

# **Review of Social and Economic Assessment: Green Mountain National Forest**

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**Prepared for:**

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## **Introduction**

Under contract with the Vermont Agency of Natural Resources, Department of Forests, Parks and Recreation, Innovative Natural Resource Solutions LLC (INRS) conducted a review of the following document:

*Social and Economic Assessment: Green Mountain National Forest, VT and Finger Lakes National Forest, NY.*

Prepared by: Patricia Stokowski, Jane Kolodinsky, Clair Ginger, Alphonse Gilbert and Carlton Newton.

Date: March 2005.

INRS is a consulting firm specializing in forest and natural resource policy. Eric Kingsley of the firm's office in Portland, Maine conducted this review.

The review consisted of two steps, as determined by the Vermont Agency of Natural Resources, Department of Forests, Parks and Recreation:

1. Identify instances in the Assessment where conclusions are not in agreement with supporting information; and
2. Identify errors in analysis, use of terms, and other errors that can be found to have a bearing on the quality of the assessment.

This review was conducted exclusively on portions of the assessment related to the Green Mountain National Forest. No effort was made to review or analyze those sections of the Assessment related to the Finger Lakes National Forest, except where the information was not specific to one forest or the other.

All data used in this analysis is presumed by INRS to be accurate. It is beyond the scope of our contract to "fact check" and verify individual statistics, but we have no reason to believe that there are any errors in the underlying data.



## Summary

The *Social and Economic Assessment: Green Mountain National Forest, VT and Finger Lakes National Forest, NY* (Assessment) covers a number of topic areas, and provides a great volume of data relative to issues related to the Green Mountain National Forest (GMNF). Chapters include:

1. Socioeconomic status and demographic trends;
2. Forest use and users;
3. Access and travel patterns;
4. Community relationships;
5. Economic conditions;
6. Land use; and
7. All terrain vehicle assessment.

In general, the Assessment is a thorough treatment of the social and economic aspects of many of the management issues surrounding the GMNF. However, because the Assessment relies heavily upon secondary data (perhaps due to contractual or budget restrictions) the connection between the information presented and the Green Mountain National Forest is often not sufficiently clear. This is particularly prevalent in Chapter 2, *Forest Use and Users* and Chapter 5, *Economic Conditions*, in the discussions regarding the forest products industry (referred to as “Wood Products and Processing”) and tourism.

The authors spent significant time collecting information on all-terrain vehicle (ATV) use on public lands around the country, and on land use issues in surrounding communities. The authors clearly document their conversations with a large number of individuals on these topics; it is disappointing that a similar level of information gathering for primary data was not applied to recreation, timber, and tourism; areas where there are significant societal expectations and economic opportunities regarding the use of the forest.

While a great volume of statistics are presented and summarized, they are not tied together in a cohesive whole that allows the reader to quickly understand the relationship between the facts presented. This could be because the Assessment serves as a foundational document for the Green Mountain National Forest Plan, and presenting the information without drawing conclusions or connections allows all participants to interpret the information without pre-conceived outcomes.

The following pages contain specific instances where information could be augmented or revised to improve the final assessment.



## Socioeconomic Status and Demographic Trends

The use of current dollars (that is, not adjusted for inflation) to describe economic changes in Vermont can lead to incorrect conclusions. This issue occurs in a number of places, most notably in the discussion of per-capita income (Page 1-9). Because inflation changes the value of the dollar over time, it is helpful to convert to a constant dollar figure when making time-series comparisons, particularly when the time period is greater than a few years. The authors note that this issue exists in the introduction to the chapter (Page 1-4), and provide annual inflation figures, but do not provide an easy conversion factor that would allow the reader to convert all figures to constant dollars.

This issue occurs not only in Section 1, but also extensively in Section 4.C.1, which provides specific demographic profiles for each community.

For purposes of illustration, INRS has converted the 1989 per-capita income to 1999 dollars by dividing the 1989 dollars by 0.743<sup>1</sup>. This allows more meaningful comparisons of 1989 and 1999 figures. This is important because some changes are not detected unless the impact of inflation is factored in, such as the decline in per-capita income in inflation-adjusted dollars for five towns. If this conversion were made, the section on per capita income could read:

Overall, Vermont saw a an inflation-adjusted statewide increase of ~~52.5%~~ 13% in per capita income between 1989 and 1999. Except for Essex and Rutland Counties ~~County~~, all other counties in the study area had slightly higher rates of increase, with Windsor County having the highest inflation-adjusted percent change (~~56.8%~~ 17%). Only Bennington, Washington, and Windsor County, though, exceeded the figure of \$20,625 that is the 1999 statewide average per capita income. Indeed, Essex County was considerably lower (at \$14,388; Granby's level was much higher, though) and Rutland County (\$18,874) was somewhat lower than the statewide average. Among GMNF-adjacent study towns, all but two (Goshen and Searsburg) showed positive trends in percent change in per capita income between 1989 and 1999. Many of the increases were, in fact, considerably higher than the statewide average – Leicester, Arlington, Manchester, Peru, Granby, Jamaica, Londonderry, Stratton, and Weston all saw inflation-adjusted percent increases above ~~80%~~ 35% (Granby's inflation-adjusted increase of ~~156%~~ 90%, and Stratton's inflation-adjusted increase of ~~150%~~ 86% were the highest among study area towns). ~~In terms of dollars, though, Weston (\$36,546), Norwich (\$35,285) and Landgrove (\$34,929) had the highest levels of per capita income in 1999, while Searsburg (\$10,472), Granville (\$14,453), and Glastenbury (\$15,436) had the lowest. Five towns in the study area (Goshen, Granville, Searsburg, Mendon and Mt. Tabor) showed inflation-adjusted~~ decreases in per capita income.



Making adjustments necessary to account for the impact of inflation on buying power, an inflation-adjusted Table 1.18 would look like the following:

**Table 1.18 (Revised).**  
**Per Capita Income, for GMNF-Adjacent Vermont Counties and Towns**

	1989	1989 (Adjusted to 1999 dollars)	1999	Percent Change 1989 – 1999 (All 1999 dollars)
<b>Vermont</b>	<b>\$ 13,527</b>	<b>\$ 18,205</b>	<b>\$ 20,625</b>	<b>13%</b>
<i>Addison County</i>	<i>\$ 12,717</i>	<i>\$17,115</i>	<i>\$ 19,539</i>	<i>14%</i>
Bristol	\$ 11,652	\$ 15,682	\$ 19,345	23%
Goshen	\$ 17,064	\$ 22,966	\$ 17,031	-26%
Granville	\$ 11,318	\$ 15,232	\$ 14,453	-5%
Hancock	\$ 9,144	\$ 12,306	\$ 16,255	32%
Leicester	\$ 12,080	\$ 16,258	\$ 21,938	35%
Lincoln	\$ 12,268	\$ 16,511	\$ 21,092	28%
Middlebury	\$ 12,622	\$ 16,987	\$ 17,926	6%
Ripton	\$ 17,279	\$ 23,255	\$ 19,597	-16%
Salisbury	\$ 12,765	\$ 17,180	\$ 19,306	12%
<i>Bennington County</i>	<i>\$ 13,543</i>	<i>\$ 18,227</i>	<i>\$ 21,193</i>	<i>16%</i>
Arlington	\$ 12,599	\$ 16,956	\$ 23,277	37%
Bennington	\$ 12,416	\$ 16,710	\$ 17,290	3%
Dorset	\$ 19,277	\$ 25,944	\$ 32,956	27%
Glastenbury	N/A	N/A	\$ 15,436	N/A
Landgrove	\$ 21,455	\$ 28,876	\$ 34,929	21%
Manchester	\$ 16,105	\$ 21,675	\$ 30,499	41%
Peru	\$ 15,783	\$ 21,242	\$ 28,546	34%
Pownal	\$ 11,821	\$ 15,909	\$ 17,669	11%
Readsboro	\$ 11,733	\$ 15,791	\$ 17,911	13%
Rupert	\$ 13,636	\$ 18,352	\$ 20,480	12%
Searsburg	\$ 10,210	\$ 13,741	\$ 10,472	-24%
Shaftsbury	\$ 14,654	\$ 19,722	\$ 22,035	12%
Stamford	\$ 13,836	\$ 18,621	\$ 19,575	5%
Sunderland	\$ 13,196	\$ 17,760	\$ 19,453	10%
Winhall	\$ 17,214	\$ 23,168	\$ 30,378	31%
Woodford	\$ 10,659	\$ 14,345	\$ 17,752	24%



	1989	1989 (adjusted to 1999 dollars)	1999	Percent Change 1989 – 1999 (all 1999 dollars)
<i>Essex County</i>	\$ 9,854	\$ 13,262	\$ 14,388	8%
Granby	\$ 11,849	\$ 15,947	\$ 30,343	90%
<i>Rutland County</i>	\$ 12,780	\$ 17,200	\$ 18,874	10%
Brandon	\$ 12,068	\$ 16,242	\$ 20,516	26%
Chittenden	\$ 13,927	\$ 18,744	\$ 21,278	14%
Clarendon	\$ 12,712	\$ 17,109	\$ 19,801	16%
Danby	\$ 11,833.00	\$ 15,925.976	\$ 16,984	7%
Killington	\$ 18,355	\$ 24,703	\$ 32,066	30%
Mendon	\$ 19,960	\$ 26,864	\$ 26,206	-2%
Mt. Holly	\$ 11,513	\$ 15,495	\$ 20,337	31%
Mt. Tabor	\$ 14,214	\$ 19,130	\$ 17,785	-7%
Pittsfield	\$ 15,360	\$ 20,672	\$ 21,837	6%
Shrewsbury	\$ 15,140	\$ 20,376	\$ 22,042	8%
Wallingford	\$ 12,689	\$ 17,078	\$ 19,570	15%
<i>Washington County</i>	\$ 13,547	\$ 18,232	\$ 21,113	16%
Warren	\$ 21,579	\$ 29,043	\$ 30,405	5%
<i>Windham County</i>	\$ 13,134	\$ 17,676	\$ 20,533	16%
Dover	\$ 14,727	\$ 19,820	\$ 23,485	18%
Jamaica	\$ 11,945	\$ 16,076	\$ 22,052	37%
Londonderry	\$ 13,329	\$ 17,939	\$ 24,220	35%
Stratton	\$ 12,978	\$ 17,467	\$ 32,489	86%
Wardsboro	\$ 12,179	\$ 16,391	\$ 17,165	5%
Wilmington	\$ 14,390	\$ 19,367	\$ 25,171	30%
<i>Windsor County</i>	\$ 14,262	\$ 19,195	\$ 22,369	17%
Barnard	\$ 15,323	\$ 20,623	\$ 25,345	23%
Bridgewater	\$ 14,355	\$ 19,320	\$ 19,811	3%
Hartford	\$ 15,097	\$ 20,318	\$ 22,792	12%
Norwich	\$ 20,454	\$ 27,528	\$ 35,285	28%
Pomfret	\$ 16,172	\$ 21,765	\$ 27,922	28%
Rochester	\$ 13,022	\$ 17,526	\$ 19,986	14%
Stockbridge	\$ 12,151	\$ 16,353	\$ 21,379	31%
Weston	\$ 17,647	\$ 23,751	\$ 36,546	54%
Woodstock	\$ 16,420	\$ 22,099	\$ 28,326	28%



## Recreation

Section 2.B.1, *Forests for Recreation and Tourism, National Survey on Recreation and the Environment*, provides information on national trends in recreation, currently sorted by increase in number of participants. This is helpful, and a good way to review the data. Another important way to look at trends is to understand the *percentage* increase in activity, in order to better understand what underlying trends might exist. Using information provided in Table 2.1, INRS calculated the *percentage* increase in each activity, as well as changes in the total U.S. population<sup>ii</sup>. The authors do present percentage growth figures for recreation interests in the Vermont market area (NH, MA, NY and VT, Table 2.3), and having the same data at the national level is helpful.

Reviewing the information based upon percentage growth, all recreational activities listed in Table 2.3 grew at a rate faster than the U.S. population. Downhill skiing, an activity popular on the Green Mountain National Forest, showed the smallest percentage growth of any outdoor recreation activity listed, while jet skiing and snowboarding more than doubled in the five year period analyzed (1994/1995 to 2000/2001).





Sorted by percentage growth, the data in Table 2.1 is as follows:

**Table 2.1 (Revised).  
Increase in Numbers of Participants for Selected Outdoor Recreation Activities in  
the United States, 1995 to 2001.**

	Activity Participation Trends			
	Millions of Participants, 1994-1995	Millions of Participants, 2000-2001	Growth in Millions, 1994/5 - 2000/01	Percent Change
Downhill Skiing	16.45	18.20	1.75	10.64%
Motor boating	45.93	52.27	6.34	13.80%
Visit Historic Sites	86.43	98.62	12.19	14.10%
Swim Outdoors	76.30	89.59	13.29	17.42%
Picnicking	96.04	116.54	20.50	21.35%
Primitive Camping	27.35	33.88	6.53	23.88%
Cross Country Skiing	6.38	8.10	1.72	26.96%
Big-game Hunting	13.90	17.79	3.89	27.99%
Family Gathering	120.97	156.78	35.81	29.60%
View Birds	52.83	69.26	16.43	31.10%
Visit Nature Centers	90.93	122.28	31.35	34.48%
Walk for Pleasure	130.66	177.00	46.34	35.47%
Developed Camping	40.53	55.73	15.20	37.50%
Drive Off-road	26.27	37.21	9.95	41.64%
Cold-water Fishing	20.27	28.81	8.54	42.13%
Canoeing	13.76	20.63	6.87	49.93%
Horseback Riding	13.94	20.95	7.01	50.29%
Bicycling	56.10	84.60	28.50	50.80%
Day Hiking	46.68	70.62	23.94	51.29%
Backpacking	14.80	22.76	7.96	53.78%
View Wildlife	61.11	95.26	34.15	55.88%
Snowmobiling	6.95	11.81	4.86	69.93%
Jet Skiing	9.26	20.31	11.05	119.33%
Snowboarding	4.43	10.53	6.10	137.70%
<b><i>US Population</i></b>	<b><i>264,804</i></b>	<b><i>283,714</i></b>		<b><i>7.14%</i></b>



Understanding population trends in the region can help illuminate what activities are growing simply because there are more people in the region, and what activities are becoming more popular (or less popular) across the population. Because Section 1 of the Assessment does not contain population data for the market region (MA, NH, NY and VT), INRS presents it here for 1995 and 2003, the same years used in Table 2.3<sup>iii</sup>.

State	1995	2003	Change (%)
Massachusetts	6,141,445	6,433,422	4.75%
New Hampshire	1,157,561	1,287,687	11.24%
New York	18,524,104	19,190,115	3.60%
Vermont	589,002	619,107	5.11%
<i>Total</i>	<i>26,412,112</i>	<i>27,530,331</i>	<i>4.23%</i>
Vermont as % of total	2.23%	2.25%	

With information available, a reader can better understand underlying demographic trends, and evaluate how Vermont fits into its larger identified market area.

Section 2.B.2 notes that a survey conducted as part of the National Visitor Use Monitoring Project involved

“...approximately 600 usable visitor interviews conducted across 10 sample days, with *only* 60 interviews from wilderness visitors.” (emphasis added)

The use of the term “only” could be referencing the lack of a statistically significant wilderness user sample, or it could be referencing a perception that wilderness users as a group are underrepresented relative to their use of the forest. Roughly 10% of visitors surveyed were identified as wilderness users (this term is assumed to mean Congressionally-designated Wilderness, and not remote areas that some users may personally classify as “wilderness”); this compares with 15% of the Green Mountain National Forest designated as Wilderness<sup>iv</sup>. Because Wilderness areas are, by definition, more remote, it is logical that only a small subset of all forest visitors are Wilderness users.

When presenting information comparing the subset of Wilderness users to all recreational users of the Green Mountain National Forest (and Finger Lakes National Forest, in this instance, pages 2-15 to 2-17), it would be helpful to present some information in a table format for ease of comparison (e.g. average annual expenditures on all outdoor recreation related expenses, length of stay, etc.), and comparable information should be included for both Wilderness users and all users whenever possible (e.g., average spending within 50 miles of the forest is presented only for Wilderness users).

In Section 4.D.1, *Survey of New Englander’s Attitudes Towards Forests*, the authors note that the individuals who conducted this study included a “set of conservation groups”, but



do not indicate whether they believe the fact that this survey was designed by a conservation group influenced the framing of questions and thus the results.

In the opinion of INRS, a number of statements in this section lack sufficient context, as presented by the authors of the Assessment, to understand their relevance to decision-making on the Green Mountain National Forest. For example, the authors note that “feelings were mixed on whether ‘government should use tax dollars to subsidize timber and logging companies remain profitable and continue to log in New England’”, but provide no indication as to what public policies or proposals this may have reflected (it may simply be a statement in the absence of details, which would diminish its value in understanding specific proposals.)

Similarly, authors noted “respondents thought that designated wilderness should be increased in each state”, but provide no context to measure whether respondents know the difference between Congressionally-designated Wilderness and remote areas that many may view as “wild” or “wilderness”.

In Section 2.D.2, addressing Wilderness issues on the Green Mountain National Forest, survey results with somewhat shocking results are not emphasized. Presumably, if “About 60% of each sample was not in favor of opening existing wilderness areas on the GMNF to logging” (page 2-30), 40% of the sample was neutral or in favor of such action. Because logging is an activity prohibited by statute in Congressionally-designated Wilderness areas, and Wilderness areas are often established specifically to end logging activities, this is a very surprising statistic. There are a number of possible explanations, including:

- A large number of respondents are not opposed to logging in Wilderness areas, despite the statutory ban on this activity;
- A number of respondents do not have an understanding of what a Wilderness area is, or what restrictions exist in such areas;
- A large number of respondents view threats to forests as something other than logging.

It is likely that a public lack of understanding or misunderstanding of Wilderness is a significant factor here, and may well influence other responses related to Wilderness issues. For example, a USDA Forest Service presentation notes that 50.5% of people are “unaware” of the National Wilderness Protection System<sup>v</sup>. It is difficult to understand how a population half “unaware” of the Congressionally-designated Wilderness system can provide informed opinions on its management.



## **Community Relationships**

Under the heading “Informal Others”, the authors note:

“it was difficult to locate much information about adjacent landowners in our searches; however, we feel that this is an important issue that needs further research.”

While time consuming, it must be noted that it is a technically simple exercise to visit town halls and use tax records in each community with National Forest land to identify adjacent landowners.



## Wood Products and Processing

Section 5.B.2 deals with wood products and processing, and is the area where forestry and timber harvesting are most extensively covered.

On page 5-38, the Assessment notes that,

“Nationally, there has been a decline in profitability of national forest timber sale programs...but to some extent, these trends reflect societal trends in values about the use of national forest land.”

While this may well be true, the authors do not make clear why it is appropriate to hold one program (in this case the timber program) to an economic return standard while other programs (for example recreation or watershed protection) are not evaluated in the same manner.

Table 5.9 reports the volumes of wood offered, sold and harvested on the Green Mountain National Forest from 1991 until 1998. While this is when the TSPIRS program was discontinued, and the termination of other tables at this point is understandable, it is not clear why data on the volumes offered, sold, and harvested; as well as acres harvested and other information included in Table 5.9, was not continued into later years. This would have provided important information relative to recent timber harvesting activities, and would have allowed the reader to draw conclusions. While not as easy to locate due to the discontinuation of the TSPIRS report, this information could be developed for any National Forest<sup>vi</sup>.

Table 5.13 is entitled “Demand by Primary Mills in GMNF-Adjacent Counties in Vermont: Commercial Sawmills”, and shows the *production* of sawmills in the region, not the *demand*. Production is the volume of wood actually sawed and sold. However, it is entirely possible that, if more wood was on the market, these mills would have sawed and sold more, thus providing economic benefits to the region. An analysis of potential demand is clearly beyond the scope of the Assessment, but could be well in excess of production levels.

Further, the listing of production levels at mills in GMNF-adjacent counties grossly underestimates the flow of wood, particularly high-value sawlogs, in the region. While the assessment notes that “the buyers of GMNF timber are typically local Vermont and New Hampshire mills” (Page 5-38), the Assessment makes no provisions for production needs of mills outside of GMNF-adjacent counties in Vermont. It is well known and documented that wood flows across state and national borders, and that demand and production levels in the state, region and sometimes globe (not simply the immediate adjacent counties) impact local mills. For example, the North East *State* Foresters Association estimates that in 2001, Vermont processed 727,000 cords of wood, exported 490,000 cords, and imported 169,000 cords<sup>vii</sup>.



This Assessment also wholly ignores the impact that paper mills and biomass facilities have on timber harvests and associated economic impacts. This may be because there are not large biomass electricity facilities or pulp mills in GMNF-adjacent counties. However, a large volume of lower grades of wood, including pulpwood and biomass, is removed during each timber harvest. There are a number of biomass facilities (including McNeil Station in Burlington, VT; Pinetree Power in Ryegate, VT; and Hemphill Power & Light in Springfield, NH) that have procurement areas that reach the GMNF. Similarly pulp mills in Ticonderoga, New York; Berlin, New Hampshire and Glens Falls, New York procure from the area encompassed by the GMNF.

Table 5.15, like others in the Assessment, presents dollar information over a long period of time (20 years) without accounting for inflation. This table shows income from wood products and processing from 1980 to 2000. However, the failure to account for inflation shows total income for all counties shown continually increasing, while in fact inflation-adjusted income has dropped noticeably since 1980 levels, and has held comparative steady from 1985 to 2000.

**Table 5.15 (Revised). Income from Wood Products and Processing, Vermont Counties Adjacent to the Green Mountain National Forest, 1980 – 2000.**

<b>Income from Lumber and Wood Products Industry</b> <b>(in thousands of 2000 dollars – other years adjusted for inflation)</b>					
	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>
<b>Vermont State</b>	\$ 140,944	\$ 123,256	\$ 138,254	\$ 150,373	(D)
Addison	\$ 12,950	\$ 7,774	\$ 8,096	(D)	\$ 10,448
Bennington	\$ 10,115	\$ 4,354	\$ 6,489	\$ 9,690	\$ 7,998
Rutland	\$ 27,942	\$ 27,174	\$ 27,530	\$ 31,944	\$ 28,388
Washington	\$ 4,040	\$ 6,851	\$ 10,395	\$ 5,991	\$ 6,461
Windham	\$ 24,605	\$ 19,112	\$ 19,254	\$ 20,953	\$ 18,786
Windsor	\$ 15,868	\$ 15,371	\$ 17,369	\$ 14,338	\$ 11,359
<b>Total from counties shown *</b>	\$ 95,520	\$ 80,637	\$ 89,133	\$ 82,915	\$ 83,440



## Tourism

While covering the tourism industry adequately, the Assessment does not address the amount of tourism directly related to the Green Mountain National Forest, but instead looks at all tourism. Also, as noted in other sections, the failure to adjust for inflation<sup>viii</sup> for data sets covering a long period of time (for example, 20 years in Table 5.18) can lead a reader to unsupported conclusions.

A revised version of Table 5.18, with all figures adjusted to 2000 dollars<sup>ix</sup>, is found below.

**Table 5.18 (Revised): Income from Tourism-Related Industries, for Vermont Counties Adjacent to the GMNF, 1980 – 2000, all 2000 dollars**

<b>Income from Tourist-Related Industries</b> (in thousands of 2000 dollars – other years adjusted for inflation)					
	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>
<b>Amusement and recreation services</b>					
<b>Vermont State</b>	\$ 21,518	\$ 36,858	\$ 57,611	\$ 61,992	\$ 79,308
Addison	(D)	\$ 314	\$ 793	\$ 451	\$ 572
Bennington	\$ 3,578	\$ 4,302	\$ 5,057	\$ 6,890	\$ 7,525
Rutland	(D)	\$ 2,368	\$ 3,884	\$ 4,730	\$ 4,578
Washington	(D)	\$ 6,845	\$ 11,735	\$ 12,590	\$ 6,598
Windham	(D)	\$ 2,755	\$ 5,005	\$ 3,701	\$ 3,571
Windsor	\$ 3,762	\$ 6,246	\$ 7,381	\$ 4,379	\$ 7,291
<b>Eating and drinking places</b>					
<b>Vermont State</b>	\$ 137,676	\$ 191,938	\$ 220,014	\$ 228,270	\$ 239,571
Addison	\$ 5,271	\$ 7,494	\$ 8,797	\$ 9,251	\$ 10,208
Bennington	\$ 11,136	\$ 14,499	\$ 17,266	\$ 17,319	\$ 17,454
Rutland	\$ 16,434	\$ 21,922	\$ 23,432	\$ 25,055	\$ 24,299
Washington	\$ 13,219	\$ 18,008	\$ 19,818	\$ 21,344	\$ 23,621
Windham	\$ 15,140	\$ 18,899	\$ 20,780	\$ 22,713	\$ 21,296
Windsor	\$ 13,534	\$ 19,037	\$ 21,336	\$ 19,432	\$ 21,095



**Income from Tourist-Related Industries**  
(in thousands of 2000 dollars – other years adjusted for inflation)

	1980	1985	1990	1995	2000
<b>Hotels and Other Lodging Places</b>					
<b>Vermont State</b>	<b>\$ 137,075</b>	<b>\$ 169,320</b>	<b>\$ 219,968</b>	<b>\$ 208,278</b>	<b>\$ 243,406</b>
Addison	\$ 4,374	\$ 5,154	\$ 6,308	(D) \$ 7,914	
Bennington	\$ 9,484	\$ 10,842	\$ 14,978	\$ 14,584	\$ 16,295
Rutland	\$ 24,008	\$ 36,917	\$ 41,232	\$ 36,929	\$ 41,001
Washington	\$ 11,956	\$ 7,066	\$ 8,199	\$ 5,918	\$ 13,734
Windham	\$ 25,729	\$ 33,640	\$ 40,859	\$ 33,368	\$ 42,804
Windsor	\$ 14,833	\$ 18,962	\$ 26,059	\$ 30,217	\$ 35,866
<b>Motion pictures</b>					
<b>Vermont State</b>	<b>\$ 4,760</b>	<b>\$ 6,682</b>	<b>\$ 28,929</b>	<b>\$ 25,190</b>	<b>\$ 30,626</b>
Addison	\$ 113	(D)	(D)	\$ 621	\$ 551
Bennington	\$ 138	\$ 189	(D)	\$ 853	\$ 725
Rutland	(D)	(D)	(D)	(D)	\$ 1,310
Washington	\$ 1,042	\$ 1,318	\$ 2,090	\$ 2,947	\$ 1,752
Windham	\$ 324	\$ 418	(D)	(D)	\$ 2,247
Windsor	(D)	\$ 302	\$ 634	\$ 894	\$ 609
<b>Tourism Total</b>					
<b>Vermont</b>	<b>\$ 301,029</b>	<b>\$ 404,797</b>	<b>\$ 526,523</b>	<b>\$ 523,730</b>	<b>\$ 592,911</b>
Addison	\$ 9,758	\$ 12,962	\$ 15,899	\$ 10,323	\$ 19,245
Bennington	\$ 24,336	\$ 29,832	\$ 37,300	\$ 39,646	\$ 41,999
Rutland	\$ 40,443	\$ 61,206	\$ 68,548	\$ 66,714	\$ 71,188
Washington	\$ 26,217	\$ 33,237	\$ 41,842	\$ 42,798	\$ 45,705
Windham	\$ 41,192	\$ 55,712	\$ 66,644	\$ 59,782	\$ 69,918
Windsor	\$ 32,129	\$ 44,547	\$ 55,410	\$ 54,921	\$ 64,861
<b>Total from counties shown</b>	<b>\$ 174,075</b>	<b>\$ 237,496</b>	<b>\$ 285,643</b>	<b>\$ 274,184</b>	<b>\$ 312,916</b>





## Recommendations

The following recommendations are intended to create a stronger and more useful Assessment, thus providing all participants in the Green Mountain National Forest planning process the best available information to make decisions:

1. Whenever dollars are used in time-series presentations, they should be converted to constant dollars (i.e., adjusted for inflation) so that the impact of inflation is eliminated. As illustrated in revised Tables 1.18 and 5.18, the use of inflation-adjusted dollars provides more meaningful information.
  - a. It should be noted that the authors of the Assessment were careful to identify this issue, but did not address it and as such missed important information (e.g., the decrease in inflation-adjusted per-capita income in some towns [revised Table 1.18] or the decrease in tourism revenue between 1990 and 1995 for “total, all counties shown” [revised Table 5.18]).
2. Whenever information is available, information should be presented in a consistent and comparable manner. This allows the reader to quickly make comparisons, and is done well in Section 4.C, where profiles of each community are presented. Examples of where this could be improved in the Assessment include:
  - a. Presenting recreational activity growth in both real and percentage growth terms (see revised Table 2.1) so that it can be compared with Table 2.3;
  - b. Presenting recreational survey information that allows the responses of all forest users and Wilderness users to be compared (pages 2-15 to 2-17).
3. By relying on surveys of attitudes toward forests in Northern New England and Wilderness that was designed by advocacy organizations, the authors leave the questions of reliability of the information open and unaddressed. The authors could include a listing of “conservation groups” (term used on page 2-26) to allow readers to better understand how this information was derived.
4. The report begins to address “below cost” timber sales, an issue that was of significant media and public interest in the 1990s. The authors of the Assessment should make clear why this issue should be highlighted for the timber program but not for other programs, such as recreation, that exist on the Green Mountain National Forest.
5. Information on the timber program, including such basic information as volume offered, volume sold, and volume harvested is lacking for the time period since 1998. There have been six full years since then, and information should be presented for the time period 1999 – 2004. It is likely that the volumes during



- some of this time period will be negligible due to the postponement of the timber program due to concerns regarding the Indiana Bat, but that information should be included in order to provide the reader with a full view of the timber program.
6. The authors appear to have confused *production* at existing sawmills with *demand*. Without conducting primary research, it is impossible to determine what demand existed for certain products at specified prices, or how mills would have reacted if more wood was available.
  7. The wood and wood processing provides some information on the primary processing industry (sawmills) in counties adjacent to the Green Mountain National Forest, but does not address the critical nature of wood flow in the region. The Assessment clearly recognized that some timber from the GMNF is purchased by New Hampshire mills, but does not address the forest products industry there or in other parts of Vermont. This section would be significantly strengthened by a full review of the production levels of all mills in the GMNF wood-flow area, and some level of primary data collection (similar to how local town plans and land use were addressed) that identifies the role that timber from the GMNF can and could play for the region's forest products industry.
  8. Similarly, the authors should provide a perspective on markets for pulpwood and biomass in the region, and how these markets are of value to a timber sale on the GMNF. While there are not major facilities of this nature in GMNF-adjacent communities, the failure to address this issue demonstrates a lack of understanding of the complexities and interrelationships that exist in the region's forest products industry, and fail to acknowledge the value timber from the GMNF can have to some more distant markets.



## Endnotes

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<sup>i</sup> Sahr, Robert C. *Consumer Price Index (CPI) Conversion Factors to Convert to 1999 Dollars (Final)*. Political Science Department, Oregon State University. 2000.

<sup>ii</sup> U.S. Census Bureau, Department of Commerce. United States population for December 1994 and December 2000.

<sup>iii</sup> Data from [www.economagic.com](http://www.economagic.com)

<sup>iv</sup> 59,598 acres of congressionally designated Wilderness in a 389,340 acre forest. Personal communication, Jeffrey Williams, GMNF, June 29, 2005.

<sup>v</sup> Cordell, Ken. *Understanding Public Values and Market Segmentation for More Effective Wilderness Education and Interpretation*. Undated. <http://www.srs.fs.usda.gov/trends/wildpv.pdf>

<sup>vi</sup> Personal communication with Alexis Jackson, White Mountain National Forest. June 28, 2005.

<sup>vii</sup> North East State Foresters Association. *2001 Wood Flows in New York, Vermont, New Hampshire and Maine*. Undated. <http://www.nefainfo.org/publications/woodflow2001.pdf>

<sup>viii</sup> The Assessment does note that this is an issue, but fails to address it.

<sup>ix</sup> Based upon conversion factors provided in: Sahr, Robert C. *Consumer Price Index (CPI) Conversion Factors to Convert to 2000 Dollars (Final)*. Political Science Department, Oregon State University. 2000. [http://oregonstate.edu/Dept/pol\\_sci/fac/sahr/cv2000.pdf](http://oregonstate.edu/Dept/pol_sci/fac/sahr/cv2000.pdf)

