APPENDIX A ANALYSIS OF THE MANAGEMENT SITUATION

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Introduction

The regulations to implement the National Forest Management Act require, as part of the planning process, an Analysis of the Management Situation (AMS). The purpose of the AMS is to identify the need for change (if any) from the direction in the 1987 Forest Plan. The AMS is also the determination of the ability of the planning arena to supply goods and services in response to society's demands. A Forest-wide AMS was completed for the Green Mountain National Forest (GMNF) in June 2002 and published as: *Implementing the Green Mountain National Forest Land and Resource Management Plan: A 15 Year Retrospective* ("the *Retrospective*").

The *Retrospective* described the past 15 years of management on the GMNF, including creation of the 1987 Forest Plan and the issues the 1987 Plan addressed. The *Retrospective* also examined the current situation on the GMNF, including a summary of general findings on meeting and accomplishing Forest management goals, objectives, standards, and guidelines. Finally, the *Retrospective* identified current public issues and concerns related to GMNF management, and categorized each issue as: 1) A Major Issue that is Addressed Differently in Each Alternative, or 2) A Major Issue that is Addressed Similarly in Each Alternative. Issues under both categories were addressed in the *Retrospective* and details were provided for each issue's major concerns, 1987 Forest Plan direction, and current information and monitoring. The purpose of this Appendix is to highlight, and discuss in greater detail, the five major issues that are Addressed Differently in Each Alternative.

Detailed Analysis of the Management Situation papers were prepared for the five main issues on the Green Mountain National Forest, including: Ecosystem Management, Recreation, Timber Management, Socio-Economic, and Wilderness. These documents are presented in this Appendix and contain additional information about the main Forest issues to supplement the *Retrospective* publication. The intent of the summaries is to give an overview of each resource, the anticipated demands for the resource, and a discussion of the change needed in a revised Plan. The format of the AMS summary is generally as follows:

1. Introduction
2. Projection of Demand – Assessment of the Demand for Goods and Services from the Green Mountain National Forest and Assessment of the Green Mountain National Forest's Ability to Supply Goods and Services
3. The Need for Change – Known Problems with Existing Direction and Assessment of the Ability to Resolve Concerns through the Planning Process

Summary of the 15 Year Retrospective

The purpose of the *Retrospective* was to evaluate how well the management strategies found in the 1987 GMNF Land and Resource Management Plan (Forest Plan) worked, and to discuss issues and concerns that arose over the 15 years of Forest Plan implementation. The report was based on 15 years of Forest Plan monitoring, the experience of Forest Service resource managers' implementing the Forest Plan, and public input. The *Retrospective* outlines what is needed to revise the Forest Plan.

The 1987 Forest Plan contains numerous goals and related outputs. The Forest Service has worked to achieve these goals and outputs, and has been successful in achieving them in some areas; in other areas, the GMNF has not been able to reach goals due to a variety of factors. Analysis indicates the goals need to be reviewed, revised, and reorganized. In addition, the GMNF also needs to review outputs and develop measurements that accurately measure how well the Forest Service can reach goals and desired future conditions.

Management Areas (MAs), also called management prescriptions, were used to achieve the different goals outlined in the 1987 Forest Plan. They vary in the desired land conditions that they aim to create, in the management practices which would bring about that desired land condition, and in the uses and benefits that will result. The management areas have generally been effective in guiding the activities that occur, but there have been concerns with: the general design of the MAs, incompatibilities between resource uses within an MA, and broad interpretation of MA direction. The *Retrospective* contains a number of general suggested changes, including: provide an efficient designation process for newly acquired lands to allow incorporation into the Forest Plan; clarify MA-specific direction concerning permitted special uses and their management to more efficiently implement the Forest's special use program. For more suggested changes, refer to the *Retrospective* (USDA 2002a).

The 1987 Forest Plan also utilizes Standards and Guidelines (S&Gs), which govern how and where management activities can take place. It was determined that most S&Gs are achieving their purpose of mitigating an effect or contributing to a desired direction. Monitoring their use and resulting impacts has proven effective in measuring how well the Forest Plan is being implemented. However, concerns related to S&Gs were also identified including: Management Area S&Gs were, in some cases, too prescriptive; Standards were sometimes difficult to differentiate from Guidelines; it was not always clear what the S&G was intended to accomplish; and S&Gs in one resource area sometimes conflicted with those in another resource area. A number of general changes were also suggested for Standards and Guidelines, such as ensuring that S&Gs comply with State regulations. More specific changes for different resource area S&Gs are suggested in the *Retrospective*.

Many of the issues and concerns that the 1987 Forest Plan was created to address are still relevant today. Some of the issues and concerns have changed somewhat to reflect current thinking about an issue. Through a series of public meetings, management issues were identified as important to the public and the Forest Service for the Forest Plan revision. The *Retrospective* contains a paper on each of these issues describing the Major Areas of Concern, Forest Plan Direction, and Current Information and Monitoring.

During the last 15 years, a number of trends emerged that the 1987 Forest Plan simply did not address or anticipate. In addition, certain situations have changed, affecting the assumptions behind the Forest Plan. The 15 Year *Retrospective* examines trends that have developed and situations that have changed since the Forest Plan was created. Major areas in which trends have emerged are:

- Recreation with new uses such as mountain bikes and ATVs, changing user demographics and changes in recreation technology
- Fish and wildlife conservation
- Black bear and neo-tropical migratory songbirds
- Biodiversity
- Old growth
- Conservation versus preservation
- Even-aged vegetation management
- Emerging heritage resource program
- Invasive exotic species
- Special uses
- Changes in ski area management
- Public values
- Funding for Plan implementation

The *Retrospective* summarizes the last 15 years of multiple-use management of the Green Mountain National Forest. It concludes that the GMNF has provided a wide range of recreation opportunities, a variety of wildlife habitat, protection of wilderness and biologically unique areas, and high-quality sawtimber. It is noted that the Forest will continue to provide multiple benefits to surrounding communities by contributing to the quality of their environment as well as social and economic stability. Finally, the *Retrospective* states that Forest Service activities have not degraded or compromised natural resources and will continue to provide a healthy, productive legacy for future generations.

Ecosystem Management and Biodiversity

Introduction

Ecosystem management and biodiversity are closely tied together, and the employment of ecosystem management on GMNF will conserve biodiversity. The issue of ecosystem management concerns the restoration, protection, maintenance, and enhancement of biological and ecological diversity by the conservation of species, plant and animal communities, and ecosystems at a variety of scales. Topics related to ecosystem management include old growth, wildlife and fisheries management, soils, air, botany, fire management, invasive species management, pest management and pesticides, and biological reserves.

Issues expressed by the public concerning biodiversity and ecosystem management include protection of biological diversity, protection of ecological systems and processes, maintenance of wildlife habitat for biological diversity, conservation of remote and unfragmented habitat to meet wildlife needs, maintenance of species population viability, defining the role of the Forest in terms of its contribution to biological diversity, increasing levels of protection for ecological integrity and complexity and biological diversity, and managing at the landscape level using principles of conservation biology. Other publics expressed concerns that efforts to protect biological diversity may result in lower levels of timber production, limits on motorized access to some areas or lower populations of some game animals.

The 1987 Forest Plan addressed biodiversity primarily at small scales, such as tree and stand diversity (species, within-stand features such as snags and den trees, vegetation composition, and age of vegetation) and individual species (Endangered, Threatened, Sensitive and Indicator). Also, the

concepts and language of biological diversity and conservation biology were not well developed at the time the Forest Plan was written. However, the goals of biological diversity, as we now know them, were discussed and incorporated primarily in the wildlife management section of the Plan. In the Goals section of the Forest Plan three specific goals addressed plant, animal and habitat diversity. The goals included: preserve and enhance the diversity of plant and animal communities; maintain adequate quality, quantity and distribution of habitats to support viable populations of native and desired non-native vertebrate species; and protect threatened, endangered and sensitive species as well as species of concern on the National Forest. The availability of new techniques for evaluating landscapes will help determine how a network of lands might be designed to provide and enhanced biological diversity. Geographic Information System (GIS) technology, developments in biodiversity assessments, developments in landscape scale analysis and design, the maturation of conservation biology and the application of ecological principles to reserve design will aid with the creation of an effective blueprint for conserving ecosystems and biology. Plan revision will consider biodiversity and natural communities at a variety of landscape scales and landscape patterns. The revision process will provide a mix of desired and viable plant and animal species populations, natural communities, and landscape patterns, and revise the GMNF management indicators including Management Indicator Species.

Projection of Demand

Assessment of the Demand for Goods and Services from the Green Mountain National Forest

As with most of the demands for goods and services from the National Forest, the public's demand for ecosystem management and biological diversity includes a very wide range of desires. Within this range, biological diversity demands may complement or directly conflict with each other. National and regional requirements for renewable resources and biological diversity have been incorporated into the laws and policy that guide Forest Service management. Therefore these requirements should be the starting points for identifying the public demands. These requirements include:

- Manage National Forests for outdoor recreation, range, timber, watershed, and fish and wildlife and give equal consideration to the value of all the renewable resources, when managing forests (Multiple Use Sustained Yield Act of 1960).
- Manage forest lands to maintain or improve biological diversity at the genetic, species, and ecosystem levels, maintain viable populations of existing native and desired non-native vertebrate species, and protect and enhance the diversity of plant and animal communities (National Forest Management Act of 1976).
- Serve the American public by maintaining diverse and productive wildlife, fish, and sensitive plant habitats as an integral part of managing National Forest ecosystems (Forest Service Manual 2603).
- Provide diverse opportunities for esthetic, consumptive, and scientific uses of wildlife, fish, and sensitive plant resources in accordance with National, regional, State, and local demands (Forest Service Manual 2603).

Assessment of the Green Mountain National Forest’s Ability to Supply Goods and Services

The physical and biological composition, structure, and ecological function of National Forest lands provide the “goods and services” for biological diversity. Through forest ecosystem management, the National Forests in general, have the ability to supply a wide array of services to maintain and enhance diversity at the genetic, species, community and ecosystem levels. This ability, however, varies by issue (desired results) and by scale. At smaller scales, such as stands, or microhabitats within stands, or lakes and streams the Forest generally has the ability to provide desired habitat conditions; the

scales at which many species habitat requirements are met. Examples of small scale habitats include: rock outcrops, cliffs, many wetlands and waterbodies, seeps and vernal pools, as well as woody debris, reserve areas and wildlife trees, stand horizontal and vertical structural diversity, spawning areas, nests, dens, large old trees, diversity of tree species within stands, transition zones between habitats, and an array of stand age classes. These conditions can be addressed by selecting and implementing a variety of management activities or "tools" such as protecting sites from human disturbance, a variety of tree harvesting techniques, planting trees, or using prescribed fire.

On larger landscape scales – from ecological subsection to land type association to management areas – the Forest also has the ability to address biodiversity and ecosystem management issues. This is possible because National Forest lands include relatively contiguous blocks of land. Ecosystem management consists of providing a variety of habitat types that meet the requirements of different species and communities, the conservation of biodiversity, management of threatened, endangered and sensitive species and the monitoring and control of invasive species. The GMNF can not provide habitats for all species native to the Northeast, however the Forest may have a significant amount of high quality habitat that is lacking outside the Forest. With regional coordination between the GMNF, the State of Vermont, neighboring lands, and conservation partners, a determination can be made as to which habitats the GMNF can best provide for the conservation of biological and ecological diversity. To this end, conservation biology will be incorporated into the decision making process.

The Need for Change

Known Problems with Existing Direction

There is a need to change management direction to: incorporate ecosystem management principles and objectives; emphasize communities and ecosystems; and incorporate increased scientific understanding. Because National Forest lands are affected by forest management, the Forest Plan revision provides the most appropriate context within which to address this issue.

Ecological information has improved substantially since 1987 when the current Plan was approved and this information needs to be incorporated into the revision of the Forest Plan. Inventories for rare species and exemplary natural communities have been conducted yearly since the early 1990s. GIS data has been developed to help evaluate the distribution of habitat features like soil, landforms, and geochemistry, which often control the distribution of rare habitats and species. Management Indicator Species (MIS) data has been collected over the past 15 years, however, this data set is currently insufficient to statistically assess relationships between management practices and wildlife responses. Assessment of this program's effectiveness is an on-going process; changes in plant and wildlife goals resulting from Plan revision will likely necessitate adjustment to our MIS program.

Management direction that will be explored during Forest Plan revision includes:

- Determining types, mixes and spatial relationships of habitat (forest, shrubland, grassland)
- Analyzing biological diversity and its conservation at a species, community, and regional level
- Monitoring and assessment of plant and animal populations and habitat conditions including Management Indicator Species
- Conserving threatened, endangered, sensitive and extirpated species
- Providing more guidance for the management of non-native and invasive species
- Using Land Type Associations, Core Reserves, and Habitat Management Units in forest management planning
- Using principles and practices of conservation biology in forest management planning

Assessment of the Ability to Resolve Concerns through the Planning Process

The ability of the Forest Service to resolve issues and concerns through the planning process varies by the issue and by the scale and time for which the public may have a concern over the issue. As long as biological diversity is maintained or enhanced through Forest management activities, determining the balance of desired wildlife and plant habitats and populations is based on public desires. Because there are conflicting desires for habitat conditions the planning process is unlikely to resolve every issue or concern. The process does, however, provide a systematic means to garner and consider the wide range of views in the formulation of new or revised management direction. It also offers the chance to resolve, or at least reduce the intensity, of ecosystem management issues.

The public meetings held throughout the revision process provide opportunities for public input specific to these issues. Assessments conducted during the plan revision process offer the ability to address issues using the best available science. Furthermore, the Plan revision process includes a review of Standards and Guidelines, which gives the GMNF the ability to resolve issues by revising those Standards and Guidelines. The planning process also includes the ability to refine Management Areas, which will help address issues related to ecosystem management.

Recreation

Introduction

The Green Mountain National Forest's (GMNF) Plan revision process offers opportunities to further refine recreation management on the Forest in the context of the new Forest Plan. People have identified a variety of issues related to recreation throughout the plan revision process. The issues that will be addressed through the revision process are:

1. Emphasizing a mix of recreational opportunities
2. Emphasizing backcountry recreation
3. Using the Recreation Opportunity Spectrum in conjunction with management area designations
4. Balancing motorized and non-motorized uses
5. Improving facilities, signage, and information
6. The impacts of recreation on other forest resources and the ecosystem
7. The impacts of trail uses on other forest resources and the ecosystem
8. Identifying the right mix of trail types through trail system planning

It is believed that there have been increases in many recreational uses on the GMNF during the life of the Forest Plan. The public wants to ensure that the Forest continues to emphasize providing a full range of high quality recreation opportunities. The appropriate mix, however, of primitive, low-density recreation opportunities, more developed, higher density recreation opportunities, and motorized (snowmobile and ORV) and non-motorized trail (ski, hike, mountain bike and horse) uses must be determined. In addition, some people want new or improved facilities for particular recreation activities as well as improved signage and information about recreation opportunities. The revised Forest Plan should also consider the effects of recreational and trail uses on the ecosystem. Furthermore, the analysis for the Forest Plan should consider current and projected use, carrying capacity and the economic value of recreation.

Projection of Demand

Outdoor recreation has remained enormously popular over the years across many American communities and societal groups. Although new forms of participation have appeared, an underlying basic motivation for outdoor recreation participation remains the opportunity to experience nature by

viewing it, traveling through it, and living it. Furthermore, outdoor recreation in America's National Forests is rapidly expanding. In 1997, the Forest Service hosted an estimated 800 million recreation visits nationwide, more than any other jurisdiction or agency. Over the next 50 years, demand is expected to go from 800 million to 1.2 billion visits to the national forests per year (USDA 2004b). In addition, people are asking for an ever-broader spectrum of benefits and services to enrich their experiences. The Forest Service must meet the nation's growing need for outdoor recreation in a manner that protects the health, diversity, and productivity of the land.

Assessment of the Demand for Goods and Services from the GMNF

Recreation demand is a complex relationship between people's desires and preferences, the availability of time, price, and the availability of facilities. The evaluation of current and future demand for recreation on the Green Mountain National Forest (GMNF) is based on recent surveys that identify and quantify:

- Estimated number of current recreation visits to the GMNF
- Participation rates for recreation activities within the State of Vermont
- Future activity demand based on projected population growth

The recent National Visitor Use Monitoring (NVUM) study by the Forest Service has provided baselines for estimating current recreation on the GMNF (Table A-1). These numbers only account for people visiting developed or dispersed sites for the purpose of engaging in a recreation activity. They do not include the thousands of people that simply drive through the national forest. Based on the NVUM data, 3.4 million recreation visits occurred on the Green Mountain National Forest during 2000 (USDA 2001). Recreation visits defined as "dispersed recreation," occuring away from developed sites in general forest areas, accounts for 67 percent of these visits. Developed recreation areas (day-use and overnight) on the GMNF accommodate approximately 33 percent of the estimated recreation visits, and 1 percent of GMNF site use is accommodated by wilderness sites.

Table A-1. Recreation Site Use on the Green Mountain National Forest

Type of Recreation Site	Current Percentage of Total Estimated Forest Recreation Visits
Day-Use Developed Sites	30%
Overnight Use Developed Sites	3%
General Forest Areas (Dispersed Sites)	67%
Wilderness	1%

Source: GMFL NVUM Data
Notes: Statistics interpolated from Green Mountain and Finger Lakes National Visitor Use Monitoring Study (2001).

Demographic information also reveals trends affecting recreation demand. As a large segment of the American population ages, demand is growing for less physically challenging activities such as viewing and photographing wildlife and driving for pleasure. The desire for easier access to facilities and forest settings is increasing as the physical abilities of the aging population decrease.

As the population continues to grow, and land continues to be developed, public lands such as the GMNF will increasingly be seen as a place of relaxation, a quiet retreat from the built environment. As forest recreation demand grow, recreation activities are likely to conflict more with each other especially on trails, in backcountry, at developed sites and on roads and their nearby environs (Cordell 1999).

Assessment of GMNF Ability to Supply Goods and Services

For planning purposes, recreation supply is defined as the opportunity to participate in a desired recreation activity in a preferred setting to realize desired and expected experiences. Recreationists choose a setting and activity to create a desired experience. Three components of supply are settings, activities and facilities. The Green Mountain National Forest manages a variety of settings and facilities.

The Recreation Opportunity Spectrum (ROS) inventory system helps characterize the existing condition of the Forest. The ROS is a planning tool used to identify and evaluate the supply of recreation settings on national forests. The GMNF inventoried ROS indicates that current National Forest conditions can provide a range of opportunities, settings, and experiences. Five ROS classes are currently inventoried on the GMNF, as shown in Table A-2. These settings include Rural, Roaded Natural, Semi-primitive Motorized, and Semi-primitive Non-motorized, and a small percentage of Urban. A large part of the Forest, 40 percent, is inventoried in the Roaded Natural ROS class.

Table A-2. Green Mountain NF Inventoried ROS Classes

ROS	Acres	Percent
Urban (U)	206	<1%
Rural (R)	11,543	3%
Roaded Natural (RN)	157,616	40%
Semi-primitive Motorized	104,663	27%
Semi-primitive Non-motorized	116,091	30%
Primitive	0	0%

Source: GMNF GIS Data
Note: The Inventoried ROS analysis includes all GMNF lands, including MA 9.2 lands.

The GMNF supplies some of its recreation opportunities in the form of developed facilities. The Forest Service defines the capacity of developed recreation facilities in terms of “people at one time” a site can support (PAOTs). Currently, there are approximately 114 developed sites managed by the GMNF to accommodate an array of recreation activities. Table A-3 lists the facility types provided across the forest and their current capacity in PAOTs.

Table A-3. Green Mountain NF Developed Recreation Facility Capacities

Developed Recreation Facility type	Total Number of Areas	Total Capacity (PAOT)
Trailheads	53	2189
Campgrounds	9	880
Swimming Area	1	580
Trail Shelters & Tent Areas	35	402
Picnic Sites	6	359
Fishing/Wildlife Viewing Sites	2	190
Interpretive Sites	4	151
Observation Sites	4	149

Source: GMNF INFRA Data

The Green Mountain National Forest also provides dispersed recreation opportunities, defined as those activities that occur outside of developed recreation sites, such as fishing, hunting, and trail activities (for example, hiking, snowmobile, cross-country skiing). Dispersed sites also include roadside camping and locally popular picnicking areas. There are several trailheads and parking areas that facilitate this

dispersed use of the forest. One indicator of recreation supply in terms of dispersed recreation opportunities is the mileage of trails on the Forest. GMNF trails provide a multitude of day and overnight hiking opportunities (Table A-4).

Table A-4. Green Mountain NF Miles of Trails by Managed Use

Trail Managed Use	Miles
Snowmobile	471
Hike	349
Horseback riding	166
Cross-country ski	37
Mountain Bike	14

Source: GMNF INFRA Data
Notes: Total trail system is 906 miles. Some trails allow for multiple uses along single sections of trail.

Benchmark analysis defines the range within which planning alternatives can be constructed. They describe the maximum potential of the resource, as well as the minimum level of management needed to protect the resource. The Green Mountain National Forest's recreation benchmarks identify the maximum production potential for recreation settings, in terms of ROS class provided. Table A-5 describes the maximum number of acres and recreation visitor days (RVD) the Forest would be able to provide in each ROS class if recreation management were to be directed toward that class. For example, the first row in the table, "Maximum Wilderness/Primitive," shows the number of acres and RVDs the Forest would be able to supply in each ROS category if the Forest were managed to provide the maximum amount of Wilderness/Primitive recreation opportunities. In this case, the GMNF would be able to provide 176,310 acres of Wilderness/Primitive opportunity; 93,784 of the remaining acres would be Semi-primitive opportunities, 118,891 acres would be Roaded Natural, and 10,793 would be Rural/Urban. These numbers were calculated by hypothetically making all Forest Roadless areas into Wilderness and subsequently generating ROS figures. The second row figures, Maximum Semi-primitive," were calculated by hypothetically closing all class 1,2,or 3 Forest Service jurisdictional roads and generating ROS figures. The third row figures, "Maximum Roaded Natural," were calculated by hypothetically improving all class 1 and 2 Forest Service jurisdictional roads to class 3 roads and generating ROS figures. The last row in the table, "Minimum Managed," shows the number of acres and RVDs the Forest would be able to supply if it were managed only for the recreation opportunities the GMNF is required to provide, such as the wilderness areas and National Recreation Area (NRA). The figures in this row therefore represent the wilderness and NRA acreage on the Forest divided into their inventoried ROS categories, and associated RVDs.

The last column in the table, Total MRVD, shows the maximum GMNF production potential in each ROS class, in terms of thousand Recreation Visitor Days. The current level of demand on the GMNF is 3,371 MRVD. Therefore, the maximum recreation capacity of the Forest currently exceeds the demand in all ROS recreation settings. The minimum management category is an exception, however; if the GMNF managed only those recreation areas it is required to provide, the supply of recreation opportunities would not satisfy the current demand.

Table A-5. Green Mountain NF Maximum Recreation Capacities					
	Acres/ RVD provided per ROS class				
Management alternative	**Wilderness/ Primitive***	**Semi-Primitive**	**Roaded Natural**	**Rural**	**Total MRVD**
Maximum Wilderness/Primitive	183,322/ 1,909,795	91,516 1,663,486	116,606/ 63,841,785	10,789/ 17,720,933	85,136
Maximum Semi-Primitive	59,001/ 614,655	208,311/ 3,786,469	120,717/ 66,092,558	11,749/ 19,297,733	89,791
Maximum Roaded Natural	59,001/ 614,655	141,125/ 2,565,229	187,903/ 102,876,893	11,749/ 19,297,733	125,355
Minimum Managed	59,001/ 614,655	22,758/ 413,672	0/ 0	0/ 0	1,028
*The GMNF does not currently provide a Primitive ROS setting. For purposes of the benchmark analysis, primitive ROS numbers are synonymous with wilderness areas.					

The Need for Change

Known Problems with Existing Direction

There are several areas of concern with the existing direction of the Green Mountain National Forest regarding recreation. One area of significant concern involves the coordination of timber harvest and recreational use within various Management Areas (MAs). Associated timber management activities have, on occasion, disrupted public use of recreational trails and roads within a project area. The increase in multi-seasonal use of recreational trails and the involvement of partners in their maintenance has made it harder to mitigate conflicts between recreational use and harvest activities. These conflicts have arisen in MA 3.1, which uses intensive management to achieve roaded recreation goals, as well as MAs 4.1 and 4.2, which emphasizes management activities that provide suitable, stable habitat to meet deer winter needs. Recreational use conflicting with wildlife and vegetative management objectives has also become a challenge to land managers in the 6.2A & 6.2B MAs, which emphasize semi-primitive recreation opportunities. Although many conflicts have been avoided through the timing of timber sale activities and temporary and permanent trail rerouting, the conflicts have not been fully resolved.

Other conflicts in deer wintering MAs also remain an issue. Pre-existing recreational activities, such as cross-country skiing and snowshoe hare hunting, continue to cause site-specific impacts on wintering deer populations. Snowmobile use in deer wintering areas also create disturbances. The Forest Service has rerouted trails as well as closed sections of ski and snowmobile trails to reduce the amount and location of these disturbances. The issue is not yet resolved, however.

An additional management concern is the inability to provide Primitive recreational opportunities. Although an MA (MA 6.1) was created to emphasize Primitive recreation opportunities, the GMNF has been unable to provide these conditions.

Furthermore, developed recreation opportunities also face challenges. The quality of the developed recreational facilities on the Forest does not meet GMNF expectations. Many are outdated and are showing signs of deteriorations. This includes facilities at Hapgood Pond, a popular recreation area with increasing use trends, whose dam, sanitation facilities, and water system do not meet GMNF expectations. Although the GMNF has been able to improve day-to-day customer service, the facilities remain in need of improvement. There also may be a need to add other developed recreations sites to the developed areas MA (MA 7.1). Finally, the GMNF may need to evaluate its capacity to maintain highly developed recreation areas.

Concerns about current recreation direction also exist in certain specific special areas, which are managed under MA 8.1. One area is Grout Pond (MA 8.1C), which has experienced a rapid rise in recreational use during the past decade. As a result, the Forest Service's ability to effectively manage Grout Pond is severely strained. Based on 1986 visitor use estimates, this increase is expected to continue and could lead to resource damage and unsatisfactory recreational experiences. Increased day use, particularly at Wallingford Pond, also presents challenges. Some of this use, such as horseback riding, and ATVs, is not authorized. Also, dispersed recreation facilities (trails, campsites, sanitary facilities, etc.) are below Forest standards in that they either do not meet the expectations of the recreational users or are causing resource damage. Although the Forest Service has developed several proposals to rectify this situation, implementation has been delayed due to lack of funding. Finally, special areas that are currently grouped together under MA 8.1 may benefit from being separated into sites where use is encouraged and sites where undisturbed conditions are emphasized.

Assessment of the Ability to Resolve Concerns through the Planning Process

The Plan Revision process offers various opportunities to address these recreation concerns. The public meetings held throughout the revision process provide opportunities for public input specific to these issues. Recreation-related assessments included in the plan offer the ability to address issues such as trail planning and use conflicts. Furthermore, the Plan revision process includes a review of Standards and Guidelines, which gives the GMNF the ability to resolve issues such as illegal use by revising those Standards and Guidelines. The planning process also includes the ability to refine Management Areas, which will address the concerns listed above.

Timber Management

Introduction

A major issue for timber management on the GMNF is the amount of even-aged and uneven-aged management. The Forest Plan emphasizes the maintenance of continuous forest cover using uneven-aged silviculture in MA 2.1. Uneven-aged silviculture was chosen since visual quality and recreation use are also emphasized as MA 2.1 lands are often near developed recreation sites or along trails. The application of individual tree and group selection silvicultural methods has mixed results. Intolerant species such as aspen and paper birch cannot be regenerated using these silvicultural methods. Sun-loving shrub species such as blueberries were being lost. Monitoring indicated that uneven-aged management, the sole silvicultural tool in MA 2.1, may be too restrictive to meet vegetative and visual goals.

Even-aged management was emphasized in MA 3.1 to provide a diversity of wildlife habitats and the production of high quality sawtimber. Even-aged management is also used to manage conifer and oak as well as enhance wildlife habitat for certain species. Forest age class composition has generally been met. The desired results in terms of vegetative response has been successful, although there has been an under achievement of acres treated and, consequently, volume. The lack of markets for small diameter trees and under funding of the timber program may account for the under achievement. In MA 3.1, even-aged management may be too restrictive. In some cases, uneven-aged management may be more appropriate to achieve social and environmental objectives. In other cases, the prescriptive nature of management direction made it difficult to incorporate changing technology. Standards and guidelines may be too restrictive to achieve even-aged resource objectives.

Another major issue for timber management is the amount of timber offered for sale. The average annual allowable sale quantity (average annual ASQ) is defined as the maximum amount of chargeable timber volume that can be sold from a plan area (the National Forest boundary) over a ten-year

planning period. "Chargeable" pertains to the timber volume that has been included in the growth and yield projections on suitable timberland used for the calculation of the average annual ASQ. Each Forest Plan that provides for a timber sales program must establish an average annual ASQ. Average annual ASQ is a ceiling for a ten-year planning period that may not be exceeded. It is neither a future sale level projection nor a target, and does not reflect all of the factors that may influence future sale levels.

Opinions vary greatly on what the average annual ASQ should be for any given national forest, or how it should be determined. The range includes high extremes setting the average annual ASQ at the maximum sustainable harvest level calculated at biological potential, to low extremes where no timber harvest would occur on national forest lands (an average annual ASQ of zero). Although average annual ASQ is defined as a ceiling, it has often been perceived as a firm target to be met, even at the expense of other resources.

The GMNF average annual ASQ was calculated from on-the-ground stand inventories using SPECTRUM, a linear programming model, and the Forest Vegetative Simulator (FVS). The Northeast Twigs growth and yield model was selected within FVS to model the GMNF stand projections. A key output from FVS is a prediction of yields per acre based on species type and application of prescriptions. Total volume was then estimated by multiplying acres by FVS calculated yield (per acre in cubic feet) and converted to thousands of board feet (MBF).

The National Forest Management Act (NFMA) requires that average annual ASQ be calculated as a non-declining flow of timber over time, unless a conscious decision is made by the Regional Forester to select a departure schedule with higher volumes in the early years, and decreasing volumes over time. Some believe the Forest Service should shift its average annual ASQ focus from volume harvested to acres treated.

The GMNF has been unable to offer timber for sale at the forest plan level projected average annual ASQ of 15.6 million board feet (MMBF) annually. One reason is that markets for pulpwood are poor in southern Vermont. Pulpwood volume contributes about half of the GMNF's average annual ASQ. In the last 18 years, about 34 percent of the average annual ASQ has been sold. Some local sawmills depend upon the supply of GMNF timber. In 2002, a total of 29.3 million cubic feet of wood products were produced in Addison, Bennington, Rutland, Windham, Washington and Windsor Counties. Sawtimber and veneer comprised about 60 percent of the wood products. Pulpwood and fuelwood for electric generation comprised the remaining 40 percent of the wood production. In southern Vermont, the pulpwood markets and fuelwood are poor. Due to the long haul distances to pulp mills and electric generation facilities, Bennington and Windham timber harvests consists of over 80 percent sawtimber.

Pulpwood markets have not dramatically improved in southern Vermont, but sawtimber stumpage prices have increased tremendously. There are other factors that have influenced the need to re-calculate the average annual ASQ for the GMNF. Over 91,000 acres of newly acquired timberland was acquired by the GMNF since 1982, which needed to be evaluated for timber suitability. Timber stand examination was required on those lands in order to determine timber suitability. Average annual ASQ levels need to be recalculated to reflect those new conditions, revised forest plan goals, standards and guidelines, updated national direction on ecosystem management, and other stewardship responsibilities of National Forest land managers.

The timber management issue is appropriately addressed during Plan revision because there is a potential for significant changes to average annual ASQ based on the alternative selected for the revised Plan. USDA Forest Service regulations 36 Code of Federal Regulation 219 require either a significant amendment or revision if there is a proposal to make changes that are significant (USDA 2004a). In addition, average annual ASQ is directly affected by age class distributions and silvicultural

management activities. A balanced age class of each forest type scheduled for harvesting will provide an even flow of forest products. Harvest volumes are related to the silvicultural method used, with even-aged methods providing more volume than uneven-aged methods on the same amount of acres.

Projection of Demand

Assessment of the Demand for Goods and Services from the Green Mountain National Forest

Several macro-trends influence timber demand, including: robust economic growth, population growth, and recycling programs. The economy of the mid-1990s has been one of fairly robust growth, and is expected to increase at a rate of 2-to 3 percent annually for the next 50 years (Reeves 1997).

In addition, population growth, including net immigration, is increasing at roughly one percent annually. Combining these two factors, along with the housing trends that include larger homes, it seems likely that lumber and panel demand to build homes and repair older homes will continue to increase into the 21st century. This does not include other uses for lumber, such as manufacturing and shipping. The popularity of community recycling programs, however, has in part contributed to a slower growth in pulpwood demand than what was predicted in the Resources Planning Act (RPA) Timber Assessment Update (USDA 1993).

According to the 1993 Resources Planning Act Timber Assessment Update, lumber consumption and production was expected to increase slightly into 2040. In the Northeastern region, hardwood lumber production is expected to increase slightly and softwood lumber production is expected to remain constant. Wastepaper will become increasingly important sources of wood fiber, up from 27 percent to total wood fiber used in 1991, to an estimated 44 percent in 2040 (USDA 1993).

Sawtimber markets are expected to remain strong for GMNF. Local stumpage prices are influenced by proximity to mills, timber quality, sale conditions, and global markets. Global markets are having an increasing influence on timber economics. GMNF sawtimber receipts have increased tremendously between 1986 and 2003. There is strong interest in timber sales containing high quality sawlogs, especially sugar maple. Although National Forest sawlog stumpage is not specifically marketed by log grade, the quality of sawlogs, especially high value species such as sugar maple, red oak and yellow birch, greatly impacts stumpage prices. The most recent Forest Inventory and Analysis conducted in Vermont (Wharton et al. 2001) indicates that the sawlog quality on the GMNF is significantly higher quality than is typically found on forestlands in northern New England. This is due to the age of the trees on the GMNF and the management that has been applied over longer periods of time. Silvicultural treatments that remove lower quality trees and allow high quality trees to become older have been applied over thousands of acres of the GMNF since the 1940s.

Assessment of the Green Mountain National Forest Ability to Supply Goods and Services

Table A-6 depicts updated information prepared during the Forest Plan revision for the GMNF. The acreages not appropriate for timber management will vary by alternative, identified for the revision of the Forest Plan. As a result, identifying the amount of suitable lands is not possible at this time and the figures in Table A-6 may vary by Alternative. However, the first four rows (Total Land Area, Non-forested Areas, Lands Legally Withdrawn, and Lands not Physically Suited for timber Production) will generally not vary, regardless of alternative.

Table A-6. Current Land Status on the Green Mountain National Forest as related to timber production			
Land Status	**1986 (acres)**	**2004 (acres)**	**Change (acres)**
Total Land Area (net)	325,400	399,960	+74,560
Non-forested areas (land and water)	9,760	11,157	+1,397
Lands legally withdrawn from timber production (ex. Wilderness)	58,400	59,001	+601
Lands not physically suited for timber production (ex. low site-productivity)	14,890	6,118	-8,772
Lands not cost efficient for timber production and lands managed for other emphasis (ex. campgrounds, Remote Backcountry MA, NRA, Alpine Ski Areas, TES species).	79,095	139,982	+60,887
Lands without information to evaluate potential for timber management	41,420	-0-	-41,420
Lands Suitable or Tentatively Suitable for timber management	121,835	194,859	+73,024
Notes: The 2004 figures reflect more accurate acre determination using GIS			

A benchmark analysis provides baseline data to support the formulation of alternatives, and aids in defining the range within which alternatives can be constructed. Benchmarks estimate the Forest's physical, biological, and technical capabilities to produce goods and services. Planning regulations specify that the Analysis of the Management Situation shall include benchmark analyses that define: (1) the range within which alternatives can be constructed; (2) the minimum level of management needed to maintain and protect the unit as part of the National Forest System, together with associated costs and benefits; and (3) the maximum physical and biological production potentials of individual significant goods and services, together with associated benefits and costs. The results of the benchmark analysis for the timber resource are listed in Table A-7.

The Minimum Level Benchmark represents the least amount of management needed to maintain and protect the Forest as part of the National Forest System (NFS). The Minimum Level Benchmark (minimum maintenance and protection of the Forest) for the timber resource represents only those costs and outputs associated with protecting and managing activities and investments where there is little or no management discretion. Although incidental outputs are permissible, there will be no management action-related timber or recreation outputs. Forest vegetation will evolve through natural succession. The results of this benchmark are that timber harvesting would not be performed on the Forest, with a resulting loss of PNV.

The Maximum Level Benchmark represents the maximum potential area of the Forest that can be classified as suitable for timber production. The maximum timber benchmark provides a maximum timber production capacity reference. Forest land not considered as suitable for timber production in this benchmark analysis includes non-forested land, land that is defined as physically unsuitable for timber management (according to the Planning Regulations), and land removed through statute or administrative action (such as Wilderness). This benchmark represents the highest possible timber harvest volume consistent with the principles of non-declining flow and harvests that do not exceed the long-term sustained yield.

The Present Net Value benchmark produces the most valuable, as defined within a PNV calculation, mix of timber products on the Forest. Its purpose is to determine the level of production that is most efficient based on monetary values for both market (financial) and non-market (assigned value) outputs.

This benchmark represents the highest value mix of market and non-market outputs on the Forest consistent with the timber harvest principles of non-declining flow and harvests that do not exceed the long-term sustained yield.

The SPECTRUM program, used to produce the benchmarks, modeled a flat harvest due to the effect of the Non-declining Yield (NDY) constraint. Under both the maximum timber and present net value benchmarks, without the NDY constraint, there is a natural tendency to have large harvests early, followed by a decline and then large harvests in the later planning periods. This natural tendency is severely dampened by the NDY constraint. Furthermore, when the harvest level is constrained to be below the long-term sustained yield (LTSY), the model finds the greatest value and harvest amount over the entire planning horizon by pushing the flat harvest level as high as possible.

Table A-7. Timber Benchmarks

Total Timber Volume (MMCF/ Decade)	Benchmarks		
	Minimum Management	Maximum Volume	Maximum PNV
Decade 1 (Planned)	0	43.6 MMCF	42.8 MMCF
Decade 2 (Projected)	0	43.6 MMCF	42.8 MMCF
Decade 3 (Projected)	0	43.6 MMCF	42.8 MMCF
Decade 4 (Projected)	0	43.6 MMCF	42.8 MMCF
Decade 5 (Projected)	0	43.6 MMCF	42.8 MMCF

Source: 2003 Spectrum – Ft. Collins Washington Office Service Center of the USDA-FS at http://fsweb.ftcol.wo.fs.us/tm

The Need for Change

Known Problems with Existing Direction

There are several areas of concern with the existing timber management direction of the Green Mountain National Forest. One area of concern involves the difficulty the GMNF has had achieving the desired timber sale levels under the 1987 Plan, as amended. The 1987 Plan standards direct the size and adjacency requirements of harvest blocks. This factor, coupled with additional standards and direction provided for wildlife habitat, especially Threatened, Endangered, and Sensitive species (TES), were not analyzed with the FORPLAN linear program used to set the 1987 Plan average annual ASQ, resulting in an inaccurate projection of average annual ASQ levels.

Another known problem under the 1987 Plan included outdated or incomplete data. In 1986 there was inadequate data about 41,420 acres of land acquired since 1982 to assess their potential for timber management. Those lands were assigned to Management Area 9.2 – Lands for Further Study. Since 1986, new land was acquired and MA 9.2 had increased to 91,348 acres. During the 1990s limited forest silviculture inventory (silvex) funds were available to examine newly acquired land. There was concern that there would be adequate stand information to make decisions for Forest Plan Revision regarding timber management potential. In 1997, funding became available and an accelerated silvex program began for newly acquired lands. By 2004, all newly acquired lands had been examined. The new data provided the Forest with a unique opportunity to conduct an average annual ASQ analysis with a high confidence of reliability.

An additional area of concern includes the selection of appropriate harvest methods. Clearcutting has been an issue for years. Current direction in the 2002 Resources Planning Act indicates that the amount of clearcutting will be reduced (USDA 2002b). The GMNF scheduled clearcutting to regenerate aspen and paper birch, release existing conifer regeneration and to regenerate high-risk trees. Other even-aged management practices, including shelterwood and thinning harvests, were scheduled. Two-aged silviculture, known as delayed shelterwood, was proposed as a new technique in 1986. Several stands were harvested using this technique across the Forest. Annual monitoring of regeneration and residual tree response was conducted and the results showed that this harvest method was, and could continue to be used successfully on the GMNF. Data from the monitoring was incorporated into FVS modeling for Plan Revision. There is a need to address the problems with the timber sale outputs and re-look at harvest methods. The land suitability classification is required to be reviewed and if changes in classification occur, it will directly relate to changes in average annual ASQ.

Finally, another timber management concern focuses on incorporating new direction and scientific thinking. New computer analysis technologies are available to address management using advances in calculating growth and yield information. The Washington Office Service Center in Ft. Collins, Colorado recommends using the Forest Vegetation Simulator (FVS) for developing growth and yield figures for planning. In addition, direction was given in a 1992 memo from Forest Service Chief Dale Robertson (USDA 2004b) to manage natural resources using an ecological approach to create diverse, healthy, productive, and sustainable ecosystems. Although the Forest Plan was amended in 2000 to protect habitat for TES species, including Indiana bat, new standards and guidelines (S&Gs) were needed to determine the impact of the S&Gs on the average annual ASQ. There is a need to incorporate this direction in the revised Forest Plan.

Assessment of the Ability to Resolve Concerns through the Planning Process

The Forest Plan revision process offers various opportunities to address the timber concerns noted above. Updated modeling procedures and more accurate ground data will allow for improved average annual ASQ predictions. However, another issue related to average annual ASQ is tied to how much timber volume is actually offered for sale from the GMNF, subsequent to the planning process. Actual annual timber sell volumes are determined through the federal budget process at the national level. Normally, the budget is proposed by the Executive branch and approved by Congress. The funds required to prepare timber sales are divided among the various Regions of the Forest Service, along with the target sell volumes. The Regions allocate their dollars and volume targets to each Forest based on the projected capability as determined by that Forest. The Finger Lakes National Forest (FLNF) is administratively attached to the GMNF and therefore the dollars and targets are received for both Forests. The timber sell dollars and targets are determined by the Regional Forester, following recommendations from the Forest Supervisor, the forest management staff, District Rangers and other resource specialists.

Another issue that may be addressed through the planning process is the appropriate selection of silvicultural methods to utilize during timber harvests. Clearcutting, and to some extent other even-aged harvesting methods, are controversial; many people feel that uneven-aged harvesting methods are more appropriate for the GMNF. In addition, some public concern has stressed the desire for more wilderness designation. The issues of forest age-class distribution, uneven-aged versus even-aged prescriptions, the length of timber rotations, the amount of old-growth, and timber supply will be analyzed in the draft environmental assessment that will be prepared for the revised Forest Plan.

Socio-Economic

Introduction

The Green Mountain National Forest's (GMNF) Plan revision process offers an opportunity to consider and evaluate the socio-economic concerns, benefits and impacts of each Plan alternative. The issue of socio-economics involves people's desires for including, recognizing, and addressing community concerns and opportunities, economic impacts and benefits, changing demographics in rural communities, and providing for multiple use management.

Issues expressed by the public concerning socio-economics include tax loss from land acquisition, and potential revenues and employment that could be generated from the Forest through resource management and regional tourism. Major topics of concern include:

- The fiscal impacts of Forest lands on municipalities
- The role of the Forest in providing social and economic benefits to local communities
- The cost effectiveness fo Forest Service programs and management
- The impacts of federal ownership on private lands and local governments
- Values and expectations of a changing population – local and regional

The 1987 GMNF plan addressed socio-economic concerns by stating that the Forest should promote the economic stability of local communities. The Forest Plan also discussed the goal of providing a consistent flow of goods and services on which local communities could depend, and to minimize disruptions to local economies that may result from forest management decisions. The 1987 Forest Plan was created in part with a desire to "maximize net public benefits." These benefits are both qualitative and quantitative in nature. The benefits range from increasing primitive and semi-primitive opportunities for recreation, to maintaining the annual amount of wood cut at or below present levels.

Projection of Demand

Assessment of the Demand for Goods and Services from the GMNF

Socio-economic goods and services can include a wide range of products on the GMNF, from recreation activities to timber products. The public's demand for these goods and services thus includes a wide range of desires. Furthermore, these desires can also conflict with one another, such as the desire for peace and solitude in a wilderness environment versus the desire for more trails for motorized vehicles. There may be a public demand for Forest land acquisition from some, while others desire retention of the towns' taxable land base. These varying socio-economic demands and resulting conflicts are the natural product of a diverse constituency, and will continue to exist on the GMNF.

The recreation component of the demand for socio-economic goods on the GMNF describes what recreation activities people demand now, and may want in the future. Based on National Visitor Use Monitoring (NVUM) data, 3.4 million recreation visits occurred on the Green Mountain National Forest during 2000. The majority, 67 percent of these recreation visits were what is defined as "dispersed recreation," occurring in general forest areas away from developed sites. Approximately one-third, 33 percent, of the estimated recreation use in 2000 was in developed recreation areas (both day-use and overnight), and 1 percent of GMNF site use took place in wilderness areas (Table A-1).

The timber component of the demand for socio-economic goods on the GMNF involves the public demand for lumber and pulpwood products. Due to population growth, housing trends that include larger homes, and interest in high quality sawlogs, public interest in timber products from the GMNF is expected to remain strong. GMNF sawtimber receipts have increased greatly between 1986 and 2003,

over the life of the 1987 Plan. Furthermore, inventory data indicates that the sawlog quality on the GMNF is significantly higher quality, on average, than is typically found on other forest lands. The GMNF will continue to provide multiple benefits to surrounding communities by contributing to the quality of their environment as well as social and economic stability in northern New England.

Assessment of the GMNF Ability to Supply Goods and Services

The GMNF can not meet all demands from all users, but strives to provide a mix of quantitative and qualitative socio-economic benefits provided by the Forest to the public and neighboring communities while still being true to its resource protection mission. The ability of the GMNF to supply timber goods and services can be seen in Table A-6. The ability of the GMNF to supply recreation goods and services can best be seen by looking at Table A-5. As this table shows, the ability of the GMNF to meet recreational needs far exceeds the recreational demand.

Furthermore, the National Forest Management Act (NFMA) requires a benchmark analysis to define the range within which alternatives can be developed. Determining the minimum level of management needed to maintain and protect the GMNF as part of the National Forest system is a baseline requirement of the benchmark analysis. This analysis provides a minimum level of the environmental, social and economic goods and services to be provided by the Forest Service on the GMNF. Minimum management objectives outlined in the Forest Service Handbook (FSH)1909.12,3 are as follows:

- Protect the life, health, and safety of incidental users;
- Prevent environmental damage to the land or resources of adjoining lands of other ownerships or downstream users;
- Conserve soil and water resources;
- Prevent significant or permanent impairment of the productivity of the land; and
- Administer unavoidable non-Forest Service special uses and mineral leases, licenses, permits, contracts, and operating plans.

Incidental outputs are permissable, but there is to be no management that would produce timber, range, and developed recreation outputs; vegetation is to follow natural succession; maintenance is only for those facilities needed to support the basic ownership activities; dispersed recreation use that cannot be discouraged or controlled is to occur; cultural resource management is to be at a minimum level and is primarily for identification and protection of the resources in conjunction with any proposed ground disturbing activities. The Plan Revision Extended Interdisciplinary Team determined the minimum management needs based on this criteria (Table A-9).

Theoretical minimum management levels were provided in the 1985 Plan DEIS Appendix B and are included here for comparison (Table A-8).

Table A-8: Minimum Management Level costs in 1985 DEIS for the Green Mountain and Finger Lakes National Forests combined	
Line Management	
1 Forest Supervisor – GS 12	
1 District Ranger – GS 12	
3 District Rangers – GS 11	
1 Administrative officer – GS 11	
1 Personnel Officer – GS 11	
5 Business management Asst. – GS 5	
Costs	
Salary and Benefits	$241,178
Other Costs (including travel, vehicles, supplies, rents, communications, contractual services, utilities and equipment)	$39,322
Subtotal	$280,500
Program Support	
1 Land Officer – GS 12	
1 Resource Officer – GS 12	
1 Recreation Officer – GS 12	
1 Engineering Officer – GS 12	
Costs	
Salary and Benefits	$102,913
Other Costs	$11,235
Subtotal	$114,148
TOTAL MINIMUM MANAGEMENT LEVEL COSTS	$394,648

Table A-9: Minimum Management Level costs in 2004 for the Green Mountain and Finger Lakes National Forests combined	
Line Management and Program Support	
1 Forest Supervisor – GS 14	
2 District Rangers – GS 13	
1 Finance Manager – GS 12	
1 Recreation, Heritage, Wilderness Manager – GS 12	
1 Trail Manager – GS 9	
1 Engineering Manager – GS 12	
1 Natural Resources Manager – GS 12	
1 Information Receptionist – GS 5	
1 Lands Manager – GS 12	
3 Field Technicians - GS 7	
Costs	
Salary and Benefits	$902,277
Other Costs (including travel, vehicles, supplies, rents, communications, contractual services, utilities and equipment)	$50,600
TOTAL MINIMUM MANAGEMENT LEVEL COSTS	$952,877
Assumption: The Supervisor's Office would remain open and the District offices would be closed.	

The Need for Change

Known Problems with Existing Direction

Areas of concern with the existing direction of the GMNF regarding socio-economic factors include concerns about the cost/benefit tradeoff of timber activities in certain management areas. This was a focus of increased public debate. Also, conflicting use demands continue to be a concern in some management areas, such as the conflict between snowmobile use and deer wintering areas, or recreational trail use and timber management activities.

The socio-economic impacts of the various alternatives are difficult to accurately quantify. Impacts are often subjective or based on somewhat speculative data. Full impacts of implementing different alternatives are often impossible to accurately project due to the complex nature and interaction of multiple variables.

Most of the social and economic related goals in the 1987 Forest Plan do not have specific objectives.

Assessment of the Ability to Resolve Issues and Concerns through the Planning Process

One stated objective of the Forest Plan revision effort is to provide for a mix of quantitative and qualitative socio-economic benefits provided by the Forest to the public. Socio-economic concerns, benefits and impacts will be considered and evaluated in the analysis of each alternative. Public review and comments on these analyses will help validate these data.

The revised Forest Plan will continue much of the current management direction to provide a wide range of uses and management flexibility; the new goals in the revised Plan will have a greater emphasis on social, economic and ecological sustainability as well as coordination with local communities to support local economies, partnerships and educational opportunities. The revised Plan will also have specific objectives designed to measure how well goals are attained.

Wilderness

Introduction

The Green Mountain National Forest's (GMNF) Plan revision process offers opportunities to further refine wilderness management on the Forest in the context of the new Forest Plan. People have identified a variety of issues related to wilderness throughout the plan revision process. The issues that will be addressed through the revision process are:

1. The amount of new wilderness designation recommended to Congress
2. The impacts of use in and around wilderness
3. The consistent and appropriate management and use of wilderness
4. Buffer zones around areas of significance, such as wilderness

Public concern is focused on how much designated wilderness the Green Mountain National Forest (GMNF) needs to have in order to provide for a range of recreation opportunities and ecosystem values. The public is divided on the subject of wilderness: while some desire more wilderness, others do not want additional wilderness designated. Another topic of public concern is that allocating land as wilderness may negatively impact other resources, such as timber management or wildlife habitat. Issues also include the impacts of use in and around wilderness, buffer zones and the level of management intensity in areas surrounding wilderness, and the consistent and appropriate management and use of wilderness.

Projection of Demand

In the New England-New York Region, public land makes up only 17 percent of the land base. With more than 70 million people currently living within a day's drive of the GMNF, public land is under increasing pressure to serve the people of this region. As coming decades are predicted to bring further urbanization, sprawl, and loss of open space, public land in the Northeast will be increasingly scarce and precious. Populations throughout New England are also increasing: within New England, population is projected to increase 30.3 percent between 1995 and 2025, and the New York state population is projected to increase 9.3 percent (U.S. Census Bureau 2004). Visitation to wilderness areas can be expected to increase as well. The Green Mountain National Forest, along with the White Mountain National Forest in New Hampshire and the Moosehorn National Wildlife Refuge in Maine, is one of three locations in the Northeast with federally designated wilderness areas. There is also a relatively limited amount of wilderness in the East in terms of acreage. Furthermore, of the northeastern wilderness areas, only four are larger than 20,000 acres, and only one is greater than 40,000 acres, indicating limited availability of large-scale wilderness areas.

Assessment of the Demand for Goods and Services from the GMNF

According to a 2000 National Visitor Use Monitoring Study (USDA 2001), there were 49,848 visitors to wilderness areas on the Green Mountain National Forest in the year 2000. Observations from field staff are that use varies, with most use concentrated in specific areas such as along the Appalachian Trail/Long Trail and other popular attractions. With many people going to areas of concentrated use, it may be difficult for wilderness users to find solitude at peak use times. Visitor perceptions of crowding, however, are generally low on the GMNF (USDA 2001). On a scale of 1 to 10, with 1 being "hardly anyone there," wilderness visitors rated GMNF wilderness areas a 2.4. The visitor use information can be used to analyze demand for a recreational resource. The 49,848 visits is equivalent to 57,083 Recreation Visitor Days (RVDs). RVDs is a measure used in recreation visitor capacity analysis. Based on the present wilderness acreage of 59,001, the Green Mountain National Forest has a capacity of 614,655 RVDs in existing wilderness.

Assessment of GMNF Ability to Supply Goods and Services

The ability of the GMNF to supply wilderness opportunities exceeds current demand. There are currently six wilderness areas on the Green Mountain National Forest: Breadloaf, Bristol Cliffs, Peru Peak, Big Branch, Lye Brook, and Aiken. These wilderness areas range in size from Bristol Cliffs' 3,712 acres to Breadloaf's 21,151 acres. Within this range of settings, the GMNF is able to provide a diversity of primitive recreation, solitude, and other wilderness opportunities. In the year 2000, 49,848 people visited GMNF wilderness areas. The capacity of the Forest's 59,001 acres of wilderness is 614,655 Recreation Visitor Days (RVDs) (See Table A-5). Therefore, the ability of the GMNF to supply wilderness goods and services currently exceeds the demand.

The Need for Change

Known Problems with Existing Direction

There are several areas of concern with the existing direction of the Green Mountain National Forest regarding the wilderness resource. One area of concern involves management plans. Management plans for Bristol Cliffs, Big Branch, Breadloaf, and Peru Peak Wildernesses have not been completed or signed. Furthermore, wilderness use needs to be inventoried and monitored in order to discern patterns. Finally, management activities on adjacent Forest and private lands continue to raise concerns that boundary areas act as a transition to the more primitive standards of wilderness character. The lack of clearly defined wilderness boundaries on the ground has complicated project planning; not knowing wilderness boundaries has caused managers to create de facto buffer zones during project design to ensure wilderness areas are not violated.

Assessment of the Ability to Resolve Concerns through the Planning Process

The Plan revision process offers various opportunities to address these wilderness concerns. Wilderness is a topic of significant public concern, both in support of as well as against wilderness recommendations, and the public meetings held throughout the revision process provide opportunities for public input on the topic. Furthermore, the 2004 Roadless Inventory included in the plan offers the ability to assess and evaluate potential wilderness resources. The Plan revision process also includes a review of Standards and Guidelines concerning wilderness management, which gives the GMNF the ability to further guide wilderness activities. The planning process also includes the ability to refine Management Areas, which guide wilderness management, and can address concerns related to the current lack of signed wilderness plans.

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