

MUNICIPAL FIRE AND POLICE RETIREMENT SYSTEM OF IOWA

Governmental Accounting Standards Board
Statement No. 68

Year End Disclosure
June 30, 2020

SilverStone
GROUP



 **HUB**

March 5, 2020

Board of Trustees
Municipal Fire and Police Retirement System of Iowa
7155 Lake Drive, Suite 201
West Des Moines, IA 50266

RE: GASB No. 68 Disclosure Report

Dear Board Members:

We are pleased to submit this actuarial report of the Municipal Fire and Police Retirement System of Iowa. This report will summarize the costs, liabilities and assets based on asset values as of June 30, 2019, member census data as of July 1, 2019 and current System provisions, all of which were supplied by the System to be reported in the financial statements of participating employers for the fiscal year ending June 30, 2020. These values have been determined to satisfy the requirements of the Governmental Accounting Standards Board Statement No. 68. We have relied on the accuracy of the information that was supplied to us by the System.

Actuarial computations based on GASB No. 68 included in this report have been prepared to fulfill employer accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of GASB Statement No. 68. Actuarial determinations prepared for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein. Accordingly, additional determinations are needed to measure benefit security at plan termination or to evaluate adequacy of plan funding on an ongoing basis.

All costs and liabilities were determined in accordance with generally accepted actuarial principles and procedures and are based on the actuarial assumptions and methods prescribed by the Board of Trustees in accordance with Iowa State Code Section 411.5.10-11, which results in the assumptions being considered prescribed assumptions by another party under applicable actuarial standards of practice. To the best of our knowledge, the information supplied in this report is complete and accurate and in our opinion, the assumptions are reasonably related to the experience of the System and to conform with those prescribed by the Board of Trustees. However, future measures may differ significantly from the current measurement. Due to the limited scope of our assignment, this report does not include an analysis of the potential range of such future measures. The undersigned meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained in this report.

Sincerely,



Glen C. Gahan, FSA, EA, MAAA
Principal



Michael S. Ehmke, ASA, EA, MAAA
Principal

GCG/MSE/je

Table of Contents

	<u>Page</u>
Overview of Statement No. 68	1
Notes to Financial Statements	2
Net Pension Liability	3
Schedule of Changes in Net Pension Liability	4
Schedule of Contributions	5
Pension Expense	6
Deferred Inflows and Outflows of Resources	7
Schedule of Deferred Inflows and Outflows of Resources	8
Actuarial Assumptions	9
Net Pension Liability by City	11
Sensitivity Analysis of Net Pension Liability by City	12
Schedule of Contributions by City	13
Pension Expense by City	14
Deferred Inflows and Outflows of Resources by City	15
Future Deferred Inflows and Outflows of Resources to be Recognized by City	17

Overview of Statement No. 68

In an effort to enhance the understandability and usefulness of the pension information that is included in the financial reports of pension plans for state and local governments, the Governmental Accounting Standards Board (GASB) has issued Statement No. 68 - Accounting and Financial Reporting for Pensions (effective for fiscal years beginning after June 15, 2014) which replace the requirements of Statement No. 27.

GASB Statement No. 68 establishes financial reporting standards for state and local governmental employers whose employees are provided with defined benefit pension plans. The statement requires financial statements and accompanying notes disclosing information relative to the funded status of the plan, pension accounting expense, historical contribution patterns and certain other information.

- Notes to the financial statements should include description of benefits provided, plan investment information, and significant assumptions used to calculate the total pension liability.
- The statement of net pension liability presents plan assets, liabilities, and sensitivity to the net pension liability to changes in the discount rate as of the end of the reporting period.
- The statement of changes in net pension liability presents changes in the total pension liability due to service cost, interest and other items and changes in the plan fiduciary net position due to contributions, investment income and deductions such as benefit payments and administrative expenses for the reporting period.
- The schedule of contributions presents the actuarially determined contributions and any contribution deficiency or excess in relation to the covered employee payroll as of the end of the reporting period.
- The pension expense is the change in the net pension liability from the prior year to the current year, with limited smoothing for deferred items.
- The statement of deferred inflows and outflows of resources presents the gains and losses for economic and demographic changes, changes in assumptions and investment performance.

GASB Statement No. 68 requires the net pension liability to be measured as the present value of projected benefit payments to current active and inactive employees that is attributed to past periods of employee service, or total pension liability, less the plan's fiduciary net position. All assumptions underlying the determination of the total pension liability are required to be made in conformity with Actuarial Standards of Practice.

This statement requires most changes in the net pension liability be included in pension expense in the period of the change. Changes of economic and demographic assumptions and differences between expected and actual experience are to be included in pension expense over a closed period equal to the average remaining service of all active and inactive employees. Differences between projected investment earnings and actual investment earnings are to be included in pension expense over a closed 5 year period.

Notes to Financial Statements

Plan Administration

The Municipal Fire and Police Retirement System of Iowa (System) was created by the Iowa General Assembly in 1990 to establish a statewide retirement system for fire and police personnel covered by the provisions of Iowa Code Chapter 411. The programs of the System include the payment of pension benefits for service retirement, ordinary disability retirement, accidental disability retirement, survivors of deceased members and the refund of contributions upon withdrawal by a terminated member.

The System is managed by a Board of Trustees established by Iowa Code Chapter 411. The Board of Trustees represents the police officer and firefighter memberships, Cities, and citizens of Iowa, while the Iowa General Assembly provides the System with direction and oversight.

Plan Membership

As of July 1, 2019 System membership consisted of the following:

Inactive members (or beneficiaries) currently receiving benefits	4,148
Inactive members entitled to but not yet receiving benefits	374
Active members	<u>4,086</u>
Total	8,608

Benefits Provided

Retirement benefits for members are based on a formula using a member's years of service, the average of a member's highest three years of earned wages, and a multiplier. Members are vested upon attaining four years of membership service. Disability retirement benefits are determined in the same manner as retirement benefits but reflect an additional minimum percentage of the member's highest three years of earned wages. Death benefits are also provided based on a specified percentage of the member's highest three years of earned wages.

An annual cost-of-living adjustment is provided to each member receiving a monthly retirement benefit except for those who terminated due to reasons other than a service retirement, disability retirement or death. The annual adjustment is equal to 1.5% of the prior year benefit plus a fixed dollar amount depending on the number of years since the benefit commenced. See the July 1, 2019 actuarial valuation report for a complete summary of System provisions.

Contributions

The Board of Trustees had adopted a funding policy that provides reasonable assurance the cost of benefits provided to the System's members will be funded in an equitable and sustainable manner. As part of the Board of Trustees' funding policy, the unfunded accrued liability is amortized as a level dollar, closed, layered methodology. Changes in the unfunded accrued liability as measured on each valuation date following July 1, 2013 are amortized as a level dollar amount over a 25-year closed period following each valuation date.

Investment Policy

The investment policy and decisions are governed by the Board of Trustees.

Net Pension Liability

The components of the net pension liability of the System at June 30, 2019 were as follows:

Total Pension Liability	\$3,269,051,818
Plan Fiduciary Net Position	<u>(2,613,125,249)</u>
Net Pension Liability	655,926,569
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	79.94%

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability, calculated using the current discount rate of 7.50%, as well as the net pension liability calculated using a discount rate that is 1-percentage point lower (6.50%) or 1-percentage point higher (8.50%) than the current rate:

	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Total Pension Liability	\$3,681,088,710	\$3,269,051,818	\$2,927,804,623
Plan Fiduciary Net Position	<u>(2,613,125,249)</u>	<u>(2,613,125,249)</u>	<u>(2,613,125,249)</u>
Net Pension Liability	1,067,963,461	655,926,569	314,679,374

Schedule of Changes in Net Pension Liability

	Fiscal Year Ending June 30, 2019
Total Pension Liability - Beginning of Year	\$3,145,031,474
Service Cost	53,017,674
Interest	233,282,508
Changes of Benefit Terms	0
Difference between Expected and Actual Experience	16,177,781
Changes of Assumptions	0
Benefit Payments, including refunds	(178,457,619)
Net Change in Total Pension Liability	124,020,344
 Total Pension Liability - End of Year	 3,269,051,818
 Plan Fiduciary Net Position - Beginning of Year	 2,549,627,987
Contributions - Employer and State	78,766,019
Contributions - Member	28,472,627
Net Investment Income	136,635,233
Benefit Payments, including refunds	(178,457,619)
Administrative Expenses	(1,797,284)
Other	(121,714)
Net Change in Plan Fiduciary Net Position	63,497,262
 Plan Fiduciary Net Position - End of Year	 2,613,125,249
 Net Pension Liability - End of Year	 655,926,569
 Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	 79.94%
 Covered-Employee Payroll*	 302,713,506
 Net Pension Liability as a Percentage of the Covered- Employee Payroll	 216.68%

*Actual for noted period as provided by the System.

Schedule of Contributions

	Fiscal Year Ending June 30, 2019
Actuarially Determined Contribution	\$78,766,019
Contributions in Relation to the Actuarially Determined	<u>78,766,019</u>
Contribution Deficiency/(Excess)	0
Covered-Employee Payroll*	302,713,506
Contributions as a Percentage of Covered-Employee Payroll	26.02%

*Actual for noted period as provided by the System.

Methods and Assumptions for Actuarially Determined Contribution

Actuarially determined contribution rates are calculated as of July 1, two years prior to the end of the fiscal year in which contributions are reported.

Valuation Date	July 1, 2019
Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Five-Year Smoothed Market
Amortization Method	Level Dollar, Closed, Layered
Amortization Period	25 Years
Salary Increases	3.75% to 15.11%
Investment Rate of Return	7.50%
Mortality Table	RP 2014 Blue Collar Healthy Annuitant table with males set-forward zero years, females set-forward two years and disableds set-forward three years (male only rates), with generational projection of future mortality improvement with 50% of Scale BB beginning in 2017.

The actuarial methods and assumptions were adopted by the Board of Trustees in accordance with Iowa State Code Section 411.5.10-11, which results in the methods and assumptions being considered prescribed assumptions by another party under applicable actuarial standards of practice. The Board of Trustees adopts the actuarial assumptions based on the actuarial investigation completed every five years. The most recently completed investigation was for the 10-year period ending June 30, 2017.

Pension Expense

Pension Expense	Fiscal Year Ending June 30, 2019
Service Cost	\$53,017,674
Interest on Total Pension Liability	233,282,508
Effect of Plan Changes	0
Administrative Expenses	1,797,284
Other Changes in Fiduciary Net Position	121,714
Member Contributions	(28,472,627)
Expected Investment Return Net of Investment Expenses	(188,525,786)
Recognition of Deferred (Inflows)/Outflows of Resources	
Economic/Demographic (Gains)/Losses	7,635,727
Assumption Changes	16,017,449
Investment (Gains)/Losses	44,875,210
Pension Expense	139,749,153

Expected Remaining Service Lives

Under GASB 68, gains and losses which are amortized over future years are referred to as deferred inflows or gains, and deferred outflows or losses. Investment gains and losses are recognized over a closed five year period. Economic and demographic gains and losses and changes in the total pension liability due to changes in assumptions are recognized over a closed period equal to the average expected remaining service lives of all covered active and inactive members, determined as of the beginning of the measurement period. The amortization period is calculated as the weighted average of expected remaining service lives assuming zero years for all inactive members.

The amortization period for the June 30, 2018 to June 30, 2019 measurement period was determined as follows:

	Number of Members	Expected Remaining Service Lives
As of June 30, 2018		
Active Members	4,003	11.239
Inactive Members	4,474	0.000
 Weighted Average Rounded to Nearest Tenth		 5.3

Deferred Inflows and Outflows of Resources

Under GASB 68, gains and losses which are amortized over future years are referred to as deferred inflows or gains, and deferred outflows or losses. Investment gains and losses are recognized over a closed five year period. Economic and demographic gains and losses and changes in the total pension liability due to changes in assumptions are recognized over a closed period equal to the average expected remaining service lives of all covered active and inactive members, determined as of the beginning of the measurement period. As of June 30, 2019 the deferred inflows and outflows of resources are as follows:

	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual experience	(6,137,873)	22,586,665
Changes of assumptions	(2,854,794)	32,932,879
Net difference between projected and actual earnings	(39,418,299)	75,557,353
Contributions made subsequent to measurement date	TBD	TBD
Total	(48,410,966)	131,076,897

Contributions made subsequent to the measurement date will not be known until after the end of the reporting period.

Other amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in future years' pension expense as follows:

Year ending	Annual
June 30:	Recognition
2020	42,958,415
2021	5,647,107
2022	18,860,997
2023	14,283,691
2024	915,721
Thereafter	0

Schedule of Deferred Inflows and Outflows of Resources

	Original Amount	Date Established	Original Recognition Period*	Amount Recognized in Expense June 30, 2019	Balance of Deferred Inflows June 30, 2019	Balance of Deferred Outflows June 30, 2019
Economic/Demographic (Gains)/Losses	16,177,781	6/30/2019	5.3	3,052,412	0	13,125,369
	(9,748,387)	6/30/2018	5.4	(1,805,257)	(6,137,873)	0
	12,891,275	6/30/2017	5.4	2,387,273	0	5,729,456
	7,643,609	6/30/2016	5.5	1,389,747	0	2,084,621
	15,374,059	6/30/2015	5.6	2,745,368	0	1,647,219
	(1,248,941)	6/30/2014	5.6	(133,816)	0	0
				7,635,727	(6,137,873)	22,586,665
Assumption Changes	0	6/30/2019	5.3	0	0	0
	21,266,192	6/30/2018	5.4	3,938,184	0	13,389,824
	39,751,096	6/30/2017	5.4	7,361,314	0	17,667,154
	(10,467,574)	6/30/2016	5.5	(1,903,195)	(2,854,794)	0
	17,508,411	6/30/2015	5.6	3,126,502	0	1,875,901
	32,616,664	6/30/2014	5.6	3,494,644	0	0
				16,017,449	(2,854,794)	32,932,879
Investment (Gains)/Losses	51,890,553	6/30/2019	5.0	10,378,111	0	41,512,442
	(3,009,437)	6/30/2018	5.0	(601,887)	(1,805,663)	0
	(94,031,590)	6/30/2017	5.0	(18,806,318)	(37,612,636)	0
	170,224,547	6/30/2016	5.0	34,044,909	0	34,044,911
	99,301,983	6/30/2015	5.0	19,860,395	0	0
				44,875,210	(39,418,299)	75,557,353

*Investment (gains) and losses are recognized in pension expense over a closed period of five years while economic/demographic (gains) and losses along with assumption changes are recognized over a closed period equal to the weighted average of expected remaining service lives for all active and inactive members.

Actuarial Assumptions

The costs and total pension liability were determined by the following actuarial assumptions:

Measurement Date	June 30, 2019
Valuation Date	June 30, 2019
Reporting Date for Employers	June 30, 2020
Measurement Period	June 30, 2018 to June 30, 2019
Investment Rate of Return	7.50%
Discount Rate	7.50%
Inflation Rate	3.00%
Salary Increases	3.75% to 15.11%
Mortality Table	RP 2014 Blue Collar Healthy Annuitant table with males set-forward zero years, females set-forward two years and disableds set-forward three years (male only rates), with generational projection of future mortality improvement with 50% of Scale BB beginning in 2017.
Actuarial Cost Method	Entry Age Normal, Level % of Pay

The actuarial assumptions used in the valuation were adopted by the Board of Trustees in accordance with Iowa Code Section 411.5.10-11, which results in the assumptions being considered prescribed assumptions by another party under applicable actuarial standards of practice. See the July 1, 2019 actuarial valuation report for a complete description of all actuarial assumptions and methods.

Per Iowa Code Section 411, the System's actuary conducts a formal investigation, or experience study, of the primary assumptions every five years. The most recent investigation was completed for the 10-year period ending June 30, 2017.

Actuarial Assumptions

Discount Rate

GASB 68 generally requires a blended discount rate be used to measure the total pension liability. The long-term expected return on plan investments may be used as the discount rate to the extent the System's fiduciary net position is projected to cover future benefit payments and administrative expenses. Determining the discount rate under GASB 68 will often require the actuary to perform complex projections of future benefit payments and asset values to determine solvency. However, GASB 68 does allow for alternative evaluations of projected solvency, if such evaluation can reliably be made. GASB 68 does not contemplate a specific method for making an alternative evaluation of sufficiency but rather it is left to professional judgement.

The System determines an Actuarially Determined Contribution (ADC) which is the basis for the annual City contributions. City contributions will be made at a rate equal to the difference between an actuarially determined rate and the member rate of 9.40% of covered payroll, based on Iowa Code Section 411. The ADC is based on a closed, layered amortization period, which means that payment of the full ADC each year will result in the System at a 100% funded position by the end of the amortization period if future experience follows assumptions. GASB 68 specifies the projections regarding future solvency assume plan assets earn the assumed investment return and there are no future changes in plan provisions, actuarial methods or assumptions, which results in the projections not reflecting any adverse future experience which might impact the System's funded position. Based on these considerations, it is our professional opinion the detailed depletion date projections outlined in GASB 68 would clearly indicate the System's fiduciary net position is always projected to be sufficient to satisfy future benefit payments and administrative expenses.

The discount rate used to measure the total pension liability as of June 30, 2019 was 7.50%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made at 9.40% of covered payroll and the City contributions will be made at rates equal to the difference between actuarially determined rates and the member rate. Therefore, the long-term expected rate of return on System investments was applied to all periods of projected benefit payments to determine the total pension liability.

Allocation Basis of Certain Measures Amongst Cities

The System is a cost-sharing multiple employer plan as defined under GASB 68. Each employer's proportionate share of certain measures such as the net pension liability, pension expense and deferred inflows and outflows of resources is to be based on the proportionate share of the individual employer's projected long-term contributions to the System as compared to the total projected long-term contributions of all employers participating in the System. Since the same contribution rate of covered payroll will apply to all participating Cities in the System for future contributions, each Cities' proportionate share was based on the most recent contribution amount as compared to the total of all Cities' contributions.

Net Pension Liability by City

The allocation amongst all Cities of the Net Pension Liability of the System at June 30, 2019 was as follows:

City	Proportionate Share (%)	Share of NPL	Covered Payroll	NPL as % of Covered Payroll
Ames	2.66%	17,470,814	8,062,871	216.68%
Ankeny	2.39%	15,708,812	7,249,698	216.68%
Bettendorf	1.88%	12,300,663	5,676,820	216.68%
Boone	0.57%	3,713,227	1,713,673	216.68%
Burlington	1.88%	12,327,602	5,689,252	216.68%
Camanche	0.23%	1,536,593	709,146	216.68%
Carroll	0.28%	1,830,022	844,565	216.68%
Cedar Falls	1.86%	12,232,171	5,645,210	216.68%
Cedar Rapids	9.07%	59,465,024	27,443,416	216.68%
Centerville	0.24%	1,566,576	722,983	216.68%
Charles City	0.32%	2,070,741	955,657	216.68%
Clinton	1.95%	12,817,487	5,915,337	216.68%
Clive	0.59%	3,848,072	1,775,905	216.68%
Council Bluffs	5.77%	37,818,712	17,453,531	216.68%
Creston	0.27%	1,771,218	817,426	216.68%
Davenport	7.78%	51,029,867	23,550,548	216.68%
Decorah	0.30%	1,990,435	918,596	216.68%
Des Moines	18.44%	120,934,295	55,811,806	216.68%
Dewitt	0.21%	1,386,962	640,091	216.68%
Dubuque	4.69%	30,775,196	14,202,912	216.68%
Estherville	0.23%	1,541,093	711,222	216.68%
Evansdale	0.13%	884,701	408,294	216.68%
Fairfield	0.30%	1,959,148	904,157	216.68%
Fort Dodge	1.56%	10,258,796	4,734,488	216.68%
Fort Madison	0.69%	4,524,260	2,087,969	216.68%
Grinnell	0.41%	2,692,887	1,242,781	216.68%
Indianola	0.46%	3,035,117	1,400,722	216.68%
Iowa City	3.68%	24,170,107	11,154,629	216.68%
Keokuk	0.77%	5,029,520	2,321,150	216.68%
Knoxville	0.25%	1,651,820	762,323	216.68%
Lemars	0.33%	2,143,253	989,122	216.68%
Maquoketa	0.21%	1,353,406	624,604	216.68%
Marion	2.03%	13,327,405	6,150,666	216.68%
Marshalltown	1.44%	9,473,600	4,372,115	216.68%
Mason City	1.95%	12,806,619	5,910,321	216.68%
Muscatine	1.77%	11,597,674	5,352,386	216.68%
Newton	0.99%	6,463,756	2,983,057	216.68%
Oelwein	0.21%	1,368,276	631,466	216.68%
Oskaloosa	0.43%	2,827,949	1,305,113	216.68%
Ottumwa	1.42%	9,334,747	4,308,034	216.68%
Pella	0.35%	2,327,523	1,074,164	216.68%
Sioux City	6.23%	40,879,981	18,866,323	216.68%
Spencer	0.48%	3,119,029	1,439,448	216.68%
Storm Lake	0.38%	2,478,438	1,143,812	216.68%
Urbandale	2.18%	14,309,773	6,604,034	216.68%
Waterloo	5.58%	36,614,772	16,897,907	216.68%
Waverly	0.37%	2,397,339	1,106,385	216.68%
Webster City	0.29%	1,871,267	863,599	216.68%
West Des Moines	3.49%	22,889,824	10,563,772	216.68%
Total	100.00%	655,926,569	302,713,506	216.68%

Sensitivity Analysis of Net Pension Liability by City

The allocation amongst all Cities of the sensitivity in Net Pension Liability of the System at June 30, 2019 was as follows:

City	Proportionate Share (%)	Current Discount Rate		
		1% Decrease	7.50%	1% Increase
Ames	2.66%	28,445,549	17,470,814	8,381,586
Ankeny	2.39%	25,576,700	15,708,812	7,536,269
Bettendorf	1.88%	20,027,636	12,300,663	5,901,217
Boone	0.57%	6,045,784	3,713,227	1,781,413
Burlington	1.88%	20,071,498	12,327,602	5,914,141
Camanche	0.23%	2,501,843	1,536,593	737,177
Carroll	0.28%	2,979,597	1,830,022	877,949
Cedar Falls	1.86%	19,916,120	12,232,171	5,868,358
Cedar Rapids	9.07%	96,819,485	59,465,024	28,528,218
Centerville	0.24%	2,550,660	1,566,576	751,561
Charles City	0.32%	3,371,529	2,070,741	993,433
Clinton	1.95%	20,869,117	12,817,487	6,149,162
Clive	0.59%	6,265,336	3,848,072	1,846,104
Council Bluffs	5.77%	61,575,495	37,818,712	18,143,447
Creston	0.27%	2,883,854	1,771,218	849,738
Davenport	7.78%	83,085,571	51,029,867	24,481,470
Decorah	0.30%	3,240,778	1,990,435	954,907
Des Moines	18.44%	196,902,236	120,934,295	58,017,973
Dewitt	0.21%	2,258,219	1,386,962	665,393
Dubuque	4.69%	50,107,415	30,775,196	14,764,335
Estherville	0.23%	2,509,169	1,541,093	739,336
Evansdale	0.13%	1,440,448	884,701	424,433
Fairfield	0.30%	3,189,836	1,959,148	939,897
Fort Dodge	1.56%	16,703,119	10,258,796	4,921,636
Fort Madison	0.69%	7,366,289	4,524,260	2,170,504
Grinnell	0.41%	4,384,492	2,692,887	1,291,907
Indianola	0.46%	4,941,702	3,035,117	1,456,091
Iowa City	3.68%	39,353,172	24,170,107	11,595,557
Keokuk	0.77%	8,188,941	5,029,520	2,412,902
Knoxville	0.25%	2,689,452	1,651,820	792,457
Lemars	0.33%	3,489,592	2,143,253	1,028,221
Maquoketa	0.21%	2,203,582	1,353,406	649,294
Marion	2.03%	21,699,352	13,327,405	6,393,794
Marshalltown	1.44%	15,424,682	9,473,600	4,544,939
Mason City	1.95%	20,851,421	12,806,619	6,143,948
Muscatine	1.77%	18,883,046	11,597,674	5,563,959
Newton	0.99%	10,524,128	6,463,756	3,100,973
Oelwein	0.21%	2,227,793	1,368,276	656,427
Oskaloosa	0.43%	4,604,396	2,827,949	1,356,702
Ottumwa	1.42%	15,198,605	9,334,747	4,478,325
Pella	0.35%	3,789,615	2,327,523	1,116,624
Sioux City	6.23%	66,559,776	40,879,981	19,612,084
Spencer	0.48%	5,078,326	3,119,029	1,496,348
Storm Lake	0.38%	4,035,332	2,478,438	1,189,025
Urbandale	2.18%	23,298,819	14,309,773	6,865,083
Waterloo	5.58%	59,615,269	36,614,772	17,565,859
Waverly	0.37%	3,903,289	2,397,339	1,150,118
Webster City	0.29%	3,046,750	1,871,267	897,736
West Des Moines	3.49%	37,268,646	22,889,824	10,981,344
Total	100.00%	1,067,963,461	655,926,569	314,679,374

Schedule of Contributions by City

The allocation amongst all Cities of the contributions to the System for the period ended June 30, 2019 was as follows:

City	Proportionate Share (%)	Actuarially Determined Contribution	Contributions in Relation to the ADC	Contribution Deficiency/ (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
Ames	2.66%	2,097,958	2,097,958	0	8,062,871	26.02%
Ankeny	2.39%	1,886,371	1,886,371	0	7,249,698	26.02%
Bettendorf	1.88%	1,477,108	1,477,108	0	5,676,820	26.02%
Boone	0.57%	445,898	445,898	0	1,713,673	26.02%
Burlington	1.88%	1,480,343	1,480,343	0	5,689,252	26.02%
Camanche	0.23%	184,520	184,520	0	709,146	26.02%
Carroll	0.28%	219,756	219,756	0	844,565	26.02%
Cedar Falls	1.86%	1,468,883	1,468,883	0	5,645,210	26.02%
Cedar Rapids	9.07%	7,140,774	7,140,774	0	27,443,416	26.02%
Centerville	0.24%	188,120	188,120	0	722,983	26.02%
Charles City	0.32%	248,662	248,662	0	955,657	26.02%
Clinton	1.95%	1,539,170	1,539,170	0	5,915,337	26.02%
Clive	0.59%	462,090	462,090	0	1,775,905	26.02%
Council Bluffs	5.77%	4,541,407	4,541,407	0	17,453,531	26.02%
Creston	0.27%	212,694	212,694	0	817,426	26.02%
Davenport	7.78%	6,127,849	6,127,849	0	23,550,548	26.02%
Decorah	0.30%	239,018	239,018	0	918,596	26.02%
Des Moines	18.44%	14,522,226	14,522,226	0	55,811,806	26.02%
Dewitt	0.21%	166,551	166,551	0	640,091	26.02%
Dubuque	4.69%	3,695,596	3,695,596	0	14,202,912	26.02%
Estherville	0.23%	185,060	185,060	0	711,222	26.02%
Evansdale	0.13%	106,238	106,238	0	408,294	26.02%
Fairfield	0.30%	235,261	235,261	0	904,157	26.02%
Fort Dodge	1.56%	1,231,913	1,231,913	0	4,734,488	26.02%
Fort Madison	0.69%	543,290	543,290	0	2,087,969	26.02%
Grinnell	0.41%	323,371	323,371	0	1,242,781	26.02%
Indianola	0.46%	364,467	364,467	0	1,400,722	26.02%
Iowa City	3.68%	2,902,433	2,902,433	0	11,154,629	26.02%
Keokuk	0.77%	603,963	603,963	0	2,321,150	26.02%
Knoxville	0.25%	198,356	198,356	0	762,323	26.02%
Lemars	0.33%	257,369	257,369	0	989,122	26.02%
Maquoketa	0.21%	162,522	162,522	0	624,604	26.02%
Marion	2.03%	1,600,403	1,600,403	0	6,150,666	26.02%
Marshalltown	1.44%	1,137,624	1,137,624	0	4,372,115	26.02%
Mason City	1.95%	1,537,865	1,537,865	0	5,910,321	26.02%
Muscatine	1.77%	1,392,690	1,392,690	0	5,352,386	26.02%
Newton	0.99%	776,191	776,191	0	2,983,057	26.02%
Oelwein	0.21%	164,308	164,308	0	631,466	26.02%
Oskaloosa	0.43%	339,590	339,590	0	1,305,113	26.02%
Ottumwa	1.42%	1,120,950	1,120,950	0	4,308,034	26.02%
Pella	0.35%	279,498	279,498	0	1,074,164	26.02%
Sioux City	6.23%	4,909,015	4,909,015	0	18,866,323	26.02%
Spencer	0.48%	374,544	374,544	0	1,439,448	26.02%
Storm Lake	0.38%	297,620	297,620	0	1,143,812	26.02%
Urbandale	2.18%	1,718,369	1,718,369	0	6,604,034	26.02%
Waterloo	5.58%	4,396,834	4,396,834	0	16,897,907	26.02%
Waverly	0.37%	287,881	287,881	0	1,106,385	26.02%
Webster City	0.29%	224,708	224,708	0	863,599	26.02%
West Des Moines	3.49%	2,748,692	2,748,692	0	10,563,772	26.02%
Total	100.00%	78,766,019	78,766,019	0	302,713,506	26.02%

Pension Expense by City

The allocation amongst all Cities of Pension Expense of the System for the period ended June 30, 2019 was as follows:

City	Proportionate Share (%)	Share of Pension Expense
Ames	2.66%	3,722,263
Ankeny	2.39%	3,346,858
Bettendorf	1.88%	2,620,731
Boone	0.57%	791,126
Burlington	1.88%	2,626,471
Camanche	0.23%	327,381
Carroll	0.28%	389,897
Cedar Falls	1.86%	2,606,139
Cedar Rapids	9.07%	12,669,386
Centerville	0.24%	333,768
Charles City	0.32%	441,184
Clinton	1.95%	2,730,844
Clive	0.59%	819,855
Council Bluffs	5.77%	8,057,507
Creston	0.27%	377,369
Davenport	7.78%	10,872,224
Decorah	0.30%	424,074
Des Moines	18.44%	25,765,790
Dewitt	0.21%	295,501
Dubuque	4.69%	6,556,843
Estherville	0.23%	328,339
Evansdale	0.13%	188,491
Fairfield	0.30%	417,408
Fort Dodge	1.56%	2,185,699
Fort Madison	0.69%	963,921
Grinnell	0.41%	573,736
Indianola	0.46%	646,650
Iowa City	3.68%	5,149,589
Keokuk	0.77%	1,071,570
Knoxville	0.25%	351,930
Lemars	0.33%	456,633
Maquoketa	0.21%	288,351
Marion	2.03%	2,839,485
Marshalltown	1.44%	2,018,408
Mason City	1.95%	2,728,528
Muscatine	1.77%	2,470,955
Newton	0.99%	1,377,143
Oelwein	0.21%	291,520
Oskaloosa	0.43%	602,512
Ottumwa	1.42%	1,988,825
Pella	0.35%	495,893
Sioux City	6.23%	8,709,729
Spencer	0.48%	664,528
Storm Lake	0.38%	528,046
Urbandale	2.18%	3,048,784
Waterloo	5.58%	7,801,000
Waverly	0.37%	510,768
Webster City	0.29%	398,685
West Des Moines	3.49%	4,876,816
Total	100.00%	139,749,153

Deferred Inflows and Outflows of Resources by City

The allocation amongst all Cities of Deferred (Inflows) of the System as of June 30, 2019 was as follows:

City	Proportionate Share (%)	Expected and Actual Experience	Changes in Assumptions	Projected and Actual Earnings	Contributions	Total
					Made After Measurement	
					Date	
Ames	2.66%	(163,484)	(76,038)	(1,049,919)	TBD	(1,289,441)
Ankeny	2.39%	(146,996)	(68,370)	(944,030)	TBD	(1,159,396)
Bettendorf	1.88%	(115,104)	(53,536)	(739,216)	TBD	(907,856)
Boone	0.57%	(34,747)	(16,161)	(223,149)	TBD	(274,057)
Burlington	1.88%	(115,356)	(53,654)	(740,835)	TBD	(909,845)
Camanche	0.23%	(14,379)	(6,688)	(92,342)	TBD	(113,409)
Carroll	0.28%	(17,125)	(7,965)	(109,976)	TBD	(135,066)
Cedar Falls	1.86%	(114,463)	(53,238)	(735,100)	TBD	(902,801)
Cedar Rapids	9.07%	(556,448)	(258,810)	(3,573,586)	TBD	(4,388,844)
Centerville	0.24%	(14,659)	(6,818)	(94,144)	TBD	(115,621)
Charles City	0.32%	(19,377)	(9,012)	(124,442)	TBD	(152,831)
Clinton	1.95%	(119,940)	(55,786)	(770,275)	TBD	(946,001)
Clive	0.59%	(36,009)	(16,748)	(231,252)	TBD	(284,009)
Council Bluffs	5.77%	(353,891)	(164,599)	(2,272,738)	TBD	(2,791,228)
Creston	0.27%	(16,574)	(7,709)	(106,442)	TBD	(130,725)
Davenport	7.78%	(477,515)	(222,098)	(3,066,670)	TBD	(3,766,283)
Decorah	0.30%	(18,626)	(8,663)	(119,616)	TBD	(146,905)
Des Moines	18.44%	(1,131,648)	(526,344)	(7,267,620)	TBD	(8,925,612)
Dewitt	0.21%	(12,979)	(6,036)	(83,350)	TBD	(102,365)
Dubuque	4.69%	(287,981)	(133,943)	(1,849,454)	TBD	(2,271,378)
Estherville	0.23%	(14,421)	(6,707)	(92,613)	TBD	(113,741)
Evansdale	0.13%	(8,279)	(3,850)	(53,167)	TBD	(65,296)
Fairfield	0.30%	(18,333)	(8,527)	(117,736)	TBD	(144,596)
Fort Dodge	1.56%	(95,997)	(44,649)	(616,509)	TBD	(757,155)
Fort Madison	0.69%	(42,336)	(19,691)	(271,888)	TBD	(333,915)
Grinnell	0.41%	(25,199)	(11,720)	(161,831)	TBD	(198,750)
Indianola	0.46%	(28,401)	(13,210)	(182,397)	TBD	(224,008)
Iowa City	3.68%	(226,173)	(105,196)	(1,452,517)	TBD	(1,783,886)
Keokuk	0.77%	(47,064)	(21,890)	(302,252)	TBD	(371,206)
Knoxville	0.25%	(15,457)	(7,189)	(99,267)	TBD	(121,913)
Lemars	0.33%	(20,056)	(9,328)	(128,800)	TBD	(158,184)
Maquoketa	0.21%	(12,665)	(5,890)	(81,334)	TBD	(99,889)
Marion	2.03%	(124,712)	(58,005)	(800,918)	TBD	(983,635)
Marshalltown	1.44%	(88,650)	(41,232)	(569,322)	TBD	(699,204)
Mason City	1.95%	(119,839)	(55,738)	(769,621)	TBD	(945,198)
Muscatine	1.77%	(108,526)	(50,477)	(696,969)	TBD	(855,972)
Newton	0.99%	(60,485)	(28,132)	(388,443)	TBD	(477,060)
Oelwein	0.21%	(12,804)	(5,955)	(82,227)	TBD	(100,986)
Oskaloosa	0.43%	(26,463)	(12,308)	(169,947)	TBD	(208,718)
Ottumwa	1.42%	(87,350)	(40,628)	(560,977)	TBD	(688,955)
Pella	0.35%	(21,780)	(10,130)	(139,874)	TBD	(171,784)
Sioux City	6.23%	(382,537)	(177,922)	(2,456,707)	TBD	(3,017,166)
Spencer	0.48%	(29,187)	(13,575)	(187,440)	TBD	(230,202)
Storm Lake	0.38%	(23,192)	(10,787)	(148,943)	TBD	(182,922)
Urbandale	2.18%	(133,905)	(62,281)	(859,954)	TBD	(1,056,140)
Waterloo	5.58%	(342,625)	(159,359)	(2,200,387)	TBD	(2,702,371)
Waverly	0.37%	(22,433)	(10,434)	(144,070)	TBD	(176,937)
Webster City	0.29%	(17,510)	(8,144)	(112,455)	TBD	(138,109)
West Des Moines	3.49%	(214,193)	(99,624)	(1,375,578)	TBD	(1,689,395)
Total	100.00%	(6,137,873)	(2,854,794)	(39,418,299)	TBD	(48,410,966)

Deferred Inflows and Outflows of Resources by City

The allocation amongst all Cities of Deferred Outflows of the System as of June 30, 2019 was as follows:

City	Proportionate Share (%)	Expected and Actual Experience	Changes in Assumptions	Projected and Actual Earnings	Contributions Made After Measurement Date	Total
Ames	2.66%	601,603	877,178	2,012,494	TBD	3,491,275
Ankeny	2.39%	540,929	788,711	1,809,526	TBD	3,139,166
Bettendorf	1.88%	423,570	617,594	1,416,935	TBD	2,458,099
Boone	0.57%	127,864	186,434	427,733	TBD	742,031
Burlington	1.88%	424,498	618,946	1,420,038	TBD	2,463,482
Camanche	0.23%	52,912	77,150	177,003	TBD	307,065
Carroll	0.28%	63,016	91,882	210,804	TBD	365,702
Cedar Falls	1.86%	421,212	614,155	1,409,046	TBD	2,444,413
Cedar Rapids	9.07%	2,047,663	2,985,631	6,849,882	TBD	11,883,176
Centerville	0.24%	53,945	78,655	180,457	TBD	313,057
Charles City	0.32%	71,305	103,968	238,532	TBD	413,805
Clinton	1.95%	441,367	643,543	1,476,469	TBD	2,561,379
Clive	0.59%	132,507	193,205	443,266	TBD	768,978
Council Bluffs	5.77%	1,302,278	1,898,809	4,356,405	TBD	7,557,492
Creston	0.27%	60,991	88,930	204,030	TBD	353,951
Davenport	7.78%	1,757,201	2,562,117	5,878,222	TBD	10,197,540
Decorah	0.30%	68,540	99,936	229,282	TBD	397,758
Des Moines	18.44%	4,164,342	6,071,889	13,930,638	TBD	24,166,869
Dewitt	0.21%	47,760	69,637	159,767	TBD	277,164
Dubuque	4.69%	1,059,736	1,545,167	3,545,050	TBD	6,149,953
Estherville	0.23%	53,067	77,375	177,521	TBD	307,963
Evansdale	0.13%	30,464	44,419	101,910	TBD	176,793
Fairfield	0.30%	67,463	98,365	225,678	TBD	391,506
Fort Dodge	1.56%	353,259	515,075	1,181,729	TBD	2,050,063
Fort Madison	0.69%	155,792	227,155	521,158	TBD	904,105
Grinnell	0.41%	92,729	135,205	310,198	TBD	538,132
Indianola	0.46%	104,513	152,388	349,620	TBD	606,521
Iowa City	3.68%	832,292	1,213,537	2,784,198	TBD	4,830,027
Keokuk	0.77%	173,190	252,523	579,359	TBD	1,005,072
Knoxville	0.25%	56,880	82,935	190,276	TBD	330,091
Lemars	0.33%	73,802	107,609	246,885	TBD	428,296
Maquoketa	0.21%	46,604	67,952	155,901	TBD	270,457
Marion	2.03%	458,926	669,145	1,535,208	TBD	2,663,279
Marshalltown	1.44%	326,221	475,652	1,091,281	TBD	1,893,154
Mason City	1.95%	440,993	642,997	1,475,217	TBD	2,559,207
Muscatine	1.77%	399,363	582,298	1,335,957	TBD	2,317,618
Newton	0.99%	222,578	324,533	744,572	TBD	1,291,683
Oelwein	0.21%	47,116	68,699	157,614	TBD	273,429
Oskaloosa	0.43%	97,380	141,986	325,756	TBD	565,122
Ottumwa	1.42%	321,440	468,681	1,075,286	TBD	1,865,407
Pella	0.35%	80,148	116,861	268,111	TBD	465,120
Sioux City	6.23%	1,407,692	2,052,509	4,709,038	TBD	8,169,239
Spencer	0.48%	107,403	156,601	359,287	TBD	623,291
Storm Lake	0.38%	85,344	124,438	285,496	TBD	495,278
Urbandale	2.18%	492,753	718,468	1,648,368	TBD	2,859,589
Waterloo	5.58%	1,260,820	1,838,361	4,217,721	TBD	7,316,902
Waverly	0.37%	82,552	120,366	276,154	TBD	479,072
Webster City	0.29%	64,437	93,953	215,555	TBD	373,945
West Des Moines	3.49%	788,205	1,149,256	2,636,720	TBD	4,574,181
Total	100.00%	22,586,665	32,932,879	75,557,353	TBD	131,076,897

Future Deferred Inflows and Outflows of Resources to be Recognized by City

The allocation amongst all Cities of amounts currently reported as Deferred (Inflows)/Outflows of the System to be recognized in Pension Expense was as follows:

City	Proportionate Share (%)	Year Ending June 30,					
		2020	2021	2022	2023	2024	Thereafter
Ames	2.66%	1,144,211	150,413	502,369	380,451	24,391	0
Ankeny	2.39%	1,028,813	135,243	451,703	342,081	21,931	0
Bettendorf	1.88%	805,604	105,901	353,702	267,864	17,173	0
Boone	0.57%	243,189	31,968	106,773	80,861	5,184	0
Burlington	1.88%	807,368	106,133	354,477	268,450	17,210	0
Camanche	0.23%	100,636	13,229	44,184	33,461	2,145	0
Carroll	0.28%	119,853	15,755	52,622	39,851	2,555	0
Cedar Falls	1.86%	801,118	105,311	351,733	266,372	17,077	0
Cedar Rapids	9.07%	3,894,526	511,956	1,709,901	1,294,932	83,017	0
Centerville	0.24%	102,599	13,487	45,046	34,114	2,187	0
Charles City	0.32%	135,618	17,828	59,544	45,093	2,891	0
Clinton	1.95%	839,452	110,350	368,563	279,118	17,894	0
Clive	0.59%	252,021	33,129	110,650	83,797	5,372	0
Council Bluffs	5.77%	2,476,850	325,595	1,087,467	823,554	52,798	0
Creston	0.27%	116,002	15,249	50,931	38,571	2,473	0
Davenport	7.78%	3,342,085	439,334	1,467,350	1,111,245	71,241	0
Decorah	0.30%	130,359	17,136	57,234	43,344	2,779	0
Des Moines	18.44%	7,920,320	1,041,166	3,477,434	2,633,510	168,837	0
Dewitt	0.21%	90,836	11,941	39,882	30,203	1,936	0
Dubuque	4.69%	2,015,551	264,955	884,933	670,172	42,964	0
Estherville	0.23%	100,930	13,268	44,314	33,559	2,151	0
Evansdale	0.13%	57,941	7,617	25,439	19,266	1,235	0
Fairfield	0.30%	128,310	16,867	56,335	42,663	2,735	0
Fort Dodge	1.56%	671,876	88,322	294,989	223,399	14,322	0
Fort Madison	0.69%	296,306	38,951	130,094	98,522	6,316	0
Grinnell	0.41%	176,364	23,184	77,433	58,641	3,759	0
Indianola	0.46%	198,778	26,130	87,274	66,094	4,237	0
Iowa City	3.68%	1,582,966	208,089	695,005	526,337	33,743	0
Keokuk	0.77%	329,397	43,301	144,623	109,525	7,022	0
Knoxville	0.25%	108,182	14,221	47,498	35,971	2,306	0
Lemars	0.33%	140,367	18,452	61,629	46,672	2,992	0
Maquoketa	0.21%	88,638	11,652	38,917	29,472	1,889	0
Marion	2.03%	872,848	114,740	383,226	290,222	18,606	0
Marshalltown	1.44%	620,452	81,562	272,411	206,300	13,226	0
Mason City	1.95%	838,740	110,257	368,251	278,881	17,879	0
Muscatine	1.77%	759,563	99,849	333,488	252,555	16,191	0
Newton	0.99%	423,329	55,649	185,864	140,757	9,024	0
Oelwein	0.21%	89,612	11,780	39,344	29,796	1,910	0
Oskaloosa	0.43%	185,210	24,347	81,317	61,582	3,948	0
Ottumwa	1.42%	611,358	80,366	268,418	203,277	13,032	0
Pella	0.35%	152,436	20,038	66,927	50,685	3,249	0
Sioux City	6.23%	2,677,341	351,950	1,175,493	890,217	57,071	0
Spencer	0.48%	204,274	26,853	89,687	67,921	4,354	0
Storm Lake	0.38%	162,320	21,338	71,267	53,971	3,460	0
Urbandale	2.18%	937,186	123,198	411,474	311,615	19,977	0
Waterloo	5.58%	2,398,001	315,230	1,052,848	797,336	51,117	0
Waverly	0.37%	157,008	20,640	68,935	52,205	3,347	0
Webster City	0.29%	122,554	16,110	53,808	40,749	2,612	0
West Des Moines	3.49%	1,499,117	197,067	658,191	498,457	31,956	0
Total	100.00%	42,958,415	5,647,107	18,860,997	14,283,691	915,721	0