BOF TESTIMONY- 4/26/2017

4/26/2017 BOF Testimony Language

Good morning.

My name is David Walters and I am the Western Region Manager for LandVest, a timberland marketing, forest management, and natural resource consulting firm based in Boston. I am a native Oregonian and I have lived in Eugene since 1994. As a forest biometrician, I have been working directly in forest inventory, growth and yield, and harvest planning since my graduation from OSU in 1984; this work has been done for academia, industry, and as a consultant. Notable among these experiences are 7 years on the faculty at the University of Minnesota, 15 years spent with Roseburg Forest Products as biometrician and manager of technical services, and the last 5 years working for LandVest. I have worked, in some capacity, on inventory, growth and yield, planning, and valuation issues on every major public sale of timberland that has occurred in Oregon, Washington, and California since 2012. In particular, I have personally completed the growth and yield analysis, reviewed inventories, developed harvest schedules, and suggested actionable valuations on over 1.5M acres of timberland in the last 5 years.

On behalf of the Oregon Forest Industries Council, I participated in the Technical Expert and Review group while it was active in 2015 and 2016. I have also been engaged by OFIC to review the project documents produced by ESSA and which are being used to adjust and inform the ODF planning process.

Today, I would like to address the key messages contained in the ESSA report and offer my own view on both the strengths and weaknesses contained therein. These recommendations are formed by my direct experience with forest planning models, growth and yield, and forest inventory.

Our time is short, so I am offering a brief synopsis here and my client will forward more detail in written form.

Brief Synopsis and Review

The TERG team identified a number of issues to the ODF FMP team having to do with the data, models, and process being undertaking to develop an updated Forest Management Plan for the Oregon State Forests. These issues were both technical and substantive. Key among these previously identified issues were:

1. The End and the Beginning – The FMP began with an inventory 12-15% lower than the inventory used by ODF to manage their lands (SLI). This was a result of using different models and methodology. The End (current state of the forest) needs to match the Beginning (of the future management plan)
2. Growth Projections – The growth model used for the FMP (FVS), included adjustments based upon dated and possibly unrepresentative permanent plots. This resulted in a 5-15% reduction in basal area growth rates. The use of soil site index, a key driver in growth projections, instead of measured site index, resulted in a 3-15% lower estimate of productivity.

3. Volume and Taper Equations – Differences in equation selection and merchandizing specifications between SLI and FMP need reconciled.
4. Static Production and Conservation Areas over time. As the forest grows and changes, some facility for adjustment to these areas within the model needs developed.
5. Future Stand Yields were generally lower than previous FMP efforts.
6. Specification, with the planning model, of residual standing inventory targets and minimum harvest ages are policy constraints incorporated in the technical model.
7. Taken holistically, the above items suggest an approach of compounding conservatism which should be reconsidered.

I review these items as these were key items that led ODF to engage ESSA to review their process. They remain important and fundamental to the sound development of Forest Management Plan for our state forests.

With these previous points in mind, here are my thoughts on the review done by ESSA. Though I have not seen the scope of work (SOW) document which outlined ESSA's task, it is clear that the SOW was aimed at reviewing the technical matters of the growth and yield portion of the FMP development. Based upon the final report, a number of solid findings were noted that supported specific TERG concerns; specifically,

- Site index should be developed in a manner that incorporated measured site index estimates. This is consistent with TERG suggestions and a good result.
- The matter of calibration (of a growth model) with various plot data is addressed. In short, the recommendation is that calibrations are made with good data and that, if unavailable, good data be developed over time.
- Choice of Growth Model – ESSA's review presumes the use of FVS for the FMP process and, given this presumption, makes a number of solid recommendations on specific machinations related to the choice of sub-models and the calibration of the model.

In short, the ESSA report provides a number of specific and useful recommendations on the technical details. The result is generally consistent with TERG recommendations on these details and done with solid tradecraft.

However, I would suggest reconsideration or additional review on the following:

- Genetic Gain – the ESSA review is inappropriately dour with respect to the current state of knowledge on genetic gain. There are many well-established and long-term studies which support the notion that greater volume, at the tree and at the stand-level, is produced by the commonly deployed improved genetic material. This should be built into the future projections of yield.
- Stand Density Index – I don't believe the approach ESSA has taken in calculating a recommended SDI max is correct and would suggest that this be re-visited.
- Disturbances – the suggested approach to dealing with fire and insect/disease outbreaks is vague and not useful. To be clear, I believe these items are outside the scope of growth and yield models and are best incorporated through a sensitivity analysis which should be based upon transparent policy choices and only modestly informed by science. I would suggest that the report clarify the recommendation.

My largest concerns are not with what the ESSA report says but, rather, with what is unsaid. It may be that these items were outside the SOW work under which ESSA operated; regardless, they remain key issues that the state should consider. Specifically, I would refer to items 1, 4, 5, 6, and 7 above – key and significant points recommended by TERG and presented previously to the Board - are not addressed clearly in the ESSA review. While much work is included in the report regarding items 2 and 3, the fundamental comparison and evaluation of the differing approaches within SLI and FMP remain; this should be done and a choice made and justified that provides consistency within ODF for both of these important business processes.

Forest management plans such as the one being undertaken by the state are done routinely in forestry; they are complicated but ultimately there are only a few key guiding principles. A future plan should start with (match) the present inventory; the plan should use best-available data and models in an unbiased fashion; necessary **policy** choices should be transparently identified and their cost explicitly calculated through sensitivity analysis. Such plans should also identify opportunities for improvement in the future and, ideally, an execution plan for implementing these improvements.

Thank you for your time today.