

CHAPTER 19 – WOODLAND AND TIMBER RESOURCES

19.1 RESOURCE OVERVIEW

Woodland resources are generally defined as those tree species that are used as non-sawtimber products and are sold in units other than board feet. Woodland resources within the Monticello Field Office (FO) area consist primarily of pinyon pine (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*). Pinyon–juniper woodlands are characterized by trees that are less than 33 feet tall. They can comprise a closed or open woodland.

Closed conifer woodlands (>60 percent canopy cover) are dominated by pinyon pine with Utah juniper as a common associate. This is the most extensive forest type in Utah exceeding, in acreage, all other forests combined (Ron Lanner 1984). Utah juniper is the more xeric of the two, often serving as nurse trees for pinyon in well-developed woodlands. The undergrowth is variable and dependent upon canopy closure, soil texture, elevation and aspect. Elevation varies from 5,000 to 8,000 feet between the lower elevation, more xeric, cool desert shrub community that is dominated by sagebrush and the higher elevation, more mesic, mountain brush or Ponderosa pine (*Pinus ponderosa*) communities (Welsh et al. 1993).

The open conifer woodlands form a wide landscape with moderately open to very open canopies (25 - 59 percent canopy cover) and is found at elevations of 4,000 to 7,000 feet. Major cover types include Utah juniper with associated shrub species like big sagebrush (*Artemisia tridentata*) and native bunchgrasses. Utah juniper increases with grazing and has spread from thin substrates along ridges and mountain slopes to deeper valley soils.

Annual precipitation in these communities typically ranges between ten and 15 inches in these areas. Pinyon seedlings are highly tolerant of shade and establish best under canopy cover. Pinyon trees begin producing seeds as early as 25 years of age, but not regularly or in large quantities until 75 to 100 years of age. The scaled foliage of the juniper allows it to conserve water more effectively than pinyon pine. Seedlings are shade-tolerant and establish quickly in cut or burned areas. Junipers begin producing seeds as early as ten years of age, but not regularly or in large enough quantities to be effective seed sources until 100 years of age (BLM 1985). Most of the area where pinyon and juniper woodland currently dominates was historically characterized by fires burning every 15 to 50 years (Kitchen 2004, Miller and Tauch 2001).

These woodland resources are used as firewood, fence posts, and Christmas trees and also have value for watershed, wildlife habitat, recreational, and visual resources. Juniper and pinyon are harvested as the preferred species for firewood, fence posts, and to some extent, Christmas trees. There are no commercial sales of woodland resources within the FO area at this time.

Cottonwood (*Populus* spp.) is an additional component of the FO area's woodland resources that grows in riparian areas, with value to Navajo Nation for ceremonial purposes. Cottonwood is critical to the proper functioning of riparian systems, in that it provides bank stabilization, shade, and wildlife habitat. Refer to Chapter 12–Riparian and Wetland Resources and/or Chapter 13–Vegetation for more information.

For the management and planning purposes of this AMS, timber resources have been combined with woodland resources. Timber resources within the Monticello FO area consist of small stands of ponderosa pine, Douglas fir (*Pseudotsuga menziesii*), cottonwood, quaking aspen (*Populus tremuloides*), oak species (*Quercus* spp.), and box elder (*Acer negundo*). The quantities and concentrations of these timber species are too low to have commercial value, though they do have scenic, habitat, and watershed resource values. No commercial sales or harvesting of any timber species take place within the FO area.

Figure 19-1 depicts the GIS coverage for places in the Monticello FO area where pinyon, juniper, ponderosa pine, oak species, riparian (cottonwood) species, aspen, and other timber species of interest are concentrated.

19.2 SPECIFIC MANDATES AND AUTHORITY

BLM woodland resources are managed under both federal and state laws and regulations. The major applicable laws and regulations are:

- The Material Sales Act of 1947 (43 U.S.C. 601) – This federal law authorizes the disposal of timber and other vegetation resources on public lands, including lands contained within unpatented mining claims after July 23, 1955.
- Sales of Forest Products (43 CFR 5400) – This federal regulation establishes procedures for disposing of forest products through sales or free use.
- Trespass (43 CFR 9230) – This federal regulation establishes procedures for determining kinds of trespass and the penalties that can be assessed for the unauthorized removal of woodland products from public lands.
- Utah Transportation of Forest Products Act of 1983 – This state law requires proof of ownership of forest products being transported, making it illegal to transport forest products off of BLM-managed land without a proper permit.
- 5400 Utah State Office Supplemental Guidance of 1986 – These state-specific BLM guidelines provide direction and procedures for resource management planning, activity planning, and sales of woodland products in Utah.
- BLM Instruction Memorandum (IM) 2003-035 Implementing the President's Healthy Forests Initiative – This IM provides guidance for actively managing woodlands to reduce hazardous fuel loads, create woodland resilience to disturbances, and emphasize appropriate commercial use of woodland products to meet ecological, economical, and community goals.
- Tribal Forest Protection Act (2004) (118 STAT. 868; Public Law 108-278 – July 22, 2004) authorizes the Secretary of Agriculture and the Secretary of the Interior to enter into an agreement of contract with Indian tribes meeting certain criteria to carry out projects to protect Indian forest land.

19.3 CURRENT MANAGEMENT PRACTICES

The Monticello FO manages woodland products by controlling harvests and sales. It sells woodland resources in informally designated areas for fuelwood, posts, Christmas trees, and other uses as demand arises. Fuelwood harvests are limited to pinyon and juniper; on-site harvests of trees by recreationists, usually as fuel for campfires, are allowed except where specifically excluded (BLM 1991).

The Monticello FO has conducted 72 pinyon-juniper treatment projects and treated 32,191 acres, primarily in the 1960s and 1970s, to remove pinyon-juniper and convert woodlands to grasslands for livestock and wildlife forage (BLM 2004). Because of subsequent regrowth of pinyon-juniper, many of these project areas are now in need of re-treatment and additional management. These areas are managed through the Moab Fire District. Re-treatment would consist of prescribed burning and/or other types treatments (i.e., mechanical, chemical) to reduce fuel loads (BLM 1989).

19.3.1 Allocations

Utah manages nearly six million acres of woodlands, mostly comprised of pinyon-juniper, compared to 271,000 acres of forested land. There are four and one half million acres of available woodlands and 12,000 acres of available forestlands within the state (BLM 2002).

In accordance with Monticello FO policy, ten percent of the value of all woodland sales is retained at the Monticello FO to defray the cost of road maintenance in woodcutting areas, and 40 percent of the value of woodland sales is retained to defray the costs of land reclamation.

The current management of woodland resources within the Monticello FO area is guided by decisions made in the San Juan Resource Management Plan (BLM 1991). This plan identifies management actions to support the woodland management objectives of 1) allowing use of woodland products in areas specified for this use; and 2) preserving woodland products in other areas to meet RMP goals. The current management actions for the resource, as specified in the RMP, include:

- Assigning all forestlands in the resource management area to one of four categories:
 1. Lands available for intensive management of forest products
 2. Lands available for restricted management of forest products
 3. Lands where forests are managed to enhance other uses
 4. Forestlands not available for management of forest products
- Using the RMP goals and management objectives to determine which areas are assigned to each category, and imposing conditions on forest products use; and
- Prior to any land treatment project that would remove woodland products, striving first for woodland sales and second for free use of woodland products.

The management guidance for developing forest resources is:

- The Monticello FO may develop forest resources for sustained yield, where feasible, in areas where forest product sales are allowed under the RMP; and
- The RMP may impose conditions of use or reclamation requirement in certain areas (BLM 1991).

Table 19.1, below, outlines the management prescriptions for woodland harvesting and the number of acres allocated for management under the current RMP. Acreages are derived from GAP satellite data and GIS spatial analysis.

Table 19.1 Woodland Management Acres

Woodland Management	Acres
Designated areas ¹	315,890
Seasonal restrictions ²	540,260
Exclude from woodland products use except for limited onsite collection of dead fuelwood (for campfires) ³	299,630
Exclude from all woodland products use (including onsite collection of dead fuelwood for campfires) ⁴	250

Table 19.1 Woodland Management Acres

Woodland Management	Acres
Standard conditions in all other areas not listed above	620,160
Total Acres	1,776,190

Source: BLM 1991

¹ Cedar Mesa ACEC, partial; Scenic Highway Corridor ACEC; most ROS SPM-class areas; existing land leases.

² Seasonal restrictions to protect bighorn sheep lambing and rutting areas, antelope fawning areas, and deer winter range. Note: the Area Manager may approve case-by-case exceptions to these specific management prescriptions if sufficient justification exists to show that the prescription is not needed.

³ Areas excluded from woodland products use (except for limited onsite collection) include: Bridger Jack Mesa ACEC, Butler Wash ACEC, the Grand Gulch special emphasis area within Cedar Mesa ACEC, Dark Canyon ACEC, floodplains, riparian/aquatic areas, Hovenweep ACEC, Indian Creek ACEC, Lavender Mesa ACEC, Shay Canyon ACEC, five identified mesa tops, most ROS P-class areas, ROS SPM-class areas within the San Juan SRMA, and Pearson Canyon hiking area.

⁴ Developed recreation sites.

19.3.2 Uses

The limited information available regarding the current level of woodland harvesting is derived from data on woodland harvesting permits sold by the Monticello FO. For FYs 2000–2003, the trend indicates an increasing number of permits were issued for harvesting wood products (BLM 2003). The actual level of woodland harvesting within the Monticello FO area is unknown because 1) resource monitoring is very limited; 2) the FO area is large, remote, and difficult to access; and 3) it is assumed that some people cut wood without purchasing a permit. Table 19.2 shows the number and types of sales in the past four years.

Table 19.2. Woodland Resource Sales for FYs 2000 – 2003

Commodity	FY 2000		FY 2001		FY 2002		FY 2003	
	Quantity	Sale Total						
Fuel Wood (\$5 per cord)	898	\$4490.00	1103	\$5515.00	1191	\$5955.00	1137	\$5685.00
7-foot Posts (\$0.20 each)	2111	\$422.20	1641	\$328.20	1796	\$359.20	1805	\$361.00
>7-foot Posts (\$0.50 each)	1065	\$532.50	1199	\$599.50	1509	\$562.00	1130	\$565.00
Wildlings ¹ (\$1.00 each)	30	\$30.00	32	\$32.00	117	\$117.00	109	\$109.00
Live Trees (\$1.00 each)	9	\$9.00	0	0	4	\$4.00	10	\$10.00
Total Sales	4113	\$5483.70	3975	\$6474.70	4617	\$6997.20	4191	\$6730.00
Permits Issued	413		490		456		513	

¹ Woodland products for ornamental or landscaping purposes.

Source: BLM 2003

19.3.3 Current Conditions

It is estimated that pinyon and juniper woodlands have increased ten-fold over the past 130 years throughout the Intermountain West (Miller and Tauch 2001). Fire suppression and lack of thinning have contributed to dense, over-mature stands of pinyon-juniper throughout the Monticello FO area, and woodland fuel loading is increasing (refer to Chapter 5–Fire Management for more information). The inadequate harvesting or thinning of pinyon-juniper woodlands within the FO area is also creating conditions in which growth and succession of woodland stands are exceeding their carrying capacity, thus causing a decline in understory vegetation and creating stresses from competition that lead to tree mortality. Stressed trees are more susceptible to disease and insect infestations, further contributing to fuel loading of dead/down wood. These conditions are also increasing the potential for uncontrolled, catastrophic wildfires. Noxious weed species could replace woodland species in those woodland areas that are burned by uncontrolled, catastrophic wildfire.

Since the approval of the current RMP, drought situations have weakened the pinyon and juniper trees, and an infestation by the Ips engraver beetle (*Ips* spp.) has caused a severe die-off. Based on the current trend, the infestation is likely to increase, exacerbated by current drought conditions and the competitive stresses described above. Currently, there is no program to contain the infestation, and though the rate of infestation and the degree of damage to woodland resources are unknown, the potential for a significant loss of woodland and timber resources is high. The loss of these resources would result in more fuel loading, further contributing to conditions that could increase the potential for catastrophic wildfires (Wallace 2003).

In riparian areas, cottonwoods are being replaced by tamarisk (*Tamarix* spp.) resulting in decreased wildlife habitat and overall watershed health. For more information please refer to Chapter 12–Riparian and Wetland Resources and/or Chapter 13–Vegetation.

Past management practices to improve grazing habitat for wildlife and cattle included chaining of pinyon-juniper stands. This management technique is no longer a preferred treatment and is not being used at this time. Currently, a program is being developed (in coordination with the Moab FO) to thin the woodland understory using prescribed fire to decrease fuel loading/hazardous fuels and to maintain old chained and reseeded areas (Wallace 2003).

Creation of wilderness study areas (WSAs) within the FO area have closed these areas to woodcutting, prescribed burning, and other woodland management options, and this may have a long-term, negative affect on woodland resources. The WSAs also preclude commercial harvesting and access trail construction. The WSAs are, in effect, woodcutting and prescribed burning exclusion zones. These conditions support the growth and succession of woodland stands that exceed their carrying capacity, cause a decline in understory vegetation, and create stresses from competition that lead to tree mortality, similar to conditions and effects described above for woodland resources throughout the Monticello FO area. Currently, there is no woodland resource monitoring in the Monticello FO area, except unscheduled, occasional fuel load assessments being made by BLM fire personnel (Wallace 2003).

19.4 RESOURCE DEMAND AND FORECAST

The current use of woodland resources within the Monticello FO area is non-commercial harvesting of pinyon and juniper for fence posts, firewood, and Christmas trees. Such harvesting is allowed with a permit issued by the Monticello FO. Permits are not issued for collection of dead and downed cottonwood for ceremonial purposes.

The demand for woodland products (including firewood) is expected to increase. The number of cords of firewood that were sold over recent years has increased from 898 cords in 2000 to 1137 cords in 2003 (BLM 2003). The sale of Christmas trees is highly variable, and fluctuates from year to year. There are no limitations on woodland sales except in fire exclusion areas (designated as Wilderness Areas and WSAs). Refer to Table 19.2 for information on woodland resource sales.

19.5 CONSISTENCY WITH NON-BUREAU PLANS

19.5.1 US Forest Service (USFS) – Manti-La Sal National Forest

The Monticello FO coordinates its fire-fighting efforts and plans with the Manti-La Sal Ranger District through the Moab Interagency Fire Center (MIFC 2004). Fuelwood reduction planning and implementation is coordinated through Desert Edge Fuel and Fire, an interagency fuels and fire group that includes the USFS, BLM, National Park Service (NPS), and the State of Utah (O'hanlon, personal communication, 2004).

19.5.2 Bureau of Indian Affairs (BIA)

The Monticello FO coordinates its fire fighting, fuels reductions, and fire-planning efforts with the BIA through the Southwest Coordination Center (SWCC) in New Mexico, an interagency wildland fire resource center (Hammond, personal communication, 2004).

19.5.3 Utah School and Institutional Trust Lands Administration (SITLA)

The current Utah SITLA policy on woodland resources is to identify areas that exhibit woodland or forest health problems and then conduct woodland sales in those areas. Woodland resources are relatively scarce on SITLA-administered lands and are primarily concentrated in areas outside of Monticello FO area boundary. Currently, Utah SITLA does not coordinate its woodland harvesting with the Monticello FO (Wilcox, personal communication, 2004).

19.5.4 San Juan County

The County policy on public land multiple use is that lands administered by the BLM, unless specifically withdrawn through Congressional mandate, should be managed under the principles of multiple-use and sustained yield. This includes timber and "production timber (to include wood products like fence posts and firewood)" (San Juan County 1996).

19.6 ISSUES OR CONCERNS

- Pinyon-juniper die-off associated with Ips beetle infestation and drought has led to an increase in field loading and hazardous fuels within the Monticello FO area and a risk of losing valuable woodland resources.
- A potential conflict exists between the Navajo Tribe's need to use the resource as fuelwood and the Monticello FO's need to manage the woodlands in order to reduce the threat of catastrophic wildfire. Cedar Mesa is an area where the conflict is most obvious between the BLM and Tribal resource needs.
- Monitoring of woodland resources is infrequent and limited, and the lack of resource monitoring is directly related to budgetary constraints and the BLM priority allocated to the woodlands

program. Fire personnel occasionally measure fuel loads, but information on the condition of woodland resources in the Monticello FO area is limited, as is woodland inventory information.

- Unmanaged woodland harvesting is damaging surface cultural resource sites and creating a network of unauthorized roads and trails that degrade visual quality, increase soil erosion and sedimentation, and affect overall watershed quality.
- Native Americans want to be able to collect live cottonwood, however, this species is valuable for wildlife (T&E species) habitat, riparian function, and overall watershed health, and is being replaced by invasive species including tamarisk.

19.7 MANAGEMENT OPPORTUNITIES AND LIMITATIONS

19.7.1 Woodland Resource Inventory

A woodland inventory of the entire FO area could provide essential information for future management of the resource. With an accurate woodlands inventory, resource use could be directed to those areas with the greatest need for thinning or intensive management, and fuel loads could be assessed to identify those areas with a need for prescribed burning or other fire management techniques. Inventory data would assist with setting harvest limits, and determining the sustained yield would assist in restoring woodlands to a healthy, stable condition, not subject to severe disturbances and fluctuations.

19.7.2 Pretreatment Prior to Prescribed Burning

Some areas designated for prescribed burning may benefit from other woodland improvement techniques before burning in order to improve woodland health. Management opportunities might include reducing fuel loads within prescribed burn areas via firewood sales or commercial woodland sales. However, any improvement projects within WSAs are limited to hand treatment techniques. Other management opportunities may include designating free-use firewood collection area, with proper monitoring, to reduce fuel loads.

19.7.3 Prescribed Burning

Prior to prescribed burning, the Moab Fire District could determine fuel loads within the FO area with the intent of improving woodland health. Those areas with the highest potential for catastrophic wildfire should be considered for treatment.

19.7.4 Wildlife Habitat Improvement

Management opportunities that would improve wildlife habitat include converting some pinyon-juniper stands in deeper soils, especially areas of encroachment, to non-woodland areas (sagebrush, grasslands, etc.). Pinyon-juniper stands with little or no understory cover have increased soil erosion rates and would benefit from some stand manipulation.

19.7.5 OHV Use Control

Management opportunities could include designating areas within the Monticello FO area for OHV use so as to be compatible with the management objectives of woodland resources.

19.7.6 Commercial Woodcutting

Management opportunities could include reassessing the need for commercial woodcutting of pinyon and juniper. At present, no commercial cutting of woodland (or timber) resources is occurring or is planned. Commercial cutting should be considered an option in reducing hazardous fuel loads, promoting woodland health, and helping to stabilize and create a sustainable woodlands resource.

19.7.7 Livestock Forage

As with wildlife habitat, by converting some pinyon-juniper stands in deeper soils, especially areas of encroachment, to non-woodland areas (sagebrush, grasslands, etc.) availability of forage for livestock and wildlife would increase, while also decreasing soil erosion rates, and improving overall watershed quality.

19.7.8 Coordination between Adjacent Jurisdictional Agencies

Memorandums of Understanding (MOUs) should be considered between the Monticello FO and the USFS, Ute Tribes, Navajo Nation, the SITLA, San Juan County, and the NPS to coordinate prescribed burning within the Monticello FO area. The MOUs would assist with conflict resolution between these entities.

19.7.9 Limitations

Woodcutting restrictions and fire exclusion zones within WSAs limit the ability of the Monticello FO to reduce fuel loading, improve stand health, and reduce the potential for catastrophic loss of the resource. Management (or lack there of) on lands adjacent to the Monticello FO area, along with budget, limit the overall management of woodland health by BLM. However, the most important limitation lies with climactic conditions – current drought conditions have allowed for increased pinyon-juniper die-off, thereby increasing fuels loads/fire hazards, and decreased resource regeneration.

19.8 REFERENCES

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