



MINNESOTA'S COUNTY LAND MANAGEMENT
A UNIQUE OWNERSHIP PROVIDING DIVERSE BENEFITS

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Introduction

In the United States, there are a number of different forest ownership types – including private, public, and many variations of the two. Each ownership type provides different opportunities and benefits. Several states, including Minnesota, provide an illustration of the benefits of having diverse forest ownerships. Minnesota is among a small number of states that have county managed forest land. This report explores the history and current contribution of Minnesota’s county-managed forest lands, including the diverse social, economic and environmental benefits they provide.

Background

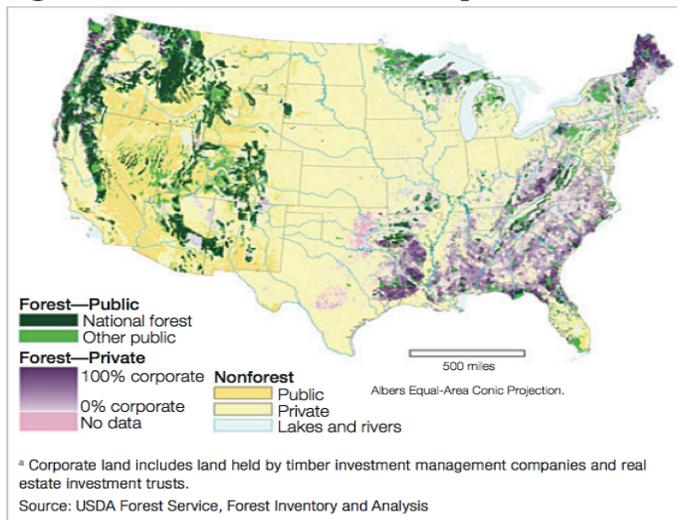
Forest land ownership is commonly described in two general categories: private or public. In reality, each of these categories includes a number of possible sub-categories (Table 1).

Table 1. Common Categories of Forest Land Ownership in the United States

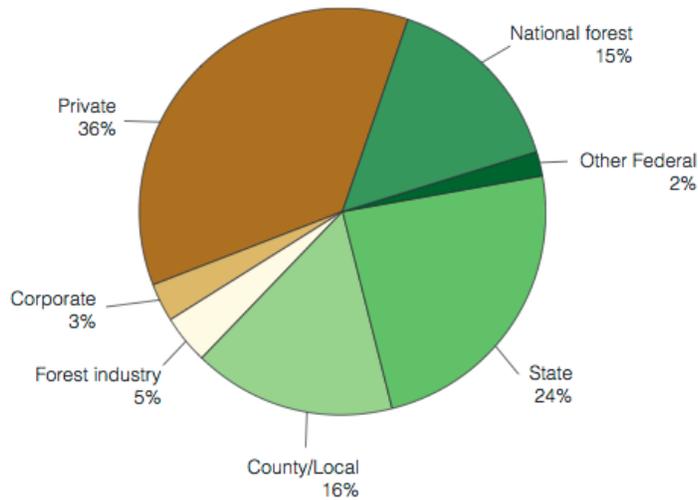
<i>Private Ownership Types</i>	<i>Public Ownership Types</i>
Industry/Industrial	Federal
Non-Industrial	State
Family Forest	County
Tribal/First Nations	Municipal

This diversity of ownership has implications for forest management on that land, as both regulations and landowner objectives can vary significantly by ownership category. For example, Federal forest ownerships are directly regulated by federal rules and regulations, and any change in management operations may require Congressional action. In contrast, Family Forests are directed by private decision-making as well as government regulations. Applicable regulations can vary at the state and local level, and management decisions are influenced by individual values, objectives, and preferences.

Figure 1. Forest Land Ownership in the U.S.



In general, having diverse forest ownership can be a good thing, by creating both private market opportunities while also ensuring stability through public policy. However, diverse forest ownership categories are not evenly distributed across the United States. As can be seen in Figure 1, in the conterminous United States there is a concentration of public lands in the west and a concentration of private land in the east and southeast. A number of states have a diverse mix of forestland ownerships.

Figure 2. Forest Land Ownership in Minnesota

Source: USDA Forest Service, Northern Research Station (2003)

As shown in Figure 2, there is considerable diversity in forest ownership within Minnesota. Minnesota's public land (shown in various shades of green) is distributed between National Forest and Other Federal (17%), State (24%) and County/Local (16%). The county-lands category is fairly unique nationally and falls within a land management niche that allows local government control and decision-making. In Minnesota management of county land is done in partnership with state agencies. Managed county forestlands exist in other states, including Wisconsin and Michigan.

Minnesota's County Forest Lands: *A History*

There are approximately 9.5 million acres of county and municipal forestlands in the United States, and nearly 30% of these acres are located in Minnesota (Brown, 2010). County forest in Minnesota encompasses over 2.7 million acres (Table 2).

Minnesota's "county forests" originated during the 1930s. During the era of the Great Depression, the state was challenged with the consequences of unsustainable farming practices, cut-and-run logging, bankrupt homesteads and devastating wildfires. Thousands of acres of land became tax delinquent as owners could not, or for a variety of reasons would not, pay their taxes. These lands were labeled "worthless" and became the "lands nobody wanted."¹

In 1935, in an attempt to return the tax delinquent acres to private ownership, the Minnesota Legislature provided for forfeiture of these lands to local counties, thereby enabling their resale to others. By this time, about eight million acres of tax-forfeited land had accumulated. Delinquency and subsequent forfeiture continued at a high level into the 1960s.

As the demand for land remained low and many of the acres were not re-sold, the land continued to be the responsibility of the local county governments. Over time, the counties began to recognize opportunities to care for these lands in ways that could rebuild the soils, restore forest habitats, enhance local communities and create long-term economic returns. Counties found they could manage the lands to grow trees on a sustained-yield basis and the returns from this management could improve the environment and also provide jobs, revenues to meet public needs, and other benefits.

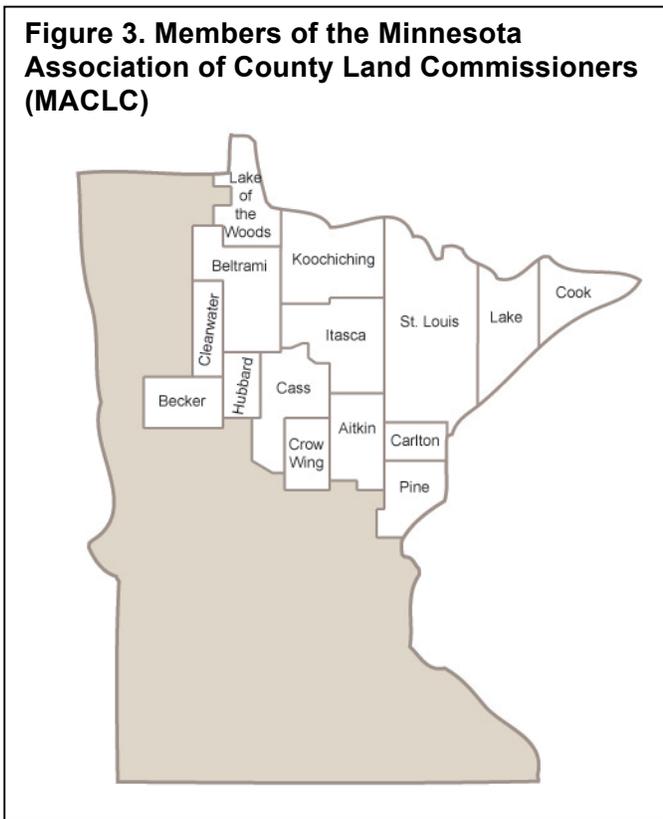
¹ For more information about the history of Minnesota's county lands, see: <http://mncountyland.org/>

Table 2. County Lands in Minnesota

Minnesota County	Acres Managed
Aitkin	222,000
Becker	75,000
Beltrami	147,000
Carlton	72,000
Cass	255,000
Clearwater	90,000
Cook	3,000
Crow Wing	105,000
Hubbard	137,500
Itasca	245,000
Koochiching	286,800
Lake	151,000
Lake of the Woods	550
Pine	48,000
St. Louis	900,000
<i>Total</i>	<i>2,737,850</i>

Minnesota counties, primarily in the northern regions of the state, began to appoint land commissioners to serve as stewards of the land, adopt forest resource policies, and initiate forest management programs. In 1979, the Minnesota Legislature enacted "Payment In Lieu of Tax (PILT) Legislation" that encouraged retention of the tax-forfeited land by the local public land managers. The law provided compensation to local taxing districts (i.e., counties) for retaining land that represented a loss of tax base. These payments remain important for sustaining the needs of local communities and ensuring continual stewardship of natural resources (MACLC 2011).

Figure 3. Members of the Minnesota Association of County Land Commissioners (MACLC)



County Lands: *The Forests Nobody Wanted Now Providing Unique Local Benefits*

To be effective in meeting the responsibilities of management and stewardship of Minnesota's forest resources, professional forest managers founded the Minnesota Association of County Land Commissioners (MACLC) in 1984. Today there are fifteen northern Minnesota counties active in MACLC (Figure 3). These 15 counties account for more than 2.7 million acres of forest (Table 2).

Although county land managers share a commitment to responsible forest management and collaborate on shared interests through their membership in MACLC, the counties do not share a uniform plan or prescription for management of forests. Each county manages its woodlands independently. The objectives of management depend on the current condition of the land, the land's ecological potential (e.g., locally

appropriate tree species and wildlife habitats) and the needs and expectations of the public and citizens. Local interests, including the common use of citizen advisory committees, inform management decisions and county staff and boards administer the lands. In this way, these county lands can be characterized as "Minnesota's Community Forests".

Local Leadership for Responsible Forest Management

In recent years, county land departments have provided leadership in several areas linked to responsible forest management. These include third-party forest certification, forest-based carbon offset opportunities, motorized recreation management, and forest inventory needs. The counties have worked both individually and collectively on these matters, and their efforts have included collaborations with other public agencies, private companies, and diverse stakeholders.

Forest Certification

County land departments in Minnesota were among the first land managers in the nation to pursue third-party forest certification under Forest Stewardship Council (FSC) standards. In 1997, lands managed by the Aitkin County Land Department achieved FSC certification, and these lands have maintained that status.² Since those beginnings more than 15 years ago, many other counties have also had their lands certified. Today, over 90% of the MACLC member lands are third-party certified, including Aitkin, Beltrami, Carlton, Cass, Clearwater, Crow Wing, Itasca, Koochiching, Lake and St. Louis counties. County land departments have also collaborated with local businesses and logging industries to support participation in chain-of-custody certification to increase the potential for certified forest products to reach end consumers with a verified eco-label.

Carbon Offsets

The counties have also contributed to improved understanding of carbon offset opportunities that may be derived from responsible forest management. Aitkin and Cass County Land Departments collaborated with researchers in 2008 to evaluate carbon offset opportunities. Results from the project showed that forest lands administered by the Aitkin and Cass County Land Departments contain at least 10 million tons of stored carbon, or about 36 million tons of carbon dioxide equivalent (MTCO₂e). This carbon storage represents the annual emissions of almost 6 million automobiles.³ The study included estimates of carbon storage in live trees and roots. Studies of regional forests indicate that at least an equal amount of carbon is also stored in the dead standing and downed wood, as well as in the understory plants and soil. Information from this research and related work was shared through workshops hosted by the counties and supported by a grant from a local private foundation. The workshops engaged carbon experts from across the country and efforts continue to pursue development of forest-based carbon offsets in the region.

Motorized Recreation

In Minnesota, as in other parts of the country, there has been growing diversification of recreational interests. New outdoor adventure sports have emerged – including snowboarding, mountain biking, off-road vehicles, and All-Terrain Vehicles (ATVs). Forests, and especially public forest lands, frequently provide important opportunities for recreation. As recreation interests have changed, public land managers have had to respond to new expectations and demands. Over the years, county land managers in Minnesota have developed trails for hiking, snowmobile riding, equestrian interests, and others. In the mid-2000s, a growing area of public interest and conflict in the state was motorized recreation trails for the recreational use of ATVs or other Off-Highway Vehicles

² At the same time county-managed lands in Aitkin County were first certified, the state managed lands located in the county were also certified.

³ The "average" automobile getting twenty-one miles per gallon and driven 12,000 miles per year emits about 6 tons of CO₂ per year.

(OHVs). In response to these pressures, counties in Northern Minnesota championed a comprehensive approach to recreation planning and a method of developing regional trail systems that can support a large number of diverse uses over a significant area. The Northwoods Regional ATV Trail⁴ is the result of more than six years of work by Aitkin and Itasca Counties and other partners to gather public input, develop trail proposals, and ultimately build or connect over 500 miles of recreational trail. Collaboration with other counties and public agencies, including the Minnesota Department of Natural Resources has aided the project’s success, resulting in a socially, environmentally, and economically beneficial approach to addressing recreational opportunities and conflicts.



Forest Inventory

Having good forest data and information (i.e., inventory) is a critical aspect of responsible management. In the early-1980s, Minnesota completed a comprehensive forest inventory process with funds provided by the federal government as part of a settlement over the Boundary Waters Canoe Area Wilderness designation. Since that time, the quality of the available inventory data has eroded, resulting in extremely variable statewide forest inventory information in Minnesota. For some lands and cover types (e.g., priority commercial species) there is good information available for evaluation of management opportunities and impacts. For other lands, habitats, and species, the data is more than 30 years old or there is a reliance on more generalized information available through the U. S. Forest Service. In recent years, MACLC members have identified investments in new inventory information and methodology as a top priority for their continued forest stewardship. In 2013, the counties completed a review of their individual inventory needs and identified shared priorities (Table 3). The management priorities range from cost savings and better use of technology to integration with other natural resource data such as native plant communities and soils. Many priorities are widely shared among county land managers.

Table 3. Minnesota County Forest Inventory Priorities

Activity/Desired Outcome	Level of Interest*
Allow inventory to be done more efficiently (<i>reduce time and cost</i>)	High
Improve systems for keeping data up-to-date (<i>maintenance plan, modeling, etc</i>)	High
Greater use of technologies (<i>digital data collection and transfer</i>)	High
Ability to share, merge or aggregate data	High
Incorporate Native Plant Communities (NPCs)	High
Incorporate Soils data	Medium
Consistency in data collection across agencies	Medium
Support Annual Inventory Updates	Medium
Support use of Continuous Forest Inventory (CFI) systems	Low
Address Recreation Management needs	Low
Higher quality aerial photography	Low

Source: Dovetail Partners and MACLC 2013

* High – Most/All Counties; Medium – Majority of Counties; Low – A Few Counties

⁴ <http://www.northwoodsatvtrail.com/>

With the advancements in digital and data related technologies in recent years and the growth in ecological understanding, the counties recognize that there are diverse potential benefits of a modernized forest inventory effort. As part of the 2013 inventory review process, the counties identified example opportunities for applying modern forest inventory approaches and innovations locally to address diverse management needs, including recreation management, water quality protections, non-timber forest products, and more (Table 4).

Table 4. Examples of Minnesota County Inventory Opportunities

Benefit Category	Inventory Activity
Recreation Management	Pilot the use of Native Plant Community (NPC) data to evaluate appropriate sustainable recreational activities, inform land use planning and management, and communicate decision-making process to the public
Water Quality	Utilize improved inventory data (forest cover types, species, age, native plant communities, soils, etc.) to evaluate current conditions in known impaired watersheds and develop long-term plans
Non-Timber Forest Products	Improve inventory data collection modules to monitor and evaluate sites for non-timber forest product collection (e.g., spruce tips, balsam boughs, birch bark, etc.)
Forest Health and Productivity	Enhance use of high resolution aerial photography and digital imagery to enable evaluations of forest health conditions, including conditions following storm events
Native Plant Communities	Field test NPC mapping, evaluate accuracy, and make recommendations for expanded use of NPC data
Forest Ecology and Successional Pathways	Evaluate and model cover type changes and stand development at critical habitat and forest health stages (e.g., jack pine, red pine, and aspen stand dynamics at stem exclusion age)
Landscape Planning and Management Goals	Identify opportunities for landscape scale improvements and monitor progress towards goals across ownerships

Source: Dovetail Partners and MACLC 2013

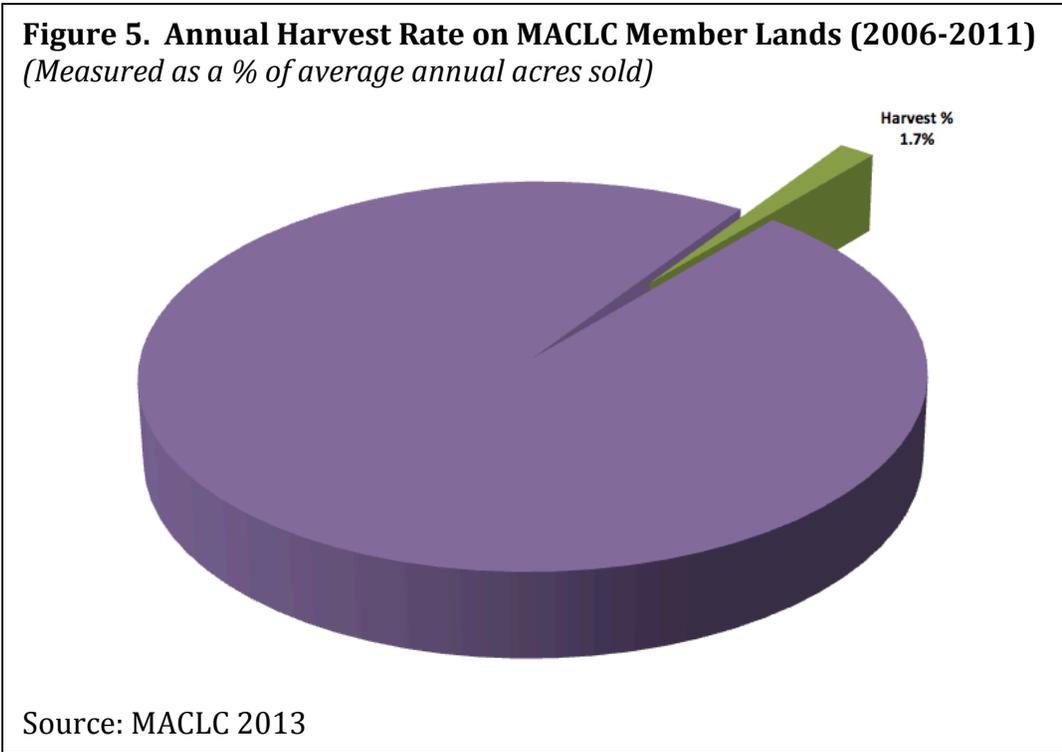
Measuring the Impact and Benefits of County Forest Lands

Minnesota’s county-managed lands provide an array of benefits. The list of ways that the public engages with and benefits from these lands is extensive. Examples include: wildlife watching, hunting, camping, fishing access, wild harvesting (e.g., berry picking, mushroom gathering, etc), timber and non-timber forest product harvesting, photography, geocaching, snowmobiling, hiking, horseback riding, diverse motorized recreation, and more. Most of these benefits and services are not easily quantified and many are provided at no direct cost, which makes estimating their value difficult. However, related research has explored the potential value of these types of benefits. For example, research suggests that access for use such as hunting may provide real economic value to the public. A study of private landowners in northern Minnesota found that the purchase of public access for hunting would likely require an estimated mean annual compensation of \$50 per acre (Kilgore et al 2008). Applying this valuation to Minnesota’s county forests means that the hunting access benefits alone provide a potential annual value of \$137 million to the state. Recognizing that hunting access is only one of many benefits, the total value provided by these county forest lands is likely much greater.

Minnesota’s county forests provide a potential annual value of \$137 million in the form of public hunting access benefits

One traditional benefit of the county lands that has been measured and quantified on an annual basis is the timber harvest. The following figures illustrate the forest management activities on MACLC member lands.

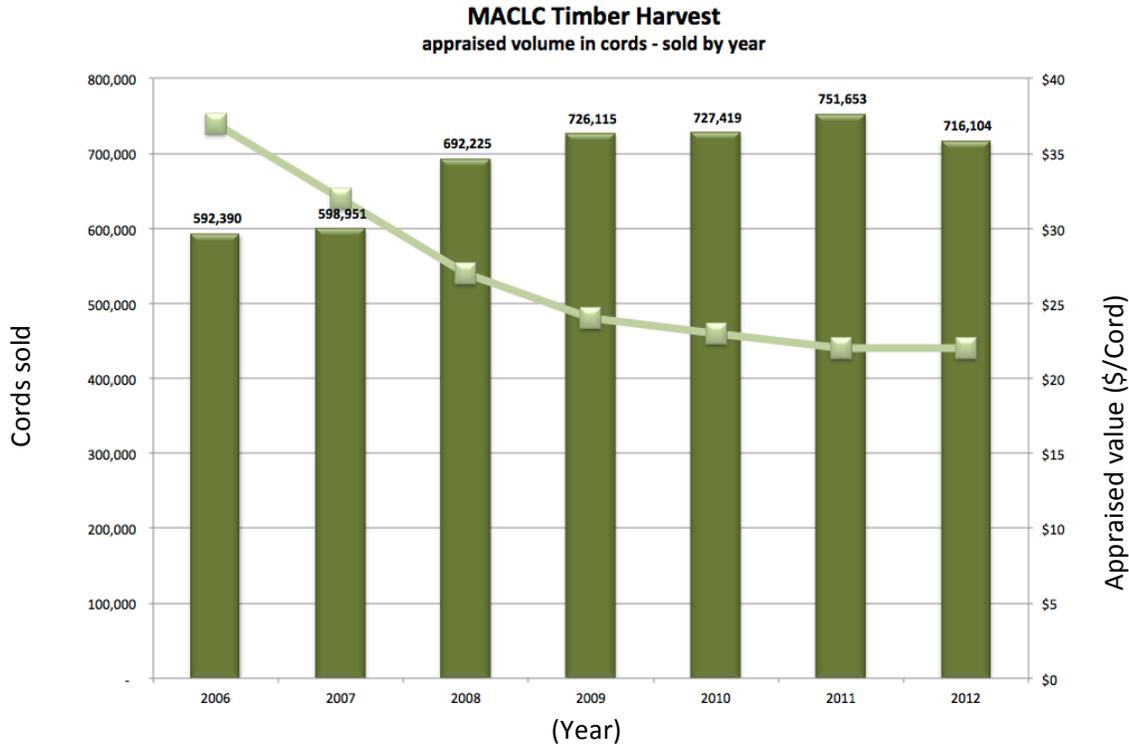
As shown in Figure 5, less than 2% of county forest lands are harvested annually. Stated another way, 98% of the lands each year are providing undisturbed habitat, water quality and recreation benefits. The county land managers monitor the annual harvest rate with oversight by the county board, citizen advisory groups and certification auditors to ensure that the county land departments are not exceeding sustainable yields. The monitoring and maintenance of a responsible harvest level is an important part of maintaining third-party certification for the county forestlands.



Although only a small percentage of the county forest lands are harvested each year, the material these lands provide is an important contribution to the local economy and forest-dependent employers. As shown in Figure 6, from 2006–2012, 600,000 to 750,000 cords have been harvested annually from county lands. This harvest volume does not include the many non-timber forest products county lands provide, including spruce tops, balsam boughs, maple syrup, birch bark and other materials that are socially and economically important to individuals, businesses and communities. The scale on the right side of Figure 6, and illustrated by the line on the figure, denotes appraised value per cord, which has declined in recent years. As shown in the figure, the counties have maintained or increased the volume of harvests even as the appraised value of the wood has decreased during the economic downturn of recent years. The uniformity of harvest levels is consistent with responsible forestry in that it is important to practice management in a manner that is ecologically driven and not purely done in response to market conditions. Ideally, forest management for restoration, forest health, wildlife habitat, and biodiversity benefits should be continued even when market prices are low. Delaying management because of poor market conditions may result in declines in forest health due to insect or disease issues being left untreated

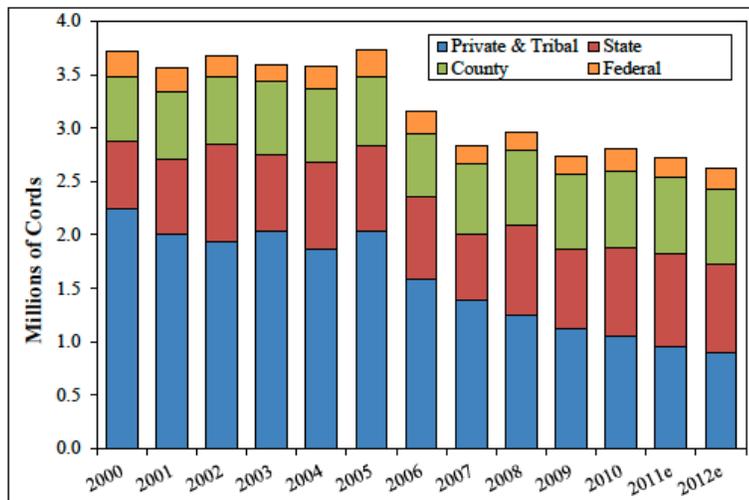
or other changes that can diminish water quality protections and important wildlife habitats. Delayed harvests and associated silvicultural treatments can also negatively impact recreation and other social benefits. Also, during times of low market prices it is common for private and family forest owners to be less willing to sell their wood (Figure 7) and this reduced willingness to sell can make it challenging for forest products companies to find the wood supply they need to operate. Maintenance of harvest levels on the part of public land managers supports continued care of the forest and economic stability of local employers.

Figure 6. Annual Harvest Levels on MACLC Member Lands (2006-2012)
(Measured by cords and appraised value)



Source: MACLC 2013

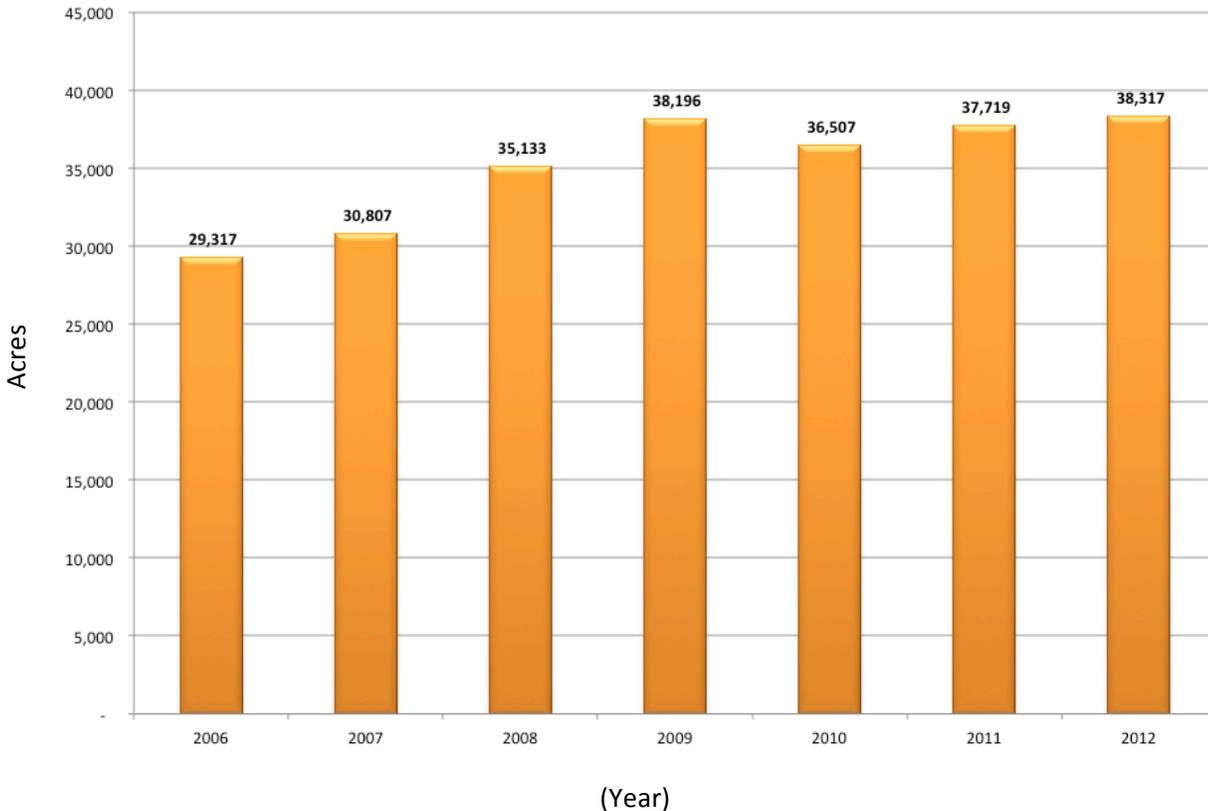
Figure 7. Minnesota’s Timber Harvest by Ownership, 2000-2010 and 2011-2012 estimates



Source: Don Deckard, Minnesota DNR, Division of Forestry

The consistency of land management by counties is also illustrated in Figure 8 that shows harvests occurring on approximately 30,000-38,500 acres annually from 2006-2012. As noted earlier, harvesting practices and rates are closely monitored and independently evaluated as part of each county’s commitment to third-party certification.

Figure 8. Annual Harvest Levels on MACLC Member Lands (2006-2012)
(Measured in acres treated)



Source: MACLC, 2013

Minnesota’s County Forest Lands – Tomorrow?

Minnesota’s county forest lands, unwanted in the 1930s, now provide unique opportunities to address local community needs, contribute to resolution of emerging issues, and demonstrate responsible forestry. County land managers are currently challenged by a number of significant threats, including invasive species, forest health concerns, and reduced markets. At the same time, the management of county forests is subjected to political pressures, shrinking local and state budgets, and competing interests. Continuing to navigate the social, economic, and environmental challenges of public forest management is a daily challenge for community forest managers.

The Bottom Line

Forest lands provide significant products and services. The type of management and the stability of land use can be influenced by who owns or controls the land. Having a variety of public and private ownerships can create unique opportunities. Minnesota is one of a few states that has county-managed lands within the public land category. These county lands can be described as Minnesota’s

“community-forests” due to the important social, economic and ecological services they provide as public lands under local control. The county-managed lands provide a unique type of land ownership within the context of public forest lands in the state. To ensure the delivery of the services and benefits of these lands for future generations continued investment and statewide commitment to their responsible care and management is required.

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