



100 Mile TSA
A G&Y Perspective on Timber Supply

Primary Sources: ®
 Timber Supply Area Analysis Report, June, 2001
 AAC Rationale, December, 2001

Short Summary: A pine (55%) and doug-fir (31%) dominated TSA with a robust timber supply and some inventory issues.

Characteristic or sensitivity	Short-term	Mid-term	Long-term	Implications
Final AAC and base case harvest flow	Final AAC 1.33M, base case 1.34M	Same as short-term, no decline or dip below LTHL	4% drop to LTHL of 1.28M at 100 yrs	Virtually at a non-declining flow already
Age-class distribution under base case	Significant gap from 150-220 yrs, majority 100-150 yrs old	Fairly even distribution attained after 100 yrs	Old seral reserves mostly in non-THLB	THLB 60% of forested TSA, non-THLB provides some buffer for constraints
Alternate harvest flow	Increased to 1.47M (+10%) for 40 yrs	Returns to base case harvest profile after 40	Same base case LTHL	Illustrates inherent short-term flexibility
Sensitivity to site index of managed stands (OGSI)	Base case maintained	Base case maintained	LHTL can be raised to 1.33M for a non-declining flow	Largest potential in pine, test whether LHTL could be raised further
Sensitivity to green-up ages	Base case maintained	Base case maintained	+/- 5yrs lowers LTHL 3% and raises it by 8%, respectively	Age to green-up related to site index with similar effects
Sensitivity to managed stand yields	Base case maintained	Base case maintained	Direct and proportional effect on LTHL	Along with site index, improving PHR yields (yield tables, OAFs, etc) mainly effects LTHL
Sensitivity to existing stand yields	Base case maintained	Decreasing yields by 10% drops harvest 6% below LTHL at 30 yrs	Returns to base case LHTL at 100 yrs	Audits indicate mature volumes may be over-estimated by 11% overall; re-inventory needed; examine partial amelioration with better managed stand yields (incl. site index)
Other issues	<ul style="list-style-type: none"> G&Y in IDF and partial cutting -- work underway on PrognosisBC in WmLk for the IDFd3, gaps remain in other areas 			

Standard caveats	<ul style="list-style-type: none"> • A long-term G&Y data and model building strategy is needed to continually check and improve G&Y predictions. This includes a rationalized data strategy incorporating PSP's, EP's and Monitoring Plots. G&Y co-ops help coordinate these strategies across management units to gain cost and logistic efficiencies. • Under a given a set of data and assumptions, every unit has many possible timber supply forecasts depending on harvest policy and analyst prerogative. A base case and its associated sensitivity analyses represent only one perspective; there are many others. Before pursuing investments to improve the base case harvest flow, one should first determine what alternate forecasts are possible with the existing data and assumptions. • Regardless of AAC effects, G&Y investments should be pursued in their own right, as a matter of due diligence, in continuous pursuit of better information to support sustainable forest management. A balanced program looks at both positive and negative factors affecting G&Y and AAC. For PHR yields, this means moderating potential growth with realistic management expectations through appropriate application of site index, models and OAFs. • Ecosystem mapping is frequently justified solely as a spatial linkage for PHR site index estimates. It is also becoming an important management tool to support and document an ecosystem-based approach to sustainable forest management.
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Abbreviations used: AAC, Allowable Annual Cut; CMAI, Culmination of Mean Annual Increment; DWB, Decay, Waste and Breakage; EP, Experimental Plot; G&Y, Growth and Yield; LTHL, Long-term Harvest Level; M, million (cubic meters); MHA, Minimum Harvest Age; OAF, Operational Adjustment Factor; OGS, Old-growth Site Index, PHR, Post-harvest Regenerated (managed stands); PSP, Permanent Sample Plot; THLB, Timber Harvesting Land Base; TSA, Timber Supply Area; TSR, Timber Supply Review; VQO, Visual Quality Objective

Selected TSR terms: **Short-term**, harvest flow over the first couple decades relying solely on the current inventory of existing mature and over-mature stands; **Mid-term**, the gradual transition (fall down) to LTHL that occurs during the shift to managed PHR stands; **Long-term**, maintenance of the LTHL where harvesting has reached equilibrium with growth and other management objectives (harvest constraints).

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