

# MWRA Employees' Retirement System

## Total Fund Performance Detail (Net)

November 30, 2014

|  | Market Value<br>(\$) | % of<br>Portfolio | Policy %     | 1 Mo<br>(%) | Fiscal<br>YTD<br>(%) | YTD<br>(%)  | 1 Yr<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) | Return<br>(%) | Since         |
|--|----------------------|-------------------|--------------|-------------|----------------------|-------------|-------------|--------------|--------------|---------------|---------------|---------------|
| <b>Composite</b>                       | <b>440,761,415</b>   | <b>100.0</b>      | <b>100.0</b> | <b>0.8</b>  | <b>-0.3</b>          | <b>5.0</b>  | <b>6.6</b>  | <b>11.4</b>  | <b>9.9</b>   | <b>7.4</b>    | <b>7.0</b>    | <b>Jan-86</b> |
| Allocation Index                       |                      |                   |              | 1.1         | 1.3                  | 6.1         | 7.1         | 10.8         | 8.9          | 6.2           | --            | Jan-86        |
| Policy Index                           |                      |                   |              | 1.1         | 1.1                  | 6.1         | 7.2         | 11.1         | 9.4          | 6.6           | --            | Jan-86        |
| <b>Total Balanced</b>                  | <b>60,589,621</b>    | <b>13.7</b>       | <b>16.0</b>  | <b>0.2</b>  | <b>-2.8</b>          | <b>3.2</b>  | <b>4.0</b>  | <b>7.7</b>   | <b>--</b>    | <b>--</b>     | <b>5.1</b>    | <b>Dec-10</b> |
| PRIT Core Fund                         | 2,799,827            | 0.6               |              |             |                      |             |             |              |              |               |               |               |
| 60% S&P 500 / 40% BC Agg               |                      |                   |              |             |                      |             |             |              |              |               |               |               |
| Wellington Opportunistic Investment    | 29,122,657           | 6.6               | 8.0          | 1.0         | -3.0                 | 2.3         | 3.7         | 8.0          | 5.2          | --            | 10.0          | Nov-08        |
| 65% MSCI ACWI (Gross) / 35% BC Agg     |                      |                   |              | 1.4         | 0.8                  | 6.5         | 7.5         | 11.0         | 8.6          | 6.7           | 10.9          | Nov-08        |
| PIMCO All Asset                        | 28,667,137           | 6.5               | 8.0          | -0.5        | -2.8                 | 3.9         | 4.0         | 6.7          | 6.8          | --            | 11.2          | Dec-08        |
| PIMCO All Asset Index                  |                      |                   |              | 0.5         | 0.7                  | 5.8         | 5.5         | 5.0          | 5.9          | 5.7           | 8.4           | Dec-08        |
| <b>Total Domestic Equity</b>           | <b>104,543,427</b>   | <b>23.7</b>       | <b>18.0</b>  | <b>2.2</b>  | <b>4.1</b>           | <b>8.7</b>  | <b>11.4</b> | <b>20.0</b>  | <b>16.6</b>  | <b>9.1</b>    | <b>6.2</b>    | <b>May-99</b> |
| <b>Large Cap</b>                       | <b>71,219,373</b>    | <b>16.2</b>       | <b>12.0</b>  | <b>3.0</b>  | <b>6.4</b>           | <b>12.4</b> | <b>15.4</b> | <b>20.7</b>  | <b>--</b>    | <b>--</b>     | <b>16.9</b>   | <b>Dec-10</b> |
| Rhumblin Advisors S&P 500 Index Fund   | 24,113,450           | 5.5               | 4.0          | 2.7         | 6.3                  | 13.8        | 16.7        | 20.7         | 15.8         | 8.1           | 7.9           | Apr-97        |
| S&P 500                                |                      |                   |              | 2.7         | 6.4                  | 14.0        | 16.9        | 20.9         | 16.0         | 8.1           | 7.8           | Apr-97        |
| MFS Large Cap Value                    | 23,267,212           | 5.3               | 4.0          | 2.8         | 5.2                  | 10.4        | 13.1        | 20.7         | 14.3         | 8.4           | 7.8           | Apr-01        |
| Russell 1000 Value                     |                      |                   |              | 2.0         | 4.1                  | 12.8        | 15.6        | 21.5         | 15.7         | 7.6           | 7.2           | Apr-01        |
| Intech Broad Large Cap Growth          | 23,838,711           | 5.4               | 4.0          | 3.7         | 7.7                  | 13.2        | 16.7        | 20.6         | --           | --            | 18.4          | Feb-10        |
| Russell 1000 Growth                    |                      |                   |              | 3.2         | 7.5                  | 14.2        | 17.5        | 20.6         | 16.8         | 9.0           | 17.7          | Feb-10        |
| <b>Small Cap</b>                       | <b>33,324,054</b>    | <b>7.6</b>        | <b>6.0</b>   | <b>0.4</b>  | <b>-0.7</b>          | <b>1.4</b>  | <b>3.4</b>  | <b>18.5</b>  | <b>--</b>    | <b>--</b>     | <b>15.9</b>   | <b>Dec-10</b> |
| Robeco Boston Partners Small Cap Value | 16,628,273           | 3.8               | 3.0          | 0.3         | -2.6                 | 2.9         | 4.9         | 18.8         | 16.3         | 9.3           | 11.7          | Feb-97        |
| Russell 2000 Value                     |                      |                   |              | -0.5        | -2.6                 | 1.4         | 3.4         | 17.8         | 15.3         | 6.9           | 9.5           | Feb-97        |
| Loomis Sayles Small Cap Growth         | 16,695,781           | 3.8               | 3.0          | 0.6         | 1.2                  | -0.1        | 1.9         | 18.1         | 19.8         | 11.4          | 5.2           | Jan-97        |
| Russell 2000 Growth                    |                      |                   |              | 0.6         | 0.3                  | 2.6         | 4.7         | 18.9         | 18.0         | 8.6           | 6.3           | Jan-97        |
| <b>Total International Equity</b>      | <b>70,716,162</b>    | <b>16.0</b>       | <b>17.0</b>  | <b>0.8</b>  | <b>-4.2</b>          | <b>-0.9</b> | <b>0.0</b>  | <b>9.5</b>   | <b>4.1</b>   | <b>4.5</b>    | <b>4.7</b>    | <b>Mar-99</b> |
| Schroder International Alpha Fund      | 24,564,189           | 5.6               | 6.0          | 1.5         | -3.2                 | -1.5        | 1.0         | --           | --           | --            | 8.2           | Mar-12        |
| MSCI EAFE                              |                      |                   |              | 1.4         | -6.0                 | -1.5        | 0.0         | 12.0         | 6.4          | 5.3           | 9.2           | Mar-12        |
| The Boston Company                     | 24,060,460           | 5.5               | 6.0          | 0.5         | -8.0                 | -4.4        | -3.6        | 9.4          | 3.4          | --            | 3.5           | Sep-05        |
| MSCI EAFE                              |                      |                   |              | 1.4         | -6.0                 | -1.5        | 0.0         | 12.0         | 6.4          | 5.3           | 4.7           | Sep-05        |



# MWRA Employees' Retirement System

## Total Fund Performance Detail (Net)

November 30, 2014

|  | Market Value<br>(\$) | % of<br>Portfolio | Policy %    | 1 Mo<br>(%) | Fiscal<br>YTD<br>(%) | YTD<br>(%) | 1 Yr<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) | Return<br>(%) | Since         |
|--|----------------------|-------------------|-------------|-------------|----------------------|------------|-------------|--------------|--------------|---------------|---------------|---------------|
| <b>Emerging Markets Equity</b>                         | <b>22,091,513</b>    | <b>5.0</b>        | <b>5.0</b>  | <b>0.2</b>  | <b>-0.7</b>          | <b>4.3</b> | <b>3.2</b>  | <b>--</b>    | <b>--</b>    | <b>--</b>     | <b>2.9</b>    | <b>Nov-13</b> |
| Lee Munder Emerging Market Equity                      | 22,091,513           | 5.0               | 5.0         | 0.2         | -0.7                 | 4.3        | 3.2         | --           | --           | --            | 3.2           | Dec-13        |
| <i>MSCI Emerging Markets</i>                           |                      |                   |             | -1.1        | -3.4                 | 2.5        | 1.1         | 5.3          | 3.5          | 9.5           | 1.1           | Dec-13        |
| <b>Total Fixed Income</b>                              | <b>112,512,363</b>   | <b>25.5</b>       | <b>25.0</b> | <b>0.3</b>  | <b>-0.4</b>          | <b>6.0</b> | <b>6.5</b>  | <b>7.9</b>   | <b>7.8</b>   | <b>7.1</b>    | <b>7.6</b>    | <b>Mar-99</b> |
| Invesco Core Bonds                                     | 43,561,844           | 9.9               | 10.0        | 0.6         | 1.3                  | 5.9        | 5.7         | 4.9          | 5.5          | 5.4           | 5.6           | Dec-98        |
| <i>Barclays Aggregate</i>                              |                      |                   |             | 0.7         | 1.9                  | 5.9        | 5.3         | 3.0          | 4.1          | 4.8           | 5.3           | Dec-98        |
| Loomis Sayles - Multi Sector Bonds                     | 67,667,800           | 15.4              | 15.0        | 0.2         | -1.4                 | 6.0        | 6.8         | 10.0         | 9.2          | 8.2           | 9.1           | Mar-99        |
| <i>Barclays Aggregate</i>                              |                      |                   |             | 0.7         | 1.9                  | 5.9        | 5.3         | 3.0          | 4.1          | 4.8           | 5.4           | Mar-99        |
| <i>Barclays High Yield</i>                             |                      |                   |             | -0.7        | -1.4                 | 4.0        | 4.5         | 9.9          | 10.1         | 8.1           | 7.3           | Mar-99        |
| Invesco Mortgage Fund                                  | 1,282,719            | 0.3               |             | 0.0         | 0.0                  | 7.2        | 15.9        | 7.0          | --           | --            | 18.7          | Apr-10        |
| <i>Barclays Aggregate</i>                              |                      |                   |             | 0.7         | 1.9                  | 5.9        | 5.3         | 3.0          | 4.1          | 4.8           | 4.4           | Apr-10        |
| <b>Total Hedge Fund</b>                                | <b>38,926,923</b>    | <b>8.8</b>        | <b>9.0</b>  | <b>0.7</b>  | <b>-1.2</b>          | <b>2.9</b> | <b>4.0</b>  | <b>7.7</b>   | <b>5.4</b>   | <b>--</b>     | <b>3.9</b>    | <b>Oct-06</b> |
| PRIM Absolute Return Fund                              | 17,692,409           | 4.0               |             |             |                      |            |             |              |              |               |               |               |
| <i>HFRI Fund of Funds Composite Index</i>              |                      |                   |             |             |                      |            |             |              |              |               |               |               |
| Permal Fixed Income Holdings                           | 10,776,507           | 2.4               |             | 1.3         | -1.9                 | 2.2        | 3.5         | 8.0          | --           | --            | 8.0           | Oct-11        |
| <i>HFRI Fund of Funds Composite Index</i>              |                      |                   |             | 1.3         | 1.0                  | 3.1        | 4.5         | 5.4          | 3.4          | 3.2           | 5.1           | Oct-11        |
| EnTrust  | 10,458,007           | 2.4               |             | 1.2         | -1.2                 | 2.6        | 3.7         | --           | --           | --            | 7.0           | Jan-12        |
| <i>HFRI Fund of Funds Composite Index</i>              |                      |                   |             | 1.3         | 1.0                  | 3.1        | 4.5         | 5.4          | 3.4          | 3.2           | 5.8           | Jan-12        |
| <b>Other</b>   | <b>3,741,403</b>     | <b>0.8</b>        | <b>0.0</b>  | <b>0.0</b>  | <b>0.0</b>           | <b>0.0</b> | <b>0.0</b>  | <b>0.0</b>   | <b>--</b>    | <b>--</b>     | <b>0.1</b>    | <b>Dec-10</b> |
| Cash Account   | 3,741,403            | 0.8               |             | 0.0         | 0.0                  | 0.0        | 0.0         | 0.0          | 0.1          | 1.7           | 2.1           | Feb-00        |
| <i>91 Day T-Bills</i>                                  |                      |                   |             | 0.0         | 0.0                  | 0.0        | 0.0         | 0.0          | 0.1          | 1.4           | 1.8           | Feb-00        |
| <b>Total Real Estate</b>                               | <b>25,056,813</b>    | <b>5.7</b>        | <b>6.0</b>  | <b>0.0</b>  | <b>1.3</b>           | <b>8.6</b> | <b>11.6</b> | <b>13.2</b>  | <b>10.5</b>  | <b>6.4</b>    | <b>7.2</b>    | <b>Apr-99</b> |
| PRIT Core Real Estate                                  | 12,447,435           | 2.8               |             |             |                      |            |             |              |              |               |               |               |
| Morgan Stanley Prime Property                          | 5,735,296            | 1.3               |             | 0.0         | 0.0                  | 5.6        | 9.2         | 12.1         | 12.4         | 7.2           | 8.1           | Sep-95        |
| Intercontinental Real Estate Investment Fund IV        | 529,444              | 0.1               |             | 0.0         | 0.0                  | 5.0        | 9.8         | 2.6          | 1.1          | --            | -8.9          | Jun-05        |
| Landmark VI (\$2m commitment in '11)                   | 1,175,968            | 0.3               |             | 0.0         | 0.0                  | 12.5       | 15.0        | 18.2         | --           | --            | 16.8          | Jul-11        |
| Mesirow MFire Global (\$2m commitment in '11)          | 1,272,194            | 0.3               |             | 0.0         | 0.0                  | 5.7        | 10.9        | --           | --           | --            | -1.3          | Apr-12        |
| Cerberus (\$1.5m commitment in '12)                    | 919,535              | 0.2               |             | 0.0         | 0.0                  | 10.5       | 17.0        | --           | --           | --            | 17.0          | May-13        |
| Realty Associates Fund X LP (\$3.5m commitment in '12) | 2,976,941            | 0.7               |             | 0.0         | 0.0                  | 7.8        | 12.0        | --           | --           | --            | 6.7           | May-13        |
| <i>NCREIF Property Index 1 Qtr Lag</i>                 |                      |                   |             | 0.0         | 2.9                  | 8.4        | 11.2        | 11.3         | 9.7          | 8.6           | 10.6          | May-13        |



# MWRA Employees' Retirement System

## Total Fund Performance Detail (Net)

November 30, 2014

|   | Market Value<br>(\$) | % of<br>Portfolio | Policy %   | 1 Mo<br>(%) | Fiscal<br>YTD<br>(%) | YTD<br>(%) | 1 Yr<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) | Return<br>(%) | Since         |
|---|----------------------|-------------------|------------|-------------|----------------------|------------|-------------|--------------|--------------|---------------|---------------|---------------|
| <b>Total Private Equity</b>                         | <b>24,674,703</b>    | <b>5.6</b>        | <b>9.0</b> | <b>0.0</b>  | <b>0.6</b>           | <b>7.9</b> | <b>15.1</b> | <b>8.2</b>   | <b>18.3</b>  | <b>8.7</b>    | <b>8.0</b>    | <b>Apr-99</b> |
| PRIM Vintage Year 2008 (\$3m commitment in '08)     | 2,010,375            | 0.5               |            |             |                      |            |             |              |              |               |               |               |
| PRIM Vintage Year 2009 (\$1m commitment in '09)     | 286,295              | 0.1               |            |             |                      |            |             |              |              |               |               |               |
| PRIM Vintage Year 2010 (\$1m commitment in '10)     | 657,035              | 0.1               |            |             |                      |            |             |              |              |               |               |               |
| PRIM Vintage Year 2011 (\$1.5m commitment in '11)   | 807,918              | 0.2               |            |             |                      |            |             |              |              |               |               |               |
| PRIM Vintage Year 2012 (\$1m commitment in '12)     | 291,723              | 0.1               |            |             |                      |            |             |              |              |               |               |               |
| PRIM Vintage Year 2014 (\$2m commitment in '14)     | 44,383               | 0.0               |            |             |                      |            |             |              |              |               |               |               |
| Ascent Fund II                                      | 73,345               | 0.0               |            | 0.0         | 0.0                  | 5.1        | 46.9        | 15.1         | 21.1         | 8.8           | 13.5          | Jan-99        |
| Ascent Fund IV (\$2m commitment in '04)             | 1,457,985            | 0.3               |            | 0.0         | 0.0                  | 0.0        | -1.4        | 1.4          | 7.1          | -1.1          | -1.4          | Jul-04        |
| Ascent Fund V (\$2m commitment in '08)              | 2,155,927            | 0.5               |            | 0.0         | 0.0                  | 4.9        | 15.6        | 18.6         | 13.7         | --            | 8.8           | Oct-08        |
| Boston Capital                                      | 17,686               | 0.0               |            | 0.0         | 0.0                  | -19.9      | -19.9       | 1.7          | 0.8          | 24.9          | 9.8           | Apr-99        |
| Castile Ventures III, L.P. (\$3m commitment in '07) | 1,240,641            | 0.3               |            | 0.0         | 0.0                  | -9.1       | -5.1        | -8.5         | -6.2         | --            | -9.0          | Jan-08        |
| Invesco Fund IV (\$3m commitment in '03)            | 1,810,263            | 0.4               |            | 0.0         | 0.0                  | 2.9        | 20.1        | 13.8         | 18.4         | 13.2          | 10.8          | Feb-04        |
| Invesco Fund VI (\$5m commitment in '13)            | 2,280,115            | 0.5               |            | 0.0         | 0.0                  | 7.6        | 10.8        | --           | --           | --            | 7.5           | Jul-13        |
| Foundry 2007 (\$3m commitment in '07)               | 3,610,522            | 0.8               |            | 0.0         | 0.0                  | 16.1       | 23.7        | -0.2         | 34.7         | --            | 30.5          | Dec-07        |
| Foundry 2010 (\$3m commitment in '10)               | 2,909,378            | 0.7               |            | 0.0         | 0.0                  | 5.8        | 7.4         | 21.2         | --           | --            | 11.7          | Jan-11        |
| Pinebridge PEP V (\$6m commitment in '07)           | 4,374,626            | 1.0               |            | 0.0         | 0.0                  | 8.5        | 16.2        | 11.1         | 12.1         | --            | 3.1           | Mar-08        |
| Landmark XV (\$3m commitment in '13)                | 646,485              | 0.1               |            | 0.0         | 0.0                  | 5.3        | 32.8        | --           | --           | --            | 29.9          | 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 8.8 for the month of November.
- 5 - Market values for Real Estate, with the exception of PRIT Core Real Estate, are as of 6/30/2014 adjusted for cash flows. PRIT Core Real Estate market value is as of the previous month.
- 6 - Market values for Private Equity managers, with the exception of PRIM Vintage Year accounts, are as of 6/30/2014 adjusted for cash flows. PRIM Vintage Year accounts market values are as of the previous month.

## Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC 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 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.



## 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.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may not be available from the source or may be preliminary and subject to change.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodial bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- This report is provided as a management aid for the client's internal use only. Performance contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

