Alameda County Employees' Retirement Association

BOARD OF RETIREMENT

INVESTMENT COMMITTEE/BOARD MEETING

ACERA MISSION:

To provide ACERA members and employers with flexible, cost-effective, participant-oriented benefits through prudent investment management and superior member services.

Wednesday, April 2, 2025
10:30 a.m.

LOCATION AND TELECONFERENCE	COMMITTEE MEMBERS	
ACERA C.G. "BUD" QUIST BOARD ROOM 475 14TH STREET, 10TH FLOOR OAKLAND, CALIFORNIA 94612-1900 MAIN LINE: 510.628.3000 FAX: 510.268.9574	GEORGE WOOD CHAIR	ELECTED GENERAL
The public can observe the meeting and offer public comment by using the below Webinar ID and Passcode after clicking on the below link or calling the below call-in number.	TARRELL GAMBLE VICE CHAIR	APPOINTED
	OPHELIA BASGAL	APPOINTED
Link: https://zoom.us/join	KEITH CARSON	APPOINTED
Call-In: 1 (669) 900-6833 US	ROSS CLIPPINGER	ELECTED SAFETY
Webinar ID: 879 6337 8479	HENRY LEVY	TREASURER
Passcode: 699406	ELIZABETH ROGERS	ELECTED RETIRED
For help joining a Zoom meeting, see: https://support.zoom.us/hc/en-us/articles/201362193	KELLIE SIMON	ELECTED GENERAL
	STEVEN WILKINSON	APPOINTED
	CYNTHIA BARON	ALTERNATE RETIRED[1]
	KEVIN BRYANT	ALTERNATE SAFETY[2]

[1] The Alternate Retired Member votes in the absence of the Elected Retired Member, or, if the Elected Retired Member is present, then votes if both Elected General members, or the Safety Member and an Elected General member, are absent.

[2] The Alternate Safety Member votes in the absence of the Elected Safety, either of the two Elected General Members, or both the Retired and Alternate Retired members.

Note regarding accommodations: If you require a reasonable modification or accommodation for a disability, please contact ACERA between 9:00 a.m. and 5:00 p.m. at least 72 hours before the meeting at accommodation@acera.org or at 510-628-3000.

Public comments are limited to four (4) minutes per person in total. The order of items on the agenda is subject to change without notice.

Board and Committee agendas and minutes and all documents distributed to the Board or a Committee in connection with a public meeting (unless exempt from disclosure) are posted online at www.acera.org and also may be inspected at 475 14th Street, 10th Floor, Oakland, CA 94612-1916.

INVESTMENT COMMITTEE/BOARD MEETING

NOTICE and AGENDA Wednesday, April 2, 2025

Call to Order: 10:30 a.m.

Roll Call

Public Input (The Chair allows public input on each agenda item at the time the item is discussed)

Action Items: Matters for discussion and possible motion by the Committee

1. Discussion and Possible Motion to Recommend that the Board Approve the Updated Real Assets Policy

   10:35 – 11:05
   Sam Austin, NEPC
   Rose Dean, NEPC
   Clint Kuboyama, ACERA
   Noe Reynoso, ACERA
   Betty Tse, ACERA

2. Discussion and Possible Motion to Recommend that the Board Approve the 2025 Real Assets Investment Plan

   11:05 – 11:35
   Sam Austin, NEPC
   Rose Dean, NEPC
   Clint Kuboyama, ACERA
   Noe Reynoso, ACERA
   Betty Tse, ACERA

3. Discussion and possible motion to recommend that the Board terminate Kennedy Capital Management - Public Equities

   11:35 – 12:05
   Sam Austin, NEPC
   Dan Hennessy, NEPC
   Stephen Quirk, ACERA
   Noe Reynoso, ACERA
   Betty Tse, ACERA

Information Items: These items are not presented for Committee action but consist of status updates and cyclical reports

1. Review of the current Public Equity Structure and Possible Restructure of the same

   12:05 – 12:35
   Sam Austin, NEPC
   Daniel Hennessy, NEPC
   Stephen Quirk, ACERA
   Betty Tse, ACERA

Trustee Remarks

Future Discussion Items
None

Establishment of Next Meeting Date
May 7, 2025 at 10:30 a.m.

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475-14th Street, Suite 1000, Oakland, CA 94612/ telephone: (510) 628-3000/ fax: 510/268-9574/ www.acera.org

TO: Members of the Investment Committee

FROM: Clint Kuboyama, Senior Investment Officer *Clint Kuboyama*

DATE: April 2, 2025

SUBJECT: Discussion and Possible Motion to Recommend that the Board Approve the Updated Real Assets Policy

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Recommendation:

Approve the updated Real Assets Policy.

Background:

During the February 5, 2025 Investment Committee ("IC") meeting, Staff and NEPC presented proposed amendments to the Real Assets ("RA") Policy as an information item. As part of the information item, a memo that described the major proposed changes to the policy, as well as a redline of the existing policy that showed the proposed changes, were distributed to and discussed with the IC. The major proposed changes generally fell under three categories: A) amendments related to changes in the Real Assets asset class as a result of the adoption of "Mix C" asset allocation for the Total Fund on July 18, 2024; B) amendments related to the synching up of the guidelines, structure and language in the RA Policy with the recently updated Private Credit and Private Equity Policies; and C) amendments meant to update the RA Policy with the most recent information.

Amendments related to changes in the RA asset class brought on by the adoption of Mix C asset allocation included: 1) updated asset class structure to 100% private investments (67% private infrastructure/33% private natural resources); 2) interim allowable investments and sub-class ranges needed to transition the asset class from one that is a mix of public and private investments to one that is 100% private investments; and 3) updated asset class benchmark. Proposed changes related to the synching up of the RA Policy with the Private Credit and Private Equity Policies included: 4) the addition of sub-class descriptions; 5) the inclusion of delegated authority language; and 6) updated information disclosure policy language related to alternative, real assets investments. Finally, amendments related to the updating of the RA Policy to include the most recent information included: 7) an update to the target weighting of the RA asset class in the Total Fund from 5% to 6%.

During the discussion with the IC regarding the proposed changes to the RA Policy on February 5, 2025, there were no concerns voiced or requests for changes to the proposed amendments made by the IC. As a result, the proposed amendments to the RA Policy that were presented to the IC on February 5, 2025, including the redline of the existing policy to reflect the proposed amendments (see Attachment #1), are now being presented to the IC as an action item for approval.

Discussion/Proposed RA Policy Amendment Highlights:

1) ***Updated RA Asset Class Structure:*** The Mix C asset allocation adopted by the Board calls for a change in the RA asset-class structure from one that is a mix of private and publicly traded investments to one that is 100% private investments. The RA asset class will be comprised of two sub-classes of investments – private infrastructure and private natural resources. Staff and NEPC are proposing sub-class targets of 67% private infrastructure and 33% private natural resources due to: 1) the sub-class weightings approximating the private infrastructure and natural resources weightings assumed in the Mix C asset allocation; 2) a more attractive risk/return profile in infrastructure versus natural resources; and 3) a broader opportunity set in private infrastructure versus natural resources. The "Existing RA Target Structure" versus the "Proposed RA Target Structure" are shown in Table 1 below:

Table 1: Existing and Proposed Real Assets ("RA") Target Structures	Existing RA Target Structure	Proposed RA Target Structure
Private Investments		
Infrastructure	50%	67%
Natural Resources	25%	33%
Total Private Investments	75%	100%
Liquid/Public Investments (aka "Liquid Pool")		
Infrastructure	10%	-
Natural Resources	10%	-
Commodities	5%	-
Total Liquid/Public Investments (aka "Liquid Pool")	25%	-

As a result of this structural change, the amendments to the RA Policy focus on the "Proposed RA Target Structure" shown in Table 1 above. In addition, because the only types of investments that are expected to be made going forward are private funds in the infrastructure and natural resources sectors (i.e., "private investments), there are also amendments that reduce the types of investments allowable under the policy. Section IV ("TYPES OF REAL ASSETS INVESTMENTS"), Section VI ("STRATEGIC ALLOCATIONS TO REAL ASSETS"), Section X ("PERFORMANCE EVALUATION CRITERIA"), and APPENDIX III in the RA Policy have been updated to reflect these proposed changes.

2) ***Interim Allowable Investments and Sub-Class Ranges:*** As of 6/30/24, the date of the most recent performance report on RA asset class, the RA asset class was comprised of 56% publicly traded investments and 44% private investments and the total value of the asset class, at 5.8% of the total Fund, was close to its 6% target weighting. If ACERA immediately adopted a 100% private-investment RA asset class and divested the publicly-traded investments, the RA asset class would immediately lose close to half of its market value and the RA asset class would be significantly underweight its 6% target. In addition, it takes time to build out a portfolio of 100% private investments as it is prudent to build a portfolio that is diversified by vintage year commitments. Moreover, once a commitment is made to a private fund, the commitment is invested over multiple years during these funds' investment periods (typically 4 – 6 years).

Because of the above factors, Staff and NEPC recommend to temporarily, over the medium term and while the private investments in the RA portfolio ramp up, maintain publicly-traded investments in the RA asset class. There is an existing vehicle in the RA portfolio, which represents the totality of publicly-traded investment exposure in the RA asset class known as the "Liquid Pool". The Liquid Pool is an investment vehicle that invests in passive investments that seek to replicate publicly-traded equity and commodity indexes currently in the following weighting: 60% S&P Global Infrastructure Index/35% S&P Global LargeMidCap Commodity and Resources Index/5% Bloomberg Roll Select Commodity Index.

Staff and NEPC have planned to use the Liquid Pool to proxy, via similar publicly traded equity exposures, the private infrastructure and natural resources investments while these private investments ramp up. Under the current plan, the Bloomberg Roll Select Commodity Index would be divested from the Liquid Pool and the weightings of the S&P Global Infrastructure Index and the S&P Global LargeMidCap Commodity and Resources Index would be re-weighted to mirror the RA asset class target weightings for private infrastructure (67%) and private natural resources (33%) investments, respectively. Then, as new private commitments are made and capital is called into these private vehicles, thereby building the private investment exposure in the RA asset class over time, the Liquid Pool will be drawn down dollar for dollar until the weighting of the private investments in the RA portfolio is 100% and the weighting to the Liquid Pool is 0%.

To accommodate this transition, language in the policy has been included to allow for publicly-traded investments to be temporarily invested in as part of the RA portfolio during the transitional period. The most prominent prosed policy changes related to this issue can be found towards the end of the policy in the “ADDENDUM”. Additional, related policy changes are also found in Section IV (“TYPES OF REAL ASSSETS INVESTMENTS”), and Section VI (“STRAGETIC ALLOCATIONS TO REAL ASSETS”).

3) ***Updated RA Asset Class Benchmark:*** To reflect the RA asset class’ mix of publicly-traded and private investments while the asset class transitions to 100% private investments, as well as the target sub-class weightings to private infrastructure (67%) and natural resources (33%) investments, the proposed, updated benchmark is 67% S&P Global Infrastructure Index/33% S&P Global LargeMidCap Commodity and Resources Index + 100 basis points. The 100 basis points is added to reflect the higher expected rate of return of private infrastructure and natural resources investments versus their public counterparts that comprise the benchmark index components. By comparison, the legacy benchmark is 60% S&P Global Infrastructure Index/35% S&P Global LargeMidCap Commodity and Resources Index/5% Bloomberg Commodity Index. Changes to the RA Policy related to this proposed update are found in Section X (“PERFORMANCE EVALUATION CRITERIA”).

4) ***Addition of Sub-Class Descriptions:*** Descriptions of the types of investments expected in RA sub-classes of Natural Resources and Infrastructure have been added to the RA Policy to synch up the structure and content of the RA Policy with the Private Credit and Private Equity Policies and to provide more information and clarity. These additions can be found in Section VII (“SPECIFIC GUIDELINES FOR REAL ASSETS PORTFOLIO”).

5) ***Delegated Authority:*** Prior to this update, the RA Policy did not contain language related to the Board/IC delegating authority to Staff to make investment decisions and, accordingly, no RA investments have been made under delegated authority to date. However, delegated authority language is now being proposed in the RA Policy that is similar to the delegated authority language found in the updated Private Credit and Private Equity Policies. The delegated authority limits included in this policy update are: 1) 7% (of the target allocation to the RA asset class) for private investments managed by managers that are new to ACERA; and 2) 15% for aggregate commitments (i.e., existing plus incremental commitments) to existing private RA managers in good standing. In addition, like the Private Credit and Private Equity Policies, delegated authority language is added to allow for Staff to make decisions on “Continuation Funds” related to existing private funds because of the truncated timeframes (i.e., 10 – 20 business days) under which a decision must typically be made. Section VIII (“ROLES AND RESPONSIBILITIES”) has been updated to reflect these changes.

6) ***Updated Information Disclosure Policy for RA Investments:*** In order to update and align it with the Private Credit and Private Equity Policies, the language in the RA Policy related to information disclosure on RA Investments has been updated. These updates can be found in Section XII (“REAL ASSETS INFORMATION DISCLOSURE POLICY”) and Appendix IV (“Details of Disclosure Policy For Real Assets Investments (“RA Funds”)).

7) ***Updating of Target Weighting for the RA Asset Class:*** The RA Policy was last amended on December 17, 2020. At that time, the target weight of the RA asset class in the total Fund was 5%. Then, on June 17, 2021, a new total Fund asset allocation was approved by the Board, which increased the target weighting of the RA asset class to 6%, but the RA Policy was not updated at that time to reflect the higher target weighting. Since then, the target weighting to the RA asset class has remained the same at 6% including in the Mix C asset allocation adopted by the Board on July 18, 2024. Now, through this round of RA Policy updates, the RA Policy is being updated to include a 6% target weighting for the RA asset class. This update can be found in Section VI (“STRAGETIC ALLOCATIONS TO REAL ASSETS”), Section VII (“SPECIFIC GUIDELINES FOR REAL ASSETS PORTFOLIO”), and Appendix III.

Conclusion:

To update the Real Assets Policy to align it with the asset-class-level changes brought on by the adoption of the Mix C asset allocation and the recently updated Private Credit and Private Equity Policies, as well as to bring it up to date with current information, Staff and NEPC recommend the approval of the updated Real Assets Policy.

Attachment:

#1 Redlined ACERA Real Assets Policy, prepared by Staff and NEPC

Alameda County Employees'
Retirement Association

ACERA

REAL ASSETS POLICY

Amended: TBD~~December 17, 2020~~

ACERA REAL ASSETS POLICY

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Real Assets Policy

I. SCOPE

This Real Assets Policy (“RA Policy” or “Policy”) governs all investments in the Real Assets (“RA”) asset class made by Alameda County Employees’ Retirement Association (“ACERA”). Established in April, 2011 the RA Policy is subject to all provisions of applicable law and applicable limitations and requirements of ACERA’s General Investment Guidelines, Policies and Procedures. If there is any conflict between this RA Policy and ACERA’s General Investment Guidelines, Policies and Procedures pertaining to investments in the RA asset class, the Policy prevails. The ACERA Board (“Board”) reserves the right to amend, supplement, and/or rescind the Policy at any time.

II. PURPOSE

The purpose of the Policy is to:

1. Set forth the RA investment policies and guidelines which are deemed to be appropriate and prudent;
2. Establish criteria against which RA investment opportunities are to be measured; and
3. Serve as a review document to guide the ongoing oversight of ACERA’s Real Assets Portfolio on a consistent basis.

The Policy also defines roles and responsibilities of the Board, the ACERA Investment Committee (“IC”), the ACERA Staff (“Staff”), the ACERA RA Consultant (“Consultant”), and the RA Investment Managers hired by ACERA to manage its assets (“Managers”).

It is expected that the Policy will be a living document and that changes will be made from time–to-time to reflect experience, evolving investment products, and opportunities and changes in the economic and capital market environment.

The RA asset class is designed to produce positive expected returns and to ~~protect~~ mitigate the impact~~against~~ of domestic inflation.

The RA portfolio is principally intended to:

1. Exceed the RA Policy benchmark on a net of fees basis.
2. ~~Protect against~~Mitigate the impact of domestic inflation and trending inflation, especially during periods of unexpected inflation.
3. Add alpha and diversification to the ACERA portfolio.

III. LEGAL AUTHORITY

The Policy is established in accordance with Article XVI, Section 17 of the California Constitution and California Government Code sections 31594 and 31595, which establish the exclusive authority and fiduciary responsibility of the Board for the investment and administration of the ACERA Trust Fund (“Fund”).

IV. TYPES OF REAL ASSETS INVESTMENTS

The RA portfolio ~~will invest in liquid and illiquid~~ is intended to invest in private natural resources and infrastructure investments over the long term. In order to maintain the RA portfolio's market value close to its target weighting in the total Fund as the portfolio transitions to 100% private investments, however, the RA portfolio will, over the medium-term, maintain its exposure to liquid/publicly traded investments[1] (please see Addendum for more information).

The private and liquid/publicly-traded investments in the RA portfolio ~~strategies that~~ ~~will seek~~are expected to provide a positive expected return and to help mitigate the impact of domestic inflation on the total Fund. Liquid/publicly-traded investments are expected to consist of publicly-traded equities in the natural resources and infrastructure sectors ~~commodities, inflation protected bonds (TIPS) and other exchange listed securities that are believed to provide an appropriate hedge to inflation~~. In addition, the RA portfolio ~~will~~ is expected to invest in ~~illiquid,~~ private limited partnerships and secondaries in sectors with inflation~~-~~ sensitive assets including, but not limited to, energy, mining, ~~infrastructure,~~ timberland, and farmland (collectively private natural resources investments), as well as infrastructure.

All RA investments/strategies made through privately-placed funds are considered Alternative Investments.

RA investments include, but are not limited to, the following:

~~1. Commodities~~
~~2. Treasury Inflation Protected Securities (TIPS), Inflation Break-evens~~
~~3. Developed and Emerging Market Currencies~~
~~4.~~1. Natural Resources - Related Equities
~~5.~~2. Infrastructure - Related Equities
~~6. Gold, Other Precious Metals~~
~~7. Publicly-traded Real Estate Investment Trusts (REITs)~~
~~8.~~3. Privately-placed Energy ~~Funds~~Investments
~~9.~~4. Privately-placed Mining ~~Funds~~Investments
~~10. Privately-placed Infrastructure Funds~~
5. Privately-placed Farmland ~~Funds~~Investments
6. Privately-placed~~,~~ Timber ~~Funds~~Investments
~~11.~~7. Privately-placed Infrastructure ~~Funds~~Investments
~~12. Publicly-traded Energy Master Limited Partnerships (MLP's)~~
~~13. Other Inflation-Hedging Assets~~

V. STRATEGIC OBJECTIVE OF REAL ASSETS INVESTMENTS

The strategic objective of real assets investments is to generate a positive~~, domestic inflation-sensitive~~ return in excess of the asset class's assigned benchmark, while mitigating the impact of domestic inflation on the total Fund. The Board believes the Fund's overall returns can be enhanced, on a risk-adjusted basis, by investing a portion of its assets in RA assets.

VI. STRATEGIC ALLOCATIONS TO REAL ASSETS

The target allocation to the Real Assets Asset Class is 6~~5~~.0% of the total Fund. The long-term RA target

[1] The publicly-traded investments will consist of two passively managed equity index strategies managed in one vehicle that seeks to replicate the blended return of 67% S&P Global Infrastructure Index/33% S&P Global LargeMidCap Commodity and Resources Index.

portfolio will consist~~-~~ of ~~of both liquid and illiquid~~ private investments with a target allocation between the two sub-classes of private ~~pools of~~ investments (i.e., ~~n~~natural resources and infrastructure), ~~at commitment level,~~ as follows:

~~Permanent RA Portfolio[1]~~	~~Target Allocations~~
~~Liquid Pool (publicly-traded)~~	~~25%~~
~~Commodities~~	~~5%~~
~~Natural Resources~~	~~10%~~
~~Infrastructure~~	~~10%~~
~~Illiquid Pool (privately-placed)~~	~~75%~~
~~Natural Resources~~	~~25%~~
~~Infrastructure~~	~~50%~~

RA Portfolio	Long-Term Target Allocation[1]	Long-Term Min./Max. Ranges[1]
Real Assets	**6.0%**	**3.0% to 9.0%**
-Private Infrastructure	67%	47% to 87%
-Private Natural Resources	33%	13% to 53%

However, in order to maintain the RA portfolio's target weighting in the total Fund while building investment exposure to private investments, a liquid vehicle ("Liquid Pool") will be used in the interim that invests in publicly traded global equities targeting the same percentage weightings for natural resources (33%) and infrastructure (67%) as the RA portfolio's long-term private targets to these sub classes. As more private investments are made, the private portion of the RA portfolio is expected to grow towards 100% of the RA portfolio while the Liquid Pool is being progressively and completely divested. (Please see Addendum for interim weightings to the private investments and the Liquid Pool.)

~~**The Liquid Pool serves four purposes:**~~

1. ~~Provide a high correlation to inflation~~
2. ~~Allow ACERA to fund its RA target allocation, providing the Total Fund with RA risk exposures to the private real asset strategies~~
3. ~~Act as a drawdown vehicle to fund commitments made by ACERA within the illiquid portfolio.~~
4. ~~Ensure that ACERA has sufficient liquidity either to meet the Total Fund's needs and/or to take advantage of attractive investment opportunities~~

~~It is expected that the liquid pool will comprise the majority of the RA portfolio until privately-placed commitments are made and investment dollars are called.~~

~~**The Illiquid Pool serves two purposes:**~~

1. ~~Provide a return premium above the publicly-listed infrastructure and natural resource equity markets.~~
2. ~~Enhance portfolio diversification by reducing the RA portfolio's public equity correlation~~

It is expected that the RA assets will be managed on a discretionary basis by investment managers, who are evaluated and monitored by Staff and Consultant. All investment managers will adhere to specific investment guidelines which are generally consistent with the intent of the Policy. Portfolio construction will be designed to produce a diversified mix of returns~~, subject to the guidelines and constraints outlined under each sub-category above~~. While specific investments may incur losses of all or part of the capital invested, it is expected that a diversified RA Portfolio will produce a positive return that exceeds the RA Policy benchmark. The risks associated with RA investments will be viewed within the context of the entire Fund. ACERA may take on over and under weights to sub-asset classes within the RA Portfolio to

[1] Please see the Addendum to this RA Policy for the interim asset allocation ranges.

improve its risk/return posture based upon an assessment of the relative attractiveness of all available opportunities.

VII. SPECIFIC GUIDELINES FOR REAL ASSETS PORTFOLIO

ACERA will gain exposure to RA investments by hiring external investment managers either directly or through participation in secondary RA markets. It is expected that the RA Portfolio will exceed the custom, blended benchmark net of all fees and expenses over a 7-10-year period (full market cycle).

The RA Portfolio is to be implemented over 3 to 5 years and diversified as follows:

By sub-asset classes: ~~Among n~~Natural resources and~~, i~~ Infrastructure~~, commodities, and other similar investments.~~

A. Natural Resources Investments

Description: Natural Resources investments are public and private investments that include, but are not limited to, equity, royalty, and debt investments in companies that produce commodities such as precious metals, industrial metals, minerals, energy, agriculture, and timberland. The companies invested in may focus solely on the production of commodities and may operate throughout commodity supply chains.

ACERA will look to hire external managers with the goal of achieving a diversified exposure across sectors, regions, and vintage year.

B. Infrastructure Investments

Description: Infrastructure investments are public and private investments that include, but are not limited to, equity and debt investments in infrastructure assets or companies. Infrastructure assets and companies include, but are not limited to, those involved with renewable energy, energy transition, traditional energy, transportation, power, digital infrastructure, and social infrastructure.

ACERA will look to hire external managers with the goal of achieving a diversified exposure across sectors, regions, and vintage year.

By vintage year: It is expected that ACERA will commit capital to private real assets investments each year to take advantage of opportunities across vintage year. The commitment amounts will vary to adjust for changes in the market value of ACERA's plan, and accommodate market opportunities.~~Roughly equal amounts of new funding will be invested or committed to private investments in each calendar year, with significant deviations permitted to accommodate market opportunities and to facilitate initial entry into the asset class.~~

By Investment Manager: No more than twenty ~~-~~(20) percent of the Fund's total six~~five~~ (6~~5~~) percent target allocation to the RA Portfolio may be ~~invested/~~committed to any one ~~illiquid~~ private investment manager~~vehicle~~.

By private fund: No more than ten (10) percent of the Fund's total six (6) percent target allocation to the RA portfolio may be committed to any one private fund.

By geography: Through investments/commitments to funds on a global basis ~~to~~to mitigate the impact of ~~provide protection against~~ domestic inflation.

By industry~~sector~~: As a result of the diversified investments/commitments outlined above, it is expected that the RA Portfolio will generally be diversified within the natural resources and infrastructure ~~by~~ sectors by industry.

VIII. ROLES AND RESPONSIBILITIES

The delineation of roles and responsibilities is important for effective administration of ACERA's RA Portfolio. The duties and responsibilities of the Board, IC, Staff, Consultant, and Managers are stated below:

A. Board

The Board shall be responsible for approving the Policy that governs the RA Portfolio and approving the Investment Plans for ACERA's RA Portfolio. From time-to-time the Board, with input from the IC, shall review the Policy to determine whether amendments are advisable. The Board shall also be responsible for reviewing and approving all RA ~~commitments/~~investments with individual commitments exceeding Staff's delegated authority as described in subparagraph C below.~~that are recommended by Staff and Consultant to the IC, Staff, and Consultant~~.

B. Investment Committee

The IC shall be responsible for the following:

1. Establishing the RA Policy to govern all investments in the Real Assets asset class;
2. Reviewing the RA Policy, evaluating proposals for RA Policy amendments, if any, and making recommendations to the Board;
3. Reviewing and approving ~~the Investment Plans for~~ ACERA's RA Portfolio Investment Plan;
4. ~~Recommending~~ Reviewing RA investments recommended by Staff and/or Consultant and making recommendations to the Board ~~a Policy to govern all investments in or commitments to the RA asset class;~~for adoption; and
5. Delegation[2] :
    a. Delegating to Staff the authority to make final decisions on new proposed RA investments with an individual commitment up to 7% of the target allocation to the total RA Portfolio.
    b. Delegating to Staff the authority to make final decisions on proposed "re-up" RA investments with existing managers in good standing, an individual commitment in addition to the existing commitments, up to 15% of the target allocation to the total RA Portfolio.

~~1.~~

~~2.1. Reviewing the Policy, evaluating proposals for amendments, if any, and making recommendations to the Board;~~

~~3.1. Reviewing and approving Investment Plans for ACERA's RA Portfolio;~~

~~4. Reviewing RA investments/commitments recommended by Staff and Consultant and recommending them to the Board for approval.~~

C. Staff

Staff shall be responsible for oversight of ACERA's RA Portfolio. Staff's responsibilities shall include, but not be limited to the following:

1. Developing and recommending all necessary changes to the RA Policy with input from Consultant;
2. Developing and maintaining specific procedures, if necessary, to comply with the approved RA Policy with input from Consultant;

~~2.~~3. Developing the investment plan of ACERA's RA Portfolio and making recommendations to the Committee for adoption with input from Consultant;

4. Reviewing, conducting due diligence, and, if satisfied, recommending RA investment/commitment proposals to the IC. Staff and Consultant shall provide the IC all required reports (*See* Appendices I through III);
5. Delegation[2]:
   a. Approving Consultant's RA investment proposals (new proposals) with each individual commitment up to 7% of the target allocation to the RA portfolio upon completion of a thorough review and due diligence process with satisfactory results. Staff and Consultant shall provide the Investment Committee all required reports (*See* Appendices I through III).
   b. Approving Consultant's RA investment proposals for "re-ups" with existing managers with each individual commitment in addition to the existing commitments, up to 15% of the target allocation to the total RA portfolio to managers in good standing[3] upon completion of a thorough review and due diligence process with satisfactory results. Staff and Consultant shall provide the Investment Committee all required reports (*See* Appendices I through III).
   ~~3.~~c. When the investment manager or general partner of existing investment vehicles offer related continuation vehicles (aka "continuation funds"), following a thorough evaluation of the investment options related to the continuation vehicle (i.e., subscribing to the continuation vehicle, receiving liquidity, or, in some cases, both), and in alignment with Consultant's recommendation, approving of investment in continuation vehicles or other related options such as receiving liquidity (i.e., receiving cash proceeds for the investments that are to be transferred into the continuation vehicle);
6. Through the ACERA Investment Products and Services Introduction ("IPSI") program and with the concurrence of the Consultant, recommend highly qualified RA investments to the IC or approve investments under delegated authority upon completion of a thorough due diligence process and the requisite reporting (*See* Appendices I through III).

~~4.~~7. Monitoring the RA Portfolio for performance and compliance with the Policy;

~~5.~~8. Monitoring the performance of the underlying Managers and their compliance with a) the investment guidelines as set forth in their respective contracts; b) the Policy: and c) applicable requirements of ACERA's General Investment Guidelines, Policies and Procedures;

~~6.~~9. Conducting comprehensive ~~annual~~ reviews of ACERA's RA Portfolio and the individual investments in the Portfolio;

~~7.~~10. Reporting to the IC any violations of the Policy with appropriate recommendations;

~~8.~~11. Assisting ACERA's legal department in contract negotiations with the selected Managers;

~~9.~~12. Evaluating RA investment opportunities with Consultant's input on an ongoing basis; and

~~10.~~13. Evaluating and making recommendations for retention and termination of Managers.

[2] Investment manager may not appear before the Investment Committee in circumstances when Staff has exercised its delegated authority.

[3] An investment manager will be considered to be in good standing if there is sufficient comfort with factors including, but not limited to, its organization, strategy, performance, and compliance.

D. Consultant

Consultant hired by the Board is a fiduciary to ACERA and its Board. Consultant shall independently and continuously monitor and analyze the performance of ACERA's RA Portfolio and make related recommendations to serve the best interests of the plan members. Consultant shall assist Staff in developing the Policy and recommending all necessary changes to the Policy. In addition, Consultant shall be responsible for:

1. Analyzing the asset allocation of the RA Portfolio by sub-asset class~~type~~, implementation vehicle, geography, industry, and vintage year, and making recommendations for reallocation of assets, as appropriate;
2. Developing an investment plan for ACERA's RA Portfolio every 1 to 3 years~~annually~~;
3. Developing a search strategy for highly qualified RA investments and maintaining a robust database containing information on qualifying Managers;
4. Recommending highly qualified investments to Staff and/or the Investment Committee upon completion of a thorough due diligence process and providing the required reports to Staff and/or the IC;
~~4.~~5. When continuation vehicles are offered related to existing investment vehicles, and following a thorough evaluation of the related investment options, recommending to Staff which investment option is most suitable for the RA Portfolio;
~~5.~~6. Ongoing monitoring of the investment performance of ACERA's RA Portfolio and individual investment strategies~~s~~ in the Portfolio;
~~6.~~7. Conducting ongoing due diligence on Managers, notifying ACERA of any significant developments and adverse events and providing analysis and advice on such issues;
~~7.~~8. Monitoring Managers' compliance with a) their respective investment guidelines as set forth in their contracts; b) the RA Policy; and c) applicable requirements of ACERA's General Investment Guidelines, Policies and Procedures;
~~8.~~9. Assisting Staff in contract negotiations with the selected Managers;

~~9.~~10. Submitting performance evaluation reports and conducting comprehensive reviews of the RA Portfolio semi-annually with the IC and on individual Managers when appropriate~~, semi-annually to the IC in conjunction with the regular quarterly performance report and review~~;
~~10.~~11. Making recommendations for retention or termination of Managers;
~~11.~~12. Attending IC and Board meetings as needed; and
~~12.~~13. Performing other duties in accordance with the terms of its contract and applicable State and Federal law.

E. Managers

Managers are fiduciaries and shall manage ACERA's assets prudently and in the best interests of ACERA and its members. Managers shall abide by all applicable policies and procedures established by ACERA and comply with applicable law. Managers shall be responsible for compliance with a) the specific investment guidelines as set forth in their respective contracts; b) the Policy; and c) applicable requirements of ACERA's General Investment Guidelines, Policies and Procedures. They shall also:

1. Communicate with Staff and/or Consultant promptly regarding investment strategy, investment results, and any non-conforming issues that may have significant and/or negative impact on the portfolio;
2. Cooperate fully with Staff, Consultant, ACERA's custodian, and other ACERA vendors concerning requests for information;
3. Submit reports in a timely manner to Staff and Consultant in accordance with their contract terms; and
4. Attend meetings as needed.

IX. DUE DILIGENCE PROCESS FOR RA INVESTMENT SELECTION

ACERA recognizes that a proper due diligence process is essential to control the risks associated with RA investments and, therefore, hereby establishes the following due diligence processes for both its Consultant and Staff:

A. Consultant

Consultant shall conduct extensive, documented due diligence before making any RA investment recommendations to Staff and the IC. Consultant shall ~~involve~~work closely with Staff in the due diligence process when appropriate. For those investments recommended to be included in the ACERA RA Portfolio, ~~c~~Consultant's duties shall include~~ shall,~~ but not be limited to:

1. Assessing the reputation of the individuals who manage the RA investments. Consider background checks, internet searches, and in-person meetings with these individuals, etc.;
2. Conducting on-site visits to the offices of the Managers;
3. Checking references from other investors that have invested in these RA investments, and, when advisable, from competitors;
4. Determining that the RA investment funds are audited, at least annually, by a reputable and recognized external auditing firm;
5. Reviewing Managers' investment strategies, policies, operating procedures, and historical performances;
6. Reviewing and understanding the valuation procedures employed by the Managers;
7. Reviewing and understanding the business terms of all operational documents and other related materials for the RA investments under consideration, including but not limited to offering memoranda, subscription agreements, fund policies, due diligence questionnaires, and Forms

ADV, if and as available.

7. ~~Reviewing business terms of all legal agreements and other related documents for the RA investments under consideration, such as offering memorandum, legal agreements, and SEC Forms ADV;~~

8. Assessing what exit strategies exist to avoid future investments in or liquidate exiting investments from strategies exhibiting poor performance; and

9. Reviewing the investments for potential exposure to Unrelated Business Taxable Income (UBTI) as specified by the Investment Manager, with the understanding that tax-related implications are outside the expertise of the Consultant~~.~~

B. Staff

Staff shall ensure that Consultant has conducted extensive, documented due diligence on all RA investment proposals recommended to Staff and the IC. Staff shall participate in Consultant's due diligence process when appropriate and shall also:

1. Review the comprehensive analysis report prepared by Consultant on its recommended RA investments;
2. Verifying the compliance of each recommended RA investment with the RA Policy, the investment plan for ACERA's RA Portfolio and other applicable ACERA investment policies;
3. Discussing issues related to the recommended RA investments with Consultant and with Investment Managers to gain a thorough understanding of each strategy's return drivers, key terms, and investment guidelines, and determine the investment suitability for ACERA's RA Portfolio;

~~2.~~4. Conduct independent internal due diligence on the recommended investment, including, but not limited to: meeting with Managers and their proposed management teams, performing background checks on related parties, review of the offering materials and proposed investment contracts, and attending onsite diligence meetings at the Managers' offices when possible~~.~~;

~~3. Verify the appropriateness of each recommended RA investment with consideration to the Policy, the investment plan for ACERA's RA Portfolio and other applicable investment policies;~~

~~4. Discuss all issues related to the recommended RA investments with Consultant and if necessary, with the Managers; and~~

5. Arrange presentations to the IC for~~ all~~ recommended RA investments ~~when needed~~~~to~~as applicable~~ allow the IC to make recommendations to the Board for approval~~.

X. PERFORMANCE EVALUATION CRITERIA

When appropriate, the specific performance evaluation criteria, including, but not limited to benchmarks, for Managers will be established in the investment agreements between ACERA and individual Managers.

Performance of the RA portfolio will be measured against the following blended benchmark:

67% S&P Global Infrastructure Index/33% S&P Global LargeMidCap Commodity and Resources Index +100 basis points

~~S&P Global LargeMidCap Commodity and Resources Index~~	~~35%~~
~~S&P Global Infrastructure Index~~	~~60%~~
~~Bloomberg Commodity Index~~	~~5%~~

Individual managers will be measured against their respective benchmarks.

Privately-placed and publicly-traded Natural Resources Investments	S&P Global LargeMidCap Commodity and Resources Index

Privately-placed and publicly-traded Infrastructure Investments	S&P Global Infrastructure Index
~~Privately-placed and publicly-traded Commodities~~	~~Bloomberg Commodity Index~~

XI. MONITORING AND REPORTING

Consultant and Staff will monitor and analyze the RA Portfolio closely so that the strategic objective(s) of the Portfolio can be met.

Managers shall submit all reports to Staff, Consultant, ACERA's custodian, and other ACERA vendors in accordance with their respective contracts.

Consultant shall submit all reports to Staff in accordance with its contract terms and the Policy.

Consultant, in conjunction with Staff, shall perform evaluations of ACERA's RA Portfolio and the underlying Managers ~~annually and, when appropriate,~~ semiannually. Consultant shall report the findings to Staff and the IC.

XII. REAL ASSETS INFORMATION DISCLOSURE POLICY

ACERA is a public agency subject to state laws, including, without limitation, (a) the California Public Records Act (Cal. Gov. Code § 7920.000~~6250~~ *et seq.*) (the "Public Records Act"), which provides generally that all records relating to a public agency's business are open to public inspection~~, disclosure~~ and copying~~,~~ unless specifically exempted under the Public Records Act, (b) the Ralph M. Brown Act (Cal. Govt. Code § 54950, *et. seq.)* (the "Brown Act"), which provides generally for open meetings for local legislative bodies, and (c) the California Government Code Section 7514.7 ("the Fee Disclosure Act) which provides generally that public pension systems in California obtain and publicly disclose certain information regarding fees, expenses and returns from the alternative investment vehicles in which they invest. *See* Appendix IV for details of the ACERA disclosure Policy regarding its RA investments. ~~. The investment of the ACERA Fund is a matter of legitimate public interest; however, the Legislature has determined that the public interest requires that certain information regarding privately-placed funds remain exempt from disclosure. (Cal. Gov. Code §6254.26.) Therefore, regarding RA investments, it shall be the policy of ACERA to disclose only those records described in California Government Code Section 6254.26, subdivision (b). Specifically, ACERA will disclose the following categories of documents:~~

~~**1.** The name, address, and vintage year of each RA investment;~~

~~**2.** The dollar amount of the commitment made to each RA investment vehicle by ACERA since inception;~~

~~**3.** The dollar amount of cash contributions made by ACERA to each RA investment vehicle since inception;~~

~~**4.** The dollar amount, on a fiscal year-end basis, of cash distributions received by ACERA from each RA investment vehicle;~~

~~**5.** The dollar amount, on a fiscal year-end basis, of cash distributions received by ACERA plus remaining value of fund assets (or interest in) attributable to ACERA's investment in each RA investment vehicle;~~

~~**6.** The net internal rate of return of each RA investment vehicle since inception;~~

~~**7.** The investment multiple of each RA investment vehicle since inception;~~

~~**8.** The dollar amount of the total management fees and costs paid on an annual fiscal year-end basis, by~~

~~ACERA to each RA investment vehicle; and~~

~~**9.** The dollar amount of cash profit received by ACERA from each RA investment vehicle on a fiscal year-end basis.~~

~~All other records regarding such RA investments shall be exempt from disclosure to the fullest extent permitted under applicable law. Notwithstanding the preceding, ACERA reserves the right to withhold any record on the basis that the public interest in disclosure is clearly outweighed by the public interest in withholding the record (Cal. Gov. Code §6255).~~

XIII. TABLE OF AMENDMENT DATES

March 17, 2016
October 18, 2018
May 15, 2019[2]
December 17, 2020

[2] This amendment reflects the updated "Natural Resources" index in the Real Assets Portfolio benchmark composite (see Section X Performance Evaluation Criteria) from the "S&P Global LargeMidCap Natural Resources Index" to the "S&P Global LargeMidCap Commodity and Resources Index" as reported to the Investment Committee on May 15, 2019.

Appendix I

List of Reports Required for Each Investment Recommendation/Approval

Name of Report	**Source**
Recommendation/Approval memo	Staff
Recommendation/Approval memo	Consultant
Executive Summary of the Fund	Consultant/*Staff ~~and Staff (separately prepared)~~
Compliance Checklist	Staff
Comprehensive Due Diligence Report (a~~A~~vailable to Trustees upon request due~~owing~~ to confidentiality)	Consultant
Manager Pitchbook	Investment Manager

***Note: Staff will provide an abbreviated Executive Summary Report that is available for review upon request by the Trustees.**

Appendix II

Executive Summary Report Template

Fund Name

Section I: General Information

Fund Name; Total AUM of the Firm; Current Target Fund Size; Previous Fund Size; Fund Focus; etc.

Section II: Investment Management

Organizational Structure; Management Group; Experience; Personnel Turnover; etc.

Section III: Investment Strategy

Investment Philosophy; Investment Strategy; Investment Process; Investment Objective; etc.

Section IV: Risk Management

Risk Control Methodology; Exit Strategy; etc.

Section V: Investment Rationale

Section VI: Investment Concerns

Section VII: Performance ~~(example)~~

~~Benchmark:~~

~~Net Returns (%):~~

~~**Period Ending Dates**~~	~~**YTD**~~	~~**1Year**~~	~~**3Years**~~	~~**5Years**~~	~~**Since Inception**~~
~~Gross Fund/Account Results~~					
~~Net Fund/Account Results~~					
~~Benchmark~~					
~~Relative Performance: Account – Benchmark~~					
~~Gross Fund/Account - Benchmark~~					
~~Net Fund/Account – Benchmark~~					

2

Section VIII: Key Terms

Fund Term; Preferred Return; Investment Period; Management Fee; Other Fees; Fee Discounts; General Partner Carry; GP Commitment; Advisory Board; Clawbacks; No-Fault Divorce; Key-Person Events; Closing Schedule; Drawdown Schedule; etc.

Appendix III

Compliance Checklist Template for RA Investment/Commitment

Target allocation to RA asset class: 6~~5~~% of the Total Fund

RA Policy	**Investment Fund**	**In Compliance**

1. Permissible Legal Structures

Any legally permissible vehicle will be allowed including, but not limited to, separate accounts, commingled funds, joint ventures, limited partnerships, corporations, and limited liability companies.	*Specific legal structure.*	*Yes, No, or N/A*

2. Investment Methods

Individual limited partnership funds Primary and/or Secondary Separate accounts Discretionary Separate Accounts Commingled Funds ETF's Fund-of-funds Direct investments/Co-Investments Combination of the above	*Specific investment methods.*	*Yes, No, or N/A*

3. Investment Characteristics

RA investments~~may~~ shall include investments as specified in Section VII of the RA Policy~~, but not be limited to, commodities, energy, mining, timberland, farmland (natural resources), infrastructure, renewables, and debt-related / special situations.~~	*Specific investment type.*	*Yes, No, or N/A*
~~Commodities: typically, futures, options on futures, and/or swaps on exchange-traded commodity instruments.~~ ~~Natural Resources: typically purchase assets/companies in the energy, mining, timberland, and/or farmland industries.~~ ~~Infrastructure: typically purchase privately-held assets and/or companies in the infrastructure sector~~ ~~Other RA Assets: investments include debt-like instruments, sub-industry investments (e.g. renewables) or any asset which exhibits an inflation protection component with an attractive risk/return characteristic.~~	*Specific investment characteristics.*	*Yes, No, or N/A*
RA Investments may be denominated in USD or other currencies.	*Specific currency denomination.*	*Yes, No, or N/A*

RA Policy	**Investment Fund**	**In Compliance**

4. Portfolio Diversification

By sub-asset class: ~~among commodities n~~Natural resources, and infrastructure~~, and debt-related/special situations~~.	*Specific investment type.*	*Yes, No, or N/A*
By vintage year: roughly equal amounts of new funding may be committed in each calendar year with deviations permitted.	*Specific vintage year.*	*Yes, No, or N/A*
By investment manager: ≤ 20% of the target allocation to the RA asset class may be committed to any one private investment manager.	*Specific investment manager.*	*Yes, No, or N/A*
By i~~I~~nvestment f~~F~~und: ~~<=~~≤~~2~~10% of the target allocation to the~~total~~ -RA asset class may be committed to any one illiquid private investment fund~~vehicle~~.	*Specific commitments to the Investment Fund.*	*Yes, No, or N/A*
By geography: commitments to funds located and/or investing both inside and outside of the U.S.	*Specific location.*	*Yes, No, or N/A*
By sector/industry: commitments to funds that will diversify the RA portfolio within sector/industry.	*Sector/Industry diversification*	*Yes, No, or N/A*

5. Return Expectation

~~Custom Benchmark or Blend (see Primary Benchmark in Policy)~~67% S&P Global Infrastructure Index/33% S&P Global LargeMidCap Commodity & Resources Index + 100 basis points (net of all fees) in aggregate. Infrastructure Investments: S&P Global Infrastructure Index Natural Resources Investments: S&P Global LargeMidCap Commodity & Resources Index	*Specific return target(s).*	*Yes, No, or N/A*

6. Investment Allocations

RA Portfolio: target 6%, range ~~0~~3%-~~9~~5% of the total Fund. ~~Liquid Pool (publicly-traded): range 10% - 100%~~ ~~Commodities: range 0%-10% Natural Resources: range 5%-35%~~ ~~Infrastructure: 5%-55%~~	*Expected allocations to the RA Portfolio and to the underlying portfolios including specific commitment to the Investment Fund.*	*Yes, No, or N/A*

Private Investments[4]: Natural Resources: 13% - 53% of the RA portfolio Infrastructure: 47% - 87% of the RA portfolio ~~Illiquid Pool (privately-placed): range 0-90%~~ ~~Natural Resources: range 0-30%~~ ~~Infrastructure: range 0-60%~~	*Proposed investment is within the sub-class--allocation range.*	*Yes, No, or N/A*

RA Investment Plan for *YEARS*
Approved: *DATE* **Investment Fund** **In compliance**

Specific Investment Plan.	*Specific commitment to the Investment Fund.*	*Yes, No, or N/A*

[4] See RA Policy Addendum for interim sub-asset class target ranges for private and liquid/publicly traded investments.

APPENDIX IV

Details of Disclosure Policy For

Real Assets Investments ("RA Funds")

1. Upon request, ACERA shall disclose : (i) the name, address and vintage year of each RA Fund; (ii) the dollar amount of capital committed to each RA Fund by ACERA since inception; (iii) the dollar amount of cash contributions made to each RA Fund by ACERA since inception; (iv) the dollar amount of distributions received by ACERA from each RA Fund on a fiscal yearend basis; (v) the market value of ACERA's investment in each RA Fund on a fiscal yearend basis; (vi) each RA Fund's net internal rate of return ("IRR") since inception; (vii) the investment multiple of each RA Fund since inception; (viii) the dollar amount of total management fees and expenses paid on an annual fiscal yearend basis, by ACERA to each RA Fund; and (ix) the dollar amount of cash profit received by ACERA from the RA Fund on a fiscal yearend basis. (*See* Cal. Govt. Code § 7928.710(c)~~6254.26(b)~~.)

2. ACERA shall disclose at least once annually in a report presented at a meeting open to the public : (i) the fees and expenses that ACERA pays directly to the RA Fund, the RA Fund manager or related parties; (ii) ACERA's pro rata share of fees and expenses not included in (i) that are paid from the RA Fund to the RA Fund manager or related parties; (iii) ACERA's pro rata share of carried interest distributed by the RA Fund to the RA Fund manager or related parties; (iv) ACERA's pro rata share of aggregate fees and expenses paid by all of the portfolio companies held by the RA Fund to the RA Fund manager or related parties; (v) the information outlined in Section 1, above, and (vi) the gross and net IRR of the RA Fund, since inception. (*See* Cal. Govt. Code § 7514.7.)

All other records regarding such RA~~Absolute Return~~ investments shall be exempt from disclosure to the fullest extent permitted under applicable law.

Notwithstanding the preceding, or anything else in this Policy, ACERA reserves the right to withhold any record when "on the facts of the particular case the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record." (*See* Cal. Govt. Code § 7922.000~~6255(a)~~.) This weighing process contemplates a case-by-case balancing test between competing public interests based on the facts presented as the statute has been interpreted by the courts.[3]

[3] *Michaelis, Montanari & Johnson v Superior Court*, 38 Cal.4th 1065, 1071 (2006).

ADDENDUM

Interim Asset Allocation Ranges (Expected 5-8 Years)

For Real Assets Portfolio

On July 18, 2024, the ACERA Board adopted a new Total Fund asset allocation that calls for the RA asset class to be 100% invested in private natural resources and infrastructure investments. However, prior to the adoption of this asset-allocation change, the RA portfolio was comprised of 56% liquid/publicly traded investments and 44% private natural resources and infrastructure investments and its aggregate market value was close to its 6% target weighting in the Total Fund. If ACERA immediately adopted an RA portfolio allocation of 100% private investments and divested its liquid/publicly traded investments, the RA portfolio would be significantly underweight its current 6% target in the Total Fund as it would divest 56% of its market value. In addition, it takes time to build out a portfolio of private investments as these investments must first be committed to, then, investors' committed capital is called into these investments and invested over multiple years during these investments' investment periods (typically 4 – 6 years). Moreover, it is prudent to achieve vintage-year diversification in building out private portfolios so all of the private capital will not be committed to private investments in a single year and will instead be committed over a multi-year period.

As a result, ~~T~~to maintain the market-value weighting of the RA portfolio close to its target weighting in the total Fund while continuing to build out the portfolio's private investments, the RA portfolio will temporarily invest, over the medium term, in liquid/publicly traded equities in the natural resources and infrastructure sectors. These equities will be passively managed in an existing separate account that will be comprised of two passive funds that seek to replicate the S&P Global LargeMidCap Commodity and Resources Index and the S&P Global Infrastructure Index in the same weightings, 33% and 67%, respectively, as the RA portfolio's target weightings to private natural resources (33%) and private infrastructure (67%). This existing separate account is known as the "Liquid Pool" and will serve as a temporary proxy for the private natural resources and infrastructure investments that are being built out over a multi-year period. By temporarily investing in these publicly-traded investments, the RA portfolio can maintain its 6% weighting in the Total Fund while achieving a risk/return posture that is similar to a 100% private RA portfolio.

Over time, as more commitments are made to private investments and capital is called to be invested into them, the private component of the RA portfolio will approach its 100% target. While this happens, the Liquid Pool will be used as a draw-down vehicle to fund the capital calls of the private investments dollar for dollar and will approach its intended 0% target in the RA portfolio.

This addendum and the below Interim Asset Allocation Ranges are meant to allow for the RA portfolio's transition from one that is a mix between liquid/publicly-traded and private investments to one that is completely private investments and do so while maintaining the RA portfolio's target weighting in the Total Fund with a risk/return posture that will approximate the risk/return posture of a 100% private portfolio along the way. ~~facilitate the rapid transition of the Real Assets Portfolio from one that is highly exposed to exchange- traded commodities into an investment fulfillment structure that has a better expected return profile and is better aligned with the target RA Asset Allocation and the asset class's purpose, the RA portfolio will adopt an interim asset allocation range. This interim asset allocation range temporarily accommodates higher-than-target capital to the Liquid Pool, which can be invested in immediately, and lower-than-target capital to the Illiquid Pool, which takes time to allocate capital to.~~
~~The Illiquid Pool (75% of the RA Asset Allocation target) is comprised of illiquid, privately placed~~

~~investment vehicles that typically cannot be invested in all at once. These vehicles must first be committed to, then, over their investment periods (typically 3 – 7 years), they call investors' capital to fund investors' long-term commitments. As a result, it is expected that the process of building out the Illiquid Pool with these vehicles will take several years.~~

~~In the meantime, to rapidly alter the RA Portfolio's investment exposure from one that is highly exchange-traded commodity focused into one that is better aligned with the asset class's purpose and objectives, the Liquid Pool will temporarily (over the next 5 – 8 years) be over allocated to. This over allocation to the Liquid Pool will, over time, be reduced as the Illiquid Pool is built out and rises towards its asset allocation target.~~

~~As commitments are made to the illiquid, privately-placed vehicles in the Illiquid Pool and the associated capital is called, the Liquid Pool will be used as a draw down vehicle to fund the Illiquid Pool capital calls dollar for dollar. Over time, as this process plays out, both the Liquid and Illiquid Pools will increasingly move towards their target asset allocation until finally reaching them in approximately 8 years. This addendum and the below Interim Asset Allocation Ranges demonstrate the wide ranges these sub-asset classes are expected to assume during this process and over the interim period.~~

~~**RA Asset Sub Class**~~	~~**Interim Asset Allocation Ranges**~~
~~**Liquid Pool (publicly-traded)**~~	~~**10%-100%**~~
~~**Commodities**~~	~~**0%-10%**~~
~~**Natural Resources**~~	~~**5%-35%**~~
~~**Infrastructure**~~	~~**5%-55%**~~
~~**Private Investments**~~~~**Illiquid Pool (privately-placed)**~~	~~**0%-90%**~~
~~**Natural Resources**~~	~~**0-30%**~~
~~**Infrastructure**~~	~~**0-60%**~~

RA Portfolio	**Interim Min./Max. Ranges**
Private Investments	**30% to 100%**
-Private Infrastructure	25% - 87%
-Private Natural Resources	0% - 53%
Liquid Pool	**0% - 70%**
-Publicly Traded Infrastructure	0% - 47%
-Publicly Traded Natural Resources	0% - 23%

REAL ASSETS INVESTMENT PLAN

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

APRIL 2, 2025

Rose Dean, CFA, Partner

OVERVIEW

- **Each year, NEPC will provide a review of the private markets allocations to determine the commitment budget for the upcoming year.**
  - We consider:
    - existing manager commitments
    - anticipated calls/ distributions
    - adjustments to the target allocation
    - forecasted net growth rate.
  - An annual review provides an opportunity to make adjustments to any of the above factors and assess the program carefully so as to not over-allocate to illiquid investments.
- **The strategy is to maintain an active commitment pace in each vintage year going forward, being mindful of the liquidity needs.**
  - Fund and manager recommendations are made in the context of the existing portfolio along with NEPC’s market views.
  - Our goal is to develop a program that will invest in various strategies and achieve returns in excess of public market returns.

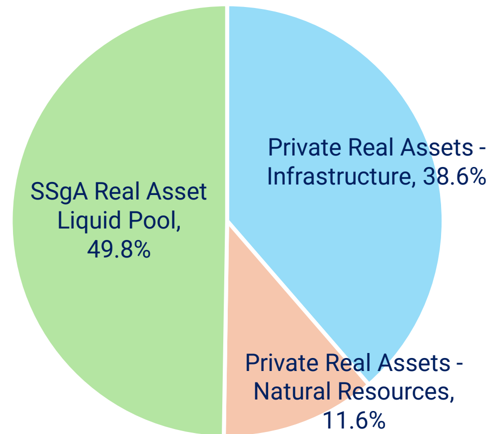
REAL ASSETS INVESTMENT PLAN

SUMMARY

Plan Summary

Total Portfolio Assets	$12,011.8
Current Total Real Assets NAV %	6.3%
Current Private Real Assets NAV %	2.8%
Current Total Real Assets Exposure %	7.1%
Current Private Real Assets Exposure %	3.5%
Target Allocation %	6.0%
Ann. Expected Return %	6.8%
Ann. Contributions %	4.5%
Ann. Payouts %	5.8%

Real Assets Market Exposures



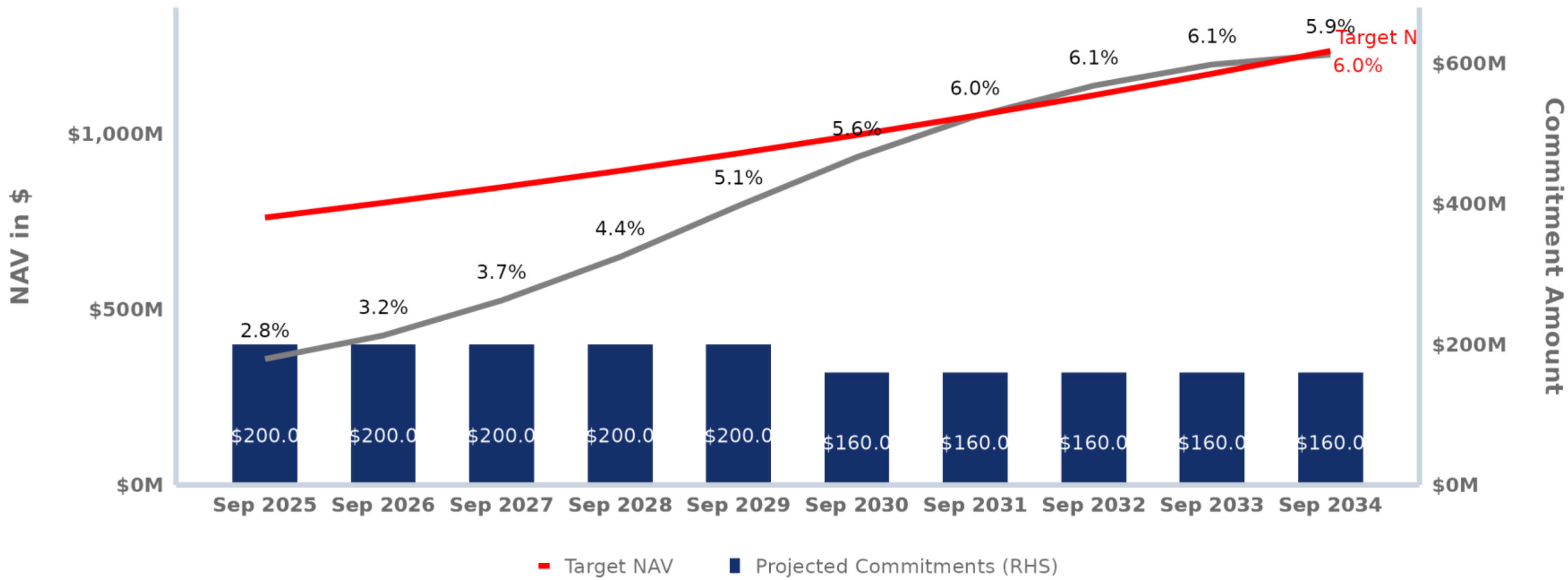
Current Allocations (in millions)

Asset Class	Investment Strategy	Commitment	Unfunded Commitment	NAV	Total Exposure
Private Real Assets	Private Real Assets - Infrastructure	$270.0	$55.2	$272.6	$327.8
	Private Real Assets - Natural Resources	$134.0	$37.7	$60.8	$98.5
	Total Private Real Assets	**$404.0**	**$92.9**	**$333.4**	**$426.3**
Public Real Assets	SSgA Real Asset Liquid Pool	$494.6	$0	$422.1	$422.1
	Total Public Real Assets	**$494.6**	**$0**	**$422.1**	**$422.1**
Grand Total		**$898.6**	**$92.9**	**$755.5**	**$848.4**

- Total portfolio assets as of 12/31/24.
- Private market valuation data as of 9/30/24; SSgA Real Asset Liquid Pool valuation data as of 9/30/24.
- SSgA Real Asset Liquid Pool will be used to fund private real asset investments.
- Annual expected return based on NEPC capital market assumptions as of 12/31/24.
- Annual contributions and payouts rates reflect the average from the past ten years.

COMMITMENTS & ALLOCATION PROJECTIONS

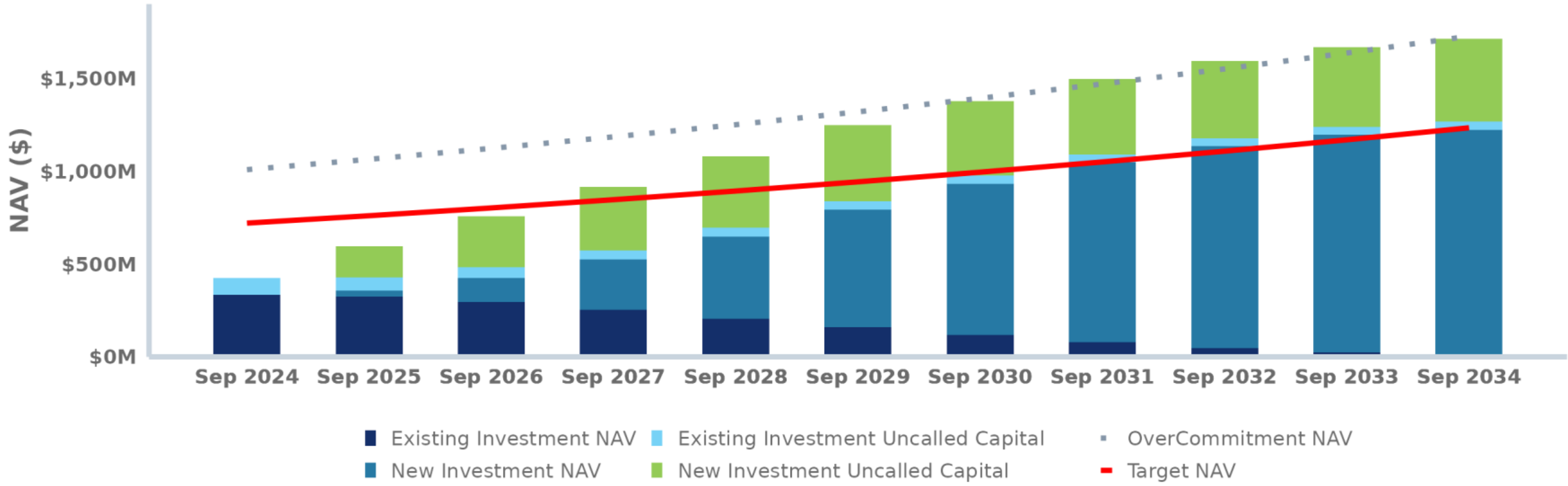
Private Real Assets Commitments by Vintage



	More Certain					Less Certain				
Description	**2025-09-30**	**2026-09-30**	**2027-09-30**	**2028-09-30**	**2029-09-30**	**2030-09-30**	**2031-09-30**	**2032-09-30**	**2033-09-30**	**2034-09-30**
Total Commitments ($M)	$200.0	$200.0	$200.0	$200.0	$200.0	$160.0	$160.0	$160.0	$160.0	$160.0
Target (%)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Projected NAV / Total Portfolio Assets	2.8%	3.2%	3.7%	4.4%	5.1%	5.6%	6.0%	6.1%	6.1%	5.9%

ASSET PROJECTIONS

Private Real Assets Portfolio Projections

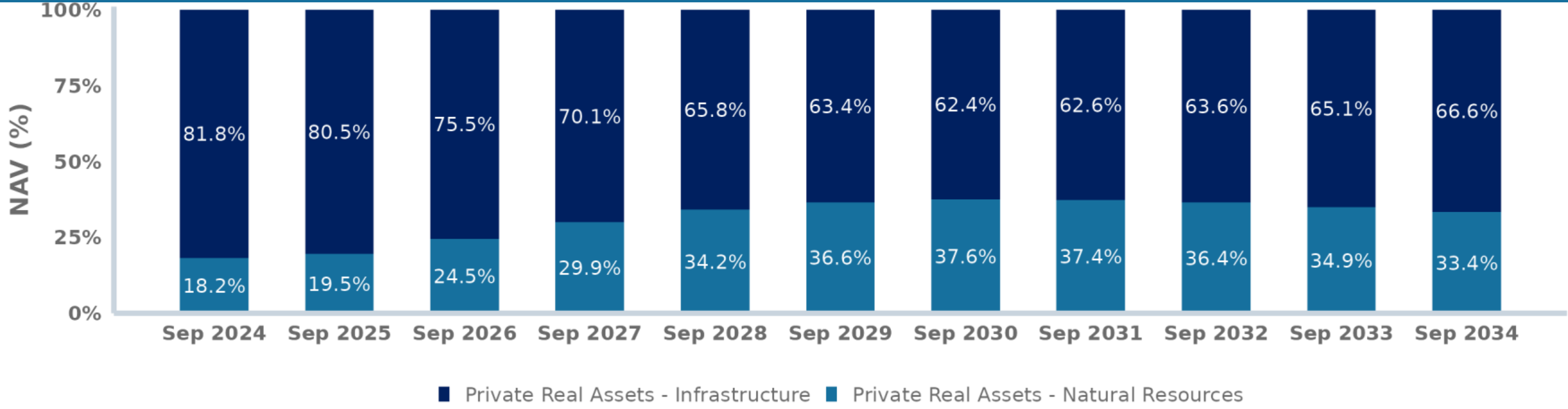


Projection Summary

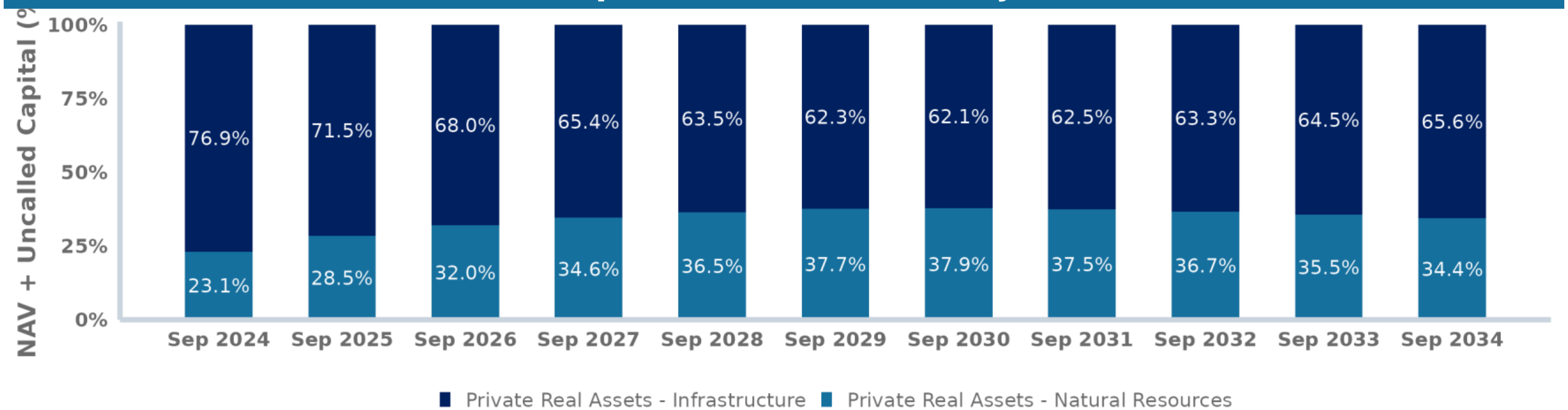
Description	2024-09-30	2025-09-30	2026-09-30	2027-09-30	2028-09-30	2029-09-30	2030-09-30	2031-09-30	2032-09-30	2033-09-30	2034-09-30
Net Asset Value (NAV)	$333.4	$358.2	$425.2	$524.7	$648.8	$794.1	$932.6	$1,048.3	$1,135.9	$1,196.0	$1,224.3
Uncalled Capital	$92.9	$237.9	$331.5	$391.1	$430.8	$456.1	$447.3	$449.8	$459.3	$473.0	$488.8
NAV + Uncalled Capital	$426.3	$596.0	$756.7	$915.9	$1,079.5	$1,250.3	$1,379.9	$1,498.1	$1,595.2	$1,669.0	$1,713.1
Target NAV	$720.7	$760.6	$802.6	$847.0	$893.8	$943.3	$995.4	$1,050.5	$1,108.6	$1,169.9	$1,234.6
NAV (%)	2.8%	2.8%	3.2%	3.7%	4.4%	5.1%	5.6%	6.0%	6.1%	6.1%	5.9%
NAV + Uncalled Capital (%)	3.5%	4.7%	5.7%	6.5%	7.2%	8.0%	8.3%	8.6%	8.6%	8.6%	8.3%
Target Allocation (%)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%

ALLOCATION PROJECTIONS

Net Asset Value Allocation Projection

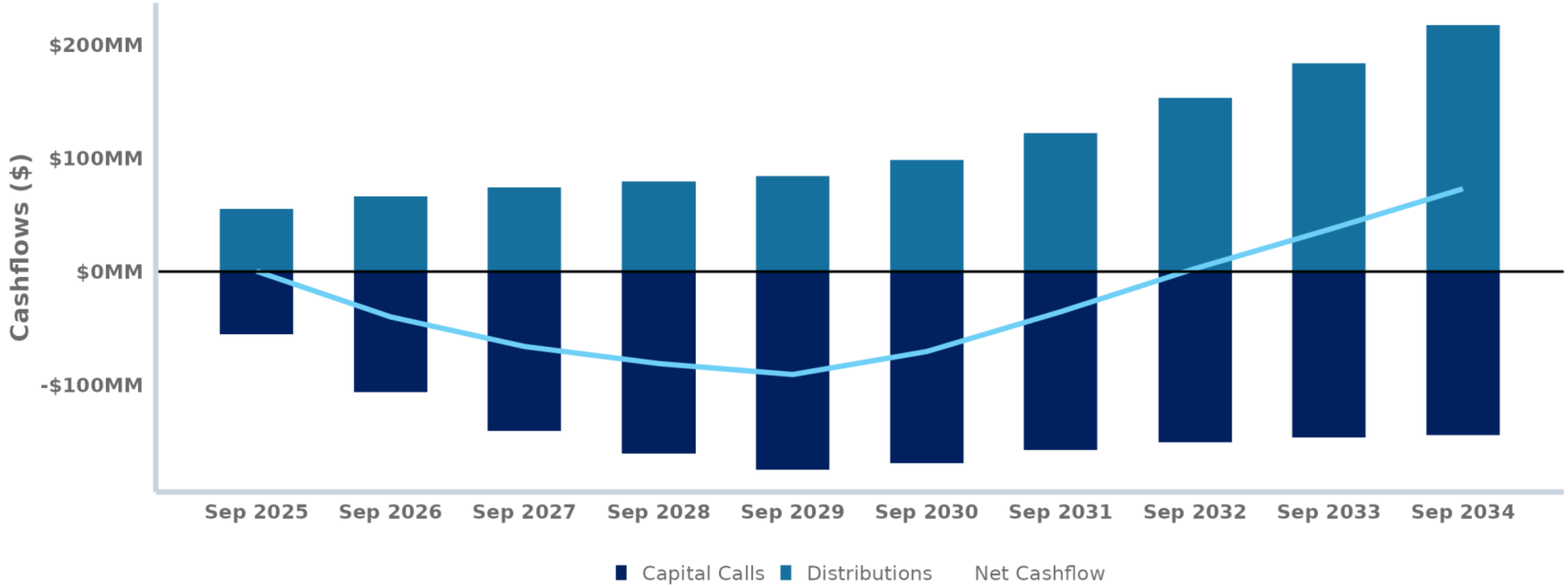


Total Exposure Allocation Projection



CASH FLOW PROJECTIONS

Private Real Assets Projected Capital Calls & Distributions



Projected Cashflows (in millions)

Description	2025-09-30	2026-09-30	2027-09-30	2028-09-30	2029-09-30	2030-09-30	2031-09-30	2032-09-30	2033-09-30	2034-09-30
Capital Calls	-$55.0	-$106.4	-$140.3	-$160.4	-$174.6	-$168.8	-$157.5	-$150.5	-$146.3	-$144.2
Distributions	$55.3	$66.5	$74.3	$79.3	$83.9	$98.4	$122.1	$153.2	$183.4	$217.2
Net Cash Flow	$0.3	-$39.9	-$66.0	-$81.1	-$90.7	-$70.4	-$35.4	$2.6	$37.1	$73.0

APPENDIX

APPENDIX

Projection Summary

Description	2024-09-30	2025-09-30	2026-09-30	2027-09-30	2028-09-30	2029-09-30	2030-09-30	2031-09-30	2032-09-30	2033-09-30	2034-09-30
Net Asset Value (NAV)	$333.4	$358.2	$425.2	$524.7	$648.8	$794.1	$932.6	$1,048.3	$1,135.9	$1,196.0	$1,224.3
Uncalled Capital	$92.9	$237.9	$331.5	$391.1	$430.8	$456.1	$447.3	$449.8	$459.3	$473.0	$488.8
NAV + Uncalled Capital	$426.3	$596.0	$756.7	$915.9	$1,079.5	$1,250.3	$1,379.9	$1,498.1	$1,595.2	$1,669.0	$1,713.1
Target NAV	$720.7	$760.6	$802.6	$847.0	$893.8	$943.3	$995.4	$1,050.5	$1,108.6	$1,169.9	$1,234.6
OverCommitment Pace	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x
OverCommitment Target NAV	$1,009.0	$1,064.8	$1,123.7	$1,185.8	$1,251.4	$1,320.6	$1,393.6	$1,470.7	$1,552.0	$1,637.8	$1,728.4
NAV (%)	2.8%	2.8%	3.2%	3.7%	4.4%	5.1%	5.6%	6.0%	6.1%	6.1%	5.9%
Uncalled Capital (%)	0.8%	1.9%	2.5%	2.8%	2.9%	2.9%	2.7%	2.6%	2.5%	2.4%	2.4%
NAV + Uncalled Capital (%)	3.5%	4.7%	5.7%	6.5%	7.2%	8.0%	8.3%	8.6%	8.6%	8.6%	8.3%
Target Allocation (%)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Plan NAV	$12,011.8	$12,676.1	$13,377.1	$14,116.8	$14,897.5	$15,721.3	$16,590.7	$17,508.2	$18,476.4	$19,498.1	$20,576.4

APPENDIX

New Funds included in this Pacing Study

Asset Class	Risk Proxy	Number of Managers	Vintage Year	Commitment Amount
Real Assets	Private Real Assets - Infrastructure	3-4	2025	120,000,000
Real Assets	Private Real Assets - Infrastructure	3-4	2026	120,000,000
Real Assets	Private Real Assets - Infrastructure	3-4	2027	120,000,000
Real Assets	Private Real Assets - Infrastructure	3-4	2028	120,000,000
Real Assets	Private Real Assets - Infrastructure	3-4	2029	120,000,000
Real Assets	Private Real Assets - Infrastructure	2-3	2030	100,000,000
Real Assets	Private Real Assets - Infrastructure	2-3	2031	100,000,000
Real Assets	Private Real Assets - Infrastructure	2-3	2032	100,000,000
Real Assets	Private Real Assets - Infrastructure	2-3	2033	100,000,000
Real Assets	Private Real Assets - Infrastructure	2-3	2034	100,000,000
Real Assets	Private Real Assets - Natural Resources	2-3	2025	80,000,000
Real Assets	Private Real Assets - Natural Resources	2-3	2026	80,000,000
Real Assets	Private Real Assets - Natural Resources	2-3	2027	80,000,000
Real Assets	Private Real Assets - Natural Resources	2-3	2028	80,000,000
Real Assets	Private Real Assets - Natural Resources	2-3	2029	80,000,000
Real Assets	Private Real Assets - Natural Resources	1-2	2030	60,000,000
Real Assets	Private Real Assets - Natural Resources	1-2	2031	60,000,000
Real Assets	Private Real Assets - Natural Resources	1-2	2032	60,000,000
Real Assets	Private Real Assets - Natural Resources	1-2	2033	60,000,000
Real Assets	Private Real Assets - Natural Resources	1-2	2034	60,000,000

PACING PLAN DISCLAIMERS

- **NEPC's private markets pacing analysis projects a potential level of future assets and cash flows for a single scenario based on a series of assumptions. This analysis is intended to help estimate future exposure levels. It is not a guarantee of future cash flows, appreciation or returns.**

- **The timing and amounts of projected future cash flows and market values of investments could vary significantly from the amounts projected in this pacing analysis due to manager-specific and industry-wide macroeconomic factors.**

- **Estimates of projected cash flows and market values for existing private markets commitments were made at the Fund level and do not incorporate any underlying portfolio company projections or analysis.**

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

- **Data used to prepare this report was obtained directly from the investment managers and other third parties. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**

ALTERNATIVE INVESTMENT DISCLOSURES

It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds and private equity:

1. **Performance can be volatile and investors could lose all or a substantial portion of their investment**
2. **Leverage and other speculative practices may increase the risk of loss**
3. **Past performance may be revised due to the revaluation of investments**
4. **These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms**
5. **A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value**
6. **These funds are not subject to the same regulatory requirements as registered investment vehicles**
7. **Managers may not be required to provide periodic pricing or valuation information to investors**
8. **These funds may have complex tax structures and delays in distributing important tax information**
9. **These funds often charge high fees**
10. **Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy**

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
475 14th Street, Suite 1000, Oakland, CA 94612 / Telephone (800) 838-1932 (510) 628-3000 / Fax: (510) 268-9574 / www.acera.org

To: Members of the Investment Committee

From: Stephen Quirk, Investment Officer *Stephen Quirk*

Date: April 2, 2025

Subject: Discussion and possible motion to recommend that the Board terminate Kennedy Capital Management – Public Equities

Recommendation

Staff recommends the termination of Kennedy Capital Management (KCM) Extended Small Cap (Public Equities) to the Board as a result of a material organizational change with KCM.

Background

KCM is a Saint Louis-based, boutique investment firm with nearly $5 billion total assets, that has focused on micro, small, and mid-cap domestic equity markets for over 40 years. Managed by Michael Bertz and a flagship product, Extended Small Cap (US Small Cap Value) was funded in October 2010 by ACERA and is designed with a contrarian view towards identifying companies with the potential to improve their businesses and is structured for up to 30-35% weighting in microcap companies. On May 13, 2024, KCM was placed on ACERA's Watchlist (Notice of KCM's watchlist placement was included in the 6/5/24 ICM packet's Quarterly Managers' Report) for organizational change, according to our Investment Policy, following two calls with Staff to discuss the announcement that the lead Portfolio Manager Bertz would be retiring in early 2025. As of December 31, 2024, ACERA had $176.3 million invested in the strategy (1.5% of the Total Fund) and the active US Small Cap Value mandate has 3.25% target within the Public Equity asset class. The annualized net performance since the October 2010 ACERA funding was 10.14% v 9.40% for the Russell 2000 Value Index (+0.74% excess return).

Discussion

Bertz, the KCM Portfolio Manager since ACERA's inception, retired on February 27, 2025, and Robert Van Bergen, an assistant portfolio manager and research analyst, assumed the role of the lead Portfolio Manager. On the 6/5/24 Quarterly Managers' Report, Staff defined three different potential options following Bertz's retirement: 1) remain in the same product with a new portfolio manager; 2) invest in a different but similar KCM product; or 3) move the proceeds into a passive vehicle. Regarding the first option, ACERA is the final remaining investor in the strategy and KCM is not seeking to grow the product under Van Bergen, which creates concerns about performance sustainability and lack of client attention. Regarding the second option, they are focused on expanding a different product (Small Cap Value), but ACERA doesn't necessarily need a replacement small cap value manager and has no familiarity with the portfolio manager. Staff also considered issuing a replacement RFI but because of an upcoming potential public equity restructure evaluation prompted by the newly established Asset Allocation, the third option, as stated below, is therefore considered optimal. Overlaying the cash redemption proceeds via the asset overlay program which is cheaper and more efficient than a physical passive allocation during this interim evaluation period. The asset overlay replicates market exposures via futures, and the restructure evaluation is estimated to be completed within six months.

Conclusion and Next Steps

Staff recommends the termination of KCM and that the cash redemption proceeds be invested via the asset overlay program according to the Asset Allocation policy targets. Staff, with the concurrence of NEPC, has notified KCM of this possible termination as a recommendation on the April 2nd ICM agenda.

ACERA

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14th Street, Suite 1000, Oakland, CA 94612 / Telephone (800) 838-1932 (510) 628-3000 / Fax: (510) 268-9574 / www.acera.org

To: Members of the Investment Committee

From: Stephen Quirk, Investment Officer Stephen Quirk

Date: April 2, 2025

Subject: Review of the current Public Equity Structure and Possible Restructure of the same

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Background

At the July 2024 Board Meeting, the Board approved Staff's and NEPC's recommendation of "Mix C" as its new Asset Allocation. As a result of the new Asset Allocation, the ACERA Public Equity Policy (48% target) will have a global benchmark, the MSCI ACWI IMI index. Previously, the Policy included separate composites for US Equity and International Equity, and they were equally weighted (24% target each). The updated ACERA Public Equity Policy reflects both the MSCI ACWI IMI index regional weights (65% US, 25% International, and 10% Emerging Markets) and capitalization weights (90% Large/Mid Cap and 10% Small Cap).

Discussion

To thoughtfully implement the updated Public Equity Policy with the appropriate Public Equity Structure, and with the potential enhancement to ACERA's Total Fund performance in mind, Staff has begun analyzing and reviewing the current ACERA Public Equity structure, to specifically answer the following three questions:

1. Of ACERA's current Public-Equity active managers, which are high conviction strategies that Staff has confidence will meet their performance objectives?
2. What is the appropriate Public-Equity construction to achieve ACERA's performance goals, e.g., specialist mandates (US, International, Emerging Markets, and Small Cap) or broad mandates (global)?
3. What is the appropriate level of active risk (tracking error) to the Policy benchmark while maximizing ACERA's Total Fund performance?

1. Which are high conviction strategies?

Many of ACERA's current managers have not produced significant positive net excess composite returns since inception with the excess returns ranging from 0.1% to 3.2%. Staff will analyze each of the strategies to assess whether they have high enough conviction that the managers will materially improve performance going forward. Staff will also validate the role of each strategy in the ACERA public equity portfolio.

2. What is the appropriate construction?

There are multiple benefits to hiring global equity mandates to cover both US and International equity markets. Please see below for a few examples:

- Expanding the opportunity set for a skilled active manager who understands multinational companies in a globalized economy increases the likelihood of positive excess returns. There is greater dispersion and outperformance in the Global equity manager universe than in the US and International large cap equity manager universes which implies an environment more conducive to successful active management. Per the Attachment, the International universe (EAFE Large Cap) fails the dispersion test because the manager returns are tightly clustered, and the US universe (Large Cap Core) fails the performance test because the 75th percentile manager excess return is negative. However, the Global equity universe passes both tests.

- Attempting to dynamically shift between the US and International allocations correctly is extremely difficult and Staff doesn't have dedicated tactical resources, so this investment decision is better delegated to the manager. Market timing the regional allocations may be included with an active manager's value proposition.
- The rebalancing burden on Staff is relieved as global equity mandates are consistent with the public equity Policy benchmark.

One caveat is that because the Small Cap and Emerging Markets manager universes have strong aggregate performance stemming from the wider breadth and greater inefficiencies of those asset classes, Staff will maintain small cap and emerging markets specialist mandates and consider global strategies only within large cap developed markets. Staff will assess the global equity manager universe in search of compelling strategies.

3. How much active risk?

Since the current ACERA public equity structure has a large passive allocation, the portfolio tracking error to the MSCI ACWI IMI index is only around 1% which limits the opportunity to achieve excess returns. A structure with at least 2% tracking error that employs high conviction managers would likely increase the excess return expectations. This more active portfolio would imply a decrease in the passive allocation. Staff will continue to conduct due diligence, including generating some hypothetical portfolios using a combination of existing and potential mandates to test an increased tracking error threshold and assess whether that revised structure will be appropriate.

Conclusion and Next Steps

Staff will continue to analyze and review the current ACERA Public Equity structure and return to the Investment Committee with a possible proposed restructure of the same later this year.

Attachment

Active vs. Passive Views – prepared by NEPC

NEPC ACTIVE VS. PASSIVE RESEARCH STUDY

- **NEPC conducts an annual study of the performance of active vs. passive investment strategies in public markets**

- **We evaluate the decision for active management across two tests:**
  - **Test 1** considers whether there is wide dispersion between manager returns across the trailing 10-year period
  - **Test 2** considers whether the median manager outperforms the benchmark, net of fees, on a rolling 3-year basis

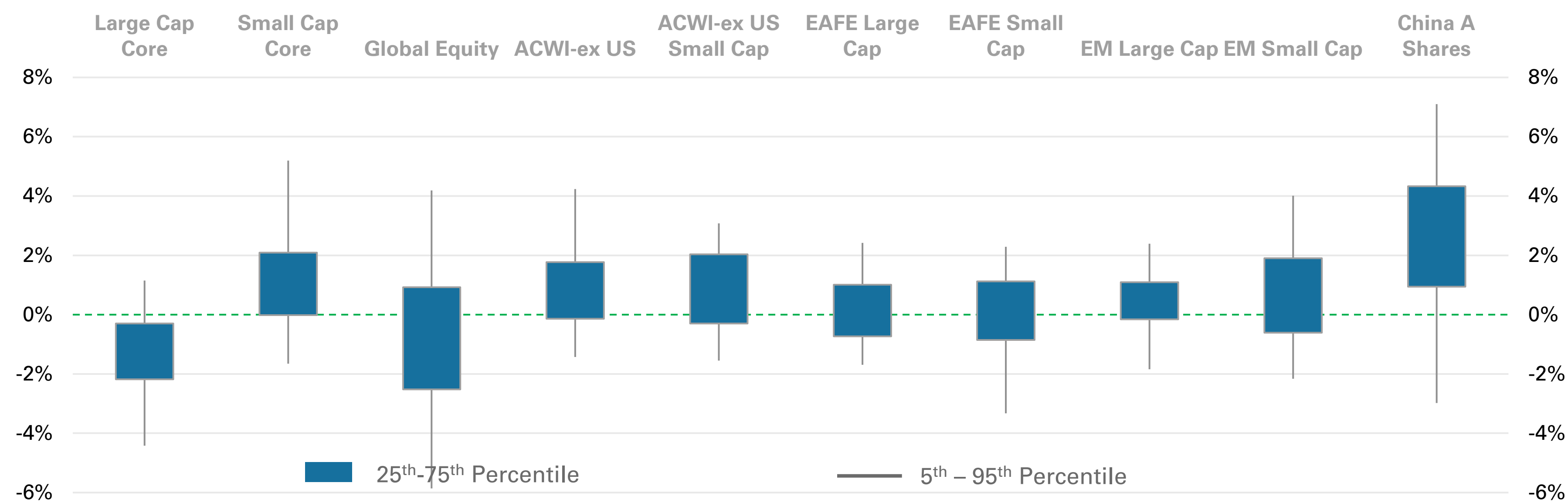
- **While this study is meant to be based on our quantitative tests, there are several things that clients should consider as they review the study**
  - The active vs. passive decision should also incorporate the individual goals of clients and the allocation specifically
  - Passive implementation in some asset classes may be costly or may not fully replicate its index

ALL EQUITIES

ACTIVE VS. PASSIVE VIEWS

	Large Core	Small Core	Global Equity	ACWI ex US	ACWI ex US Small Cap	EAFE Large Cap	EAFE Small Cap	EM Large Cap	EM Small Cap	China A Shares
Test 1 (Dispersion)	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass
Test 2 (Rolling Outperformance)	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Efficient Passive Option	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

10 Year Excess Return – Net of Fees



Source: eVestment. Data as of 06/30/2024

*Benchmarks used in the above analysis are detailed within appendix

BENCHMARK DISCLOSURE

EQUITY

Asset Class	Index	eVestment Universe
Large Cap Value	Russell 1000 Value	US Large Cap Value Equity
Large Cap Core	S&P 500	US Large Cap Core Equity
Large Cap Growth	Russell 1000 Growth	US Large Cap Growth Equity
Mid Cap Value	Russell Mid Cap Value	US Mid Cap Value Equity
Mid Cap Core	Russell Mid Cap	US Mid Cap Core Equity
Mid Cap Growth	Russell Mid Cap Growth	US Mid Cap Growth Equity
Smid Cap Value	Russell 2500 Value	US Small-MId Cap Value Equity
Smid Cap Core	Russell 2500	US Small-Mid Cap Core Equity
Smid Cap Growth	Russell 2500 Growth	US Small-MId Cap Growth Equity
Small Cap Value	Russell 2000 Value	US Small Cap Value Equity
Small Cap Core	Russell 2000	US Small Cap Core Equity
Small Cap Growth	Russell 2000 Growth	US Small Cap Growth Equity
Global Equity	MSCI ACWI	All Global Equity
ACWI-ex US	MSCI ACWI ex US	All ACWI ex US
ACWI-ex US Small Cap	MSCI ACWI ex US Small Cap	All ACWI ex US Small Cap
EAFE Large Cap	MSCI EAFE Large Cap	EAFE Large Cap Equity
EAFE Small Cap	MSCI EAFE Small Cap	EAFE Small Cap Equity
EM Large Cap	MSCI Emerging Mkt. Equity	Global Emerging Mkt. Large Cap Equity
EM Small Cap	MSCI Emerging Mkt. Equity Small Cap	Global Emerging Mkts. Small Cap Equity
China A Shares	MSCI China A	Onshore China A Shares Equity

DATA DISCLOSURES

Universe performance data is shown on a net-of-fee basis

The universe data shown includes only actively managed portfolios

Rolling 3-year annualized excess returns and benchmark rankings have a one month rollback

The median fee shown for each asset class is for a commingled fund at an assumed $50 million mandate size

To account for survivorship bias, eVestment includes inactive accounts in any historical universe calculations. eVestment does not allow for products/vehicles to be deleted from its database.

eVestment classifies universes using a tiered approach so that products can be found in data screens of differing levels of granularity. eVestment offers universe tiers at three levels: Primary, Secondary/Specialty, and Roll-Up.

Primary Universes are typically the most granular and are commonly used as the default comparison peer group in eVestment's analytics modules. A product can only be classified into one Primary Universe. Example: US Large Cap Core Equity and US High Yield.

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.