

**NIFRMA Task D** - An evaluation of procedures employed in timber sales administration, including preparation, field supervision, and accountability for proceeds.

IFMAT I and II drew many of their findings from six elements that had been identified for tribes to obtain the full benefits from timber harvested from their forest. These six elements pertain to timber sale preparation, marking, bidding, size of sale, utilization, and scaling. Business management was also found to be important. IFMAT III found many of the six elements had improved and that key findings in IFMAT III Task D are more on business management and the relationship between the BIA and tribal forestry programs as well as the relationships between the natural resource departments/tribal forestry programs with Tribal Councils and enterprises. Improvements have been made in the relationships between the BIA and tribal forestry programs, but there has been little improvement in the relationship between the natural resource departments/tribal forestry programs and the forest products enterprises.



Mobile yarder/loader – Spokane. Photo by Mark Rasmussen.

Timber sales occur on tribal trust lands, allotted lands, and tribal fee. On some reservations, the BIA arranges tribal timber sales and provides the sale layout for timbered allotments through direct services. On other reservations, tribal forestry programs, through contract or compact, provide the tribal timber sale preparation and administration and may also employ an allotment forester to take care of allotted lands. Allotments and tribal trust lands are those lands that are held in trust by the federal government. Tribal fee lands are lands that tribes have acquired often for purposes of consolidation or economic development. Tribal fee lands, just as

non-Native private forests and woodlands, are subject to the forest practices regulations and taxes imposed by state governments. When possible tribal forestry programs may consolidate sale preparation and administration of tribal trust and tribal fee lands as well as allotment timber sales to reduce cost and improve efficiencies.

As tribes pursue self-governance and gain greater control over their forests, tribal timber sales and forest management practices more closely reflect tribal objectives than at any time since federal authority was initiated, however, government statutes and procedures remain as obstacles to effective marketing and sale of timber (Hill and Arnett 1995).



Mechanized log processor on the landing – Quinault. Photo by Mark Rasmussen.

The tribal timber sale layout process presently includes an inter-disciplinary team (IDT) approach that develops formal environmental assessments (EA) including NEPA and ESA. A review of the EA is conducted by the BIA and a Finding of No Significant Impact (FONZI) is prepared before a proposed timber sale can move forward through the process. The sale, including an appraisal of value, is then prepared and approved by the Tribal Council and the BIA. Following approval the sale can then be advertised. Sales are commonly stumpage sales and can be harvested over a three-year period. Generally one sale is prepared at a time and made available for purchase before preparation of another can begin.



Skidder logging over frozen ground – Penobscot. Photo by Larry Mason.

By comparison, the timber sale processes widely employed by industrial forestland owners may be delivered log sales or stumpage sales. Where multiple species are sold, as in the Pacific Northwest, the delivered log sale process is favored. Where one or two species are being sold and are of similar size and quality, as in the southeastern U. S., the stumpage sales process is more common. The process is direct and streamlined and often the sale areas are chosen to attempt to meet the demands of the market place and the purchasing strategies of the log buyers as well as to accommodate least costs for harvest and transport.

Most private timber sales programs do not conduct a formal environmental assessment but instead complete an environmental checklist that reviews the issues associated with the timber sale area. This does not necessarily mean that environmental protections are compromised as evidenced by the fact that many industrial timberland owners are compliant with the requirements of third party certification. Silvicultural prescriptions are developed by foresters and the sale is prepared and approved by the resource manager. The sale is sold by species, product type and sometimes by grade to the highest bidder for each sort. Delivered log sale contracts generally last three to nine months and are negotiated between seller and purchaser based upon the short-term market demand of the region and the negotiated price leverage of buyer and seller. In the case of stumpage sales, which are generally sold on a lump sum or pay as cut basis, the timber is sold to the highest bidder at auction and can be available for harvest at any time for 1 to 3 years depending on the payments schedule and contractual requirements of each landowner. Industrial timberland owners strive to reduce administrative costs while increasing stumpage returns. The major differences between industry and tribal timber sales processes are shown in Table D.1.

Table D.1. Comparison of industrial and tribal timber layout process

	<b>Tribal Timber Sale</b>	<b>Industry Timber Sale</b>
<b>Environmental Assessment</b>	Prepare EA with ID Team, complete public input, prepare FONZI, Tribal and BIA approval required	Complete an environmental checklist for sale area
<b>Type of Sale Advertisements</b>	Primarily stumpage sales	Primarily delivered log or lump sum stumpage payment for sale
<b>Harvest Timelines</b>	Stumpage sales: 3 year contracts	Delivered logs: 3 to 9 month sale Stumpage sales: 1 to 3 years
<b>Ability to Respond to Markets</b>	Sales are slow, cumbersome, and cannot respond to market conditions.	Short layout period and quick harvest response creates loyal customers and market flexibility.

## Findings - timber sale preparation

**D1. The requirements included in the National Environmental Protection Act (NEPA) and the Endangered Species Act (ESA) increase the cost of timber sale preparation,** lengthen preparation time, and reduce opportunities to meet market and tribal goals. The tribal timber sale preparation process includes many federal requirements such as NEPA and ESA that are time-consuming and expensive. NEPA and ESA requirements burden tribal funding and staff resources that could otherwise be directed toward other forestry activities. ESA in particular frustrates forestry staff who often consider the management of a single species as not compatible with holistic tribal worldviews and harvest constraints as a compromise to beneficial use of the Indian trust lands. Many feel that impacts to tribes are a result of poor practices on other land ownerships. Both NEPA and ESA procedures require interdisciplinary analysis and expertise that are not adequately supported by BIA. This is particularly true for disciplines outside of forestry such as wildlife biology, hydrology, or fisheries.

**D2. The timber sale process and appraisals on many reservations could be more efficient** to meet market fluctuations and improve revenues. The Code of Federal Regulations (CFR) works for some reservations, but many tribal foresters feel it needs to be updated and revised. The trust responsibilities in dealing with the timber sale process, the CFR, and stumpage appraisal system appear to be applied differently for each reservation. Clarification of the trust responsibilities for each of the unique situations on the tribes needs to be evaluated.

The CFR is considered obsolete by some and examples include the requirement by the BIA to conduct an appraisal from stump to lumber to determine stumpage values. This exercise

calculates for many sales a deficit and after completing the process the BIA then negotiates with the tribe to establish a minimum stumpage value. Tribal foresters also point to the large amount of documentation and paperwork necessary to complete a BIA timber sale as compared to a tribal timber sale. Some tribes have been able to prepare timber sales particularly salvage sales after wildfires within three to six months. Timber sales not involving an emergency harvest can take up to two years.



Tribal timber sale preparation on left as compared to BIA timber sale preparation for an allotment on right for similar timber types and acreages – Tulalip. Photo by Larry Mason.

**D3. A suite of “shelf ready” timber sales is desirable** to take advantage of spot market opportunities and require sufficient prepared timber volume to be ready for rapid sale. Alternative procedures to current appraisal methods are needed to allow tribal foresters sufficient flexibilities to exploit transient market opportunities. The timber sales flexibilities created by pipeline sales inventories can be particularly important during periods of market instability and economic downturn. At several reservation visits, we heard of delays in timber sale offerings created by the need to have distant BIA offices review and sign-off on documentation. Funding and staffing shortages (see funding and staffing discussions in Tasks A & C) mean that tribal foresters have multiple responsibilities and consequently, in some

cases, appear to subordinate timber sale preparation when more urgent priorities arise. Effective marketing of timber involves a combination of the timing of sale advertisement, harvest delivery schedules, log manufacturing quality and providing consistency in delivering annual sales volumes. As sawmills manufacture product for sales, the species, log quality and volume availability are important for them to meet their customer's expectations. An efficient log seller that can reliably satisfy such expectations can become a preferred supplier with ability to leverage market premiums for timber sales programs. When developing a timber sale program, sale preparation should be a facet of the whole log marketing process such that a variety of customers and products are considered to ensure sufficient utilization and market return for the total harvest yield. An adequately funded and staffed approach to forest management that considers market forecasting, marketing strategies, and coordination with existing mills can improve cultural, employment, and stumpage value returns (see planning discussion in Task F). Creation of pipeline inventories of prepared timber sale units will require a short-term investment in timber sales preparation to create an inventory that can be carried forward and replenished as needed.

**D4. Producing “shelf-ready” timber sales provides lead-time** for road installation, road maintenance, and developing and implementing transportation plans that can reduce the cost of harvesting. Reducing harvest cost increases revenues to the tribes. Forest management by adjacent state and private landowners generally includes timber sale preparation for harvest areas at least one full year in advance of sale with planning for sales beginning two years out. This lead time provides for road installation, road maintenance and to evaluate marketing strategies and harvesting configurations as well as logistics options such as access (right-of-ways) as needed that can reduce harvesting and transportation costs. IFMAT I and II identified a lack of competition for sales and logging contracts as a cause of compromise to tribal sale revenues. The lack of planning to control cost and forecast markets also compromises tribal revenues. An evaluation of timber sale harvesting cost per unit can identify the differences and opportunities prior to implementing harvest operations and ensure that other tribal goals are being addressed.

## **Findings – marketing, timber sales, and stumpage values**

**D5. Tribes use many different methods to determine the value of their logs** and stumpage, and questions remain as to whether they are receiving appropriate value. Each tribe has different goals and objectives specific to the needs of their communities and forests: some operate sawmills, while others sell delivered logs or stumpage. Many are in remote locations. As identified in previous IFMATs, there is a need for an auditing procedure to document the competitiveness of forest enterprises and monitor the stumpage comparisons between tribes and neighboring lands.

Table D.2. Regional stumpage return comparisons between tribes and state forestry programs.

<b>Stumpage Prices 2011</b>	
<b>Region</b>	<b>Ave \$/MBF</b>
<b>Northeast Region</b>	
Maine	\$145
Minnesota	\$146
Lake States	\$328
<b>Average Tribal Stumpage Value</b>	<b>\$87</b>
<b>Northwest Region</b>	
Washington Westside	\$361
Oregon West Side	\$398
<b>Average Tribal Stumpage Value</b>	<b>\$278</b>
<b>Inland West Region</b>	
Eastern Washington	\$205
Idaho	\$201
Montana	\$127
<b>Average Tribal Stumpage Value</b>	<b>\$120</b>
<b>SW Region</b>	
Arizona	N/A
New Mexico	N/A
<b>Average Tribal Stumpage Value</b>	<b>\$18</b>
<b>West Region</b>	
California	\$397
<b>Average Tribal Stumpage Value</b>	<b>\$326</b>
<b>Southeast Region</b>	
North Carolina	\$144
Virginia	\$177
<b>Average Tribal Stumpage Value</b>	<b>\$47</b>

Tribes use many different methods to determine the value of their logs and stumpage. Some tribes use a stump to mill calculation developed by the BIA. Others that operate sawmills have used models to determine the appropriate stumpage arrangement for dedicated sale from the tribal forestry program to the tribal enterprise. Log value estimates are based on the value of lumber less the costs of harvest and processing or can be estimated based upon the value of log sales on adjacent timber lands. The results must be carefully considered because the tribes have different market (dollars) and non-market (jobs, environmental and cultural benefits) objectives associated with outcomes of timber harvest.

Some tribes in remote locations have sawmills and it has been challenging in the soft lumber market of the past five years to operate and consequently many of these facilities are closed

at this time. Other tribes in regions where there is sufficient processing capacity to support competitive log markets sell logs on the open market albeit in reduced volumes in recent years. Questions remain on many reservations as to whether the tribes are receiving appropriate value for their timber. Table D.2. shows that tribes generally receive less for their logs than neighboring state forestry programs. There are many reasons why log sales might be compromised such as poor timber quality, poor market leverage, and distance to markets. IFMAT I and II identified the need to develop an auditing procedure to document the competitiveness of forest enterprises and to monitor the stumpage comparisons between the tribes and neighboring lands. There remains a need to monitor timber values and stumpage comparisons.

Tribal enterprises can create numerous community benefits through a multiplier effect that is not well documented. In isolated communities and reservations with high unemployment, the creation of jobs can avert significant health and social service costs. Tribal enterprises that manufacture lumber products provide a considerable number of jobs on reservations with their sawmill enterprises and often are the only opportunity to provide better forestry. They are essential to local communities. A critical lack of economic information about the market and nonmarket value relationships unique to reservations clouds understanding of trust obligations, handicaps forest planning, and confounds best value estimation for comparative timber sale arrangements.

**D6. Some tribal enterprise businesses are accustomed to marketing logs and managing harvest operations, while a few are manufacturing logs for standard and specialty lumber products.** On many reservations the tribes maintain marketing enterprises that are separate from forest management programs. Some enterprises oversee tribal sawmill operations, but most enterprises oversee production and marketing of logs. Log marketing enterprises generally receive tribal timber at a price determined by a BIA approved appraisal system. Sometimes these sales are exclusive and other times enterprises must compete with non-Native timber buyers. Generally in the latter case, the enterprise is given the option of matching the high bid and being awarded the sale. This is almost always the case for allotted timber sales to tribal enterprises so that allotment owners are assured that they receive the highest return that the market provides. Forestry enterprises generally contract with tribal loggers and log haulers to grade and sort logs for sale to international and domestic markets. On some reservations, the profits generated by enterprise activities are used to purchase forest lands for the tribe.





From the woods to the mill – Menominee Tribal Enterprise. Photos by Larry Mason.

A few tribes have sawmills that process tribal products (at the time of this writing only four are operating but two more have plans to reopen within a year). Most tribes contract with companies owned by tribal members to perform logging and hauling operations, conduct thinnings, and complete forest development work on reservations. Tribal contractors support reservation employment with most payroll dollars spent locally creating high leverage within the social accounting matrix (SAM). Benefits also accrue off reservation when parts, fuels and equipment purchases are needed. A few larger tribes with forest products enterprises manage sawmills that may employ as many as 200 people at each location. The multiplier effects of reservation resource management and manufacture have never been adequately investigated and consequently are poorly understood. For isolated economies such as reservations that are burdened with high unemployment, the avoided health and social service costs associated with job creation can be significant. Reservation economies are unique in many other respects as well since trust resources are communally owned and support tribal benefits such as schools and elder care. A critical lack of economic information about the market and nonmarket value relationships unique to reservations clouds understanding of trust obligations, handicaps forest planning, and confounds best value estimation for comparative timber sale arrangements. BIA has not undertaken economic research in more than twenty years. BIA should provide economics support to tribes by initiating studies to help understand comparative value recoveries from Indian forest resources.



Loaded log truck – Fort Apache. Photo by Larry Mason.

**D7. Better coordination between the Tribal Councils, Enterprise Board of Directors, and the Natural Resource Programs would help** in integrating social, economic, and political concerns with environmental concerns. This integration is critical to improving forestry operations on reservations. Lack of effective communications and alignment in planning between tribal forestry/natural resource departments, tribal councils, enterprise managers and boards, causes inefficiencies in implementing management processes and incurs higher cost and lower revenues for tribal products.

We saw little improvement in relationships between the natural resource departments, tribal forestry programs, and forest products enterprises. Better coordination between tribal councils, enterprise board of directors, and the natural resource programs would help in integrating social, economic, and political concerns with environmental concerns. This integration is critical to improving forestry operations on reservations.

**D8. NIFRMA identified the need for BIA to provide technical support for marketing strategies** for both domestic and international sales opportunities. BIA technical support and marketing specifically are identified under NIFRMA as elements of trust responsibility. However, BIA technical support for marketing has been missing for many years. Without

availability of reliable marketing expertise, potential opportunities for tribal enterprises to expand and improve domestic and international sales will be foregone. The lack of marketing assistance was identified in IFMAT I and II and continues to restrict tribes marketing opportunities. A recently completed study of the potential for expanding access for Indian forest products to broader domestic and international markets found that shortages of skilled marketing and sales personnel within Indian Country was a primary obstacle to progress (Morishima et al. 2011).

**D9. Opportunities may exist for tribes to expand hazardous fuels reductions on federal forests through the Tribal Forest Protection Act (TFPA) and Stewardship Contracting while helping provide raw material needed to support log markets and processing infrastructure.**



Stewardship contracting discussion at the Sitgreaves National Forest - Fort Apache visit. Photo by Vincent Corrao.

Throughout much of the inland west, milling infrastructure has largely disappeared and consequently there is little value to be recovered from the harvest of forest products. However, declines in forest health and changing climate trends are contributing to an expensive and environmentally-destructive wildfire emergency the worst of which is on federal forests adjacent to tribal reservations. Tribes share 3,000 miles of common boundary with federal forests. In 2004, Congress acknowledged the threat to Indian Country created by fires that start on federal lands when it passed the TFPA. Prior to that in 1998, the USFS, at Congress's direction, began a program of Stewardship Contracting whereby community contractors could assist the Forest Service with hazardous fuels removals in exchange for a combination of financial compensation and timber salvage. The effectiveness of fuels treatments in reducing the hazard and costs of wildfires is well-documented (Peterson et al. 2005, Graham et al. 2004,



Stewardship contracts between tribes and adjacent national forests benefit both ownerships. Before and after treatment examples are shown as paired photos for Mescalero/Lincoln National Forest (top) and Flathead/Lolo National Forest (below). Photos by Larry Mason.

Keyes and O'Hara 2002, Omi and Martinson 2002,). Indian tribes with ready workforce and next door to federal forests have sought TFPA and Stewardship Contracting opportunities, however, progress has been slow and only a handful of projects have gone forward while millions of forest acres remain at risk.

The BIA, the USFS, and the Department of Energy have encouraged the tribal use of biomass for energy production and market development for small diameter logs but the opportunities vary considerably by regional. Tribes in the Northeast and Midwest have markets and can sell biomass and benefit from an economic return. Tribes in the dry forests of the Northwest and Southwest do not yet have markets and consequently non-merchantable material must be removed and burned at considerable cost to reduce wildfire hazard. To restore process infrastructure needed to create value for logs, underwrite costs of forest restoration projects, and spur renewable energy development a sustainable flow of raw material must be available in sufficient supply and certainty to support investment.

Expanded use of TFPA and Stewardship Contracting authorities offer such opportunities. For tribes the benefits are manifold: expanded markets for timber sales from increased supply and activity, more employment for tribal members, opportunities for energy development, and safer home reservations. TFPA and stewardship contracting opportunities should be aggressively pursued towards creation of long-term (10 plus years) contracts such that skilled human resource can be recruited and retained and investments in equipment can be justified.

## **Finding - allotment management**

### **D10. The cost of preparing timber sale activities and administering allotments**

**continues to be high** due to small land parcels, checker-board ownership, and fractionation. The high cost to prepare and administer allotments which are generally smaller parcels and not contiguous on the reservations continues to be a barrier. Landscape management requires extended planning horizons and stable ownership. In the case of allotments, the consent of numerous heirs, often living in widely separated counties or states, must be obtained before a sale is sold. Timing for allotment timber sales is more generally a function of how the parcel has progressed through the sales queue rather than market timing. Allotment timber sales require time-consuming boundary surveys. Allotment management is further plagued by lack of BIA law enforcement to protect from timber trespass. Many allotments may be land locked without right-of-ways. Reservations with higher percentage of acreage in allotment ownerships require high management costs to meet federal regulatory requirements. The Indian Land Consolidation Act (ILCA) was passed to help tribes reacquire allotments and consolidate ownerships but funding and acreage acquisitions have been limited. There is a need to continue consolidation of allotment lands on reservations to reduce cost and provide effective long-term landscape management to meet tribal vision and goals. The recent Cobell settlement will

certainly help consolidate allotments (DOI 2012b). However, there is uncertainty about what percentage of the \$1.55 billion available for allotment purchases might be spent to acquire interests in allotted forest lands.

## **Finding - accountability for proceeds**

**D11. Evaluation of accounting procedures includes an assessment of the Trust Asset and Accounting Management System (TAAMS).** TAAMS stores information and provides an accounting system to help distribute proceeds from the sale of forest products and to support the management of trust title ownership, encumbrance, and land records through a centralized Bureau wide system. Initially the TAAMS Land Title and Records Office (LTROs) could not record title documents, deeds, leases, and probates received from agencies and field offices with the speed required to certify and issue Title Status Reports and successfully complete trust asset transactions. Prior to TAAMS the agency offices manually created and mailed title documents to LTROs, who manually recorded, microfilmed and entered data into the title system to maintain title documents. TAAMS significantly reduced the amount of time needed to process documents and closes the gap between manual and automated delivery and processing of title documents and certified land title products and reports.

Some of the tribes indicated that they have significant problems with the Bureau documents and the TAAMS. TAAMS provides many challenges in establishing tribal priorities due to its inability to provide timely and accurate ownership information.

When BIA personnel retire, it can be difficult for new staff to learn to use the TAAMS program. Some BIA foresters report that the TAAMS process is not as easy for reconciling payments as the older system possibly because TAAMS was designed primarily for oil and gas accounting. However, we have heard that TAAMS has made a significant difference in the ability to ensure that the payments are accurate and timely. Continued training is required if tribes are to benefit from the TAAMS.

## **Recommendations**

The earlier IFMAT assessments made recommendations that are still valid today. Good progress has been made on many of the original six elements identified in the earlier assessments. Funding, communication, and education in business operations and marketing opportunities are needed to improve efficiencies and implementation of long-term forest management.

- D1. Forest Management Plans and Integrated Resource Management Plans should include strategies for long-term harvest planning and marketing of tribal forest products.** An approved FMP or IRMP can be used as a guide for harvest scheduling and for gaining efficiencies in timber sale preparation.
- D2. An auditing procedure should be developed to document the competitiveness of forest enterprises.** IFMAT I and II identified the need to develop an auditing procedure to document the competitiveness of forest enterprises. This will require periodic monitoring of stumpage comparisons between the tribes and neighboring lands to determine whether tribes are receiving appropriate value for their logs. The audit process should produce benchmark cost analysis for personnel, harvesting, and management cost. This would provide tribes with metrics to evaluate efficiency of their timber programs as compared to others.
- D3. Improve coordination among Tribal Councils, Enterprise Boards of Directors, and Natural Resource Programs.** Studies of the social, economic, political and environmental performance of these communities is needed to better understand the suite of benefits and multiplier effects of Indian timber harvest both on and off the reservation. It was found in IFMAT II that there is a need to have natural resource personnel on enterprise boards and that enterprise personnel should be part of the interdisciplinary resource team in planning management activities.
- D4. Develop a timber market reporting system that monitors and periodically publishes log and stumpage price values to compare domestic and international sale values.** The BIA has not undertaken economic and market research for over 20 years. A market reporting system that monitors and publish delivered logs prices, stumpage values, produce benchmark cost analysis for personnel, harvesting and management cost periodically would provide the tribes metrics to evaluate the efficiency of their programs and to determine if they are receiving appropriate economic value for their forest products.
- D5. Consolidation of allotments represents high economic and conservation value recovery. Create a system of matching funds to underwrite land reacquisition costs for tribes that choose to provide a percentage of the purchase costs.** Unfortunately, ILCA and Cobell alone will not solve this problem; an additional step worthy of consideration would be creation of matching funds to underwrite land reacquisition costs for Indian tribes that choose to provide a percentage of the purchase costs. The high cost to prepare and administer allotments on the reservations continues to be a barrier to combining landscape management with meeting tribal and allottee goals.
- D6. Provide consistent programmatic funding to adequately address unfunded mandates and improve timber sale preparation timelines.** Research the opportunity to develop blanket environmental assessments to help reduce sale preparation and improve

opportunities to capture market trends. Evaluate the CFR required by the BIA to understand the value of the documentation and requirements necessary to complete the timber sale process under these guidelines.