

MWRA Employees' Retirement System

Total Fund Performance Detail (Net) - Preliminary

January 31, 2016

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Composite	433,396,446	100.0	100.0	-2.9	-6.9	-1.9	5.1	6.0	5.6		Jan-86
Allocation Index				-3.2	-5.0	-2.5	4.9	5.6	4.7	--	Jan-86
Policy Index				-3.5	-5.6	-2.8	4.7	5.7	5.0	--	Jan-86
Total Balanced	66,887,451	15.4	16.0	-2.5	-9.5	-8.0	-0.9	1.3	--	2.0	Dec-10
PRIT Core Fund	2,849,209	0.7									
60% S&P 500 / 40% BC Agg											
Wellington Opportunistic Investment	24,733,952	5.7	6.0	-4.7	-9.1	-5.0	1.2	0.6	--	7.4	Nov-08
65% MSCI ACWI (Net) / 35% BC Agg				-3.4	-6.2	-4.3	3.4	4.3	4.3	7.9	Nov-08
PIMCO All Asset	22,370,145	5.2	6.0	-1.4	-9.9	-10.5	-3.3	1.5	--	7.2	Dec-08
PIMCO All Asset Index				0.3	-0.4	-1.0	1.8	4.0	5.1	6.9	Dec-08
William Blair	16,934,145	3.9	4.0	-1.2	-10.9	--	--	--	--	-11.6	Mar-15
60% MSCI ACWI (Net)/40% CITI WGBI				-3.1	-5.6	-4.6	1.7	2.9	3.9	-7.3	Mar-15
Total Domestic Equity	87,388,247	20.2	20.0	-6.2	-9.1	-2.9	10.1	10.1	6.8	5.4	May-99
Large Cap	62,089,966	14.3	14.0	-5.5	-5.8	-1.3	11.3	10.7	--	12.0	Dec-10
Rhumbline Advisors S&P 500 Index Fund	23,177,111	5.3	6.0	-5.0	-4.8	-0.8	11.1	10.8	6.5	7.2	Apr-97
S&P 500				-5.0	-4.8	-0.7	11.3	10.9	6.5	7.1	Apr-97
MFS Large Cap Value	19,514,975	4.5	4.0	-4.2	-6.3	-1.3	10.4	9.9	6.6	6.8	Apr-01
Russell 1000 Value				-5.2	-8.2	-5.0	8.8	9.6	5.2	6.0	Apr-01
Polen Focused Growth	19,397,880	4.5	4.0								
Russell 1000 Growth											
Small Cap	25,298,281	5.8	6.0	-7.8	-15.9	-6.5	7.3	8.7	--	10.2	Dec-10
Robeco Boston Partners Small Cap Value	12,709,363	2.9	3.0	-6.9	-15.7	-9.6	4.8	7.3	5.8	10.2	Feb-97
Russell 2000 Value				-6.7	-14.3	-9.9	4.5	6.2	4.0	8.2	Feb-97
Loomis Sayles Small Cap Growth	12,588,918	2.9	3.0	-8.7	-16.0	-3.4	9.8	10.0	8.1	4.5	Jan-97
Russell 2000 Growth				-10.8	-19.1	-10.0	7.7	8.3	5.7	5.4	Jan-97
Total International Equity	64,292,355	14.8	17.0	-6.5	-16.6	-13.4	-1.5	-1.4	-0.1	3.2	Mar-99
Schroder International Alpha Fund	24,614,376	5.7	6.0	-5.5	-10.4	-6.2	1.0	--	--	3.1	Mar-12
MSCI EAFE				-7.2	-12.8	-8.4	0.7	1.6	1.7	3.2	Mar-12
The Boston Company	21,592,308	5.0	6.0	-7.9	-18.2	-11.5	-1.8	-2.2	0.1	1.3	Sep-05
MSCI EAFE				-7.2	-12.8	-8.4	0.7	1.6	1.7	3.0	Sep-05

Intech liquidated 1/27/2016, with balance being moved into Polen Focused Growth 2/1/2016

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Emerging Markets Equity	18,085,671	4.2	5.0	-6.0	-22.5	-23.9	--	--	--	-11.2	Nov-13
Lee Munder Emerging Market Equity	18,085,671	4.2	5.0	-6.0	-22.5	-23.9	--	--	--	-11.7	Dec-13
<i>MSCI Emerging Markets</i>				-6.5	-22.7	-20.9	-9.2	-5.6	1.8	-11.5	Dec-13
Total Fixed Income	96,861,687	22.3	22.0	-0.6	-3.1	-4.2	1.5	4.3	6.0	6.8	Mar-99
Invesco Core Bonds	44,809,260	10.3	10.0	0.7	0.5	-1.7	1.9	3.9	5.0	5.3	Dec-98
<i>Barclays Aggregate</i>				1.4	2.0	-0.2	2.1	3.5	4.7	5.0	Dec-98
Loomis Sayles - Multi Sector Bonds	50,655,623	11.7	12.0	-1.8	-6.4	-6.9	0.5	4.2	6.4	7.9	Mar-99
<i>Barclays Aggregate</i>				1.4	2.0	-0.2	2.1	3.5	4.7	5.2	Mar-99
<i>Barclays High Yield</i>				-1.6	-8.3	-6.6	0.7	4.2	6.6	6.3	Mar-99
Invesco Mortgage Fund	1,396,804	0.3		0.0	14.5	22.0	21.7	13.3	--	22.8	Apr-10
<i>Barclays Aggregate</i>				1.4	2.0	-0.2	2.1	3.5	4.7	3.8	Apr-10
Total Hedge Fund	38,358,976	8.9	9.0	-1.7	-7.1	-5.6	2.4	2.8	--	2.9	Oct-06
PRIM Absolute Return Fund	17,694,300	4.1	5.0								
<i>91 Day T-Bill + 3%</i>											
<i>HFRI Fund of Funds Composite Index</i>											
Permal Fixed Income Holdings	10,485,129	2.4	2.0	-2.9	-7.6	-6.8	1.4	--	--	4.0	Oct-11
<i>HFRI Fund of Funds Composite Index</i>				-3.0	-5.8	-3.3	2.2	1.5	1.7	3.0	Oct-11
EnTrust	10,179,547	2.3	2.0	-3.3	-11.0	-10.0	-0.2	--	--	1.9	Jan-12
<i>HFRI Fund of Funds Composite Index</i>				-3.0	-5.8	-3.3	2.2	1.5	1.7	3.3	Jan-12
Other	3,576,267	0.8	0.0	0.0	0.0	0.1	0.2	0.1	--	0.1	Dec-10
Cash Account	3,576,267	0.8		0.0	0.0	0.1	0.2	0.1	1.3	2.0	Feb-00
<i>91 Day T-Bills</i>				0.0	0.1	0.1	0.0	0.0	1.1	1.7	Feb-00
Total Real Estate	36,022,183	8.3	7.0	0.0	5.5	11.1	12.8	13.1	6.3	7.7	Apr-99
PRIT Core Real Estate	16,451,388	3.8									
Morgan Stanley Prime Property	7,104,881	1.6		0.0	6.8	14.6	15.3	14.8	7.0	8.8	Sep-95
Intercontinental Real Estate Investment Fund IV	43,202	0.0		0.0	-3.0	21.9	16.9	11.6	-3.8	-5.1	Jun-05
Invesco Mortgage Recovery II (\$3M commitment in '15)	1,865,239	0.4		0.0	--	--	--	--	--	0.0	Oct-15
Landmark VI (\$2m commitment in '11)	979,072	0.2		0.0	4.3	9.8	14.8	--	--	16.1	Jul-11
Mesirow MFire Global (\$2m commitment in '11)	1,498,886	0.3		0.0	2.4	7.0	12.8	--	--	2.1	May-12
Cerberus (\$1.5m commitment in '12)	1,780,404	0.4		0.0	9.5	22.1	--	--	--	21.2	May-13
Realty Associates Fund X LP (\$3.5m commitment in '12)	3,650,151	0.8		0.0	3.7	11.0	--	--	--	10.1	May-13
TerraCap Partners III (Institutional), LP	2,648,961	0.6		0.0	3.8	--	--	--	--	3.8	Jul-15
<i>NCREIF Property Index 1 Qtr Lag</i>				0.0	6.3	13.5	11.9	12.5	8.0	6.3	Jul-15

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Total Private Equity	40,009,279	9.2	9.0	0.0	1.5	41.0	24.4	19.2	13.5	10.2	Apr-99
PRIM Vintage Year 2008 (\$3m commitment in '08)	1,878,313	0.4									
PRIM Vintage Year 2009 (\$1m commitment in '09)	306,797	0.1									
PRIM Vintage Year 2010 (\$1m commitment in '10)	769,086	0.2									
PRIM Vintage Year 2011 (\$1.5m commitment in '11)	1,109,222	0.3									
PRIM Vintage Year 2012 (\$1m commitment in '12)	476,256	0.1									
PRIM Vintage Year 2014 (\$2m commitment in '14)	450,571	0.1									
Alcentra European DLF (\$5m commitment in '14)	4,658,010	1.1		0.0	2.2	11.6	--	--	--	10.6	Jan-15
Ascent Fund II	86,084	0.0		0.0	-0.8	23.5	27.7	16.6	15.5	14.9	Jan-99
Ascent Fund IV (\$2m commitment in '04)	776,317	0.2		0.0	-3.0	-40.7	-14.1	-14.4	-6.8	-6.2	Jul-04
Ascent Fund V (\$2m commitment in '08)	2,185,913	0.5		0.0	-6.3	-6.8	3.6	10.6	--	6.4	Oct-08
Ascent VI (\$3m commitment in '15)	240,000	0.1									
Boston Capital	16,733	0.0		0.0	0.0	-5.4	-9.0	-0.1	16.6	8.7	Apr-99
Castile Ventures III, L.P. (\$3m commitment in '07)	1,072,599	0.2		0.0	-1.4	-17.8	-14.3	-9.0	--	-10.2	Jan-08
Invesco Fund IV (\$3m commitment in '03)	1,407,667	0.3		0.0	-3.7	-1.5	14.1	13.3	14.5	10.6	Feb-04
Invesco Fund VI (\$5m commitment in '13)	3,953,746	0.9		0.0	1.7	11.1	--	--	--	16.2	Jul-13
Kayne Energy Fund VII (\$5m commitment in '15)	442,210	0.1									
Foundry 2007 (\$3m commitment in '07)	12,201,943	2.8		0.0	-2.2	209.4	79.7	49.5	--	50.6	Dec-07
Foundry 2010 (\$3m commitment in '10)	3,619,136	0.8		0.0	0.9	4.5	13.8	12.1	--	12.1	Jan-11
Foundry 2010 Annex	188,520	0.0		0.0	--	--	--	--	--	-0.3	Sep-15
Pinebridge PEP V (\$6m commitment in '07)	3,270,025	0.8		0.0	15.4	36.1	22.4	16.0	--	7.4	Mar-08
Landmark XV (\$3m commitment in '13)	900,132	0.2		0.0	2.7	18.9	--	--	--	19.1	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 - Preliminary Total Composite gross of fee since inception return is 8.4% for the month of current month.

5 - Market values for Real Estate, with the exception of PRIT Core Real Estate, are as of 9/30/2015 adjusted for cash flows. PRIT Core Real Estate's market values are as of 12/31/2015.

6 - Market values for Private Equity managers, with the exception of PRIM Vintage Year accounts, are as of 9/30/2015 adjusted for cash flows. PRIM Vintage Year accounts market values are as of 12/31/15.

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

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- 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.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.