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**To:** Daniel Castillo

Many of the questions in your memo dated June 5, 2006 revolve around several common issues in the interpretation of the projected market demand estimates we prepared for the Tongass National Forest. As background, these are the fourth set of projections we prepared since 1990. The existing methods provide a robust framework for formalizing the projection process. The model was initially developed from the original methods for estimating derived demand for National Forest stumpage developed in the first round of planning (see PNW-RP-282, 1981). These methods produce projections of timber demand from different assumptions about different uses of timber, the existing trends in market shares, and the trends in supplies from competing regional landowners. We then use scenario planning constructs to reflect alternative futures based on different assumptions about consumption in end use markets or the development of new industries in Alaska.

During the past decade, there have been several research efforts that provide information to support our revisions of the demand projections for the Tongass. Key in this work was the Robertson and Brooks study of competitive conditions, updating various trade and price statistics (PNW-GTR-504, 2001), and the sawmill processing capacity studies (PNW-RN-545, 2004; PNW-RN-553, in press). In 2003, *An Analysis of the Timber Situation in the United States: 1952-2050* (PNW-GTR-560, 2003) was completed with several helpful supporting documents. The most useful was *Reconsidering Price Projections for Selected Grades of Douglas-fir, Coast Hem-fir, Inland Hem-Fir, and Ponderosa Pine Lumber* (PNW-RP-561, 2004). These grade specific projections suggested that volumes of high-grade lumber had declined in the past decade, but price ratios among low-, medium-, and high-grade groupings were persistent. They also suggest that changes both in the United States and various Asian markets starting in the mid 1990s led to a convergence in the domestic and export markets for high-quality lumber. The result of this has been that we used the original model structure but modified the assumptions about independent variables for the new information collected or developed in the last decade. We believe that this provided a sufficient means for revising the demand projections within the available time.

1. The values in Table 3 represent the derived demand for National Forest timber in southeast Alaska. It is expressed in roundwood form (converted from various timber products) and is adjusted for supplies from other landowners. It is the amount of timber required to produce the projected volume of product to be produced from National Forest timber. Other comments with respect to this question are as follows:



- a. We made no attempt to estimate the volume or mix of federal timber sales necessary to supply that volume of wood. We acknowledge the role that other potential timber suppliers have when we subtract their estimated volumes from the total demand.
  - b. You are correct to say that you will need to expand these figures for log exports from non salvage sales and utility logs that we assumed could not be processed (this depends on the various assumptions in the scenarios).
2. You are correct to interpret that the demand numbers do not include increased timber sales in anticipation of the start up of a mill. Such timber would need to be sold in preceding years to provide sufficient uncut volume under contract.
3. The answer for question 2 also applies to the question about the timber supply of a new facility.
4. You are correct to interpret Table 8 as the projected maximum volume of logs processed in Alaskan mills. It includes, depending on the assumptions in the scenarios, both saw and utility logs.
5. The key independent variables are those that describe the markets for Alaskan forest products outside of Alaska. In earlier versions of the demand projections these were usually described as export markets, primarily to Japan. With the closure of pulp mills in Alaska and collapse of Japanese housing industry, the remaining markets for timber were export logs to the Pacific Rim and increased shipments of lumber to domestic markets. Key assumptions in the model are those explaining the production of forest products in Alaska: energy products, lumber (for both domestic and export markets), chip exports, log exports from the Anchorage custom district, and expected timber harvests from non Forest Service timberlands. While not as important in past studies, the assumption about shipments to domestic markets (in the lower 48 states) is more important in these projections (see assumptions in table 5B).
6. Model projections are always sensitive to the underlying assumptions. Here we illustrate that by including a set of nested scenarios where progressive changes in key assumptions determine differences. Table 3 illustrates how various changes on the demand side might influence the demand for Alaskan National Forest timber. For example, the success of the existing industry in developing new products and markets is illustrated in the second scenario. If that success was greater than portrayed there, new demand projections might be necessary.

/s/ Allen Brackley

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