

**EMPLOYEES' RETIREMENT SYSTEM  
OF THE CITY OF MILWAUKEE**

**Schedules of Employer Allocations and Pension Amounts by Employer  
As of and for the year ended December 31, 2018**

## Table of Contents

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Independent Auditors' Report.....	3
Schedule of Employer Allocations .....	5
Schedule of Pension Amounts by Employer.....	6
Notes to the Schedules of Employer Allocations and Pension Amounts by Employer .....	7

## INDEPENDENT AUDITORS' REPORT

To the Annuity and Pension Board of the Employees'  
Retirement System of the City of Milwaukee  
Milwaukee, Wisconsin

### **Report on Employer Schedules**

We have audited the accompanying schedule of employer allocations of the Employees' Retirement System of the City of Milwaukee as of and for the year ended December 31, 2018, and the related notes. We have also audited the total for all entities of the columns titled beginning net pension liability, ending net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total employer pension expense excluding that attributable to employer-paid member contributions (specified column totals) included in the accompanying schedule of pension amounts by employer of the Employees' Retirement System of the City of Milwaukee as of and for the year ended December 31, 2018, and the related notes.

### ***Management's Responsibility for the Schedules***

Management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express opinions on the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, which is issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

**Opinions**

In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and beginning net pension liability, ending net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total employer pension expense excluding that attributable to employer-paid member contributions for the total of all participating entities for the Employees' Retirement System of the City of Milwaukee as of and for the year ended December 31, 2018, in accordance with accounting principles generally accepted in the United States of America.

**Other Matter**

We have audited, in accordance with auditing standards generally accepted in the United States of America, and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the Employees' Retirement System of the City of Milwaukee as of and for the year ended December 31, 2018, and our report thereon, dated July 15, 2019, expressed an unmodified opinion on those financial statements.

**Restriction on Use**

Our report is intended solely for the information and use of the Employees' Retirement System of the City of Milwaukee management, the Annuity and Pension Board, the Employees' Retirement System of the City of Milwaukee employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

**Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated July 15, 2019 on our consideration of the Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Employees' Retirement System of the City of Milwaukee's internal control over financial reporting and compliance.



Milwaukee, Wisconsin  
September 24, 2019

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Schedule of Employer Allocations**  
**As of and for the year ended December 31, 2018**

<b>Employer</b>	<b>Current Year Actuarial Employer Contributions</b>	<b>Employer Allocation Percentage</b>	<b>Prior Year Actuarial Employer Contributions</b>	<b>Employer Allocation Percentage</b>
City of Milwaukee - General City	\$ 14,682,553	16.3865965%	\$ 16,981,832	18.9892986%
City of Milwaukee - Water Department	1,432,313	1.5985459%	1,620,272	1.8118086%
Milwaukee Public Schools	10,088,662	11.2595428%	11,310,385	12.6474151%
Milwaukee Metropolitan Sewerage District	1,516,283	1.6922614%	1,587,306	1.7749456%
Veolia Water Milwaukee LLC	213,488	0.2382652%	269,974	0.3018883%
Wisconsin Center District	344,024	0.3839511%	396,188	0.4430224%
Housing Authority of the City of Milwaukee	772,027	0.8616277%	980,258	1.0961369%
City of Milwaukee - Policemen	43,246,399	48.2655359%	39,457,424	44.1217889%
City of Milwaukee - Firemen	17,305,243	19.3136734%	16,824,793	18.8136956%
<b>Total</b>	<b>\$ 89,600,992</b>	<b>100.0000000%</b>	<b>\$ 89,428,432</b>	<b>100.0000000%</b>

The accompanying notes are an integral part of the Schedules of Employer Allocations and Pension Amounts by Employer.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Schedule of Pension Amounts by Employer**  
**As of and for the year ended December 31, 2018**  
**(in thousands)**

Employer	Deferred Outflows of Resources							Deferred Inflows of Resources					Pension Expense		
	Beginning Net Pension Liability	Ending Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Net Recognition of Deferred Amounts from Changes in Proportionate Share	Total Employer Pension Expense
City of Milwaukee - General City	\$ 68,845	\$ 219,396	\$ 5,404	\$ 89,708	\$ 78,236	\$ 35	\$ 173,383	\$ 11,943	\$ 39,076	\$ 40	\$ 6,806	\$ 57,865	\$ 63,934	\$ (2,395)	\$ 61,539
City of Milwaukee - Water Department	6,569	21,403	527	8,751	7,632	8	16,918	1,165	3,812	4	509	5,490	6,237	(165)	6,072
Milwaukee Public Schools	45,852	150,751	3,713	61,640	53,757	61	119,171	8,207	26,850	28	3,424	38,509	43,931	(1,156)	42,775
Milwaukee Metropolitan Sewerage District	6,435	22,657	558	9,264	8,079	4	17,905	1,233	4,035	4	314	5,586	6,603	(122)	6,481
Veolia Water Milwaukee LLC	1,094	3,190	79	1,304	1,138	2	2,523	174	568	1	232	975	930	(91)	839
Wisconsin Center District	1,606	5,141	127	2,102	1,833	2	4,064	280	916	1	141	1,338	1,498	(45)	1,453
Housing Authority of the City of Milwaukee	3,974	11,536	284	4,717	4,114	-	9,115	628	2,055	2	535	3,220	3,362	(180)	3,182
City of Milwaukee - Policemen	159,961	646,217	15,917	264,230	230,435	11,048	521,630	35,180	115,093	118	61	150,452	188,313	3,877	192,190
City of Milwaukee - Firemen	68,208	258,586	6,369	105,733	92,210	1,078	205,390	14,077	46,055	48	216	60,396	75,355	277	75,632
<b>Total for All Entities</b>	<b>\$ 362,544</b>	<b>\$ 1,338,877</b>	<b>\$ 32,978</b>	<b>\$ 547,449</b>	<b>\$ 477,434</b>	<b>\$ 12,238</b>	<b>\$ 1,070,099</b>	<b>\$ 72,887</b>	<b>\$ 238,460</b>	<b>\$ 246</b>	<b>\$ 12,238</b>	<b>\$ 323,831</b>	<b>\$ 390,163</b>	<b>\$ -</b>	<b>\$ 390,163</b>

The accompanying notes are an integral part of the Schedules of Employer Allocations and Pension Amounts by Employer.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO THE SCHEDULES OF EMPLOYER ALLOCATIONS AND PENSION**  
**AMOUNTS BY EMPLOYER**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2018**  
**(DOLLAR AMOUNTS IN THOUSANDS)**

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**Plan Description**

The following brief description of the more common provisions of the Employees' Retirement System of the City of Milwaukee (the "Retirement System" or "ERS") is provided for financial statement purposes only. The provisions described reflect changes to the Retirement System enacted in 2000 as part of what is known as the Global Pension Settlement ("GPS"). GPS increased benefits to all members who consented to the settlement in exchange for allowing the City to make certain changes in plan administration, including allowing the use of Retirement System assets to pay for all costs to administer the Retirement System.

**Plan Administration**

The Retirement System was established pursuant to the Retirement Act (Chapter 396 of the Laws of Wisconsin of 1937) to provide the payment of retirement and other benefits to employees of the City of Milwaukee (the "City"). Chapter 441 of the Laws of Wisconsin of 1947 made the benefits contractual and vested. The Retirement System is a cost-sharing, multi-employer plan, which also provides benefits to employees of the Milwaukee Metropolitan Sewerage District, Wisconsin Center District, Veolia Water Milwaukee LLC, Milwaukee Housing and Redevelopment Authorities, non-certified staff of Milwaukee Public Schools and some employees of the Milwaukee Area Technical College (the "Agencies"). City employees comprise approximately 54.8% of the active participants in the Retirement System.

**Measurement Focus and Basis of Accounting**

The ERS is accounted for using the flow of economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, contributions are recognized in the accounting period in which the underlying earnings on which the contributions are based are paid and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the ERS. Investment transactions and the related gains and losses are recorded on a trade date basis. Dividend and interest income are accrued as earned. Investments are reported at fair value.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE  
NOTES TO THE SCHEDULES OF EMPLOYER ALLOCATIONS AND PENSION  
AMOUNTS BY EMPLOYER  
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2018  
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**Long-term Expected Rate of Return**

The long-term expected rate of return on pension plan investments was reviewed as part of the regular experience study, prepared for the Retirement System in October 2017. Additional analysis was performed in early 2019 which resulted in a decrease in the long-term rate of return to 7.50%. Several factors are considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and an analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation), along with estimates of variability and correlations, as developed by the Retirement System's investment consultant, for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. This assumption is intended to be a long-term assumption (30 to 50 years) and is not generally expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

Best estimates of arithmetic real rates of return (net of inflation) for each major asset class included in the Retirement System's target asset allocation as of December 31, 2018, are listed in the table below:

<u>Asset Class</u>	<u>Asset Allocation</u>	<u>Long-term Expected Real Rate of Return*</u>
Public Equity	47.0%	7.3%
Fixed Income & Cash	25.0%	3.1%
Real Estate	7.7%	5.6%
Real Assets	3.3%	4.5%
Private Equity	8.0%	10.6%
Absolute Return	9.0%	2.9%
	<u>100.0%</u>	

*\* Rates provided by Callan Associates, arithmetic mean, net of expenses*

**Rate of Return**

For the year ended December 31, 2018, the annual money-weighted rate of return, net of investment expense is shown below. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

	<u>2018</u>
Annual money-weighted rate of return, net of investment expense	-2.75%



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**Actuarial Assumptions**

The last actuarial valuation was performed as of January 1, 2018, and the amounts were used to roll-forward the total pension liability to the plan's year-end, December 31, 2018, and was determined using the following actuarial assumptions, applied to all prior periods included in the measurement:

Valuation Date	January 1, 2018
Actuarial Cost Method	Entry Age Normal - Level Percentage of Pay
Amortization Method	Level percent of payroll, closed
Asset Valuation Method	5-year smoothing of difference between expected return on actuarial value and actual return on market value
Actuarial Assumptions:	
Investment Rate of Return	7.50% per annum, compounded annually
Projected Salary Increases	General City: 2.5% - 5.5% Police & Fire: 4.0% - 13.4%
Inflation Assumption	2.50%
Cost of Living Adjustments	Varies by employee group and decrement type (see plan provisions)
Mortality Table	Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant Mortality Table, using 111% of rates for males and 110% of rates for females, projected generationally with Scale MP-2016. Disabled mortality rates are based on RP-2014 Disabled Mortality Table, using 102% of rates for males and 98% of rates for females, projected generationally using Scale MP-2016. Active mortality rates are based on the RP-2014 Employee Mortality Table, projected generationally using Scale MP-2016.
Experience Study	The actuarial assumptions used in the December 31, 2018 valuation were based on the results of an actuarial experience study for the period January 1, 2012-December 31, 2016.

**Net Pension Liability**

The components of the pension liability of the ERS as of December 31, 2018, were as follows:

Total pension liability	\$ 6,289,760
Plan fiduciary net position	<u>(4,950,881)</u>
Net pension liability	<u>\$ 1,338,879</u>
Plan fiduciary net position as a percentage of the total pension liability	78.71%
Employee payroll	\$ 574,394
Net pension liability as a percentage of employee payroll	233.09%

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**Discount Rate**

The discount rate used to measure the total pension liability was 7.50 percent. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from ERS agencies will be made at contractually required rates, actuarially determined. Based on those assumptions, the ERS' fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. The cross over analysis produces a single rate of 7.50 percent, which reflects the long-term expected rate of return on ERS investments. Therefore, the discount rate was applied to all periods of projected benefit payments to determine the total pension liability. The Annuity and Pension Board changed the long-term assumed rate of return to 7.50% from the blended rate of 8.24% used in the 2017 fiscal year. This change was adopted by the board at the April 29, 2019 meeting and is effective for the measurement date of December 31, 2018.

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

The following presents the net pension liability (asset) of the ERS calculated using the discount rate of 7.50 percent, as well as what the ERS' net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50 percent) or 1-percentage-point higher (8.50 percent) than the current rate:

	<b>1% Decrease (6.50%)</b>	<b>Current Discount (7.50%)</b>	<b>1% Increase (8.50%)</b>
Net pension liability	\$ 2,094,227	\$ 1,338,879	\$ 710,281

**Schedule of Employer Allocations**

The Employer Allocation Percentage is based on the employers' required contribution compared to the required contribution for all employers. The Employer Allocation Percentage is rounded to seven decimal places.

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**AMOUNTS BY EMPLOYER**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2018**  
**(DOLLAR AMOUNTS IN THOUSANDS)**

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**Schedule of Pension Amounts**

The employer's proportionate share of the Collective Net Pension Liability, Deferred Outflows of Resources, Deferred Inflows of Resources, and Total Employer Pension Expense (Income) is based on the Employer Allocation Percentage.

The Total Pension Liability is measured as of December 31, 2018 based on a January 1, 2018 actuarial valuation rolled forward to December 31, 2018 using standard roll-forward techniques as shown below:

	<b>2018</b>
Total pension liability	
Service cost	\$ 75,119
Interest	464,845
Changes in benefit items	-
Differences between expected and actual experience	(91,515)
Changes of assumptions	475,766
Benefit payments including refunds of member contributions	(393,526)
Net change in total pension liability	530,689
Total pension liability - beginning	5,759,071
Total pension liability - ending	\$ 6,289,760
Plan fiduciary net position	
Contributions - employer	\$ 83,166
Contributions - member	32,085
Net investment income	(160,190)
Benefit payments, including refunds of member contributions	(393,526)
Administrative expense	(7,181)
Net change in plan fiduciary net pension	(445,646)
Plan fiduciary net position - beginning	5,396,527
Plan fiduciary net position - ending	\$ 4,950,881
Net pension liability - ending	\$ 1,338,879

The Fiduciary Net Position is 78.71% of the Total Pension Liability, so the ERS has a Net Pension Liability.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
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The Collective Deferred Inflows and Outflows of Resources due to liabilities are amortized over the Average Expected Service Lives of all Employees of 4.01 years. The Collective Deferred Inflows and Outflows of Resources due to the net difference between projected and actual earnings on pension plan investments is amortized over five years.

Collective Deferred Inflows and Outflows of Resources to be recognized in the Current Pension Expense are as follows:

	<b>Outflows of Resources</b>	<b>Inflows of Resources</b>	<b>Net Outflows (Inflows) of Resources</b>
Differences between expected and actual experience	\$ 17,088	\$ (32,359)	\$ (15,271)
Changes of assumptions	180,985	(1,240)	179,745
Differences between projected and actual earnings	223,394	(79,619)	143,775
Changes in proportion	4,447	(4,447)	-
	<u>\$ 425,914</u>	<u>\$ (117,665)</u>	<u>\$ 308,249</u>

Collective Deferred Inflows and Outflows of Resources to be recognized in the Future Pension Expense are as follows:

	<b>Outflows of Resources</b>	<b>Inflows of Resources</b>	<b>Net Outflows (Inflows) of Resources</b>
Differences between expected and actual experience	\$ 32,978	\$ (72,887)	\$ (39,909)
Changes of assumptions	477,434	(246)	477,188
Differences between projected and actual earnings	547,449	(238,460)	308,989
Changes in proportion	12,238	(12,238)	-
	<u>\$ 1,070,099</u>	<u>\$ (323,831)</u>	<u>\$ 746,268</u>

Deferred Outflows and Inflows of Resources to be recognized in the Future Pension Expense are as follows:

<b>Year Ending December 31,</b>	<b>Net Outflows of Resources</b>
2019	\$ 283,022
2020	208,354
2021	135,267
2022	119,625

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**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2018**  
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Employers may also need to recognize a Deferred Outflow or Inflow of Resources related to a change in their proportionate share of the Net Pension Liability and for differences between employer contributions and proportionate share of contributions.

The Collective Pension Expense is determined as follows:

Service cost	\$ 75,119
Interest cost on total pension liability	464,845
Projected earnings on plan investments	(433,146)
Contributions - Member	(32,085)
Administrative expense	7,181
 <u>Recognition of net deferred outflows (inflows)</u>	
Changes in assumptions	118,645
Differences between expected and actual liability experience	(22,822)
Difference between projected and actual earnings	118,667
Recognition of prior years':	
Deferred outflows	184,155
Deferred inflows	<u>(90,396)</u>
Total Pension Expense	<u><u>\$ 390,163</u></u>

**Additional Financial Information for the ERS** - For additional information regarding ERS's financial statements and audit report, please visit the ERS web site at: <http://www.cmers.com/About-Us/Reports.htm>