MONTGOMERY COUNTY EMPLOYEE RETIREMENT PLANS

CONSOLIDATED RETIREE HEALTH BENEFITS TRUST

December 6, 2018

SECOND REPORT TO THE COUNTY COUNCIL AND THE COUNTY EXECUTIVE PURSUANT TO COUNCIL RESOLUTION NO. 18-804

On May 16, 2017, the Montgomery County Council adopted Resolution No. 18-804, *Environmental, Social, and Governance Investment Policy Guidelines and Fossil Fuel Company Investments of the Employees' Retirement System and the Consolidated Retiree Health Benefits Trust*.[1] The resolution is Attachment 1. It requested the Boards for the ERS and the CRHBT to:

1. consistent with their fiduciary duties, explore all means possible to:

    a. minimize the Boards' investments in companies with the largest fossil fuel reserves as rapidly as possible; and

    b. apply environmentally and economically sound decision-making, both generally and specific to climate change, using ESG policy guidelines; and

2. report within 6 months after adoption of this resolution and annually thereafter to the Council and the Executive on implementation of these actions, detailing the research conducted on top fossil fuel holding companies and detailing the extent of divestment or the rationale for not pursuing divestment from individual holdings.

This is the Board's second report to Council. It is organized as follows: Part A reviews the Boards' fiduciary duty and the Environmental, Social, and Governance (ESG) policy guidelines employed by the Boards and their investment managers and consultants. Part B reviews the Boards' current holdings in fossil fuel companies. Part C reviews the research undertaken by the Boards since the adoption of the resolution.

[1] The Employees' Retirement System (ERS), the defined benefit pension plan that includes employees of Montgomery County Government, participating agencies, and their beneficiaries, is overseen by the Board of Investment Trustees. The Consolidated Retiree Health Benefits Trust (CRHBT), the trust that includes employees of Montgomery County Government, Montgomery County Public Schools, Montgomery College, participating agencies, and their dependents, is overseen by the Board of Trustees. As of September 30, 2018, the ERS had assets of $4.2 billion. The CRHBT had assets of $993 million. The ERS, which started in 1965, currently has a funded level of 96 percent. Its 10-year investment return is in the top decile of its peer group (better than 90% of peers) of public pension funds. The CRHBT, which started in 2011, currently has a funded level of 27 percent.

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A. The Boards' fiduciary duty and the ESG policy guidelines employed by the Boards and their investment managers and consultants, both generally and specific to climate change.

Both Boards are required by law to act in accordance with their fiduciary duty. The Standard of Care for the ERS in Section 33-61C of the County Code requires a fiduciary to act "only in the best interest of the participants and their beneficiaries." The Duty of Care for the CRHBT in Section 33-163 requires a fiduciary to act "only in the interest of the participants in retiree benefit plans and eligible dependents."

The County Code also requires the Boards to use investment managers to select individual securities; we are not authorized to do so ourselves. We apply rigorous screens to determine the best investment managers for different asset classes.

The Boards have developed ESG policy guidelines that are embedded in our investment and governance processes. Our Governance Manuals state that our policy is:

> that the Executive Director and Investment Staff incorporate ESG considerations into all investments…and examine opportunities for ESG integration in existing investments. This policy also applies to investment consultants and investment managers hired…to provide guidance on investment due diligence matters. The Boards annually review engagement outcomes and update this policy as appropriate.

As our investment managers work to achieve the best risk-adjusted return in accordance with their fiduciary duty, they apply ESG factors to help determine which companies to include or exclude from consideration. Shown below are actions taken by our investment managers since our last report:

- Sold holdings in an oil and natural gas company due to potential regulatory enforcement action and growing reputational risk. The investment manager determined that they didn't believe the company's board had supervised executives properly, and therefore, the risks could potentially be much larger than initial reports indicated.

- Sold holdings in Turkey's medium-term debt because they became concerned with the consolidation of power, ongoing deterioration of rule of law, freedom of speech and press, and civil liberties under President Erdogan. Given the team's deteriorating view of Turkey's political governance, they no longer felt they were being sufficiently compensated for the risks facing Turkey.

- Passed on an investment in a pharmaceutical company due to concerns over their large exposure to drugs benefitting from large price increases and drugs that are more expensive than combinations of generic drugs.

- Engaged with a technology company about the potential to work on an extension to their current platform to improve diversity in governance. The manager identified a void in sourcing qualified and diverse perspectives for board membership. The manager has been in discussions with this company about creating a new product to give small and mid-sized companies the opportunity to see diverse qualified candidates for their boards. The manager will continue to engage the management of this issuer and monitor its developments with the hope that engagement will lead to an extension of the company's commitment to the Sustainable Development Goals (SDGs.)

- Engaged a small bank to implement change among its board of directors after it was discovered that corruption/misuse of capital by its CEO (and family) and other members of the board. This behavior was destroying shareholder value and the manager felt it was essential to engage and enact management change. The board now has new directors who are more aligned with shareholders and are focused on the strategic direction of the company.

- Historically avoided traditional power generation companies due to stranded asset risk (i.e., when government policy pushes production away from less environmentally-friendly sources). Changes in environmental policy have caused them to alter their treatment of energy infrastructure assets from perpetual assets to finite-life assets. This, in turn, has led to a reduction in the overall energy weighting. The manager engages company management teams on environmental concerns. This is particularly relevant with energy infrastructure companies regarding environmental impact studies, as well as with various utility operations. For example, the manager had a discussion with a particular utility company this past year where the utility company shared with the manager their sustainability efforts and also emphasized how they wanted to be a leader in their peer group when it comes to environmental issues.

- Purchased a U.S. data center company in their portfolio due to the company's initiative to draw power from renewable sources. In 2016, 40% of their electricity use came from wind, solar, and hydro power plans. The U.S. EPA has listed the company as one of the 12 largest buyers of renewable energy. The manager also recently purchased a Japanese real estate developer that emphasizes fostering a quality workplace that they believe empowers their employees and encourages long-term retention. Some of the initiatives include a flat management structure, gender diversification at the management level and an in-house day care facility at their headquarters. The company's progressive view towards the social characteristics of its company extends from a broader progressive strategy towards business strategy in general, which the manager values highly in their selection for their portfolio.

- Purchased a Dutch consumer products company due to the company's strong sourcing and procurement practices, high employee satisfaction and retention, and impressive governance. They recently sold a Swiss-based food company due to labor-related issues and increased concerns over governance. This manager also recently engaged the management team of a current holding in a Dutch financial services company. This company has a strong ESG profile as it has a heavy environmental focus as well as diversity and inclusion initiatives. However, recently press reports regarding settlement with Dutch prosecutors on IT oversight raised some governance questions. The manager promptly engaged with the company's management and received a prompt response that suggests that the matter should not be a material concern.

Each Board's Governance Manual requires a comprehensive annual report detailing the implementation and outcomes of its ESG policy guidelines. The September 28, 2018 annual report for the Board of Investment Trustees for the ERS is Attachment 2. The report includes industry developments, current manager ESG updates and corporate engagement, Staff research, consultant initiatives, and recent Board actions. There is a similar report for the Board of Trustees for the CRHBT.

B. The Boards' current holdings in fossil fuel companies.

Two tables, on Attachments 3 and 4, show the fossil fuel holdings of the ERS and the CRHBT as of September 30, 2018. As noted above, the Council resolution referred to "top fossil fuel holding companies." We have used the Carbon 200 list proposed by 350.org.

As we indicated in part A, the County Code requires the Boards to use investment managers to select individual securities; we are not authorized to do so ourselves. The Boards apply rigorous screens to determine the best investment managers for different asset classes.

The Boards have developed ESG policy guidelines that are embedded in our investment and governance processes. As our investment managers work to achieve the best risk-adjusted return in accordance with their fiduciary duty, they consider ESG factors to help determine which companies to include or exclude from consideration.

Earlier last month, in preparation for this report and future annual reports, we asked our investment managers to confirm that their fossil fuel holdings, if any, reflect their best judgment as to their risk-return mix, their ESG policy, and their fiduciary duty. Seven of our actively managed separate account managers have such holdings. All have replied in the affirmative.

The table for the ERS on Attachment 3 lists fossil fuel holdings of $68.7 million. This represents 1.65 percent of our total fund's market value of $4.2 billion as of September 30, 2018. This compares to a $67.3 million or 1.67 percent exposure as of September 30, 2017.

The table for the CRHBT on Attachment 4 lists fossil fuel holdings of $13.1 million This represents 1.32 percent of the total fund's market value of $993 million. This compares to a $16.5 million or 1.86 percent exposure as of September 30, 2017.

To place the current percentage of our funds' direct fossil fuel holdings in perspective, the majority of our holdings are actively managed. Two-thirds of the fossil fuel holdings in the Trust funds are in bonds, not stocks.

The Boards will continue to assess and refine our ESG policy guidelines and those of our investment managers and consultants. This analysis will be included in the future annual reports requested by the Council resolution.

C. Research undertaken by the Boards since the first report to the Council

Since the first report to the Council on November 20, 2017 we have continued to expand our knowledge of divestment issues. Shown below is a summary of the activities taken:

1. Discussions with Other Plans – Staff is engaged in dialogue with the following pension plans to discuss their approach to ESG and fossil fuel divestment

    - **New York State Common Fund –** Andrew Cuomo, the Governor of NY, said he will push for the state pension fund to divest from fossil fuel companies. However, State Comptroller Thoma DiNapoli, who is responsible for investment decisions, indicated that the fund has no plans to divest. Staff spoke with the plan's staff and confirmed that the plan has no intent to divest, as they view it to be a violation of their fiduciary duty.
    - **NYCERS –** NYC Mayor Bill de Blasio announced that NYCERS is setting a formal goal to divest from fossil fuels within five years. However, divestment would need to be

approved by the trustees for the city's five pension boards (Teachers, Fire, Police, Employees, and Board of Education). One of the boards (Police) has explicitly rejected any divestment actions. Before any actions are taken, NYCERS will hire a consultant to study the issue and its impact on risk and return. Additionally, Mayor de Blasio and Comptroller Stringer recently announced that NYCERS will target an investment of $4 billion, or 2% of the city's pension, in renewable energy, energy efficiency, and other climate change solutions. This would represent a 100% increase relative to the current target for environmentally targeted investments.

- **San Francisco ERS –** In January 2018, the board of SFERS voted against divesting from fossil fuels after the plan's investment consultant, NEPC, issued a report stating that divestment would negatively impact the fund's return, diversification, and inflation protection characteristics. Additionally, SFERS recently announced they will be committing $1 billion to a "carbon-restrained" investment strategy. This strategy passively tracks a carbon-restrained Russell 1000 Index that targets 50% of the carbon emissions of the broader Russell 1000 Index. In October 2018, the Board approved an active engagement campaign with five fossil fuel companies in an attempt to have them agree to transform their business model over the long term. There are no immediate plans to divest.
- **Vermont ERS –** Following a push from the Governor of Vermont to divest from fossil fuels, the fund's staff conducted significant internal analysis and commissioned Pension Consulting Alliance (PCA), a national pension consulting firm, to study the impact that fossil fuel divestment would have on the plan. PCA's research reaffirmed the research that Vermont's staff had performed, which indicated that divestment would not be an appropriate strategy as a fiduciary.
- **MainePERS –** The Board of Trustees for MainePERS opted to not divest from fossil fuels as their state constitution mandates that "investment decisions will only be made to fund benefit payments and for no other purposes"
- **CalPERS –** Citing the large costs of several of the plan's divestment campaigns in the past, CalPERS pension fund trustees have reiterated their opposition to calls for fossil fuel divestment. The following language is present in the plan's divestment policy: "Divesting appears to almost invariably harm investment performance, such as by causing transaction costs (e.g. the cost of selling assets and reinvesting the proceeds) and compromising investment strategies. In addition, there appears to be considerable evidence that divesting is an ineffective strategy for achieving social or political goals, since the usual consequence is often a mere transfer of ownership of divested assets from one purchaser to another."
- **CalSTRS –** The plan also has a divestment policy that makes their opposition to fossil fuel divestment clear. It reads "The Investment Committee opposes any divestment effort that would either implicitly or explicitly attempt to direct or influence the Investment Committee to engage in investment activities that violate and breach the Trustees' fiduciary responsibility." The plan's CIO, Chris Ailman, also noted that "taking us out of a particular company has zero impact to that company. Somebody else buys the shares. It's literally like a boycott of two out of thousands."

2. **Natural Resources Strategy -** Staff evaluated adding a dedicated natural resources strategy within the public real asset portfolio to help hedge against inflation risk. However, after further analysis Staff concluded that the potential risks outweigh the merits, specifically because of the significantly higher volatility relative to a diversified real asset strategy. In addition, there is a tail risk associated with investing in natural resource companies related to climate risk and the continued demand for fossil fuels. A diversified public real assets active manager who invests across multiple strategies (i.e. commodities, TIPS, REITs, listed

infrastructure, emerging markets debt) can monitor and evaluate this tail risk and appropriately adjust the portfolio depending on the relative risk adjusted return opportunities offered by natural resource companies compared to other potential investments within their mandate. However, a dedicated public markets natural resources manager does not have this flexibility and must remain fully invested in natural resource companies, which could result in high volatility and significant underperformance during periods of time when natural resource equities suffer. For example, the S&P North America Natural Resources Index lost over 30% of its value from 2011-2015 as oil prices plummeted.

3. **Consultant Studies on Divestment** – Staff conducted research on the work performed by some of the largest pension consulting firms in the country to understand their analysis of the risk associates with fossil fuel divestment. Noted below are comments related to their studies:

   - **NEPC Study for SFERS –** NEPC, a national pension consulting firm, and the General Consultant for the San Francisco Employees' Retirement System, published a study in January 2018 that is useful in understanding the costs associated with divestment. SFERS is a multi-billion-dollar pension fund that is diversified globally across multiple asset classes, both private and public. The main results of the study are:
     - NEPC estimated a one-time transaction cost of 0.5% that would be incurred by selling the fossil fuel investments and replacing them with non-fossil fuel investments. This would result in a one-time cost of $335,000 for the ERS and $85,000 for the CRHBT, based on the Trust Funds' current fossil fuel holdings of $67M and $17M, respectively.
     - NEPC estimated an annual performance impact of 0.03%-0.10% from divestment due to decreased diversification. This would result in annual costs of between $1.2 million and $4.0 million for the ERS and between $274,000 and $912,000 for the CRHBT.
   - **Wilshire Study on CalPERS Previous Divestment Campaigns –** Wilshire Associates, the General Consultant for CalPERS, recently estimated that CalPERS has lost between $3.8 billion and $8.3 billion across five notable divestment campaigns (South Africa, Tobacco, Iran/Sudan, Firearms, and Impermissible Emerging Market Countries).
     - Every divestment campaign resulted in lost value for the pension, with Tobacco and South Africa representing material losses and Iran, Sudan, and Firearms representing marginal losses.
   - **Pension Consulting Alliance Analysis for the State of Vermont –** The Vermont State Employees' Retirement System hired PCA to conduct an extensive study on divestment. Their recommendation was against divestment for the plan due to increased costs, reduced diversification, the inability to have an impact on climate change or the financial situation of the company, and the likelihood that divestment could lead to a slippery slope where further restrictions are placed on Vermont's investment opportunity set.

4. **Carbon Footprint Monitoring and Evaluation** – Northern Trust, the custodian bank for the ERS and CRHBT, recently ran two analyses on our public equity portfolios. The first analysis looks at the carbon footprint of our equity holdings. The result of this analysis shows that 14 out of 15 of our public equity managers have a smaller carbon footprint than their benchmark index. This analysis also indicates that our equity portfolio has a lower exposure to fossil fuels than our benchmark. Additionally, Northern Trust analyzed our exposure to various Sustainable Development Goals (SDGs) and initiatives as defined by the United Nations. The five SDGs that were analyzed were Alternative Energy, Energy Efficiency, Green Building, Pollution Prevention, and Sustainable Water. The amounts of the ERS and CRHBT equity

portfolio invested in companies engaged in these five areas of environmental sustainability are noted below:

- Alternative Energy: 1.7%
- Energy Efficiency: 11.5%
- Green Building: 0.4%
- Pollution Prevention: 1.8%
- Sustainable Water: 1.1%

5. **Wilshire ESG Analysis – Plan Level -** Our general consultant, Wilshire Associates, has analyzed our current ESG practices, assessed our level of ESG adoption and integration, and has made recommendations regarding some areas that could be considered to further bolster our approach to ESG. Some of the potential actions that will be considered in the future are shown below:

    - Further analyzing our portfolios' ESG scores/metrics vs. benchmarks
    - Hiring a consultant to assist us with ESG efforts

    They also noted that the actions taken by the Boards are more advanced than our peers as we have:

    - Adopted an ESG policy
    - Integrated ESG considerations into manager selection
    - Developed a process to assess ESG risks and opportunities
    - Conducted an ESG portfolio analysis (i.e. carbon footprint analysis)

6. **Governance and Social Research –** Several research studies conducted by academics and investment practitioners support the notion that good corporate governance, including strong social initiatives, can improve investment performance. Each study has confirmed the existence of a performance premium for companies with strong governance and this premium exists across geographies. One such study was commissioned by Deloitte with the assistance of several leading business schools. The results of the study show that the following six governance variables have an academically proven positive impact on performance:

    - Board independence
    - Board diversity
    - Aligned compensation/remuneration structure
    - CEO characteristics
    - Oversight
    - Ownership structure

    While there is more limited historical data on the performance impacts of environmental factors, several of the Plans' investment managers have attested that considerations of environmental factors are vital in their assessment of investments. Additionally, many managers believe that the "E" and "S" factors are derivatives of the "G" factor as the company's approach toward environmental and social factors are typically driven by senior management and the board.

Attachment - 1

Resolution No.: 18-804
Introduced: May 2, 2017
Adopted: May 16, 2017

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

Lead Sponsor: Council President Berliner
Co-Sponsors: Council Vice President Hans Riemer, Councilmember Tom Hucker

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SUBJECT: Environmental, Social, and Governance Investment Policy Guidelines and Fossil Fuel Company Investments of the Employees' Retirement System and the Consolidated Retiree Health Benefits Trust

Background

1. In 2016, President Obama noted that "Climate Change is a potential existential threat to the entire world if we don't do something about it." The substantial global risks of climate change are without question and are an immediate and increasing threat to our own generation and those that follow.

2. Climate change is a global issue, but with profoundly local aspects as well. Known environmental impacts of climate change include the loss of ice at the poles, rising seas and increased coastal flooding, longer and more damaging wildfires, more destructive hurricanes, more frequent and intense heat waves, and increased droughts. Health impacts of climate change include increased air pollution, a longer and more intense allergy season, the spread of insect-borne diseases, the disruption of our food supply, and more frequent and dangerous medical issues due to heat waves. These will have a profound impact upon the quality of life for current and future Montgomery County residents. Other impacts include the continued acidification of the oceans, destruction of coral reefs, the loss of marine life and shrinking habitats.

3. The extraction, transport and burning of fossil fuels results in the release of greenhouse gases, such as carbon dioxide and methane, which directly contribute to climate change. The 2015 Paris Agreement on goals for reducing emissions is a major step forward, and market forces are moving strongly in the direction of clean energy. However, the challenge remains grave, especially given the gross disregard for the threat of climate change displayed by President Trump and members of his administration. It is more important than ever that local governments confront climate change and the companies that contribute to it. Montgomery County is a national leader among local governments in addressing climate change by taking direct action locally to support clean energy, energy efficiency, and sustainability.

4. Retirement funds and other institutional investors have focused increasing attention on environmental, social, and governance (ESG) factors in the selection of professional investment managers and in the process followed by those managers when selecting companies for investment. Investments in the securities of fossil fuel companies must draw particular scrutiny. The burning of fossil fuels results in the release of greenhouse gases, such as carbon dioxide and methane, which directly contribute to climate change. Many fossil fuel companies have refused to acknowledge climate science, have rejected business plans that accurately account for the carbon emissions created by their identified reserves, and have lobbied against urgently needed climate policies. For these reasons, a growing global movement believes that it is morally reprehensible to invest in and seek to profit from the catastrophe-inducing actions of these companies. Since 2012, investments worldwide with a total value of over $5 trillion have been fully or partially divested of fossil fuel holdings. Minimizing the amount of County public employee pension funds invested in these companies will tell the world that we can no longer support policies and business practices that endanger our climate and our health.

5. The Employees' Retirement System (ERS), the defined benefit pension plan that includes employees of Montgomery County Government, participating agencies, and their beneficiaries, is overseen by the Board of Investment Trustees. The Consolidated Retiree Health Benefits Trust (CRHBT), the trust that includes employees of Montgomery County Government, Montgomery County Public Schools, Montgomery College, participating agencies, and their dependents, is overseen by the CRHBT Board of Trustees. The ERS currently has assets of about $3.8 billion. The CRHBT currently has assets of about $700 million.

6. Both Boards have adopted ESG guidelines for a socially responsible investment policy that applies ESG factors to the selection of investment managers and the managers' selection of securities. As the managers work to achieve the best risk-adjusted return in accordance with their fiduciary duty, they apply ESG screens to help determine which investment options to include or exclude from consideration.

7. There are several examples of public pension funds that have reduced or eliminated fossil fuel holdings using ESG factors. Notably, The District of Columbia Retirement Board has sold all of its directly held Carbon Underground 200 stocks via ESG screening as of June 9, 2016, in response to a DC Council resolution passed in 2014. The states of Maine and Vermont have also made considerable progress in reducing the fossil fuel holdings of their public employee pension funds using ESG policies.

8. Gino Renne, President of UFCW Local 1994, in an April 16 letter to Council President Berliner, expressed support for using ESG factors to reduce fossil fuel holdings in the ERS, noting that "Employee unions across the country have played a critical role in taking action to fight climate change by leveraging employee funds to make investment decisions that take the impact on our climate into consideration." And the Board of Investment Trustees noted in its April 10 statement on the issue that it will "focus particular attention on decisions by our managers to retain or invest in securities of fossil fuel companies."

Action

The County Council for Montgomery County, Maryland approves the following resolution:

The Council requests the Board of Investment Trustees of the Employees' Retirement System and the Board of Trustees of the Consolidated Retiree Health Benefits Trust to:

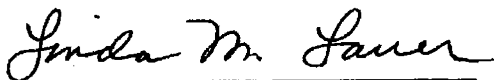
1. consistent with their fiduciary duties, explore all means possible to:

    a. minimize the Board's investments in companies with the largest fossil fuel reserves as rapidly as possible; and

    b. apply environmentally and economically-sound decision-making, both generally and specific to climate change, using ESG policy guidelines; and

2. report within 6 months after adoption of this Resolution and annually thereafter to the Council and the Executive on implementation of these actions, detailing the research conducted on top fossil fuel holding companies and detailing the extent of divestment or the rationale for not pursuing divestment from individual holdings.

This is a correct copy of Council action.



Linda M. Lauer, Clerk of the Council

Attachment - 2

BOARD OF INVESTMENT TRUSTEES

BOARD OF TRUSTEES

MEMORANDUM

September 28, 2018

TO: Board of Investment Trustees and Board of Trustees

FROM: Linda Herman, Executive Director

SUBJECT: Environmental, Social, Governance – Required Annual Update – 2018

As detailed in the Board's Governance Manual, the Boards are required to annually provide a comprehensive report describing the implementation and outcomes of the Board's ESG policy, including recommendations for updates or revisions to this policy, as part of the year-end reporting process.

This report includes the following:

I. Industry Developments
II. Current Manager ESG Updates and Corporate Engagement
III. Consultant Initiatives
IV. Staff Research
V. Recent Board Actions

I. Industry Developments

- **San Francisco Employees Retirement System (SFERS)** rejected a fossil fuel divestment plan in January as they believe this approach will negatively impact risk-adjusted returns and lessen the plan's influence as a shareholder in fossil fuel companies. However, the plan recently committed to allocating $1 billion (4% of the plan) to a "carbon-restrained" investment strategy and hired a director of socially responsible investing.

- **New York City Employees Retirement System (NYCERS)** announced that they will conduct a carbon footprint analysis of their portfolios and determine how to best manage climate change risk. The funds have selected Mercer Investment Consulting to run the analysis. They also announced they will be conducting a comprehensive study to understand the economic feasibility of divesting from fossil fuel securities within the next five years.

- **California Public Employees Retirement System (CalPERS)** invested $1 billion in a new internally managed environmental, social, and governance (ESG) global equity portfolio, which represents 0.50% of the total equity allocation. While the portfolio will be internally managed, the

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investment methodology was developed by investment advisory firm QS Investors, who have entered into a five-year contract with the plan.

- **The University of Cambridge's endowment** Chief Investment Officer recently terminated his employment amidst growing pressure from the university's academic staff and students to divest from the endowments fossil fuel holdings. Cambridge's endowment, the largest endowment fund in the U.K. had delivered strong investment performance during CIO, Nick Cavalla's tenure. Two people familiar with Mr. Cavalla's move said, "he had become increasingly frustrated about the debate around divestment of fossil fuels, believing it left staff unable to get on with their jobs of trying to maximise the value of their endowment".

- **DOL guidance on ESG considerations.** In April 2018, the US Department of Labor (DOL) issued "Field Assistance Bulletin 2018-01". This bulletin provides guidance to regional enforcement offices about how to interpret prior DOL guidance related to an ERISA plan's exercise of shareholder rights and how fiduciaries can take ESG factors into account when making plan investments. The prior interpretation seemed to give more latitude to plan sponsor's considering such ESG factors. While not necessarily a repudiation of the prior guidance, FAB 2018-01 may be viewed as a narrow interpretation, inviting further deliberation by fiduciaries considering ESG factors in their investment process.

II. Current Manager ESG Updates and Corporate Engagement

- **Long Duration Fixed Income Manager –** Sold their holdings in an oil and natural gas company due to potential regulatory enforcement action and growing reputational risk. They determined that they didn't believe the company's board had supervised executives properly, and therefore, the risks could potentially be much larger than initial reports indicated. Additionally, the manager is researching and evaluating industry best practices related to ESG, including whether they will become a signatory to the UNPRI.

- **High Yield Fixed Income Manager –** Had invested in Turkey's medium-term debt but became concerned with the consolidation of power, ongoing deterioration of rule of law, freedom of speech and press, and civil liberties under President Erdogan. Given the team's deteriorating view of Turkey's political governance, they no longer felt they were being sufficiently compensated for the risks facing Turkey. As a result, they sold out of their position in October 2017.

- **High Yield Fixed Income Manager –** Passed on an investment in a pharmaceutical company due to concerns over their large exposure to drugs benefitting from large price increases and drugs that are more expensive than combinations of generic drugs. The manager actively engages companies on ESG issues as they believe that roughly 70-80% of their engagement actions have contributed to positive change in the companies in which they invest. They believe that most companies agree that sustainable ESG policies will help lead to long-run success, and accordingly are receptive to their engagement. An example of an engagement action over the past year is this manager's investment in an energy infrastructure company. The manager has pressed the company on the safety of their pipelines in the Rover and DAPL pipeline areas as well as their handling of Native American rights. They believe that problems in the construction phases of the respective pipelines have been addressed and that the risk of spills is minimal. Regarding Native American rights, the manager is aware that the company is continuing to engage with a variety of indigenous groups and stakeholders.

- **Domestic Equity Manager -** Engaged with a technology company about the potential to work on an extension to their current platform to improve diversity in governance. The manager identified a void in sourcing qualified and diverse perspectives for board membership. The manager has been in discussions with this company about creating a new product to give small and mid-sized companies the opportunity to see diverse qualified candidates for their boards. The manager will continue to engage the management of this issuer and monitor its developments with the hope that engagement will lead to an extension of the company's commitment to the Sustainable Development Goals (SDGs.)

- **Domestic Equity Manager** – Engaged a small bank to implement change among its board of directors after it was discovered that corruption/misuse of capital by its CEO (and family) and other members of the board. This behavior was destroying shareholder value and the manager felt it was prudent to engage and enact management change. The board now has new directors who are more aligned with shareholders and are focused on the strategic direction of the company.

- **Listed Infrastructure Manager** – Has historically avoided traditional power generation companies due to stranded asset risk (i.e. policy pushing production away from less environmentally-friendly sources). Changes in environmental policy has also caused them to alter their treatment of energy infrastructure assets from perpetual assets to finite-life assets. This, in turn, has led to a reduction in the overall energy weighting. The manager engages company management teams on environmental concerns. This is particularly relevant with energy infrastructure companies regarding environmental impact studies, as well as with various utility operations. For example, the manager had a discussion with a particular utility company this past year where they shared with the manager their sustainability efforts and also emphasized how they wanted to be a leader amongst their peer group when it comes to environmental issues.

- **Public Real Estate Manager –** Purchased a U.S. Data Center company in their portfolio. One of the factors in their analysis was the company's initiative to draw power from renewable sources. In 2016, 40% of their electricity use came from wind, solar, and hydro power plans. The U.S. EPA has listed the company as one of the 12 largest buyers of renewable energy. The manager also recently purchased a Japanese real estate developer that emphasizes fostering a quality workplace that they believe empowers their employees and encourages long-term retention. Some of the initiatives include a flat management structure, gender diversification at the management level and an in-house day care facility at their headquarters. The company's progressive view towards the social characteristics of its company extends from a broader progressive strategy towards business strategy in general, which the manager values highly in their selection for their portfolio.

- **International Equity Manager –** Purchased a Dutch consumer products company. One of the aspects of this company that bolstered their decision was strong sourcing and procurement practices, high employee satisfaction and retention, and impressive governance. They recently sold a Swiss-based food company due to labor-related issues and increased concerns over governance. This manager also recently engaged the management team of a current holding in a Dutch financial services company. This company has a strong ESG profile as it has a heavy environmental focus as well as diversity and inclusion initiatives. However, recently press reports regarding settlement with Dutch prosecutors on IT oversight raised some governance questions. The manager promptly engaged with the company's management and received a prompt response that suggests that the matter should not be a material concern.

III. Consultant Initiatives and Approach to ESG

- **Wilshire Associates (General Consultant) –** Over the last 12 months, Wilshire has been providing ESG advice to the Boards as well as its other clients on: drafting ESG/climate change risk policies, conducting ESG research notes on managers, searching for low carbon tilted indexes, providing portfolio ESG scores, and analyzing portfolio carbon footprints relative to benchmarks.

  As part of its ESG integration activity, Wilshire has produced and circulated several ESG resources to its clients, including the following:

  - Wilshire's first ESG Asset Owner Survey. Wilshire intends to conduct the survey again in future years to build a better picture of themes and trends in this space.
  - A white paper analyzing the potential financial impacts of ESG risks.
  - A research report that summarizes the recent DOL guidance related to ERISA plan's considerations of ESG factors.

- **Franklin Park Associates (Private Equity Consultant) –** Given the increased institutional investor interest in ESG/Impact investing, Franklin Park updated their ESG/Impact fund manager list and compiled a synopsis of fund manager profiles in this space. Some key takeaways from this study were:
  - There were only 15 fund managers pre-2005, most of whom focused on renewable energy technology.
  - Post-2005, the manager universe ballooned during the clean technology bubble to 150.
  - More than 40% of the managers that Franklin Park has tracked since 2003 are no longer active or are not of institutional quality.
  - Today, Franklin Park estimates that there are less than 50 managers that they deem to be institutional quality. Most of these managers are in the growth equity and venture capital space.

- **Albourne (Hedge Fund Consultant) –** Albourne recently added a section on their client portal dedicated to ESG. With this addition, they now provide ratings for hedge fund managers based on the manager's ESG integration. They break down their ratings into the following five categories:
  - Advanced – The highest level of integration and responsible investing.
  - Engaged – Actively integrating ESG factors into the investment process where possible.
  - Early Stage – Starting to integrate ESG factors and may be signed up to the UN PRI or similar group.
  - Not Considering – Not looking to integrate ESG criteria or sign any principles.
  - Pending – Not yet been spoken to by an Albourne ESG analyst.

  Additionally, one of Albourne's senior consultants has taken on the role of Chair of the UN PRI hedge fund working group.

- **Aberdeen (Private Real Assets Consultant) –** In the last year, the Aberdeen Private Real Assets team has implemented a communication line with their Europe-based ESG group through a regularly scheduled quarterly call so that they can remain current on specific trends that affect the investment environment and the needs of their investors. Additionally, Aberdeen continues to include ESG as an integral component of their Operational Due Diligence practices.

IV. Staff Research

- **Discussions with Other Plans –** Staff engaged in dialogue with the following pension plans to discuss their approach to ESG and fossil fuel divestment

  - **New York State Common Fund –** Andrew Cuomo, the Governor of NY, said he will push for the state pension fund to divest from fossil fuel companies. However, State Comptroller Thoma DiNapoli, who is responsible for investment decisions, indicated that the fund has no plans to divest. Staff spoke with the plan's staff and confirmed that the plan has no intent to divest, as they view it to be a violation of their fiduciary duty.
  - **NYCERS –** NYC Mayor Bill de Blasio announced that NYCERS is setting a formal goal to divest from fossil fuels within five years. However, divestment would need to be approved by the trustees for the city's five pension boards (Teachers, Fire, Police, Employees, and Board of Education). One of the boards (Police) has explicitly rejected any divestment actions. Before any actions are taken, NYCERS will hire a consultant to study the issue and its impact on risk and return. Additionally, Mayor de Blasio and Comptroller Stringer recently announced that NYCERS will target an investment of $4 billion, or 2% of the city's pension, in renewable energy, energy efficiency, and other climate change solutions. This would represent a 100% increase relative to the current target for environmentally targeted investments.
  - **San Francisco ERS –** In January 2018, the board of SFERS voted against divesting from fossil fuels after the plan's investment consultant, NEPC, issued a report stating that divestment would negatively impact the fund's return, diversification, and inflation protection characteristics. Additionally, SFERS recently announced they will be committing $1 billion to a "carbon-restrained" investment strategy. This strategy passively tracks a carbon-restrained Russell 1000 Index that targets 50% of the carbon emissions of the broader Russell 1000 Index.
  - **Vermont ERS –** Following a push from the Governor of Vermont to divest from fossil fuels, the fund's staff conducted significant internal analysis and commissioned Pension Consulting Alliance (PCA), a national pension consulting firm, to study the impact that fossil fuel divestment would have on the plan. PCA's research reaffirmed the research that Vermont's staff had performed, which indicated that divestment would not be an appropriate strategy as a fiduciary.
  - **MainePERS –** The Board of Trustees for MainePERS opted to not divest from fossil fuels as their state constitution mandates that "investment decisions will only be made to fund benefit payments and for no other purposes"

- **Natural Resources Strategy -** Staff evaluated adding a dedicated natural resources strategy within the public real asset portfolio to help hedge against inflation risk. However, after further analysis Staff concluded that the potential risks outweigh the merits, specifically because of the significantly higher volatility relative to a diversified real asset strategy. In addition, there is a tail risk associated with investing in natural resource companies related to climate risk and the continued demand for fossil fuels. A diversified public real assets active manager who invests across multiple strategies (i.e. commodities, TIPS, REITs, listed infrastructure, emerging markets debt) can monitor and evaluate this tail risk and appropriately adjust the portfolio depending on the relative risk adjusted return opportunities offered by natural resource companies compared to other potential investments within their mandate. However, a dedicated public markets natural resources manager does not have this flexibility and must remain fully invested in natural resource companies, which could result in high volatility and significant underperformance during periods of time when natural resource equities suffer. For example, the S&P North America Natural Resources Index lost over 30% of its value from 2011-2015 as oil prices plummeted.

- **Consultant Studies –** Staff conducted research on the work performed by some of the largest pension consulting firms in the country to understand their analysis of the risks associated with fossil fuel divestment. Noted below are comments related to their studies:

    - **NEPC Study for SFERS –** NEPC, a national pension consulting firm, and the General Consultant for the San Francisco Employees' Retirement System, published a study in January 2018 that is useful in understanding the costs associated with divestment. SFERS is a multi-billion-dollar pension fund that is diversified globally across multiple asset classes, both private and public. The main results of the study are:
        - NEPC estimated a one-time transaction cost of 0.5% that would be incurred by selling the fossil fuel investments and replacing them with non-fossil fuel investments. This would result in a one-time cost of $335,000 for the ERS and $85,000 for the CRHBT, based on the Trust Funds' current fossil fuel holdings of $67M and $17M, respectively.
        - NEPC estimated an annual performance impact of 0.03%-0.10% from divestment due to decreased diversification. This would result in annual costs of between $1.2 million and $4.0 million for the ERS and between $274,000 and $912,000 for the CRHBT.
    - **Wilshire Study on CalPERS Previous Divestment Campaigns –** Wilshire Associates, the General Consultant for CalPERS, recently estimated that CalPERS has lost between $3.8 billion and $8.3 billion across five notable divestment campaigns (South Africa, Tobacco, Iran/Sudan, Firearms, and Impermissible Emerging Market Countries).
        - Every divestment campaign resulted in lost value for the pension, with Tobacco and South Africa representing material losses and Iran, Sudan, and Firearms representing marginal losses.
    - **Pension Consulting Alliance Analysis for the State of Vermont –** The Vermont State Employees' Retirement System hired PCA to conduct an extensive study on divestment. Their recommendation was against divestment for the plan due to increased costs, reduced diversification, the inability to have an impact on climate change or the financial situation of the company, and the likelihood that divestment could lead to a slippery slope where further restrictions are placed on Vermont's investment opportunity set.

V. Recent Board Actions

- **CERES –** The ERS and CRHBT recently joined the CERES Investor Network on Climate Risk and Sustainability. By joining CERES, the Boards hope to gain a better understanding of climate risk within the portfolios, explore opportunities embedded in the clean energy economy, and develop a dialogue with other pension funds as to their analysis.

    - CERES comprises 146 institutional investors, collectively managing more than $23 trillion in assets, with a goal of advancing leading investment practices, corporate engagement strategies, and policy solutions to build and equitable, sustainable global economy and planet.
    - Notable CERES Investor Network members include CalPERS, MassPRIM, New York State Common, NYCERS, NY State Teachers, Washington State Investment Board, and Maryland State Retirement and Pension System.

- **ESG Monitoring and Evaluation** – Northern Trust, the custodian bank for the ERS and CRHBT, recently ran two analyses on our public equity portfolios. The first analysis looks at the carbon footprint of our equity holdings. The result of this analysis shows that 14 out of 15 of our public

equity managers have a smaller carbon footprint than their benchmark index. Additionally, Northern Trust analyzed our exposure to various Sustainable Development Goals (SDGs) and initiatives as defined by the United Nations. The five SDGs that were analyzed were Alternative Energy, Energy Efficiency, Green Building, Pollution Prevention, and Sustainable Water. The amounts of the ERS' equity portfolio invested in companies engaged in these five areas of environmental sustainability are noted below:

- Alternative Energy: 1.7% ($26 million)
- Energy Efficiency: 11.5% ($177 million)
- Green Building: 0.4% ($6 million)
- Pollution Prevention: 1.8% ($27 million)
- Sustainable Water: 1.1% ($16 million)

Attachment 3

ERS Carbon 200 Exposure - September 2018

Coal or Oil	Company	Market Value
O	Aker BP	$1,031,988
C	Alliance Resources	$239,625
O	Anadarko Resources	$97,407
C	Anglo American	$199,941
O	Antero Resources	$215,092
O	Apache Corp	$953,118
C	ArcelorMittal	$575,212
O	BASF	$1,000,358
C/O	BHP Billiton	$910,913
O	BP	$1,700,923
O	Cabot	$27,812
O	California Resources	$1,727,504
O	Chesapeake	$4,165,787
O	Chevron	$2,433,005
O	Cimarex	$25,373
C	Cloud Peak	$478,622
O	Concho	$82,485
O	ConocoPhillips	$4,323,273
O	Consol Energy	$1,206,794
O	Continental Resources	$1,114,145
O	Denbury Resources	$1,369,016
O	Devon Energy	$621,486
O	Encana	$627,038
O	Energen	$21,112
O	ENI	$720,433
O	EOG	$204,877
O	EP Energy	$343,763
O	EQT	$32,111
O	Exxon Mobil	$999,495
C	FirstEnergy	$49,436
O	Freeport McMoran	$1,219,927
C	Glencore	$865,596
O	Great Eastern	$291,988
O	Gulfport	$1,338,813
O	Hess Corp	$2,768,720
O	Inpex	$426,653
C	Itochu	$208,760
O	Marathon Oil	$1,022,320
O	MEG Energy	$3,500,175
C	Mitsubishi	$560,974
O	Murphy Oil	$666,774
O	Newfield Exploration	$261,470
O	Noble Energy	$1,551,215
O	Oasis Petroleum	$1,169,378
O	Occidental Petroleum	$1,959,919

Coal or Oil	Company	Market Value
O	PDC Energy	$1,017,491
C	Peabody Energy	$58,611
O	Petrobras	$1,370,839
O	Pioneer Natural Resources	$81,869
O	QEP	$102,304
O	Range Resources	$559,647
C	Rio Tinto	$572,001
O	Royal Dutch Shell	$1,288,667
O	SM Energy	$1,904,126
O	Southwestern Energy	$1,238,825
O	Statoil	$1,365,573
O	Suncor	$2,848,411
C	Teck Resources	$779,428
O	Total SA	$6,359,667
O	Whiting Petroleum	$2,319,340
O	WPX Energy	$472,814
O	YPF	$1,001,789
	Total ERS Carbon 200	**$68,652,224**

Total Oil	$63,153,107	91.99%
Total Coal	$4,588,204	6.68%
Total Coal/Oil	$910,913	1.33%
Total	**$68,652,224**	**100.00%**

Attachment 4

CRHBT Carbon 200 Exposure - September 2018

Coal or Oil	Company	Market Value
O	Aker BP	$309,750
C	Alliance Resources	$53,250
O	Antero Resources	$75,960
O	Apache Corp	$69,232
C/O	BHP Billiton	$66,606
O	California Resources	$173,881
O	Chesapeake	$699,791
O	Chevron	$474,936
C	Cloud Peak	$136,749
O	ConocoPhillips	$1,186,274
O	Consol Energy	$340,710
O	Denbury Resources	$164,391
O	Devon Energy	$128,056
O	Encana	$156,405
O	ENI	$105,287
O	EP Energy	$58,073
O	Freeport-McMoran	$308,781
O	Gulfport Energy	$322,850
O	Hess Corp	$747,587
O	Marathon Oil	$277,337
O	MEG Energy	$136,080
C	Mitsubishi	$391,214
O	Murphy Oil	$297,740
O	Newfield Exploration	$48,473
O	Noble Energy	$494,015
O	Oasis Petroleum	$301,050
O	Occidental Petroleum	$494,910
O	PDC Energy	$301,245
C	Peabody Energy	$11,722
O	Petrobras	$64,874
O	QEP	$23,906
O	Range Resources	$122,500
O	SM Energy	$484,371
O	Statoil	$254,263
O	Suncor	$841,682
C	Teck Resources	$203,466
O	Total SA	$1,876,995
O	Whiting Petroleum	$678,371
O	WPX Energy	$25,313
O	YPF	$213,493
	Total CRHBT Carbon 200	**$13,121,587**

Total Oil	$12,258,580	93.42%
Total Coal	$796,401	6.07%
Total Coal/Oil	$66,606	0.51%
Total	**$13,121,587**	**100.00%**