

Multiple Uses and their Contributions to Local, Regional, and National Economies

TIMBER

Existing Information (36 CFR 219.6(a)(1))

(FSH 1909.12 14.33: Timber management can play an important role in attaining desired conditions for ecological sustainability and can contribute to social and economic sustainability.)

Sections 6.6.2 (Timber Economic Conditions), 6.7 (Federal Land Payments to States), 6.9.4 (Timber Uses, Products, and Services), and 6.10 (Economic Contribution of the National Forest) of the Socioeconomic Assessment address the social and economic importance of the timber resource on the Nez Perce-Clearwater National Forest.

Capacity and Capability of Mills in the Clearwater and Nez Perce National Forests Timber Processing Area produced by the Bureau of Business and Economic Research at the University of Montana also provides information specific to this forest regarding timber harvest and processing capabilities and contributions to this area.

Forest Inventory and Assessment data.

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Informing the Assessment (36 CFR 219.6(a)(3))

What are the current conditions of forests in the plan area?

Forest Inventory and Assessment (FIA) plots have been installed on these two Forests. There are approximately 300 plots on each forest, totaling over 600 plots. FIA is a nationwide project that takes an inventory of forest conditions, and updates that inventory every ten years. The following tables summarize this information for these two Forests. Forty-percent of the plots have since been remeasured and the most recent data compiled to develop these existing conditions.

Table 1. Nez Perce-Clearwater National Forests, current size class and species composition

Size Class	% of NF Area	Species Composition (Plurality)
Non-forest	5	Grasslands, permanent shrub lands, rock, water
Non-stocked	4	Seral shrub and forb species
Trees < 5"	3	Spruce/subalpine fir, Douglas-fir, grand fir, lodgepole pine, western larch
Trees 5" – 9"	10	Lodgepole pine, spruce/subalpine fir, Douglas-fir, grand fir, western redcedar
Trees 9" – 14"	32	Grand fir, spruce/subalpine fir, Douglas-fir, lodgepole pine
Trees 14" – 21"	33	Grand fir, subalpine fir/Engelmann spruce, Douglas-fir, lodgepole pine, ponderosa pine, western redcedar
Trees > 21"	12	Grand fir, ponderosa pine, western redcedar, subalpine fir/Engelmann spruce, Douglas-fir

Source: Nez Perce and Clearwater Hybrid Forest Inventory and Assessment data collected from 2000-2002 and 2004-2007.

Table 2. Existing vegetation composition by species or species mix

Species	Percent
Grand fir	15
Grand fir mix	9
Subalpine fir	8
Subalpine fir mix	6
Western larch and mixes	2
Whitebark pine and mixes	<1
Lodgepole pine	9
Lodgepole pine mix	4
Engelmann spruce	3
Engelmann spruce mix	4
Ponderosa pine	4
Ponderosa pine mix	2
Douglas-fir	8
Douglas-fir mix	9
Western redcedar	3
Western redcedar mix	3
Mountain hemlock	1
Forbs	1
Shrubs	3
Nonforest	5

Source: Nez Perce and Clearwater Hybrid Forest Inventory and Assessment data collected from 2000-2002 and 2004-2007.

Insects and diseases have been present as long as this forest has been in existence, and continue to affect forest composition and structure. Mountain pine beetle has been seriously affecting lodgepole pine across the forest, wherever it is mature - older than 80 years of age or over 7" in diameter. Douglas-fir beetle have been a constant, low-level presence in Douglas-fir forests, particularly where the trees are large (over 21 inches in diameter) or overcrowded and stressed. That stress may be the result of stand density or root rots affecting the trees. Root rots – primarily *Armillaria* and *Schweinitzii* – affect many species, but are particularly damaging to grand fir, Douglas-fir, and young ponderosa pine. Other root rots are also found on the forest, though they tend to be less common. White pine blister rust has almost eliminated western white pine from the forest, and is currently decimating whitebark pine.

Fire risk has also risen in the past few decades. The risk of fire starts is tied most closely to weather – the incidence of lightning strikes. The risk presented by a fire once it starts is dependent on where it starts, and what the fuel conditions are in that area. Where insects and diseases that have left dead wood in the forest, they have increased fuel loads and fire risk.

But it is also a function of fire suppression, which has allowed forests to become denser and have continuous canopy levels. Homes and businesses close to the forest have increased the risk that fires pose to human lives and property.

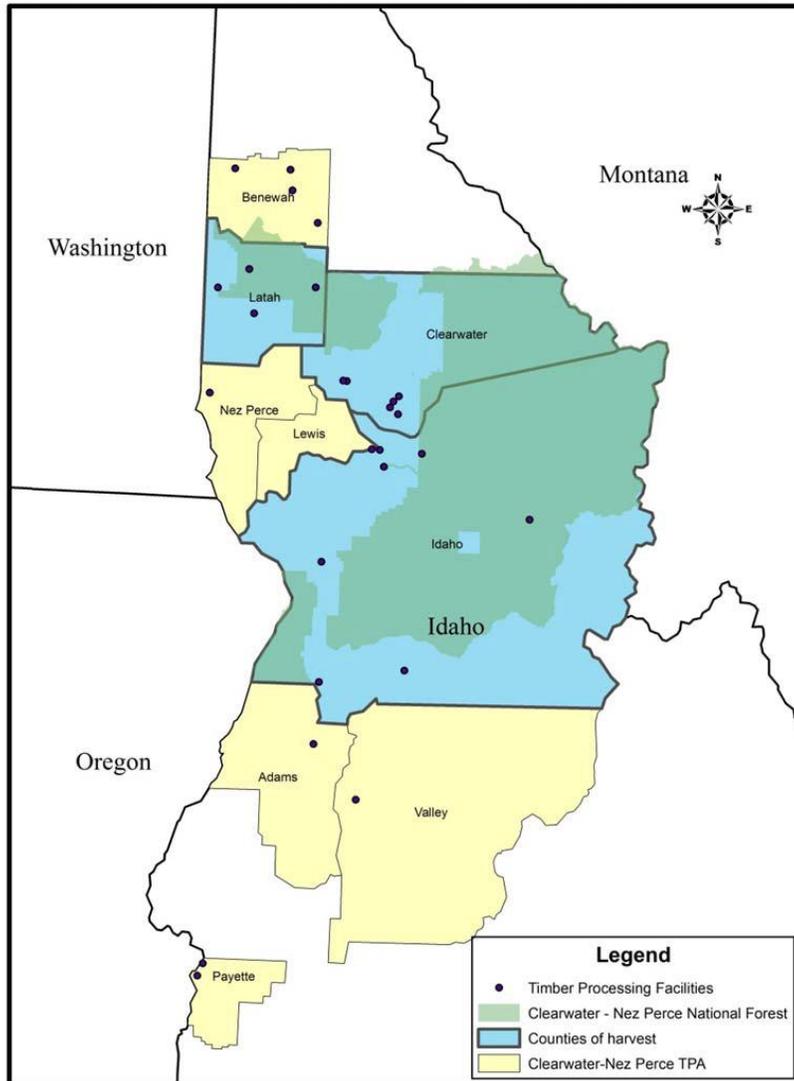
What are the current nature and level of timber management in the plan area and within the broader landscape?

Clearwater and Nez Perce National Forest non-reserved timberland is located in three Idaho counties: Clearwater, Idaho and Latah. The total harvest from all lands in these three counties was 84.3 million cubic feet (MMCF) in 2006 (Brandt and others 2012). Six percent (4.8 MMCF) of the timber harvest in this three-county area originated from the Clearwater and Nez Perce National Forests. Most (98 percent) of the timber harvested from these counties consisted of green (live) trees. The species composition of the harvested volume in this three-county area was: true firs 40 percent, Douglas-fir 25 percent, western redcedar 19 percent, and ponderosa pine 5 percent. Western hemlock was 4 percent of the harvest, while western larch, lodgepole pine, western white pine, Engelmann spruce, and other species combined accounted for the remaining 7 percent. Sawmills and veneer/plywood plants received about 91 percent of the timber harvested from these counties. House logs, posts and small poles, and other mills received less than 2 percent of the timber harvest volume. Pulp and paper mills utilized 7 percent of the 2006 harvest from the three-county region (Brandt and others 2012).

The 2011 harvest in the three-county area was estimated to be approximately 60.7 MMCF. The Clearwater and Nez Perce National Forest contribution was estimated to be approximately 16 percent of the total harvest by all ownerships.

The Clearwater and Nez Perce National Forest Timber-Processing Area (TPA) was defined by the BBER as the nine-county area including: Adams, Benewah, Clearwater, Idaho, Latah, Lewis, Nez Perce, Payette and Valley Counties in the state of Idaho (Figure 1). Within the TPA there were 31 facilities operating as of 2011: 16 sawmills, 5 cedar products manufacturers, 7 log home, manufacturers, one post and small pole plant, one plywood plant, one utility pole plant and one furniture manufacturer.

Figure 1. Clearwater and Nez Perce National Forest Timber Processing Area



Map created by Chelsea P. McIver, Bureau of Business and Economic Research.
 Data courtesy of ESRI, Inc.; Montana Natural Resource Information System (NRIS); Bureau of Business and Economic Research.
 Created August 8, 2012.

Much of the timber management on this forest over the past decade has revolved around fuel reduction in the wildland urban interface (WUI) and non-WUI. Although fuel reduction has been the primary benefit (purpose) at times, secondary benefits are tangible in overall watershed improvement, wildlife habitat improvement, as well as vegetative restoration objectives.

The decade of the 1990s saw a sharp decline in the volume harvested for both National Forests. For the Clearwater National Forest the harvest volume peaked in 1990 at 147.7 MMBF and was at its lowest point in 2008 at 7.3 MMBF. The Nez Perce’s peak harvest occurred in 1989 at approximately 100 MMBF, and harvest volume was at its lowest point in 2006 at 4.8 MMBF.

What is the ability of timber management to affect forest resistance and resilience to stressors such as fire, insects, and disease?

Timber management has the potential to improve forest resistance and resilience to stressors in areas identified for treatment, usually in the roaded portions of the forest. Timber management is a relatively slow process, taking 2 to 5 years from the beginning of planning to the implementation, so it does not respond quickly to rising threats. It works better as a long-term modification of forest composition and structure to achieve resistance and resilience.

What is the ability of timber management to maintain or restore key ecosystem characteristics identified in the assessment of ecological sustainability (sec. 13)?

Where timber management is an option, on the roaded portions of the forest, it can provide opportunities to re-establish early seral species like ponderosa pine, western white pine, and western larch that have been declining in abundance. It can also restore forest structure where historically one- and two-storied forests now have a continuous canopy from ground to tree tops. Where forest densities are higher than historic levels, and put trees at risk to insects and diseases, timber harvest can reduce densities and decrease risk.

What are the current capacity and trend for logging and restoration services and infrastructure for processing wood within the broader landscape?

Milling infrastructure within the plan area has remained relatively intact over the past decade. Bidding competition for timber sales and stewardship contracts has remained high. Similarly, the capacity for logging and restoration services exists at a level adequate to accomplish Forest objectives with competition for these services. Capacity includes mills from within and adjacent to the plan area.

Capacity to process timber in the Clearwater and Nez Perce National Forest TPA was 207 million cubic feet (MMCF). Mills in the TPA are currently using about 115 MMCF of timber annually, or about 56 percent of their total capacity (Table 2). Capacity utilized by mills in the TPA is down significantly since 2006 when mills were reported to be operating at 96 percent capacity. Total capacity to process timber is also down from over 400 MMCF in 2006 to slightly more than 200 MMCF in 2011, even though the TPA increased from five to nine counties (Keegan and others 2006). About 87 percent (99.9 MMCF) of the volume processed in the TPA is composed of trees with diameter at breast height (dbh) $\geq 10''$. Slightly more than 12 percent (14 MMCF) of the volume processed comes from trees 7 - 9.9'' dbh, while just over 1 percent (1,381 MCF) of processed volume comes from trees $< 7''$ dbh.

About 75 percent (156 MMCF) of the 207 MMCF of existing capacity in the TPA is not capable of efficiently utilizing trees $< 10''$ dbh (Table 3). Approximately 51 MMCF of timber-processing capacity is capable of utilizing trees $< 10''$ dbh, and nearly 63 percent of the capacity capable of utilizing trees $< 10''$ dbh 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 going unused. About 7 percent of capacity in the < 7” dbh category is currently utilized to process trees < 7” dbh, and slightly more than 44 percent of capacity in the 7 - 9.9” dbh category is being used to process trees 7 - 9.9” dbh. More than 2.2 MMCF of capacity capable of using trees 7 - 9.9” dbh is used annually to process trees \geq 10” dbh. Recent (2007-2011) poor market conditions for lumber have reduced mill demand for smaller diameter logs used to make studs. As lumber markets recover, increased capacity utilization can be expected across all the size classes.

Mills within the plan area

Mill	Location
Idaho Forest Group	Grangeville, Idaho
Blue North	Kamiah, Idaho
Idaho Forest Group	Lewiston, Idaho
Tri-Pro	Orofino, Idaho
Empire	Weippe, Idaho
Bennett Lumber Products	Princeton, Idaho
Idaho Cedar Sales	Troy, Idaho

Mills adjacent to the plan area

Mill	Location
Tamarack	New Meadows, Idaho
Stimpson	St. Maries, Idaho
Stimpson	Plummer, Idaho
Idaho Forest Group	Chilco, Idaho
Guy Bennett Lumber	Clarkston, Washington
Pyramid	Seeley Lake, Montana
Tricon	Superior, Montana
Tricon	St. Regis, Montana

What are key trends that drive the supply and demand for timber in the plan area?

The supply and demand for timber is driven by regional, national or global issues. Local drivers are small in scope and scale and generally have inconsequential effects on the overall market for timber and/or lumber products. Larger issues such as export demand, housing starts and home improvement trends are examples that drive the supply and demand for timber.

The supply of federal timber to the market within the plan area is impacted somewhat by local environmental issues as well as involvement by local interest groups.

What changes are expected in these trends over the next 20 years. For example, are housing demand, biomass development, restoration activity, or timber markets likely to influence timber management or demand in the plan area?

Brandt, et al. (2012) and Morgan, et al. (2012) the reasons for the decline in the primary wood industry in Idaho are: 1) the 35 percent reduction in timber harvest driven by the 80 percent decline in the Federal timber sale program (1990-2006) and the collapse of the U.S. housing market (2006-2010).

According to Skog et al. (2012), other factors influencing the future of the forest products industry, besides the economic recovery and housing starts, include the intensity of wood use per unit of economic activity, global demand and supply, and the long-term value of the dollar. Consumption of wood for energy, though closely linked to pulp and solidwood products production, will be influenced by changes in the price of fossil fuel relative to wood fuel, changes in wood energy technologies, and changes in regulations or incentives. Buongiorno et al. (2012) project that the consumption of manufactured wood products will grow modestly with only small price changes between now and 2060. However, the consumption and price of fuelwood is expected to increase substantially.

What is the contribution of timber management in the plan area for ecological, social and economic sustainability

The counties in the analysis area all derive a higher percentage of their employment from timber-related industries than either the state or the nation (Figure 6-6). Lewis County has the highest percent of employment in timber-related industries, at 21.5 percent, and both Clearwater and Nez Perce depend upon timber for more than 10 percent of their employment.

Lewis County's timber employment saw a large decrease after 2001, recovered in 2007, and then fell again. Idaho County's timber-related employment increased in 1999 and then remained fairly steady up to 2008, when it more than doubled its 1998 levels. Levels then fell drastically in 2009. Timber-related employment in Nez Perce and Latah Counties changed relatively little over the period.

(I can't pull this chart out of the .pdf report – any suggestions?)

Figure 6-6. Percent of Total Employment by Commodity Sectors for the Five Counties in the Analysis Area, the State of Idaho and The United States

Note: Data for timber and mining are from County Business Patterns which excludes proprietors, government, and railroad.

Data for agriculture are from Bureau of Economic Analysis. The latest year for each data source may vary due to different data release schedules. (Accessed via EPS-HDT)

Information Needs (36 CFR 219.6(a)(3))

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