

Capacity and Capability of Mills in the Clearwater and Nez Perce National Forests Timber-Processing Area

Addendum to:

Timber Use, Processing Capacity, and Capability to Utilize Small-Diameter Timber
within USDA Forest Service, Region One Timber-processing Area

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and

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Introduction

This report was prepared as a forest planning support document for the Clearwater and Nez Perce National Forests as part of Challenge Cost-share Agreement #03-CS-1132463-241, between the USDA Forest Service, Inventory and Monitoring Institute and The University of Montana's Bureau of Business and Economic Research (BBER).

In this report, "capacity" refers to the total volume of timber (excluding pulpwood) that existing timber processors could utilize annually, and "capability" refers to the volume of trees of a certain size class that existing timber processors can efficiently process annually. The major sources of information used to estimate timber flow, timber-processing capacity, and volumes of timber processed were periodic censuses and annual surveys of the forest products industry (see attached Region One report). These censuses and surveys are performed on a regular basis by the BBER, the University of Idaho's Department of Forest Products, and the Department of Natural Resource Science at Washington State University. Follow-up telephone interviews with mill managers were used to update volumes of timber processed, as well as timber-processing capacity and capability to use timber of various sizes. Volumes of timber reported as harvested or processed include timber used to produce manufactured wood products (e.g., lumber, veneer, plywood, posts, utility poles, log homes, and log furniture). The roundwood pulpwood and industrial fuelwood components of the harvest are dealt with separately in the Region One report.

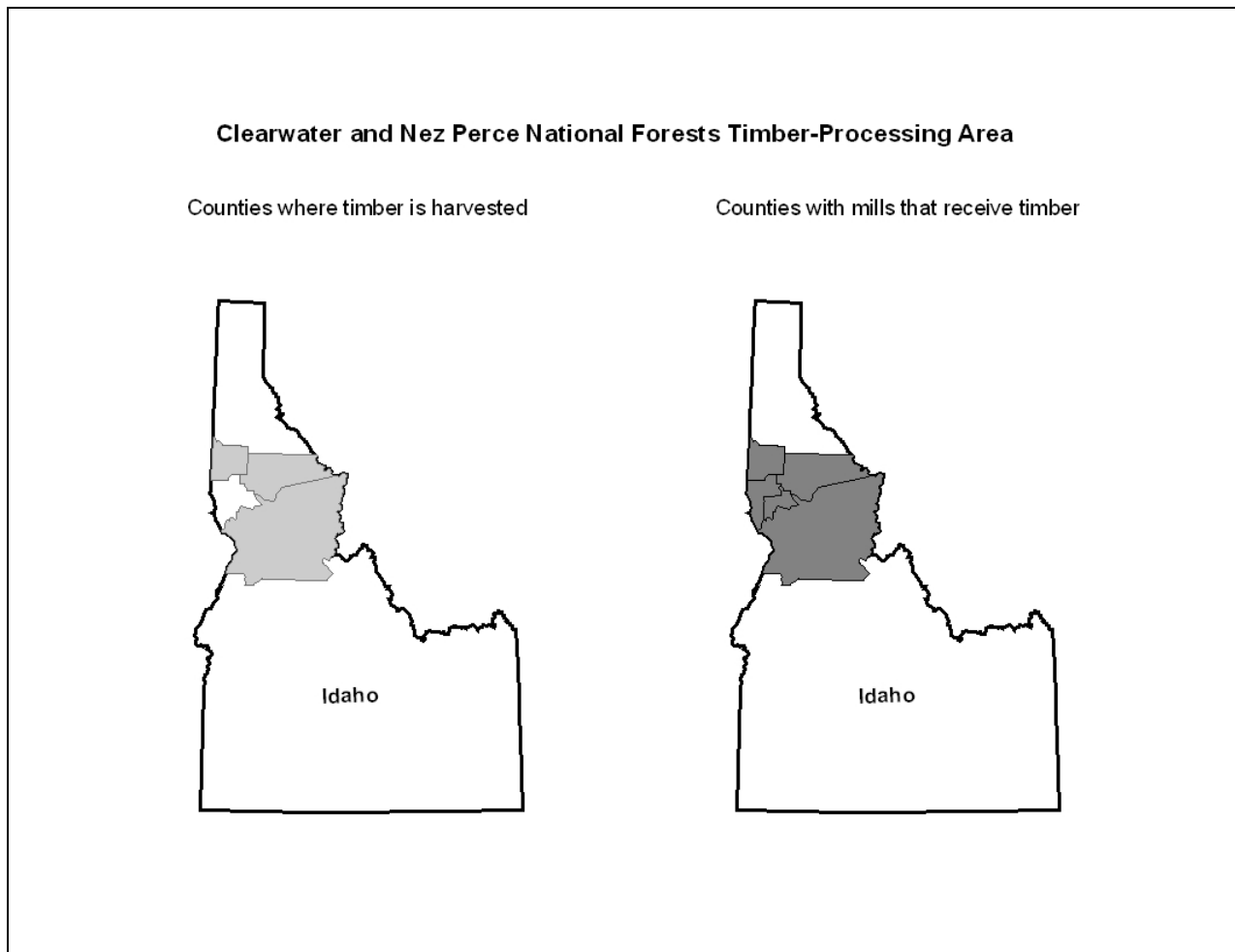
Timber-processing area

The following steps were taken to determine the timber-processing area for the Clearwater and Nez Perce National Forests:

1. Counties containing Clearwater and Nez Perce National Forest non-reserved timberlands were identified.
2. Using BBER databases, timber harvest and flow were analyzed for all ownerships within the above counties.
3. Based on this timber harvest and flow analysis and feedback from January 2005 drafts of this report for each forest, the Clearwater and Nez Perce planning teams designated the Clearwater and Nez Perce National Forests Timber-Processing Area as the five counties with timber processors receiving timber from the two national forests.

The Clearwater and Nez Perce National Forests have non-reserved timberland in three Idaho counties: Clearwater, Idaho, and Latah (Figure 1). Nearly 5 percent of the recent (2001)

timber harvest in this three-county area came from the Clearwater and Nez Perce National Forests. Most (97 percent) of the timber harvested from these counties was from green (live) trees. The species composition of the harvested volume in this three-county area was: true firs 27 percent, Douglas-fir about 26 percent, western redcedar 12 percent, and western hemlock 9 percent. Western larch, ponderosa pine, and lodgepole pine each accounted for 6 percent of the harvest, while western white pine, Engelmann spruce, and other species combined accounted for the remaining 8 percent. About 91 percent of timber harvested from these counties was used for lumber production, 4 percent was used for veneer/plywood, and the remainder for log homes, cedar products, and utility poles.



The Clearwater and Nez Perce National Forests Timber-Processing Area (TPA) was designated by forest planning staff as the 5-county area surrounding the Clearwater and Nez Perce National Forests. The counties comprising the TPA are Clearwater, Idaho, Latah, Lewis, and Nez

Perce in Idaho (Figure 1). Within the TPA there are 21 facilities operating as of May 2006: 10 sawmills, 5 cedar products manufacturers, 3 post and small pole plants, 2 log home manufacturers, and a roundwood chipping facility. More than 100 additional facilities outside the designated TPA also processed timber harvested from Clearwater, Idaho, and Latah counties, and many of these mills used timber from national forests.

Current conditions and capacity

Across Region One, about 80 percent of annual timber-processing capacity is being utilized (see attached Region One report). Capacity to process timber in the Clearwater and Nez Perce National Forests TPA is 91,078 thousand cubic feet (MCF), with 87 percent of capacity being used annually. Timber-processing capacity of all the mills using timber from Clearwater, Idaho, and Latah counties exceeds 400,000 MCF, with approximately 80 percent utilized.

Mills in the TPA are currently using about 79,679 MCF of timber annually (Table 1). About 96 percent (76,789 MCF) of the volume processed in the TPA is composed of trees with diameter at breast height (dbh) $\geq 10''$. Less than 4 percent (2,862 MCF) of the volume processed comes from trees 7 - 9.9" dbh, while less than 0.05 percent (28 MCF) of processed volume comes from trees $< 7''$ dbh.

Thousand Cubic Feet of Timber		Thousand Board Feet Scribner of Timber	
Tree dbh	Volume Used	Tree dbh	Volume Used
<7 in	28	<7 in	28
7-9.9 in	2,862	7-9.9 in	10,992
10+ in	76,789	10+ in	342,930
Total	79,679	Total	353,950

Most facilities are designed to operate using trees of a given size class (e.g., veneer/plywood plants, which typically use trees $\geq 10''$ dbh, or post manufacturers, which use trees $< 7''$ dbh). Capacity at these facilities was readily classified as being capable of processing timber of just one of the size classes. This was true for some sawmills, but sawmills vary greatly in equipment, product output, and ability to process timber of various sizes.

Mills often process trees that are larger than the smallest tree sizes they are capable of processing. In other words, most mills capable of efficiently processing trees 7 – 9.9" dbh are also capable of processing trees $\geq 10''$ dbh, and indeed these mills do process substantial volumes of

these larger trees. However, some mills that process larger trees are not capable of processing smaller-diameter trees. For this reason, this report presents capability to process trees $\geq 10''$ dbh as the proportion of total capacity not capable of efficiently using trees $< 10''$ dbh. Whereas, capability to process trees $< 7''$ dbh and $7 - 9.9''$ dbh are presented as maximum volumes of trees of these size classes that can be processed efficiently.

Financial feasibility analyses, involving repeated simulations of processing logs of a range of sizes through different sawmill configurations (see attached Region One report), were used to estimate the potential for individual sawmills to use trees in each size class. In some cases, particularly where a mill has both small- and large-log capability, expert opinion was employed to estimate the proportion of smaller trees the mill is capable of using.

About 82 percent (74,808 MCF) of the 91,078 MCF of existing capacity in the TPA is *not* capable of efficiently utilizing trees $< 10''$ dbh (Table 2). Approximately 16,270 MCF of timber-processing capacity is capable of utilizing trees $< 10''$ dbh, and nearly all of this is in the $7 - 9.9''$ dbh class. A substantial amount of the capacity capable of utilizing smaller diameter trees is being used to process larger trees or is going unused. About 80 percent of capacity in the $< 7''$ dbh class is currently utilized to process trees $< 7''$ dbh, while just 18 percent of capacity in the $7 - 9.9''$ dbh class is being used to process trees $7 - 9.9''$ dbh. More than 9,200 MCF (57 percent) of capacity capable of using trees $7 - 9.9''$ dbh is used annually to process trees $\geq 10''$ dbh.

Thousand Cubic Feet of Timber		Thousand Board Feet Scribner of Timber	
Tree dbh	Capability	Tree dbh	Capability
<7 in	35	<7 in	35
7-9.9 in	16,235	7-9.9 in	62,344
10+ in	74,808	10+ in	342,983
Total Capacity	91,078	Total Capacity	405,362

* Note: Capability in <7 and 7-9.9 in. classes is maximum volume capable of being used efficiently; capability in 10+ in. class is portion of total capacity NOT capable of efficiently using trees with dbh<10 in.

Among the 100-plus mills outside the TPA that receive timber from Clearwater, Idaho, and Latah counties, additional capability exists to process more than 10,000 MCF of trees $< 7''$ dbh and 75,000 MCF of trees $7 - 9.9''$ dbh annually. Less than 20 percent of capability within each size class is currently being utilized to process trees of the specified sizes.