

**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, 2016**

# Employees' Retirement System of the City of Milwaukee

## Table of Contents

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Independent Auditors' Report.....	1
Schedule of Employer Allocations.....	3
Schedule of Pension Amounts by Employer.....	4
Notes to the Schedules of Employer Allocations and Pension Amounts by Employer.....	5

## 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, 2016, 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 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, 2016, 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 an opinion on the schedule of employer allocations and an opinion on the 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 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, 2016, 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 United States, the financial statements of the Employees' Retirement System of the City of Milwaukee as of and for the year ended December 31, 2016, and our report thereon, dated June 19, 2017, 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 June 19, 2017 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.

*Baker Tilly Virchow Krause, LLP*

Milwaukee, Wisconsin  
August 28, 2017

**Employees' Retirement System of the City of Milwaukee**  
**Schedule of Employer Allocations**  
**As of and for the year ended December 31, 2016**

<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	\$ 16,243,778	20.2683831%	\$ 16,015,226	20.0595073%
City of Milwaukee - Water Department	1,497,335	1.8683190%	1,452,640	1.8194712%
Milwaukee Public Schools	10,538,564	13.1496289%	10,201,168	12.7772411%
Milwaukee Area Technical College	-	0.0000000%	5,271	0.0066021%
Milwaukee Metropolitan Sewerage District	1,546,382	1.9295180%	1,532,962	1.9200767%
Veolia Water Milwaukee LLC	314,774	0.3927633%	380,826	0.4769950%
Wisconsin Center District	367,387	0.4584119%	355,500	0.4452734%
Housing Authority of the City of Milwaukee	900,100	1.1231114%	931,049	1.1661643%
Redevelopment Authority of the City of Milwaukee	74,809	0.0933439%	98,846	0.1238073%
City of Milwaukee - Policeman	33,410,152	41.6879472%	33,554,544	42.0279814%
City of Milwaukee - Fireman	15,250,152	19.0285734%	15,310,549	19.1768802%
<b>Total</b>	<b>\$ 80,143,433</b>	<b>100.0000000%</b>	<b>\$ 79,838,581</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, 2016**  
**(Dollar Amounts in Thousands)**

Employer	Deferred Outflows of Resources							Deferred Inflows of Resources					Pension Expense				
	Beginning Net Pension Liability	Ending Net Pension Liability	Difference Between Expected and Actual Experience	Net Difference Between Projected and Actual Pension Plan Earnings on Investments	Changes of Assumptions	Changes in Proportion Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows	Difference Between Expected and Actual Experience	Net Difference Between Projected and Actual Pension Plan Earnings on Investments	Changes of Assumptions	Changes in Proportion Between Employer Contributions and Proportionate Share of Resources	Total Deferred Inflows	Proportionate Share of Pension Plan Expense	Pension Expense Related to Specific Liabilities of Employers	Net Amortization of Deferred Amount from Changes in Proportion and Differences Between Employer Contributions and Proportional Share of Contributions	Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	
City of Milwaukee - General City	\$ 84,361	\$ 86,362	\$ -	\$ 57,205	\$ -	\$ 96	\$ 57,301	\$ 4,716	\$ 320	\$ 552	\$ 2	\$ 5,590	\$ 37,512	\$ -	\$ 29	\$ 37,541	
City of Milwaukee - Water Department	7,652	7,961	-	5,273	-	28	5,301	435	29	51	-	515	3,458	-	10	3,468	
Milwaukee Public Schools	53,735	56,030	-	37,113	-	172	37,285	3,060	207	358	31	3,656	24,337	-	39	24,376	
Milwaukee Area Technical College	28	-	-	-	-	-	-	-	-	-	3	3	-	-	(1)	(1)	
Milwaukee Metropolitan Sewerage District	8,075	8,222	-	5,446	-	5	5,451	449	30	53	-	532	3,571	-	2	3,573	
Veolia Water Milwaukee LLC	2,006	1,674	-	1,109	-	7	1,116	91	6	11	39	147	727	-	(9)	718	
Wisconsin Center District	1,873	1,953	-	1,294	-	8	1,302	107	7	12	-	126	848	-	3	851	
Housing Authority of the City of Milwaukee	4,904	4,786	-	3,170	-	8	3,178	261	18	31	20	330	2,079	-	(2)	2,077	
Redevelopment Authority of the City of Milwaukee	521	398	-	263	-	2	265	22	1	3	14	40	173	-	(3)	170	
City of Milwaukee - Policemen	176,752	177,629	-	117,658	-	-	117,658	9,700	657	1,136	214	11,707	77,155	-	(78)	77,077	
City of Milwaukee - Firemen	80,650	81,079	-	53,705	-	65	53,770	4,427	300	519	68	5,314	35,218	-	10	35,228	
<b>Total for All Entities</b>	<b>\$ 420,557</b>	<b>\$ 426,094</b>	<b>\$ -</b>	<b>\$ 282,236</b>	<b>\$ -</b>	<b>\$ 391</b>	<b>\$ 282,627</b>	<b>\$ 23,268</b>	<b>\$ 1,575</b>	<b>\$ 2,726</b>	<b>\$ 391</b>	<b>\$ 27,960</b>	<b>\$ 185,078</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 185,078</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, 2016**  
**(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, multiple-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 54.5% 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.

**Employes' 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, 2016**  
**(Dollar Amounts in Thousands)**

---

**Long-term Expected Rate of Return —**

The long-term expected rate of return on the pension plan investments was determined based on the results of an experience review performed by Buck Consultants. The results of the experience review were presented to the Board by Buck Consultants at the Board's December, 2012 Meeting and adopted at the same meeting. The rate of return assumption was based on the Retirement System's target asset allocation. In the experience review, Buck Consultants developed best estimate ranges of expected future real rates of return (net of inflation) for the portfolio, based on the expected returns of each major asset class and their weights in the portfolio. Buck used an econometric model that forecasts a variety of economic environments and then calculates asset class returns based on functional relationships between the economic variables and the asset classes. Expected investment expenses were subtracted and expected inflation was added to arrive at the long term expected nominal return. A value for the expected long term expected return was selected for the portfolio such that there was a better than 50% likelihood of the emerging returns exceeding the expected return.

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, 2016, are listed in the table below:

<u>Asset Class</u>	<u>Policy</u>	<u>Actual</u>	<u>Long-term Expected Real Rate of Return*</u>
Public Equity	55.00%	55.72%	8.32%
Fixed Income	21.00%	20.50%	1.87%
Cash	1.00%	0.62%	0.92%
Real Estate	7.00%	7.95%	6.82%
Real Assets	3.00%	2.20%	5.63%
Private Equity	5.00%	4.96%	12.52%
Absolute Return	8.00%	8.05%	4.67%
	100.00%	100.00%	

*\* Rates provided by Conduent HR Consulting, LLC.*

**Rate of Return —** For the year ended December 31, 2016, 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>2016</u>
Annual money-weighted rate of return, net of investment expense	8.77%

**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, 2016**  
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---

**Actuarial Assumptions** — The last actuarial valuation was performed as of January 1, 2016, and the amounts were used to roll-forward the total pension liability to the plan's year-end December 31, 2016, and was determined using the following actuarial assumptions, applied to all prior periods included in the measurement:

Valuation Date	January 1, 2016
Actuarial Cost Method	Entry Age Normal – Level Percentage of Pay
Amortization Method	For pension expense; the difference between expected and actual liability experience and changes of assumptions are amortized over the average of the expected remaining service lives of all members. The differences between projected and actual earnings are amortized over a closed period of five years.
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Investment Rate of Return	8.25% for calendar years through 2017, and 8.50% beginning with calendar year 2018
Projected Salary Increases	General City 3.0% - 7.5% Police & Fire 3.0% - 14.4%
Inflation Assumption	3.00%
Cost of Living Adjustments	Vary by Employee Group as explained in summary of plan provisions
Mortality Table	For regular retirees and for survivors, the RP-2000 Combined Mortality Table projected nine years using Scale AA. Future generational rates are projected from 2009 based on Scale AA. For duty and ordinary disability retirees, use the RP-2000 Disability Mortality Table. For death in active service, the rates are similar to those used for regular retirees and survivors with a 6-year setback.
Experience Study	The actuarial assumptions used in December 31, 2016 valuation were based on the results of an actuarial experience study for the period January 1, 2007-December 31, 2011.

**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, 2016**  
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---

**Net Pension Liability** — The components of the pension liability of the ERS as December 31, 2016, were as follows:

Total pension liability		\$ 5,312,763
Plan fiduciary net position		<u>(4,886,669)</u>
Net pension liability		<u><u>\$ 426,094</u></u>
Plan fiduciary net position as a percentage of total pension liability		91.98%
Covered employee payroll		\$ 583,950
Net pension liability as a percentage of covered employee payroll		72.97%

**Discount Rate** — The discount rate used to measure the total pension liability was 8.50 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 8.50 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.

**Sensitivity of the net pension liability (asset) to changes in the discount rate** — The following presents the net pension liability (asset) of the ERS calculated using the discount rate of 8.50 percent, as well as what the ERS' net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (7.50 percent) or 1-percentage-point higher (9.50 percent) than the current rate:

	<b>1% Decrease</b>	<b>Current Discount</b>	<b>1% Increase</b>
	<u>(7.50%)</u>	<u>(8.50%)</u>	<u>(9.50%)</u>
ERS' net pension liability (asset)	\$ 1,004,645	\$ 426,094	\$ (61,855)

**Employes' Retirement System of the City of Milwaukee**  
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**As of and for the year ended December 31, 2016**  
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**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.

**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, 2016 based on a January 1, 2016 actuarial valuation rolled forward to December 31, 2016 using standard roll-forward techniques as shown below:

	<b>2016</b>
Total pension liability	
Service cost	\$ 70,377
Interest	430,745
Differences between expected and actual experience	(9,921)
Changes of assumptions	-
Benefit payments including refunds of member contributions	(351,303)
Net change in total pension liability	139,898
Total pension liability - beginning	5,172,865
Total pension liability - ending	\$ 5,312,763
Plan fiduciary net position	
Contributions - employer	\$ 74,095
Contributions - member	35,918
Net investment income	383,747
Benefit payments, including refunds of member contributions	(351,303)
Administrative expense	(8,096)
Net change in plan fiduciary net pension	134,361
Plan fiduciary net position - beginning	4,752,308
Plan fiduciary net position - ending	\$ 4,886,669
Net pension liability - ending	\$ 426,094

The Fiduciary Net Position is 92.0% of the Total Pension Liability, so the ERS has a Net Pension Liability.

**Employes' 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, 2016**  
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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 4.16 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:

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
Differences between expected and actual experience	\$ -	\$ (2,385)	\$ (2,385)
Net Difference between projected and actual earnings on pension plan investment	104,333	-	104,333
Total	<u>\$ 104,333</u>	<u>\$ (2,385)</u>	<u>\$ 101,948</u>

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

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
Differences between expected and actual experience	\$ -	\$ (25,994)	\$ (25,994)
Net Difference between projected and actual earnings on pension plan investment	282,236	(1,575)	280,661
Total	<u>\$ 282,236</u>	<u>\$ (27,569)</u>	<u>\$ 254,667</u>

**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, 2016**  
**(Dollar Amounts in Thousands)**

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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 Deferred Outflows of Resources</b>
2017	\$ 93,556
2018	93,556
2019	68,329
2020	(774)
Total	\$ 254,667

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	\$	70,377
Interest cost on total pension liability		430,745
Projected earnings on plan investments		(381,778)
Contributions - Member		(35,918)
Administrative expense		8,096
<u>Recognition of net deferred outflows (inflows)</u>		
Changes in assumptions		-
Differences between expected and actual liability experience		(2,385)
Difference between projected and actual earnings		(394)
Recognition of prior years'		
Deferred outflows		104,727
Deferred inflows		(8,392)
Total Pension Expense	\$	185,078

**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>