Memo

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To: Geoff Bekker

From: Ian Cameron

cc:

Date: January 23, 2002

Project: PTM-013 Yield Curves for TFL 8

Re: Influence of incorrect Amabilis Fir species code in TFL 8 Inventory

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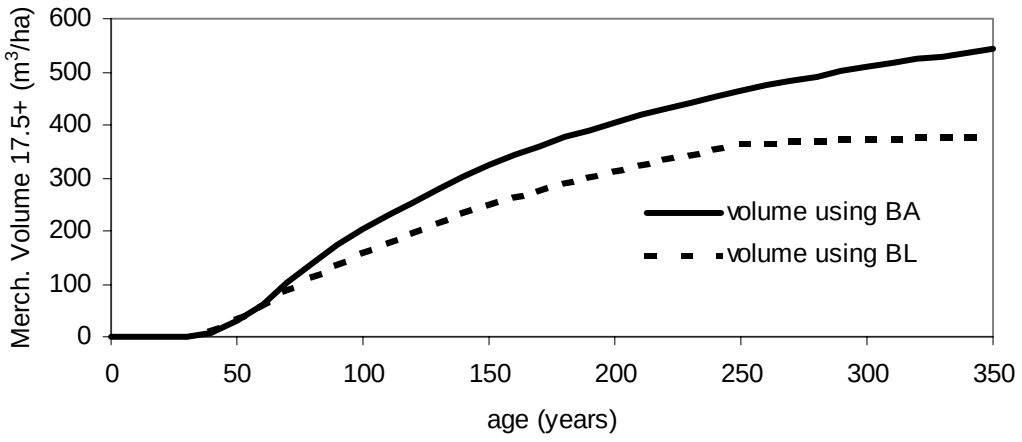
Amabilis Fir (Species code "BA") is found in the inventory for TFL 8 even though Amabilis Fir actually does not occur on the TFL. BA is the leading species in approximately 1483 ha, corresponding to 2.2% of the THLB.

Within the BA-leading polygons, mean proportion of BA is approximately 56%. However, BA also occurs as minor species in polygons where BA is not the leading species. When we calculated an area-weighted proportion of BA using all the species information, the result. Under either method the area classified as BA is approximately equal to the area classified as BL.

We conducted tests with VDPY and evaluated the impact of changing the species code from BL to BA. Our tests with VDYP show that for individual polygons, the predicted yield for a stand of BA is about 60% higher than a BL stand with all the same input attributes.

To assess the impact on yield curves used for the timber supply analysis, we isolated the natural stand yield curves for every BA-leading polygon in the THBL and created an area-weighted average yield curve. We then re-ran the curves after changing the species code to BL, and produced a second area-weighted curve.

Effect of BA in TFL 8 Inventory



Between ages 100 and 300, the BA/BL ratio is reasonably stable at 1.3, indicating that the curves are about 30% higher with BA than with BL. This is consistent with the previous observations. That is, if the yield of BA is about 60% higher than BL, and if BA is approximately 56% of the volume in the BA-leading stands, then the impact on BA-leading yields should be about 30%. Since BA occurs as a minor species in equal amounts in other stands, the change in the BA-leading curves does not tell the complete story. The overall impact is a 60% over-prediction on 2.2% of the landbase. This corresponds to a 1.32% overestimate of the volume on the THLB.

This matter has been discussed with Mark Hafer and Erik Wang of Timberline. They will bring forward this issue in their analysis, but no changes will be made to the yield curves because the 1.3% difference in the inventory is within the range of their sensitivity analyses.

Yields for managed stands are not affected by this problem because only BL was used for any silviculture regimes with subalpine fir.