

MWRA Employees' Retirement System

Total Fund Performance Detail (Net) - Preliminary

June 30, 2016

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Composite	445,193,005	100.0	100.0	0.3	1.1	-3.5	5.5	5.8	5.9	6.6	Jan-86
Allocation Index				0.5	2.5	0.6	6.2	6.2	5.2	--	Jan-86
Policy Index				0.3	2.5	0.2	6.1	6.3	5.6	--	Jan-86
Total Balanced	70,987,223	15.9	14.0	0.7	3.6	-3.8	2.4	2.2	--	2.9	Dec-10
PRIT Core Fund	2,927,158	0.7		0.0	2.7	1.0	7.0	6.4	5.2	6.2	Apr-99
60% S&P 500 / 40% BC Agg				0.9	4.5	5.0	8.7	8.9	6.8	5.3	Apr-99
Wellington Opportunistic Investment	25,994,837	5.8	5.0	-1.0	0.6	-4.0	4.4	2.0	--	7.7	Nov-08
65% MSCI ACWI (Net) / 35% BC Agg				0.2	2.8	-0.2	5.5	5.0	4.9	8.3	Nov-08
PIMCO All Asset	24,830,032	5.6	5.0	3.3	9.5	0.1	1.6	2.7	--	8.3	Dec-08
PIMCO All Asset Index				1.8	6.2	5.4	4.5	4.5	5.7	7.3	Dec-08
William Blair	17,235,197	3.9	4.0	0.0	0.5	-9.3	--	--	--	-7.6	Mar-15
60% MSCI ACWI (Net)/40% CITI WGBI				1.1	5.1	2.3	4.8	3.9	4.6	0.4	Mar-15
Total Domestic Equity	93,343,838	21.0	21.0	-0.2	0.1	-3.1	9.1	10.1	7.6	5.7	May-99
Large Cap	65,648,543	14.7	15.0	0.0	-0.2	-0.6	10.2	10.9	--	12.2	Dec-10
Rhumblin Advisors S&P 500 Index Fund	25,307,038	5.7	7.0	0.2	3.7	3.9	11.5	12.0	7.4	7.5	Apr-97
S&P 500				0.3	3.8	4.0	11.7	12.1	7.4	7.4	Apr-97
Coho Relative Value Equity	20,760,791	4.7	4.0	1.8	--	--	--	--	--	7.3	Mar-16
Russell 1000 Value				0.9	6.3	2.9	9.9	11.4	6.1	12.1	Mar-16
Polen Focused Growth	19,580,714	4.4	4.0	-2.2	--	--	--	--	--	0.9	Feb-16
Russell 1000 Growth				-0.4	1.4	3.0	13.1	12.3	8.8	7.4	Feb-16
Small Cap	27,695,295	6.2	6.0	-0.5	0.6	-8.2	6.9	8.6	--	11.1	Dec-10
Robeco Boston Partners Small Cap Value	14,130,521	3.2	3.0	-1.0	3.0	-6.7	6.8	8.4	7.2	10.6	Feb-97
Russell 2000 Value				0.3	6.1	-2.6	6.4	8.1	5.2	8.7	Feb-97
Loomis Sayles Small Cap Growth	13,564,774	3.0	3.0	0.1	-1.8	-9.7	6.9	8.7	9.2	4.8	Jan-97
Russell 2000 Growth				-0.5	-1.6	-10.8	7.7	8.5	7.1	5.8	Jan-97



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Total Non-US Equity	67,674,024	15.2	19.0	-0.4	-1.1	-11.9	0.4	-0.6	0.2	3.5	Mar-99
International Equity	47,807,767	10.7	15.0	-1.9	-2.9	-10.7	1.1	0.4	--	--	Sep-05
SEG Baxter Street	22,728,969	5.1	5.0	-0.8	--	--	--	--	--	-1.2	May-16
MSCI ACWI ex USA				-1.5	-1.0	-10.2	1.2	0.1	1.9	-3.2	May-16
Schroder International Alpha Fund	25,078,798	5.6	5.0	-2.9	-3.8	-8.7	2.4	--	--	3.2	Mar-12
MSCI EAFE				-3.4	-4.4	-10.2	2.1	1.7	1.6	3.6	Mar-12
Emerging Markets Equity	19,866,257	4.5	4.0	3.4	3.3	-14.9	--	--	--	-6.3	Nov-13
Lee Munder Emerging Market Equity	19,866,257	4.5	4.0	3.4	3.3	-14.9	--	--	--	-6.5	Dec-13
MSCI Emerging Markets				4.0	6.4	-12.1	-1.6	-3.8	3.5	-5.1	Dec-13
Total Fixed Income	102,682,457	23.1	21.0	1.6	6.5	3.8	4.2	4.9	6.7	7.1	Mar-99
Invesco Core Bonds	40,094,632	9.0	9.0	1.8	6.0	5.8	4.4	4.5	5.7	5.4	Dec-98
Barclays Aggregate				1.8	5.3	6.0	4.1	3.8	5.1	5.2	Dec-98
Loomis Sayles - Multi Sector Bonds	42,990,075	9.7	8.0	1.5	6.9	2.0	3.6	4.9	7.2	8.2	Mar-99
Barclays Aggregate				1.8	5.3	6.0	4.1	3.8	5.1	5.3	Mar-99
Barclays High Yield				0.9	9.1	1.6	4.2	5.8	7.6	6.8	Mar-99
Invesco Mortgage Fund	1,343,068	0.3		0.0	-1.2	11.9	19.2	12.2	--	20.7	Apr-10
Barclays Aggregate				1.8	5.3	6.0	4.1	3.8	5.1	4.2	Apr-10
Rhumblin TIPS	18,254,682	4.1	4.0	1.6	--	--	--	--	--	1.6	Jun-16
Barclays US TIPS				2.1	6.2	4.4	2.3	2.6	4.7	2.1	Jun-16
Total Hedge Fund	38,477,340	8.6	9.0	-0.5	-1.4	-6.8	1.4	2.7	--	2.8	Oct-06
PRIM Absolute Return Fund	17,542,735	3.9	5.0								
Permal Fixed Income Holdings	10,759,454	2.4	2.0	-0.3	-0.4	-5.2	1.3	--	--	4.2	Oct-11
HFRI Fund of Funds Composite Index				-0.4	-2.6	-5.4	1.9	1.6	1.6	2.8	Oct-11
EnTrust	10,175,151	2.3	2.0	-1.7	-3.4	-11.0	-0.9	--	--	1.8	Jan-12
HFRI Fund of Funds Composite Index				-0.4	-2.6	-5.4	1.9	1.6	1.6	3.1	Jan-12
Other	5,441,953	1.2	0.0	0.0	0.0	0.0	0.2	0.1	--	0.1	Dec-10
Cash Account	5,441,953	1.2		0.0	0.0	0.0	0.2	0.1	1.1	2.0	Feb-00
91 Day T-Bills				0.0	0.1	0.2	0.1	0.1	0.9	1.7	Feb-00



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Total Real Estate	34,635,394	7.8	7.0	0.0	1.7	8.1	11.8	12.4	5.9	7.7	Apr-99
PRIT Core Real Estate	15,459,142	3.5									
Morgan Stanley Prime Property	7,238,674	1.6		0.0	1.9	8.8	13.1	13.6	6.4	8.7	Sep-95
Intercontinental Real Estate Investment Fund IV	39,342	0.0		0.0	-8.9	-11.7	12.7	7.3	-4.1	-5.7	Jun-05
Invesco Mortgage Recovery II (\$3M commitment in '15)	2,178,174	0.5		0.0	-2.8	--	--	--	--	-1.8	Oct-15
Landmark VI (\$2m commitment in '11)	771,906	0.2		0.0	-0.4	5.3	12.8	14.9	--	14.9	Jul-11
Mesirow MFire Global (\$2m commitment in '11)	1,504,264	0.3		0.0	2.4	6.9	9.2	--	--	2.9	May-12
Cerberus (\$1.5m commitment in '12)	1,607,176	0.4		0.0	0.6	10.1	19.5	--	--	18.3	May-13
Realty Associates Fund X LP (\$3.5m commitment in '12)	3,492,189	0.8		0.0	2.1	9.8	11.8	--	--	10.7	May-13
TerraCap Partners III (Institutional), LP	2,344,527	0.5		0.0	-3.8	3.1	--	--	--	3.1	Jul-15
<i>NCREIF Property Index 1 Qtr Lag</i>				2.2	5.2	11.8	11.9	11.9	7.6	11.8	Jul-15
Total Private Equity	31,950,775	7.2	9.0	0.0	-8.9	-13.3	16.0	10.8	11.8	9.0	Apr-99
PRIM Vintage Year 2008 (\$3m commitment in '08)	1,920,716	0.4									
PRIM Vintage Year 2009 (\$1m commitment in '09)	296,543	0.1									
PRIM Vintage Year 2010 (\$1m commitment in '10)	792,595	0.2									
PRIM Vintage Year 2011 (\$1.5m commitment in '11)	1,200,348	0.3									
PRIM Vintage Year 2012 (\$1m commitment in '12)	518,430	0.1									
PRIM Vintage Year 2014 (\$2m commitment in '14)	570,231	0.1									
Alcentra European DLF (\$5m commitment in '14)	4,342,729	1.0		0.0	-0.6	3.5	--	--	--	8.4	Jan-15
Ascent Fund II	134,884	0.0		0.0	37.8	55.4	48.6	27.8	20.8	17.5	Jan-99
Ascent Fund IV (\$2m commitment in '04)	541,914	0.1		0.0	-11.0	-32.3	-27.4	-17.9	-9.5	-8.8	Jul-04
Ascent Fund V (\$2m commitment in '08)	2,397,509	0.5		0.0	8.3	2.8	7.3	11.2	--	7.4	Oct-08
Ascent VI (\$3m commitment in '15)	441,137	0.1		0.0	-6.2	--	--	--	--	-14.0	Dec-15
Boston Capital	16,510	0.0		0.0	0.0	-1.3	-9.3	-0.4	14.9	8.4	Apr-99
Castile Ventures III, L.P. (\$3m commitment in '07)	983,118	0.2		0.0	-1.2	-7.1	-12.8	-8.7	--	-10.3	Jan-08
Invesco Fund IV (\$3m commitment in '03)	1,073,362	0.2		0.0	0.0	-2.4	13.6	10.5	13.8	10.4	Feb-04
Invesco Fund VI (\$5m commitment in '13)	4,220,135	0.9		0.0	0.0	2.0	13.9	--	--	13.9	Jul-13
Kayne Energy Fund VII (\$5m commitment in '15)	1,752,724	0.4		0.0	-1.5	--	--	--	--	-1.5	Jan-16
Foundry 2007 (\$3m commitment in '07)	3,476,841	0.8		0.0	-37.7	-49.9	40.7	17.7	--	36.5	Dec-07
Foundry 2010 (\$3m commitment in '10)	3,324,191	0.7		0.0	-4.7	-7.3	5.8	12.8	--	9.4	Jan-11
Foundry 2010 Annex	177,069	0.0		0.0	-0.1	--	--	--	--	-6.2	Sep-15
Pinebridge PEP V (\$6m commitment in '07)	2,992,530	0.7		0.0	-1.6	13.1	19.1	13.0	--	6.7	Mar-08
Landmark XV (\$3m commitment in '13)	777,258	0.2		0.0	0.0	-1.8	--	--	--	14.0	Nov-13

Notes

- 1 - Results for periods longer than one year are annualized.
- 2 - Total Balanced, Large Cap, Small Cap, and Other Composite performance starts 12/1/2010.
- 3 - Fiscal YTD begins July 1st.
- 4 - Market values for Real Estate, with the exception of PRIT Core Real Estate, are as of 3/31/2016 adjusted for cash flows. PRIT Core Real Estate's market values are as of 5/31/2016.
- 5 - Preliminary Total Composite gross of fee since inception return is 8.4% for the current month.
- 6 - Market values for the following private equity managers Private Equity managers are as of 3/31/2016 and are adjusted for cash flows: Alcentra DLF, Ascent II, Ascent IV, Ascent V, Ascent VI, Boston Capital, Castile III, Foundry 2007, Foundry 2010, Kayne Anderson VII, Pinebridge PEP V. Invesco IV, Invesco VI, and Landmark XV are as of 12/31/2015. PRIM accounts are as of 5/31/2016.
- 7 - Rhumblin TIPS funded on 06/02/2016 partial month performance shown.

Information Disclaimer and Reporting Methodology

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
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Reporting Methodology

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- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
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