

# MWRA EMPLOYEES' RETIREMENT BOARD MEETING

## AGENDA

Thursday, April 25, 2024 10:00 a.m.  
MWRA, 2 Griffin Way  
Chelsea, MA 02150

Item 1 10:00 a.m. Meeting called to order

### OLD BUSINESS

- Item 2 Standing Committee Reports
- i. By-Laws Committee: Member Kevin McKenna, Member Brian Peña
  - ii. Human Resources Committee: Member Frank Zecha, Member Matthew Horan
  - iii. Special Committee, Stipend: Member James M. Fleming, Member Kevin McKenna
  - iv. Job Review Committee: Member James M. Fleming, Member Frank Zecha

### NEW BUSINESS

- Item 3 Approval of 2023 Annual Statement – VOTE
- Item 4 Approval of March 28, 2024 Minutes – VOTE
- Item 5 Approval of Warrants – VOTE
- a) Warrant 4-2024
  - b) Warrant 4-2024A – Payroll
- Item 6 Approval of Monthly Transfers 4-2024 – VOTE
- Item 7 Acknowledgement of retirement applications under G.L. c 32 §5 – VOTE
- a) Lisa Patenaude DOR 3/28/2024
  - b) Karen Reardon DOR 4/1/2024
  - c) Jon Szarek DOR 4/6/2024
- Item 8 Approval of Bank Reconciliations – VOTE
- a) February 2024
  - b) March 2024
- Item 9 10:20 a.m. Legal
- a) MWRAERB v. PERAC (Capozzi) – Status Update
  - b) MWRAERB v. PERAC (Vargus) – Status Update
  - c) Post-Retirement Earnings
    - Dixon v. Lynn* March 15, 2024 CRAB Decision
    - Inspector General's March 26, 2024 Report
  - d) FY2023 CLA Audit Confirmation
  - e) NEPC Contract Execution
  - f) Pending Legislation of Note
  - g) Cohen Milstein – Board Fiduciary Presentation

Item 10

NEPC

- a) Flash Report as of 3/31/2024
- b) Global Equity Respondents
- c) International EAFE Index Search Review
- d) Rebalance Recommendation – VOTE
- e) Private Equity – Secondaries RFP – VOTE

.....**FOR YOUR INFORMATION and REVIEW** .....

- Item 99-1 PERAC MEMO #11/2024 – Mandatory Retirement Board Member Training – 2<sup>nd</sup> Quarter 2024
- Item 99-2 PERAC MEMO #/12/2024 – PERAC Regulations 840 CMR 4.00 and 25.00
- Item 99-3 PERAC MEMO #13/2024 – PERAC Regulations 840 CMR 2.00, 8.00, 11.00, 12.00, & 15.00
- Item 99-4 May 2, 2024 Manager Due Diligence Meeting Presenters
 

10:00 a.m.	Pinebridge	11:00 a.m.	Foundry
10:10 a.m.	Ascent	11:15 a.m.	LMCG
10:20 a.m.	Invesco	11:30 a.m.	TerraCap
10:30 a.m.	TA Realty	11:45 a.m.	Constitution
10:40 a.m.	Mesirow	12:00 p.m.	HarbourVest
10:50 a.m.	Loomis	12:15 p.m.	PRIM

**The Board reserves the right to consider items on the agenda out of order. The listing of items is those reasonably anticipated by the Chair to be discussed received at least forty-eight (48) hours prior to the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law. Items identified for discussion in Executive Session may be conducted in open session, in addition to, or in lieu of discussion in Executive Session.**

**Special meeting is scheduled for Thursday, May 2, 2024, remotely for the sole purpose of mandatory manager due diligence presentations.**

**Date of next scheduled Retirement Board meeting is Thursday, May 30, 2024, 10:00 a.m., Chelsea**

**MWRA EMPLOYEES' RETIREMENT BOARD MEETING  
MARCH 28, 2024**

A regular meeting of the MWRA Employees' Retirement Board was conducted in-person on Thursday, March 28, 2024. Remote access was provided to the public via Zoom, with call-in information provided on the official Meeting Notice posted to [www.mwraretirement.com](http://www.mwraretirement.com) and the MA Secretary of State's website. Present at the in-person meeting were Board members Matthew Horan, Kevin McKenna, and Brian Peña, staff members Carolyn Russo, Julie McManus and Danielle DiRuzza, and Sebastian Grzejka representing NEPC. Mr. Frank Zecha joined via remote participation. Members of the public and from the Advisory Board also attended via remote access. Mr. Fleming attempted to participate remotely but was unable due to a service interruption with his internet/email provider. Mr. Horan called the meeting to order at 10:02 a.m.

- 1) Call the meeting to order-roll call of members: Mr. McKenna, Mr. Peña, Mr. Zecha, and Mr. Horan present.
- 2) Standing Committee Reports
  - i. By-Laws Committee: No report
  - ii. Human Resources Committee: No report
  - iii. Special Committee, Stipend: No report
  - iv. Job Review Committee: No report

Mr. Horan stated that as a courtesy to Ms. VanDermark, he would be taking items out of order and jumping to item 4 on the agenda.

- 4) Actuarial Pre-Valuation Assumption Discussion

Ms. Lisa VanDermark, FSA, MAAA, EA joined the meeting on behalf of Segal. She referred the Board to page two for discussion points. She thanked Mr. Grzejka and his team for providing the asset allocation information to the SegalMarco consulting group. The group calculated a 7.66% return on the ten-year time horizon, and a 7.4% return on the twenty-year horizon, as opposed to NEPC's 6.3% expected return on the ten-year time horizon, and a 7.6% return on the thirty-year horizon. Segal's recommendation is that the Board maintain its current return assumption of 6.9%. Ms. VanDermark acknowledged that the ten-year horizon expectations are different, but that they are the product of different models and viewpoints. The two converge over the longer-term. Mr. McKenna asked why the gap is larger than usual at 136bps, and to what the difference is attributable. Ms. VanDermark cited the Horizon Actuarial Survey of Capital Market Assumptions as supporting to SegalMarco's position. She noted last year the difference was 106bps, and it is just the result of different opinions and models. Mr. Grzejka concurred, and stated the biggest reason is high equity

valuations, which are factored into NEPC's model and currently driving the lower return expectation. He would expect a year from now that the two will be closer. Ms. VanDermark reminded the Board that the focus should not be on the short-term. Segal does not recommend a reduction in the return assumption. It is the Actuary's job to supply a best estimate, and Segal will not implement assumptions it knows to be unreasonable. The current funding schedule fully funds the system by 2030 with a 6.9% return assumption and a year-over year increase of 14.2%. Ms. VanDermark asked the Board what the most important items are. All other things being equal, she expects a gain on assets. Would the Board be looking to lower the year-over year increase? Mr. McKenna asked if the Executive Director had spoken to PERAC's Actuary. The Executive Director responded that Mr. Boorack had stated that the 14.2% increase is an outlier state-wide, it is her understanding that he would like to see that moderate, and that he is likewise not recommending a reduction to the return assumption. Mr. Horan asked whether the impact of the additional appropriation made last year would be shown, and commented that the MWRA has projected it will be able to make payments in addition to the required appropriation over the next two years. Ms. VanDermark stated that asset gains would be greater as a result of the additional \$1.9m last year. It would be realized over five years, and the FY25 requirement will stay the same, but it would lower the later years' payments, everything else equal. Ms. VanDermark asked if the Board wants to keep the 14.2% increase for 3 years, then solve for the lowest possible year-over-year increases thereafter. Mr. Horan stated he would like to see the first three years kept at 14.2% and the year-over-year increases adjusted in subsequent years. Additional funds are expected to be added to the appropriation in the meantime, but should not be assumed as part of the Funding Schedule process. Mr. Zecha asked if returns are 15-18% for 2024, whether we would want to push gains out and keep the current schedule for FY25 and FY26. Ms. VanDermark agreed if the Board were to continue with its schedule and keep the asset gains "in its pocket," the out years would look better. If there are asset gains, the Board could change its schedule immediately, later, or not at all. Ms. VanDermark asked for confirmation that the Board wants to keep the 14.2% for three years, then see what happens in later years. Mr. Horan confirmed. Mr. McKenna asked that Ms. VanDermark run the results using a 6.75% assumption to see what it looks like. Ms. VanDermark asked whether the intention is to use 6.75% and keep the 14.2% increases, and Mr. McKenna responded affirmatively. Ms. VanDermark noted that the System may no longer be fully funded by 2030 given that scenario. Mr. Zecha asked about the 6/30/2030 full-funding date. Our reporting year is 12/31. Ms. VanDermark stated the Unfunded Liability is determined as of 12/31 but is rolled forward to 7/1 for the purposes of the funding schedule. The system is expected to be fully funded by 6/30/2030. Mr. McKenna asked about the mortality tables. Ms. VanDermark stated that the most recent table is the 21 table, which was adopted previously by the Board. Ms. VanDermark stated the salary assumption is higher in early years, and she will not recommend an assumption modification unless she identifies significant salary gains or losses. Mr. McKenna stated the State just settled at 8% and

stated if MWRA does it, that it should affect the 5.75 chart. Mr. Horan noted the salary increase was not 8% over one year. It was 4% effective 7/1/2023 and 4% effective 1/6/2024. No increase is expected for 7/1/2024. Ms. VanDermark stated that the 4% from July is already in the data, and the 4% in January is not. If the MWRA were to give 8% per year over the long term, it would have an impact, but should not over the short term. Mr. McKenna asked about the impact of staffing levels. He stated MWRA is down 100 employees from the peak, and asked if that changes the valuation. Ms. VanDermark stated that MWRA's salary level has been pretty stable over the past several years. If numbers went way up or way down over the long term, it would have an effect. Each valuation encompasses the System's current population. Mr. Horan asked to see a schedule which extends full funding out to 2035. Mr. McKenna stated that ties the Board's hands in future years. Mr. Horan agreed, but stated he still wants to see it.

Ms. VanDermark summarized the requested schedules as:

- 1) 6.9% return assumption, 14.2% year over year increases in all years, solve for full-funding date. If not fully funded by 2030, solve for increase % needed to fully fund by 2030.
- 2) 6.9% return, 14.2% year-over-year increases for 3 years, then lowest possible increases year-over-year through full-funding date of 2035;
- 3) 6.9% return, full funding by 2030, solve for lowest possible year-over-year increases; and
- 4) 6.75% return, 14.2% increases all years, solve for full-funding date.

Ms. VanDermark thanked the Board and signed off the call at 10:35 a.m.

### 3) Scheduling Manager Due Diligence Presentations

Mr. Zecha stated that he wants to take one day to assign as many managers as possible, and that he wants a series of pre-determined questions to be sent to all so that the Board has the information in front of them ahead of time and can get through them quickly. Mr. Grzejka suggested ten minutes per manager as was done last year. Mr. Peña stated he agrees in concept but questioned the timeline. Last year the Board got so far behind that some managers had to sign off due to scheduling conflicts. He suggested a firm fifteen minute timeline, ten for presentations, five for questions, three hour meeting in total. Mr. Grzejka suggested that multi-account managers be called in: PRIM, Ares, TerraCap, Ascent, TA, Pinebridge Foundry, Loomis Sayles, etc. After discussion of possible dates, the Board agreed to conduct a meeting solely for the purposes of due diligence presentations on Thursday May 2, 2024 at 10:00 a.m. Mr. Grzejka will schedule managers with multiple accounts to present. The meeting will be held remotely.

## 5) Appointment of Election Officer and Approval of Election Timeline – VOTE

The Retirement Coordinator stated that she is ordinarily designated as the Election Officer, and that the timeline is consistent with PERAC regulations.

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to designate Retirement Coordinator Julie McManus as the Election Officer and to approve the election timeline as submitted for the first Elected Member's position. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

## 6) Approval of FY2025 3% Retiree COLA – VOTE

Mr. McKenna asked whether the proper notification had been sent to the Board of Directors, and Ms. McManus responded affirmatively. Mr. Horan asked if the amount would be 3% calculated on a \$17,000 base, and the Executive Director responded affirmatively.

On a motion made by Mr. Peña and seconded by Mr. McKenna:

**VOTED**

to approve a COLA for retirees in the amount of 3% calculated on a \$17,000 base to become effective July 1, 2024. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

## 7) Approval of February 29, 2024 Minutes – VOTE

On a motion made by Mr. Peña and seconded by Mr. McKenna:

**VOTED**

to approve the Minutes of the February 29, 2024 meeting as submitted. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

## 8) Approval of Warrant 3-2024 – VOTE

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to approve Warrant 3-2024. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

## 9) Approval of Monthly Transfers 3-2024 – VOTE

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to approve the monthly transfers for March. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

10) Acknowledgement of retirement applications under G.L. c 32 §5 – VOTE

- |    |                 |               |
|----|-----------------|---------------|
| a) | Michael Sheehan | DOR 1/23/2024 |
| b) | Andrea Enos     | DOR 2/21/2024 |
| c) | John Porcello   | DOR 3/2/2024  |
| d) | Olivia Stots    | DOR 3/8/2024  |

On an omnibus motion made by Mr. Peña and seconded by Mr. McKenna:

**VOTED**

to acknowledge the section 5 retirements as listed. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

11) Approval of 12(2)(d) Survivor Benefit re. Sharmila Fernandes, spouse of Damien Fernandes, DOD 1/19/2024 – VOTE

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to approve the s. 12(2)(d) survivor allowance payable to Sharmila Fernandes, including dependent benefits for the three eligible minor children. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

Mr. Horan and Mr. McKenna thanked the Executive Director for her efforts on the Fernandes family's behalf.

12) Approval of Shannon Matuschak's buyback of 4 months of MassDOT employment – VOTE

On a motion made by Mr. Peña and seconded by Mr. McKenna:

**VOTED**

to approve Ms. Shannon Matuschak's buyback of prior service with MassDOT. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

13) Acceptance of Section 7 Retirement Application re. Timothy Joslin – VOTE

On a motion made by Mr. Peña and seconded by Mr. McKenna:

**VOTED**

to accept the application of Mr. Timothy Joslin for accidental disability, and to request from PERAC the appointment of a medical panel upon receipt of the pertinent medical records. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

- 14) Attendance at MACRS TEDS & Annual Conference, June 1 – June 5, 2024, Hyannis – VOTE

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to approve travel for any Board or Staff member who wishes to go to the MACRS Spring Conference. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

- 15) NEPC

- a) Flash Report as of 2/29/2024
- b) Estimated Asset Allocation Rebalance Summary
- c) MSCI EAFE International Equity Index Search RFP – VOTE
- d) Global Equity Search RFP – VOTE
- e) Private Markets Pacing

Mr. Grzejka stated that the portfolio was up 2% for the month of February, and ended at \$690m. Performance was driven by US Large Cap, with Small Cap and Non-US also performing well. Growth has had another rally in February, which seems to have balanced out in March. Apple is experiencing regulatory pressures, particularly in the EU. Baillie Gifford has captured some of the up-swing. Axiom outperformed, driven by security selection and being underweight in China. Rates are high, but the markets seem to be taking the “higher longer” rate environment in stride. Credit markets outperformed, and NEPC favors credit moving forward. The Private Equity and Debt valuations lag, but the Q4 PE performance should be positive and help the year-end number. Real Estate has been relatively flat. The rebalance sheet for March does not show new recommendations but rather shows where the fund landed after February’s transactions. As of Monday, the transactions executed to transition out of the large cap separate accounts are complete. Large Cap Value has had gains since the first tranche was moved to Aristotle. The Hedge Fund movements shown have been requested, but not yet disbursed.

In regard to the MSCI EAFE search, the goal is to add a passive account manager. The Board is seeking a “pure play” in developed markets, with an allocation of between \$30m and \$35m. Because it is an index search and does not require the same depth of responses, NEPC is advertising it with a ten-day turnaround time, so the Board may be able to vote in April. Mr. Zecha asked from where the allocation would be funded. Mr. Grzejka stated it would be from Schroders, Baillie Gifford, Axiom, and/or SEG. Mr. Zecha asked if that would result in the termination of one or more, and Mr. Grzejka responded affirmatively. NEPC has asked for a minimum track record of three years, but expects the responses to include some very established firms. Mr. Horan asked how many responses NEPC would expect, and Mr. Grzejka responded 10 or 15. Mr.



McKenna asked if these would be big names, similar to the Large Cap process, and Mr. Grzejka said “yes.” Mr. McKenna asked about splitting the \$30m-\$35m, and Mr. Grzejka responded that the Board could but in doing so would be diluting any benefits to the allocation. In making this move, both fee and performance issues within the international portfolio will be addressed.

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to approve the RFP as submitted by NEPC for the International Index Search Equity Manager. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

In regard to the Global Equity Search, the allocation will likely be \$50m. Global will be a more broad portfolio, and will be funded through rebalancing other areas. The allocation is intended to limit Emerging Markets exposure, for less overlap and volatility. NEPC is also recommending a ten-day response turnaround so the Board can move quickly. Mr. McKenna asked if Global can go into all markets including EM, with the exception of US. Mr. Grzejka stated that Global can go into EM with a ceiling of 10%, and may invest in US. They can go anywhere they want. Mr. Peña noted that allows the manager to be more nimble. Mr. Grzejka agreed that allows them to pivot quickly to add value. The EM exposure can go slightly over due to short term market valuation shifts, but not significantly over a long period. He expects a good cross section of managers. Mr. McKenna asked what the differentiators would be. Mr. Grzejka cited overlap, heavy EM exposure, fees, track record, resources, whether the strategy is all cap or has a small cap focus, and the manager’s overall experience. Mr. Horan asked if the RFP should be more specific in those categories to weed out some of the responses. Mr. Grzejka expects the 10% cap on EM will weed out some responses, but we will still have good options. The initial review process will eliminate those deemed not to operate within the requested mandate. He hopes to get the list to the Board in time for the April meeting. Mr. Peña asked if there are lists of barred countries. Mr. Grzejka stated that there are, such as Sudan, and through the Chair the Executive Director added Northern Ireland and South Africa, but stated that would be addressed in the Side Letter to the Investment Management Agreement. Mr. Zecha asked about splitting the mandate. Mr. Grzejka stated it doesn’t really make sense because there is such a high tracking for these products. Mr. Zecha asked if other NEPC systems are in these products. Mr. Grzejka responded that Boston has the exposure, as does PRIT. This is a long play because it does not track directly with the S&P.

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to approve the RFP as submitted by NEPC for the Global Equity search. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

In regard to Private Equity pacing, Mr. Grzejka stated that the goal is to add to the PE allocation every year, since different vintages have different opportunity sets. Existing managers are making distributions so there are outflows from existing PE assets over time. Commitments are also invested over time, so to reach and maintain targets, new commitments need to be made annually. NEPC's recommendation is that the Board Commit up to \$24 per year. The Board has already committed \$10m to PRIT PE VY 2024. NEPC recommends focusing on Secondaries, which tend to be discounted, provide liquidity, and are realized sooner with attractive fees. As shown on page 9 of the presentation, older vintages will be making distributions, so exposure will go down before it goes up. Building up to and maintaining a 15% PE exposure is built into the Asset Allocation model. 2027 and beyond are shown for demonstration purposes on the graphic and are expected to change. Mr. McKenna asked if the 2024 \$24m recommendation already includes the PRIT allocation, and Mr. Grzejka stated that it does. He noted the RFP process for Secondaries will begin in April. Mr. Horan asked if it is too late to increase the PRIT VY 2024 commitment, and Mr. Grzejka stated that it is. PRIT has a window toward the end of every calendar year, and the Board committed the \$10m. Mr. Zecha asked about names Mr. Grzejka would expect. He responded that Hamilton Lane, Newbury, Harbourvest, Commonfund, and TA would likely respond. Mr. Zecha asked about the return through February. Mr. Grzejka stated that the fund is up 2% through February, and March to date has been positive too. Mr. Horan noted that adding managers adds work for the Board and NEPC, RFPs, reporting, etc. Mr. Grzejka stated that some managers are adding "evergreen" products, but otherwise agreed. The PRIT PE exposure has crept up over time, and the increases would be expected to continue. Mr. Peña asked if it is permissible to restrict responses to known firms, and Mr. Grzejka stated the process has to be fully open to all who fit the strategy the Board is seeking. Limiting the search to Secondaries will limit the responses.

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to request that NEPC draft an RFP for a Secondaries Manager for the Board's consideration. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

Mr. McKenna asked that travel for Board and Staff be approved for those who wish to participate in the Opal educational conference in July.

On a motion made by Mr. McKenna and seconded by Mr. Peña:

**VOTED**

to approve Board and Staff travel to the Opal Conference in Newport in July. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes.

On a motion made by Mr. Peña and seconded by Mr. McKenna:  
**VOTED**  
 to adjourn the March 28, 2024 meeting of the MWRA Employees' Retirement Board. 4-0, with Mr. McKenna voting yes, Mr. Peña voting yes, Mr. Zecha voting yes, and Mr. Horan voting yes. The meeting was adjourned at 11:28 a.m.

The following communications were distributed to the Board for review:

PERAC MEMO #10/2024 – Tobacco Company List

**The Board reserves the right to consider items on the agenda out of order. The listing of items is those reasonably anticipated by the Chair to be discussed received at least forty-eight (48) hours prior to the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law. Items identified for discussion in Executive Session may be conducted in open session, in addition to, or in lieu of discussion in Executive Session. Date of next scheduled regular Retirement Board meeting is Thursday, April 25, 2024 at 10:00 a.m., Chelsea, MA.**

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James M. Fleming, Chair

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Matthew Horan Appointed Member

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Kevin McKenna, Elected Member

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Brian Peña, Ex Officio Member

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Frank Zecha, Fifth Member

# MONTHLY PERFORMANCE REPORT

**MWRA EMPLOYEES' RETIREMENT  
SYSTEM**

MARCH 31, 2024



PROPRIETARY & CONFIDENTIAL

# GOALS & OBJECTIVES

## Investment Return Objective

“Its primary goal is to provide promised benefits to participants and beneficiaries of the MWRA Employees’ Retirement system. Plan assets should be equal to or greater than the present value of the projected benefit obligations (“fully funded”). When Plan assets are less than the present value of projected benefit obligations, a schedule will be established and a plan will be in place to meet a fully funded status. When achieving return objectives required to fully fund the system, the Board is intent on controlling risk. Consistency of returns and risk of loss are primary considerations. The Board has also determined that the annual performance of plan assets should not vary substantially from returns achieved by other public pension funds with similar goals and objectives.”

## Return Expectations

**The investment growth should be maintained in such a manner that the minimum nominal rate of return does not cause a negative real rate of return over a full market cycle:**

- **Time Horizon:** Return assumptions will be based on a ten-year time horizon with a detailed review and analysis to be made at least annually to monitor allocations and assumptions. Should a manager deviate from proscribed mandate or expected risk and return profile by a consequential degree, that manager may be reevaluated at any time.
- **Liquidity Needs:** Presently contributions exceed plan withdrawals to provide benefits, payouts, and/or plan expenses. Portfolio liquidity will be managed based on the cash flow needs of the System.
- **Regulatory Considerations:** Assets of this Fund shall be invested in a manner consistent with the fiduciary standards established under Code of Massachusetts Regulations 840 (“840 CMR”). The Board shall also use as precedent the Employee Retirement Income Security Act (ERISA).

# EXECUTIVE SUMMARY

	Market Value (\$)	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Composite</b>	<b>696,395,364</b>	<b>1.5</b>	<b>3.5</b>	<b>9.5</b>	<b>3.2</b>	<b>6.7</b>	<b>6.0</b>	<b>6.8</b>	<b>Jan-86</b>
<i>Allocation Index</i>		2.2	4.0	11.8	4.3	7.5	6.7		
<i>Policy Index</i>		1.9	4.1	12.5	4.8	8.1	7.1		

20 years as of March 31, 2024				
	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
<b>Composite</b>	<b>6.8</b>	<b>8.5</b>	<b>0.9</b>	<b>0.9</b>
<i>Allocation Index</i>	6.5	8.0	0.9	0.9
<i>Policy Index</i>	6.9	8.6	0.9	0.9

## Performance

- The Composite had a preliminary return of 1.5% (net) for the month, underperforming the Allocation Index of 2.2% and the Policy Index of 1.9%.
- In equities, the continuing economic momentum bolstered stocks last month with U.S. large-cap equities up 3.2%, according to the S&P 500 Index; U.S. small-cap stocks rose 3.6%, as measured by the Russell 2000 Index. Global equities gained 3.1%, according to the MSCI ACWI Index, helped by the MSCI EAFE Index posting returns of 3.3%; emerging market equities lagged with the MSCI Emerging Markets Index up 2.5%. The portfolio's Domestic Equity composite returned 2.7% (net) and the Non-US Equity composite was up 2.0% (net).
- In fixed income, interest rates held steady in March. The two-year U.S. Treasury yield—a proxy for short-term market expectations for Fed interest rate policy—was unchanged at 4.6%, and consistent with Fed guidance on three expected cuts in 2024. Long-bond yields were also flat in March with the 10-year yield at 4.2% and 30-year at 4.4%. The Fixed Income composite returned 0.9% (net) for the month while the Bloomberg Agg and the Bloomberg US HY returned 0.9% and 1.2%, respectively.
- This brings the total plan return for the trailing one-year period to 9.5% (net), while the Allocation Index and Policy Index both returned 11.8% and 12.5%, respectively.

Returns for 20 years Risk/Return and Statistics Summary are gross of fees.  
 Since inception return is 8.3% gross of fees. Prior to 1999, performance history does not capture separate net and gross returns.



# TOTAL FUND PERFORMANCE DETAIL (NET)

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy(%)	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Composite</b>	<b>696,395,364</b>	<b>100.0</b>	<b>100.0</b>	<b>1.5</b>	<b>3.5</b>	<b>9.5</b>	<b>3.2</b>	<b>6.7</b>	<b>6.0</b>	<b>6.8</b>	<b>Jan-86</b>
Allocation Index				2.2	4.0	11.8	4.3	7.5	6.7		
Policy Index				1.9	4.1	12.5	4.8	8.1	7.1		
<b>Total Balanced</b>	<b>3,974,566</b>	<b>0.6</b>	<b>0.0</b>	<b>1.7</b>	<b>3.6</b>	<b>10.9</b>	<b>5.4</b>	<b>7.4</b>	<b>4.8</b>	<b>5.1</b>	<b>Dec-10</b>
PRIT Core Fund	3,974,566	0.6	0.0	1.7	3.6	10.9	5.4	8.4	7.6	7.0	Apr-99
60% S&P 500 / 40% Bloomberg Aggregate				2.3	5.9	18.0	5.9	9.3	8.5	6.5	
<b>Total Domestic Equity</b>	<b>223,004,870</b>	<b>32.0</b>	<b>31.0</b>	<b>2.7</b>	<b>8.1</b>	<b>21.9</b>	<b>6.3</b>	<b>12.0</b>	<b>10.6</b>	<b>7.9</b>	<b>May-99</b>
Russell 3000 Index				3.2	10.0	29.3	9.8	14.3	12.3	7.8	
<b>Large Cap</b>	<b>170,303,054</b>	<b>24.5</b>	<b>24.0</b>	<b>2.5</b>	<b>8.9</b>	<b>24.4</b>	<b>7.7</b>	<b>12.9</b>	<b>11.6</b>	<b>12.9</b>	<b>Dec-10</b>
Rhumblin Advisors S&P 500 Index Fund	119,337,684	17.1	10.0	3.2	10.5	29.8	11.4	15.0	12.9	9.5	Apr-97
S&P 500 Index				3.2	10.6	29.9	11.5	15.0	13.0	9.4	
Aristotle Value Equity Fund	50,936,329	7.3									Apr-24
Russell 1000 Value Index											
<b>Small Cap</b>	<b>52,701,816</b>	<b>7.6</b>	<b>7.0</b>	<b>3.3</b>	<b>5.5</b>	<b>13.6</b>	<b>1.7</b>	<b>9.2</b>	<b>8.3</b>	<b>11.0</b>	<b>Dec-10</b>
Loomis Sayles Small Cap Growth	26,789,287	3.8	3.5	1.5	6.8	14.9	0.0	8.9	9.4	6.9	Jan-97
Russell 2000 Growth Index				2.8	7.6	20.3	-2.7	7.4	7.9	7.0	
Mesirow Small Cap Value Equity CIT - Founders Class	25,912,529	3.7	3.5	5.2	4.1	12.3				12.3	Apr-23
Russell 2000 Value Index				4.4	2.9	18.8				18.8	
<b>Total Non-US Equity</b>	<b>118,138,454</b>	<b>17.0</b>	<b>19.0</b>	<b>2.0</b>	<b>4.7</b>	<b>7.7</b>	<b>-3.8</b>	<b>2.4</b>	<b>2.5</b>	<b>3.9</b>	<b>Mar-99</b>
<b>International Equity</b>	<b>77,707,654</b>	<b>11.2</b>	<b>12.0</b>	<b>1.8</b>	<b>5.3</b>	<b>7.7</b>	<b>-2.3</b>	<b>4.1</b>	<b>3.4</b>	<b>3.6</b>	<b>Sep-05</b>
SEG Baxter Street	32,562,723	4.7	5.0	2.4	6.6	6.4	-2.7	3.7		6.5	May-16
MSCI AC World ex USA (Net)				3.1	4.7	13.3	1.9	6.0		6.5	
Schroder International Alpha Trust Class 1	31,367,686	4.5	4.0	1.9	4.8	10.6	1.9	8.5	6.1	6.9	Mar-12
MSCI AC World ex USA (Net)				3.1	4.7	13.3	1.9	6.0	4.3	5.7	
Baillie Gifford International Growth Fund Class K	13,777,245	2.0	3.0	0.5	3.7	4.3	-10.4			-4.6	Oct-20
MSCI AC World ex USA (Net)				3.1	4.7	13.3	1.9			7.4	

Since inception return is 6.8% Net of fees. Prior to 1999, performance history does not capture separate net and gross returns. In November 2019, Loomis Sayles and Schroders transitioned from a mutual fund to a CIT structure. Performance prior to the transition to the CIT investment vehicle is linked to mutual fund performance history. Preliminary performance is subject to change once finalized.



# TOTAL FUND PERFORMANCE DETAIL (NET)

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy(%)	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets Equity</b>	<b>40,430,799</b>	<b>5.8</b>	<b>7.0</b>	<b>2.4</b>	<b>3.5</b>	<b>7.8</b>	<b>-7.6</b>			<b>-8.4</b>	<b>Mar-21</b>
Axiom Emerging Markets Trust Class 2	19,446,420	2.8		2.7	5.4	5.9	-9.9			-10.6	Mar-21
<i>MSCI Emerging Markets (Net)</i>				2.5	2.4	8.2	-5.1			-5.4	
ABS Emerging Markets MA Fund	20,984,379	3.0		2.1	1.9	9.5				-5.0	Dec-21
<i>MSCI Emerging Markets (Net)</i>				2.5	2.4	8.2				-3.7	
<b>Total Fixed Income</b>	<b>137,300,826</b>	<b>19.7</b>	<b>20.0</b>	<b>0.9</b>	<b>-0.2</b>	<b>3.4</b>	<b>-0.9</b>	<b>2.0</b>	<b>2.4</b>	<b>5.6</b>	<b>Mar-99</b>
Garcia Hamilton Fixed Income Aggregate	30,307,334	4.4	6.0	1.1	-1.4	-0.2	-2.6	0.1		0.7	Apr-18
<i>Blmbg. U.S. Aggregate Index</i>				0.9	-0.8	1.7	-2.5	0.4		1.0	
Lord Abbett Core Fixed Income	39,500,456	5.7	4.0	0.9	-0.5	2.2	-2.3	0.7		1.3	Apr-18
<i>Blmbg. U.S. Aggregate Index</i>				0.9	-0.8	1.7	-2.5	0.4		1.0	
Loomis Sayles Multisector Full Discretion Trust	53,016,401	7.6	8.0	1.1	0.4	5.1	-0.9	2.8	2.9	6.8	Mar-99
<i>Blmbg. U.S. Aggregate Index</i>				0.9	-0.8	1.7	-2.5	0.4	1.5	3.8	
<i>Blmbg. U.S. Corp: High Yield Index</i>				1.2	1.5	11.2	2.2	4.2	4.4	6.3	
LMCG Serenitas Credit Gamma Offshore	14,461,450	2.1	2.0	-0.1	0.8					3.6	Sep-23
<i>HFRI Relative Value (Total) Index</i>				1.0	2.5					5.5	
<i>Blmbg. U.S. Aggregate Index</i>				0.9	-0.8					3.3	
Invesco Mortgage Recovery Loans Feeder Fund	15,185	0.0		0.0	0.0	-0.8	0.0	-1.3	4.6	9.0	Apr-10
<i>Blmbg. U.S. Aggregate Index</i>				0.9	-0.8	1.7	-2.5	0.4	1.5	2.3	
<b>Total Hedge Fund</b>	<b>40,048,464</b>	<b>5.8</b>	<b>6.0</b>	<b>0.9</b>	<b>2.9</b>	<b>10.6</b>	<b>4.5</b>	<b>5.6</b>	<b>3.4</b>	<b>3.7</b>	<b>Oct-06</b>
PRIM Portfolio Completion Strategies	12,730,652	1.8		1.7	3.3	12.2	5.2	5.3	4.2	4.2	Oct-06
Corbin Pinehurst Partners	14,664,900	2.1		0.1	3.5	13.5	3.6	6.3		6.2	Nov-18
<i>HFRI Fund of Funds Composite Index</i>				1.6	4.2	9.7	2.9	5.0		5.1	
UBS Neutral Alpha Strategies	12,605,230	1.8		0.9	2.5	6.7	6.8	7.1		6.6	Nov-18
<i>HFRI Fund of Funds Composite Index</i>				1.6	4.2	9.7	2.9	5.0		5.1	
Entrust Peru Wind Down	47,681	0.0		-0.4	-2.4	-14.1	-60.1	-43.2		-36.6	Dec-17
<i>HFRI Fund of Funds Composite Index</i>				1.6	4.2	9.7	2.9	5.0		4.1	
<b>Other</b>	<b>13,135,856</b>	<b>1.9</b>	<b>0.0</b>	<b>0.4</b>	<b>1.2</b>	<b>5.3</b>	<b>2.5</b>	<b>2.1</b>	<b>1.4</b>	<b>1.1</b>	<b>Dec-10</b>
Cash Account	13,135,856	1.9		0.4	1.2	5.3	2.5	2.1	1.4	1.9	Feb-00
<i>90 Day U.S. Treasury Bill</i>				0.4	1.3	5.2	2.6	2.0	1.4	1.8	

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Preliminary performance is subject to change once finalized.





# TOTAL FUND PERFORMANCE DETAIL (NET)

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy(%)	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Real Estate</b>	<b>67,356,699</b>	<b>9.7</b>	<b>12.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-2.8</b>	<b>8.3</b>	<b>6.9</b>	<b>8.7</b>	<b>7.8</b>	<b>Apr-99</b>
<i>NCREIF Property Index</i>				0.0	0.0	-6.2	4.0	4.0	6.5	7.9	
Morgan Stanley Prime Property (\$2.8m commitment in '95)	23,735,670	3.4		0.0	0.0	-2.5	6.8	5.7	8.2	8.2	Sep-95
TA Realty Core Property Fund, LP (\$15m commitment in '19)	24,556,783	3.5		0.0	0.0	-2.9	9.9			8.7	Jun-19
Invesco Mortgage Recovery II (\$3M commitment in '15)	592,182	0.1		0.0	0.0	-30.2	-17.8	-21.3		-8.3	Oct-15
Landmark VI (\$2m commitment in '11)	6,021	0.0		0.0	0.0	1.9	-3.7	-7.9	-3.2	1.4	Jul-11
Landmark VIII (\$4m commitment in '17)	2,203,460	0.3		0.0	0.0	-3.2	14.9	10.2		14.6	Nov-17
StepStone Real Estate Fund II (\$2m commitment in '11)	348,139	0.0		0.0	0.0	-4.0	-1.4	-3.1	2.3	1.4	May-12
Cerberus Institutional Real Estate Partners III (\$1.5m commitment in '12)	502,381	0.1		0.0	0.0	10.2	21.7	15.5	13.4	14.1	May-13
TerraCap Partners III, LP (\$2.6m commitment in '15)	1,580,920	0.2		0.0	0.0	-1.2	8.0	6.0		9.6	Jul-15
TerraCap Partners IV, LP (\$4m commitment in '17)	3,509,679	0.5		0.0	0.0	-3.2	4.4	7.1		7.8	Nov-17
TerraCap Partners V, LP (\$8m commitment in '22)	8,321,463	1.2		0.0	0.0	-1.7				3.9	Jun-22
TA Realty Value XIII	2,000,000	0.3		0.0	0.0					0.0	Dec-23
<b>Total Private Equity and Debt</b>	<b>93,435,630</b>	<b>13.4</b>	<b>12.0</b>	<b>0.3</b>	<b>0.5</b>	<b>3.8</b>	<b>12.1</b>	<b>13.6</b>	<b>13.7</b>	<b>10.2</b>	<b>Apr-99</b>
<i>CJA US All PE</i>				0.0	0.0	6.1	10.8	14.6	13.2	12.9	
<i>NASDAQ W/O Income</i>				1.8	9.1	34.0	7.3	16.2	14.6	7.9	
PRIM Vintage Year 2008 (\$3m commitment in '08)	900,346	0.1		4.0	3.9	19.2	19.7	16.4	17.5	10.9	Jun-08
PRIM Vintage Year 2009 (\$1m commitment in '09)	50,359	0.0		2.3	2.0	5.1	7.8	22.5	22.1	12.6	Nov-09
PRIM Vintage Year 2010 (\$1m commitment in '10)	354,158	0.1		-0.3	-0.6	-19.1	-1.1	9.3	13.8	8.5	Jun-10
PRIM Vintage Year 2011 (\$1.5m commitment in '11)	693,977	0.1		0.8	1.0	0.3	19.7	19.4	20.4	8.8	May-11
PRIM Vintage Year 2012 (\$1m commitment in '12)	404,722	0.1		-0.1	2.1	5.3	-1.1	12.0	11.9	-8.1	Jun-12
PRIM Vintage Year 2014 (\$2m commitment in '14)	1,865,368	0.3		0.0	1.0	3.0	12.5	18.1		7.7	Jun-14
PRIM Vintage Year 2017 (\$2m commitment in '17)	2,655,564	0.4		1.7	1.6	10.7	16.3	19.3		15.1	May-17
PRIM Vintage Year 2020 (\$5m commitment in '20)	4,706,012	0.7		1.1	2.3	9.0	12.8			13.6	Mar-20
PRIM Vintage Year 2021 (\$5m commitment in '21)	4,341,914	0.6		1.7	2.5	10.6	3.4			3.0	Dec-20
PRIM Vintage Year 2022 (\$7.5m commitment in '22)	2,354,027	0.3		0.6	3.4	9.5				2.1	Apr-22
PRIM Vintage Year 2023 (\$10m commitment in '23)	789,005	0.1		4.9	8.0					7.8	May-23
PRIM Vintage Year 2024	52,963	0.0		-3.1						-3.1	Mar-24
Alcentra European DLF (\$5m commitment in '14)	20,448	0.0		0.0	0.0	8.3	29.5	17.2		11.9	Jan-15
Ascent Fund IV-B (\$1m commitment in '16)	20,104	0.0		0.0	0.0	-1.4	-28.5	-28.4		-20.2	Jul-16
Ascent Fund V (\$2m commitment in '08)	1,299,603	0.2		0.0	0.0	2.4	1.9	0.1	1.1	3.8	Oct-08
Ascent VI (\$3m commitment in '15)	3,119,079	0.4		0.0	0.0	-4.0	0.3	-1.3		0.4	Dec-15
CVI Credit Value Fund IV A LP (\$6m commitment in '17)	4,221,885	0.6		0.0	0.0	4.1	6.9	6.4		6.2	Dec-17
Invesco Fund VI (\$5m commitment in '13)	477,377	0.1		0.0	0.0	-9.9	-15.4	5.1	9.9	10.0	Jul-13

Importantly, all returns in this report, including those of the private real estate managers, are based on a time weighted return calculation and not based on IRRs, which can result in return differences.

Preliminary performance is subject to change once finalized.



# TOTAL FUND PERFORMANCE DETAIL (NET)

	Allocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy(%)	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Kayne Energy Fund VII (\$5m commitment in '15)	2,765,200	0.4		0.0	0.0	21.5	23.7	-13.8		-2.4	Jan-16
Foundry 2007 (\$3m commitment in '07)	218,788	0.0		0.0	0.0	6.0	-20.7	-5.4	2.6	12.6	Dec-07
Foundry 2010 (\$3m commitment in '10)	3,830,853	0.6		0.0	0.0	-35.9	6.0	8.2	7.5	9.0	Feb-11
Foundry 2010 Annex (\$0.4m commitment in '15)	540,786	0.1		0.0	0.0	-50.9	13.3	33.7		24.1	Sep-15
Pinebridge PEP V (\$6.23m commitment in '07)	237,665	0.0		0.0	0.0	3.7	-2.8	3.3	5.7	6.7	Dec-10
Pinebridge (AIG) PEP V Asia (\$.55m commitment)	30,091	0.0		0.0	0.0	-5.2	-8.8	-12.3		-12.4	Oct-18
Pinebridge (AIG) PEP V Europe (\$1.6m commitment)	2,560	0.0		0.0	0.0	-7.2	-12.1	92.2		84.4	Oct-18
Pinebridge (AIG) PEP V Large Market US Buyout (\$.7m commitment)	50,760	0.0		0.0	0.0	30.4	6.4	14.3		12.0	Oct-18
Pinebridge (AIG) PEP V Preferred Participation Fund (\$.5m commitment)	59,357	0.0		0.0	0.0	-12.4	-16.4	-6.0		-7.2	Oct-18
Pinebridge (AIG) PEP V Secondary (\$.6m commitment)	14,546	0.0		0.0	0.0	-8.7	-16.0	-14.0		-11.3	Jan-17
Pinebridge (AIG) PEP V Small-Mid Market US Buyout (\$.9m commitment)	39,224	0.0		0.0	0.0	-1.7	1.7	12.3		11.9	Oct-18
Pinebridge (AIG) PEP V US Venture (\$.48m commitment)	41,127	0.0		0.0	0.0	5.0	-4.2	-3.7		-4.6	Oct-18
Landmark XV (\$3m commitment in '13)	556,596	0.1		0.0	0.0	-3.6	-3.3	4.2	6.7	8.7	Nov-13
JFL Equity Investors IV, L.P. (\$6m commitment in '16)	2,816,100	0.4		0.0	0.0	53.7	32.9	38.8		38.1	Jan-17
Private Advisors Small Co. Coinvestment Fund, LP (\$4m commitment in '17)	4,475,443	0.6		0.0	0.0	12.9	14.2	19.6		19.2	Feb-17
Park Square Credit Opportunities III (\$3m commitment in '17)	2,717,165	0.4		0.0	0.0	5.1	6.7	7.6		6.9	Feb-18
Ironsides Constitution Opportunities (\$3m commitment in '18)	1,453,256	0.2		0.0	0.0	3.0	8.1	10.8		10.6	Oct-18
HarbourVest Dover Street X (\$9m commitment in '20)	7,663,725	1.1		0.0	0.0	1.1	20.4			41.1	Jun-20
Hamilton Lane Secondary Fund V LP (\$9m commitment in '20)	6,890,855	1.0		0.0	0.0	0.8	15.1			22.7	Jul-20
Constitution Ironsides Co-Investment Fund VI (\$12m commitment in '21)	12,803,996	1.8		0.0	0.0	4.3				3.6	Nov-21
HarbourVest Co-Investment Fund VI (\$8m commitment in '21)	6,607,700	0.9		0.0	0.0	3.6					Jan-22
JFL Equity Investors V, L.P. (\$9m commitment in '20)	11,530,590	1.7		0.0	0.0	14.2	16.7			9.6	Sep-20

Importantly, all returns in this report, including those of the private markets managers, are based on a time weighted return calculation and not based on IRRs, which can result in return differences.

# NOTES

- 1 - Results for periods longer than one year are annualized.
- 2 - Total Balances, Large Cap, Small Cap, and Other Composite performance starts 12/1/2010.
- 3 - Preliminary Total Composite net of fee since inception return is 6.8% for the current month.
- 4 - Preliminary Total Composite gross of fee since inception return is 8.3% for the current month.
- 5 - Targets, Allocation Index, and Policy Index have been updated to reflect new allocation of 02/01/2022.
- 6 - Policy Index changed from Nasdaq to Cambridge All PE to reflect as of 5/1/2012.
- 7 - Policy Index Consists of: 24% S&P 500, 7% Russell 2000, 12% MSCI ACWI IMI, 7% MSCI Emerging Markets, 12% Bloomberg US Aggregate TR, 8% Bloomberg US Universal TR, 6% HFRI Fund of Funds Composite Index, 12% NCREIF Property Index, 12% CJA US All PE.
- 8 - Allocation index consists of: Weighted index of underlying managers to their respective benchmark.
- 9 - All Private Market managers are final as of 12/31/23 and preliminary as of 3/31/24.
- 10 - UBS is preliminary as of 3/31/2024 and is a gross of fee estimate.
- 11 - Aristotle and PRIM 2024 funded in March 2024.
- 12 - Both Polen and Coho are in the process of liquidation and have residual values of \$7,409.98 and \$21,631.41 respectively.

# FEE SCHEDULE

Account Name	Fee Schedule	Market Value (\$)	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
PRIT Core Fund	0.49 % of Assets	3,974,566	0.57	19,475	0.49
Rhumblin Advisors S&P 500 Index Fund	0.04 % of Assets	119,337,684	17.14	47,735	0.04
Loomis Sayles Small Cap Growth	0.45 % of Assets Minimum Fee: \$45,000	26,789,287	3.85	120,552	0.45
SEG Baxter Street	1.00 % of Assets	32,562,723	4.68	325,627	1.00
Schroder International Alpha Trust Class 1	0.55 % of Assets	31,367,686	4.50	172,522	0.55
Baillie Gifford International Growth Fund Class K	0.60 % of Assets	13,777,245	1.98	82,663	0.60
Axiom Emerging Markets Trust Class 2	0.77 % of Assets	19,446,420	2.79	149,737	0.77
ABS Emerging Markets MA Fund	0.75 % of Assets	20,984,379	3.01	157,383	0.75
Garcia Hamilton Fixed Income Aggregate		30,307,334	4.35	37,884	0.13
Lord Abbett Core Fixed Income	0.19 % of Assets	39,500,456	5.67	75,051	0.19
Loomis Sayles Multisector Full Discretion Trust	0.39 % of First \$50 M 0.30 % Thereafter	53,016,401	7.61	204,049	0.38
Mesirow Small Cap Value Equity CIT - Founders Class	0.45 % of Assets	25,912,529	3.72	116,606	0.45
Invesco Mortgage Recovery Loans Feeder Fund		15,185	0.00		
PRIM Portfolio Completion Strategies		12,730,652	1.83		
Corbin Pinehurst Partners	0.85 % of Assets	14,664,900	2.11	124,652	0.85
UBS Neutral Alpha Strategies	0.90 % of Assets	12,605,230	1.81	113,447	0.90
Entrust Peru Wind Down	0.50 % of Assets	47,681	0.01	238	0.50
LMCG Serenitas Credit Gamma Offshore	Performance Based 1.50 % and 20.00 %	14,461,450	2.08	216,922	1.50
Cash Account		13,135,856	1.89		
Morgan Stanley Prime Property (\$2.8m commitment in '95)		23,735,670	3.41		
TA Realty Core Property Fund, LP (\$15m commitment in '19)		24,556,783	3.53		
TA Realty Value XIII		2,000,000	0.29		
Invesco Mortgage Recovery II (\$3M commitment in '15)		592,182	0.09		
Landmark VI (\$2m commitment in '11)		6,021	0.00		
Landmark VIII (\$4m commitment in '17)		2,203,460	0.32		
StepStone Real Estate Fund II (\$2m commitment in '11)		348,139	0.05		
Cerberus Institutional Real Estate Partners III (\$1.5m commitment in '12)		502,381	0.07		
TerraCap Partners III, LP (\$2.6m commitment in '15)		1,580,920	0.23		
TerraCap Partners IV, LP (\$4m commitment in '17)		3,509,679	0.50		
TerraCap Partners V, LP (\$8m commitment in '22)		8,321,463	1.19		
PRIM Vintage Year 2008 (\$3m commitment in '08)		900,346	0.13		
PRIM Vintage Year 2009 (\$1m commitment in '09)		50,359	0.01		
PRIM Vintage Year 2010 (\$1m commitment in '10)		354,158	0.05		
PRIM Vintage Year 2011 (\$1.5m commitment in '11)		693,977	0.10		
PRIM Vintage Year 2012 (\$1m commitment in '12)		404,722	0.06		
PRIM Vintage Year 2014 (\$2m commitment in '14)		1,865,368	0.27		

# FEE SCHEDULE

Account Name	Fee Schedule	Market Value (\$)	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
PRIM Vintage Year 2017 (\$2m commitment in '17)		2,655,564	0.38		
PRIM Vintage Year 2020 (\$5m commitment in '20)		4,706,012	0.68		
PRIM Vintage Year 2021 (\$5m commitment in '21)		4,341,914	0.62		
PRIM Vintage Year 2022 (\$7.5m commitment in '22)		2,354,027	0.34		
PRIM Vintage Year 2023 (\$10m commitment in '23)		789,005	0.11		
PRIM Vintage Year 2024		52,963	0.01		
Alcentra European DLF (\$5m commitment in '14)		20,448	0.00		
Ascent Fund IV-B (\$1m commitment in '16)		20,104	0.00		
Ascent Fund V (\$2m commitment in '08)		1,299,603	0.19		
Ascent VI (\$3m commitment in '15)		3,119,079	0.45		
CVI Credit Value Fund IV A LP (\$6m commitment in '17)		4,221,885	0.61		
Invesco Fund VI (\$5m commitment in '13)		477,377	0.07		
Kayne Energy Fund VII (\$5m commitment in '15)		2,765,200	0.40		
Foundry 2007 (\$3m commitment in '07)		218,788	0.03		
Foundry 2010 (\$3m commitment in '10)		3,830,853	0.55		
Foundry 2010 Annex (\$0.4m commitment in '15)		540,786	0.08		
Pinebridge (AIG) PEP V Asia (\$.55m commitment)		30,091	0.00		
Pinebridge (AIG) PEP V Europe (\$1.6m commitment)		2,560	0.00		
Pinebridge (AIG) PEP V Large Market US Buyout (\$.7m commitment)		50,760	0.01		
Pinebridge (AIG) PEP V Preferred Participation Fund (\$.5m commitment)		59,357	0.01		
Pinebridge (AIG) PEP V Secondary (\$.6m commitment)		14,546	0.00		
Pinebridge (AIG) PEP V Small-Mid Market US Buyout (\$.9m commitment)		39,224	0.01		
Pinebridge (AIG) PEP V US Venture (\$.48m commitment)		41,127	0.01		
Landmark XV (\$3m commitment in '13)		556,596	0.08		
JFL Equity Investors IV, L.P. (\$6m commitment in '16)		2,816,100	0.40		
Private Advisors Small Co. Coinvestment Fund, LP (\$4m commitment in '17)		4,475,443	0.64		
Park Square Credit Opportunities III (\$3m commitment in '17)		2,717,165	0.39		
Ironsides Constitution Opportunities (\$3m commitment in '18)		1,453,256	0.21		
HarbourVest Dover Street X (\$9m commitment in '20)		7,663,725	1.10		
Hamilton Lane Secondary Fund V LP (\$9m commitment in '20)		6,890,855	0.99		
Constitution Ironsides Co-Investment Fund VI (\$12m commitment in '21)		12,803,996	1.84		
JFL Equity Investors V, L.P. (\$9m commitment in '20)		11,530,590	1.66		
HarbourVest Co-Investment Fund VI (\$8m commitment in '21)		6,607,700	0.95		
Aristotle Value Equity Fund		50,936,329	7.31		
<b>Investment Management Fee</b>		<b>696,395,364</b>	<b>100.00</b>	<b>1,964,701</b>	<b>0.28</b>

# DISCLAIMERS & DISCLOSURES

Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC’s preferred data source is the plan’s custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.

The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.

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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv



# GLOBAL EQUITY RESPONDENTS

MWRA RETIREMENT SYSTEM

APRIL 25, 2024

Sebastian Grzejka, CAIA, Partner

Mike Sullivan, Partner

Francesca LoVerde, Sr. Consulting Analyst



PROPRIETARY & CONFIDENTIAL

# SUMMARY OF GLOBAL EQUITY SEARCH

- **Target fund strategy**
  - Global Equity strategy
- **Advertised requirements for the search:**
  1. Candidates must have familiarity with and agree to comply (in writing) with Massachusetts G.L. Chapter 32 and Chapter 176 of the Acts of 2011. Additionally, candidates must have familiarity and agree to comply with the reporting and investment guidelines administered by PERAC.
  2. Candidates must read and agree to the attached side letter pertaining to mandatory contractual language, based on the guidelines above.
  3. Candidates must be registered with the SEC or Massachusetts Secretary of State.
  4. Preference will be given to candidates who have at least \$500 million in assets in the fund that is being suggested, however, this is subject to the Board's discretion.
  5. Preference will be given to Funds that have a live track record of at least three years, however, this is subject to the Board's discretion
  6. Emerging markets exposure limited to 10%.
- **Responses were due on April 10, 2024 by 5:00 PM EST.**
  - A total of 58 managers responded





# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
2Xideas US, Inc.	2Xideas Global Mid Cap Library	SMA	\$ 614.0	\$ 1,161.0	9+ years	Fundamental, bottom-up, quality growth	10% Upper limit, actual 6.1%	0.80%	Yes	Mid Cap Focus. Proposing separately managed account.
ABS Global Investments	ABS Global Strategic Portfolio	Commingled	\$ 346.0	\$ 6,811.0	2.25 for fund with historical carve-out record back to 2013	Fundamental, bottom-up	10% upper limit v. 13.8% actual	0.75%	Yes	Incumbant in EM. Track record less than three years. Limited strategy assets.
Acadian Asset Management LLC	Global All-Country Equity	Commingled	\$ 85.0	\$103,744	Strategy: 19yrs Fund: 17yrs	Systematic, core approach.	Upper Limit in the strategy: Within +/- 11% of bmark w/a +/- 1% tolerance: Actual in the fund: 15.933*	0.75%	Yes w/ modifications	Limited vehicle assets.
AGF Investments America Inc.	AGF Global Select Strategy	SMA	\$ 2,854.0	\$ 24,659.0	Strategy Track Record: 11yrs	Fundamental, bottom up with macro considerations	Emerging markets is capped at a maximum of 30% Actual as of December 31, 2023 (1.19%)	0.45%	Yes	Proposing seperately managed account.
Altrinsic Global Advisors, LLC	Altrinsic Global Equity	SMA	\$ 879.0	\$ 8,525.2	23.52	Bottom-up, fundamentally driven, globally focused approach. The strategy is unconstrained and all-cap in nature.	10% EM exposure limit, which is in line with our historical exposures. The Altrinsic Global Equity strategy's standard guidelines allow up to 20% exposure to emerging markets, though since inception in 2000, exposure has never breached 10%.1,2,3	0.725%	Yes	Proposing seperately managed account.
American Century Investment Management, Inc. (ACIM)	Global Growth (MSCI World)	Separate Account	5341.12 (Fund AUM shown is for the Global Growth (MSCI World) composite)	\$ 229,522.5	25.00	Fundamental, bottom-up	Upper Limit: <10%; Actual 5.7%	0.70%	Yes w/ modifications	Proposing seperately managed account.
Aristotle Capital Mangement, LLC	Global Equity	CIT	\$ 1,366.7	\$ 52,810.0	15+	Fundamental, bottom-up stock selection process	May invest up to 10% in Emerging Markets. Actual as of 12/31/2023 was 2.60%.	0.49%	Yes	Incumbent in Large Cap Value.

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# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
Artisan Partners Limited Partnership	Global Value	Separate Account (Artisan Global Value Strategy) CIT (Artisan Global Value Trust)	\$ 25,349.0	\$ 150,167.0	17.00	Fundamental, bottom-up, value	The portfolios may invest up to 30% of their assets at the time of purchase in emerging and less developed markets.  Artisan Partners is willing to manage a separate account with an emerging markets limit of 10%.  Emerging Markets Exposure: 7.9% (Actual) 7.0% (Average)	0.80% (SMA) 0.85% (CIT)	Yes w/ modifications	
Axiom Investors, LLC	Axiom Concentrated Global Growth Equity Strategy	Commingled 3c7 Fund	\$ 3,937.6	\$ 19,915.6	9.00	Bottom-up, fundamental growth	Emerging Markets Upper Limit: 25% Exposure as of 12/31/23: 4.68%	0.75%	Yes	Incumbent in EM.
Bain Capital Public Equity L.P.	Global Long Equity Strategy	Global Long Equity Fund, LP (co-mingled)	\$ 1,060.1	\$ 2,977.3	7 years (strategy inception January 2017)	Active, Fundamental, Bottom-up	NA	1.25% (Tranche H)*	Yes w/ modifications	Differentiated fee structure.
Boston Partners Global Investors, Inc. ("Boston Partners")	Boston Partners Global Equity	Commingled	\$ 177.0	\$ 94,056.0	8.52	Bottom-up fundamental analysis	The portfolio is predominantly a developed country portfolio with EM holdings driven opportunistically while imposing an internal limit of 20%. Current exposure is 2.0% as of 12/31/2023.	0.65%	Yes	Limited vehicle assets.
Brown Advisory LLC	Brown Advisory Global Leaders	SMA or Mutual Fund	\$ 11,813.6	\$147,596.4	9 years	Active, Fundamental Bottom-Up	11.2% as of December 31, 2023	SMA: 0.80%  Mutual Fund: 0.77%	Yes	
CDAM (UK) LTD.	CDAM Global Equity SMA	SMA	\$624m	\$1,659m	6.00	Fundamental, bottom-up	Upper limit (10%) v. Actual (5.7%)	0.65%	Yes	Proposing separately managed account.
Centerstone Investors LLC	Centerstone Global Equity/Centerst one Investors Fund	SMA & Mutual Fund	\$225.8M Strategy Total \$170.2M Fund	\$479M	MF- 7yr 11mos SMA 1yr 3mos	Fundamental, bottom-up	SMA (as per client) Fund (by prospectus)	0.75%*	Yes	Limited strategy and firm assets.

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# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
Channing Global Advisors, LLC	Channing Global Equity	SMA	\$ 96.2	\$ 543.9	8.00	bottom-up	Typically +10% of the benchmark weight (with maximum latitude of 15% of portfolio) but can be limited to 10% of the portfolio.	0.75%	Yes w/ modifications	Limited strategy and firm assets.
City Different Holdings LP d/b/a City Different Investments	City Different Investments Global Equity	SMA	\$8.1M	\$117.4M	2.00	Fundamental, bottom-up	No upper limit defined as part of the strategy. An SMA can be tailored to meet specific client requirements.	0.48%	Yes	Limited strategy and firm assets. Track record less than three years.
ClearBridge Investments, LLC	ClearBridge Global Growth Strategy	SMA (Institutional Separate Account)	\$ 304.5	\$ 176,569.0	Over 11 years (Incepted July 2012)	Fundamental, bottom-up	Up to 25% Emerging Market is allowable; Actual EM Exposure as of 12/31/23 is 5.93%  Investment Guidelines for Inst'l Separate Account can limit EM investment to 10%	0.40%	Yes w/ modifications	Limited strategy assets.
Dimensional Fund Advisors	All Country All Cap Core Equity Strategy (US Bias)	Mutual Fund	\$ 8,509.0	\$ 677,141.0	19 Years	Systematic	Although there is no explicit upper limit to the emerging markets exposure in the fund exposure to emerging markets on December 31, 2023 was 8.29%.	0.25%*	Yes w/ modifications	
Dundas Partners LLP	Dundas Global Equity Capital & Dividend Growth Strategy	SMA	\$ 1,880.0	\$ 2,195.0	11 years 4 months	Fundamental, bottom-up, dividend growth	Max allocation no greater than +20% relative to MSCI ACWI index weight	0.40%	Yes	Proposing separately managed account.
Epoch Investment Partners, Inc. ("TD Epoch")	TD Epoch Global Quality Capital Reinvestment	SMA	\$ 3,066.3	\$ 34,276.1	11	Fundamental, bottom-up	No set limits to EM exposure. Historically, the portfolio has typically had an Emerging Markets exposure of less than 5%.	0.60%	Yes	Proposing separately managed account.
Fisher Investments (FI)	Fisher Investments Institutional Group (FIG) Global Total Return strategy	SMA and Commingled Fund	\$11,370.56 in the strategy and \$0 in the commingled fund (expected to be available for investment in June or July of this year)	\$ 236,698.9	The FIG Global Total Return strategy has a track record of over 29 years	Combined top-down and bottom-up core strategy	No maximum emerging markets constraint. The top-down process is flexible and can accommodate client-mandated portfolio constraints in separately-managed accounts.  For the past three years, the EM exposure has been as follows: 12/31/21: 4.13% 12/31/22: 2.21% 12/31/23: 1.64%	0.7%	Yes	Commingled fund is just launching.

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# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
Galvanize Climate Solutions LLC	Galvanize Global Equities	Commingled	\$ 57.4	\$ 1,180.0	>1	Fundamental	No formal limit Current: <3%	Series A: 1.25%* Series B: 0.9%*	Yes w/ modifications	Limited strategy assets. Track record less than three years. Differentiated fee structure.
Grantham, Mayo, Van Otterloo & Co. LLC (GMO).	GMO Quality Strategy	Mutual Fund	US\$ 8,446	US\$ 59,857	20.00	Bottom-up	No formal limit, but historically had less than 5% exposure to Emerging Markets.	0.5%*	No	Cannot agree to side letter.
Hardman Johnston Global Advisors, LLC	Hardman Johnston Global Equity Strategy	SMA/Commingled Fund	\$ 841.2	\$ 6,832.7	18.0	Fundamental, bottom-up	Max EM Exposure: 15% Current EM Exposure: 6.32%	0.70%	Yes	
Impax Asset Management	Impax Global Opportunities Strategy	SMA/CIT	\$ 12,422.0	\$ 49,786.0	Launch date 1/1/2015	Fundamental, bottom-up	The soft limits: Emerging Markets 20% Japan 15% Asia ex-Japan 15%  The historic exposures have been less than 10%.	Separate Account: 0.60% CIT: 0.70%	Yes	
Impax Asset Management	Impax Leaders Strategy	SMA/Mutual Fund	\$ 9,228.0	\$ 49,786.0	Launch date 3/1/2008	Bottom up stock selection process	The soft limits: 20% (MSCI EM)  The historic exposures are less than 10%.	Separate Account: 0.70% Mutual Fund: 0.91%	Yes	
J O Hambro Capital Management Group represented by it US entity JOHCM (USA) Inc.	JOHCM Global Opportunities	Monthly valued US commingled vehicle. Ryder Court Global Opportunities Fund (Delaware Statutory Trust(DST))	\$ 52.4	\$ 27,306.0	Global Opportunities Strategy incepted June 2012  Ryder Court Global Opps DST Fund incepted May 2020, 4 Yrs.	value investing with a quality threshold, or quality investing with a valuation control	Upper Limit of Emerging Market exposure (Aggregate) = Index +/- 20 percentage points  Actual Emerging Market Exposure = 2.88%	0.65%*	Yes	Limited vehicle assets.
J. Stern & Co.	J. Stern & Co. World Stars Global Equity	LP	\$ 365.0	\$ 1,800.0	12.00	Fundamental, Global Core	0.00	0.65%	Yes w/ modifications	Limited vehicle assets.

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# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
J.P.Morgan Investment Management Inc.	JPM Global Select	Commingled	\$ 3,891.2	\$ 2,947,121.0	6.50	Fundamental, bottom-up	Typically <5%, Currently 6%	0.47%	Yes	
Jennison Associates LLC	Global Equity Opportunities	Commingled	\$ 707.6	\$ 194,154.9	9	Concentrated, unconstrained, sector agnostic, growth	Generally under 20% Actual 6.3%	0.65%	Yes	
Jennison Associates LLC	Global Equity Opportunities	SMA	\$ 4,906.5	\$ 194,154.9	12.7	Concentrated, unconstrained, sector agnostic, growth	Generally under 20% Actual 6.3%	0.68%	Yes	Proposing separately managed account.
Lazard Asset Management LLC	Lazard Global Equity Franchise	Collective Investment Trust (CIT)	\$ 3,837.0	\$ 206,956.8	10.00	Fundamental, bottom-up	Upper limit of emerging markets exposure is 15%. As at 31 December 2023, actual exposure was 0%.	0.6%*	Yes w/ modifications	
Longview Partners	Global Equity Strategy	Global Equity Fund (Commingled or CIT)(also available via SMA)	Currently unfunded	\$17,807	0 (since 31-Dec-2002 for strategy)	Fundamental, Bottom-up, Quality	Limit: 10% Actual: 0%	0.75%	Yes	CIT is currently unfunded.
LSV Asset Management	Global Value Equity	Separate Account	\$ 17,690.0	\$ 96,001.0	20.00	Risk-controlled, bottom-up approach. Value factors and security selection dominate sector/industry factors as explainers of performance.	Approximately country neutral relative to the benchmark	0.70%	Yes w/ modifications	Proposing separately managed account.
MAC Alpha Capital Management, LP	MAC Alpha Capital International Small Cap Fund	Commingled or SMA	\$ 59.6	\$ 73.1	3.5	Fundamental, bottom-up	10% max, currently 4%	0.95%	Yes	Limited strategy and firm assets. Proposing International Small Cap Fund.

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# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
Mackenzie Investments	Mackenzie World Large Cap Strategy	SMA or new Commingled fund	\$ 118.4	\$ 148,418.5	3.00	Core, Systematic	Limit = +3% benchmark Typical exposure has been under 0.5%	0.5%	Yes	Limited strategy assets. Track record less than five years.
Manulife Investment Management	Global Quality Value	Separate Account	Strategy AUM: \$2.25 million as of 3/31/2024	461,899.92 million	14 years	Fundamental, Bottom-Up	Averaged approximately 2.4% in emerging markets since inception	0.50%	Yes w/ modifications	
Manulife Investment Management	John Hancock Global Quality Value Trust*	Collective Investment Trust (CIT)*	CIT AUM: \$2.21 million	461,899.92 million	3 years	Fundamental, Bottom-Up	Averaged approximately 2.7% in emerging markets since inception	0.42%	Yes w/ modifications	Limited assets in vehicle.
Mawer Investment Management Ltd.	Mawer Global Equity	SMA & CIT	\$26.1M (CIT) \$26,575M (Mawer Global Equity Strategy) as of March 31, 2024	\$ 66,509.9	14.17 Note: Based on Mawer Global Equity strategy.	Fundamental, bottom-up	Upper limit exposure per IPS = 20% Actual current EM exposure = 2.0%  Please note, since June 2014 to December 2023 exposure averaged 4.84% over this period.	0.625% (SMA) 0.60% (CIT)	Yes w/ modifications	Limited assets in CIT vehicle.
Metropolis Capital Ltd	Metropolis Valuefund	CIT	\$ 201.9	\$ 4,180.3	15.6	bottom-up	No limit, actual exposure 4.14%, historic high 9.19%:	0.65% management, 0.13% operating expenses	Yes w/ modifications	Limited vehicle assets.
MFS Institutional Advisors, Inc.	MFS Global Growth Equity	Institutional Separate Account	\$ 4,747.8	\$ 598,137.7	20 years (Represents MFS Global Growth Equity track record)	Fundamental, Bottom-Up	11.0% in EM exposure and has averaged 10.7% in EM exposure over the 10 years ended 12/31/23  Standard guidelines state that a maximum 25% of the portfolio's market value may be invested in emerging markets.  Please note: MFS would be able to customize a separate account in this mandate to restrict emerging markets exposure to 10%.	0.65%	Yes w/ modifications	Proposing separately managed account.
Mirova	Mirova Global Sustainable Equity	CIT	\$69.1M	\$ 32,831.5	3.00	Fundamental, bottom-up	Emerging Markets : Maximum of 25%  Actual Exposure to Emerging Markets as of 12/31/2023 : 4.54% 5 Year Average Exposure to Emerging Markets : 5.06%	0.70%	Yes w/ modifications	Limited vehicle assets.

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# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
Moerus Capital Management LLC	Moerus Global Value Strategy	SMA	\$ 622.2	\$ 768.8	6.00	Fundamental, bottom-up	No set policy across all accounts. Each account has an individual IMA that determines EM exposure. Our EM exposure, calculated using country of risk, including ADRs, ranges from 19% to the representative account, which was 40.77% as of 12/31/23.	0.475%	Yes w/ modifications	Proposing separately managed account. Smaller strategy and firm AUM.
Mondrian Investment Partners	Mondrian Global Equity	Separate Account	\$ 2,249.8	\$ 49,058.5	33	Active Value-Oriented Defensive	NA	0.65%	Yes	Proposing separately managed account.
Nia Impact Capital	Nia Global Solutions	SMA	\$177M	\$422M	8 years	Fundamental and Bottom-Up	Actual - 8.69% Upper Limit - 10%	0.39%	Yes	Limited strategy and firm assets.
Nikko Asset Management	Nikko AM Global Equity	Segregated account or Collective Investment Trust	\$3923 (Strategy AUM) CIT AUM \$146.34M as of 3/31/2024	\$ 228,600.0	Since 4/2011	Fundamental, bottom-up. Bias towards growth and quality styles.	The representative portfolio's positions are typically +/-20% relative to the regional weights of the benchmark. Since inception of the fund on 1st Oct 2014 to end Feb 2024, the total average weight in emerging markets has been 7.55% vs the benchmark (MSCI All Country World) of 11.28%.	0.45%	Yes w/ modifications	Proposed CIT is newer vehicle offering.
Numeric Investors LLC	Man Numeric Global Core Strategy	SMA	\$11012 (Strategy level AUM)	\$ 40,772.0	10.00	Quantitative, bottom-up. Core portfolio focused	Does not invest in EM	0.45%	Yes w/ modifications	Proposing separately managed account.
PanAgora Asset Management, Inc.	Dynamic Global Equity	Separately Managed Account	\$3,257.3M	\$32,729.7M	24.00	Systematic, bottom-up	Benchmarked to the MSCI World Index and invests only in developed market securities.	0.55%	Yes w/ modifications	Proposing separately managed account.
Paradice Investment Management	Paradice Global Small Mid Cap Strategy	SMA	\$ 1,660.2	\$ 2,158.6	13.50	Fundamental, bottom-up	25% vs. 6.38%	1%	Yes	Proposed strategy is small/midcap focused.
Paradice Investment Management	Paradice Global Small Mid Cap Strategy	Commingled* (seed investor)	\$ -	\$ 2,158.6	0.00	Fundamental, bottom-up	can limit to 10%	1%	Yes	Proposed strategy is small/midcap focused.

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# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
Pictet Asset Management S.A.	Pictet Global Environmental Opportunities	SMA	\$ 10,088.0	\$ 273,539.0	9 years	Fundamental	The portfolio is unconstrained in terms of its allocation to regions. Final portfolio exposures solely stem from a bottom-up stock picking investment approach. EM is 0% as of December 31, 2023.	0.65%	Yes	Proposing separately managed account.
Pictet Asset Management S.A.	Pictet Quest Global Sustainable Equities	SMA	\$ 2,197.5	\$ 273,539.0	12 years	Systematic	The portfolio's max permitted exposure to emerging markets is 10%. Emerging Markets is 0.2% as of December 31, 2023.	0.30%	Yes	Proposing separately managed account.
Polen Capital Management, LLC	Global Growth	SMA	\$ 1,545.0	\$ 66,354.5	8.00	Fundamental, Bottom-up, Growth	Upper Limit:15% Actual: 1.15%	0.80%	Yes	Proposing separately managed account.
Otron Investments LLC	Otron Global Equity Large Cap	SMA	\$118.92	\$1240.64	7	Systematic, bottom up	Max: 5% Current: 0.3%	0.45% (of \$50M)	Yes	Limited strategy assets.
Sit Investment Associates, Inc.	Sit Global Dividend Growth Equity	SMA	\$ 228.0	\$ 15,618.0	17.50	Fundamental, bottom-up	Historically no EM in portfolio, but allowable subject to client guidelines	0.720%	Yes	Limited strategy assets.
Sprucegrove Investment Management	Global Equity	Global CIT	\$ 866.1	\$ 17,582.5	Global Equities mandate: June 29, 1995, Global Equity CIT vehicle: February 28, 2020	Fundamental, bottom-up	10% upper limit, as of December 31, 2023: 8.7%	0.55% management fee + 9.1 bps operating fees (estimate and unaudited)	Yes	Proposed CIT is newer vehicle offering.
Strategic Global Advisors, LLC	Global Equity	SMA	\$ 503.0	\$ 3,106.8	10+ years	Bottom-up utilizing both quantitative and fundamental processes	Upper limit of Emerging Markets: 15% of the portfolio weight Actual Emerging Markets Exposure: 1.14%	0.55%	Yes	Limited strategy assets.
Trillium Asset Management, LLC (Trillium)	Trillium ESG Global Equity	SMA	\$ 936.4	\$ 4,873.7	24.50	Bottom-up, fully ESG-integrated, fundamental investment process	20.00% policy maximum vs 6.27% actual as of 12/31/23	0.57%	Yes	Proposing separately managed account.

Proposed Fee: The effective fee proposed for a \$50 million investment

\* See disclosures in appendix





# GLOBAL EQUITY SEARCH RESPONSES

Firm Name	Strategy Name	Vehicle	Fund AUM (in mm)	Firm AUM (in mm)	Fund Track Record (in years)	Approach & Style	Upper Limit of Emerging Markets exposure v. Actual	Effective Fee for \$50M (as a %)	Agree to Side Letter Terms	Initial Comments
Victory Capital Management Inc.	RS Global	Commingled	Total Strategy: \$2,622.6 mm CIT: \$250.0 mm	\$166.6 Bn at 12/31/23	10 Years (composite)	Quantitative; Bottom-up; All-Cap Core	20% max; typically 0-5%	0.45%	Yes	Proposed CIT is newer vehicle offering.
Walter Scott & Partners Limited	Walter Scott Global Equity	Segregated portfolio and Commingled Fund - ('NCS Group Trust - Global Fund')	Walter Scott Global Equity strategy discretionary AUM, as at 31 December 2023: US\$49,944m.  NCS Group Trust - Global Fund AUM, as at 31 December 2023: US\$2,893m.	Walter Scott discretionary AUM, as at 31 December 2023: US\$82,458m.	38 years	Fundamental, bottom-up.  Style: long-term growth at a reasonable price (GARP).	Can accommodate a 10% maximum exposure to EM in a segregated portfolio. The EM allocation for a representative Walter Scott Global portfolio is 2.9%, as at 31 December 2023.  Over the last 10 years a representative Walter Scott Global portfolio has averaged 4.3% with a maximum exposure of 6.5%.  Commingled fund guidelines maximum exposure to EM: 15%. As at 31 December 2023, the emerging markets allocation for the NCS Group Trust - Global Fund was 2.8%. Over the last 10 years the NCS Group Trust - Global Fund has averaged 4.6% with a maximum exposure of 7.5%.	Segregated 0.75% NCS Group Trust - Global Fund 0.75%	Yes	
Wasatch Global Investors	Global Select - Developed	SMA	\$ 16.4	\$ 26,654.3	7.00	Fundamental, bottom-up, growth	10%/0% (No EM Exposure)	0.20%	Yes w/ modifications	Limited strategy assets.
Wellington Trust Company, NA	Global Quality Value	WTC Collective Investment Trust II	\$ 4,727.0	\$ 1,219,910.0	15	Bottom-up stock selection. Large-cap value approach	No formal limit on region exposures, with the exception of EM, which is limited to 10% of the portfolio. Currently, EM represents 4.85% of the portfolio.	0.50%*	Yes w/ modifications	

Proposed Fee: The effective fee proposed for a \$50 million investment

\* See disclosures in appendix





# APPENDIX



PROPRIETARY & CONFIDENTIAL

# FEE DISCLOSURES

## **Bain Capital Public Equity L.P.**

- 1) Tranche F interests - a fixed + performance option (0.75% fixed plus 18.5% performance fee on excess return over the MSC World Index.
- 2) Tranche H interests - a fixed-fee only option via (1.25% fixed fee)

## **Centerstone Investors LLC**

MF Management Fee 0.90% Total Operating Expense 1.18% SMA 0.75% (negotiable)

## **Dimensional Fund Advisors**

Annual Fund Operating Expenses (expenses that you pay each year as a percentage of the value of your investment)

Management Fee 0.20%

Other Expenses 0.02%

Acquired Fund Fees & Expenses 0.21%

Total Annual Fund Operating Expenses 0.43%

Fee Waiver and/or Expense Reimbursement<sup>1</sup> 0.18%

Total Annual Fund Operating Expenses After Fee Waiver and/or

Expense Reimbursement 0.25%

<sup>1</sup> Dimensional Fund Advisors LP (the "Advisor") has agreed to waive certain fees of the Portfolio. The Fee Waiver Agreement for the Portfolio will remain in effect through February 28, 2025, and may only be terminated by the Fund's Board of Directors prior to that date. Under certain circumstances, the Advisor retains the right to seek reimbursement for any fees previously waived up to thirty-six months after such fee waiver.



# FEE DISCLOSURES

## **Galvanize Climate Solutions LLC**

Series A:

- Management Fee: 1.25% per annum
- Incentive Allocation: None

Series B:

- Management Fee: 0.9% per annum
- Incentive Allocation: 15% of the Series B Capital Account's outperformance relative to the Benchmark Return (the "Benchmark Return" being MSCI ACWI 100% Hedged to USD Index)

## **Grantham, Mayo, Van Otterloo & Co. LLC (GMO)**

0.48% management fee. 0.50% total annual fund operating expenses after expense reimbursement

## **J O Hambro Capital Management Group represented by it US entity JOHCM (USA) Inc.**

Does not include operating expenses

## **Lazard Asset Management LLC**

50bps management fee with 10 bps admin (capped). Total Fee of 60bps.

## **Metropolis Capital Ltd**

USD 0-75m 0.65% management, 0.13% operating expenses

USD 75-150m 0.63% management, 0.12% operating expenses

USD 150-200m 0.55% management, 0.11% operating expenses



# FEE DISCLOSURES

## Nikko Asset Management

CIT Founder's Shareclass; 45bps would be the flat fee structure and includes custody and administration fees. For separate/segregated accounts the minimum amount would be USD 50 million or equivalent.

Below is the standard fee for the Nikko AM Global Equity CIT:

Nikko AM Global Equity Collective Investment Trust (CIT) - Trustee Fee

Nikko AM Global Equity CIT - Founders Class (1) - 0.45%

Nikko AM Global Equity CIT - Class B (2) - 0.55%

Nikko AM Global Equity CIT - Class A (3) - 0.75%

(1) Nikko AM Global Equity CIT - Founders Class is open to Participating Plans until the Fund's assets reach \$200 million, at which point the class will close, and Class B and Class A will open. Any additional contributions by the Participating Plans will be invested in the Founders Class.

(2) Nikko AM Global Equity CIT - Class B is open to Participating Plans who 1) are clients of specific consultants performing certain client services related to investments in the Fund as reasonably determined by the Trustee in its sole discretion or 2) invest \$25m or more in the Fund. Class B will open upon closure of the Founders Class.

(3) Nikko AM Global Equity CIT - Class A is open to Participating Plans investing up to \$25m in the Fund. Class A will open upon closure of the Founders Class.



# FEE DISCLOSURES

## Wellington Trust Company, NA

The total annual fees and expenses of the Global Quality Value Portfolio (the "Portfolio") will include both an investment management fee (the "Investment Management Fee") payable by the Participating Trust to the Trustee and, in addition, routine operating expenses (e.g., custody, accounting, audit, transfer agency, and other administrative expenses) incurred by the Portfolio (the "Operating Expenses").

Investment Management Fee: On All Assets: 0.50%

In addition to the investment management fee, commingled pool accounts incur routine operating expenses (e.g., custody, accounting, audit, transfer agency, and other administrative expenses). These operating expenses are voluntarily capped. Commingled pool accounts also indirectly experience operating expenses of any other pooled investment vehicles in which they invest, and the voluntary cap does not apply to those indirect expenses. The cap on the portfolio's direct operating expenses could be eliminated or revised in the future, which may lower the portfolio's yield or return. Currently, the Operating Expenses are capped at 0.05% per annum of the net assets of the Portfolio. Operating Expenses above the capped amount will be borne by the Trustee.



# NEPC DISCLOSURES

Past performance is no guarantee of future results.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

Some of the information presented herein has been obtained from external sources NEPC believes to be reliable. While NEPC has exercised reasonable professional care in preparing this content, we cannot guarantee the accuracy of all source information contained within.

The opinions presented herein represent the good faith views of NEPC as of the publication date and are subject to change at any time.

This presentation contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.





# INTERNATIONAL EAFE INDEX SEARCH REVIEW

MWRA RETIREMENT SYSTEM

APRIL 25, 2024

Sebastian Grzejka, CAIA, Partner

Mike Sullivan, Partner

Francesca LoVerde, Consulting Analyst





# SUMMARY OF INTERNATIONAL EAFE EQUITY SEARCH

- **Target fund strategy**
  - International EAFE Equity Index
- **Advertised requirements for the search:**
  1. Candidates must have familiarity with and agree to comply (in writing) with Massachusetts G.L. Chapter 32 and Chapter 176 of the Acts of 2011. Additionally, candidates must have familiarity and agree to comply with the reporting and investment guidelines administered by PERAC.
  2. Candidates must read and agree to the attached side letter pertaining to mandatory contractual language, based on the guidelines above.
  3. Candidates must be registered with the SEC or Massachusetts Secretary of State.
  4. Preference will be given to candidates who have at least \$500 million in assets in the fund that is being suggested, however, this is subject to the Board's discretion.
  5. Preference will be given to Funds that have a live track record of at least three years, however, this is subject to the Board's discretion
- **Responses were due on April 8, 2024 by 5:00 PM EST**
  - A total of 4 managers responded, with select managers proposing multiple vehicles

# INTERNATIONAL EAFE SEARCH RESPONDENTS

Firm	Strategy	Vehicle	Fund AUM (MM)	Firm AUM (MM)	Fund Track Record (in years)	Approach & Style	Proposed Fee Schedule	Effective Fee for \$30M (as a %)	MWRA Rating
BlackRock, Inc.	iShares MSCI EAFE International Index Fund (the "Fund") via the K share class	Mutual Fund	\$10,025.3	\$10,008,995	27	Index	The standard expense ratio for K share class is 0.04%	Total Annual Fund Operating Expenses After Fee Waivers and/or Expense Reimbursements: 0.04% <sup>1,2</sup>	1
LGIM America	MSCI EAFE	Commingled	\$811.7	\$214,762	7	Passive	<\$100 million: 8.00 bps; \$100-\$250 million: 7.00 bps; \$250-\$500 million: 6.00 bps; >\$500 million: 4.00 bps <b>Management fee with Performance Fee<sup>3</sup></b>	0.08%	1
LGIM America	MSCI EAFE Plus	Commingled	\$1,464	\$214,762	<1	Passive	<\$100 million: 5.0 bps; >\$100 million: 4.0 bps <b>Management fee:</b> <\$100 million: 7.0 bps; >\$100 million: 6.0 bps	0.05% <sup>3</sup> / 0.07%	4
Northern Trust Investments, Inc.	EAFE Index	Commingled	\$35,407	\$1,100,000	20	Full Replication	EAFE Index Collective Fund Lending: 6 bps mgmt. fee, 1.04 bp estimated actual admin fee EAFE Index Collective Fund Non Lending: 8 bps mgmt. fee, 1.23 bp estimated actual admin fee	EAFE Index Collective Fund Lending: 6 bps mgmt. fee, 1.04 bp estimated actual admin fee EAFE Index Collective Fund Non Lending: 8 bps mgmt. fee, 1.23 bp estimated actual admin fee	1
RhumbLine Advisers	MSCI EAFE Index Strategy	Commingled	\$1,150.1M in strategy	\$107,610	9 years (Composite Inception 5/31/2014)	Passive	Flat 4 basis points on assets. Minimum annual fee waived.	0.04%	1

<sup>3</sup> Performance fee is equal to 20% of the excess return above the benchmark hurdle

**Blackrock:** management fee of 0.01% and Administration fee of 0.03%. See fee disclosure for additional footnotes.

**LGIM America:** MSCI EAFE Plus is an LLC vehicle. There is a 4 bp expense cap in the LLC. However, if the performance fee is elected, the performance fee is not applied until the expenses are covered

**RhumbLine:** Pooled funds are charged an Administrative Fee that includes custody, audit, financial statements and reporting. This fee comes directly out of the fund's NAV. In 2023, the Administrative Fee on the MSCI EAFE Pooled Index Fund was 1 basis point. Effective January 1, 2022, State Street Bank (Custodian Bank on RhumbLine's pooled funds) waives all ticket charges and commissions on all RhumbLine's pooled funds. The only fee RhumbLine would directly charge the client for this mandate is the proposed Investment Management Fee of 4 basis point on assets.



# PERFORMANCE AS OF 12/31/2023

Trailing Performance (%)							
Fund	MRQ	YTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr
BlackRock: EAFE Equity Index	10.87	18.34	18.34	4.22	8.33	7.12	4.29
LGIM America: MSCI EAFE	10.41	18.03	18.03	4.08	8.34	7.12	--
LGIM America: MSCI EAFE Index Plus	10.44	--	--	--	--	--	--
Northern Trust:							
EAFE Index Equity Strategy	10.45	18.06	18.06	4.14	8.36	7.11	4.49
RhumbLine	10.37	18.37	18.37	4.19	8.29	6.98	--
<i>MSCI EAFE-ND</i>	<i>10.42</i>	<i>18.24</i>	<i>18.24</i>	<i>4.02</i>	<i>8.16</i>	<i>6.91</i>	<i>4.28</i>

Calendar Year Performance (%)										
Fund	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
BlackRock: EAFE Equity Index	18.34	-14.08	11.34	8.06	21.93	-13.35	25.17	1.03	-0.81	-6.11
LGIM America: MSCI EAFE	18.03	-14.28	11.45	8.15	22.38	-13.52	25.44	1.35	--	--
LGIM America: MSCI EAFE Index Plus	--	--	--	--	--	--	--	--	--	--
Northern Trust: EAFE Index Equity										
Strategy	18.06	-13.99	11.21	8.30	22.14	-13.33	24.95	1.24	-0.61	-4.72
RhumbLine	18.37	-14.25	11.43	7.80	22.12	-13.63	24.75	1.28	-0.92	--
<i>MSCI EAFE-ND</i>	<i>18.24</i>	<i>-14.45</i>	<i>11.26</i>	<i>7.82</i>	<i>22.01</i>	<i>-13.79</i>	<i>25.03</i>	<i>1.00</i>	<i>-0.81</i>	<i>-4.90</i>

eVestment vehicle:

Blackrock

USA - PF - SEC-Registered 1940 Act Mutual Fund - International Index Fund - Net of Fees

LGIM EAFE

USA - CF - Collective Investment Trust (CIT) - ERISA - Legal & General MSCI EAFE CIT Fund Class NL - Net of Fees

LGIM EAFE Index Plus

USA - CF - Limited Liability Company (LLC) - ERISA/Non-ERISA - MSCI EAFE Index Plus Lending - Net of Fees

Northern Trust

USA - SA - Composite - NT MSCI EAFE Passive Institutional Strategy - Net of Fees

Rhumbline

USA - CF - Common Trust Fund - ERISA - MSCI EAFE Pooled Index Fund - CFE - Net of Fees





# APPENDIX



# FEE DISCLOSURES

## Blackrock

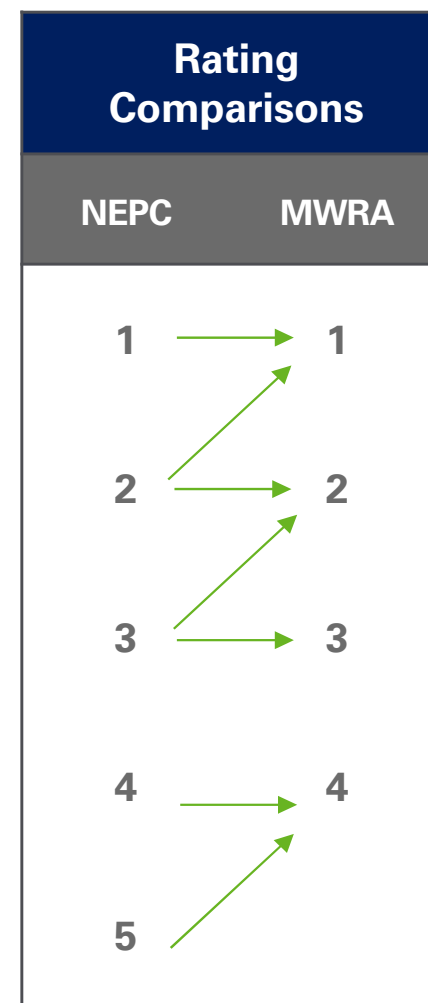
<sup>1</sup> As described in the “Management of the Funds” section of the Fund’s prospectus beginning on page 35, BlackRock has contractually agreed to waive the management fee with respect to any portion of the Fund’s assets estimated to be attributable to investments in other equity and fixed income mutual funds and exchange-traded funds managed by BlackRock or its affiliates that have a contractual management fee, through June 30, 2024. In addition, BlackRock has contractually agreed to waive its management fees by the amount of investment advisory fees the Fund pays to BlackRock indirectly through its investment in money market funds managed by BlackRock or its affiliates, through June 30, 2024. The contractual agreements may be terminated upon 90 days’ notice by a majority of the non-interested directors of the Corporation or by a vote of a majority of the outstanding voting securities of the Fund.

<sup>2</sup> Independent Expenses consist of the Fund’s allocable portion of the fees and expenses of the independent directors of the Corporation, counsel to such independent directors and the independent registered public accounting firm that provides audit services to the Fund. BlackRock has contractually agreed to reimburse, or provide offsetting credits to, the Fund for Independent Expenses through June 30, 2033. After giving effect to such contractual arrangements, Independent Expenses will be 0.00%. Such contractual arrangements may not be terminated prior to July 1, 2033 without the consent of the Board of Directors of the Corporation.

# RATINGS SYSTEM COMPARISON

NEPC Research	
1	NEPC Research views 1-rated strategies as best ideas. The strategy has a clear investment thesis, and the manager is sufficiently resourced and incentivized to execute on the thesis. NEPC Research has high conviction that 1-rated strategies are positioned to deliver on a stated investment thesis and target return over a full investment cycle.
2	NEPC Research has a positive view of the strategy. The strategy has a clear investment thesis, and the manager is sufficiently resourced and incentivized to execute on the thesis. A single factor or mosaic of factors may lead to a 2 rating rather than a 1 rating.
3	NEPC Research has a constructive view of the strategy and believes the strategy can play an appropriate role in certain client portfolios. Through ongoing research, NEPC has not identified unreasonable risks from an organizational, process, operational or investment perspective.
4	NEPC has conducted a reasonable level of due diligence and has an unfavorable view of the strategy due to issues, weaknesses or risks that would challenge the manager's ability to execute on a stated investment thesis.
5	NEPC has conducted a reasonable level of due diligence and has significant concerns about the effectiveness or viability of the strategy. Through the due diligence process, NEPC has uncovered serious issues, weaknesses or risks that would challenge the manager's ability to execute on a stated investment thesis.

MWRA Searches (for PERAC)	
1	NEPC views these strategies as the best ideas and have high conviction in these firms and investment teams. These strategies meet all manager search requirements and are compatible with the client's portfolio.
2	Strategies that are positively viewed by NEPC and/or are existing managers for MWRAERS. These strategies meet all search requirements.
3	NEPC has a positive or neutral view of these strategies. Client and search specific factors may result in a three rating.
4	Strategies that are not applicable for the current search. These strategies do not fit the search description or qualify based on the search guidelines. Strategies that demonstrate serious weaknesses or risks will also receive a 4 rating.



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MWRA Employees' Retirement System

**Estimated Asset Allocation Rebalance Summary**

April 19, 2024

	Market Value	Weight in Fund	Target Weight	Recommendation	New Market Value	New Weight
<b>Composite</b>	<b>\$680,822,843</b>	<b>100.0%</b>	<b>100.0%</b>	<b>\$0</b>	<b>\$680,822,843</b>	<b>100.0%</b>
<b>Total Balanced</b>	<b>\$3,974,566</b>	<b>0.6%</b>	<b>0.0%</b>	<b>\$0</b>	<b>\$3,974,566</b>	<b>0.6%</b>
PRIT Core Fund	\$3,974,566	0.6%	0.0%	\$0	\$3,974,566	0.6%
<b>Total Domestic Equity</b>	<b>\$209,687,818</b>	<b>30.8%</b>	<b>29.0%</b>	<b>\$0</b>	<b>\$209,687,818</b>	<b>30.8%</b>
Rhumbline Advisors S&P 500 Index Fund	\$112,547,370	16.5%	15.0%	\$0	\$112,547,370	16.5%
Aristotle Relative Value	\$48,267,265	7.1%	7.0%	\$0	\$48,267,265	7.1%
Mesirow Smcall Cap Value	\$23,997,593	3.5%	3.5%	\$0	\$23,997,593	3.5%
Loomis Sayles Small Cap Growth	\$24,875,590	3.7%	3.5%	\$0	\$24,875,590	3.7%
<b>Total International Equity</b>	<b>\$115,785,061</b>	<b>17.0%</b>	<b>13.0%</b>	<b>-\$2,562,723</b>	<b>\$113,222,338</b>	<b>16.6%</b>
SEG - Baxter Street Fund	\$32,562,723	4.8%		-\$32,562,723	\$0	0.0%
Schroders International Alpha	\$29,824,396	4.4%	8.0%	\$0	\$29,824,396	4.4%
Baillie Gifford	\$12,967,143	1.9%		\$0	\$12,967,143	1.9%
MSCI EAFE Index Fund	\$0	0.0%	0.0%	\$30,000,000	\$30,000,000	4.4%
Axiom Emerging Markets	\$19,446,420	2.9%	2.5%	\$0	\$19,446,420	2.9%
ABS Emerging Markets Strategic Portfolio	\$20,984,379	3.1%	2.5%	\$0	\$20,984,379	3.1%
<b>Total Global Equity</b>	<b>\$0</b>	<b>0.0%</b>	<b>8.0%</b>	<b>\$0</b>	<b>\$0</b>	<b>0.0%</b>
Global Equity TBD	\$0	0.0%	8.0%	\$0	\$0	0.0%
<b>Total Equity</b>	<b>\$325,472,879</b>	<b>47.8%</b>	<b>50.0%</b>	<b>-\$2,562,723</b>	<b>\$322,910,156</b>	<b>47.4%</b>
<b>Total Fixed Income</b>	<b>\$134,078,114</b>	<b>19.7%</b>	<b>18.0%</b>	<b>\$0</b>	<b>\$134,078,114</b>	<b>19.7%</b>
Garcia Hamilton	\$29,350,143	4.3%		\$0	\$29,350,143	4.3%
Lord Abbett	\$38,560,345	5.7%	8.0%	\$0	\$38,560,345	5.7%
Loomis Sayles Multi Sector Bonds	\$51,690,991	7.6%	8.0%	\$0	\$51,690,991	7.6%
LMCG Serenitas	\$14,461,450	2.1%	2.0%	\$0	\$14,461,450	2.1%
Invesco Mortgage Recovery	\$15,185	0.0%	0.0%	\$0	\$15,185	0.0%
<b>Total Hedge Fund</b>	<b>\$40,048,463</b>	<b>5.9%</b>	<b>5.0%</b>	<b>\$0</b>	<b>\$40,048,463</b>	<b>5.9%</b>
PRIM Absolute Return Fund	\$12,730,652	1.9%		\$0	\$12,730,652	1.9%
Corbin Pinehurst Partners	\$14,664,900	2.2%		\$0	\$14,664,900	2.2%
UBS Neutral Alpha Strategies	\$12,605,230	1.9%		\$0	\$12,605,230	1.9%
Entrust Peru Winddown	\$47,681	0.0%		\$0	\$47,681	0.0%
<b>Total Real Estate</b>	<b>\$67,356,699</b>	<b>9.9%</b>	<b>10.0%</b>	<b>\$0</b>	<b>\$67,356,699</b>	<b>9.9%</b>
TA Realty Core	\$24,556,783	3.6%		\$0	\$24,556,783	3.6%
Morgan Stanley PPF	\$23,735,670	3.5%		\$0	\$23,735,670	3.5%
<b>Total Private Equity &amp; Debt</b>	<b>\$93,435,630</b>	<b>13.7%</b>	<b>15.0%</b>	<b>\$0</b>	<b>\$93,435,630</b>	<b>13.7%</b>
<b>Cash</b>	<b>\$16,456,492</b>	<b>2.4%</b>	<b>2.0%</b>	<b>\$2,562,723</b>	<b>\$19,019,215</b>	<b>2.8%</b>
M&T Cash	\$16,456,492	2.4%	2.0%	\$2,562,723	\$19,019,215	2.8%





**The MWRA Employees' Retirement System**  
**Private Equity - Secondaries**  
**Request for Proposal**

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The Massachusetts Water Resource Authority Employees' Retirement System (the "System") is accepting proposals from investment firms to manage a Private Equity Secondaries mandate for the System's \$688 million, defined benefit pension fund. To be considered, candidates must be raising a private closed-end, secondaries private equity fund. The System anticipates committing approximately \$14 million for this mandate. Direct buyout, growth equity, co-investments, fund of funds, special situations, and open-end strategies will not be considered.

In order to be considered, candidates must meet the following criteria:

1. Candidates **must have familiarity with and agree to comply (in writing)** with Massachusetts G.L. Chapter 32 and Chapter 176 of the Acts of 2011. Additionally, candidates must have familiarity and agree to comply with the reporting and investment guidelines administered by PERAC. Guidelines can be found in the attached links.  
<https://malegislature.gov/Laws/SessionLaws/Acts/2011/Chapter176>  
<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIV/Chapter32>
2. Candidates must be registered with the Securities and Exchange Commission or with the Secretary of State where the firm is domiciled.
3. Candidates must read and agree to the attached side letter pertaining to mandatory contractual language, based on the guidelines above.
4. Preference will be given to candidates that have raised at least one prior fund for the proposed strategy, however, this is subject to the Boards discretion.
5. The final close date of the proposed fund must be no earlier than August 2024.
6. It is preferred that the proposed fund is raising at least \$200 million, however, lower amounts may be considered at the Boards discretion.
7. Candidates must complete the attached RFI, along with each appendix. Incomplete responses may be rejected.

By submitting a formal response to this RFP, the Manager acknowledges that the Investor, MWRA Employees' Retirement System, is bound by both Massachusetts Open Meeting Law as governed by Massachusetts General Laws Chapter 30A § 18-25 and 940 CMR 29.00, and the Massachusetts Public Records Law as governed by Massachusetts General Laws Chapter 66 and 950 CMR 32.00. All materials submitted in connection with this search may be subject to disclosure consistent with Massachusetts Public Records Law.

To access the RFP and required forms, please visit the website of NEPC, LLC at [www.nepc.com/institutional/investment-managers/](http://www.nepc.com/institutional/investment-managers/). The Board reserves the right to cancel or reject in whole or part, any or all proposals in the best interest of the System.

All questions should be directed via email to the following contact (no phone calls please). **Proposals must be submitted to [MWRAsearch@nepc.com](mailto:MWRAsearch@nepc.com) by 5:00 pm EDT, on May 10<sup>th</sup>, 2024.** Proposals received after the deadline will not be considered.

MWRA Search  
NEPC, LLC  
[MWRAsearch@nepc.com](mailto:MWRAsearch@nepc.com)