

# TABLE OF CONTENTS

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 PURPOSE OF THE ASSESSMENT.....	1
1.2 HISTORY AND DEVELOPMENT OF THE WMNF.....	1
1.3 SCOPE OF THE STUDY.....	2
1.3.1 <i>Directly Affected Towns</i> .....	2
1.3.2 <i>The Forest Region: The Four Counties</i> .....	6
1.3.3 <i>The Wider Region: New Hampshire, Maine, Massachusetts, and Vermont</i> .....	7
1.3.4 <i>The Forest and the Northeast</i> .....	7
1.4 APPROACH TO THE ASSESSMENT.....	7

## **1.0 INTRODUCTION**

This is the Final Report on the “Socio-Economic Assessment to Provide a Context for the White Mountain National Forest Plan Revision.” It was commissioned by the White Mountain National Forest as part of its Forest Plan Revision process.

### **1.1 PURPOSE OF THE ASSESSMENT**

The purpose of the assessment is to characterize the socio-economic environment of the White Mountain National Forest in New Hampshire and Maine, by investigating the relationship between National Forest land and the surrounding communities. The assessment will be used by the Forest Service in describing the affected environment, defining and revising management alternatives, evaluating those alternatives, and providing a baseline for effects analysis of the Forest Plan Revision. Thus the assessment is a source of information and a baseline for the socioeconomic components of the Forest Plan Revision process.

The assessment is intended to help the Forest Service and the public:

- 1) Better understand the relationship between public lands and communities.
- 2) Assemble the socio-economic information needed to evaluate Forest management direction.
- 3) Identify appropriate socio-economic measurement units to evaluate various future Forest management alternatives.

The assessment is intended to cover the area impacted by the White Mountain National Forest (referred to herein as the Forest or the WMNF), which can be considered in three parts as follows:

- 1) The Forest in the context of its adjacent and closely tied communities.
- 2) The Forest and its relationship to a larger community in Coos, Carroll and Grafton Counties in New Hampshire and Oxford County in Maine.
- 3) The Forest and its relationship to the Wider Region, which focuses on the states of New Hampshire, Maine, Massachusetts and Vermont. This relationship is economic and social, including the Forest users who travel to the Forest for a variety of outdoor recreational activities.

### **1.2 HISTORY AND DEVELOPMENT OF THE WMNF**

In the late 1800s, timber harvesting was a major activity in the White Mountains. Simultaneously, recreation in the region was also gaining ground and the vast timber extraction raised concerns for the protection of forest lands and water quality among many user groups. In response, the Society for the Protection of New Hampshire Forests (SPNHF) was created in 1901 by eight concerned citizens with a mission to protect the then heavily logged White Mountains. Strong lobbying by SPNHF and other groups helped pass the Weeks Act in 1911, which gave Congress the ability to purchase lands to maintain navigable waters. In 1918, the White Mountain National Forest was created. Many other national forests were created around the country in the years that followed. The U.S. Forest Service has the responsibility for the management of the national forests under multiple use policy.

Tourism continued to grow in the White Mountains as the availability of personal cars gave people the ability to go where they wished, not relying on rail routes. Through much of the 20<sup>th</sup> Century, skiing and other winter sports experienced rapid expansion, as did backpacking, fishing, hunting, climbing, wildlife viewing, and motorized recreation. Much of the participation in backcountry recreation can be attributed to the Appalachian Mountain Club (AMC). Founded in 1876, the AMC is the nation’s oldest

conservation and recreation organization and plays an extensive role in the entire White Mountain Region. Today, the White Mountain National Forest is one of most visited outdoor recreation destinations east of the Mississippi.

### **1.3 SCOPE OF THE STUDY**

The data collection, analysis, and interpretation for the socio-economic assessment focuses on the Forest at three geographic levels. These three geographic levels are the Directly Affected Towns, the Forest Region, and the Wider Region.

#### **1.3.1 Directly Affected Towns**

The Directly Affected Towns (also referred to as the Affected Towns) are defined as a set of towns and other minor civil divisions (MCDs) that include WMNF land or directly adjoin WMNF land. This group of 43 towns and 17 other unincorporated MCDs are the towns most directly affected in a tangible and significant way by the presence of the Forest and by the management decisions which are made by the Forest Service. These communities are directly affected in several or all of the following ways:

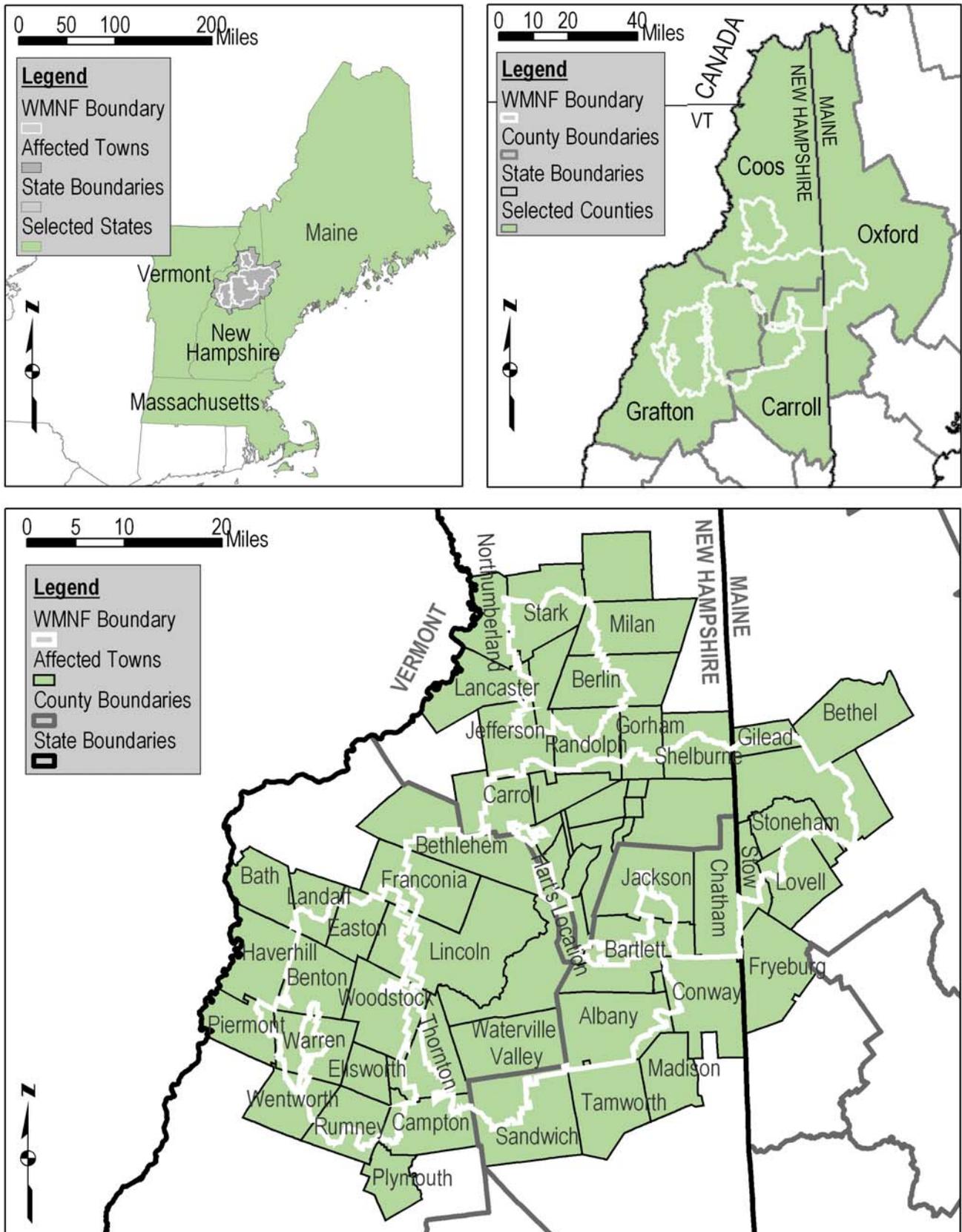
- 1) Having Forest land and activities taking place within their boundaries.
- 2) Being on direct access routes for visitors, Forest workers, and contractors.
- 3) Having local land use and property values directly impacted by Forest management decisions.
- 4) Providing municipal services, including road maintenance, that supports Forest activities.
- 5) Having businesses and workers engaged in Forest related activities.
- 6) Having significant numbers of residents in whose lives the Forest plays an important role in tangible and intangible ways.
- 7) Receiving payments in lieu of taxes and payments from the 25 percent funds.

Although there are other towns in the region that may have some of these attributes, notably economic linkages, the group of Affected Towns is qualitatively different from other communities in the region in that they include or abut Forest land. Therefore, these towns have a high degree of direct linkage to Forest activities and Forest management decisions. The list of towns and minor civil divisions are shown in Table 1-1 and on the maps in Figures 1-1 and 1-2.

It should be noted that the list of Affected Towns does not include the towns of Orford, Lyme, and Hanover, which include parts of the Appalachian Trail administered by the Forest Service. The relationship between the Forest and those towns is qualitatively different from the Forest proper. These three towns in Grafton County, especially Hanover, fall into a different socio-economic region and have little in common with the Affected Towns listed in Table 1-1.

The Affected Towns individually and collectively as a group are characterized in the assessment based on the demographic, social, and economic indicator units that are available and relevant at the town level.

Figure 1-1: Study Area: States, Counties and Directly Affected Towns



Data Sources: U.S. Census Bureau; U.S. Forest Service, White Mountain National Forest



**Table 1-1: Directly Affected Towns - Acreage and Percentage National Forest by Place**

MUNICIPALITIES	APPROX. ACRES OF WMNF *	TOTAL ACRES	% NATIONAL FOREST
Albany town, Carroll Cnty, NH	41,366	48,046	86.1%
Bartlett town, Carroll Cnty, NH	30,267	48,187	62.8%
Bath town, Grafton Cnty, NH	89	24,730	0.4%
Benton town, Grafton Cnty, NH	23,491	30,958	75.9%
Berlin city, Coos Cnty, NH	16,504	39,973	41.3%
Bethel town, Oxford Cnty, ME	10	42,211	0.0%
Bethlehem town, Grafton Cnty, NH	30,373	58,236	52.2%
Campton town, Grafton Cnty, NH	2,425	33,612	7.2%
Carroll town, Coos Cnty, NH	16,547	32,133	51.5%
Chatham town, Carroll Cnty, NH	28,960	36,616	79.1%
Conway town, Carroll Cnty, NH	392	45,893	0.9%
Easton town, Grafton Cnty, NH	13,186	19,962	66.1%
Ellsworth town, Grafton Cnty, NH	11,573	13,749	84.2%
Franconia town, Grafton Cnty, NH	27,279	42,212	64.6%
Fryeburg town, Oxford Cnty, ME	0	42,154	0.0%
Gilead town, Oxford Cnty, ME	2,311	12,610	18.3%
Gorham town, Coos Cnty, NH	5,845	20,679	28.3%
Hart's Location town, Carroll Cnty, NH	5,494	11,901	46.2%
Haverhill town, Grafton Cnty, NH	19	33,561	0.1%
Jackson town, Carroll Cnty, NH	31,327	42,837	73.1%
Jefferson town, Coos Cnty, NH	4,462	32,243	13.8%
Lancaster town, Coos Cnty, NH	1,597	32,809	4.9%
Landaff town, Grafton Cnty, NH	4,704	18,210	25.8%
Lincoln town, Grafton Cnty, NH	74,827	83,783	89.3%
Lovell town, Oxford Cnty, ME	236	30,642	0.8%
Madison town, Carroll Cnty, NH	0	26,204	0.0%
Milan town, Coos Cnty, NH	4,398	39,844	11.0%
Northumberland town, Coos Cnty, NH	789	23,641	3.3%
Piermont town, Grafton Cnty, NH	2,467	25,484	9.7%
Plymouth town, Grafton Cnty, NH	0	18,390	0.0%
Randolph town, Coos Cnty, NH	13,327	30,174	44.2%
Rumney town, Grafton Cnty, NH	11,619	27,236	42.7%
Sandwich town, Carroll Cnty, NH	16,914	59,819	28.3%
Shelburne town, Coos Cnty, NH	14,210	31,230	45.5%
Stark town, Coos Cnty, NH	19,163	38,143	50.2%
Stoneham town, Oxford Cnty, ME	13,467	23,479	57.4%
Stow town, Oxford Cnty, ME	3,741	15,681	23.9%
Tamworth town, Carroll Cnty, NH	251	38,876	0.6%
Thornton town, Grafton Cnty, NH	15,403	32,520	47.4%
Warren town, Grafton Cnty, NH	17,299	31,391	55.1%
Waterville Valley town, Grafton Cnty, NH	40,722	41,546	98.0%
Wentworth town, Grafton Cnty, NH	3,660	26,840	13.6%
Woodstock town, Grafton Cnty, NH	28,452	37,898	75.1%

**Table 1-1 (Continued)**

UNINCORPORATED PLACES	APPROX. ACRES OF WMNF *	TOTAL ACRES	% NATIONAL FOREST
Beans grant, Coos Cnty, NH	6,109	6,205	98.5%
Beans purchase, Coos Cnty, NH	41,771	41,771	100.0%
Chandler's purchase, Coos Cnty, NH	1,364	1,364	100.0%
Crawford's purchase, Coos Cnty, NH	5,200	5,242	99.2%
Cutt's grant, Coos Cnty, NH	7,287	7,320	99.6%
Dummer town, Coos Cnty, NH	2	31,385	0.0%
Green's grant, Coos Cnty, NH	2,099	2,345	89.5%
Hadley's purchase, Coos Cnty, NH	4,672	4,745	98.5%
Hale's location, Carroll Cnty, NH	1,220	1,555	78.5%
Kilkenny township, Coos Cnty, NH	16,411	16,415	100.0%
Livermore town, Grafton Cnty, NH	40,811	40,838	99.9%
Low and Burbank's grant, Coos Cnty, NH	16,722	16,729	100.0%
Martin's location, Coos Cnty, NH	2,408	2,408	100.0%
Pinkham's grant, Coos Cnty, NH	2,415	2,415	100.0%
Sargent's purchase, Coos Cnty, NH	16,544	16,544	100.0%
South Oxford UT, Oxford Cnty, ME	29,798	61,224	48.7%
Thompson and Meserve's purchase, Coos Cnty, NH	11,843	11,843	100.0%
COUNTIES			
Coos Cnty, NH	156,189	359,934	43.4%
Carroll Cnty, NH	231,689	487,602	47.5%
Grafton Cnty, NH	348,401	641,153	54.3%
Oxford Cnty, ME	49,563	228,001	21.7%

*\*National Forest area by Place is calculated in ArcView using 2002 revised Forest ownership data and Minor Civil Division boundaries from Tiger/Line files 2000*

### 1.3.2 The Forest Region: The Four Counties

The Forest and the Directly Affected Towns all fall within Coos, Carroll and Grafton Counties in New Hampshire and Oxford County in Maine. Therefore this group of Four Counties provides the next logical region for the assessment. The Forest is located centrally within the counties and there are no other counties directly adjacent to the Forest. Thus administratively the Four Counties include the Forest and all the Directly Affected Towns and constitute the Forest Region. This is important because a great deal of data is only available at the county level. In addition, the economic impact analysis uses the IMPLAN model, which is an input output economic impact model that cannot be used for areas below the county level (MIG Inc, 2000).

For the purposes of the economic impact analysis using the IMPLAN model, the Four Counties were chosen as the appropriate level for analysis, as opposed to each of the counties individually. This choice was made because the Forest is located more or less centrally within the Four-County region such that it is difficult to allocate specific economic linkages between Forest activities and any one county among the Four Counties. In addition, the IMPLAN model tends to provide more representative results for larger economic regions.

### **1.3.3 The Wider Region: New Hampshire, Maine, Massachusetts, and Vermont**

Data of demographic, social, and economic indicators and trends have been gathered for the states of New Hampshire, Maine, and in some cases for Massachusetts and Vermont. In general, these data include the same demographic, social, and economic indicators that are used to characterize the Affected Towns and the Four Counties. Comparisons are made to these state level data to assess the Forest Region trends in a state context. In addition, the assessment will refer to state-wide studies and data sources indicating characteristics and trends in socio-economic indicators. These include outdoor recreation visitor statistics for which reliable data are only available at the state level but which are nevertheless useful in characterizing these activities at the Forest Region level.

### **1.3.4 The Forest and the Northeast**

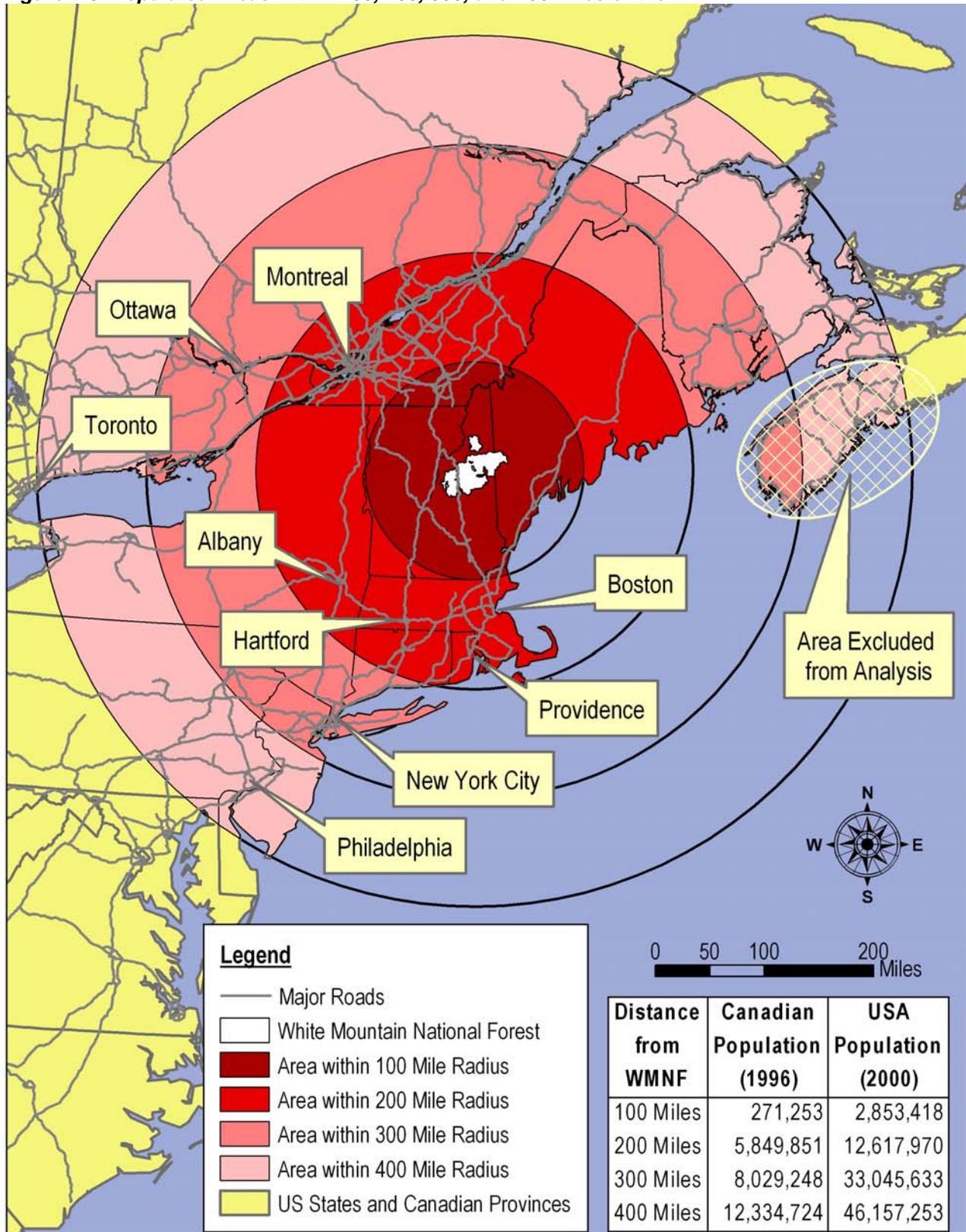
The White Mountain National Forest provides natural resources and recreation opportunities for a large area of the Northeastern United States and Eastern Canada. Over 46 million Americans and 12 million Canadians live within 400 miles of the Forest. The cities of Boston, New York, Albany, Hartford, Providence, and Philadelphia as well as Montreal, Quebec, and Ottawa are within a day's drive of the White Mountains. The Forest is the most visited National Forest east of the Mississippi. Additionally, Timber products from the Forest, such as sawtimber and pulpwood, are shipped throughout the Northeast and into Canada. Figure 1-3 shows the populations within various driving distances.

## **1.4 APPROACH TO THE ASSESSMENT**

In an assessment of this scope and magnitude, many sources of information were available for use, often with differing units of measurement for similar data. The measurement units in the report are consistent with data sources and social indicators that are widely used and accepted in the professional community and by the Forest Service and other relevant government agencies. This decision was made based on the need for the socio-economic assessment to be widely accepted and understood by professionals within the Forest Service and by the general public. It is also a practical choice, as a decision was made at the beginning of the project to rely on existing data sources rather than undertake any new data collection efforts. In cases where there are a variety of approaches to measurement units or indicators, as in the case of recreation statistics, the report has typically chosen measurement units consistent with the Forest practice. Where there are appropriate data collected locally for the Forest Region or in New Hampshire and Maine those data have been used over national or regional statistics.

In order to characterize the present state of the Forest Region, the most current data that are consistently available has been used. This is usually 2000 for census data and 2001 or 2002 for economic data. Forest activity data are typically for 2002 or adjusted to 2002. Economic analysis using the IMPLAN model has been standardized to 2002, although it uses earlier data with adjustments for inflation. Socio-economic change data are typically reported for the last ten years or a similar period, while for some statistics such as population and migration, data are reported and interpreted for much longer periods.

Figure 1-3: Populated Areas within 100, 200, 300, and 400 Miles of the WMNF



Data Sources: U.S. Bureau of Census, Statistics Canada