

Abstract

Recently increased pressure has been placed on Michigan private lands to produce wood fiber for both current and developing markets. Several programs have been specifically designed to encourage management on non-industrial private forest (NIPF) lands. Traditionally for policy, research, and discussion purposes NIPF owners have been combined into one homogeneous group across the State of Michigan. Considering that social, economic, and ecological factors vary across Michigan regions, it is unsurprising that NIPF lands are not as homogeneous as thought. To determine the scale and nature of regional differences in private land ownership we mailed a survey to 1600 NIPF landowners across the state. We asked landowners to provide information on their reasons for owning land, demographic variables and past management activities. Distinct regional differences were found in parcel size, reasons for owning forested land and management behavior. These results bring into question the practicality of combining landowners into a single group over large geographic areas. Policy makers may benefit from more carefully considering the implications of regional differences that could affect land ownership patterns.

Introduction

The State of Michigan has expressed interest in forests as a source of feedstock for alternative energy production. Considering the current utilization of forest products on public land, and the constraints on increasing public land timber harvests, some increase in woody biomass output will likely come from private forestland.

NIPF owners own 8.8 million acres of Michigan's 19.2 million acres of forest land¹. This forest land is controlled by an estimated 384,700 different landowners. With so many private forest owners it is unsurprising the NIPF category has been difficult to categorize or influence through the use of policy.

Programs are available at both the federal and state level to increase participation in responsible management. These programs target landowners across the entire state and require certain factors to be met for participation.

Owner's attitudes, beliefs and objectives for their properties have been shown to influence participation in a variety of management programs². Therefore, where private lands and landowners differ, participation in management and conservation programs can be expected to vary.

Considering the geographic diversity of Michigan it is expected that non-industrial private forest parcels and ownership characteristics vary by region. If this is the case, it could have implications for government programs which target forest owners. Our study sought to determine the extent of regional differences in owner demographics, parcel characteristics, reasons for owning forested land and management activities.

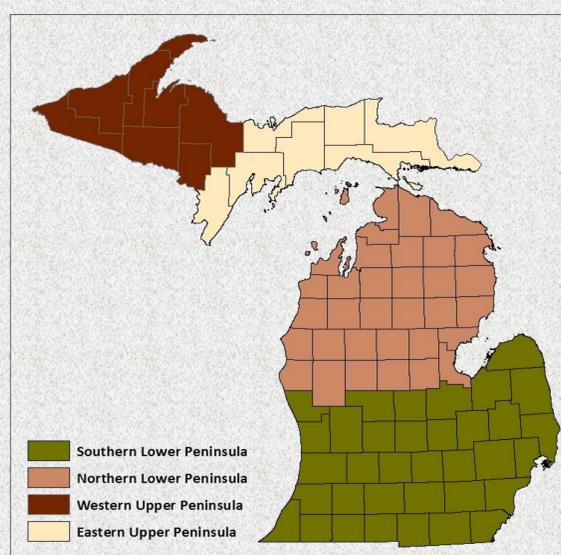


Figure 1. Michigan regions.

Methods

In 2003, a survey was mailed to 1600 regionally-stratified, randomly -selected private landowners. Respondents were asked to indicate basic demographic information, parcel characteristics, reasons for owning forested property and management activities. Responses were recorded by region (Figure 1) – Western Upper Peninsula (WUP), Eastern Upper Peninsula (EUP), Northern Lower Peninsula (NLP), Southern Lower Peninsula (SLP) – and examined for significant differences.

Results

With respect to demographic characteristics, WUP landowners tended to have a higher formal education than did those in the EUP and had higher incomes than did those in the SLP (Table 1). SLP respondents had held their property longer than had those in the EUP and more often were residing on their forested property. WUP respondents lived farther from their nearest forested parcel than did those in the SLP.

Table 1. Median responses to demographic questions.
(Like superscripts denote no significant difference, * mean, ** mode)

Variable	Region			
	SLP	NLP	EUP	WUP
Education	Some College ^{bc}	Some College ^a	Some College ^b	Bachelors degree or equivalent ^c
Income	\$40,000-59,999 ^a	\$40,000-59,999 ^{ab}	\$40,000-59,999 ^{ab}	\$60,000-74,999 ^b
Employment**	Employed Full Time ^a	Employed Full Time ^{ab}	Employed Full Time ^b	Employed Full Time ^{ab}
Tenure*	30 years ^a	25 years ^b	28 years ^{ab}	26 years ^{ab}
Permanent Residence (Percentage)	67.90%	35.7% ^a	44.8% ^a	40% ^a
Distance	15 miles ^a	82.5 miles ^{bc}	25.5 miles ^{ab}	101.5 miles ^c

Mean parcel size differed significantly among all regions. The NLP contained the only instance of parcels larger than 999 acres, although the EUP contained the parcels with the largest average size (Figure 2). The SLP contained the greatest number of small parcels (0-40 acres).

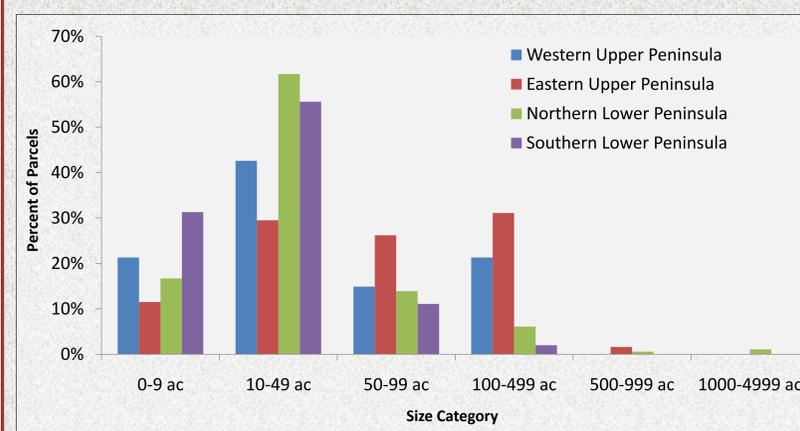


Figure 2. Percentage of parcels in size category by region.

SLP respondents ranked “to protect nature and biologic diversity” as more important for owning forestland than did those in the EUP (Table 2). Additionally, more SLP respondents ranked the importance of their parcel as part of their home than did those in the NLP or WUP. Respondents in the NLP indicated “for cultivation/collection of non timber forest products” as more important than those in the SLP. EUP respondents reported “for production of sawlogs, pulpwood, or other timber products” as more important than did owners in other regions. Further, NLP respondents indicated “for hunting or fishing” as a more important reason for owning forested property than did those in the SLP or WUP. Likewise, EUP respondents considered the same reason as more important than did those in the WUP.

Table 2. Median rankings of importance of reasons for owning forested property by region. (Like superscripts denote no significant difference.)

Reason for owning forest property	SLP	NLP	EUP	WUP
To protect nature and biologic diversity	Very Important ^a	Very Important ^{ab}	Somewhat Important ^b	Very Important ^{ab}
As part of my home, vacation home, farm, or ranch	Very Important ^a	Very Important ^b	Very Important ^{ab}	Very Important ^b
For privacy	Very Important ^a	Very Important ^a	Very Important ^a	Very Important ^a
For cultivation/collection of non timber forest products	Neutral ^a	Somewhat Unimportant ^b	Neutral ^{ab}	Neutral ^{ab}
For production of sawlogs, pulpwood or other timber products	Somewhat Unimportant ^a	Somewhat Unimportant ^a	Neutral	Somewhat Unimportant ^a
For hunting or fishing	Somewhat Important ^{ac}	Very Important ^b	Very Important ^{ab}	Somewhat Important ^c

Table 3. Percentage of respondents having performed management activities by region. (Like superscripts denote no difference.)

Management Activity	SLP	NLP	EUP	WUP
Improved an existing stand for timber	37.9% ^a	48.9% ^{ab}	61.5% ^b	48.6% ^{ab}
Built or improved access road or trail	22.2% ^{ab}	16.5% ^a	37% ^b	23.7% ^{ab}
Harvested timber	37.7% ^a	49.6% ^{ab}	73.2% ^b	52.6% ^b

A greater percentage of the EUP landowners had “improved an existing stand for timber” than had respondents in the SLP (Table 3). More EUP landowners had “built or improved access road or trail” than had those in the NLP. Moreover, a greater number of respondents in the EUP and WUP had harvested timber than had those in the SLP. In general, EUP landowners had performed more activities linked to timber production than had those in the other regions.

Discussion

Our analysis shows variation in several factors among Michigan's four regions. Where EUP respondents seemed to be more interested in utilitarian uses of their land, NLP and WUP landowners tended to value vacation uses of their forested parcels. In contrast, SLP landowners were focused on protection and non-consumptive uses of their forest property. Regardless of the factors driving these variation, our analysis does show that there is regional variability among values and behaviors of Michigan's private forest owners and among the characteristics of their parcels. These differences are likely to influence participation in forest conservation and management programs. Policy-makers should seek to understand these variations to effectively craft private forest management policies and programs.

As Michigan seeks to enter a new era of forest utilization, non-industrial private forest owners will become increasingly important as contributors to biomass output. Therefore, it has become even more important that we seek to understand private forest owners and their goals in order to balance societal and landowner objectives.

References

- ¹Leatherberry, E.C., N.P. Kingsley and T.W. Birch. 1998. Private timberland owners of Michigan, USDA For. Serv. Res. Bull. NC-191
- ²Serbruyns, I. and S. Luyssaert. 2006. Acceptance of sticks, carrots and sermons as policy instruments for directing private forest management. For. Pol. And Econ., 9 (3) pp. 285-296.