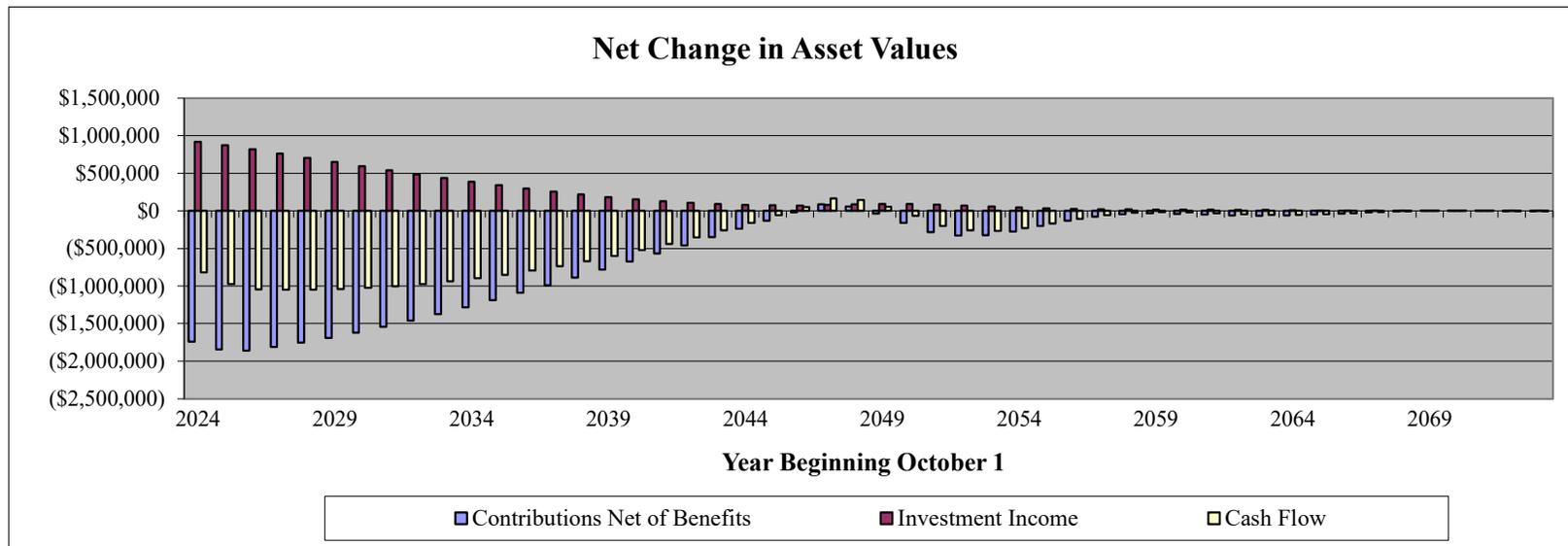
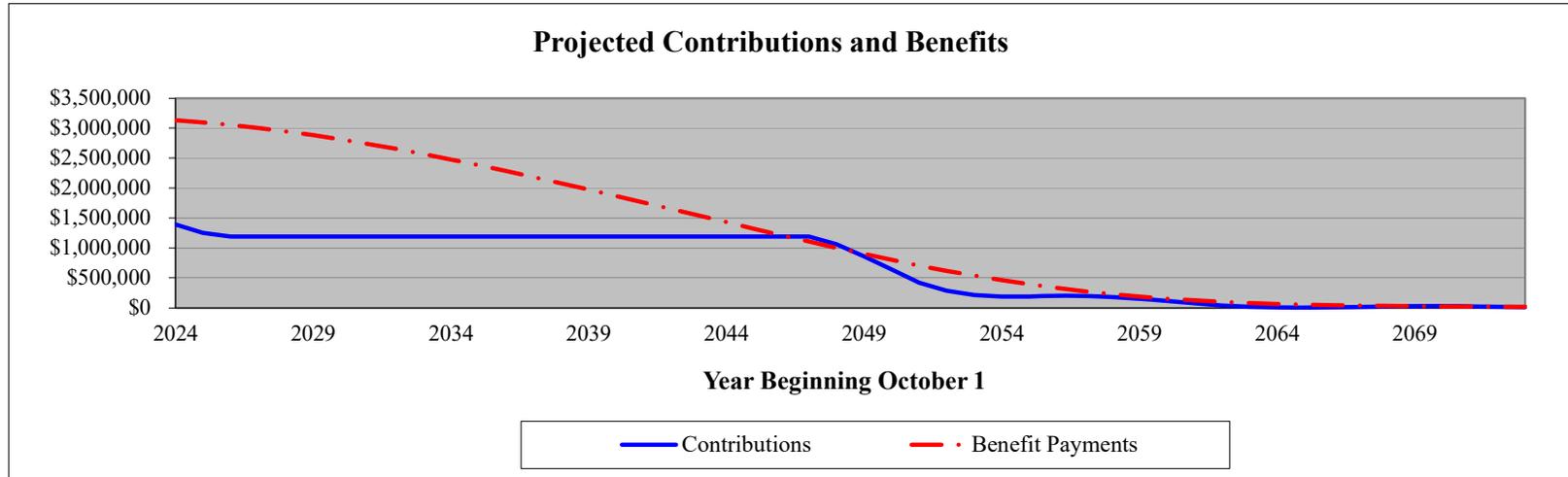
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$543,307,810	\$17,591,558	0.00219	\$1,391,304	\$3,131,940	\$920,309	(\$820,327)	\$16,771,231	2025
2025	543,307,810	16,771,231	0.00219	1,249,608	3,095,667	872,331	(973,728)	15,797,503	2026
2026	543,307,810	15,797,503	0.00219	1,189,844	3,052,337	818,330	(1,044,163)	14,753,341	2027
2027	543,307,810	14,753,341	0.00219	1,189,844	3,001,714	762,274	(1,049,596)	13,703,745	2028
2028	543,307,810	13,703,745	0.00219	1,189,844	2,943,970	706,113	(1,048,013)	12,655,732	2029
2029	543,307,810	12,655,732	0.00219	1,189,844	2,880,098	650,205	(1,040,049)	11,615,683	2030
2030	543,307,810	11,615,683	0.00219	1,189,844	2,810,166	594,900	(1,025,422)	10,590,262	2031
2031	543,307,810	10,590,262	0.00219	1,189,844	2,733,995	540,569	(1,003,582)	9,586,679	2032
2032	543,307,810	9,586,679	0.00219	1,189,844	2,652,625	487,579	(975,202)	8,611,477	2033
2033	543,307,810	8,611,477	0.00219	1,189,844	2,566,332	436,284	(940,204)	7,671,274	2034
2038	543,307,810	4,390,192	0.00219	1,189,844	2,078,266	217,356	(671,066)	3,719,126	2039
2043	543,307,810	1,801,444	0.00219	1,189,844	1,539,443	89,594	(260,005)	1,541,440	2044
2048	543,307,810	1,536,346	0.00184	1,058,485	999,326	86,104	145,263	1,681,609	2049
2053	543,307,810	1,209,521	0.00099	212,069	535,771	57,741	(265,961)	943,561	2054
2058	543,307,810	381,060	0.00042	182,798	227,872	19,735	(25,339)	355,721	2059
2063	543,307,810	237,093	0.00015	15,659	80,839	11,272	(53,908)	183,184	2064
2068	543,307,810	34,841	0.00006	23,617	30,879	1,719	(5,543)	29,298	2069
2073	543,307,810	41,152	0.00003	10,988	16,874	2,104	(3,782)	37,370	2074



# 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**

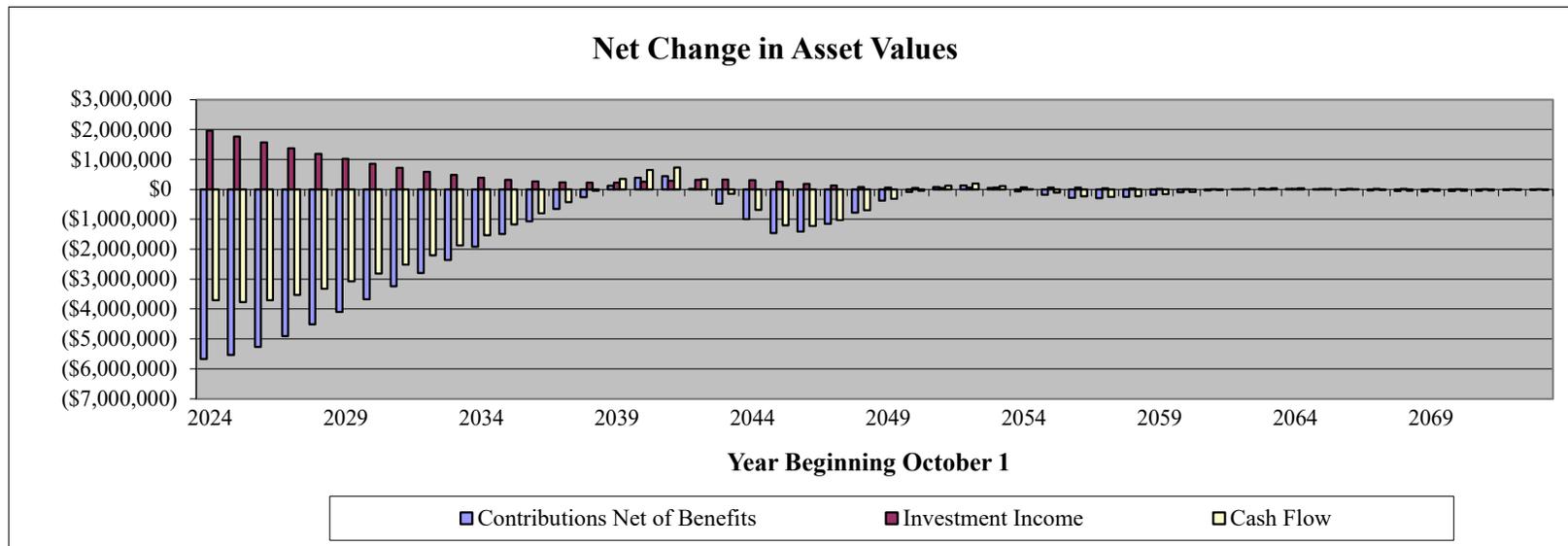
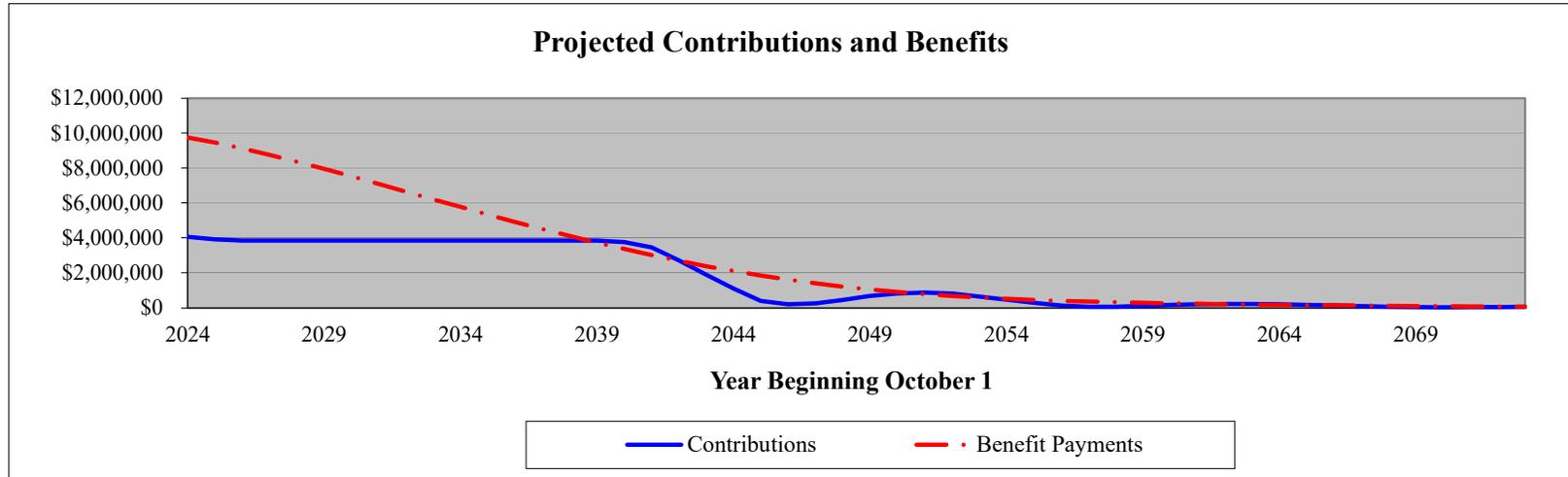
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$1,253,350,551	\$38,573,004	0.00307	\$4,069,525	\$9,741,349	\$1,967,628	(\$3,704,196)	\$34,868,809	2025
2025	1,253,350,551	34,868,809	0.00307	3,916,720	9,450,056	1,767,654	(3,765,682)	31,103,126	2026
2026	1,253,350,551	31,103,126	0.00307	3,847,786	9,117,125	1,567,705	(3,701,634)	27,401,492	2027
2027	1,253,350,551	27,401,492	0.00307	3,847,786	8,751,265	1,374,041	(3,529,438)	23,872,053	2028
2028	1,253,350,551	23,872,053	0.00307	3,847,786	8,359,231	1,190,559	(3,320,886)	20,551,168	2029
2029	1,253,350,551	20,551,168	0.00307	3,847,786	7,947,217	1,019,089	(3,080,342)	17,470,826	2030
2030	1,253,350,551	17,470,826	0.00307	3,847,786	7,520,952	861,235	(2,811,931)	14,658,894	2031
2031	1,253,350,551	14,658,894	0.00307	3,847,786	7,085,640	718,390	(2,519,464)	12,139,431	2032
2032	1,253,350,551	12,139,431	0.00307	3,847,786	6,645,919	591,750	(2,206,383)	9,933,048	2033
2033	1,253,350,551	9,933,048	0.00307	3,847,786	6,205,875	482,338	(1,875,751)	8,057,297	2034
2038	1,253,350,551	4,126,560	0.00307	3,847,786	4,108,375	219,891	(40,698)	4,085,862	2039
2043	1,253,350,551	6,157,569	0.00190	1,907,249	2,383,852	325,735	(150,868)	6,006,700	2044
2048	1,253,350,551	1,867,333	0.00097	439,265	1,215,505	81,642	(694,598)	1,172,734	2049
2053	1,253,350,551	1,131,387	0.00047	641,056	593,032	63,529	111,553	1,242,940	2054
2058	1,253,350,551	662,142	0.00025	62,333	316,868	29,512	(225,023)	437,119	2059
2063	1,253,350,551	191,287	0.00015	213,065	187,389	11,217	36,893	228,180	2064
2068	1,253,350,551	268,331	0.00009	53,266	109,806	13,224	(43,316)	225,015	2069
2073	1,253,350,551	79,155	0.00005	50,837	57,944	4,161	(2,946)	76,209	2074



# 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**

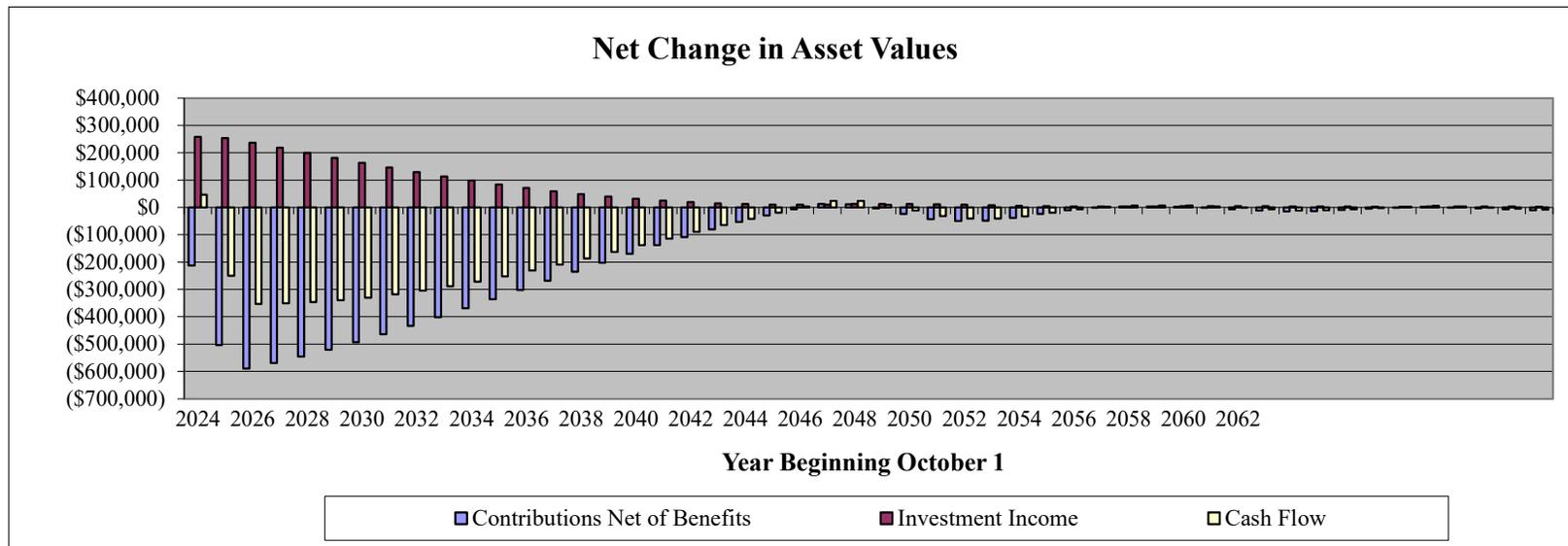
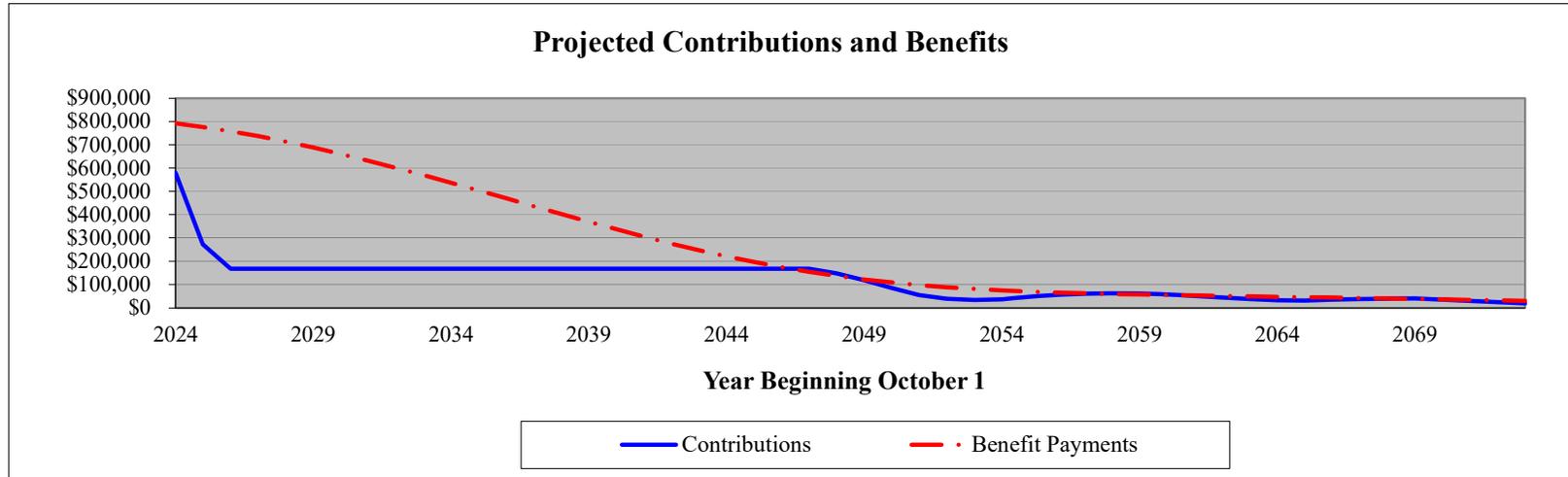
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$226,039,433	\$4,804,059	0.00074	\$579,673	\$792,034	\$258,462	\$46,101	\$4,850,161	2025
2025	226,039,433	4,850,161	0.00074	272,378	776,056	253,093	(250,585)	4,599,576	2026
2026	226,039,433	4,599,576	0.00074	167,269	757,591	236,960	(353,362)	4,246,214	2027
2027	226,039,433	4,246,214	0.00074	167,269	736,679	218,093	(351,317)	3,894,897	2028
2028	226,039,433	3,894,897	0.00074	167,269	713,427	199,401	(346,757)	3,548,141	2029
2029	226,039,433	3,548,141	0.00074	167,269	688,003	181,019	(339,715)	3,208,426	2030
2030	226,039,433	3,208,426	0.00074	167,269	660,629	163,078	(330,282)	2,878,144	2031
2031	226,039,433	2,878,144	0.00074	167,269	631,557	145,701	(318,587)	2,559,557	2032
2032	226,039,433	2,559,557	0.00074	167,269	601,051	129,006	(304,776)	2,254,781	2033
2033	226,039,433	2,254,781	0.00074	167,269	569,373	113,103	(289,001)	1,965,780	2034
2038	226,039,433	1,001,170	0.00074	167,269	402,503	48,682	(186,552)	814,618	2039
2043	226,039,433	310,359	0.00074	167,269	247,237	14,900	(65,068)	245,291	2044
2048	226,039,433	211,600	0.00061	148,340	136,994	11,946	23,292	234,892	2049
2053	226,039,433	161,333	0.00036	32,893	80,990	7,568	(40,529)	120,804	2054
2058	226,039,433	63,602	0.00026	63,061	59,379	3,598	7,280	70,882	2059
2063	226,039,433	86,577	0.00022	38,063	49,148	4,461	(6,624)	79,953	2064
2068	226,039,433	49,874	0.00018	39,262	39,722	2,731	2,271	52,145	2069
2073	226,039,433	56,246	0.00013	19,041	29,513	2,809	(7,663)	48,583	2074



# 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**

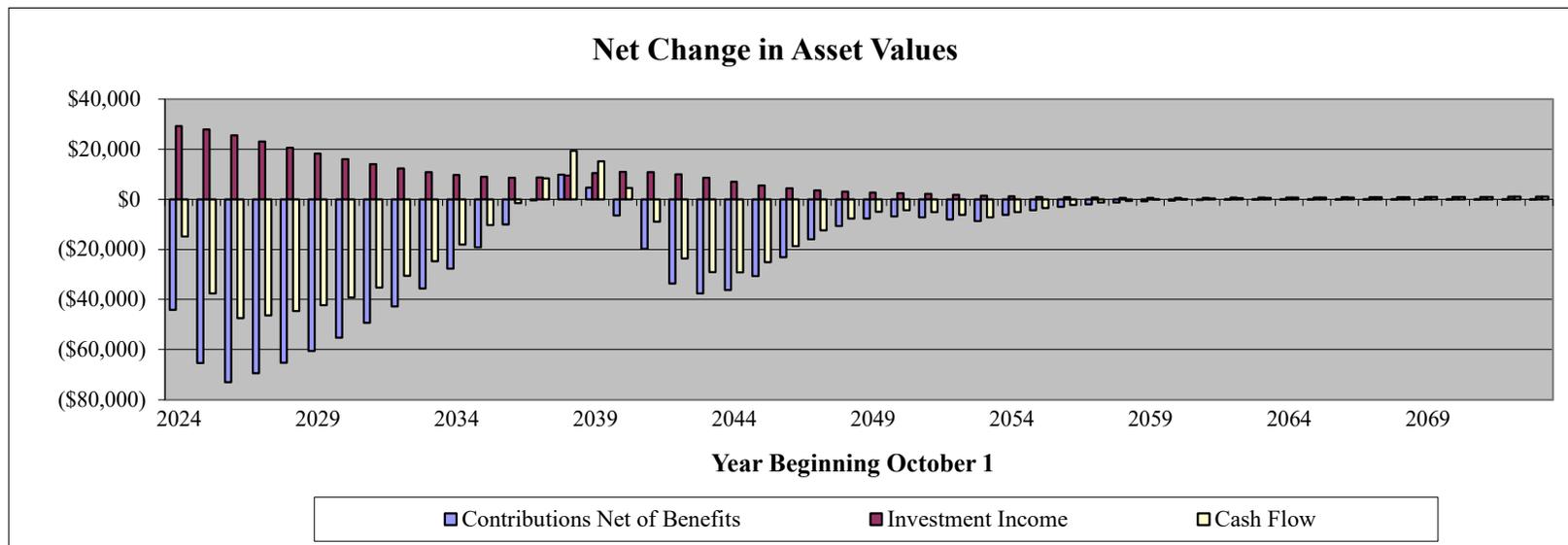
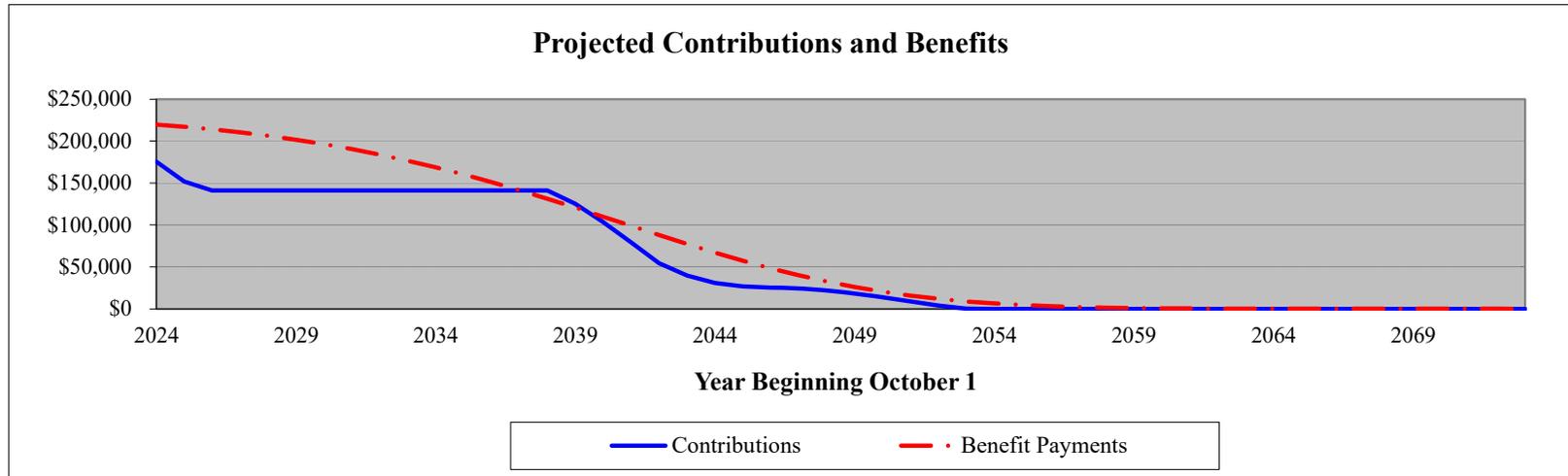
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$110,059,087	\$552,638	0.00128	\$175,508	\$219,639	\$29,198	(\$14,933)	\$537,706	2025
2025	110,059,087	537,706	0.00128	151,606	216,983	27,800	(37,577)	500,129	2026
2026	110,059,087	500,129	0.00128	140,876	213,877	25,526	(47,475)	452,654	2027
2027	110,059,087	452,654	0.00128	140,876	210,276	23,013	(46,387)	406,266	2028
2028	110,059,087	406,266	0.00128	140,876	206,141	20,574	(44,691)	361,576	2029
2029	110,059,087	361,576	0.00128	140,876	201,440	18,243	(42,321)	319,255	2030
2030	110,059,087	319,255	0.00128	140,876	196,147	16,059	(39,212)	280,043	2031
2031	110,059,087	280,043	0.00128	140,876	190,238	14,063	(35,299)	244,744	2032
2032	110,059,087	244,744	0.00128	140,876	183,687	12,299	(30,512)	214,232	2033
2033	110,059,087	214,232	0.00128	140,876	176,479	10,817	(24,786)	189,447	2034
2038	110,059,087	168,000	0.00119	140,876	131,061	9,506	19,321	187,321	2039
2043	110,059,087	174,264	0.00070	39,634	77,229	8,564	(29,031)	145,233	2044
2048	110,059,087	59,680	0.00030	21,830	32,472	2,994	(7,648)	52,032	2049
2053	110,059,087	31,238	0.00008	32	8,680	1,483	(7,165)	24,073	2054
2058	110,059,087	12,002	0.00001	0	1,294	625	(669)	11,333	2059
2063	110,059,087	11,980	0.00000	0	97	656	559	12,539	2064
2068	110,059,087	15,415	0.00000	0	3	848	845	16,259	2069
2073	110,059,087	20,138	0.00000	0	0	1,108	1,108	21,246	2074



## 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

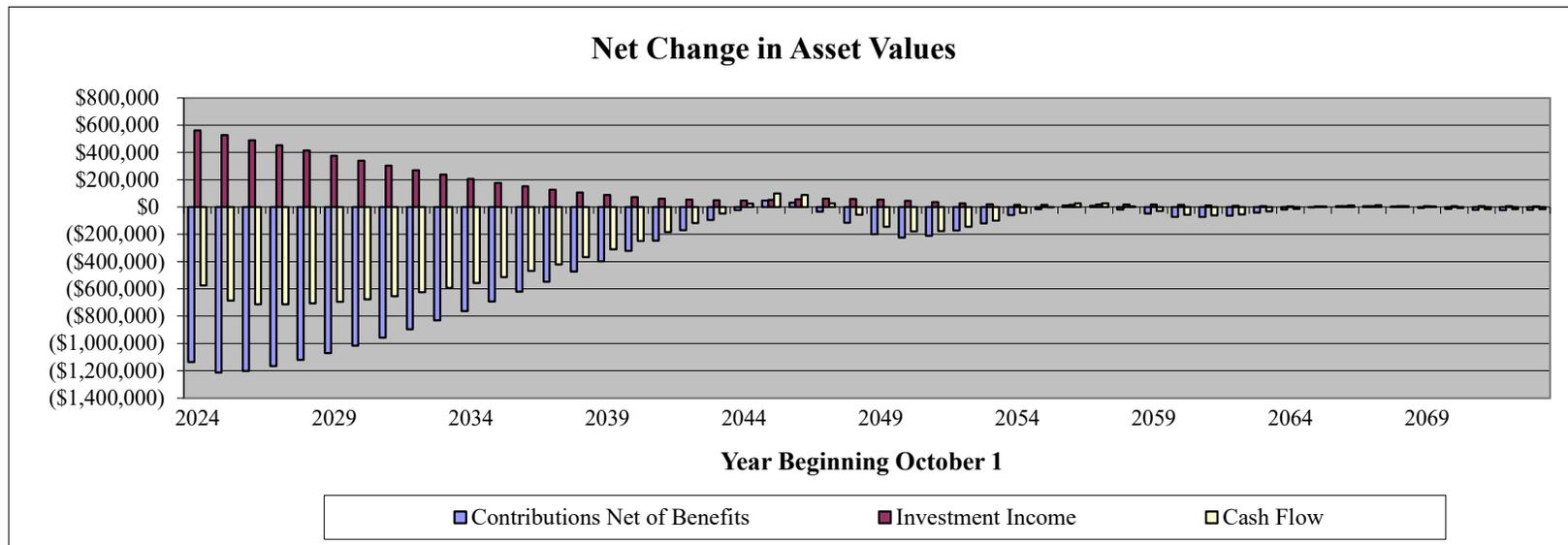
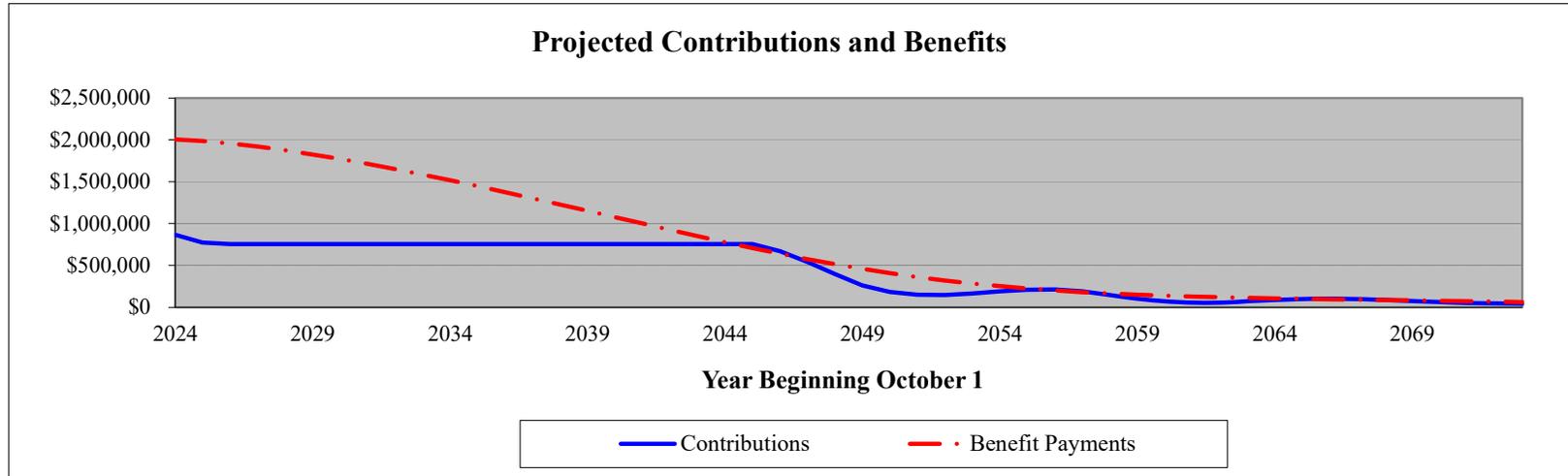
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$374,469,534	\$10,768,447	0.00201	\$866,389	\$2,003,804	\$561,404	(\$576,011)	\$10,192,436	2025
2025	374,469,534	10,192,436	0.00201	770,471	1,984,083	527,656	(685,956)	9,506,480	2026
2026	374,469,534	9,506,480	0.00201	752,684	1,955,124	490,232	(712,208)	8,794,272	2027
2027	374,469,534	8,794,272	0.00201	752,684	1,918,097	452,065	(713,348)	8,080,924	2028
2028	374,469,534	8,080,924	0.00201	752,684	1,874,143	414,023	(707,436)	7,373,488	2029
2029	374,469,534	7,373,488	0.00201	752,684	1,824,329	376,466	(695,179)	6,678,309	2030
2030	374,469,534	6,678,309	0.00201	752,684	1,769,592	339,716	(677,192)	6,001,117	2031
2031	374,469,534	6,001,117	0.00201	752,684	1,710,723	304,068	(653,971)	5,347,146	2032
2032	374,469,534	5,347,146	0.00201	752,684	1,648,387	269,791	(625,912)	4,721,233	2033
2033	374,469,534	4,721,233	0.00201	752,684	1,583,117	237,137	(593,296)	4,127,937	2034
2038	374,469,534	2,166,989	0.00201	752,684	1,225,646	106,352	(366,610)	1,800,379	2039
2043	374,469,534	941,607	0.00201	752,684	848,617	49,186	(46,747)	894,860	2044
2048	374,469,534	1,135,096	0.00137	396,734	512,990	59,276	(56,980)	1,078,116	2049
2053	374,469,534	433,616	0.00075	162,500	282,331	20,598	(99,233)	334,383	2054
2058	374,469,534	344,815	0.00044	144,487	162,936	18,464	15	344,829	2059
2063	374,469,534	145,343	0.00030	72,456	112,031	6,920	(32,655)	112,688	2064
2068	374,469,534	127,969	0.00023	85,785	85,130	7,056	7,711	135,680	2069
2073	374,469,534	98,608	0.00016	41,948	61,675	4,888	(14,839)	83,770	2074



# Mississippi Municipal Retirement Systems City of Meridian

## 50 Year Cash Flow Projection Based on Valuation Assumptions





Mississippi Municipal Retirement Systems  
City of Natchez

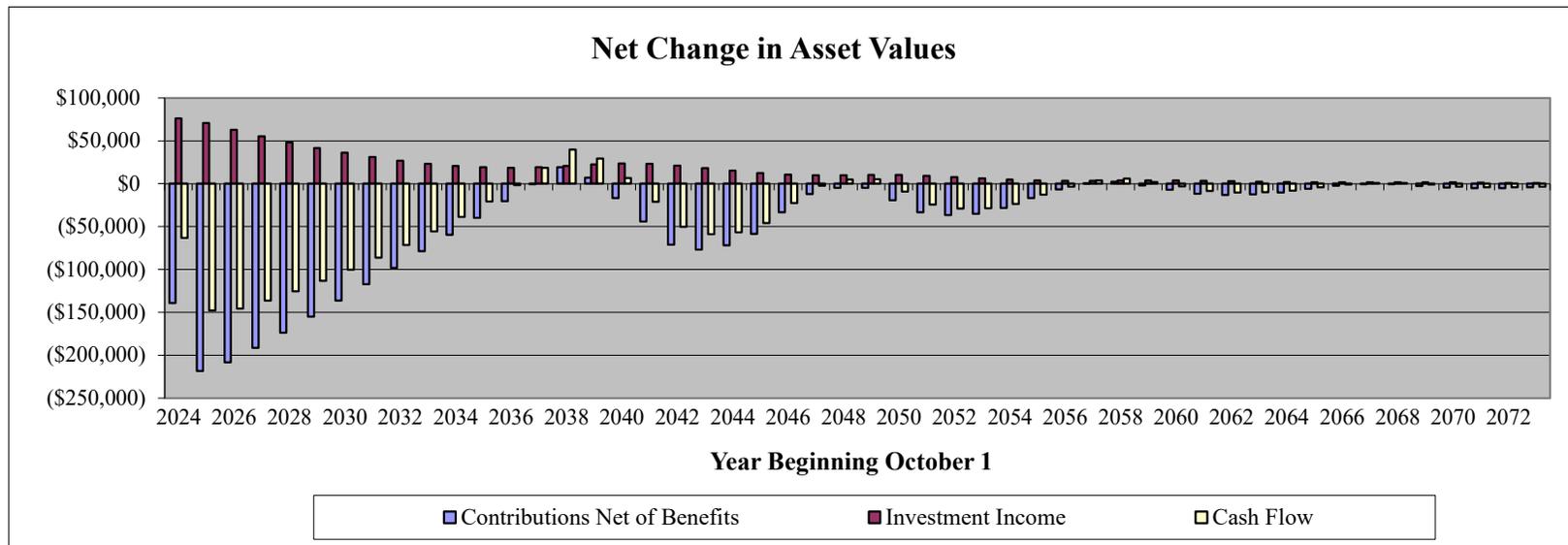
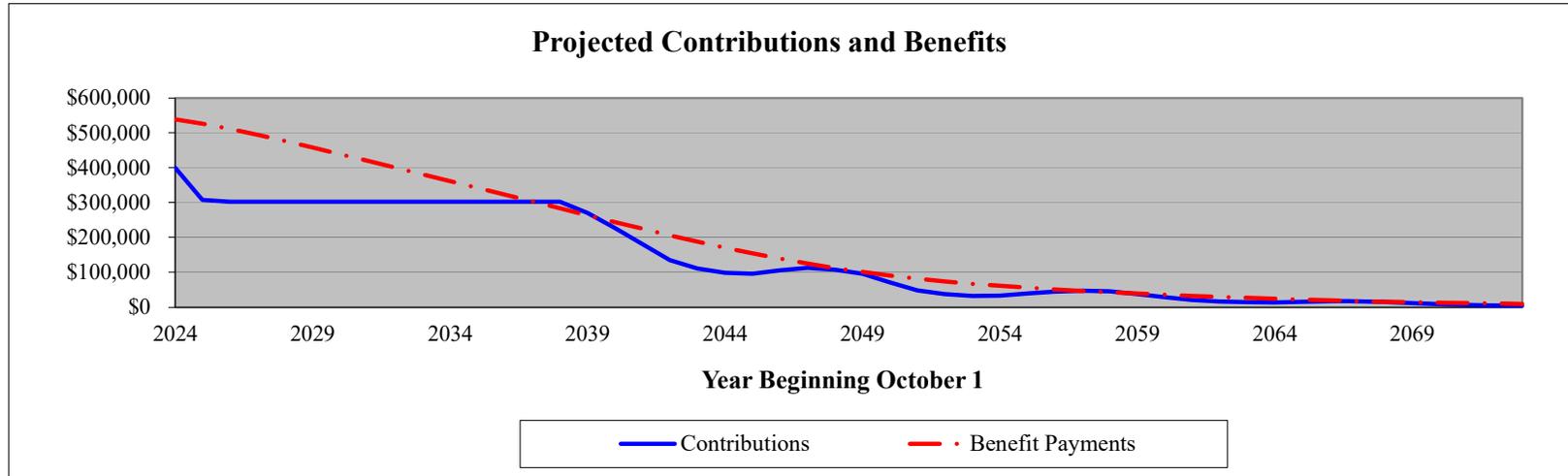
**Cash Flow Projection**  
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$258,346,030	\$1,453,936	0.00117	\$399,467	\$538,927	\$76,183	(\$63,277)	\$1,390,659	2025
2025	258,346,030	1,390,659	0.00117	307,432	525,904	70,559	(147,913)	1,242,745	2026
2026	258,346,030	1,242,745	0.00117	302,265	510,641	62,697	(145,679)	1,097,066	2027
2027	258,346,030	1,097,066	0.00117	302,265	493,822	55,141	(136,416)	960,650	2028
2028	258,346,030	960,650	0.00117	302,265	475,980	48,123	(125,592)	835,058	2029
2029	258,346,030	835,058	0.00117	302,265	457,513	41,716	(113,532)	721,527	2030
2030	258,346,030	721,527	0.00117	302,265	438,686	35,983	(100,438)	621,089	2031
2031	258,346,030	621,089	0.00117	302,265	419,654	30,975	(86,414)	534,675	2032
2032	258,346,030	534,675	0.00117	302,265	400,492	26,742	(71,485)	463,190	2033
2033	258,346,030	463,190	0.00117	302,265	381,199	23,334	(55,600)	407,590	2034
2038	258,346,030	364,763	0.00110	302,265	283,159	20,580	39,686	404,449	2039
2043	258,346,030	368,885	0.00073	110,578	187,699	18,196	(58,925)	309,959	2044
2048	258,346,030	182,103	0.00043	107,207	112,156	9,881	4,932	187,034	2049
2053	258,346,030	129,804	0.00026	31,959	66,998	6,189	(28,850)	100,954	2054
2058	258,346,030	64,863	0.00017	44,990	42,744	3,628	5,874	70,738	2059
2063	258,346,030	50,665	0.00010	13,977	26,547	2,446	(10,124)	40,541	2064
2068	258,346,030	27,742	0.00006	15,040	15,541	1,512	1,011	28,752	2069
2073	258,346,030	15,904	0.00004	5,278	9,592	758	(3,556)	12,349	2074



# 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

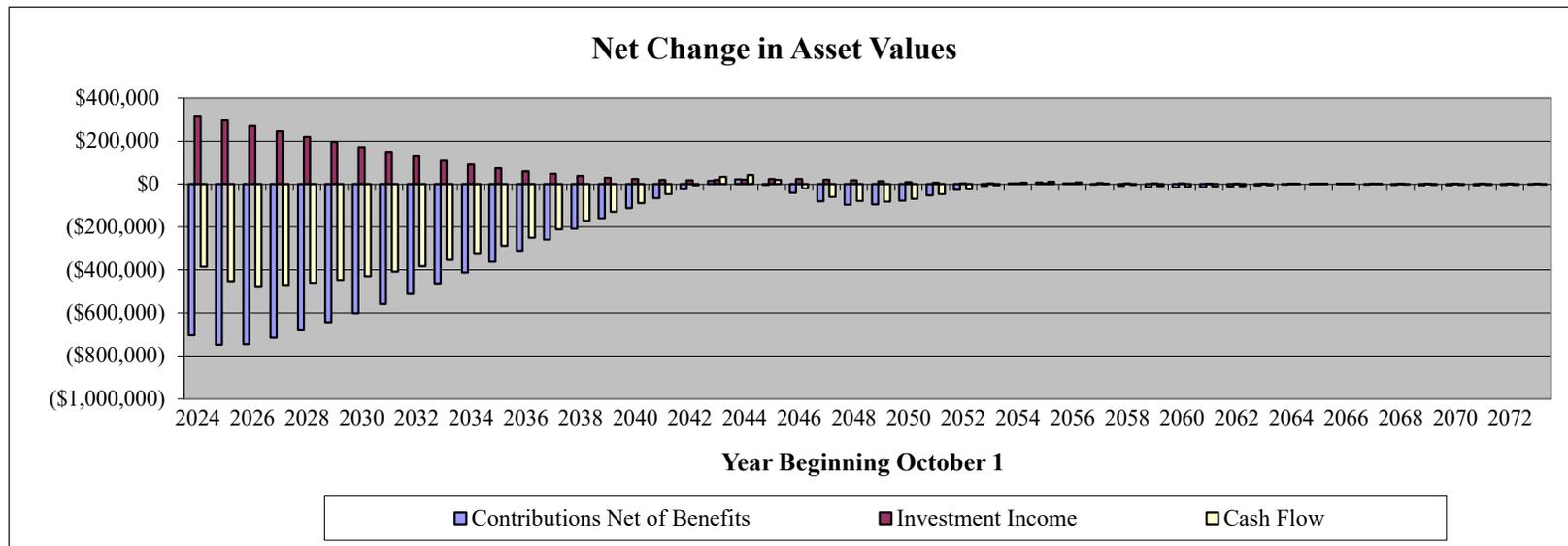
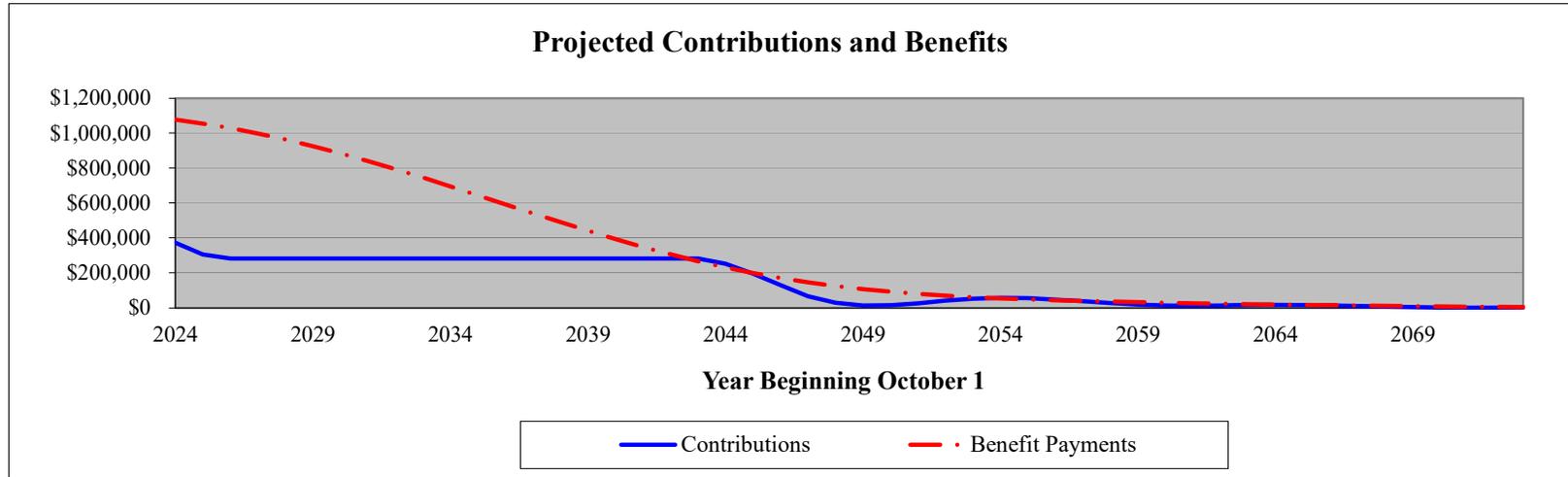
No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments

<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>
2024	\$309,592,933	\$6,125,538	0.00091	\$372,450	\$1,076,661	\$317,798	(\$386,413)	\$5,739,125	2025
2025	309,592,933	5,739,125	0.00091	305,723	1,054,564	295,334	(453,507)	5,285,617	2026
2026	309,592,933	5,285,617	0.00091	281,730	1,028,106	270,458	(475,918)	4,809,700	2027
2027	309,592,933	4,809,700	0.00091	281,730	997,546	245,112	(470,704)	4,338,996	2028
2028	309,592,933	4,338,996	0.00091	281,730	963,156	220,156	(461,270)	3,877,725	2029
2029	309,592,933	3,877,725	0.00091	281,730	925,220	195,816	(447,674)	3,430,051	2030
2030	309,592,933	3,430,051	0.00091	281,730	884,055	172,311	(430,014)	3,000,037	2031
2031	309,592,933	3,000,037	0.00091	281,730	840,018	149,855	(408,433)	2,591,604	2032
2032	309,592,933	2,591,604	0.00091	281,730	793,508	128,653	(383,125)	2,208,479	2033
2033	309,592,933	2,208,479	0.00091	281,730	744,967	108,898	(354,339)	1,854,140	2034
2038	309,592,933	781,870	0.00091	281,730	490,291	37,344	(171,217)	610,652	2039
2043	309,592,933	340,181	0.00086	281,730	266,670	19,119	34,179	374,360	2044
2048	309,592,933	356,838	0.00040	29,091	124,856	17,028	(78,737)	278,101	2049
2053	309,592,933	56,443	0.00020	52,508	60,712	2,882	(5,322)	51,121	2054
2058	309,592,933	76,760	0.00011	27,274	35,245	4,006	(3,965)	72,795	2059
2063	309,592,933	29,998	0.00007	14,453	20,624	1,482	(4,689)	25,309	2064
2068	309,592,933	26,574	0.00003	6,116	10,332	1,347	(2,869)	23,705	2069
2073	309,592,933	7,495	0.00001	1,350	3,947	342	(2,255)	5,240	2074



# Mississippi Municipal Retirement Systems City of Pascagoula

## 50 Year Cash Flow Projection Based on Valuation Assumptions





Mississippi Municipal Retirement Systems  
City of Tupelo

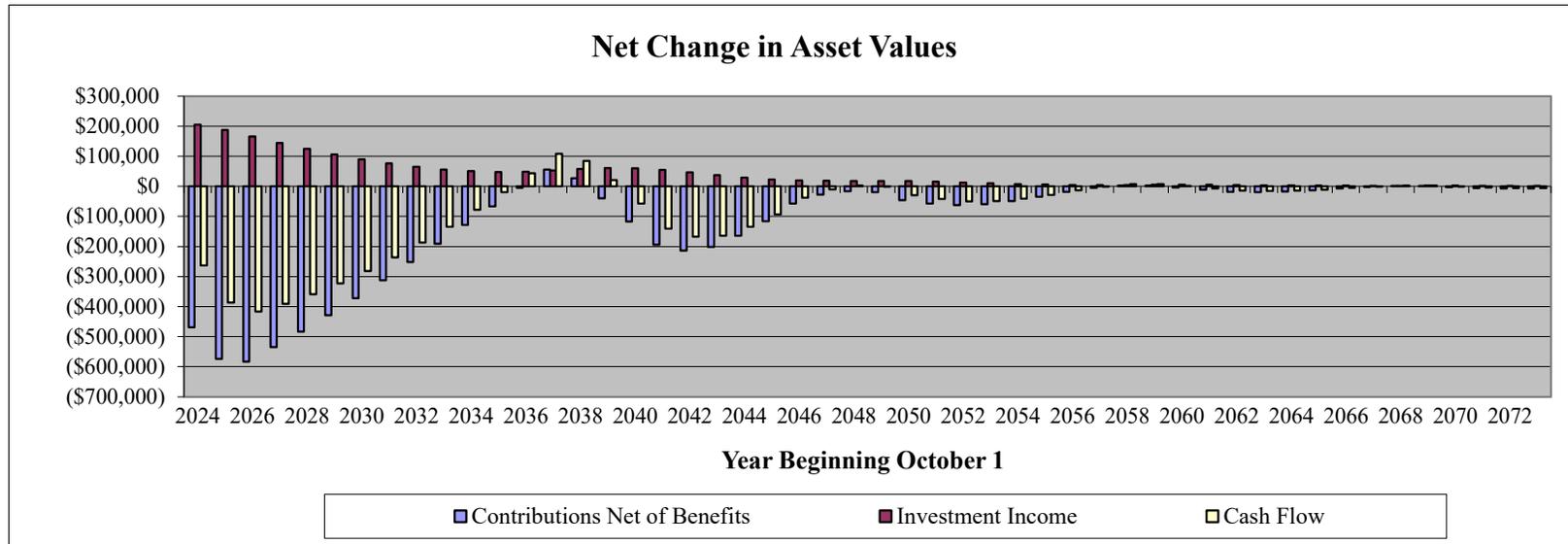
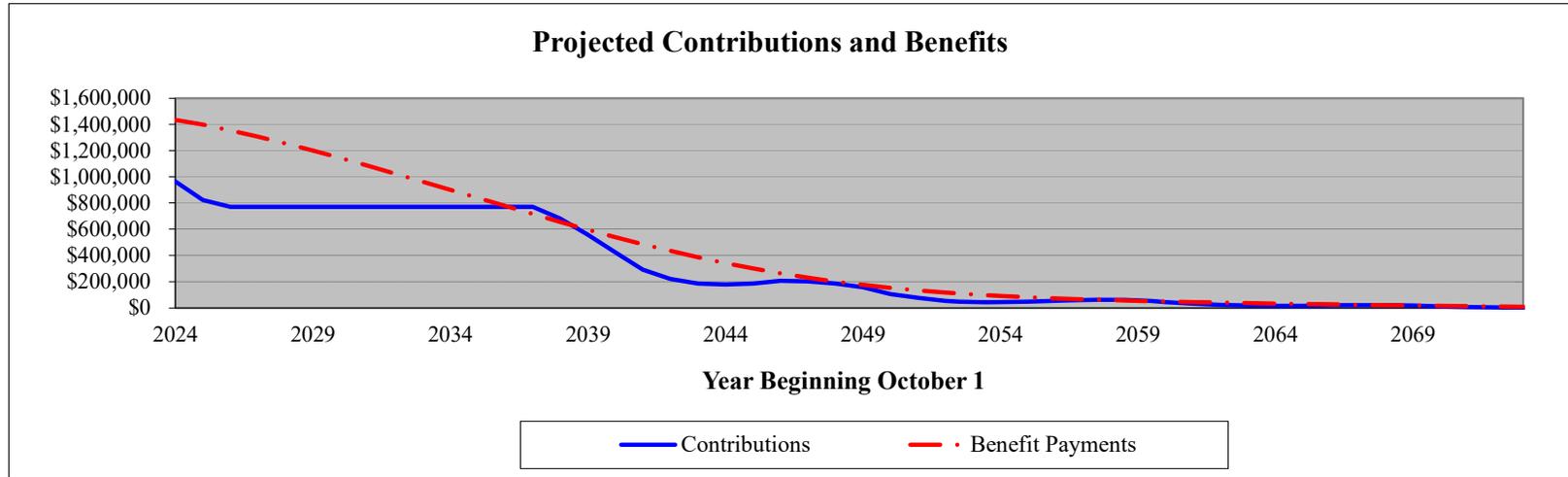
**Cash Flow Projection**  
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$607,092,925	\$3,961,444	0.00127	\$965,374	\$1,434,062	\$205,163	(\$263,525)	\$3,697,919	2025
2025	607,092,925	3,697,919	0.00127	822,611	1,396,800	187,807	(386,382)	3,311,538	2026
2026	607,092,925	3,311,538	0.00127	771,008	1,353,975	166,318	(416,649)	2,894,889	2027
2027	607,092,925	2,894,889	0.00127	771,008	1,306,419	144,692	(390,719)	2,504,170	2028
2028	607,092,925	2,504,170	0.00127	771,008	1,254,939	124,599	(359,332)	2,144,838	2029
2029	607,092,925	2,144,838	0.00127	771,008	1,200,269	106,319	(322,942)	1,821,896	2030
2030	607,092,925	1,821,896	0.00127	771,008	1,143,071	90,109	(281,954)	1,539,942	2031
2031	607,092,925	1,539,942	0.00127	771,008	1,083,937	76,206	(236,723)	1,303,218	2032
2032	607,092,925	1,303,218	0.00127	771,008	1,023,393	64,829	(187,556)	1,115,662	2033
2033	607,092,925	1,115,662	0.00127	771,008	961,907	56,182	(134,717)	980,946	2034
2038	607,092,925	1,035,711	0.00108	681,259	654,765	57,683	84,177	1,119,888	2039
2043	607,092,925	775,238	0.00064	184,372	385,559	37,180	(164,007)	611,232	2044
2048	607,092,925	336,021	0.00033	184,063	199,962	18,050	2,151	338,172	2049
2053	607,092,925	215,421	0.00017	42,723	102,589	10,224	(49,642)	165,779	2054
2058	607,092,925	81,803	0.00010	61,374	58,747	4,570	7,197	89,000	2059
2063	607,092,925	77,152	0.00006	16,502	35,967	3,715	(15,750)	61,402	2064
2068	607,092,925	30,849	0.00003	19,475	19,348	1,700	1,827	32,676	2069
2073	607,092,925	23,955	0.00001	0	7,312	1,119	(6,193)	17,761	2074



# 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**

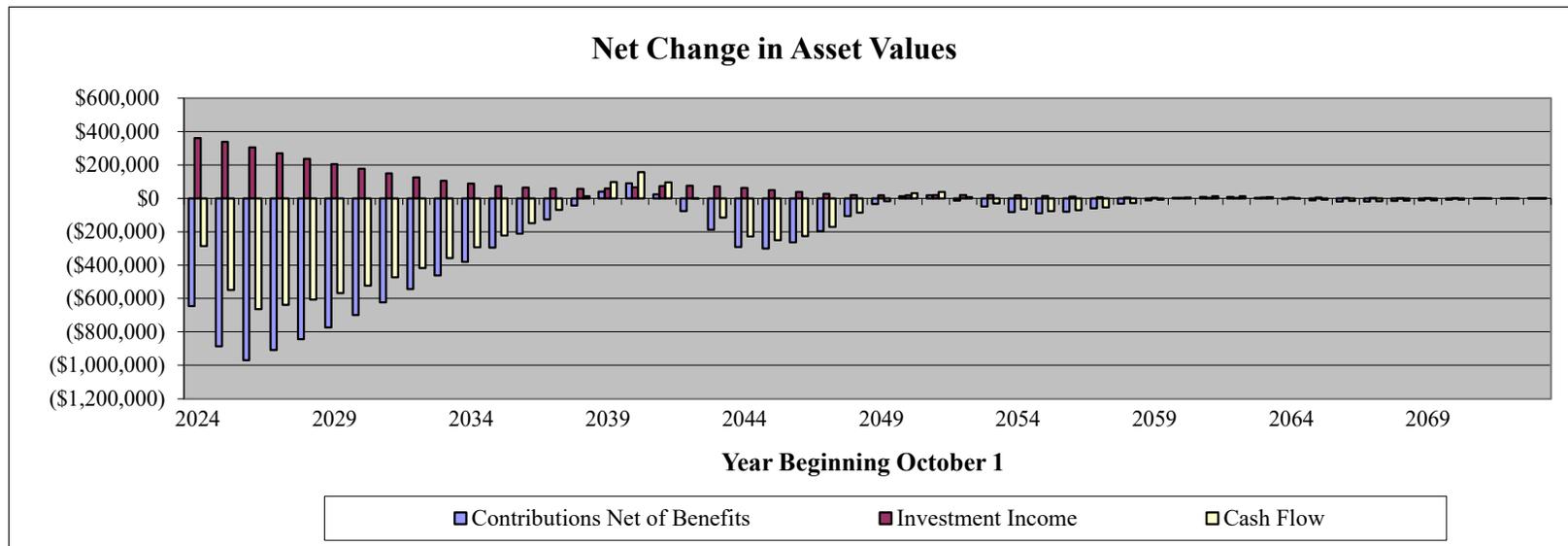
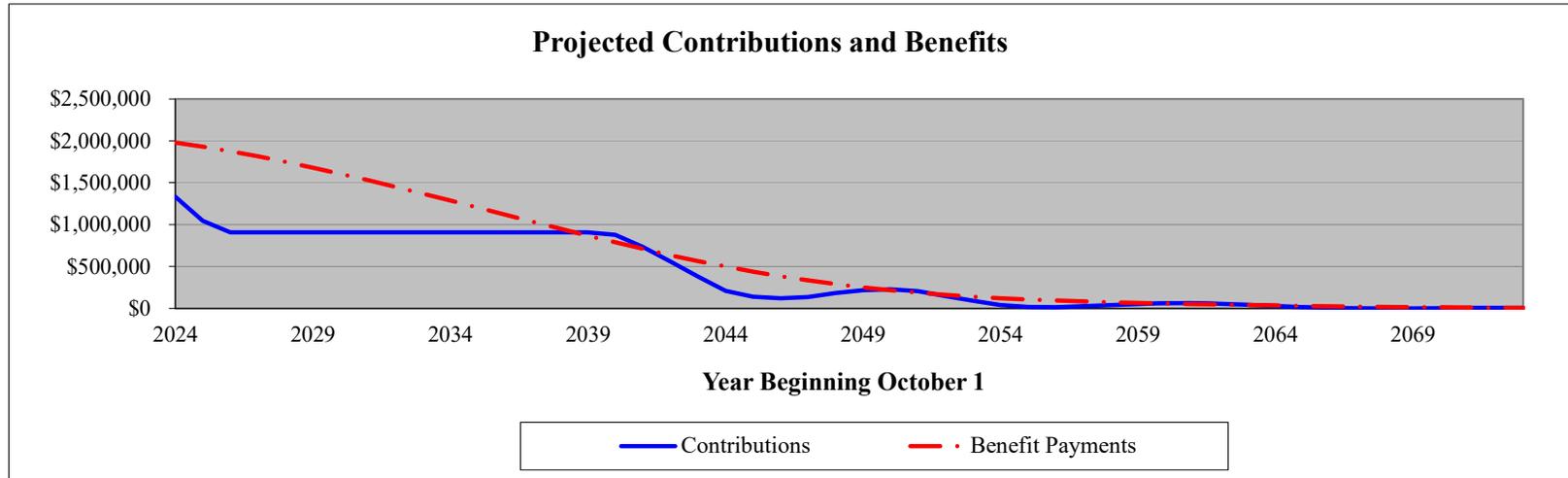
**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$533,298,230	\$6,862,070	0.00170	\$1,333,645	\$1,980,006	\$359,877	(\$286,484)	\$6,575,586	2025
2025	533,298,230	6,575,586	0.00170	1,043,931	1,931,057	337,588	(549,538)	6,026,048	2026
2026	533,298,230	6,026,048	0.00170	906,607	1,875,918	305,133	(664,178)	5,361,869	2027
2027	533,298,230	5,361,869	0.00170	906,607	1,815,237	270,250	(638,380)	4,723,489	2028
2028	533,298,230	4,723,489	0.00170	906,607	1,749,684	236,918	(606,159)	4,117,330	2029
2029	533,298,230	4,117,330	0.00170	906,607	1,679,893	205,472	(567,814)	3,549,516	2030
2030	533,298,230	3,549,516	0.00170	906,607	1,606,440	176,236	(523,597)	3,025,919	2031
2031	533,298,230	3,025,919	0.00170	906,607	1,529,872	149,515	(473,750)	2,552,169	2032
2032	533,298,230	2,552,169	0.00170	906,607	1,450,725	125,606	(418,512)	2,133,657	2033
2033	533,298,230	2,133,657	0.00170	906,607	1,369,521	104,791	(358,123)	1,775,534	2034
2038	533,298,230	1,042,205	0.00170	906,607	950,028	56,143	12,722	1,054,928	2039
2043	533,298,230	1,402,651	0.00106	377,224	564,246	72,072	(114,950)	1,287,701	2044
2048	533,298,230	412,181	0.00054	182,068	287,573	19,807	(85,698)	326,483	2049
2053	533,298,230	383,116	0.00026	89,272	138,558	19,734	(29,552)	353,564	2054
2058	533,298,230	86,415	0.00013	38,907	71,799	3,860	(29,032)	57,383	2059
2063	533,298,230	76,574	0.00007	40,090	37,847	4,272	6,515	83,088	2064
2068	533,298,230	43,303	0.00003	0	15,853	1,952	(13,901)	29,401	2069
2073	533,298,230	7,501	0.00001	4,730	4,142	428	1,016	8,516	2074



# 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

**No Assumed Growth in Assessed Property, Certified Millage Rates, Assume 5.50% on Investments**

<b>Year Beginning July 1</b>	<b>Value of Assessed Property</b>	<b>MVA Balance July 1</b>	<b>Millage Rate</b>	<b>Contributions</b>	<b>Benefit Payments</b>	<b>Investment Income</b>	<b>Cash Flow</b>	<b>MVA Balance June 30</b>	<b>Year Ending June 30</b>
2024	\$55,937,302	\$224,916	0.00238	\$169,097	\$146,645	\$12,980	\$35,432	\$260,348	2025
2025	55,937,302	260,348	0.00238	142,221	145,927	14,219	10,513	270,860	2026
2026	55,937,302	270,860	0.00238	117,381	144,863	14,152	(13,330)	257,530	2027
2027	55,937,302	257,530	0.00238	103,116	143,411	13,071	(27,224)	230,307	2028
2028	55,937,302	230,307	0.00238	92,019	141,527	11,324	(38,184)	192,123	2029
2029	55,937,302	192,123	0.00238	92,019	139,171	9,287	(37,865)	154,258	2030
2030	55,937,302	154,258	0.00238	107,769	136,304	7,710	(20,825)	133,432	2031
2031	55,937,302	133,432	0.00238	122,034	132,891	7,044	(3,813)	129,620	2032
2032	55,937,302	129,620	0.00230	132,951	128,909	7,239	11,281	140,901	2033
2033	55,937,302	140,901	0.00222	129,904	124,352	7,900	13,452	154,352	2034
2038	55,937,302	190,659	0.00168	69,019	93,909	9,811	(15,079)	175,580	2039
2043	55,937,302	82,586	0.00102	47,096	57,161	4,269	(5,796)	76,790	2044
2048	55,937,302	69,702	0.00047	12,953	26,274	3,472	(9,849)	59,853	2049
2053	55,937,302	17,323	0.00015	1,981	8,219	784	(5,454)	11,870	2054
2058	55,937,302	5,663	0.00003	391	1,477	282	(804)	4,859	2059
2063	55,937,302	3,529	0.00000	0	127	191	64	3,593	2064
2068	55,937,302	4,294	0.00000	0	5	236	231	4,525	2069
2073	55,937,302	5,601	0.00000	0	0	308	308	5,909	2074



# Mississippi Municipal Retirement Systems City of Yazoo City

## 50 Year Cash Flow Projection Based on Valuation Assumptions

