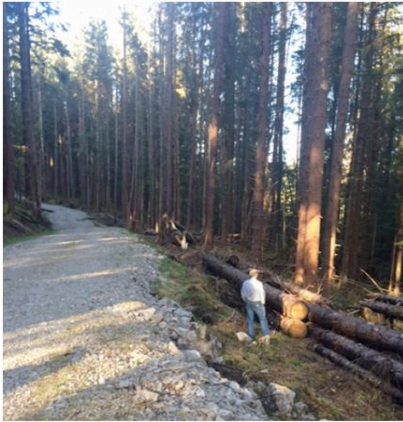


# Opportunity in Crisis: How Second Growth Timber in Alaska Will Help

By Catherine M. Mater\*



Tongass National Forest Dargon Point second growth timber sale just purchased by Good Faith Lumber in Thorne Bay.



The March 30, 2016 news coverage of Viking Lumber Company’s announcement of imminent closure of their operations in Craig, Alaska in 12-18 months, unless the Forest Service offers additional old growth timber sales, deserves careful consideration. The news coverage highlights two options that could save the industry:

- 1) Continue harvesting of trees that are at least 90 years old or older (old growth harvesting) while; and
- 2) Waiting “until there are sufficient acres of 60-yr old (second growth) and older trees that become available to enable amortization of a modern sawlog sawmill.”

The harvest at 90 + years is the current standard in SE Alaska. However the second option – harvest at 60 years (‘second growth’) if acres are available – captured my attention and should capture yours. Here’s why.

With modification to harvest beginning at 55 years, this new harvest protocol presents the most enlightened opportunity for a rebirth of a healthy forest products industry in Alaska. It is an option amazingly in alignment with environmental blessings, supported literally by a “wall of wood” (starting 2020) of 55-yr old stands that will become available for harvest with access to currently open Forest Service roads (no road construction

required, resulting in dramatically reduced logging costs).

This supply of timber can be found in over 80,000 acres of pre-commercially thinned (PCT) stands in all Ranger Districts throughout the SE Alaska, but heavily concentrated in the Thorne Bay, Petersburg, and Sitka Ranger Districts. In 2015, as part of a project jointly undertaken by Geos Institute and NRDC, the most intensive timber cruise ever conducted on the Tongass National Forest was completed:

~1,000 acres of representative pre-commercially thinned (PCT) stands using a one plot per acre cruise protocol (the Forest Service typically uses a one plot per ten acre cruise protocol). What we learned is important to any transition discussion.

These PCT stands are “reduced risk” stands as, once clear-cut for old pulping operations, environmental characteristics have long been reduced. The trees in these stands are larger in diameter and taller than what conventional technical wisdom would say. Unlike old growth stands, the trees have notably lower defect (7% compared to 50% in old growth stands), leaving less waste in the forest at harvest time. These trees grow remarkably tall and straight with minimal taper (again unlike old growth stands).

As example, the Forest Service’s first second growth timber sale in 2014 (57-acre Dargon Point timber sale shown in the March 2016 photos above) offers 65-year old second growth trees that are ~ 140’ in height with an average diameter at breast height of 21.” The Forest Service estimated that these second growth acres will produce an average of almost 78,000 board feet of merchantable volume *per acre*, and appraised the 4.5 million board feet timber sale at \$440,035. The sale produced bids from Alaska producers Viking Lumber, Sealaska, and Good Faith Lumber Company, and one out-of-state producer, with all bids above appraised value (from 7% to 80% higher than appraised value).



Good Faith Lumber Company mill in Thorne Bay processes value-added wood product out of second growth spruce and



Good Faith Lumber Company (the second highest bidder), located in Thorne Bay, acquired 20% of the timber sale (~ 500,000 bf of standing timber). With upgrades in process technology already implemented at the mill site and more planned, Good Faith Lumber is already producing value-added product out of second growth trees: D-siding for the log cabin industry; high-grade interior tongue-and-groove spruce paneling selling into the Anchorage custom home market for \$1200/mbf (see the March 2016 photos at left). Even the hemlock product manufactured by Good Faith Lumber sold into the market at \$900/mbf. Those who claim no markets exist for products manufactured from second growth supply lack current market information that may tell quite a different story. Markets for second growth show promise if the volume and lumber grades are there, and the price is right. Since road-building is typically a significant cost of access to supply, focusing on PCT acres with access to currently open Forest Service roads should tip the scales in favor of competitive pricing. But volume and grade recovery information needs shoring up.

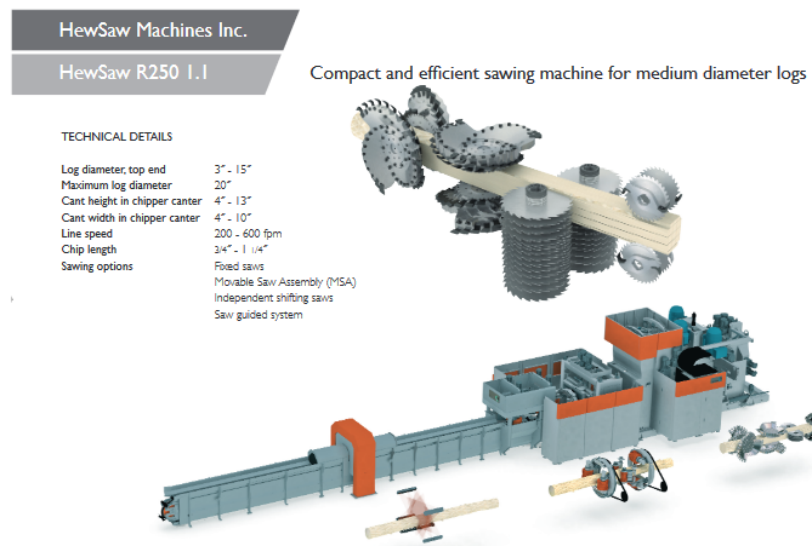
**A key question to expedite transition is how much second growth volume will be available over time, and how soon will it be ready for harvest?**

The 2015 Forest Service GIS data we analyzed, along with the results of our intensive 2015 timber cruise, show potential for the following:

- Starting 2020, almost 12,000 acres of 55-year old PCT stands will become available for harvest with projected tree heights of over 70' expected to provide more than 54 million merchantable log board feet per year to Alaska mills.
- By 2025, an additional 9,000 acres of 60-year old PCT stands will offer trees over 85' in height producing an expected 80 million merchantable log board feet per year.
- And by 2030, a sustainable annual volume of almost 100 million board feet is expected to be available for production in SE Alaska mills from 55-60 yr old PCT timber stands. (As contrast, the Forest Service currently offers ~20 million board feet per year for Alaska mills on an unpredictable, often environmentally-contested basis, and has just determined that 46 million board feet per year would satisfy market demand for Alaska mills.)

But the promise of volume works only when a) lumber grade recovery from expected volume is consistent and good, and 2) mills in SE Alaska have the proper technology to efficiently process these smaller-sized logs to capture both volume and grade. In both cases, more work is needed. Within the next 12 months, efforts are underway to process larger volumes of 55-70yr old second growth trees to determine volume and grade recovery ranges by the end of 2016. These efforts will include participation

from existing SE Alaska mills and also include mills outside of Alaska with installed small log processing technology being considered for installation in SE Alaska (see HewSaw: [http://www.hewsaw.com/images/productpdfs/us/R250\\_1\\_us.pdf](http://www.hewsaw.com/images/productpdfs/us/R250_1_us.pdf)).



For medium –sized mills like Viking Lumber, this new technology should be

evaluated for retrofitting existing headrigs on small log production lines (~ \$4 million installed), with installation that could be completed in a few months. Mills like Good Faith Lumber Company will require more overall mill rebuild to handle the larger volumes of wood to be processed through the mill. None of this will happen overnight, and even with a second growth transition effort in action, some level of old growth supply will still be needed to help sustain the industry and make the transition work. From experience, I know it will take industry leadership from Viking, Good Faith Lumber, Sealaska, Alcan, and members of the Southeast Conference to help guide this inevitable transition. Having support from well-heeled environmental organizations such as Geos Institute and NRDC is also crucial in transitioning from a ‘wall of

litigation' to a 'wall of wood.' From experience, I also know that waiting is not an option. We should set our sights on achieving three tasks by end of 2016:

- 1) Complete field inventory of 40-55 year old second growth stands on the Tongass National Forest (funding already provided by Congress to accomplish this);
- 2) Secure results of pilot testing 50-70 year old second growth stands to determine lumber and grade recovery from small log processing technology, including market response to products manufactured from SE Alaska second growth wood; and
- 3) Complete an economic analysis of cost savings resulting from harvesting of second growth stands where road building costs are significantly reduced.

These steps will allow SE Alaska to swiftly become a new model of responsible job-producing forestry and forest products manufacturing while protecting its greatest assets... old-growth rainforests.

\*About the author:

Catherine M. Mater is President of Mater Engineering dba Mater Ltd, a 90-year old forest products engineering and marketing research firm based out of Oregon servicing world-wide clients. A civil engineer by education, Mater has spent over 40 years in the wood products industry introducing new technology, new species, new solid wood products, and new biofuel products into world-wide markets. She is a recognized wood products and lumber grading expert in the US federal court systems, is a Senior Fellow with the Pinchot Institute for Conservation out of Washington DC where she is a Senior Fellow lead on the Forest Health Human Health Initiative, and is an inductee into the Academy of Distinguished Engineers at Oregon State University. She has worked on SE Alaska projects since 1980 and has worked exclusively with Geos Institute and NRDC on the transition to second growth in SE Alaska since 2013. ([mater@mater.com](mailto:mater@mater.com))

