## Today's Situation

The net revenues to the Common School Fund under Department of Forestry management have been declining for a number of years, and were negative in fiscal year 2013 and 2014 (Figure 4). In light of the fact that these lands are currently causing a net loss to the Fund and projections are showing low returns or losses potentially continuing into the future, it raises the question as to whether or not continuing to hold these lands as part of the Fund's real property asset portfolio is consistent with the trustee duty of the State Land Board.

Figure 4. Net Revenue from Elliott State Forest (1997-2013)
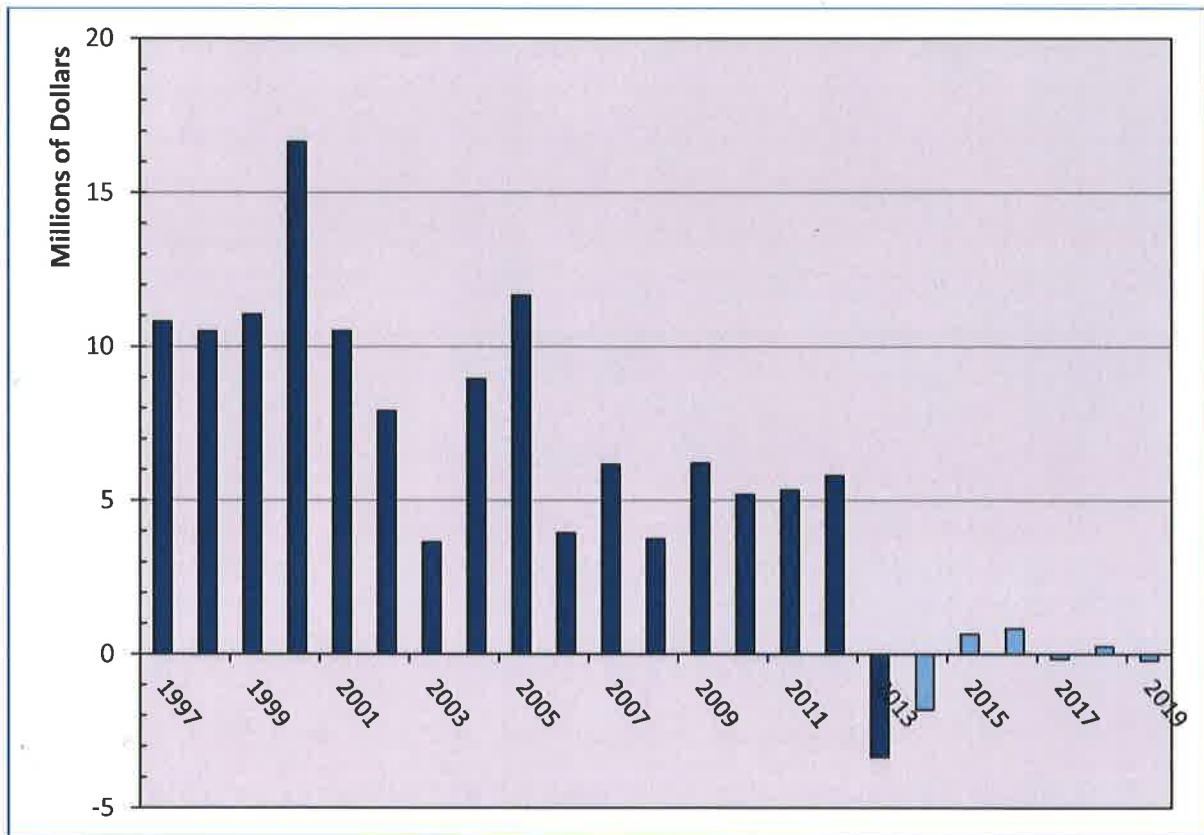
Source: Oregon Department of Forestry data

The problem is primarily around revenue generation, not cost. The costs for the Department of Forestry to manage the Elliott have been averaging a relatively constant $34-$37/acre/year since at least the late 1990s.[16] However, revenues have declined from $150-200/acre/year in the late 1990s to an average of $64/acre/year over the past five years. They are projected to be only $3/acre/year over the next five years. This downward trend in revenues leaves only a small margin of profit even if management costs are drastically reduced.[17]

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[16] Figures noted in this section were derived from Oregon Department of Forestry data (Deblander, 2014).

[17] Projections assume phased down management costs to just under $12/acre/year for basic stewardship in 2019.

Figure 2. Estimated Timber Volume from Elliott State Forest, 1955 to 2014
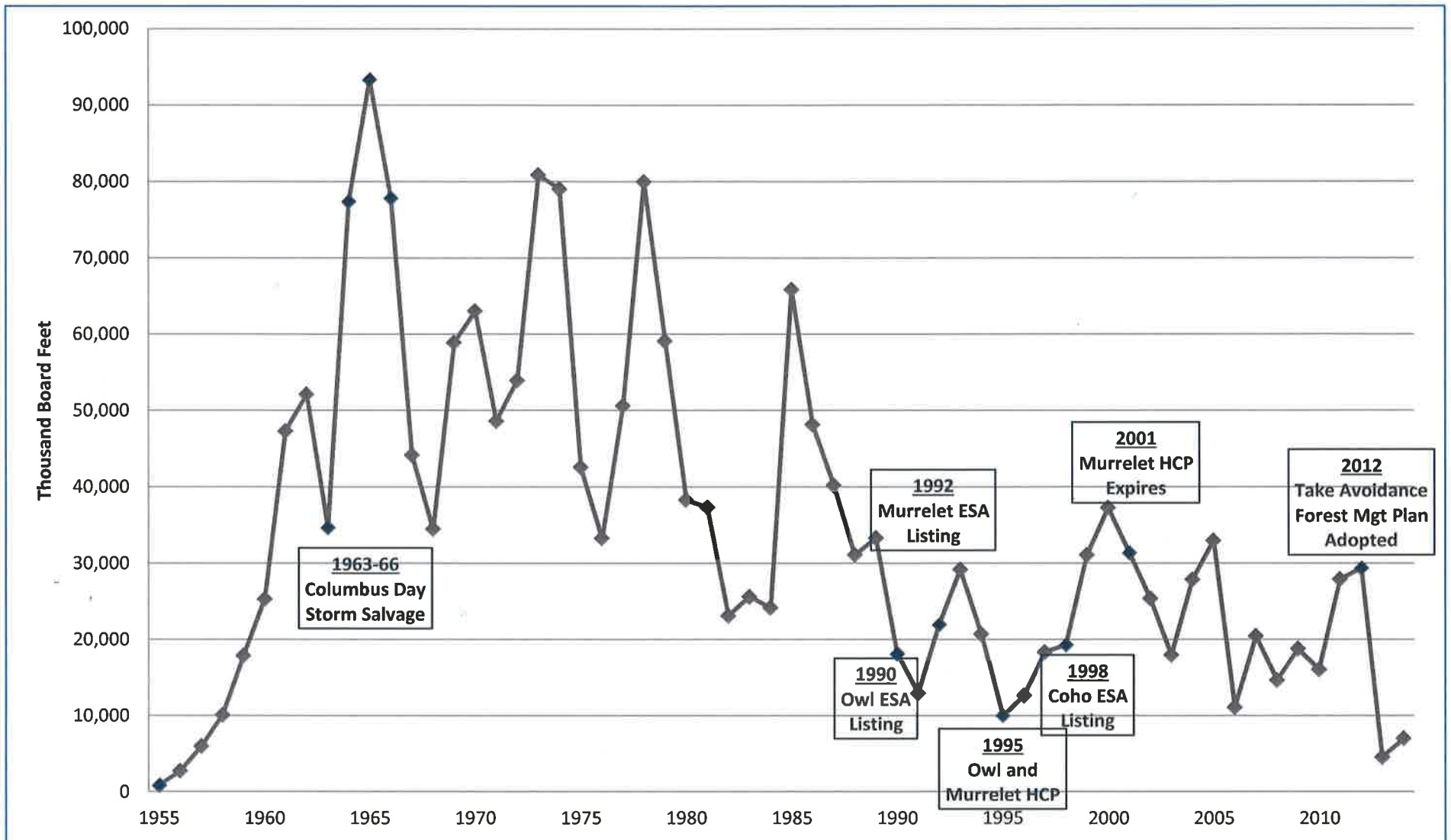
Source: Oregon Department of Forestry data

average harvest volume experienced in recent years. Our reason for doing this was that we assume that any of these alternatives will require about two years to implement.

Annual Harvests and Changes in Forest Structure

Figure 1 shows projected annual harvests for each alternative. For the Public Auction alternative, we assume the owner would be a private timber company and the company would operate with the objective of maximizing financial returns from the forest. In doing so, the owner would set a relatively high annual harvest level for the first 20 years (2017 through 2036) and then would allow timber harvests to decrease while the forest settled into a uniform distribution of acres by age class.[7] After bottoming out at 35 MMBF through 2070, harvests would then increase through 2082 and settle at an annual harvest level of approximately 55 MMBF per year.

Figure 1: Annual Softwood Timber Harvest by Alternative
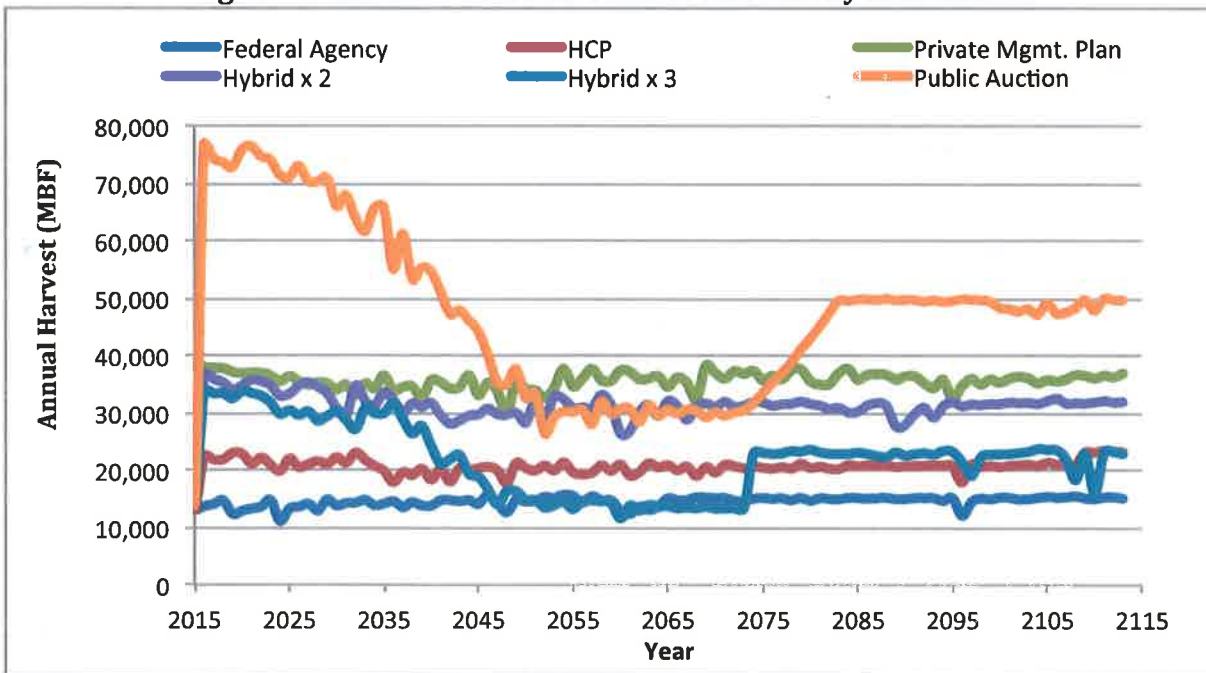
Source: Analysis by the Evergreen Team of Oregon Department of Forestry (ODF) data

For the Hybrid x 3 alternative, the distribution of harvests through time is similar to the Public Auction alternative except that harvest volumes are significantly lower each year, especially in the early years of the projection.

For the Federal Agency, HCP, and Private Management Plan alternatives, harvest would be even or approximately even throughout the projection period at 17 MMBF, 23 MMBF, and 40 MMBF, respectively.

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[7] We assume for each alternative, except the Private Management alternative, that harvest for 2015 and 2016 will remain at the average for the three previous years (about 15 MMBF).

risks and uncertainty related to federal and state regulation, and long-term productivity of the forest.[12]

Figure 9 shows our estimates of NPV for each alternative (horizontal bars) with the lower and upper bounds of an approximate 90 percent confidence interval for the "true" NPV. We computed the NPV for each alternative based on a 6 percent discount rate, which is at the upper-end of standard discount rates used in forestry.[13] In comparing the NPVs for each alternative, it is important to note that one should not compare ranges, but rather compare the means and consistent points within each range (e.g. compare lower bounds across alternatives).

Figure 9: Estimated Net Present Value to Owner of Forest by Alternative*
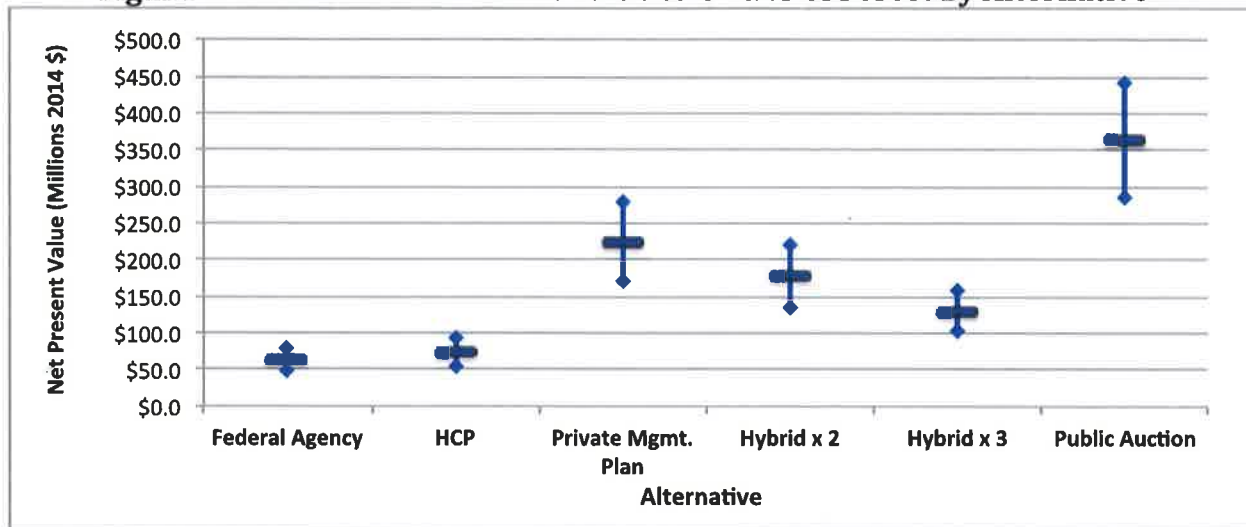
Source: Analysis by Evergreen Economics of data provided by ODF
* The estimates of NPV represent the return to the owner of the forest, not the return to the CSF under the alternative.

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[12] Uncertainty in the long-term average price of logs is accounted for through the standard error of westside log prices (1979 through 2011), which is about $19/MBF; uncertainty in other factors are accounted for through alternative discount rates, 5% (upper bound) and 7.5% (lower bound)
[13] Standard discount rates used in valuation of forestland (though discounted cash flow analysis) generally range from 4.5% to 6.5% for private-to-private transactions.

To illustrate the rationale, it helps to examine two simulated approaches using data from past performance. In 1995 the Department was putting together its first Asset Management Plan and looked at the value of the Elliott at that time, and did so again in 2005 after members of the 2003 Ways and Means Natural Resources Subcommittee expressed interest in selling the property.[93] Using a conservative value estimated from these two time periods, Table 8 compares the different results that would have accrued had the property been decoupled from the Common School Fund in 1995 or in 2005 versus the actual asset performance. The results demonstrate the impact to the property value since 1995, but also show that even a sale in 2005 would have resulted in an estimated $100 million more in total value than the actual performance.

Table 8. Simulated Prior Elliott Sale versus Actual Elliott Management

Simulation	Simulated Endowment in 2014	Simulated Distribution Over Time Period[94]	Estimated Residual Land Value[95]	Total Value Over Time Period[96]
(Actual) Managed for Timber Since 1995	$1.4 billion	$0.7 billion	$0.4 billion	$2.5 billion
Sale in 1995 and Invested Proceeds[97]	$2.5 billion	$1.4 billion	$0	$3.9 billion
Buyout in 2005 and Invested Proceeds[98]	$1.8 billion	$0.8 billion	$0	$2.6 billion

Past performance is not an indicator of future outcomes, but balanced portfolios are often recommended to spread risk across different investment instruments. The invested portion of the Common School Fund is a balanced portfolio – including a wide range of stocks and bonds in the national and international markets. It is managed by the Oregon Investment Council. In contrast, the real property portion of the Common School Fund is significantly less diversified in that it is limited to real property within the state's boundaries and includes mostly geographically limited forestlands and rangelands with a small amount in commercial properties.

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[93] Mason, Bruce & Girard, 2005.

[94] In 2014 dollars.

[95] See Evergreen Economics (2014). Residual net value is estimated by the median of Evergreen Economics' net present value for a public auction less a 2% transaction cost ($362,547,618*0.98=$355,296,665).

[96] In 2014 dollars.

[97] PGP Valuation Inc., 2005. A 1995 buyout valuation was calculated from data in this report based on a 1993-94 forest lands market valuation applied just to Elliott acres with a 2% transaction cost ($1,066,000,000*(85,000/133,000)*0.98=$667,000,000).

[98] Mason, Bruce, & Girard, 2005. A 2005 buyout valuation was calculated as the median range in sale value estimated with a 2% transaction cost ($377,000,000*0.98=$369,000,000).