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# Maine Forest Landowner Study

James Acheson

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**Final Report for Period:** 06/2008 - 11/2008**Submitted on:** 01/16/2009**Principal Investigator:** Acheson, James M.**Award ID:** 0449529**Organization:** University of Maine**Submitted By:****Title:**

Maine Forest Landowner Study

**Project Participants****Senior Personnel****Name:** Acheson, James**Worked for more than 160 Hours:** Yes**Contribution to Project:**

During the past year (i.e. 2007-2008) I did two different tasks. First I carried out a survey of 172 Forestlandowners and Hunters who were selected by a rolling sample technique. Eight interviewers were hired to do the actual interview in eight of the 16 counties of Maine. The purpose of this study was to supplement information obtained in two other surveys that were carried out earlier in this project. In this final study, I focused on obtaining information on three disparate topics on which I needed additional information: 1. relationships between landowners and the people using their land for recreation. 2). Inheritance and the long term goals of forest landowners. 3. Information on the quality of harvesting and the sways in which people define 'high quality' or 'sustainable' harvesting.

Second, I analyzed the data obtained in all of our studies and wrote four articles based on this data.

Between June 2008 and November 2008, I completed a detailed study of the history of 72 parcels of forest land over the past 100 years. I supervised Jayne Lello who is analyzing this data and will write up the results for her MA thesis. In addition, I completed two articles which have been submitted for publication in addition to the three articles which have been submitted and accepted for publication.

**Post-doc****Graduate Student****Name:** McCloskey, Jon**Worked for more than 160 Hours:** Yes**Contribution to Project:**

Jon McCloskey worked through July 2006 on the satellite image analysis portion of the project. He is co-author of an article stemming from this project which has been published by Human Ecology.

In 2008 he began writing another article, which will be published jointly with the PI, using the satellite image data.

**Name:** Lello, Jayne**Worked for more than 160 Hours:** Yes**Contribution to Project:**

Jayne collected data on the history forest parcels. These data will be analyzed and used for her MA thesis at the University of Maine. Her thesis will concentrate on inheritance and disposition of forest parcels over time. This is an important topic because when land is sold, it is often heavily harvested first and we hypothesize that large amounts of it fall into the hands of developers who convert the land to housing.

**Undergraduate Student****Technician, Programmer**

## Other Participant

### Research Experience for Undergraduates

#### Organizational Partners

#### Other Collaborators or Contacts

Tom Doak, Executive Director of the Small Woodlot Owners Association of Maine (SWOAM), has been very helpful on a number of occasions. He and I are writing a article on inheritance and socio-economic factors contributing to the conversion of Maine's forests.

In addition, Jon Olson, Executive Director of the Maine Farm Bureau has provided a list of members of the Maine Farm Bureau along with a good deal of information on Farm 'woodlots'.

Officers of the Maine Forest Service have provided information as well.

#### Activities and Findings

##### **Research and Education Activities:**

During the course of this project we have carried out three different studies designed to understand different aspects of the conservation and overexploitation of Maine's forests. During 2005 we carried out a large scale mail and interview study of small forest landowners. By spring of 2006, all of the data from the 1,365 interviews had been entered in an SPSS file. During the past two years, I have spent a good deal of time analyzing the results of this part of the study, and using those results in articles. This project produced a huge compendium of information.

Second, from May to November 2006, we did an intensive study of forest landowners in central Maine. This is the area that our satellite study showed was the most heavily exploited area in the state. We concentrated a good deal of effort on this area in our effort to study the decisions for forest landowners leading to heavy exploitation. This study involved several different phases. First, Jon McCloskey identified 50 sites in this 16 town area that had been harvested between 2000 and 2005. He identified these sites using Landsat images and he then described these sites using UTM coordinates. Second, I located these sites on the ground using a handheld GPS machine. I assessed the amount of cutting that had taken place and took pictures of the forest on each site. Third, I went to the town office and got the name and address of the owner of each parcel (information on land ownership is public). Fourth, I contacted the owners and interviewed them. During these interviews, I got three kinds of information: (a) information on the characteristics of these owners (age, occupation, address of the parcels of land); (b) information on the history of their parcel of land and their plans for the future; (c) information on the harvesting they had done (i.e. harvester, goals, for the harvest, quality of the harvest, what species were cut, etc.) This study produced a great deal of detailed information both harvested parcels and the people who made the harvesting decisions.

A third study was done in the late summer and fall of 2007. This study was designed to obtain more detailed information on three topics the earlier two studies suggested were very important: a) relations between hunters and landowners. b) inheritance and long term plans of forest landowners. 3. quality of cutting and the way that landowners define 'high quality' and 'sustainable' harvesting.

Throughout the fall of 2007 and the spring of 2008, I spent a good deal of time analyzing the data collected in the course of this project and writing a series of articles based on these data.

During the summer and Fall of 2008, we completed still another study of forest landowners focusing on the detailed history of 72 parcels of forest land. The objective of this project was to study inheritance and disposition of forest land. This is an important topic because if forest land is given to heirs who keep the land in forest, it is not converted. Unfortunately, some owners are forced to sell land because of inadequate retirement income or unemployment. Moreover a high percentage of people who inherit forest land harvest land and then sell it. In both cases, land that is sold often finds its way into the hands of developers who use it for housing. This is the primary cause of sprawl which is seriously depleting the amount of forest land in the southern and central parts of Maine.

##### **Findings:**

To date several important findings have come from this work. 1. Deforestation in southern Maine is due to sprawl and housing development. In the north, it is due to the activities of the REITS and TIMOs who have short time horizons. 2. The goals of small forest landowners who are

long term residents are very different from the so called 'new owners'. The long term residents are cutting their forest parcels at a far heavier rate than the 'new owners', who have more of a conservation ethic. 3. A good deal of land is being posted primarily by small landowners. This threatens the open land tradition [recreational use of private land by the public]. This has major implications for the tourist industry, the largest industry in the state. 4. The average small forest owner is quite old (61.4 years old). Fully 26% of the forest parcels on which we have data are owned by people 75 years old or older. This means that a large amount of land will change hands in the next few years. What will happen to much of Maine forest land depends on the decisions of those who will inherit it. Our data indicate that those who will inherit land will not sacrifice as much to retain forest land as their parents. 5. Forestlandowners are caught between countervailing pressures. A large number love their forest land and are loath to sell it. For them, land is not so much an investment or a source of income as much as it is a refuge, a place for recreation, a family legacy. Still a number of factors are giving Maine forest landowners incentives to sell their property. Returns on investment in forest land are so low that converting the land to any other use will give a higher return. Regulations, irresponsible sportsmen, dishonest loggers and spiralling land taxes add to the list of reasons to sell forest land. As a result, fully 30,000 acres of Maine forest land are being converted to non-forest use each year. 6. The landowners who are selling forest land, which is then often converted to non-forest use, are loggers, retired people and the unemployed. Many farmers have inadequate incomes when they retire or cannot make a living in farming. Thus a good deal of farm land continues to be sold and converted to non-forest use. and 7. Maine forest landowners define good forestry in very different ways. As a result, different sets of landowners can treat their forests in different ways and still be convinced they are doing a good job managing their land. 8. Given the incentives of forest landowners, it will be very expensive to maintain a lot of forest land as forest land. a large amount of forest land in Maine will continue to be converted to non-forest use.

### **Training and Development:**

Jon McCloskey obtained a good deal of experience doing advanced satellite change analysis. Four students, who were hired as interviewers, got a lot of experience interviewing and entering data into SPSS files.

Another student, Jayne Lello will use data from this project to write her Master's degree thesis.

### **Outreach Activities:**

One article "[Public Access to Privately Owned Land in Maine]" has been published in Maine Policy Review. MPR is read by legislators, town managers and other people interested in policy issues in Maine. The conflict between landowners and recreational users is becoming very important politically. I have also given a presentation to the Small Woodlot Owners Association members at their annual meeting.

In addition, I have written four articles for academic journals, which will reach the large number of academics interested in the social science aspects of resource management.

One of these articles has been jointly authored with Tom Doak, the Executive Director of the SWOAM (Small woodlot Owners association of Maine). This is the largest organization of landowners in Maine. Our findings have been made available to the members of this organization.

Jon Olson, Executive Director of the Maine Farm Bureau, requested information on the attitudes of landowners concerning various forest policy options. I provided that information to him.

### **Journal Publications**

Acheson, James M., "Public Access to Privately Owned Land in Maine", Maine Policy Review, p. 18, vol. 15, (2006). Published,

Acheson, James M., "The Causes of Deforestation: The Maine Case", Human Ecology, p. 909, vol. 36, (2006). Published,

Acheson, James M., "On the Cusp of the Forest Transition", Human Organization, p. 125, vol. 67(2), (2008). Published,

Acheson, James M. and Julianna Acheson, "Maine Land: Private property and Hunting Commons", International Journal of the Commons, p. , vol. , (2009). Submitted,

Acheson, James M. and Thomas Doak, "Inheritance, Landsales and the Future of Maine's Forests", Human Organization, p. , vol. , (2009). Submitted,

### **Books or Other One-time Publications**

## Web/Internet Site

## Other Specific Products

### Contributions

#### **Contributions within Discipline:**

The forests of the world are disappearing at a rapid rate. In a few areas, however, a forest transition is occurring and reforestation is taking place. We know comparatively little about the processes producing changes in forests. Both both deforestation and reforestation are due to the decisions of landowners. My research explores the motives behind the harvesting and conservation decisions of landowners. This research is leading to some surprising conclusions about the factors leading to both deforestation and reforestation.

#### **Contributions to Other Disciplines:**

This research will contribute to the literature on forestry and the social science literature on natural resources. Most foresters have focused on the biology and ecology of forests. This project focuses on the people who are making the decisions resulting in conservation or deforestation.

#### **Contributions to Human Resource Development:**

Nothing to report.

#### **Contributions to Resources for Research and Education:**

The articles coming out of this project will certainly contribute to resources for research. Five articles have been produced and more are on the way.

#### **Contributions Beyond Science and Engineering:**

This project will produce information on causes of deforestation and reforestation. These are important topics in a world where forests are threatened in widespread parts of the world. In three articles, we have suggested policy changes that hopefully will help to conserve forests. However, our prognosis for Maine's forests is not especially optimistic. It will take some far reaching changes in policy to stem the tide forest conversion.

### Categories for which nothing is reported:

Organizational Partners

Any Book

Any Web/Internet Site

Any Product