Memorandum
To: Idaho Board of Land Commissioners
From: Callan LLC
Date: July 5, 2018
Subject: Strategic Reinvestment Plan Update

Background
The Strategic Reinvestment Plan is subject to annual review.

In May 2016, the Idaho Board of Land Commissioners ("Land Board") approved the Strategic Reinvestment Plan that allowed for the investment of Land Bank proceeds into timberland and farmland for all endowments subject to certain requirements, including the minimum rate of return ("hurdle rate") for new investments of 3.5% net real for timberland and 4.5% net real for farmland.

In July 2017, the Land Board adopted a revised Strategic Reinvestment Plan which specified until the Asset Allocation/Spending Study was completed, Land Bank Funds could be reinvested into timberland and farmland for Public Schools at or above the hurdle rates and subject to certain other criteria; however, Land Bank Funds could not be reinvested into timberland or farmland for any other endowment.

Asset Allocation and Distribution Study
The Asset Allocation and Distribution Study (fka Asset Allocation/Spending Study) is complete. This study examined a number of items with regard to each endowment including determining the best use of land sales proceeds.

The Investment Sub-Committee has recommended that the Land Board pursue Option A of the study and this update to the Strategic Reinvestment Plan assumes the Land Board adopts that recommendation. Option A is outlined on page 33 of the Asset Allocation and Distribution Study and is paraphrased below:

- Option A: “Consistent with the Reinvestment Plan, identify transactions that meet established hurdle rates and set aside sufficient funds over an appropriate time horizon (immediately move money that will either “mature” prior to the transaction or exceeds what is required).

Because of the scope of the Asset Allocation and Distribution Study, Option A affirms that timberland and farmland may be considered for all endowments.
Discussion of Hurdle Rates
The hurdle rates were set to be long term numbers subject to periodic review and revision. Callan recommends the minimum hurdle rates established in the 2016 Strategic Reinvestment Plan remain in place for both timberland and farmland. This is based on the Asset Allocation and Distribution study, a review of the current portfolio, and a survey of managers actively buying timberland or farmland.

Timberland Hurdle Rate
The Idaho Timberland hurdle rate is a minimum net real return of 3.5% which equates to a 6.75% gross nominal return, assuming 2.25% inflation. This return is assumed to come predominately from stumpage income since the sale of timberland is prohibited and the Land Board would not be able to realize any appreciation.

Callan surveyed institutional timber investment manager organizations (“TIMOs”) about their expected returns for new acquisitions of core U.S., Northwest, and Idaho timber. Survey participants included Brookfield, BTG Pactual, Campbell Global, Forest Investment Associates, Hancock Natural Resource Group, Jamestown, Molpus, RMS, Silver Creek Capital, and Timber Investment Resources. These TIMOs own approximately 15 million acres of timberland with a value of $25.5 billion.

The TIMOs are actively buying timberland in the U.S. with total gross nominal return targets of 5% to 11% (the range covers all U.S. regions). The income return expectation ranges from 2% to 4%. The expectations regarding appreciation show a wider range from 2% to 6%. Return targets at the higher end of the range reflect more aggressive assumptions about expected appreciation by the survey participants with variability by region. Realized and unrealized appreciation is ultimately driven by (i) higher income from log prices and demand for timber and/or (ii) a reduction in the required rate of return expected by investors which would result in a lower discount rate used for valuation purposes and a higher resulting value. TIMOs do not generally project value increases from changes to higher and better use.

Consistent with survey results of prior years, Idaho is a market that is less attractive compared to other regions. Idaho is viewed as riskier by the TIMOs surveyed due to lower productivity based on its location east of the Cascades, thinner timber markets, including reduced access to export markets, and fewer institutional buyers which impacts liquidity. These factors result in higher required returns for Idaho. The TIMOs we surveyed noted they would add 50 to 100 basis points (1/2 of one percent to 1%) to their required returns if they were investing in Idaho; however, few indicated they were actively investing in Idaho. The gross nominal return range for Idaho is 6% to 11% based on the survey which equates to a net real return of 2.75% to 7.75%.

The lack of TIMO interest in Idaho timberland should work in the Land Board's favor in terms of securing transactions.
Unlike Farmland (discussed below), returns for Idaho-only timberland are not available from NCREIF due to lack of properties owned by TIMOs in Idaho. The returns for U.S. timberland are shown below and illustrate the historical split between income and appreciation.

### Institutional Timberland Returns: U.S.
**Periods Ending March 31, 2018 – Gross Nominal Returns**

<table>
<thead>
<tr>
<th></th>
<th>1 Yr</th>
<th>3 Yrs</th>
<th>5 Yrs</th>
<th>10 Yrs</th>
<th>15 Yrs</th>
<th>20 Yrs</th>
<th>Inception 4Q 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Timberland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>3.01%</td>
<td>2.70%</td>
<td>2.74%</td>
<td>2.55%</td>
<td>3.15%</td>
<td>3.42%</td>
<td>5.03%</td>
</tr>
<tr>
<td>Appreciation</td>
<td>0.76%</td>
<td>0.73%</td>
<td>3.29%</td>
<td>1.49%</td>
<td>4.30%</td>
<td>2.92%</td>
<td>6.40%</td>
</tr>
<tr>
<td>Total</td>
<td>3.79%</td>
<td>3.44%</td>
<td>6.10%</td>
<td>4.06%</td>
<td>7.54%</td>
<td>6.41%</td>
<td>11.63%</td>
</tr>
</tbody>
</table>

Source: NCREIF Timberland Property Index. The Index returns are gross of fees. As of March 31, 2018, there were 456 properties with a market value of $25.2 billion and 13.98 million total acres in the Timberland Property Index.

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**Farmland Hurdle Rate**

The Idaho Farmland hurdle rate is higher than timberland and is a minimum net real return of 4.5% which equates to an approximate 7.75% gross nominal return, assuming 2.25% inflation. Although some of the market participants we surveyed are targeting marginally lower returns, we recommend continuing to use the 4.5% hurdle rate. As articulated in the May 2016 Strategic Reinvestment Plan, this hurdle rate is above the Long Term Policy Returns for both the Financial Asset Portfolio and the Farmland Portfolio to keep the focus on finding transactions that are accretive. Farmland has a net asset value of $24.7 million representing only 2% of the Land portfolio. It is not a Strategic Asset Class in the asset allocation.

Callan surveyed institutional farmland managers with regard to their expected returns for new acquisitions of farmland in Idaho. Survey participants included Hancock Natural Resource Group, Homestead Capital, IFC, UBS Agrivest, and US Ag. The gross nominal target returns for Idaho row crops were 7.25% to 7.50% which equates to approximately 4.00% net real to 4.50% net real. The return expectations are different than the historical returns of Idaho farmland properties in the NCREIF Farmland Index shown below, mainly because there is less appreciation expected going forward with land appreciating at inflation.

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1 NCREIF is the acronym for the National Council of Real Estate Fiduciaries. NCREIF is an independent organization that collects return and operational data for real estate, farmland, and timberland. NCREIF serves the institutional real estate, timberland and farmland investment community as a non-partisan collector, validator, aggregator, converter and disseminator of performance and benchmarking information.
Institutional Farmland Cropland Returns: Idaho Compared to U.S.  
Periods Ending March 31, 2018 – Gross Nominal Returns

<table>
<thead>
<tr>
<th></th>
<th>1 Yr</th>
<th>3 Yrs</th>
<th>5 Yrs</th>
<th>10 Yrs</th>
<th>15 Yrs</th>
<th>20 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S. Cropland</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>3.62%</td>
<td>3.66%</td>
<td>3.76%</td>
<td>4.03%</td>
<td>4.21%</td>
<td>6.13%</td>
</tr>
<tr>
<td>Appreciation</td>
<td>1.58%</td>
<td>1.34%</td>
<td>2.42%</td>
<td>5.76%</td>
<td>7.62%</td>
<td>4.49%</td>
</tr>
<tr>
<td>Total</td>
<td>5.24%</td>
<td>5.05%</td>
<td>6.25%</td>
<td>9.96%</td>
<td>12.06%</td>
<td>10.82%</td>
</tr>
</tbody>
</table>

|                |       |       |       |        |        |        |
| **Idaho Cropland** |     |       |       |        |        |        |
| Income         | 4.05% | 4.02% | 4.05% | N/A    | N/A    | N/A    |
| Appreciation   | 0.43% | 4.83% | 4.03% | N/A    | N/A    | N/A    |
| Total          | 4.49% | 8.99% | 8.21% | N/A    | N/A    | N/A    |

N/A –not available
Source: NCREIF. The Index returns are gross of fees.

In contrast to timberland, investment in Idaho farmland (mostly row crops with some alfalfa) is viewed as attractive by several of the managers, particularly when compared to the Midwest and Colorado. There are more institutional participants in the Idaho farmland market compared to timberland. Managers are actively acquiring farmland properties in Idaho or targeting Idaho for new acquisitions. There are currently 47 Idaho farmland properties in the NCREIF Farmland Index with a market value of $453 million or an average of $9.6 million per property. This has risen from 30 properties in 2012 which had a market value of $174 million.

The Land Board may compete for farmland transactions with the institutional buyers who target transactions in the $2 million to $10 million range, as well as local buyers.

**Recommendation**

The findings from the Asset Allocation and Distribution Study completed by Callan in 2018 are consistent with the conclusions and next steps outlined in the Strategic Reinvestment Plan approved by the Land Board in 2016. Assuming the Land Board adopts the recommendation of the Investment Sub-Committee to proceed with Option A of the Asset Allocation and Distribution Study, Callan recommends that all future investments in timberland and farmland are made at or exceed the established hurdle rates. This applies to all endowments.