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Service

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April 2006



# Finger Lakes National Forest

## **Land and Resource Management Plan**



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# **Finger Lakes National Forest Land and Resource Management Plan (2006 Forest Plan)**

Eastern Region  
Milwaukee, Wisconsin  
April 2006

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*As the population of the country rises and demands on the timber, forage, water, wildlife, and recreation resources increase, the national forests more and more provide for the material needs of the individual, the economies of the towns and States, and contribute to the Nation's strength and well-being. Thus the national forests serve the people.*

- Edward P. Cliff, Ninth Chief of the USDA Forest Service, *The USDA Forest Service – The First Century*, FS 650, Washington DC, July 2000

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Bluebird Box

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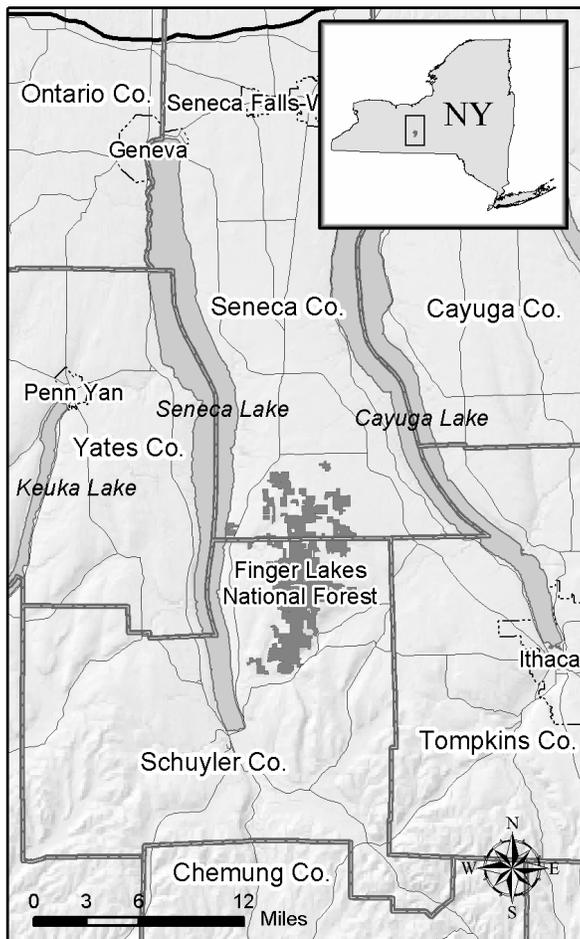
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# Chapter 1 Introduction to the Forest Plan

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## 1.1 INTRODUCTION TO THE FOREST PLAN

The Finger Lakes National Forest (FLNF) lies within the heart of New York's Finger Lakes Region. Farms, vineyards, numerous small wineries, and other small business enterprises characterize the area. The FLNF is the only national forest in New York State and is also the only public land in the State that has an explicit philosophy of multiple-use management. The FLNF is a relatively young national forest, having been established in 1983. In threat of being sold under the Reagan-era Assets Management program, the local community mobilized to petition the Congress to get the then 'Purchase Unit' established as a national forest.



**Figure 1.1-1: Location of the Finger Lakes National Forest in New York**

The Forest encompasses slightly more than 16,000 acres, consisting of a variety of vegetative types and successional stages. The Forest is valued for its diverse habitats and biodiversity, in addition to wood, forage, and other products. The FLNF is also valued for the multiple services available on National Forest System lands and the Forest Service commitment to preserve long-term productivity. People have come to rely on the Forest for opportunities to observe and enjoy nature, and to recreate in a large land area.

The Forest also has a long history of demonstration and education use and is committed to promoting an awareness of natural resource management and a strong conservation ethic. Grazing on the FLNF enables livestock owners to maintain a historic livelihood and continue to demonstrate sustainable agriculture. Large areas of public land are rare in the region, therefore the FLNF will be managed to provide benefits requiring a large, continuous land area, and a long, stable tenure of ownership. Examples of this include the trail system, ecological areas, sustainable agriculture through grazing, and sustainable forestry practices.

### 1.1.1 Introduction

#### Purpose of the Forest Plan

The Forest Plan, also known as the Land and Resource Management Plan, guides all natural resource management activities for the FLNF. It describes Forest-wide goals and objectives; management area desired resource conditions; standards and guidelines for implementation of projects; levels of resource production and management; and the availability of suitable land for resource management.

The purpose of the Forest Plan is to provide management direction to ensure that ecosystems are capable of providing a sustainable flow of beneficial goods and services to the public. More specifically, the Plan establishes:

- How the Forest should look if the Forest Plan is fully implemented (Goals and Desired Conditions)
- Measurable, planned results that contribute to reaching the desired conditions (Objectives)
- Required action or resource status designed to meet the desired conditions and objectives (Standards)
- Preferable action used to reach desired conditions and objectives (Guidelines)
- Management Direction that is applicable Forest-wide
- Management direction that is applicable only to specific management areas
- Management direction that is applicable only to specific landscape ecosystems
- Monitoring and evaluation requirements
- Designation of land as suitable or not suitable for timber production and other resource management activities

Land use determinations and management area standards and guidelines constitute a statement of the Plan's management direction; however, the actual outputs, services, and rates of implementation are dependent on annual budgets from the Congress.

## Revising the 1987 Forest Plan

A Forest Plan for the Finger Lakes National Forest was issued in 1987. The National Forest Management Act (NFMA) regulations require that Forest Plans be revised every 10 to 15 years (36 CFR 219.10). The 2006 Forest Plan is a result of the revision effort described in the Final Environmental Impact Statement (EIS).

Included in the Final EIS are several management alternatives. The 2006 Forest Plan is based on the Selected Alternative that is described in Chapter 2 (Section 2.1.7) of the Final EIS. The 2006 Forest Plan is a result of extensive analysis and considerations addressed in the accompanying Final EIS. The 2006 Forest Plan will completely replace the 1987 Forest Plan.

## Forest Plan Revision in the Future

The FLNF Forest Supervisor is required to review conditions of the land at least every five years to determine if the Forest Plan needs to be revised. If monitoring and evaluation indicate that immediate changes are needed and these needed changes cannot be handled by a Plan amendment, then it would be necessary to revise the 2006 Forest Plan.

## Forest Service Planning Rules

The Forest Plan revision process was conducted under the 1982 version of the Forest Service planning rules as stated in 36 CFR 219. The Forest Service has developed revised planning rules; however, they were not adopted by the FLNF during revision of the 1987 Plan due to their issuance late in the planning process. Subsequent revisions or amendments to the 2006 Forest Plan will be developed under applicable planning rules.

## Consultation with Tribes

To ensure the rights of sovereign tribal governments are fully respected, the President has directed agencies to operate within a government-to-government relationship; to consult with tribal governments prior to taking actions affecting resources in which tribal governments may have an interest; to assess the impact of plans, projects, and programs to assure that tribal governments' rights and interests are considered; and, to remove any procedural impediments to working directly and effectively with tribal governments.

The Forest Service has been in contact with tribes throughout the process of preparing the 2006 Forest Plan. Government-to-government contact between the federal government and federally recognized American Indian Tribal governments acknowledges the sovereign status of these tribes. Contact is ongoing between the Forest Service and the Seneca Nation of Indians as well as the Cayuga Nation of New York.

Consultation with the Seneca Nation of Indians and the Cayuga Nation of New York supports Executive Order 13175 (November 6, 2000), which recognizes the sovereignty of federally recognized American Indian tribes and the special government-to-government relationship between the United States and American Indian tribes.

## 1.1.2 Implementing the Forest Plan

The 2006 Forest Plan provides a framework and context that guides the FLNF day-to-day resource management operations. It is a strategic, programmatic document and does not make project-level decisions.

The National Forest Management Act (NFMA) requires that “permits, contracts, and other instruments for use and occupancy” of National Forest System lands be “consistent” with the Forest Plan (16 U.S.C. 1640(i)). In the context of a Revised Plan, the NFMA specifically conditions this requirement in three ways:

1. These documents must be revised only “when necessary”
2. These documents must be revised as “soon as practicable”
3. Any revisions are “subject to valid existing rights”

## Basic Principles of Management

A set of fundamental principles guides management on the FLNF. Direction in the 2006 Forest Plan qualifies and expands upon these four basic principles.

### Principle 1

The Forest Service will follow laws and regulations as well as policies in Forest Service Manuals and Handbooks that relate to managing National Forest System land. The 2006 Forest Plan is designed to supplement, not replace, direction from these sources.

### Principle 2

The Forest Service will coordinate management activities with the appropriate local, State, or tribal governments as well as with other federal agencies.

### Principle 3

The Forest Service will actively consult with tribal governments and collaborate with interested organizations, groups, and individuals on resource planning and implementation.

### Principle 4

The Forest Service will manage the Finger Lakes National Forest for multiple uses. The FLNF is open for any legal public activity or management action, unless specially restricted in law, policy, or the 2006 Forest Plan. While allowed, such activities and actions may require administrative review and authorization before they are implemented.

## Tools and Techniques

The FLNF will reach desired vegetative conditions through natural ecological processes and through utilization of a diverse range of management tools and techniques as per the 2006 Forest Plan.

To the extent practical, timber management will be used to emulate naturally occurring disturbances, such as fire and windstorms, as well as to create desired vegetative types. Management practices will include fire, and both even-aged and uneven-aged timber harvesting techniques. Clearcutting will continue to be used on the Forest when it is the optimal method to meet the objectives and requirements of the 2006 Forest Plan. The Forest Service will also use shelterwood, group selection, individual tree selection, and other harvest methods to create or maintain even-aged and uneven-aged stands.

Prescribed fire will be used alone or with silvicultural treatments to mimic the effects of natural fire. Prescribed fire will help maintain, enhance, and restore natural ecological processes on the Forest.

The Forest Service will promote re-growth of harvested or other disturbed forests with a variety of regeneration practices. This includes regenerating forests through tree planting, seeding, and natural regeneration. Some areas will naturally change through forest succession.

Environmentally sustainable management practices will provide commodity and non-commodity resources to contribute to the social and economic stability of local communities. Management practices to achieve this include prescribed fire, mowing, timber harvest, non-commercial and commercial use of forest products, and restoration activities. Recreation opportunities will be provided in a multiple-use setting by using management tools such as the Recreation Opportunity Spectrum.

Ecological functions of watersheds and riparian areas will be enhanced or restored through techniques such as reconstructing or improving road and trail crossings, or using silvicultural treatments to enhance shade, coarse woody debris recruitment, or bank stability in riparian areas..

## Site-Level Projects

“Implementing the Forest Plan” means developing and implementing site-level forest management projects in order to reach the desired conditions established in the 2006 Forest Plan.

Project-level compliance with the NFMA is primarily concerned with consistency with the 2006 Forest Plan and the NFMA regulations, as well as disclosure of potential environmental impacts.

Compliance with the National Environmental Policy Act involves the environmental analysis process for a specific proposal, proper documentation, and public disclosure of effects in an environmental assessment, environmental impact statement, or categorical exclusion. An analysis file or project file is available for public review. Environmental analysis is driven by public involvement and determined issues.

Environmental analysis of site-level projects will use, as its basis, the data and evaluations in the 2006 Forest Plan and the Final Environmental Impact Statement for the 2006 Forest Plan. The following are some examples of project-level decisions that may require additional environmental analyses and disclosure as the 2006 Forest Plan is implemented:

- Timber harvest
- Wildlife improvement and restoration projects
- Prescribed burn projects
- Trail construction

## Operational Activities Exempt from National Environmental Policy Act Procedures

Resource inventories, action plans, and schedules do not require additional environmental analysis and disclosure at the project level. The following are some examples of operational activities that do not constitute site-specific decisions and therefore are exempt from National Environmental Policy Act procedures:

- Developing fire-situation reports
- Scheduling maintenance for developed recreation sites

## Budgets

Annual Forest Service budget proposals are based on the activities and actions required to achieve the desired conditions and objectives of the 2006 Forest Plan. The Congress reviews and allocates Forest Service budgets on an annual basis, which may, or may not be, sufficient to implement proposed annual activities.

The National Forest System appropriation from the Congress provides funds for stewardship and management of approximately 192 million acres of federal land and the natural ecosystems on that land across the country. These appropriated funds are necessary for translating the desired conditions and objectives stated in the 2006 Forest Plan to on-the-ground results.

Upon receipt of the final budget, the Forest Service annually prepares an implementation budget. This budget is a result of program development, annual work planning, and monitoring processes. These processes supplement the 2006 Forest Plan and make the annual adjustments and changes needed to reflect current priorities within the overall management direction contained in the Plan. Therefore, the funding distribution between program components and the intensity or level of activities in those programs is a reflection of the 2006 Forest Plan as well as the will of the Congress. The final determining factor in

carrying out the intent of the 2006 Forest Plan is the level of funding, which dictates the rate of implementation of the Plan.

## Forest Plan Amendments

Proposed activities should be consistent with direction in the 2006 Forest Plan. When conditions change, such as a change in public interest or land resource conditions, or monitoring and analysis shows an error in the Plan, adjustment to the 2006 Forest Plan would require an amendment.

The need to amend management direction may result from:

- Changes in physical, biological, social, or economic conditions
- Recommendations of an interdisciplinary team based on the results of monitoring and evaluation
- Determination by the Forest Supervisor that existing or proposed projects, permits, contracts, cooperative agreements, or other instruments authorizing occupancy and use are appropriate, but not consistent with elements of the 2006 Forest Plan management direction
- Errors in planning found during implementation. Conflicts may be identified between different sections of management direction, for instance there could be discrepancies in the selected alternative map and the narrative description of the selected alternative. The 2006 Forest Plan does not prioritize management direction; therefore a discrepancy would need to be resolved by determining the management intent using a variety of information, such as the planning record, Final Environmental Impact Statement, and the 2006 Forest Plan. The Forest Supervisor will determine whether proposed changes to the Forest Plan are significant or non-significant as defined by the National Forest Management Act, to determine the level of analysis necessary to amend the Plan.

# Chapter 2 Forest-Wide Management Direction

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## 2.1 ROLE OF THE FINGER LAKES NATIONAL FOREST

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### 2.1.1 Historical Perspective

The Finger Lakes National Forest (FLNF) was created from land that has a long history of varied use and ownership. These lands were part of the traditional homeland of the Seneca and Cayuga Nations of the Iroquois Confederacy. They inhabited the area until shortly after the Revolutionary war, when they were driven off their lands by the Colonial army. In 1790, the area was divided into 600-acre military lots and distributed among war veterans as payment for their services. The veterans then cleared the land for production of hay and small grains, such as buckwheat. The farmers prospered until the mid-nineteenth century, when a series of events occurred that devalued their crops and land. One of the contributing events was lack of access to modern infrastructure like roads and electricity. Other events included improved regional and national transportation systems and competition from other parts of the country. By the 1930s, it became evident that farmers in many parts of the country, including the Finger Lakes Region, could no longer make a living from the land and were causing environmental damage as they overworked fields.

Between 1938 and 1941, more than 100 farms were purchased by the federal government in the area now known as the Finger Lakes National Forest. Because this was done on a willing seller, willing-buyer basis, the resultant federal ownership resembles a patchwork quilt.

The USDA Soil Conservation Service initially managed the newly acquired federal land, named the Hector Land Use Area. They stabilized the soil by planting trees, developed pasturelands, and established the Hector Grazing Association to illustrate sustainable agriculture. By the 1950s, many of the original objectives of the Hector Land Use Area had been met, while at the same time the public was becoming interested in the concept of multiple-use of public land. The decision was

made at that time to transfer administrative responsibilities to the USDA Forest Service. The parcel was to remain a 'Purchase Unit' until 1982 when the Hector Land Use Area was evaluated under the federal government's "Assets Management" program. This program identified federal land that could be sold "without significantly affecting the resource base of public service." Several members of the community became concerned about losing their local treasure and petitioned the Congress to establish the Hector Land Use Area as a national forest. As a result, in 1983, the Hector Land Use Area became the Hector Ranger District of the Green Mountain National Forest. The local populace wanted a closer tie to the Finger Lakes Region so the name was changed to the Finger Lakes National Forest in 1985.

### 2.1.2 The Role of Today's Finger Lakes National Forest

The FLNF lies within the heart of New York's Finger Lakes Region. Farms, vineyards, numerous small wineries, and other small business enterprises characterize the area. The FLNF is the only national forest in New York State and is the only public land in the State that has an explicit philosophy of multiple-use.

When the FLNF was evaluated for sale under the Assets Management Program in the early 1980s, it was clear that the Forest was considered a precious and indispensable asset to the region. This attitude has remained constant through time, as people have come to rely on the Forest for opportunities to observe and enjoy nature, and to recreate in a large unrestricted land area. The Forest is valued for its diverse habitats and biodiversity; wood, forage, and other products; the multiple services available on the National Forest System lands; and the Forest Service commitment to preserve long-term productivity.

For these reasons, the Forest Service is strongly committed to the continuation of multiple-use management, and the sustainability of the many natural resources of the FLNF. Although the resource management emphasis will vary from one part of the Forest to another, the Forest Service will consider all resources in management decisions. The Forest Service will look for creative ways to balance the production of commodities, such as timber and forage, with other important benefits such as high-quality recreation, diverse wildlife habitat, and rare plants. The Forest Service will provide for clean water, air, productive soils, and a diversity of plant and animal life. This will require close teamwork among resource specialists in the Forest Service, other agencies, and the community.

The Forest has a long history of demonstration and education use and will continue to provide these benefits into the future. As a public land base that is close to several colleges and universities, it is the responsibility of the Forest Service to further the understanding and management of sustainable management of natural resources through making the FLNF available for research and ensuring that research is shared widely. The Forest Service is committed to promoting an awareness of natural resource management and a strong conservation ethic to highlight a dedication to careful stewardship of the land for present and future generations. The Forest Service will work with local schools and communities to provide educational opportunities on the Forest. Grazing on the FLNF will enable livestock owners to maintain a historic livelihood, help maintain grassland habitat, and continue to demonstrate sustainable agriculture. Finally, because large areas of public land are rare in the region, the FLNF will be managed to provide benefits requiring a large, continuous land area, and a long, stable tenure of ownership. Examples of this include the trail system, ecological areas, sustainable agriculture through grazing, and sustainable forestry practices.



Interlocken Trail

## 2.2 FOREST-WIDE GOALS AND OBJECTIVES

### 2.2.1 Introduction

The National Forest Management Act (NFMA) requires that Forest Plans contain multiple-use goals and objectives that include a description of the desired future condition of the forest and the identification of the quantities of goods and services that are expected to be produced or provided during the planning period. Goals and objectives are conditions and activities that the FLNF is working toward but may not be able to completely achieve during the life of the 2006 Forest Plan. They are not intended to be construed as requirements.

Forest goals are concise statements that describe a desired condition to be achieved sometime in the future. They are normally expressed in broad, general terms, and are timeless in that they have no specific dates by which they are to be completed. Goal statements form the principal basis from which objectives are developed.

Forest objectives are concise statements of measurable planned results or outcomes that are needed to achieve established goals. Objectives form the basis for building management programs and further planning to define the precise steps to be taken and the resources to be used in achieving goals. Objectives generally are accomplished by implementing projects or activities, and have a specific timeframe for achieving the desired outcome. The objectives shared below are expected to be accomplished during the life of the 2006 Forest Plan (10 to 15 years) unless there is a specific stated timeframe for accomplishment of the objective.

Managers will use forest-wide goals and objectives as a means of measuring progress achieved by implementing the 2006 Forest Plan. Information gained from comparing actual implemented progress against the Forest's desired future condition through monitoring and evaluation will be used to

determine future management actions and resources needed to achieve the goals.

### 2.2.2 Goals and Objectives

**Goal 1:** Provide for a wide range of uses and activities in an ecologically, socially, and economically sustainable way.

**Objective:**

This is the overarching goal for the management of the Finger Lakes National Forest. Because of its broad nature, this goal will be achieved by following the goals and objectives listed below.

**Goal 2:** Maintain and restore quality, amount, and distribution of habitats to produce viable and sustainable populations of native and desirable non-native plants and animals.

**Forest-wide Habitat Composition and Structure Objectives:**

Provide diversity in wildlife habitat composition and structure according to types and proportions indicated in Tables 2.2-1 and 2.2-2.

Maintain northern hardwood forests, native softwood forests, and forests of oak, hickory, and pine, on sites that ecologically support these habitats.

Maintain, and where desirable increase, the acres of aspen and regenerating forest in order to support species that prefer these habitats.

Maintain acres of grassland and shrubland habitat at levels higher than ecological tendencies to support species that prefer these habitats.

Provide at least 80 percent of the Grassland for Wildlife Management Area in grass/forb vegetation.

Increase acres of late-successional and old forest habitats through natural successional processes within lands not suitable for timber, and through use of extended rotations within lands suitable for timber.

Maintain acres of forested and non-forested wetlands, predominantly through natural processes.

Forest and habitat type	% of Forest area
Mixed Hardwoods (N. Hardwoods and Oak)	35-50
Aspen	1-3
Softwoods	6-10
Shrubland	10-12
Grassland	33-35

**Age Class Objectives for Northern Hardwood and Oak Hickory Management Areas:**

Maintain a full range of age classes from young to old, including late successional and multi-age conditions, within management areas where age class can be actively manipulated toward goals, objectives, and desired future conditions.

Manage a minimum of 20 percent of lands suitable for timber management using uneven-aged silvicultural systems to create multi-age conditions.

Apply the following age-class objectives (Table 2.2-2) to suitable lands that will be managed using even-aged silvicultural systems to provide a variety of habitat conditions for wildlife and create a balanced distribution of age classes to meet timber objectives. Because balancing age classes to meet objectives takes time, it may be decades before these age class objectives are attained.

Forest type	Age class (years)	Desired range
Mixed Hardwoods (N. Hardwoods & Oak)	0-9 regenerating	5-10%
	10-59 young	30-50%
	60-99 mature	25-35%
	100+ old	5-10%
Softwoods	0-9 regenerating	10-20%
	10-39 young	15-35%
	40-99 mature	35-55%
	100+ old	5-40%
Aspen	0-9 regenerating	10-20%
	10-49 young-mature	70-80%
	50+ old	5-15%

Notes: Objectives apply only to suitable lands within the Oak-Hickory and Northern Hardwood Management Areas. Even-aged silvicultural systems will be used most frequently within the Oak-Hickory MA, and will be uncommon in the Northern Hardwood MA.

In order to achieve the desired conditions for age class distribution of different forest types, use standard and extended rotation ages (Table 2.2-3) whereby:

- Suitable forest land where quality timber products are the primary emphasis will be managed to Standard Rotation ages.
- Suitable forest lands where recreation, enhancement of ecological communities, wildlife habitat, or other resource values are emphasized in addition to quality timber products, may be managed to longer rotations, up to the Extended Rotation Ages.

**Table 2.2-3: Rotation Ages for Even-aged Silvicultural Methods (Years)**

Forest type	Standard rotation age (yr)	Extended rotation age (yr)
Mixed Hardwoods	100	150-250
Eastern white pine	100	150-200
Eastern hemlock	100	150-300
Aspen	50	60-70

**Wildlife Reserve Tree Objectives:**

Reserve snags, den trees, and nest trees, including trees with exfoliating bark, during timber management activities in sufficient quality, quantity, and distribution to maintain well-dispersed, self-sustaining populations of snag-, den-, and nest-tree dependent wildlife indigenous to the Finger Lakes National Forest.

Manage mast producing species to increase or expand mast productivity where practical. Mast species are nut and fruit producers such as red osier, thorn apple, hop hornbeam, cherry, apple, plum, blueberry, oak, beech, and hickory.

**Threatened, Endangered, Proposed, and Sensitive Species; Species of Local Interest; Rare and Exemplary Natural Communities Objectives:**

Implement established recovery or conservation strategies for federally listed endangered, threatened, or proposed species influenced by FLNF management, according to guidelines from the US Fish and Wildlife Service (USFWS).

Implement established conservation strategies for Regional Forester sensitive species where they exist; otherwise, maintain or enhance habitat conditions for these species through the development of specific site prescriptions during project development.

Maintain or enhance habitat for Species of Local Interest, which includes those species for which there is a concern in the State or on the Forest, but which do not meet criteria for inclusion in the Regional Forester sensitive species list.

Coordinate with the New York Fish and Wildlife Department to maintain and enhance habitat conditions for the State’s rare species and natural communities

Maintain viable reproducing populations for all native plant and animal species. For species where the Forest alone cannot support a viable population, species persistence will be maintained, and the Forest will contribute to maintaining or improving viability where possible.

**Fisheries Objective:**

Maintain fish populations at or above current levels through habitat protection, enhancement, and restoration along with stocking programs.

**Non-native Invasive Species Objective:**

Minimize adverse effects of non-native invasive species on National Forest resources through containment, abatement, and introduction prevention.

**Goal 3:** Maintain or restore the natural, ecological functions of the soil.

**Objectives:**

Minimize the adverse impacts on soils from management activities.

Restore natural soil processes and functions on degraded soils.

**Goal 4:** Maintain or restore aquatic, fisheries, riparian, vernal pool, and wetland habitats.

**Objectives:**

Minimize the adverse impacts on aquatic, fisheries, riparian, vernal pool, and wetland resources from management activities.

Meet or exceed all State Water Quality Standards (WQSs), including biotic.

Restore and improve aquatic, fisheries, riparian, vernal pool, and wetland resources.

Maintain existing pond impoundment structures, excluding stock ponds, currently managed for fish and wildlife resources to ensure their long-term structural integrity and to provide benefits to fish and other aquatic organisms.

Take needed measures to control cattle access on all water resources (including stock ponds, streams, wetlands, seasonal pools, and riparian areas) within the next ten to fifteen years.

**Goal 5:** Maintain or restore ecological processes and systems on the FLNF within desired ranges of variability, including a variety of native vegetation and stream channel types, and their patterns and structural components.

**Objectives:**

Manage at least five percent of each ecological type present on the FLNF for old growth characteristics.

Manage oak-pine natural communities on the FLNF to maintain their presence and continuity on the Forest, using natural as well as human-caused disturbance processes including fire use when necessary.

Reduce hazardous fuels where needed to reduce threats to private property, threatened and endangered species habitat, or risks to ecosystem components resulting from wind throw, blowdown, ice storm damage, or epidemic disease or insects.

Restore and enhance stream ecosystem processes using knowledge of riparian/floodplain functions and large woody debris (LWD) dynamics for the purpose of improving and connecting aquatic habitats, such as wild trout habitat, promoting stream stability and sediment and organic matter storage, or to increase stream productivity. Stream habitat should be managed to provide:

- LWD quantities between 75 and 130 pieces greater than 12 inches diameter per mile of stream, and
- Approximately 100 pieces between 8 to 12 inches diameter per mile of stream.

Convert planted softwood stands to native vegetation that is suited to the site.

**Goal 6:** Protect rare or outstanding biological, ecological, or geological areas on the FLNF.

**Objective:**

Maintain or enhance areas with rare or outstanding biological, ecological, or geological features.

**Goal 7:** Provide for the sustainable use of grasslands for grazing on the FLNF.

**Objectives:**

Maintain forage production sufficient to support approximately 10,000 Animal Unit Months (AUMs) annually.

Provide functioning livestock watering facilities to support approximately 10,000 Animal Unit Months (AUMs) annually.

**Goal 8:** Provide for a sustainable supply of forest products.

**Objectives:**

Provide high-quality sawtimber and other wood products for local economies.

Provide sustainable opportunities to harvest special forest products.

**Goal 9:** Demonstrate innovative, ecologically sound management practices that can be applied to other lands.

**Objectives:**

Provide opportunities for public education on Forest Service management practices.

Increase the use of native seed mixes and/or develop native seed mixes for Forest Service use.

Reduce the amount of energy needed to operate Forest facilities by employing state-of-the-art conservation practices and alternative heat and electricity sources when constructing new facilities, or when modifying existing facilities as necessitated for other reasons.



Lecture to Girl Scout Troop

**Goal 10:** Provide protection and stewardship for significant heritage resources on the FLNF.

**Heritage Resource Objectives:**

Reduce the backlog of unevaluated heritage sites.

Increase the number of partnerships that help accomplish the Forest's heritage inventory, evaluation, and interpretation and education needs.

Increase proper stewardship for the Forest's historically significant buildings and structures.

Improve curation facilities or move curated material to a facility that meets the federal curation standards (36 CFR 79) for heritage collections, records, and administrative history archives.

**Tribal Relations Objectives:**

Maintain relationships with federally recognized tribes by having contact quarterly with appropriate representatives (for example, meetings, letters, phone calls).

Produce at least one relevant interpretation and education product in order to increase public awareness to provide protection and stewardship for sites relevant to tribal histories.

**Goal 11:** Provide a diverse range of high-quality, sustainable recreation opportunities that complement those provided off National Forest System lands.

**Objectives:**

Continue to provide diverse, high-quality opportunities for recreation in partnership with private sector by authorizing appropriate activities through special use authorization and by improving administration of special use authorizations.

Increase the effective use of partnerships in the improvement, maintenance, and operation of the Forest recreation facilities and trails system.

Increase the number of miles of trails which are operated and maintained to full standard.

Reduce the total deferred maintenance on the FLNF trail system.

Reduce total deferred maintenance on FLNF developed recreation facilities.

Increase the number of developed recreation sites that are operated and maintained to standard.

Increase the number of inventoried Concentrated Use Areas (CUAs) managed to standard to reduce health, safety, and resource impacts caused by unmanaged recreation use outside of developed recreation sites.

Complete a Forest-wide comprehensive interpretive plan for recreation and trails.

Complete comprehensive management plans that address the enhancement of dispersed recreation activities, non-facility related, that occur in the General Forest Area.

**Goal 12:** Provide a diverse range of information and education opportunities that will enhance the understanding of the FLNF.

**Objectives:**

Expand internal and external public awareness of Forest Service management.

Provide timely, sufficient information regarding Forest recreation and management to internal and external audiences.

Deliver at least one public interpretation and education (I&E) product annually in order to better protect and encourage stewardship of resources through increased public awareness.

Include teacher development in stewardship of living systems in the educational outreach program.

Establish one site on the Finger Lakes National Forest for demonstration forests, discovery trails, or plots and other “living laboratories” for teacher/non-formal educator use.

**Goal 13:** Meet anticipated future needs and opportunities on public lands and improve management effectiveness of the FLNF through landownership adjustment activities.

**Objective:**

Increase management efficiency by adjusting landownership through purchase, donation, exchange, transfer, interchange, rights-of-way acquisition, and boundary adjustment of the National Forest.

**Goal 14:** Support regional and local economies through resource production and resource protection.

**Objectives:**

Increase coordination with communities and local businesses to enhance the FLNF's economic contribution.

Vary the range of project sizes for contracts.

Maintain communications with Forest communities with regard to Payment in Lieu of Taxes, 25 Percent Fund, and/or Secure Schools and Community Self-Determination Act.

**Goal 15:** Maintain and enhance partnerships.

**Objectives:**

Increase the effective use of partnerships to achieve Forest goals.

Increase coordination with State, county, and local agencies and landowners in the prevention, control, containment, and monitoring of non-native invasive species.

Establish, maintain, or enhance partnerships with community organizations for resource planning.

Increase work with communities in community development to enhance social capital and economic baseline.

**Goal 16:** Maintain or enhance visual resources such as viewsheds, vistas, overlooks, and special features.

**Objectives:**

Complete a transition from the current Visual Management System to the Scenery Management System.

Maintain or enhance visual quality on the Forest.



View from Finger Lakes National Forest to Seneca Lake

## 2.3 FOREST-WIDE STANDARDS AND GUIDELINES

### 2.3.1 Introduction

This chapter presents forest-wide standards and guidelines for the Finger Lakes National Forest. These standards and guidelines apply to all Forest areas for the purpose of protecting or managing forest resources. Standards and guidelines are designed to achieve desired conditions, goals, and objectives in the 2006 Forest Plan. They are usually mitigation measures that minimize or negate the effects of a management action or land use. They only govern management actions implemented under the 2006 Forest Plan standards and guidelines. They do not apply to existing conditions or management actions implemented under previous Forest Plans. Existing conditions that do not meet the 2006 Forest Plan standards and guidelines will be brought into compliance with these standards and guidelines as appropriate and practicable based on the need to protect resources. The Forest-wide standards and guidelines are used in addition to the standards and guidelines included in management area guidance (Chapter 3).

**Standards (non-discretionary):** Standards are Forest Plan management requirements that are applicable to all foreseeable situations. Deviation from standards requires an amendment to the 2006 Forest Plan. Standards are mandatory permissions, limitations, desirable conditions, or in some instances required courses of action needed to achieve the goals and objectives of the 2006 Forest Plan. Standards can be Forest-wide or management-area specific.

Standards should be implementable and comply with all applicable laws, regulations, executive orders, and policies. They should not include factors beyond management control, for example water temperature and pH, budget-dependent items, or any type of desired future plans, analyses, or accomplishments that may never happen.

**Guidelines (discretionary):** Guidelines are Forest Plan management requirements that are applicable to most situations, but can be modified at the project level. To communicate discretionary guidance, guidelines are permissions, limitations, desirable conditions, or courses of action that should be implemented in most situations. Deviation from a guideline does not require a 2006 Forest Plan amendment, but it does require that the rationale for deviation be disclosed in the project decision documents and analysis.

Guidelines can be Forest-wide or management-area specific. This set of standards and guidelines is designed to be specific to the Finger Lakes National Forest; management area guidelines are addressed in Chapter 3. Laws, regulations, and Forest Service directives are not repeated in this section. References to particular laws or directives may be included to provide needed emphasis for the protection and management of specific resources. Forest Plan implementation will comply with all applicable laws, regulations, and directives (listed in Final EIS Appendix G).

### 2.3.2 Soil, Water, and Riparian Area Protection and Restoration

#### Standards

**S-1:** Direction provided in FSM 2526.03.2 and .5 (05/25/2000, pp. 18 and 19) applies to all riparian areas including streams (perennial, intermittent, and ephemeral), wetlands, and seasonal pools. This direction does not apply to human constructed stock ponds in grazing allotments which are managed according to Forest-wide Range Management Standards and Guidelines and the Grassland for Grazing MA Standards and Guidelines.

**S-2:** A protective strip of predominantly undisturbed soil (having plant and/or organic matter cover) shall separate soil-disturbing activities from all water sources (streams, lakes, ponds, wetlands, and vernal or seasonal pools). This direction does not apply to human constructed stock ponds in grazing allotments which are managed according to Forest-wide Range Management Standards and Guidelines and the Grassland for Grazing MA Standards and Guidelines.

- Protective strips (Table 2.3-1) shall be applied to all soil disturbing activities and impacts, including construction (examples: campground, parking lot, or trail construction) and logging. The purpose of the protective strip is to protect the soil's infiltration capacity, and to filter out sediment.
- A minor amount of soil disturbance is allowed in the protective strip, provided adherence to FSM 2526.03.2 and .5. Logging and heavy construction equipment shall only operate in the protective strip when:
  - Soils are dry, frozen, or covered with sufficient snow to minimize soil disturbance; or
  - Measures are taken to assure compliance with FSM 2526.03.2 and .5; or
  - Local topography eliminates the risk of stream sedimentation associated with ground disturbing activity (for example, if a natural berm in the protective strip separates a stream from soil-disturbing activity)

<b>Table 2.3-1: Protective Strip Width Guide</b>	
% Slope of land between disturbed area and water source	Width of protective strip between disturbed area and water source (ft) <sup>1</sup>
0-10	50
11-20	70
21-30	90
31-40*	110
<sup>1</sup> Add 20 feet for each additional 10% side slope	

**S-3:** Heavy construction and logging equipment operations shall only occur when soil conditions are such that compaction, rutting and erosion will be minimal. Equipment operations shall be carefully monitored to assure that erosion and sedimentation are minimized. Prompt corrective measures shall be implemented if erosion or sedimentation problems arise.

**S-4:** Sites for servicing and refueling logging and construction equipment must be located outside the protective strip, and approved by a Forest Officer. Fuel leaks from such equipment shall be repaired immediately. A supply of acceptable absorbent materials shall be kept on the job site (where such equipment is used) for use in the event of a hazardous fluid spill. Acceptable absorbent materials are those that are manufactured specifically for the containment and clean up of hazardous materials.

**S-5:** All permanent stream crossings shall:

- Be approved in terms of the design, location, structure type and size by a Forest engineer.
- Be sized to pass water and debris for the targeted storm event (for example, a 25-year storm), and allow free movement of resident aquatic life. The targeted storm event shall be determined with consideration of direction in FSM 2526.03.2 and .5.

**S-6:** Drainage structures shall be kept in working order.

**S-7:** All stream crossings shall avoid riparian wetlands, including seeps, wherever possible. When not possible, stream crossings shall be at the narrowest point, or at a point that provides for the least impact to resources.

**S-8:** Occasional, designated crossings of riparian areas are allowed in pastures provided they minimize impacts to the riparian ecosystem.

**Guidelines**

**G-1:** To maintain bank stability and provide for long-term recruitment of large woody debris (LWD) to streams and ponds, tree cutting and/or harvesting shall not occur within 25 feet of a perennial stream or high water mark of a pond. Maintain a minimum basal area of 50 square feet per acre including the retention of large diameter trees within 25 feet of intermittent stream banks. Exceptions to these guidelines include tree removal for public safety, prescriptions to benefit hydrological and/or ecological function of associated stream, pond, or riparian area, and tree removal needed to construct and maintain existing roads, bridges, and other infrastructure. Trees cut or moved in this zone should be used to benefit riparian and aquatic habitat.

**G-2:** Application of Best Management Practices (BMPs):

- Timber harvesting should comply with BMPs. Harvest practices may deviate from BMPs provided that:
  - FSM 2526.03.2 and .5 are met, and/or
  - 2006 Forest Plan standards and guidelines and special mitigation measures are implemented to provide an extra measure of resource protection or improvement.

**G-3:** Skid road/trail grades should not exceed 20 percent beyond a distance of 300 feet. Soils must have sufficient depth, and be sufficiently drained to allow erosion control structures to be installed. Erosion control structures should be in working order at all times.

**G-4:** New structures such as a trail, road, or skid trail stream crossing may be allowed in the protective strip, provided compliance with FSM 2526.03.2 and .5.

**G-5:** Water bars and other erosion control structures should be designed, located, and constructed to prevent sediment from entering streams.

**G-6:** Revegetation of critical bare soil areas should be completed on all projects as soon as practical. Mulching may be used alone outside the growing season, with seeding to follow at the start of the next growing season. Critical bare soil areas are soils largely devoid of vegetation:

- Within 25 feet of water sources (ponds, streams, wetlands, or vernal pools)
- On skid roads having a grade more than 20 percent
- Where dips or ditches empty close to water sources
- At other locations as identified by a Forest Officer

**G-7:** As a general rule, temporary seeding and/or mulching of critical bare soil areas should be done when soil-disturbing activities are anticipated to be inactive for more than approximately one month. See Non-Native Invasive Species (NNIS) Standards and Guidelines for further guidance.

**G-8:** Trees or downed wood that have fallen naturally into streams, rivers, or ponds should not be removed unless they are hazards to people or structures, or present impassable barriers in navigable waters.

**G-9:** In the 25 to 50 foot distance zone of all streams, consider leaving large diameter trees (12 inches or greater), especially conifers, to enhance achievement of riparian vegetation composition goals.

**G-10:** Within 100 feet of wetlands and seasonal pools, activities should be limited to those that protect, manage, and improve the condition of these resources. Acceptable activities should be approved on a case-by-case basis.

**G-11:** Crossing wetlands with roads or trails should be avoided whenever possible.

**G-12:** When wetlands must be crossed to provide access to adjacent uplands, crossings should be located to minimize wetland impacts, and use should be permitted:

- Under frozen soil conditions; or
- When the ground is covered with sufficient snow to minimize soil disturbance; or
- When other measures are taken to assure compliance with FSM 2526.03.2 and .5

**G-13:** An average canopy closure of at least 70 percent should be maintained over a stream's length to ensure that stream temperatures are appropriate for native fish species. Permanent upland openings may be maintained and established to the water's edge in accordance with FSM 2526.03.2 and .5. Trees cut or moved in this zone should be used to benefit riparian and aquatic habitats when possible.

**G-14:** Lands within 100 feet of surface waters, including stock ponds, should not be fertilized.

**G-15:** Sites that show signs of advanced deterioration should be rehabilitated, closed, or relocated. Examples of deterioration include widespread bare mineral soil, obvious soil erosion, exposed tree roots, or vegetation that is reduced in vigor or dying.

### 2.3.3 Minerals

#### Leasable Minerals

Lands are withdrawn from oil and gas leasing under the Energy Policy Act of 2005.

##### Standards

**S-1:** Lands will be available for exploration provided that surface disturbance does not occur, unless prohibited by law.

**S-2:** Surface disturbing mineral activity is allowed except where prohibited by Management Area Standards and Guidelines.

**S-3:** Where permitted by law and Management Area Standards, surface disturbing mineral activity is permitted when supported by an environmental analysis and an appropriate decision document.

#### Common Variety Minerals

##### Standards

**S-1:** When supported by site-specific environmental analysis and a decision, exploration and development of common variety minerals is permitted, except where prohibited by law or Management Area Standards.

**S-2:** Before development of a site, an operating plan shall be prepared. The plan will include at least the following items:

- A schedule of activities
- An estimate of the amount of material to be removed
- Expected use of roads and infrastructure
- Rehabilitation measures for stabilizing soil, protecting water quality, restoring vegetation, and protecting visual quality.

#### Recreational Mineral Collecting

The State of New York owns the gold and silver on most of the lands. Collection of these minerals requires prior authorization by the State of New York.

##### Standard

**S-1:** Gold panning for recreational purposes may be allowed within stream channels. Collection methods not needing a Forest Service permit are limited to small trowels or similar digging tools for scooping sediment into the pan.

##### Guidelines

**G-1:** Except in areas closed for such activity by Forest Supervisor order, the collection of mineral specimens for personal use may be allowed without a Forest Service permit as long as there is no surface disturbance.

**G-2:** Deciding officials should close areas or place restrictions in permits where appropriate for public safety and /or the protection of resources.

## 2.3.4 Timber or Vegetation Management

### Selection of Appropriate Silviculture

#### Standards

**S-1:** Treatments will be designed and/or approved by a federally certified silviculturist.

**S-2:** Timber sale contracts shall include provisions for protection of range improvements.

**S-3:** Remove the remaining overstory, if compatible with other resource objectives, after the regeneration has been certified.

#### Guidelines

**G-1:** Select the most appropriate silviculture system for an area that best fulfills the objectives over time.

**G-2:** Timber sales may be used to enhance habitats, vegetative diversity, scenic views, and public access. The following non-priced benefit is a major element of the Forest's stated goals and objectives:

- Regeneration of stands to provide young age classes to increase the structural diversity of the forest (see Chapter 2 Forest-wide Goals and Objectives, Tables 2.2-2 and 2.2-3).

**G-3:** Even-aged silviculture may be used to achieve, but is not restricted to achieving, the following:

- Create diversity of stand types and age classes among stands.
- Regenerate species that are intolerant, or intermediately intolerant, of shade such as oak, aspen, and locust.
- Regenerate high-risk and sparse stands.
- Prevent the spread of insects and disease.

**G-4:** Uneven-aged silviculture may be used to:

- Produce high quality sawtimber and other forest products
- Produce a diversity of age classes and structure within a stand
- Maintain continuous forest canopy

**G-5:** Timber may be cut where financial revenues fall below financial costs when the Forest Service determines the resulting non-priced benefits are needed, or desirable, to meet the goals of Forest stewardship.

### Application of Even-aged Silviculture

#### Regeneration Cuts

#### Standard

**S-1:** Clearcutting regeneration method shall only be used when it is found to be the optimum method of regeneration to achieve the following resource objectives:

- Salvage stands damaged by insect, disease, or climatic catastrophe, or to stop the spread of an insect or disease outbreak
- Regenerate aspen and locust stands that are intolerant of shade and valuable for wildlife habitat and vegetative diversity
- Remove mature planted softwoods from areas where hardwoods are better adapted to the site
- Improve the condition of stands which have a high risk of dying within the next ten years or which are sparsely stocked and will be unable to fully utilize the site within ten years

## Guidelines

**G-1:** The shelterwood regeneration method may be applied to regenerate species that are somewhat tolerant of shade.

- Trees left, other than wildlife reserve trees, should be of good quality, disease free, wind firm, and of sufficient size to permit a commercial removal cut within ten years.
- Post-sale treatment to remove all remaining stems, more than one inch in dbh that are not wildlife trees, should be done within two years after the first cut, unless prescribed fire is used.

**G-2:** Shelterwood with reserves regeneration method may be used to regenerate species that are somewhat tolerant of shade in areas where the second cut of a standard shelterwood should be delayed beyond 20 percent of rotation years to:

- Maintain overstory trees in locations of high visual sensitivity or to eventually convert even-aged stands to uneven-aged stands when current stocking is insufficient
- Trees left should be of good quality, disease free, wind firm, and of sufficient number, size, and distribution to allow for adequate understory regeneration

**G-3:** Clearcutting methods may be used to:

- Create permanent upland openings for better vegetative diversity and improved wildlife habitat
- Create vistas and parking areas to enhance public use and enjoyment of the National Forest



Finger Lakes National Forest Logging Landing

## Intermediate Cuts

### Guidelines

**G-1:** When compatible with site productivity and overall resource objectives, use intermediate cuts to:

- Improve the existing stand and regulate its growth
- Release desirable species or individual trees to enhance the size, number, and distribution of more desirable tree species
- Improve the growth and quality of desirable trees, through thinning prescriptions, as determined by silvicultural guides for each timber type. The frequency of thinnings selected for each stand should be based on overall resource objectives, the type of trees being managed, and the productivity of the site.
- Ensure oak survival on all suitable sites using pre-commercial or commercial thinnings

**G-2:** Most softwood plantations on the Forest have grown past the age where thinning will result in improved growth. In addition, many of the planted softwood species have little or no commercial value. For these reasons, softwood plantations should not be thinned except to:

- Meet wildlife or visual objectives
- Release hardwood reproduction that has become established in the understory

## Application of Uneven-aged Silviculture

### Guidelines

**G-1:** Group Selection generally results in temporary openings of less than one acre and is appropriate in:

- Mixed hardwood stands where species intermediately tolerant to intolerant of shade are desired
- White pine stands
- Areas needing small temporary openings to meet other resource objectives
- Even-aged stands to facilitate the conversion to uneven-aged stands
- Areas where small temporary openings or gaps in the canopy are desirable

**G-2:** Individual tree selection is appropriate in:

- Mixed hardwood stands where shade tolerant species are desired
- Hemlock stands
- Areas where maintenance of a continuous forest canopy is desired

**G-3:** A mixture of individual and group selections is appropriate when a combination of factors requiring both methods occurs.

**G-4:** Selection cutting should occur every 15 to 20 years.

## Reforestation

### Guidelines

**G-1:** Site preparation may be done by manual, mechanical, biological, prescribed fire, or chemical methods based on a site-specific analysis. Chemical controls shall only be used when other methods are ineffective.

**G-2:** Natural regeneration should be the preferred method. Consider artificial regeneration when sources of natural regeneration are not sufficient or where forest-type conversions are prescribed.

## 2.3.5 Openings

### Standard

**S-1:** The maximum size of a temporary opening shall be limited to 30 acres or less. Individual exceptions to the maximum size of temporary openings may be granted for salvage of timber resulting from natural catastrophes caused by fire, insects, diseases, ice, or windstorms.

### Guideline

**G-1:** New even-aged regeneration cuts should not be made adjacent to previous even-aged regeneration areas until the average height of the previously harvested stand is at least 15 feet tall.

## 2.3.6 Special Forest Products

### Standard

**S-1:** Permits shall be required for commercial gathering of special forest products.

### Guideline

**G-1:** Gathering of special forest products for personal or scientific use may require a permit. Permits are generally required for personal use of Christmas trees, firewood, boughs, and maple syrup. Other products considered, such as foods, herbs, medicinals, decoratives, and specialty products may require a permit if the Forest Service determines that collection of these products may be at or trending toward unsustainable levels. Traditional gathering activities by tribal members generally do not require permits as long as supply of the resource is not limited and the value is low.

## 2.3.7 Range Management

### Standards

**S-1:** Term permits shall be used to allow public grazing of livestock within designated pastures.

**S-2:** Wheeled vehicle access through pastures shall be allowed for management purposes.

**S-3:** Deferred rotational grazing shall occur in selected pastures to achieve sufficient livestock forage when a need to provide a recuperation period for improved productivity is identified.

**S-4:** Attempts shall be made to control undesirable plants where they reduce forage production for livestock and wildlife needs. Mechanical, fire, biological, or chemical control methods may be used.

**S-5:** Fences, corrals, and ponds shall be constructed and maintained following established designs modified to meet site-specific needs.

**S-6:** Provide adequate spillway and/or drainpipes in pond dikes to prevent breach of the dike in overflow conditions.

**S-7:** Areas that have been sprayed with herbicide shall be signed to notify recreational users and grazers to avoid the area for time periods appropriate to the type of herbicide used.

### Guidelines

**G-1:** Grazing should only occur between May 15 and November 1 annually with two weeks leeway before and after to allow for favorable ground conditions.

**G-2:** Continuous grazing should only occur in selected pastures from May 15 to November 1 when the practice provides suitable forage productivity for livestock and wildlife.

**G-3:** Pastures should be tilled and cultivated with desirable grass and forb species as needed to achieve good quality forage for livestock and wildlife.

**G-4:** A minimum soil pH of 6.0 should be maintained through periodic applications of lime.

**G-5:** Fence existing and newly constructed livestock ponds to prevent trampling of dikes. Livestock should have limited access to pond water at hardened areas off of dikes or at troughs where water is piped.

**G-6:** Woody vegetation should be removed from pond dikes every three to five years to prevent breach of the dike by roots.

**G-7:** Mowing, prescribed fire, hand methods, and dredging equipment are all acceptable methods for controlling vegetation on pond dikes.

**G-8:** Trails should be mowed or clearly marked where they cross pastures.

**G-9:** Recreation and access should be designed to minimize conflicts with grazing.

**G-10:** Gates should be kept closed when livestock are in pastures. Signs should be posted at gates to inform the public to close those gates.

**G-11:** Signs should be posted at trail access points in pastures to warn visitors to stay clear of livestock.

**G-12:** To protect nesting grassland birds, burning or mowing grassland for grazing and grassland for wildlife should not occur between May 15 and August 15. Exceptions include control of NNIS or other site-specific resource objectives.

**G-13:** Utilization of forage by livestock should not exceed 60 percent of average annual production as determined by measurements done on grazed and ungrazed areas.

**G-14:** Mowing blades should be raised to the maximum height.

**G-15:** Herbicide use should be avoided where trails occur. If a need to spray in these areas is identified, there should be a temporary relocation or closure of the trail to avoid sprayed areas.

**G-16:** Water development, maintenance, and reconstruction should be done as needed to ensure an adequate water supply through the grazing season, while complying with State of New York grazing BMPs.

### 2.3.8 Wildlife

#### Guidelines

**G-1:** Wildlife habitat management should be coordinated with the US Fish and Wildlife Service, the New York State Department of Environmental Conservation (NYSDEC), and other agencies or organizations as necessary.

**G-2:** To protect nesting grassland birds, burning or mowing grassland for grazing and grassland for wildlife should not occur between May 15 and August 15. Exceptions include control of NNIS or other site-specific resource objectives.

## Wildlife Reserve Trees

### General

#### Standards

**S-1:** Uncut patches totaling five percent of the harvested area shall be retained during forest management activities of five acres or greater where harvest reduces the basal area of a stand below 30 square feet per acre.

**S-2:** At least five wildlife trees shall be retained per acre harvested during forest management activities where harvest will leave basal area above 30 square feet per acre.

**S-3:** Wildlife reserve trees shall include two cavity or snag trees of the largest available dbh, live trees with exfoliating bark, den trees, or nest trees. In areas lacking such cavity trees and snags, retain at least two trees of the largest available dbh with defects likely to lead to cavity formation.

**S-4:** All hard snags and den trees and two mast trees per acre shall be retained within 300 feet of ponds, lakes, beaver ponds, wetlands, permanent upland openings greater than five acres, and within riparian zones of all streams as shown on USDA Forest Service 1:24,000 topographic maps. If hard snags, mast trees, and den trees are not available in these areas, retain at least six replacement trees per acre.

#### Guidelines

**G-1:** Patches of retained trees should be at least one-quarter acre in size and located to encompass as many wildlife trees as possible, including nest or den trees; trees with exfoliating bark; snags greater than or equal to eight inches dbh; other trees with cavities or broken tops; and mast trees such as oaks, hop hornbeam, hickories, apple, and black cherry.

**G-2:** Patches of retained trees should be located along the edge of openings or riparian corridors where possible.

**G-3:** Cull material from harvested trees, especially hollow logs, should be left in the woods.

**G-4:** Down and dead material should be retained during forest management activities to provide habitat for small mammals, amphibians, and reptiles.

## Snags

### Guidelines

**G-1:** All soft snags should be retained unless they pose a safety hazard.

**G-2:** Evidence of wildlife use for feeding, roosting, nesting, or denning should be used to prioritize snags for retention.

## Den & Nest Trees

### Guidelines

**G-1:** Den trees with cavities or openings that are not prone to collecting water should be retained whenever possible.

**G-2:** Raptor nest trees should be retained.

## Mast Trees

### Guidelines

**G-1:** The largest available mast trees should be retained whenever possible, because they may fill several functions by providing mast and potentially den and snag habitats simultaneously. Species to be considered will be oaks, hickories, walnut, American beech, hop hornbeam, and black cherry.

**G-2:** White oaks should be retained in preference to all other mast trees due to their potential for annual mast crops and preference by wildlife.

**G-3:** Apple trees should be retained and released whenever possible.

## Rare and Unique Biological Features

### Threatened, Endangered, Proposed, and Sensitive Species and Rare and Exemplary Natural Communities

#### Standards

**S-1:** The FLNF shall maintain a list of federally listed endangered, threatened, or proposed species, and Regional Forester sensitive species (TES species), which will be updated periodically whenever new designations are made by the US Fish and Wildlife Service (USFWS) or Regional Forester. The TES species list shall be available at the FLNF and regional office websites, FLNF office, and shall be included in the FLNF annual monitoring report.

**S-2:** All project sites must be investigated for the presence of federally listed endangered, threatened, or proposed species, Regional Forester sensitive species, and/or habitat for these species prior to beginning any authorized ground-disturbing activity at the site. TES plant surveys must be completed for all new ground-disturbing projects, when biologists determine TES plant species occurrences are likely.

**S-3:** Management activities that may influence the rare or uncommon natural communities on the Forest, considered significant by the agency and/or the State shall be limited to those that maintain or improve the composition, structure, or functioning of the natural community.

#### Guidelines

**G-1:** Reintroduction of native plant and animal species may be undertaken where local sources of seed or breeding stock have been eliminated (for example, American chestnut). Reintroductions should be undertaken in cooperation with research, and/or relevant agencies or organizations.

**G-2:** Management activities adjacent to Research Natural Areas and special management areas should be designed so as not to compromise the ecological values of those areas.

**G-3:** Management activities adjacent to Ecological Special Areas should be designed so as not to compromise the ecological values for which the area is designated.

**G-4:** Habitat that is important to conservation of federally listed endangered, threatened, or proposed species, or Regional Forester Sensitive Species, should be retained in Finger Lakes National Forest ownership in all land adjustments.

**G-5:** Use restrictions may be implemented to protect habitat for threatened federally listed endangered, threatened, or proposed species, or Regional Forester Sensitive Species.

## Northern Goshawk

### Guidelines

**G-1:** Management within 660 feet of an active northern goshawk nest:

- May prohibit non-administrative activities between April 15 and July 31, or until nesting activities have been completed
- Should be designed to conserve or enhance site conditions (for example, structural and compositional integrity)

**G-2:** In some instances, landform or vegetative conditions may necessitate expanding protected area beyond 660 feet.

## Species of Local Interest

### Great Blue Heron

#### Guidelines

**G-1:** Management within 660 feet of occupied rookery:

- May prohibit non-administrative activities between March 15 and August 1, or until nesting activities have been completed
- Should be designed to conserve or enhance site conditions (for example, structural and compositional integrity)

**G-2:** Management within 330 feet of occupied rookery:

- May prohibit all disturbing land uses except as necessary to protect the rookery

**G-3:** In some instances, landform or vegetative conditions may necessitate expanding protected area beyond 660 feet.

## 2.3.9 Fisheries

### Standard

**S-1:** Non-native fish shall only be introduced after alternative measures for native fish management prove unsatisfactory. Non-native fish shall only be introduced with responsible State agency's concurrence.

### Guidelines

**G-1:** Fisheries management should be coordinated with the US Fish and Wildlife Service (USFWS), the New York State Department of Environmental Conservation (NYSDEC), and other agencies or organizations as necessary.

**G-2:** The use of native materials, such as boulders, trees, and root masses, should be emphasized in stream and pond restoration or enhancement projects to harmonize with the surrounding visual setting.

**G-3:** Trout may be released in ponds that:

- Are accessible for fish stocking and meet NYSDEC stocking criteria
- Have high public use and demand
- Cannot sustain the fishery with natural reproduction

**G-4:** Largemouth bass and non-game species populations may be supplemented by stocking in ponds lacking sufficient natural reproduction, impacted by winter kill, or impacted by excessive nutrient enrichment, but capable of maintaining a productive fishery.

**G-5:** Existing ponds needed for fisheries and wildlife management should be maintained to prevent failure of impounding structures.

## 2.3.10 Forest Health and Disturbance Processes

### Pests, Diseases, and Non-Native Invasive Species

#### Standards

**S-1:** The Forest Service shall incorporate information on the status and threat of non-native invasive species (NNIS) infestation as part of project development. Methods for determining risk shall be standardized in keeping with regional and national guidelines. For projects that pose moderate to high risk of introducing or spreading NNIS, measures shall be identified that can be undertaken to prevent and control the spread of NNIS during project implementation.

**S-2:** The Forest Service shall include in contracts and permits appropriate clauses concerning the prevention or spread of NNIS.

**S-3:** Seed mixes or cultivated plants used for any purpose on National Forest System lands shall not include any species on the Forest's NNIS list, or any species of potential concern as identified by the State.

**S-4:** In cooperation with the USDA Forest Service Forest Health Protection (Durham, NH) and the New York Department of Environmental Conservation, the Forest Service shall monitor and report on Forest health conditions including insects, pathogens, invasive plants, air pollution, and weather-related damage.

**S-5:** Non-native insect and disease pathogens shall be managed using appropriate biological, silvicultural, or chemical controls. Chemical controls shall only be used when other methods are ineffective.

#### Guidelines

**G-1:** For projects that pose low risk of introducing or spreading NNIS, basic prevention measures should be implemented.

**G-2:** When treatment of NNIS is undertaken, the Forest Service should:

- Attempt to determine the source of the infestation before treatment begins
- Cooperate with willing adjacent landowners
- Include restoration of native communities where feasible
- Use herbicides/pesticides only when other methods are ineffective
- Consider potential naturally developing control mechanisms

**G-3:** When it is safe and effective to do so, the Forest Service should use an integrated pest management approach to manage NNIS, prioritizing these actions in the following order:

- Prevent introduction of new invasions
- Conduct early treatment of new infestations
- Prioritize treatment in sites that have the greatest ability to provide a source of seeds or propagules for other infestations, such as gravel pits, administrative sites, trailheads, parking lots, campgrounds, and emergency staging areas
- Protect known sites for TES animals and plants
- Protect Special Areas and Research Natural Areas
- Contain and control established infestations

**G-4:** Seed mixes or cultivated plants used for any purpose on National Forest System lands should not include species of concern in adjacent states. This should include checking for obvious signs of NNIS in the root wads of woody plants to be planted.

**G-5:** The Forest Service should use only NNIS-free forage and mulch on National Forest System land when feasible; this includes forage brought onto National Forest System land for the purpose of feeding domestic animals.

**G-6:** Composition of seed mixes should be prioritized as follows:

- Native species with local genotypes
- Native species with non-local genotypes
- Desirable (non-invasive) non-native species (may be preferable in some situations that call for rapid regeneration of ground cover)

**G-7:** Biological and/or chemical pesticide use may be allowed after an analysis has been conducted and when deemed necessary to prevent significant resource value losses.

### 2.3.11 Fire Management

#### Standard

**S-1:** All ignitions must receive an appropriate management response according to a Fire Management Plan.

#### Guidelines

**G-1:** Fire planning should be integrated into all resource management plans to ensure treatment objectives utilize fire in an appropriate manner from both ecological and resource protection standpoints.

**G-2:** Fire suppression and prescribed fire impacts should be minimized by implementing Minimum Impact Suppression Tactics as described in the Interagency Standards for Fire And Fire Aviation Operations.

**G-3:** Fuel reduction projects should consider the effects on deadwood in relation to wildlife habitat.

**G-4:** Best available smoke management practices should be used to ensure that prescribed fire will not result in adverse effects on public health and safety, or visibility.

### 2.3.12 Recreation

#### General Forest Area

##### Standards

**S-1:** The General Forest Area (GFA) shall be managed consistent with management area direction and the desired Recreation Opportunity Spectrum (ROS) class to provide a range of dispersed recreation opportunities, while ensuring the balanced protection of social and natural resources.

**S-2:** On-site developments, for example USDA Forest Service installed facilities, shall not be allowed except for basic improvements for site protection only and shall be consistent with the desired ROS Class.

**S-3:** Pit toilets shall be constructed at least 100 feet away from bodies of water.

##### Guidelines

**G-1:** General Forest Areas (GFAs) should be managed according to the National Quality Standards for recreation, to the extent allowed by budgets. (For standards and definitions, reference the National Quality Standards for Meaningful Measures at: <http://www.fs.fed.us/r3/measures/>).

**G-2:** Geocaching, the maintenance of minor registers, and similar activities may be allowed if no significant resource problems result from the activity.

#### Developed Recreation

##### Standards

**S-1:** Developed recreation sites shall be managed consistent with management area direction and the desired Recreation Opportunity Spectrum (ROS) class to provide a range of developed recreation opportunities, while ensuring the balanced protection of social and natural resources.

**S-2:** Prior to substantial change to an historical recreation structure, it shall be evaluated to determine its eligibility for listing on the National Register of Historic Places.

### Guidelines

**G-1:** Developed recreation sites should be managed according to the National Quality Standards for recreation. (For standards and definitions, reference the National Quality Standards for Meaningful Measures at: <http://www.fs.fed.us/r3/measures/>).

**G-2:** Recreation maintenance and improvements should focus on the reduction of deferred maintenance needs on existing facilities before the development of new facilities.

**G-3:** Developed recreation sites should be managed following policy and procedures identified in the most recent Forest Recreation Facility Master Plan.

**G-4:** Developed recreation site maintenance, rehabilitation, and reconstruction should be undertaken in the following priority:

- Correct health and safety problems
- Improve accessibility for people with disabilities
- Mitigate social and/or natural resource problems
- Decrease deferred maintenance costs
- Improve operation and maintenance efficiency

**G-5:** Decisions to construct, relocate, or rehabilitate trail shelters should be made cooperatively with trail management partners.

**G-6:** Recreation areas, sites, and facilities located on National Forest System lands should complement, and not compete with, commercial public services within communities or on private or other public land.

## 2.3.13 Trails

### Standards

**S-1:** The Forest Service trail system shall be managed consistent with management area direction.

**S-2:** Regulatory, warning, and guide signs shall conform to standards identified in FSH 2309.18 and EM 7100-15 and other internal trail management direction.

### Guidelines

**G-1:** National Forest System trails should be managed according to National Quality Standards for trails (National Quality Standards for Meaningful Measures <http://www.fs.fed.us/r3/measures/>).

**G-2:** Trail maintenance and improvement activities should focus on the reduction of deferred maintenance needs on existing trails before the development of new trails.

**G-3:** All trails should be monitored for resource impacts in accordance with an established monitoring plan. Responsibility for monitoring should be shared by the Forest Service and cooperators.

**G-4:** Multiple-use trails should be emphasized over single use trails where the uses are compatible.

**G-5:** Multiple-use recreation trails should be designed and maintained to adequately and safely accommodate the most demanding or impacting type of use allowed.

**G-6:** The Interloken, South Slope, Ravine, Potomac, and Gorge Trails should be managed primarily for foot travel. Exceptions to allow other non-motorized uses may be considered to facilitate management such as providing loop opportunities or temporary trail relocations due to management activities.

## Non-Motorized

### Bicycles

#### Standards

**S-1:** Bicycling shall be allowed only on National Forest System trails that are designated for that use. Exception for administrative use must be authorized in writing by the Forest Service.

**S-2:** Bicycles shall be prohibited on all trails during the period of March 15 to May 15.

#### Guidelines

**G-1:** Bicycle trails should be identified and maintained in cooperation with partners.

**G-2:** If consistent with management area direction, bicycling may be allowed on any trail except where the safety and environmental concerns make their use hazardous or create environmental or maintenance problems.

### Saddle, Pack, and Draft Animals

#### Standards

**S-1:** Saddle, pack, and draft animals shall be allowed only on National Forest System trails that are designated for that use and in pastures.

**S-2:** Saddle, pack and draft animals shall be prohibited on all trails during the period of March 15 to May 15.

#### Guideline

**G-1:** Horse trails should be identified and maintained in cooperation with partners.

## Motorized Vehicles

#### Standards

**S-1:** Summer off-road vehicle use shall be prohibited on the FLNF except where authorized for administrative purposes.

**S-2:** Snowmobiles shall be allowed only on National Forest System trails that are designated for that use and in designated pastures. Exceptions, for administrative use, must be authorized in writing by the Forest Service.

#### Guidelines

**G-1:** Trails should be managed to provide for resource protection, public health and safety, and to minimize user conflicts considering the following:

- All snowmobiles using Forest trails must meet State safety and registration requirements.
- Trail uses should be restricted if conflicting uses or resource conditions warrant.
- Snowmobile trails should be managed and maintained consistent with agreements for snowmobile trail operation and maintenance.
- Snowmobile trail management and operations should be coordinated with New York State and user groups.

**G-2:** On roads, trails, and general forest areas where motorized vehicle uses are prohibited, motorized access may be allowed for law enforcement, emergency, firefighting, maintenance, and other administrative purposes.

### 2.3.14 Visuals

#### Standards

**S-1:** Visual quality objectives shall be determined when implementing the 2006 Forest Plan on specific areas.

**S-2:** Visual quality objectives shall be met for all activities.

#### Guidelines

**G-1:** The Built Environment Image Guide (BEIG) (USDA Forest Service 2001) should be used to develop the image, appearance, or architectural character of existing or proposed facilities, when considering rehabilitation, expansion, replacement, or the addition of new improvements.

**G-2:** The following guidelines (Tables 2.3-2 and 2.3-3) should be used to determine visual quality objectives (see Glossary for definitions of terms).



Potomac Pond on the Finger Lakes National Forest

<b>Table 2.3-2: Visual Condition Guidelines for On-Site and Off-Site Views</b>	
<b>Viewer Sensitivity:</b>	<b>Visual Condition On-Site (within ½ mile):<sup>1</sup></b>
High	Up to 10% of travel corridor may be PERMANENT MODIFICATION. At least 90% will be RETENTION <sup>2</sup> .
Moderate	Up to 10% of travel corridor may be PERMANENT MODIFICATION. Up to 15% of the travel corridor may be TEMPORARY PARTIAL RETENTION. At least 85% of the travel corridor will be RETENTION. <sup>2</sup>
Low	Up to 1% per 1000 acres may be PERMANENT MODIFICATION. Up to 10% per 1000 acres may be TEMPORARY MODIFICATION.
<b>Viewer Sensitivity:</b>	<b>Visual Condition Off-Site (more than ½ mile):</b>
All	When viewing any National Forest lands from a distant location, some changes may be apparent. On the upper part of more noticeable ridges, changes may be seen but are subdued and subordinate to the surrounding natural appearing landscape (PARTIAL RETENTION). On other locations, changes may be more noticeable and even begin to dominate the view but must be in harmony with the characteristics of the surrounding landscape (MODIFICATION)
<sup>1</sup> Percentages refer to the amount of each visual condition that is appropriate along each mile of travel corridor (about 50 acres) or 1000 acres of lands outside those corridors. <sup>2</sup> Temporary changes caused by vegetation management in the Grassland for Grazing, Grassland for Wildlife, or Shrubland MAs are compatible with a visual quality objective of retention.	

<b>Table 2.3-3: Visual Condition Guidelines Related to Timber Harvesting Activities on the Finger Lakes National Forest</b>			
<b>ACTIVITY</b>	<b>VISUAL SENSITIVITY (foreground)</b>	<b>VISUAL QUALITY AND TIME</b>	<b>PERCEIVED SIZE AND SHAPE OF TEMPORARY OR PERMANENT OPENINGS<sup>1</sup></b>
INDIVIDUAL TREE SELECTION OR THINNING	High	Retention upon completion of project	Not Significant
	Moderate or Low	Partial Retention within 1 year. Retention within 3 years	Not Significant
GROUP SELECTION	High	Retention upon completion of project	Openings up to 1/10 acre Irregular shape
	Moderate	Partial retention within 1 year. Retention within 3 years	Openings up to ½ acre Irregular shape
	Low	Modification within 1 year. Partial retention in 3 years. Retention in 5 years.	No geometric shapes
	High	Visual Enhancement, demonstration projects, and for ecological restoration must be designed or reviewed by landscape architect; timber production is a secondary objective.	Must relate to the surrounding landscape character.
SHELTERWOOD WITH RESERVES, TWO CUT SHELTERWOOD, AND THREE CUT SHELTERWOOD	Moderate	Partial retention 1 year. Retention in 15 years from regeneration cut.	Up to 10 acre shelterwood and removal cut. Roadside opening up to 400 feet and trail side up to 200 feet, with at least 1000 feet between openings. Irregular shapes.
	Low	Modification in 1 year. Partial retention in 3 years. Retention in 15 years from regeneration cut.	No geometric shapes.
	High	Visual enhancement, demonstration projects and for ecological restoration must be designed or reviewed by landscape architect; timber production is a secondary objective.	Must relate to the surrounding landscape character.
CLEARCUT	Moderate	Partial retention within 1 year. Retention within 15 years.	Up to 5 acres with islands and irregular shape. Road and trail side opening up to 200 feet with at least 1000 feet between openings.
	Low	Modification in 1 year. Partial retention in 3 years. Retention in 15 years.	Up to 15 acres with irregular shapes.
<b>VISUAL RESOURCE MITIGATIONS SHOULD BE DETERMINED ON A CASE BY CASE BASIS.</b>			
<sup>1</sup> Perceived size and shape of temporary openings (or permanent upland openings where clearcut is used to create them) as seen from the sensitive viewing locations. Actual size may be larger. Wildlife reserve trees that dominate the surroundings may be removed after consultation with the Forest Wildlife Biologist. Residual debris (tree branches, root wads, stumps and other debris) should appear consistent with the VQO.			

### 2.3.15 Tribal Relations

#### Standards

**S-1:** The Forest Service must consult with Tribal Historic Preservation Offices (THPO) and federally recognized Native American tribes, as appropriate, early in the planning process regarding proposed management activities in order to identify and address tribal interests, either on a case-by-case basis or through a programmatic agreement.

**S-2:** The Forest Service must consult appropriate THPO and federally recognized Native American tribes regarding the discovery of any human remains on the Forest.

#### Guideline

**G-1:** The Forest Service should respect, and incorporate in our decisions when appropriate, concerns expressed by Native American groups and individuals with historical ties to the Forest independent of their federal recognition status.

### 2.3.16 Heritage Resources

#### Standards

**S-1:** Heritage resources management shall be coordinated with State Historic Preservation Offices (SHPO) and Tribal Historic Preservation Offices (THPO) and federally recognized Native American tribes as appropriate, either on a case-by-case basis or through a programmatic agreement. Mitigation plans must include the above consultation and the Advisory Council on Historic Preservation (ACHP) when projects might affect resources eligible for the National or State Registers of Historic Places (NR).

**S-2:** All proposed undertakings must take into account the effect on any NR-listed, NR-eligible, or unevaluated heritage resource within the Area of Potential Effect (APE) prior to implementation. The Forest Service must protect and manage properties found to be eligible for the NR, or which remain unevaluated, as if they were listed on the NR.

**S-3:** Discoveries of human remains and associated objects must remain in place and protected if encountered, and must be reported immediately to USDA Forest Service Law Enforcement Officers (LEOs) and USDA Forest Service heritage resource specialists; project work in the area of the discovery must cease until LEO and heritage evaluation is completed.

**S-4:** The nature and location of archaeological and Native American sacred or traditional use sites shall remain confidential and exempt from the Freedom of Information Act (36 CFR 296.18).

**S-5:** Heritage inventory activities and resulting data shall meet current national guidance and professional standards, shall be maintained in the Forest Service's corporate database and mapping systems, and shall be consistent with SHPO standards.

#### Guidelines

**G-1:** Heritage resources should be evaluated to determine their eligibility for listing on the NR with reference to the State Historic Preservation Plan as appropriate.

**G-2:** Heritage resource artifact collections and records, and administrative history and archival data, should be curated in accordance with federal standards (36 CFR 79), and through consultation with SHPO and other interested parties.

**G-3:** Old wells that are determined not to be significant historical resources and that are a safety hazard should be filled or covered.

### 2.3.17 Interpretation and Education

#### Standards

**S-1:** Interpretation and education (I&E) efforts shall reflect the integration of the social, ecological, economic, and land use history of the Forest and region while emphasizing the mission of the Forest Service in managing National Forest System lands.

**S-2:** The Forest Service mission and image shall remain visible on all I&E products produced by the Forest Service and its partners.

**S-3:** Interpretation and education efforts shall be executed consistent with management area direction and the desired Recreation Opportunity Spectrum class.

#### Guidelines

**G-1:** Visitors should be informed of the distribution, differences, and roles of the federal, State, and private lands found in the Finger Lakes region and the respective range of recreation and cultural interest opportunities and facilities available.

**G-2:** Nationally adopted interpretation and education (I&E) programs, such as Leave No Trace, should be promoted to Forest visitors to create a better understanding of the Forest environment and to reduce impacts to Forest resources.

**G-3:** I&E efforts should utilize a wide range of technologies to provide a range of media for the dissemination of information related to the health, safety, education, and enjoyment of Forest visitors.

**G-4:** The Forest Service should provide adequate information for Forest users to take full advantage of available goods and services.

**G-5:** Internal or external partner development of new I&E products, related to the Finger Lakes National Forest, should be reviewed by appropriate resource Forest Service Specialists for consistency and quality of messages prior to being finalized.

### 2.3.18 Land Ownership Adjustments

#### Guidelines

**G-1:** Lands that become available for purchase by willing sellers and meet one or more of the following will be the highest priority. The more guidelines a property meets, the higher it will be in priority.

- Provide administrative and/or public access to the National Forest
- Consolidate public ownership to facilitate natural resource restoration and conservation, improve management effectiveness, and provide large contiguous areas for multiple-use opportunities.
- Provide resources for forest products
- Provide wildlife habitat and corridors
- Provide fisheries habitat
- Conserve threatened, endangered, and sensitive species habitat
- Provide recreation opportunities
- Conserve streams and watersheds
- Benefit the National Scenic Trails System
- Have uncommon or outstanding scenic, physical, or biological qualities
- Protect significant historic properties
- Resolve occupancy trespass and encroachment onto federal land
- Meet the goals of the counties and towns

**G-2:** Although the 2006 Forest Plan is the guiding document for land adjustment in that it lists the purchase priorities, the Forest Service may go for years without purchasing acres in any of the priorities, such as acquisition of inholdings. This does not mean the priorities are being ignored, it means no tracts with priority characteristics were available for purchase. Priorities can only be applied when multiple opportunities exist and limited funding requires prioritization. Otherwise, land is purchased when it is available if it meets one or more of the guidelines.

**G-3:** The transfer of lands, or interest in lands, from the Forest Service to other parties should be guided by the following criteria:

- Lands no longer needed for National Forest System purposes
- Parcels that will serve a greater public need in State, county, town, or other federal agency ownership
- Parcels isolated from other National Forest System lands
- Parcels having boundaries, or portions of boundaries, with inefficient configurations
- Reduction of administrative problems and management costs

**G-4:** Newly acquired land should be assigned a Management Area classification in the following manner:

- The tract should be given the same Management Area designation as the surrounding, adjacent, or closest proximity National Forest System land.
- If the current vegetative condition (forest, shrub, or grassland) of the newly acquired land is different than the surrounding or adjacent National Forest System land, then Management Area designation may be assigned based on the current vegetative condition.
- If the newly acquired land has attributes that are unique or different than the surrounding or adjacent National Forest System land, the acquired tract may be evaluated by an

integrated team to decide its Management Area designation.

## 2.3.19 Transportation Analysis

### Standard

**S-1:** Transportation project proposals shall follow FSM 7712 -Transportation Analysis, which covers roads analysis, accessibility, traffic volumes, economic impacts, road management objectives, soil and water impacts, and effects on recreation and timber management.

## Road Design and Construction

### Standards

**S-1:** Road designs shall follow FSM 7721 and FSM 7722 and shall receive a technical review, including a plans-in-hand field review, by the District Ranger and the appropriate interdisciplinary team.

**S-2:** Roads constructed or reconstructed for use by the general public shall be designed in accord with the latest AASHTO Policy on Geometric Design of Highways and Streets standards section on rural roads and special purpose roads.

**S-3:** New drainage structures shall be located and designed to minimize road and ditch erosion and to outlet onto stable slopes and drain into areas suitable for trapping sediment.

**S-4:** Stream crossings and other in-stream structures shall be designed and constructed to pass water and debris for the targeted storm event, and allow free movement of resident aquatic life.

**S-5:** Replacement of drainage structures with known fish passage opportunities must provide fish passage except to meet prescribed fish management objectives.

**S-6:** Temporary erosion control devices shall be installed and maintained until disturbed ground has been stabilized.

## Road Operation and Maintenance

### Standards

**S-1:** The Forest Service shall cooperate with town governments and highway departments in managing town-maintained roads through the Finger Lakes National Forest.

**S-2:** Public access shall be controlled on National Forest roads to meet 2006 Forest Plan management objectives such as achieving desired recreation opportunities (See General Management Requirements for Recreation/Visual) and protecting wildlife habitats (See General Management Requirements for Wildlife and Fish).

**S-3:** Road restrictions, year-round or seasonal, on National Forest roads shall be considered when:

- Use causes unacceptable damage to roadbed or soil and water resources
- Use causes unacceptable wildlife conflict or habitat degradation
- Use results in unsafe conditions
- A seasonal public or administration need is served
- The area accessed has seasonal need for protection or non-use
- It is necessary to resolve conflicts between users

**S-4:** Users shall be informed of closures through signing.

### Guideline

**G-1:** New road grades should generally be between 2 and 20 percent. Grades greater than ten percent should be considered if other alternatives are too expensive and mitigating measures, such as additional drainage control, are possible.

## 2.3.20 Special Uses

### Recreation Special Uses

#### Standards

**S-1:** Special use permits shall be administered to standards described in Forest Service Handbooks and Manuals, as well as other internal management direction.

**S-2:** Special use permits shall be administered consistent with management area direction.

**S-3:** Existing uses that are not compatible with the 2006 Forest Plan shall be brought into compliance upon renewal or re-issuance to a new holder.

**S-4:** Outfitters/guides shall submit operating plans and itineraries as part of their annual permit applications.

**S-5:** Special use authorizations shall be issued only when there are no private land alternatives, or when the use has a clear and significant public benefit.

#### Guidelines

**G-1:** Recreation special uses should be managed to protect the characteristics of the desired Recreation Opportunity Spectrum classification.

**G-2:** Recreation special use permits should be denied when it is determined that undesirable social and/or resource impacts occur.

**G-3:** Recreation special use permits should be denied when permit applications are not received within administratively established time frames, or the proposed use cannot be effectively administered.

**G-4:** Recreation special use allocation studies should be instituted if monitoring and analysis determines that recreation demand exceeds the capacity of the land and/or facility to accommodate such activities.

**G-5:** Permitted activity group sizes should be limited when necessary to provide for safety and resource protection, or to minimize the impact large groups have on others.

## Non-Recreation Special Uses

### Standards

**S-1:** Special use permits shall be administered to standards described in Forest Service Handbooks and Manuals, as well as other internal management direction.

**S-2:** Special use permits shall be administered consistent with management area direction.

**S-3:** First Amendment group uses, such as freedom of assembly and worship, shall not be denied on the basis that they can reasonably be accommodated on non-National Forest System lands.

**S-4:** Existing uses that are not compatible with the 2006 Forest Plan shall be brought into compliance upon renewal or re-issuance to a new holder of an authorization.

**S-5:** Maple tapping shall require a special use permit in addition to a forest products permit.

**S-6:** Military training activities shall be authorized only after the Department of Defense has determined and substantiated that lands under its jurisdiction are either unsuitable or unavailable in accordance with the Master Agreement between the Department of Defense and the Department of Agriculture that governs the use of National Forest System lands for these purposes. When local supplemental agreements with military agencies exist, consult such agreements for additional direction. Activities must be in conformance with management area objectives.

**S-7:** All research permits shall include a requirement that the Forest Service receive a copy of the final report or analysis.

**S-8:** Special use permits shall not be approved for new uses where the primary use is storage or disposal of hazardous materials including, but not limited to, landfills and liquid septage disposal facilities.

**S-9:** Special Use applications shall be denied if the authorizing officer determines that:

- The proposed use would not be in the public interest.
- The proposed use would otherwise be inconsistent with applicable federal, State, and local laws, regulations, and special orders that apply to the national forests.
- The proposed use may endanger public health or safety.
- The proposed use would conflict or interfere with administrative use by the Forest Service, other authorized existing uses, or uses of adjacent non-federal lands.
- The applicant does not, or cannot, demonstrate technical or financial capability.

**S-10:** Special use permits required by law to provide access to non-federal land shall be issued.

### Guidelines

**G-1:** Special use authorizations should be issued only when there are no reasonable private land alternatives, or when the use has a clear and significant public benefit.

**G-2:** New special use permits for transportation, utility and communication corridors should be co-located with existing corridors to reduce the proliferation of separate rights-of-way.

**G-3:** Current uses, where the primary use is storage or disposal of hazardous materials including, but not limited to, landfills and liquid septage disposal facilities, should be phased out.

**G-4:** First Amendment group uses may only be denied a permit if the use does not meet the eight criteria listed in Federal regulations (36 CFR 251.54).

**G-5:** Electrical utility lines of 33 kilovolts or less, communication lines, or pipelines should be buried unless one or more of the following applies:

- Visual quality objectives of the area can be met using an overhead line.
- Burial is not feasible due to geological hazards or unfavorable geologic conditions.
- Greater long-term site disturbance would result.
- It is not technically feasible.

**G-6:** Agricultural uses should meet the requirement of having a clear and significant public benefit, such as maintaining desirable open space as determined by appropriate analysis. Do not authorize such uses merely to continue a past use on land now part of the National Forest System.

## Administrative Facilities and Uses

### Guidelines

**G-1:** Existing facilities may be maintained.

**G-2:** Research activities and facilities may be allowed as long as they are consistent with management area direction.

**G-3:** On roads, trails, and general forest areas where motorized vehicle uses are prohibited, motorized access may be allowed for law enforcement, emergency, firefighting, maintenance, and other administrative purposes.



Bee Keeping on the Finger Lakes National Forest

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### Introduction

Chapter 3 presents management direction for specific management areas. The management direction that applies Forest-wide, found in Chapter 2, also applies to all management areas. Management area direction is developed to be appropriate for the variety of different uses and resources in the management areas. Management area direction may replace Forest-wide direction.

Each management area has a major emphasis and desired future condition. In addition, each management area has a set of standards and guidelines.

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## GRASSLAND FOR GRAZING (1.1)

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### Major Emphasis

The emphasis of this management area is to provide grasslands for domestic livestock grazing. Management actions provide a mix of grasses and forbs suitable for both livestock and a variety of wildlife species. Recreation and visual condition objectives are considered an integral part of management in pastures. Grassland pastures provide habitat for wildlife species, scenic values, and opportunities for recreational trail use. The grazing program promotes healthy riparian areas along streams in pastures. Revenues from grazing help offset the costs of maintaining the pastures.

### Desired Future Condition

The open condition of pastures will be dominated by grasses and forbs and will be especially suited for livestock forage as well as for wildlife such as raptors, rodents, rabbits, bluebirds, bobolinks, and flycatchers. Livestock ponds will provide water in each pasture. The range program will demonstrate low energy, ecologically sound pasture management practices.

Recreation management will be towards the desired ROS class of Rural. Recreation opportunities will include, but not be limited to, dispersed activities such as hiking, hunting, fishing, bird watching, and nature study. Trails for different uses will also be designated in this area.

### Standards and Guidelines for Grassland for Grazing

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

#### Soil, Water, and Riparian Area Protection and Restoration

##### Standard:

**S-1:** Livestock shall be kept out of streams with the exception of designated stream crossings.

#### Timber or Vegetation Management

##### Standard:

**S-1:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

##### Guidelines:

**G-1:** The timing of logging should be coordinated with grazing and pasture maintenance activities.

**G-2:** When a timber stand must be accessed through a pasture fence, and repeated entries are expected, for example for additional harvest, firewood removal, or timber stand improvement, a gate should be installed.

**G-3:** Forested stands within pastures may be fenced if regeneration cannot become established because of grazing.

**G-4:** Landings, skid trails, or temporary roads in pastures should be restored as necessary for forage productivity and to provide a smooth surface for future mowing.

**G-5:** Methods for tree removal may include commercial timber sale.

## Range Management

### Standards:

**S-1:** Old fencing shall be removed when replacement fencing is constructed.

**S-2:** Fences shall be constructed and maintained to follow existing Forest Service policies and procedures.

**S-3:** Range facilities such as fences, corrals, and water developments shall be designed to a level appropriate to their use. Long-term relationships between construction sites and maintenance costs shall be considered.

### Guidelines:

**G-1:** All livestock ponds should be completely fenced to exclude livestock and protect water quality, provided a trough watering system, or a similar system, is feasible. Pond outlets should be fenced as needed to protect water quality.

**G-2:** Hay may be cut and sold from vacant pastures as market conditions permit.

**G-3:** Annual fence replacement proposals should be based on the assumption that an average fence will require replacement every 20 years.

**G-4:** New fencing should be placed in the same location as the old fencing. Brush may have to be cleared to accomplish this.

**G-5:** Approximately 20 feet should be permitted between openings and timber stands to facilitate fence maintenance.

**G-6:** Reconstruction or dredging of ponds for watering livestock should be based on the assumption that it is required every 10 years for unfenced ponds and every 30 years for fenced ponds.

## Wildlife

### Guidelines:

**G-1:** Snags and large-diameter trees in and adjacent to pastures should be retained as raptor perches.

**G-2:** Small areas of trees and shrubs, including hedge rows, should be retained within pastures to provide wildlife habitat diversity, visual variety, or shade for livestock.

## Pests, Diseases, and Non-Native Invasive Species

### Guideline:

**G-1:** Administrative access to pastures, or other access as authorized, should incorporate measures to prevent the spread of non-native invasive species.

## Fire Management

### Guidelines:

**G-1:** Prescribed fire may be permitted.

**G-2:** Fruit trees, hedge rows, snags, and stump fences should be protected from fire where possible.

## Recreation

### Standards:

**S-1:** Forest visitors shall be informed of grazing activities and pasture-related recreation through brochures, signing, or personal contacts to reduce conflicts.

**S-2:** Safe recreation crossing points shall be provided in barbed wire pasture fences.

**S-3:** Camping shall not be permitted in pastures between May 1 and November 1 when livestock are present.

### Guidelines:

**G-1:** Pasture facilities should be designed to accommodate recreation use and wildlife whenever practical.

**G-2:** Recreation activities should not compromise the purpose of this management area.

## Heritage Resources

### Guidelines:

**G-1:** When installing new, or replacing established gates or corrals, consideration should be given to placing them away from historical site locations in order to minimize cattle and machinery traffic in site areas.

**G-2:** Old unused structures, such as wells and buildings, that are determined to not have significant historical value should be removed as funds permit.

**G-3:** All or parts of a pasture may be excluded from the grazing program to protect large site areas. Exclosure fences may be erected around smaller site areas to keep cattle out. Fence lines should be moved or placed so that sites not previously lost or destroyed become excluded from the pasture.

## Interpretation and Education

### Guideline:

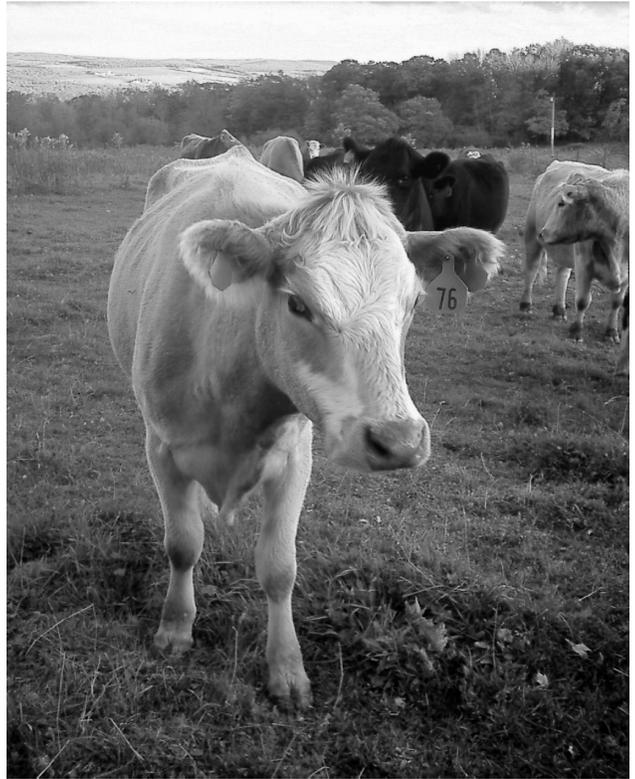
**G-1:** Research on pasture management, noxious weed control, and grazing systems should be promoted on the Finger Lakes National Forest.

## Non-Recreation Special Uses

### Guidelines:

**G-1:** Existing corridors for utility lines, pipelines, and other energy and communication corridors may be continued under special use permit.

**G-2:** Temporary non-recreation special uses may be permitted with appropriate timing and planning to mitigate conflicts.



Cattle grazing on the Finger Lakes National Forest

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## GRASSLAND FOR WILDLIFE (1.2)

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### Major Emphasis

This management prescription emphasizes maintenance of grasslands for wildlife habitat. Management maintains or promotes grass and forb production without livestock grazing. Dominant vegetation includes many varieties of edible grasses and forbs that also provide cover and nesting habitat for a wide variety of game and non-game wildlife species that are dependent on grassland habitats during all, or part of, their life cycle. This habitat type is relatively uncommon in the region. These areas contribute to the diverse scenic landscape and provide opportunities for dispersed recreation.

### Desired Future Condition

Grasslands will vary in shape and size. They may be as small as a few acres or greater than 250 acres. Grasses and forbs will dominate the vegetation, with some shrub and forest areas interspersed. Human modifications may be evident from maintenance practices such as mowing, liming, prescribed burning, or fertilization. Hay may be removed from these grassland areas and incidental amounts of sawtimber and other wood products may be available from intermingled timber stands.

Recreation opportunities will include, but not be limited to, dispersed activities such as hiking, hunting, fishing, bird watching, and nature study. Recreation management will be towards the desired ROS class of Rural. Grassland for Wildlife will provide opportunities for picking berries, apples, and other fruit. Grasslands will be scattered over the Forest, more prevalently in the northern half of the Forest. Fewer grasslands will be located in the more rugged terrain of the southern Forest area.

### Standards and Guidelines for Grassland for Wildlife

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

#### Soil, Water, and Riparian Area Protection and Restoration

##### Guideline:

**G-1:** Water developments may be maintained and reconstructed when wildlife and fisheries habitat improvement opportunities exist.

#### Timber or Vegetation Management

##### Standard:

**S-1:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

##### Guidelines:

**G-1:** Landings, skid trails, or temporary roads in grasslands should be restored as necessary for forage productivity and to provide a smooth surface for future mowing.

**G-2:** Methods for tree removal may include commercial timber sale.

#### Range Management

##### Standard:

**S-1:** Grazing by domestic livestock shall not be permitted, except for incidental use by recreation stock, for example horse use.

##### Guidelines:

**G-1:** Prescribed fire and mowing will be the preferred methods for maintaining open conditions.

**G-2:** Hay may be cut and sold as market conditions permit.

## Wildlife

### Guidelines:

**G-1:** Approximately 30 to 50 percent, of the Forest's Grassland for Wildlife should be maintained each year.

**G-2:** Snags and large-diameter trees in, and adjacent to, grasslands should be retained as raptor perches.

**G-3:** Small areas of trees and shrubs, including hedge rows, should be retained within grasslands and along edges to provide escape cover. Mast-producing species and aspen should be promoted in these areas.

**G-4:** Water may be piped from wildlife ponds to stock troughs in nearby pastures, provided that an adequate supply of water is maintained for wildlife.

## Fire Management

### Guidelines:

**G-1:** Prescribed fire may be permitted.

**G-2:** Fruit trees, hedge rows, snags, and stump fences should be protected from fire where possible.

## Recreation

### Guidelines:

**G-1:** Trails and other recreation facilities may be retained in grasslands.

**G-2:** New trails and facilities may be developed, and existing trails may be designated for new uses, as long as it complements the purpose of Grassland for Wildlife Management Area.

## Road Operation and Maintenance

### Guidelines:

**G-1:** National Forest System roads may be closed to public use, or the types of vehicles or season of use may be restricted for public safety, to prevent resource damage or to protect wildlife.

**G-2:** Existing National Forest System roads may be maintained through grasslands, and appropriate surfacing may be added to the roads as required.

**G-3:** Lightly used grass or soil roads may connect some areas to gravel roads.

## Pests, Diseases, and Non-Native Invasive Species

### Guideline:

**G-1:** Administrative access to grasslands, or other access as authorized, should incorporate measures to prevent the spread of non-native invasive species.



Mowed Grassland for Wildlife

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## SHRUBLAND (1.3)

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### Major Emphasis

This management prescription emphasizes the maintenance of parcels dominated by brushy conditions for wildlife habitat and fruit production. A large variety of game and non-game wildlife species are dependent on shrubland during all or part of their life cycle. This habitat type is relatively uncommon in the region.

### Desired Future Condition

Shrublands will vary in shape and size. They may be as small as 1 acre or greater than 200 acres. Shrubland will provide vegetation in an intermediate successional stage for game and non-game wildlife habitat. Grasses, forbs, shrubs, and small patches of trees will dominate the vegetation. Many varieties of edible berries and tree fruits may be found in this vegetation type. Age and structure of vegetation will vary, depending on site characteristics, neighboring vegetation types, and management application. Shrubland will add visual variety to the landscape, including opportunities for vistas in forested areas. Small amounts of firewood will be available. This management area will contain many of the wildlife ponds on the Forest.

Recreation management will be towards the desired ROS class of Roaded Natural. Recreation will be largely fish and wildlife-oriented, including, but not limited to, hunting, fishing, trail activities, and wildlife observation. Shrubland will provide opportunities for picking berries, apples, and other fruit.

### Standards and Guidelines for Shrubland

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

#### Soil, Water, and Riparian Area Protection and Restoration

##### Guideline:

**G-1:** Water developments may be maintained and reconstructed when wildlife and fisheries habitat improvement opportunities exist.

#### Timber or Vegetation Management

##### Standard:

**S-1:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

##### Guidelines:

**G-1:** At least 80 percent of each shrubland should be maintained in a mosaic of brush, forb, and grass conditions. Tree crown closure should be less than 50 percent and predominant shrub height should be at less than 35 percent of that in adjacent forested areas.

**G-2:** Individual shrublands should include a mixture of vegetative types, including grasses, forbs, shrubs, and clumps of trees.

**G-3:** Methods for tree removal may include commercial timber sale.

**G-4:** Mast-producing shrubs and trees should be favored in vegetation management.

**G-5:** Shrubland should be maintained every 3 to 20 years. Decisions on maintenance frequency vary with rates of succession, adjacent vegetation types, and desired wildlife species. Various tools may be used to maintain shrublands including, but not limited to, mowing, prescribed burning and hand-cutting.

**G-6:** Shrublands should have irregular shapes to maintain visual quality and to improve interspersions with other vegetation types.

**G-7:** Canopy cover should be maintained around ponds. Pond dike maintenance may require more aggressive vegetation management, such as tree removal and mowing, to protect against dike failure.

### Wildlife

#### Guidelines:

**G-1:** Snags and large-diameter trees in, and adjacent to, shrubland should be retained as raptor perches.

**G-2:** Small areas of trees and shrubs, including hedge rows, should be retained within shrubland and along edges to provide escape cover. Mast producing species and aspen should be promoted in these areas.

**G-3:** Water may be piped from wildlife ponds to stock troughs in nearby pastures, provided that an adequate supply of water is maintained for wildlife.

### Fire Management

#### Guidelines:

**G-1:** Prescribed fire may be permitted.

**G-2:** Fruit trees, hedge rows, snags, and stump fences should be protected from fire where possible.

### Recreation

#### Guideline:

**G-1:** New trails and facilities may be developed, and existing trails may be designated for new uses, as long as they complement the desired future conditions of the Shrubland Management Area.

### Trails

#### Guideline:

**G-1:** Trails through shrubland should be mowed frequently enough to maintain an obvious trail tread and comfortable clearance.

### Visuals

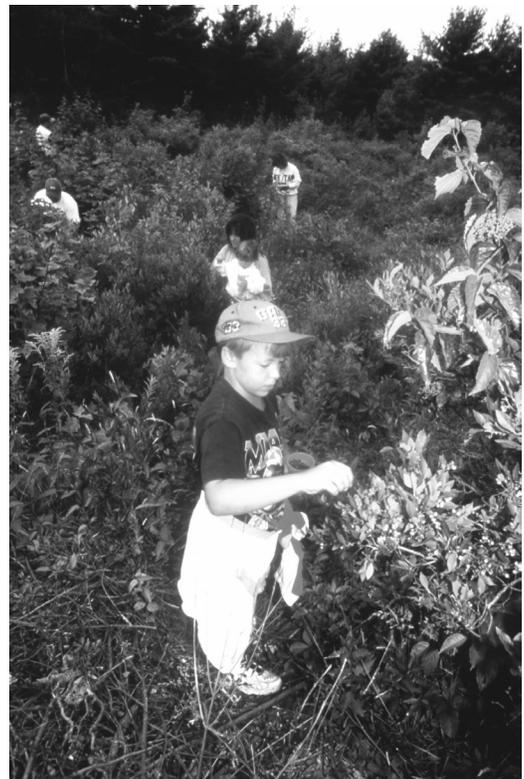
#### Guideline:

**G-1:** Maintenance of shrublands should enhance scenic vistas whenever possible.

### Road Operation and Maintenance

#### Guideline:

**G-1:** National Forest System roads may be closed to public use, or the types of vehicles or season of use may be restricted for public safety, to prevent resource damage or to protect wildlife.



Blueberry Pickers

## NORTHERN HARDWOOD (2.1)

### Major Emphasis

This management area emphasizes shade-tolerant northern hardwood tree species. Vegetation management emphasis is placed on the production of high-quality sawtimber and other timber products on a sustained basis. The primary purpose is to provide northern hardwood forests that are varied in height and natural appearing, with vigorous stands of trees in areas that are visually sensitive. Wildlife species that utilize multi-layer forest stands will benefit.

### Desired Future Condition

The Northern Hardwood MA will include a continuous forest canopy of primarily northern hardwoods and hemlock, with inclusions of oak-hickory, pine, aspen, and locust stands. Stands will be a tree mixture of sizes and ages ranging from seedlings to very large, old trees. Silviculture practices, including single tree and group selection, will be used to maintain shade-tolerant northern hardwood species in visually pleasing stands. On oak-hickory sites and in aspen and locust stands, a variety of silvicultural practices may be used.

Suitable habitat will be provided for a variety of wildlife and plant species. Wildlife that benefit from vertical structure diversity will prosper. Shade-tolerant tree species will dominate including beech, red maple, yellow birch, sugar maple, and hemlock. Hemlock stands will provide winter cover for wildlife. In riparian areas, continuous forest canopy will provide dense stream cover enhancing fish habitat.

Recreation management will be towards the desired ROS class of Roaded Natural. Forest visitors will be common in developed recreation sites and camping areas along roads in the general forest areas. Trail opportunities will be diverse, ranging from hiking and bicycling to snowmobiles.

Interaction among visitors will be in moderate to high concentrations in locally popular areas. Impacts from recreation use will be evident, and may be controlled through management actions ranging from visitor restrictions to constructing features to make sites more durable. Visitor amenities may be constructed to enhance recreation sites for the comfort of the visitor.

### Standards and Guidelines for Northern Hardwoods

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

#### Timber or Vegetation Management

##### Guideline:

**G-1:** Silviculture techniques that promote shade-tolerant tree species, such as northern hardwood and hemlock forests, should be used. Exceptions in areas managed for species such as aspen and locust may occur.

#### Fire Management

##### Guideline:

**G-1:** Prescribed fire may be permitted.



Hardwood stand

## OAK HICKORY (3.1)

### Major Emphasis

This management area emphasizes oak/hickory forests. Vegetation management emphasis is placed on production of high-quality sawtimber and other timber products on a sustained basis. Management actions provide a mix of habitats for wildlife species, emphasizing hard mast production. Public use is managed to provide a full range of recreation opportunities, from motorized and non-motorized trails to dispersed campsites and developed campsites. This mix of vegetation conditions and recreation opportunities across the landscape provides a mosaic of landscape conditions that are visually attractive to people visiting the Forest.

### Desired Future Condition

The landscape character will be a mix of oak, hickory, white pine, and other deciduous and coniferous stands, including northern hardwoods. The stands will vary in size, shape, height, and tree species. Along road and trail corridors, large diameter trees of diverse species will predominate. Vistas of landscapes with a mosaic of vegetative patterns will be provided along roads and trails. All forested communities that would naturally be present, such as northern hardwoods and aspen, as well as introduced stands of locust, will be retained and enhanced where feasible. Two different conditions will occur in stands: most stands will consist of trees of about the same age and size; the remaining stands will consist of a mix of tree sizes and ages ranging from seedlings to very large mature trees. A variety of silviculture practices will be used to meet timber, ecological, visual, and recreation objectives.

Suitable habitat will be provided for a variety of wildlife and plant species. Oak and hickory forests will be emphasized to provide hard mast consisting of acorns and various nuts. Habitat at the landscape level will include a sustainable mix of young and mature forests. Permanent and temporary openings will occur across the landscape in shapes and sizes that are consistent with visual objectives in the area. Views, ecological processes, and management practices will be interpreted at appropriate vista sites.

Recreation management will be towards the desired ROS class of Roaded Natural. Recreation opportunities will be diverse in this MA. Forest visitors will be common in developed recreation sites and camping areas along roads in the general forest areas. Trail opportunities will be diverse, ranging from hiking and horseback riding to snowmobiling and bicycling. Interaction among visitors will be in moderate to high concentrations in locally popular areas. Impacts from recreation use will be evident, and may be controlled through management actions ranging from visitor restrictions to constructing features to make sites more durable. Visitor amenities may be constructed for the comfort of the visitor.



Horseback Riding

### Standards and Guidelines for Oak Hickory

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

### Timber or Vegetation Management

#### Guideline:

**G-1:** Silviculture techniques that promote shade-intolerant tree species such as oak, hickory, white pine, aspen, and locust should be used. Exceptions in areas managed for species such as northern hardwood and hemlock may occur.

### Fire Management

#### Guideline:

**G-1:** Prescribed fire may be permitted.



Public Lands Day



Hiking on the Finger Lakes National Forest

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## FUTURE OLD FOREST (6.1)

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### Major Emphasis

This management area emphasizes natural succession of plant communities to old forest conditions, with little or no timber harvest. Management actions are limited to those that help restore or maintain natural processes, natural communities, and associated species within their natural ranges of variation in the landscape. Public use is managed to provide educational and non-motorized backcountry recreation opportunities, while maintaining existing winter motorized uses.

### Desired Future Condition

Areas of Future Old Forest will represent a variety of ecological land types and natural communities where terrestrial and aquatic ecosystems develop under natural disturbance regimes. Forests of oak, northern hardwood, and hemlock will dominate. Changes in vegetation will predominantly be the result of natural processes. Over time, a mix of tree sizes and ages, including very large live and dead trees, young trees, and canopy gaps that occur as a result of natural disturbances will be evident. Natural disturbances such as wind, fire, ice storms, or outbreaks of native insects and diseases will be considered part of these natural processes. Blocks of land within this management area will vary in size relative to the size and town road network on the Forest, but will be as large as possible.

Under some circumstances, management actions that further ecological goals and objectives in this MA may be appropriate. Management activities will be designed to maintain ecological and social conditions consistent with those desired for the management area. Vegetation management activities are needed to improve habitat for threatened, endangered, and Regional Forester sensitive species; control non-native invasive species; restore terrestrial or aquatic

ecosystem composition and structural characteristics; or maintain existing important wildlife features. Ecological restoration within these areas may occur through control of non-native invasive species, removal of forest plantations, native inland fish stocking, and aquatic habitat restoration. The minimum managerial controls necessary will be used to maintain acceptable ecological and social standards.

Public use will be managed at a scale and intensity that either helps keep species or processes within their natural range of variation, or will have limited effect on the area's integrity. Aside from the town road network and some trails, there will be little evidence of current human development. Historical evidence of human activities that have become overgrown or dilapidated may be present.

Recreation management will be towards the desired ROS class of Semi-primitive Motorized. Hiking, backpacking, and related foot trail recreational opportunities will be available to provide a relative sense of isolation in an environment generally free of human disturbances. Facilities may be present but must complement the desired recreation opportunity spectrum class. New hike, bike, ski, and equestrian trails may be developed. There will be no new roads or motorized trails. Existing motorized uses will be maintained on existing trail and road networks, but will be managed to protect natural resources such as water quality, and rare plants and animals, minimize visual disturbance, and maintain where possible a sense of isolation from human activity. There will be a low to moderate probability of experiencing sights and sounds of other people, with the moderate probability concentrated around trail corridors.

## Standards and Guidelines for Future Old Forest

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

### Minerals

#### Standard:

**S-1:** Subject to valid existing rights, mineral exploration and extraction that causes surface disturbance within this area shall be prohibited.

### Timber or Vegetation Management

#### Standard:

**S-1:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

#### Guideline:

**G-1:** Vegetation management is normally not permitted. However, infrequent vegetation management may take place for any of the following reasons:

- Vegetation management activities are needed to improve habitat for threatened, endangered, and Regional Forester sensitive species; restore terrestrial or aquatic ecosystem composition and structural characteristics; or maintain existing important wildlife features.
- The cutting, sale, or removal of timber is incidental to the implementation of a vegetation management activity.

- The removal of vegetation is needed to maintain existing trails, vistas, and overlooks, or to establish new trails for resource protection or public safety needs.
- The removal of vegetation on or around heritage sites is needed for preservation, research and/or interpretive purposes.
- The removal of vegetation is needed and appropriate for administrative use.

### Openings

#### Guideline:

**G-1:** Permanent and temporary openings found in the area should be the result of natural processes only; exceptions are permitted for vegetation management activities consistent with management area direction.

### Special Forest Products

#### Standard:

**S-1:** Gathering of special forest products that require a permit or are for commercial sale shall be prohibited.

### Range Management

#### Standard:

**S-1:** Domestic livestock grazing shall be prohibited.

### Fisheries

#### Guidelines:

**G-1:** Changes resulting from stream restoration activities should be kept as naturally appearing as possible.

**G-2:** Pond management activities should be limited to those that enhance natural conditions and processes.

### Pests, Diseases, and Non-Native Invasive Species

#### Guidelines:

**G-1:** Chemical and biological controls may be utilized when determined to be less ecologically disruptive than the target pest.

**G-2:** Control actions against native insect, disease, plant, or animal pests, should only be used when the actions are necessary to protect adjacent resources or Future Old Forest desired future conditions.

### Fire Management

**Guidelines:**

**G-1:** Prescribed fire may be permitted.

**G-2:** Off-road use of tractors or tractor plows, retardants, constructed helispots, and engines should be minimized.

### Recreation

**Standards:**

**S-1:** Recreational use shall complement the management objectives and desired future conditions of this MA.

**S-2:** Construction of new developed recreational facilities shall be limited to those needed for resource protection.

**Guideline:**

**G-1:** Existing facilities may be maintained as long as they complement Future Old Forest desired future conditions, are needed for public health and safety, or are significant historic properties.

### Trails

**Standard:**

**S-1:** New motorized trails shall be prohibited.

**Guidelines:**

**G-1:** Relocation of existing trails may occur only for resource protection and visitor safety.

**G-2:** The use of horses, pack animals, dog teams, bicycles, and motorized vehicles may be permitted as long as such uses do not interfere with MA purpose and value. Opportunities to relocate existing motorized trails outside of Future Old Forest should be considered.

### Transportation Analysis

**Standard:**

**S-1:** New road construction shall be prohibited unless required by law to provide access to private land.

**Guideline:**

**G-1:** Relocation of existing trailheads and parking areas, and construction of new trailheads and parking areas, may occur only for resource protection and visitor safety.

### Recreation Special Uses

**Standards:**

**S-1:** Outfitter/guide permits shall not disperse use from high- to low-use areas.

**S-2:** Permits for competitive or recreation events shall be restricted to existing trail and road systems or recreation sites.

### Non-Recreation Special Uses

**Standards:**

**S-1:** Development of, and designated sites for, wind and communication towers shall be prohibited unless along current town roads and buried.

**S-2:** Development of new utility and pipeline corridors and associated facilities shall be prohibited.

**Guidelines:**

**G-1:** Expansion of existing facilities and corridors for utility lines and pipelines should not be encouraged.

**G-2:** Reconstruction, upgrading, or maintenance of existing utility lines and facilities should be designed and implemented to be as compatible as possible with visual quality and management objectives and desired future conditions of the area.

**G-3:** Special use permits may be permitted for research or educational activities, or when mandated by law or agreement.

**G-4:** Existing special use permits should be phased out when feasible.

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# NORTH COUNTRY NATIONAL SCENIC TRAIL SPECIAL AREA

## (8.1)

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### Major Emphasis

The intent of this Special Area is to manage the nationally significant North Country Trail (NCT) for the education and recreation of present and future generations. The North Country Trail links outstanding scenic, natural, recreational, historic, and cultural areas in seven northern tier states – New York, Pennsylvania, Ohio, Michigan, Wisconsin, Minnesota, and North Dakota. The trail system is located on a combination of private, State, and federal land. The portion of the trail in the Finger Lakes National Forest is managed to provide hiking and cross country skiing where human modifications appear secondary to natural features. Consistent with existing agreements, the Green Mountain and Finger Lakes National Forest will consult with the National Park Service, North Country Trail Association, and the Finger Lakes Trail Conference on management actions that affect North Country Trail values.

The following 2006 Forest Plan direction is in addition to, and consistent with, the National Trails System Act, as amended (P.L. 90-543) and Forest Service manual and handbook direction. For further technical details refer to:

- Comprehensive Plan for Management and Use of the North Country National Scenic Trail
- Various Memoranda of Agreement, Memoranda of Understanding, and policy statements between the USDA Forest Service, the National Park Service, and the North Country Trail Association

### Desired Future Condition

North Country Trail users in the Finger Lakes National Forest will encounter a variety of vegetation types including conifer and locust plantations, managed hardwood forest, old growth forest, shrublands, and an ecologically important wildlife pond and associated wetland. While resource management will provide the variety of habitats, the emphasis will be on providing an environment where natural processes dominate. Historic evidence of past farming activities, such as stone foundations and stone walls, may be found. The unique characteristics and values of areas of ecological and cultural importance and the North Country Trail will be protected and maintained to the greatest extent possible. Views of the Hector Bluffs and surrounding countryside will be seen from shrublands and the Finger Lakes Trail Shelter.

The portion of the North Country Trail in the Finger Lakes National Forest will be part of the Finger Lakes Trail system. Recreation management will be towards the desired ROS class of Semi-primitive Non-motorized. The North Country Trail will provide high-quality non-motorized trail opportunities for those on foot and other pedestrian means, such as skis or snowshoes. The Management Area will include an area of 200 feet on either side of the North Country Trail.

## Standards and Guidelines for North Country National Scenic Trail Special Area

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

### Minerals

#### Standard:

**S-1:** Subject to valid existing rights, mineral exploration and extraction that causes surface disturbance within this area shall be prohibited.

### Timber or Vegetation Management

#### Standard:

**S-1:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

#### Guidelines:

**G-1:** Forested areas should be managed to provide continuous forest canopy except for maintenance of vistas.

**G-2:** Timber salvage should not be permitted unless there is a threat to public safety, structures, adjacent lands, or needed to meet the desired future condition of the North Country Trail.

### Openings

#### Guideline:

**G-1:** Permanent upland openings may be maintained or created if needed for wildlife and plant habitat, recreation, visuals, or to meet the desired future condition of the North Country Trail.

### Special Forest Products

#### Standard:

**S-1:** Gathering of special forest products for commercial sale shall be prohibited.

### Range Management

#### Standard:

**S-1:** Domestic livestock grazing shall be prohibited.

### Wildlife

#### Guidelines:

**G-1:** Vegetation should be managed to provide species diversity and a variety of major vegetation types, such as grasslands, shrublands, and forests.

**G-2:** Existing shrublands should be maintained to provide wildlife habitat and vistas. This may be done through mowing, prescribed fire, or other methods compatible with the desired future condition of the North Country Trail.

### Fisheries

#### Guidelines:

**G-1:** Ponds should be maintained for fish and wildlife uses.

**G-2:** Restoration and habitat improvement activities may be permitted when they will not diminish the character or purpose of the NCT.

### Pests, Diseases, and Non-Native Invasive Species

#### Guidelines:

**G-1:** Control actions against native insect, disease, plant, or animal pests, should only be used when the actions are necessary to protect adjacent resources or to meet the desired future condition of the North Country Trail.

**G-2:** Native plant species should be used for restoration activities.

### Fire Management

#### Guideline:

**G-1:** Prescribed fire may be permitted.

## Recreation

### Guidelines:

**G-1:** New trail shelters and associated facilities should be prohibited; existing trail shelters and facilities should be maintained.

**G-2:** Interpretation that increases awareness of area botanical, ecological, geological, and zoological resources may be provided.

**G-3:** Construction of new trailheads, and relocation of existing trailheads, should occur only for recreation, education, resource protection, and visitor safety.

## Trails

### Standards:

**S-1:** The North Country Trail MA shall be managed for foot travel only.

**S-2:** The use of horses, pack animals, bicycles, and motorized vehicles in the North Country Trail MA shall be prohibited.

### Guidelines:

**G-1:** Overnight camping should be limited to two consecutive nights at the trail shelter.

**G-2:** Construction of new trails, and maintenance and relocation of existing trails, should occur only for recreation, education, resource protection, management efficiency, and visitor safety.

**G-3:** Addition of trail crossings of the North Country Trail should be prohibited.

## Recreation Special Uses

### Guidelines:

**G-1:** Permits for recreation events or facilities should be prohibited except if they support the desired future condition of the North Country Trail.

**G-2:** Existing special use permits, that aren't consistent with Special Management Area desired future conditions, should be phased out.

## Non-Recreation Special Uses

### Standards:

**S-1:** Development of, and designated sites for, wind and communication towers shall be prohibited.

**S-2:** Development of new utility and pipeline corridors and associated facilities shall be prohibited.

### Guidelines:

**G-1:** Reconstruction, upgrading, or maintenance of existing utility lines and facilities should be designed and implemented to be as compatible as possible with visual quality and management objectives and desired future conditions of the area.

**G-2:** Special use permits may be permitted for research or educational activities, or when mandated by law or agreement.

**G-3:** Existing special use permits should be phased out when feasible.

## Transportation Analysis

### Guidelines:

**G-1:** Roads and skid trails should be prohibited from the management area except where no reasonable alternative exists.

**G-2:** Roads and skid trails crossing the North Country Trail should be at right angles to the trail wherever possible.

## RECREATION AND EDUCATION SPECIAL AREA (8.2)

### Major Emphasis

Recreation and Education Special Areas have uncommon or outstanding recreational, scenic, cultural, ecological, geological, or historical significance. The intent of this management area is to preserve and enhance these values for the education and recreation of present and future generations.

### Desired Future Condition

Recreation and Education Special Areas (SAs) will exemplify the special values for which they were designated. Recreation and Education SAs will provide opportunities for public use and education focused on the specific special value or values identified. Recreation and education will be complementary to the special values identified and will not degrade these values. Recreation and Education SAs will focus on a variety of uncommon or outstanding values. Evidence of human activities in this MA will range from substantially unnoticeable to very evident. The public will use these areas for a variety of recreational and educational activities.

Natural disturbances and occasional management activities will shape the vegetation composition. Components of the natural disturbance regime may include individual tree throw and infrequent larger scale blowdown, infrequent fire, insect damage, and beaver flooding. Management activities will be focused on protection of the identified special recreational and educational value. Recreation management will be towards the desired ROS class of Rural.

Existing grasslands, shrublands, and permanent upland openings may be maintained to provide wildlife habitat and visual diversity.

### Recreation and Education Special Areas

<b>Recreation and Education SA</b>	<b>Special Values</b>
Caywood Point	Educational, Recreational, Cultural, Historical, Ecological

### Standards and Guidelines for Recreation and Education Special Areas

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

#### Minerals

##### Standard:

**S-1:** Subject to valid existing rights, mineral exploration and extraction that causes surface disturbance within this area shall be prohibited.

#### Timber or Vegetation Management:

##### Standard:

**S-1:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

##### Guidelines:

**G-1:** Forested land should be managed for continuous forest canopy except for maintenance of vistas.

**G-2:** Commercial timber harvesting should not be permitted unless needed for recreation or education or to maintain the special values of the Special Area (SA).

**G-3:** Timber salvage should not be permitted unless there is a threat to public safety, SA resources or structures, or adjacent lands.

**G-4:** Native plant species should be used for restoration activities. Use non-native plant species only if they are needed to prevent irreversible resource damage.

### Openings

**Guideline:**

**G-1:** Permanent upland openings may be maintained if needed to maintain the character or purpose of the Special Area.

### Special Forest Products

**Standard:**

**S-1:** Gathering of special forest products for commercial sale shall be prohibited.

### Range Management

**Standard:**

**S-1:** Domestic livestock grazing shall be prohibited except for educational purposes.

### Wildlife

**Guidelines:**

**G-1:** Vegetation may be managed to provide both species diversity and a variety of major vegetation types, such as grasslands, shrublands, and forests.

**G-2:** Existing shrublands and permanent upland openings may be maintained to provide wildlife habitat. This may be done through mowing, prescribed fire, or other methods compatible with recreation and education use.

### Fisheries

**Guideline:**

**G-1:** Restoration or habitat improvement activities may be permitted when they will not diminish the character or purpose for which the SA was designated.

### Pests, Diseases, and Non-Native Invasive Species

**Guideline:**

**G-1:** Chemical and biological controls may be utilized when determined to be less ecologically disruptive than the target pest.

### Fire Management

**Guidelines:**

**G-1:** Prescribed fire may be permitted.

**G-2:** Off-road use of tractors or tractor plows, retardants, constructed helispots, and engines should be minimized.

### Recreation

**Standard:**

**S-1:** Recreational use shall complement the management objectives and desired future conditions of this MA.

**Guideline:**

**G-1:** Facilities may be maintained or constructed as long as they don't threaten or degrade the values for which the SA was designated and are needed for public education, recreation, or are significant historic properties.

### Trails

**Standard:**

**S-1:** Trails shall be managed for non-motorized uses only.

**Guideline:**

**G-1:** Construction of new trails, and maintenance and relocation of existing trails, should occur only for recreation, education, resource protection, and visitor safety.

## Visuals

### Guideline:

**G-1:** The Built Environment Image Guide (BEIG) (USDA Forest Service 2001) should be used to develop the image, appearance, or architectural character of existing or proposed facilities, when considering rehabilitation, expansion, replacement, or the addition of new improvements.

## Interpretation and Education

### Guideline:

**G-1:** The special values for which this area was designated should be interpreted where this can be done without resulting damage to the special values.

## Transportation Analysis

### Guidelines:

**G-1:** Roads may be closed to public use. The types of vehicles or season of use may be restricted for public safety, to prevent resource damage and to protect wildlife.

**G-2:** New road construction should be prohibited unless they protect or contribute to SA values, education, or recreation.

**G-3:** Construction of new trailheads, and maintenance and relocation of existing trailheads, should occur only for recreation, education, resource protection, and visitor safety.

**G-4:** Decommissioned roads may be demolished, dismantled, obliterated, or disposed of to eliminate the deferred maintenance needs of the fixed asset. Portions of the asset may remain if they do not cause problems nor require maintenance. This may include blocking the entrance, revegetating and installing waterbars, removing fills and culverts, establishing drainage ways, removing unstable road shoulders or full obliteration, recontouring, and restoring to natural slopes.

## Recreation Special Uses

### Guideline:

**G-1:** Permits for recreation events or facilities may be permitted as long as the activity supports MA purposes and values.

## Non-Recreation Special Uses

### Standards:

**S-1:** Development of, and designated sites for, wind and communication towers shall be prohibited.

**S-2:** Development of new utility and pipeline corridors and associated facilities shall be prohibited.

### Guidelines:

**G-1:** Expansion of existing facilities and corridors for utility lines and pipelines should not be encouraged.

**G-2:** Reconstruction, upgrading, or maintenance of existing utility lines and facilities should be designed and implemented to be as compatible as possible with visual quality objectives and management purposes and values for the area.

**G-3:** Special use permits may be permitted for research or educational activities, or when mandated by law or agreement.

**G-4:** Existing special use permits should be phased out when feasible.



Queen's Castle on Caywood Point

# EXISTING AND CANDIDATE RESEARCH NATURAL AREAS (8.3)

## Major Emphasis

The emphasis for an existing or candidate Research Natural Area (RNA) is preservation and protection of ecologically significant natural features, representative ecosystems, and/or unique areas. In combination with other RNAs in the nation, these form a national network of ecological areas for research, monitoring, education, and maintenance of biological diversity. The intent of this management area designation is to include a broad representation of natural communities. In this document, RNA will refer to both existing and candidate Research Natural Areas.

## Desired Future Condition

RNAs are chosen as high-quality representatives of ecological communities found on the Forest. In general, they will exhibit minimal evidence of past human disturbance, and contain all or most species characteristic of that community in the region. Size may vary from less than 100 acres to a few hundred acres. These areas will generally be well buffered from incompatible activities on nearby lands in order to preserve the integrity of the area for monitoring of baseline ecological conditions. RNAs are meant to include a representation of upland, wetland, and aquatic ecological types across the Forest. Forest composition and structure will primarily be the result of natural ecological processes, rather than human-caused activities. These areas will provide excellent opportunities for many kinds of long-term monitoring and non-manipulative research.

Recreation use will not be encouraged in RNAs. Recreation management will be towards the desired ROS class of Semi-primitive Non-motorized. Research will be

the predominant use of the area, and hiking or other foot trail use will generally be incidental or educational in purpose. National Forest System roads will be either absent or closed within RNA boundaries.

## Candidate Research Natural Areas

<b>Research Natural Areas</b>	<b>Special Values</b>
Hector Oak Woods	Appalachian oak-hickory forest that is mature in some portions and provides rare plant habitat
Sawmill Creek Ravine	Mature hemlock-northern hardwood forest along a series of ravines formed by Sawmill Creek and its tributaries

## Standards and Guidelines for Existing and Candidate Research Natural Areas

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

### Soil, Water, and Riparian Area Protection and Restoration

**Guideline:**

**G-1:** Management for soil and water resources should be permitted only when the action is necessary to protect the adjacent resources, or restoration is required to move the area toward a more natural condition.

**Minerals****Standard:**

**S-1:** Subject to valid existing rights, mineral exploration and extraction that causes surface disturbance within this area shall be prohibited.

**Timber or Vegetation Management****Standards:**

**S-1:** Management for commercial timber products shall be prohibited.

**S-2:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

**Guidelines:**

**G-1:** Vegetation management should be permitted only when needed to maintain or restore the unique feature(s) or vegetation type(s) for which the RNA was established. Management practices should approximate the vegetation and processes that govern natural succession.

**G-2:** Hazard trees may be cut but not removed.

**Openings****Guideline:**

**G-1:** Permanent and temporary openings found in RNAs should be the result of natural processes only, unless they are the result of other activities permitted elsewhere in this guidance.

**Special Forest Products****Standard:**

**S-1:** Gathering of special forest products that require a permit or are for commercial sale shall be prohibited.

**Guideline:**

**G-1:** Gathering of special forest products may be permitted for scientific use on a case-by-case basis.

**Range Management****Standard:**

**S-1:** Domestic livestock grazing shall be prohibited.

**Wildlife****Guideline:**

**G-1:** Management for plant and animal habitat should be permitted only when species or habitat for which the area is established would be lost or degraded without treatment, or require restoration to move the area toward a more natural condition.

**Fisheries****Guideline:**

**G-1:** Management for fisheries should be permitted only when species or habitat for which the area is established would be lost or degraded without treatment, or require restoration to move the area toward a more natural condition.

**Pests, Diseases, and Non-Native Invasive Species****Guidelines:**

**G-1:** Control actions against native insect, disease, plant, or animal pests, should only be used when the actions are necessary to protect adjacent resources or RNA values.

**G-2:** Control actions may be permitted against non-native invasive species when such species are known to disrupt natural ecological processes, TES species, or the features for which the area was designated.

**G-3:** Chemical and biological controls may be utilized when determined to be less ecologically disruptive than the target pest.

**G-4:** Use of non-native plant species for restoration or recovery purposes should only occur when needed to prevent irreversible resource damage.

**Fire Management****Guideline:**

**G-1:** Prescribed fire should be prohibited except where needed to maintain the values for which the areas were established.

## Recreation

### Standards:

**S-1:** Recreational use that threatens or interferes with the values or purposes for which the RNA was established shall be prohibited.

**S-2:** Geocaching shall be prohibited.

## Trails

### Standard:

**S-1:** The use of horses, pack animals, dog teams, bicycles, and motorized vehicles on RNA trails shall be prohibited.

### Guidelines:

**G-1:** Signs, new trails, or other improvements may be permitted only when they contribute to RNA objectives or area protection.

**G-2:** Existing trails should be maintained at the lowest possible maintenance standard.

**G-3:** Management direction for the North Country Trail (NCT) Management Area should apply to the NCT within or adjacent to Existing or Candidate RNAs. Where direction differs, the more restrictive standards and guidelines apply.

## Land Ownership Adjustments

### Guideline:

**G-1:** RNA boundaries should be clearly identified in the field.

## Transportation Analysis

### Standard:

**S-1:** Construction of new roads shall be prohibited.

### Guideline:

**G-1:** Decommissioned roads may be demolished, dismantled, obliterated, or disposed of to eliminate the deferred maintenance needs of the fixed asset. Portions of the asset may remain if they do not cause problems nor require maintenance. This may include blocking

the entrance, revegetating and installing waterbars, removing fills and culverts, establishing drainage ways, removing unstable road shoulders or full obliteration, recontouring, and restoring to natural slopes.

## Recreation Special Uses

### Standard:

**S-1:** Permits for recreation special uses shall be prohibited.

## Non-Recreation Special Uses

### Standards:

**S-1:** Development of, and designated sites for, wind and communication towers shall be prohibited.

**S-2:** Development of new utility and pipeline corridors and associated facilities shall be prohibited.

### Guidelines:

**G-1:** Expansion of existing facilities and corridors for utility lines and pipelines should not be encouraged.

**G-2:** No additional structures should be permitted unless needed for RNA purposes.

**G-3:** Special use permits may be permitted for research or educational activities, or when mandated by law or agreement.

**G-4:** Existing special use permits should be phased out when feasible.



## ECOLOGICAL SPECIAL AREAS (8.4)

### Major Emphasis

Ecological Special Areas (SAs) are characterized by physical or biological features of Forest-wide or regional significance. Areas that may be designated as Ecological SAs include locations that provide examples, or representatives of geological, botanical, zoological, and ecological values. Management emphasizes the protection of these values and opportunities for public use and interpretation. Ecological SAs may also provide opportunities as reference sites for research and monitoring.

### Desired Future Condition

Ecological Special Areas will exemplify the special values for which they are designated. These areas will tend to be smaller than Future Old Forest areas, and will often be more influenced by past or present human activities than Research Natural Areas. They will display moderate to high levels of ecological integrity, while providing opportunities for public use and awareness. Ecological SAs will represent physical and biological conditions across the Forest, and therefore will include wide variation in vegetative cover and communities. This variety of ecosystems and the quality of special values will make Ecological SAs well suited for research and monitoring.

Recreation management will be towards the desired ROS class of Semi-primitive Non-motorized. Some of the Ecological SAs will have important recreation values in addition to the biological values for which they are designated. As a result, evidence of human activity will range from substantially unnoticeable to very evident, and road networks will vary from not evident to evident.

Natural disturbances and occasional management activities will shape the landscape-level and site-level vegetation composition. Components of the natural disturbance regime may include individual tree throw and infrequent larger scale blowdown, infrequent fire, insect damage, ice storms, and beaver flooding. Management activities will generally be limited to light disturbances such as trail clearing and facility maintenance, as well as habitat maintenance for rare plants and animals or restoration of natural communities.

### Ecological Special Areas

<b>Ecological Special Areas</b>	<b>Special Values</b>
The Gorge	Ravine with hemlock-northern hardwood forest, Appalachian oak-hickory forest, and enriched hardwood forest with high tree species diversity and rare and uncommon plants.
Potomac Creek Woods	Mature hemlock-northern hardwood forest and ravine.
Blueberry Patch	Mature, seasonally wet Appalachian oak-hickory forest with areas of perched swamp white oak swamp, a rare natural community in New York state.
The Ravine	Mature hemlock ravine with a hiking trail.
Potomac Ravine	Ravine with mature sugar maple-basswood rich mesic forest including butternut.

Breakneck Creek	Deep, dry oak ravine.
Townsend Road Oak Woods	Mature Appalachian oak-hickory forest on gentle slopes with high diversity.
Mill Creek Ravine	Ravine with mature hemlock–northern hardwood forest and Appalachian oak-hickory forest, a diverse flora, waterfall, and a rare fish population.

### Standards and Guidelines for Ecological Special Areas

Forest-wide standards and guidelines apply. The management area standards and guidelines are to be applied in addition to Forest-wide standards and guidelines. In case of a conflict between the Forest-wide standards and guidelines and the management area standards and guidelines, the most restrictive standard and guideline shall apply.

#### Minerals

**Standard:**

**S-1:** Subject to valid existing rights, mineral exploration and extraction that causes surface disturbance within this area shall be prohibited.

#### Timber or Vegetation Management

**Standard:**

**S-1:** Forested lands within this management area shall not be part of the suitable timber base; however, trees may be removed to meet management area desired future conditions.

**Guidelines:**

**G-1:** Vegetation management and commercial timber harvesting may be permitted only when needed to maintain the character or purpose of the Ecological SA.

**G-2:** Timber salvage may be permitted only when there is a threat to public safety, resources, structures, or adjacent lands.

**G-3:** Hazard trees may be cut but not removed.

#### Openings

**Guideline:**

**G-1:** Permanent and temporary openings found in Ecological SAs should be the result of natural processes only; exceptions are permitted for maintenance of habitat for federally listed threatened or endangered species, and Regional Forester sensitive species, or if needed to maintain the character or purpose of the Ecological SA.

#### Special Forest Products

**Standard:**

**S-1:** Gathering of special forest products that require a permit or are for commercial sale shall be prohibited.

#### Range Management

**Standard:**

**S-1:** Domestic livestock grazing shall be prohibited.

#### Fisheries

**Guidelines:**

**G-1:** Restoration or habitat improvement activities may be permitted when they will not diminish the character or purpose for which the Ecological SA was designated.

**G-2:** Changes resulting from stream and pond restoration activities should be kept as naturally appearing as possible.

#### Pests, Diseases, and Non-Native Invasive Species

**Guidelines:**

**G-1:** Control actions against native insect, disease, plant, or animal pests, should only be used when the actions are necessary to protect adjacent resources or Ecological SA values.

**G-2:** Chemical and biological controls may be utilized when determined to be less ecologically disruptive than the target pest.

## Fire Management

### Guidelines:

**G-1:** Prescribed fire may be permitted.

**G-2:** Off-road use of tractors or tractor plows, retardants, constructed helispots, and engines should be minimized.

## Recreation

### Standard:

**S-1:** Recreational use shall complement the management objectives and desired future conditions of this MA.

### Guidelines:

**G-1:** Facilities should not be constructed unless they protect or contribute to Ecological SA purposes and values.

**G-2:** Existing facilities may be maintained, replaced, or reconstructed as long as they complement the values for which the Ecological SA was designated, are needed for public health and safety, are significant historic properties, or are needed for resource protection purposes.

**G-3:** On-site interpretation may be provided, where appropriate, to increase awareness of the botanical, ecological, geological, and zoological resources of the areas.

## Trails

### Standard:

**S-1:** New motorized trails shall be prohibited.

### Guidelines:

**G-1:** Maintenance and relocation of existing trails may occur only for resource protection and visitor safety.

**G-2:** Construction of new trails should not be permitted except for education and interpretation enhancements.

**G-3:** The use of horses, pack animals, dog teams, bicycles, and motorized vehicles may be permitted on existing trails as long as such uses do not interfere with Ecological SA purposes and values. Opportunities to relocate existing motorized trails outside of Ecological SAs should be considered.

**G-4:** Management direction for the North Country Trail (NCT) Management Area should apply to the NCT within or adjacent to Ecological SAs. Where direction differs, the more restrictive standards and guidelines apply.

## Transportation Analysis

### Guidelines:

**G-1:** New roads should not be constructed unless they protect or contribute to Ecological SA values.

**G-2:** Maintenance and relocation of existing trailheads may occur only for resource protection and visitor safety.

**G-3:** Construction of new trailheads should not be permitted except for education and interpretation enhancements.

**G-4:** National forest roads should be managed at the lowest traffic service and maintenance levels possible.

**G-5:** Decommissioned roads may be demolished, dismantled, obliterated, or disposed of to eliminate the deferred maintenance needs of the fixed asset. Portions of the asset may remain if they do not cause problems nor require maintenance.

## Recreation Special Uses

### Guidelines:

**G-1:** Permits for recreation events or facilities may be permitted as long as the activity supports MA purposes and values.

**G-2:** Outfitter/guide permits and permits for recreation events should not disperse use from high- to low-use areas.

**Non-Recreation Special Uses**

**Standards:**

**S-1:** Development of, and designated sites for, wind and communication towers shall be prohibited.

**S-2:** Development of new utility and pipeline corridors and associated facilities shall be prohibited unless along existing town or county roads and buried.

**Guidelines:**

**G-1:** Expansion of existing facilities and corridors for utility lines and pipelines should not be encouraged.

**G-2:** Reconstruction, upgrading, or maintenance of existing utility lines and facilities should be designed and implemented to be as compatible as possible with visual quality and management objectives and desired future conditions of the area.

**G-3:** Special use permits may be permitted for research or educational activities, or when mandated by law or agreement.



Perched Swamp White Oak Swamp

## **Chapter 4      Monitoring and Evaluation**

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## 4.1 MONITORING AND EVALUATION

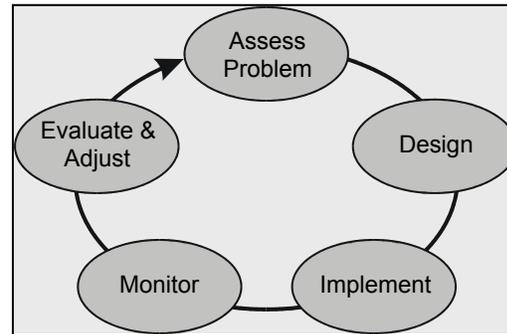
### 4.1.1 Introduction

Monitoring and evaluation are separate, sequential activities required by National Forest Management Act (NFMA) regulations. *Monitoring* is the systematic collection of information that reflects changes in actions, conditions, and resource relationships on the Forest. *Evaluation* is the analysis and interpretation of the information collected during monitoring. The monitoring and evaluation process enables the Forest to assess its effectiveness in moving toward stated management goals and desired conditions. In this sense, monitoring and evaluation constitute a quality control process for determining how well the 2006 Forest Plan is being implemented, and whether the Forest Plan needs revision or amendment.

Monitoring design and data collection will follow accepted national standards. Data will be catalogued into appropriate corporate databases such as Automated Lands Program (ALP), Natural Resource Inventory System (NRIS), or Geographic Information System (GIS).

### 4.1.2 Adaptive Management

Knowledge gained through monitoring, evaluation, and associated research provides the basis of adaptive management. The process creates a feedback mechanism (Figure 4.1-1) whereby Forest Service staff can compare observed results and trends with desired goals and outcomes, or examine or test the scientific appropriateness and validity of assumptions used in the development of the Forest Plan. Using results from monitoring and evaluation as a guide, the Forest Service can develop amendments to management direction as necessary. In this way, monitoring and evaluation help keep the 2006 Forest Plan dynamic, relevant, and responsive to changing issues.



**Figure 4.1-1: Monitoring, Evaluation, and Adaptive Management**

### 4.1.3 Components of Monitoring and Evaluation

An integrated and comprehensive monitoring and evaluation program includes four phases or components:

- Monitoring Plan
- Monitoring Implementation Guide
- Annual Monitoring Schedule
- Annual Monitoring and Evaluation Report

#### Monitoring Plan

The *Monitoring Plan*, which is contained in this chapter, provides the conceptual framework for specific monitoring and evaluation elements. It defines the over-arching, strategic questions that must be addressed by the Forest Service through monitoring, including broad timetables and schedules for analysis and reporting. The Monitoring Plan does not dictate exactly how these questions will be addressed. Those details are contained in the *Monitoring Implementation Guide*, which is described below. Direction in the Monitoring Plan cannot be changed without amending the 2006 Forest Plan.

### **Monitoring Implementation Guide**

The *Monitoring Implementation Guide* (Guide), sometimes referred to as the *Monitoring Guide* or the *Implementation Guide*, is a procedural document that is external to the Forest Plan. It describes the Forest's monitoring program in its entirety. The Guide is founded on guidance contained in this chapter of the Forest Plan, expanded into greater detail. The Guide contains specific monitoring elements, along with methods, protocols, and analytical procedures to be followed. The Monitoring Guide incorporates direction found in the Forest Service handbook, technical manuals, and other sources. The Guide is developed concurrently with, or immediately following issuance of the 2006 Forest Plan.

The Guide can be modified in response to policy changes, updated procedures, improved scientific protocols, or other changing conditions without amending the 2006 Forest Plan or issuing a NEPA decision. Program managers responsible for 2006 Forest Plan development and implementation are involved in developing and updating the Guide.

### **Annual Monitoring Schedule**

The *Annual Monitoring Schedule* outlines monitoring items, time frames, roles, and locations for the upcoming year. The annual monitoring schedule will be linked directly to both the 2006 Forest Plan and the Monitoring Implementation Guide. The Forest Service will prepare and revise this schedule annually as part of the annual work planning process. Some elements of the Guide will be performed or measured annually, whereas others will be scheduled with other time intervals that are determined necessary or appropriate for timely and effective evaluation. The Forest's annual work planning process also will establish or revise priorities for the monitoring schedule.

### **Annual Monitoring Evaluation Review**

The *Annual Monitoring Evaluation Review* provides a forum for the review of current-year findings. Comparison of results with those from previous years can identify trends and highlight where management is or is not achieving desired goals. It is during this annual review that Forest staff can determine if modifications to the 2006 Forest Plan or the Monitoring Guide are necessary. Priorities for monitoring also will be reviewed and revised (if necessary) each year by Forest program managers with responsibility for particular resource areas.

## **4.1.4 Monitoring Prioritization**

Within any agency or institution, necessary or desirable work demands often exceed available funding. Forest Plan monitoring is no exception. Consequently, a prioritization process for Chapter 4 and the Monitoring Guide items will be developed to ensure efficient use of limited time, money, and personnel. The following is a list of potential criteria that may be used in the prioritization process:

- Is monitoring of a particular question or resource a legal requirement?
- Is there a high degree of uncertainty associated with management assumptions? (Management Significance)
- Is there a high degree of disparity between existing and desired conditions?
- Are proposed management activities likely to affect resources of concern? (Ecological Significance)
- How do monitoring items fit into National and Regional priorities?
- How well do monitoring items fit with the public's comments and interests?
- What are the consequences of incomplete knowledge or uncertainty about resource conditions?
- Will monitoring respond to key issues?

Monitoring priorities will be established each year utilizing the above criteria, information gained during the past year, and budgets. The prioritization process will be explained in greater detail in the Monitoring Guide.

### 4.1.5 Monitoring Plan

Many individual elements of the monitoring program fall into three general areas of focus, depending on whether they examine the *implementation* or *effectiveness* of management actions, or the *validity* of the underlying assumptions on which management is founded (Table 4.1-1). These three areas of focus are interwoven with the monitoring program as a means of measuring the Forest’s success in achieving 2006 Forest Plan goals and objectives, and applying Forest Plan standards and guidelines.

Specific Requirements are those monitoring items required under NFMA (and the 1982 36 CFR 219 regulations, as permitted by 36 CFR 219.14(e) and (f) of the 2005 Planning rule). These items include:

- Sustainability Requirements
- Outputs, Services, and Costs
- Management Indicator Species (MIS)

General Requirements are not explicitly identified in the NFMA. They are, as the name implies, very general and broad in nature. These include:

- Attainment of objectives
- Application of standards and guidelines

<b>Monitoring Focus</b>	<b>Purpose</b>
Implementation	Is the overall direction in the 2006 Forest Plan being implemented? This includes goals and objectives, desired conditions, standards and guidelines, and management area direction. <b>Or</b> , “Did we do what we said we were going to do?”
Effectiveness	Are the 2006 Forest Plan standards and guidelines working? Are there significant changes in productivity of the land? <b>Or</b> “Did it work?”
Validation	Are the assumptions and predicted effects used to formulate the 2006 Forest Plan accurate? <b>Or</b> “Were we right in our initial understanding of the situation? Did we look at the right things?”



Goshawk with transmitter

#### Monitoring Tables

The elements for the Monitoring Plan are presented in a series of matrices, or tables. Separate tables cover the different specific and general monitoring requirements. Definitions and details for column headings and structure are contained in Table 4.1-2. The monitoring frequencies contained in these tables are objectives only. The approval of site-specific projects is not dependent on monitoring at the specified frequencies.

Basic monitoring requirements can be classified into two broad categories: *specific requirements* and *general requirements*.

### Specific Monitoring Requirements

Monitoring items that are specifically required are those that are mandatory components of every Forest Plan. The NFMA identifies several areas of resource concern for specific monitoring. Those monitoring items associated with sustainability of basic resources are listed in Table 4.1-3.

The Forest Plan must include a mechanism for monitoring its own performance in terms of *outputs, services, and costs*. This includes demonstrating whether projected outputs and services were provided and comparing the projected and actual costs of implementing the management prescriptions in the 2006 Forest Plan. Monitoring for outputs, services, and costs is listed in Table 4.1-4.

The 2006 Forest Plan also includes a strategy for conserving *Management Indicator Species* (MIS). This strategy consists of management direction including objectives for maintaining

or improving MIS habitat. Monitoring will focus on the relationship between habitats provided on NFS lands and MIS population trends, in cooperation with state fish and wildlife agencies, to the extent practicable. Population trends may be determined by a variety of methods considering best available science, including, but not limited to, data and analysis relating to habitat. The Forest Plan does not require population monitoring for MIS. MIS monitoring requirements are listed in Table 4.1-5. Additional monitoring items and protocols specific to MIS habitat and populations on the Finger Lakes National Forest will be provided in the Monitoring Guide.

The regulations do not require MIS monitoring on every project. While Forest-wide effects of projects on MIS populations and habitat must be periodically evaluated, approval of individual projects is not contingent on whether the Forest Service has met all the specific monitoring objectives delineated in the Forest Plan.

<b>Component</b>	<b>Definition</b>
Requirement, Management Direction, or Resource Area	The qualitative or quantitative parameter or element being assessed
Monitoring Question	Specific monitoring question(s) developed to ensure that monitoring and evaluation address information essential to measuring the Forest Plan. Questions relate directly to purposes and rationales for monitoring. There may be more than one question per requirement, direction, or resource area.
Monitoring Driver	The compelling reason for a particular monitoring element. Drivers include legal and regulatory requirements, goals, objectives, standards, and guidelines in the 2006 Forest Plan, court rulings, and validation of assumptions and predictions used to develop the Forest Plan and the monitoring and evaluation program.
Measurement Frequency	The scheduled frequency for collection of information.
Evaluation and Reporting Frequency	The scheduled frequency for analysis and reporting of monitoring results.
Precision and Reliability	Two classes of precision or reliability are appropriate for monitoring and evaluation at the 2006 Forest Plan scale: <ul style="list-style-type: none"> <li>• <i>Class A</i>: Information appropriate for modeling or quantitative analysis. Results have a high degree of repeatability, reliability, accuracy, and precision.</li> <li>• <i>Class B</i>: Information derived from project records, personal communications, ocular estimates, informal visitor surveys, and similar types of assessments. Reliability, accuracy, and precision are lower than Class A methods, but they still provide valuable information.</li> </ul>

**Table 4.1-3: Specific Monitoring Requirements - Sustainability**

Requirement	Monitoring questions	Monitoring driver	Frequency of		Precision/reliability
			Measurement	Evaluation	
Lands are adequately restocked	Are harvested lands adequately restocked according to 2006 Forest Plan goals?	NFMA requirement that lands are adequately restocked as specified in the 2006 Forest Plan	Annual	Annual	A
Lands not suited for timber production	To what extent is timber management occurring on lands suitable for such production?	NFMA requirement that lands identified as not suited for timber production are examined at least every 10 years to determine if they have become suited; and that, if determined suited, such lands are returned to timber production.	10 Years	10 Years	A
Changes in productivity of the land	Are the effects of Forest Service management, including prescriptions, resulting in significant changes to productivity of the land	NFMA requirement that documentation of the measured prescriptions and effects is prepared, including significant changes in productivity of the land.	1-5 Years	1-5 Years	A/B
Maximum size of temporary openings from even-aged management	Are maximum size limits for harvest areas appropriate, and should these limits be retained?	NFMA requirement that maximum size limits for harvest areas are evaluated to determine whether such size limits should continue	5 Years	5 Years	B
Increase of destructive insects and diseases	Are insect and disease levels compatible with objectives for maintaining healthy forest conditions?	NFMA requirement that destructive insects and disease organisms do not increase to potentially damaging levels following management activities	Annual	Annual	B
Effects of vehicle use off roads.	Is the use of vehicles off roads causing considerable adverse effects on resources or other forest visitors; how effective are forest management practices in managing vehicle use off roads?	Regulatory requirement (36 CFR 295) that use of vehicles off roads shall be planned, implemented and monitored in order to protect resources and visitors from considerable adverse effects, promote public safety, and minimize conflicts with other uses of the National Forest System lands	Annual	Annual	B

<b>Table 4.1-4: Specific Monitoring Requirements - Outputs, Services, and Costs</b>					
Requirement	Monitoring questions	Monitoring driver	Frequency of		Precision/reliability
			Measurement	Evaluation	
Comparison of actual and projected outputs and services	How close are actual outputs and services to projected values?	NFMA requirement for a quantitative estimate of performance comparing outputs and services with those projected by the 2006 Forest Plan.	Annual	Annual	A
Comparison of actual and projected costs	How close are actual costs to projected costs?	NFMA requirement for documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the 2006 Forest Plan.	Annual	Annual	A

<b>Table 4.1-5: Specific Monitoring Requirements – Management Indicator Species (MIS)</b>					
Requirement	Monitoring questions	Monitoring driver	Frequency of		Precision/reliability
			Measurement	Evaluation	
Relationship between habitats provided on NFS lands and MIS population trends	To what extent are forest management activities providing habitat for MIS?	Goal 2, which requires the Forest Service to maintain and restore quality, quantity, amount, and distribution of habitats to produce viable and sustainable populations of native and desirable non-native plants and animals	Annual	5 Years	A and B

Management Indicator Species (MIS) for the 2006 Forest Plan are listed in Appendix C of the FEIS.

### General Monitoring Requirements

The general requirements for Forest Plan monitoring pertain to the implementation and effectiveness of 2006 Forest Plan management direction. General monitoring provides a tool for periodic, broad-scale assessment of the effects and effectiveness of management practices. General monitoring requires evaluation, on a sample basis, of how well objectives are being met and how closely standards and guidelines are being applied. Whereas these elements in the Monitoring Plan represent a general assessment of management effects, the Guide provides monitoring questions that examine management effects in greater detail. The broad monitoring requirements that address implementation and effectiveness of the 2006 Forest Plan are contained in Table 4.1-6.

### Monitoring for Specific Issues, Topics, and Public Concerns

The preceding sections and tables describe the basic, general elements of the FLNF monitoring program, in accordance with the NFMA and related regulatory requirements. It is also appropriate to go beyond basic monitoring requirements to highlight specific issues or topics of concern in the 2006 Forest Plan or other high profile issues or concerns specific to the Forest. These elements, which link directly to goals in the Forest Plan (Chapter 2.1), apply specifically to individual resource areas. Monitoring elements for specific issues, topics, and public concerns are listed in Table 4.1-7.

**Table 4.1-6: General Monitoring Requirements – Broad-scale Treatment**

Management direction	Monitoring questions	Monitoring driver	Frequency of		Precision/reliability
			Measurement	Evaluation	
Attainment of Objectives	To what extent have Objectives been attained?	NFMA and objectives in Forest Plan	Annual	5 Years	A and B
Application of Standards and Guidelines	To what extent have Standards and Guidelines been applied?	NFMA and standards and guidelines in Forest Plan	Annual	5 Years	A and B
Effects of Management Practices	What are the effects of management practices prescribed by the Forest Plan?	NFMA and management area direction	Annual	5 Years	A and B

Management direction	Monitoring questions	Frequency of		Precision/ reliability
		Measurement	Evaluation	
Maintain and restore quality, amount, and distribution of habitats to produce viable and sustainable populations of native and desirable non-native plants and animals (Goal 2)	To what extent do Forest Service management activities contribute toward restoration and maintenance of habitat for native and desirable non-native species?	5 Years	5 Years	B
	To what extent are Forest Service management activities contributing toward population viability for native and desired non-native species?	Variable	5 Years	B
Maintain or restore the natural, ecological functions of the soil (Goal 3)	To what extent are Forest Service management and restoration activities maintaining or improving soil quality?	1-5 Years	5 Years	A and B
Maintain or restore aquatic, fisheries, riparian, vernal pool, and wetland habitats (Goal 4)	To what extent is Forest management affecting water quality, quantity, flow timing, and the physical features of aquatic, fisheries, riparian, vernal pool, and wetland habitats?	1-5 Years	5 Years	A and B
Provide a diverse range of high-quality, sustainable recreation opportunities that complement those provided off National Forest lands (Goal 11)	To what extent are desired ROS settings being provided?	5 Years	5 Years	A
	Is the quality of the Forest Service trail system and recreation facilities being improved through operation and maintenance?	Annual	5 Years	A
Provide a diverse range of information and education opportunities (Goal 12)	In what way is the Forest providing information and education opportunities that enhance the understanding of the FLNF?	Annual	5 Years	B

## 4.1.6 Evaluation

Data collected in accordance with the Monitoring Plan must be evaluated and interpreted before they provide useful information. As described above, evaluation of monitoring data addresses three basic questions:

- Implementation—Is the 2006 Forest Plan implemented properly?
- Effectiveness—Is the 2006 Forest Plan achieving the desired outcomes?
- Validation—Does the 2006 Forest Plan need to be changed?

Evaluation is conducted at intervals established in Tables 4.1-3 to 4.1-7. Reporting of the most recent evaluation results will be provided in conjunction with the annual monitoring report when possible. At a minimum, the evaluation must answer:

- Have there been significant changes in the condition of the land or the demands of the public?
- What are the effects of management actions prescribed by the Forest Plan?
- How well are goals, objectives, outputs, and services being met and how closely are standards and guidelines being applied?
- What are the effects of specific types of vehicles off roads on National Forest System lands?
- Are maximum size limits for harvest areas appropriate?

Results of the evaluation are used to identify changes that may be needed to improve the effectiveness of the Forest Plan.

## 4.1.7 Annual Monitoring and Evaluation Report

The annual monitoring and evaluation (M & E) report provides an opportunity to track progress towards the implementation of 2006 Forest Plan decisions and the effectiveness of specific management practices. The focus of

the evaluation is in providing short and long-term guidance to ongoing management. The M & E report should include components such as:

- Forest accomplishments toward desired conditions and outputs of goods and services.
- Forest Plan Amendment Status.
- Status of other agency/institution cooperative monitoring.
- Summary of available information on MIS or comparable species.
- Summary of large scale or significant projects or programs.
- Update of research needs
- Public participation/disclosure plan

The report is particularly useful in that it provides immediate feedback and guidance to Forest Service managers regarding ongoing management. The evaluation contained in the M&E report is tied directly to the Forest-specific questions identified for each monitoring element. The focus of the evaluation is on the individual 2006 Forest Plan-required monitoring elements specified in Tables 4.1-3 through 4.1-7. Other components of information management, including collection and storage of data, evaluation and interpretation of data, sharing of information and findings, and coordination with research, are discussed more fully in the Monitoring Implementation Guide.

## 4.1.8 Public Involvement

The Forest Service mission of “Caring for the Land and Serving the People” will not be realized without the public’s trust in the agency’s decision-making process. Even though agency decisions will not consistently please everyone, an open process for making decisions should foster public understanding of the rationale for individual decisions. The same principle applies to monitoring. Moreover, as the Forest Service is incorporating an adaptive strategy to management, frequent public feedback is necessary relative to prioritization, protocols, evaluation, and ultimately, better informed decisions for the monitoring program.

The Forest Service's strategy for involving the public and other agencies in planning, execution, and evaluation of monitoring will include partnerships with interest groups, volunteer groups, other federal, State, and local agencies, and universities. Information gathered through monitoring will be summarized in various reports (most notably the annual Monitoring and Evaluation Report). The Forest Service will encourage information trips for the public to review monitoring findings and methods and address subsequent management implications. The Forest Service also will employ other avenues of public involvement, such as news releases, the internet, brochures, and public reports.



Fishing Derby



## Chapter 5 Literature Cited

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5.1. Literature Cited in the Forest Plan

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## 5.1 LITERATURE CITED

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## 6.1 GLOSSARY

### Abbreviations and Acronyms

AA	Analysis Area	GIS	Geographic Information System
AASHTO	American Association of State Highway and Transportation Officials	GPS	Global Positioning System
ADA	Americans with Disabilities Act	I&E	Information and Education
AMS	Analysis of the Management Situation	IDT	Interdisciplinary Team
APE	Area of Potential Effects	LNT	Leave No Trace
ASQ	Allowable Sale Quantity	LRMP	Land and Resource Management Plan ("Forest Plan")
ATV	All-Terrain Vehicle	LTA	Land Type Association
AUM	Animal Unit Month	MA	Management Area
BA	Biological Assessment	MBF	One Thousand Board Feet
BE	Biological Evaluation	MCF	One Thousand Cubic Feet
BEIG	Built Environment Image Guide	M&E	Monitoring and Evaluation
BLM	Bureau of Land Management	MM	One Million
BMP	Best Management Practice	MMBF	One Million Board Feet
CCF	One Hundred Cubic Feet	MIS	Management Indicator Species
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	MUSY	Multiple-Use and Sustained-Yield Act
CEQ	Council on Environmental Quality	NCT	North Country National Scenic Trail
CFR	Code of Federal Regulations	NEPA	National Environmental Policy Act
CMAI	Culmination Mean Annual Increment	NF	National Forest
cRNA	Candidate Research Natural Area	NFMA	National Forest Management Act
CUA	Concentrated Use Area	NFS	National Forest System
DBH	Diameter at Breast Height	NNIS	Non-native Invasive Species
DEIS	Draft Environmental Impact Statement	NOI	Notice of Intent
DFC	Desired Future Condition	NRHP	National Register of Historic Places
EIS	Environmental Impact Statement	ORV	Off-Road Vehicle
ELT	Ecological Land Type	PAOT	People At One Time
EPA	Environmental Protection Agency	PILT	Payment in Lieu of Taxes
ESA	Endangered Species Act	PNV	Present Net Value
FEIS	Final Environmental Impact Statement	RAP	Roads Analysis Process
FLNF	Finger Lakes National Forest	RD	Ranger District
FOF	Future Old Forest	RFSS	Regional Forester Sensitive Species
FR	Forest Road	PPM	Parts Per Million
FS	Forest Service	RMO	Road Management Objective
FSH	Forest Service Handbook	RN	Roaded Natural
FSM	Forest Service Manual	RNA	Research Natural Area
FVS	Forest Vegetation Simulator	ROS	Recreation Opportunity Spectrum
FY	Fiscal Year	ROD	Record of Decision
GFA	General Forest Area	S&Gs	Standards and Guidelines
		SA	Special Area
		SHPO	State Historic Preservation Office(r)
		SMS	Scenery Management System
		SPM	Semi-primitive Motorized
		SPNM	Semi-primitive Non-motorized
		SUP	Special Use Permit
		SVE	Species Viability Evaluation

TES	Threatened, Endangered, and Sensitive
TEPS	Threatened, Endangered, Proposed, and Sensitive
TSI	Timber Stand Improvement
TDD	Telecommunication Device for the Deaf
TTY	Teletype
USDA	United States Department of Agriculture
USDI	United States Department of Interior
USFS	United States Forest Service
USFWS	USDI Fish and Wildlife Service
USNPS	USDI National Park Service
VIS	Visitor Information Services
VMS	Visual Management System
VQO	Visual Quality Objective
WFU	Wildland Fire Use
ZOI	Zone of Influence

## Terms

The following definitions and/or descriptions clarify terminology used in the 2006 Forest Plan and Final Environmental Impact Statement. References are cited within parentheses. Where a reference is cited, it served as the primary source of the definition/description for that particular term. Where no reference is cited, the definition/description was developed from a variety of sources. The descriptions and definitions are in alphabetical order.

### [A]

**ABIOTIC** – Non-living. Climate is an abiotic component of ecosystems.

**ACQUISITION** – Obtaining land through purchase, exchange, and donation.

**ADAPTIVE MANAGEMENT** – A type of natural resource management that implies decisions are made as part of an on-going process. Monitoring the results of actions will provide a flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information.

**ADMINISTRATIVE USE** – Use of National Forest System land, interests in land, or other resources, by the Forest Service, or an individual or entity authorized by the Forest Service, for purposes incidental to the protection, administration, or management of the National Forest.

**AERIAL LOGGING** – Removing logs from a timber harvest area by helicopter. Fewer roads are required, so the impact to an area is minimized.

**AFFECTED ENVIRONMENT** – The natural environment that exists at the time an area is being analyzed.

**AGE CLASS** – An age grouping of trees according to an interval of years, usually 20 years. A single age class would have trees that are within 20 years of the same age, such as 1-20 years or 21-40 years.

**AIRSHED** – A geographic area that shares the same air.

**ALL-TERRAIN VEHICLE (ATV)** – Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels on three or more low-pressure tires with a seat designed to be straddled by the operator. Low-pressure tires are 6 inches or more in width and designed for use on wheel rim diameters of 12 inches or less, utilizing an operating pressure of 10 pounds per square inch (psi) or less as recommended by the vehicle manufacturer.

**ALLOTMENT (range allotment)** – The area designated for use by a prescribed number of livestock for a prescribed period of time. Though an entire Ranger District may be divided into allotments, all land will not be grazed, because other uses, such as recreation or tree plantings, may be more important at a given time.

**ALLOWABLE SALE QUANTITY (ASQ)** – The amount of timber that may be sold within a certain time period from an area of suitable land. The suitability of the land and the time period are specified in the Forest Plan.

**ALLOWABLE USE** – An estimate of proper range use. Forty to fifty percent of the annual growth is often used as a rule of thumb on ranges in good to excellent condition. It can also mean the amount of forage planned to be used to accelerate range rehabilitation.

**ALTERNATIVE** – Alternatives provide options for meeting the purpose and need of a Plan revision process by emphasizing reasonable ways to resolve management issues as though each alternative were a separate Forest Plan. While all alternatives provide a wide range of multiple-uses, goods and services, they respond to the issues needing change in different ways and describe a different desired future condition.

**AMERICANS WITH DISABILITIES ACT (ADA)** – Law requiring that persons with disabilities not be denied access to the programs provided to all other people by State and local governments, public accommodations, public transportation, and commercial establishments, solely because of their disability. The ADA does not apply to the programs and facilities of federal agencies with the exception of designated wilderness (ADA Title V Section 507(c)).

**ANADROMOUS FISH** – Species of fish that mature in the sea and migrate into streams to spawn.

**ANALYSIS OF THE MANAGEMENT SITUATION (AMS)** – Using Resource Assessments and the existing Forest Plan as background, the AMS determines the ability of the area covered by the Forest Plan to supply goods and services in response to societal demands. The AMS speculates on the expected results or potential problems should the existing Forest Plan direction continue; discusses whether or not these problems need to be resolved and determines the potential to resolve them in a Plan Revision. If the Plan revision can resolve potential problems, the AMS proposes a range of values within which a possible solution may occur.

**ANIMAL UNIT MONTH (AUM)** – The quantity of forage required by one mature cow and her calf (or the equivalent, in sheep or horses, for instance) for one month.

**ANNUAL MAINTENANCE** – Work performed to maintain serviceability or repair failures during the year in which they occur. Includes preventive and/or cyclic maintenance performed in the year in which it is scheduled to occur. Unscheduled or catastrophic failures of components or assets may need to be repaired as a part of annual maintenance.

**APPROPRIATE MANAGEMENT RESPONSE** – Specific actions taken in response to a wildland fire to implement protection and fire use objectives (Zimmerman and Bunnell 1998).

**AQUIFER** – A body of rock that is saturated with water or transmits water. When people drill wells, they tap water contained within an aquifer.

**AREA OF POTENTIAL EFFECT (APE)** – The spatial extent of a proposed project's possible impact/effect, including non-contiguous areas like borrow pits, log landings, or equipment storage areas, within which significant Heritage Resources should be identified and protected. This term was established in the regulations pertaining to the National Historic Preservation Act.

**ASPECT** – The direction a slope faces. A hillside facing east has an eastern aspect.

**ASSESSMENT (Resource Assessment)** – A compilation of background material on the status of a particular resource area, on a local, regional, or national scale. A Resource Assessment describes the present condition of a particular resource and speculates on the future condition of the resource based on current and expected trends. Assessments address management problems, new policy and direction, monitoring results, and the existing condition of the resource on the forest.

**[B]**

**BACKGROUND** – A term used in the management of visual resources or scenery. It refers to the visible terrain located four miles to infinity from the viewer.

**BASAL AREA** – The cross-section area of a tree stem including bark, in square feet, and commonly measured at breast height (4.5 feet above ground). This parameter is often used in silvicultural equations and/or models for determining growth and yield of forest stands.

**BENCHMARKS** – (benefits, costs, and values) Benchmarks define the maximum and minimum levels of output. These limits take into account land capability, projected resource demands, and cost efficiency. The benchmark process demonstrates the Forests' ability to respond to timber harvesting issues and management concerns represented in the problem statements.

**BENEFIT** – Inclusive term used to quantify the results of a proposed activity, project, or program; expressed in monetary or non-monetary terms.

**BEST MANAGEMENT PRACTICES (BMPs)** – A set of measures implemented during the course of logging or livestock grazing, to prevent or minimize discharges, such as mud, petroleum products, and woody debris, from getting into streams, ponds, lakes, and rivers. They are also meant to maintain natural water temperatures by requiring that trees be left along streams and other water bodies (New York State Department of Conservation 2004).

**BIOLOGICAL CONTROL** – The use of natural means to control unwanted pests. Examples include introduced or naturally occurring predators such as wasps or hormones that inhibit the reproduction of pests. Biological controls can sometimes be alternatives to mechanical or chemical means.

**BIOLOGICAL DIVERSITY (biodiversity)** – The variety of life forms and processes within an area. Included in the consideration of diversity are genetic variation, number and distribution of species, and the ways in which the variety of biologic communities interact and function.

**BIOLOGICAL EVALUATION (Threatened, Endangered, Proposed, and Regional Forester Sensitive Species)** – The use of a variety of tools, including review of existing literature and data, field survey, and data gathering and analysis, to determine the presence of, and effects of activities on, threatened, endangered, proposed, and sensitive species (FSM 2670).

**BIOMASS** – The total weight of all living organisms in a biological community.

**BIOME** – The complex of living communities maintained by the climate of a region and characterized by a distinctive type of vegetation. Examples of biomes in North America include the tundra, desert, prairie, and the western coniferous forest.

**BIOTA** – The plant and animal life of a particular region.

**BIOTIC** – Living; for example, green plants and soil microorganisms are biotic components of ecosystems.

**BOARD FOOT** – A measurement term for lumber or timber. It is the amount of wood contained in an unfinished board 1 inch thick, 12 inches long, and 12 inches wide. Often used variations are MBF (thousand board feet) and MMBF (million board feet).

**BROADCAST BURN** – A prescribed fire that burns a designated area. These controlled fires can reduce wildfire hazards, improve forage for wildlife and livestock, or encourage successful regeneration of trees.

**BROWSE** – Twigs, leaves, and young shoots of trees and shrubs that animals eat. Browse is often used to refer to the shrubs eaten by big game, such as deer.

**BUFFER** – A land area that is designated to block or absorb unwanted impacts to the area beyond the buffer. Buffer strips along a trail could block views that may be undesirable. Buffers may be set aside next to wildlife habitat to reduce abrupt change to the habitat.

## [C]

**CANDIDATE RESEARCH NATURAL AREA (cRNA)** – An area that has high potential for designation as a research natural area, and is being recommended for protection until it has undergone formal evaluation and it has been decided whether to designate it as an RNA (this authority rests with the Regional Forester, with concurrence of the Research Station Director) or to manage the area under another management area prescription.

**CANOPY** – The part of any stand of trees represented by the tree crowns. It usually refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multi-storied forest.

**CAPABILITY** – The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils, and geology, as well as the application of management practices, such as silviculture or protection from fire, insects, and disease.

**CAPITAL IMPROVEMENT** – The construction, installation, or assembly of a new fixed asset, or the significant alteration, expansion, or extension of an existing fixed asset, to accommodate a change of purpose.

**CAPITAL INVESTMENT** – An input that increases the stock of natural or manmade resources (assets) needed to maintain or increase the flow of outputs in the future. Benefits resulting from capital investments are normally recouped in excess of one year.

**CAVITY** – A hole in a tree often used by wildlife species, usually birds, for nesting, roosting, and reproduction.

**CHEMICAL CONTROL** – The use of pesticides and herbicides to control pests and undesirable plant species.

**CLEANING** – Form of release cutting that removes trees the same age as the young stand (FSM 2470).

**CLEARCUT** – Even-aged cutting method in which the entire standing crop of trees from an area is removed at one time (FSM 2470).

**CLIMAX** – The culminating stage in plant succession for a given site. Climax vegetation is stable, self-maintaining, and self-reproducing.

**COARSE FILTER MANAGEMENT** – Land management that attempts to address the needs of a majority of native species through management of natural landscapes and communities (see Fine Filter Management).

**COHORT** – A population of plants or animals having approximately the same age.

**COMMERCIAL FOREST LAND** – Forest land that has not been withdrawn by the Congress, the Secretary of Agriculture, or the Chief of the Forest Service, and is producing, or is capable of producing, crops of industrial wood without irreversible damage to soils, productivity, or watershed conditions, and with reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

**COMMERCIAL OPERATIONS (SALES)** – Using timber sales for cost effective vegetation management on lands that are not part of the timber base.

**COMMERCIAL THINNING** – Thinning operation where the material cut can be sold on the market as opposed to a pre-commercial thinning.

**COMMERCIAL USE (SPECIAL USES)** – Any use or activity on National Forest System land where (a) an entry or participation fee is charged, or (b) the primary purpose is the sale of a good or service, and in either case, regardless of whether the use or activity is intended to produce a profit (36 CFR 251.51).

**COMMON VARIETY MINERALS** – Earth construction materials including rock or stone, sand and gravel, pumice aggregate, pumicite, cinders, and soil materials suitable for compacted earth structures.

**COMMUNITY (Natural Community)** – An interacting assemblage of organisms, their physical environment, and the natural processes that affect them (Thompson and Sorenson 2000).

**COMMUNICATION SITE** – A developed area with a structure sufficient for placement of antennas for the transmission or reception of electronic intelligence at the proper height; a building or cabinet, a power line or onsite power supply, and an access route. Most are served by telephone or fiber optic lines.

**COMPOSITION** – The types of organisms and environmental features present in a particular area.

**CONCENTRATED USE AREA** – A relatively undeveloped area, outside of developed recreation sites, where management is invested because recreation use there leaves evident impacts.

**CONCERN LEVEL** – Similar to Viewer Sensitivity in the Visual Management System. Concern levels are a measure of the degree of public importance placed on landscapes viewed from travelways and use areas. Concern levels are divided into three categories: levels 1 (high), 2 (moderate), and 3 (low).

**CONCOMITANT** – Events that are coincident in time and so clearly related that one probably is a direct result of the other.

**CONGRESSIONALLY DESIGNATED WILDERNESS** – see Wilderness

**CONIFER** – A tree that produces cones, such as a pine, spruce, or fir tree.

**CONNECTIVITY (of habitats)** – A condition in which the spatial arrangement of land cover types allows organisms and ecological processes (such as disturbance) to move across the landscape. Connectivity is the opposite of fragmentation.

**CONSTRAINT** – A qualification of the minimum or maximum amount of an output or cost that could be produced or incurred in a given time period.

**CONSUMPTIVE USE** – Resource use that reduces the supply, such as logging and mining.

**CONTOUR** – A line drawn on a map connecting points of the same elevation.

**CONVERTIBLE PRODUCTS** – Timber products that can be measured in cubic feet of solid wood (FSH 2409.18, sec. 87).

**CORRIDOR** – A landscape feature that allows animal movement between two patches of habitat or between habitat and geographically discrete resources.

**COVER** – Any feature that conceals wildlife or fish. Cover may be dead or live vegetation, boulders, or undercut streambanks. Animals use cover to escape from predators, rest, and/or feed.

**COVER TYPE (forest cover type)** – A descriptive classification of forestland based on existing tree species in a given land area (FSM 2470).

**CRITICAL HABITAT** – Areas designated for the survival and recovery of species listed as threatened or endangered under the federal Endangered Species Act.

**CROWN HEIGHT** – The distance from the ground to the base of the crown of a tree.

**CULMINATION MEAN ANNUAL INCREMENT (CMAI)** – The point in the growth of a tree where mean annual increment (total tree volume at any point in time divided by total age) is at a maximum. This “culmination point” for mean annual growth is regarded as the ideal harvesting or rotation age in terms of most efficient volume production.

**CULTURAL LANDSCAPE** – Human-altered landscapes, especially those slowly evolving landscapes with scenic vegetation patterns or scenic structures. Addition of these elements creates a visually pleasing complement to the natural character of a landscape.

**CULTURAL RESOURCE** – see Heritage Resource

## [D]

**DECISION CRITERIA** – The rules and standards used to evaluate alternatives to a proposed action on National Forest System land. Decision criteria are designed to help a decision maker identify a preferred choice from the array of alternatives.

**DECOMMISSION** – Demolition, dismantling, removal, obliteration, and/or disposal of a deteriorated or otherwise unneeded asset or component, including necessary cleanup work. This action eliminates the deferred maintenance needs for the fixed asset. Portions of an asset or component may remain if they do not cause problems or require maintenance.

**DEFERRED MAINTENANCE** – Maintenance that was not performed when it should have been or when it was scheduled and which, therefore, was put off or delayed for a future period. When allowed to accumulate without limits or consideration of useful life, deferred maintenance leads to deterioration of performance, increased costs to repair, and decrease in asset value. Deferred maintenance needs may be categorized as critical or non-critical at any point in time. Continued deferral of non-critical maintenance will normally result in an

increase in critical deferred maintenance.

**DELAYED SHELTERWOOD** – Even-aged cutting method in which most of a stand of trees is removed through a cutting designed to regenerate a new crop with seed and protection provided by a portion of the stand. No removal cut is implemented. The remaining portion of the stand is retained at least for 20 percent into the rotation of the new stand, but usually 40 to 60 years.

**DEME** – A locally interbreeding population of organisms.

**DEN TREE** – A live or dead tree, at least 10” dbh, containing a natural cavity in the main stem or with exfoliating bark used by wildlife for nesting, brood rearing, hibernating, roosting, daily or seasonal shelter and escape.

**DEPARTURE** – A schedule which deviates from the principle of non-declining flow by exhibiting a planned decrease in the timber sale and harvest schedule at any time in the future. A departure can be characterized as a temporary increase, usually in the beginning decade(s) of a planning period, over the base sale schedule that would otherwise be established, without impairing the future of a Forest’s long-term sustained-yield capacity.

**DESIGNATED COMMUNICATION SITE (SPECIAL USES)** – An area of National Forest System land designated through the forest planning process. It may be limited to a single communication facility but most often includes more than one. A designated communication site provides the leaseholder more flexibility to manage other communication facilities on the site.

**DESIRED FUTURE CONDITION** – Land or resource conditions that are expected to result if goals and objectives are fully achieved.

**DEVELOPED RECREATION** – Recreation activities that are dependent on the presence of constructed features or facilities. Examples include camping in a campground or using a picnic area.

**DEVELOPED RECREATION SITE** – An area with a concentration of constructed features or facilities managed primarily for the enhancement of recreation activities. Examples include campgrounds, picnic areas, interpretive sites, and trailheads.

**DIAMETER AT BREAST HEIGHT (dbh)** – The diameter of a tree 4 and 1/2 feet above the ground on the uphill side of the tree.

**DISPERSED RECREATION** – Recreation that does not occur in a developed recreation site, such as hunting, backpacking, and scenic driving.

**DISTURBANCE** – any relatively discrete event in space and time that disrupts ecosystem, community, or population structure and changes resources, substrate, or the physical environment (White and Pickett 1985).

**DIVERSITY** – The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

**DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)** – The draft version of the Environmental Impact Statement that is released to the public and other agencies for review and comment.

## [E]

**EARLY SUCCESSIONAL FOREST** – The biotic (or living) community that develops immediately following the removal or destruction of forest vegetation in an area. For instance, grasses may be the first plants to grow in an area that was burned.

**EARLY SUCCESSIONAL SPECIES** – Those plant or animal species characteristic of early successional forest stages.

**EASEMENT** – The right of use over the property of another owner.

**ECOLOGICAL APPROACH** – An approach to natural resource management that considers the relationships among all organisms, including humans, and their environment.

**ECOLOGICAL LAND TYPE (ELT)** – An area of land hundreds to low thousands of acres in size, with a well-known succession of forest species on unique soil materials. Ecological Land Type classification is based on geomorphic history, nature of soil substrata, and potential natural vegetation.

**ECOLOGICAL TYPE** - A category of land with a distinctive combination of landscape elements, differing from other types in the kind and amount of vegetation it can produce and its ability to respond to management actions and natural disturbances (Winthers et al. 2005, p. 8). Ecological types occur across a variety of scales and are often organized into hierarchical land classification systems.

**ECOLOGY** – The interrelationships of living things to one another and to their environment, or the study of these interrelationships.

**ECOREGION** – An area over which the climate is sufficiently uniform to permit development of similar ecosystems on sites that have similar properties. Ecoregions contain many landscapes with different spatial patterns of ecosystems.

**ECOSYSTEM** – A dynamic arrangement of living organisms interacting with each other and their non-living environment. Living organisms include plants and animals. The non-living environment includes soils, landforms, weather, and disturbances.

**ECOSYSTEM MANAGEMENT** – An approach to the management of natural resources that strives to maintain or restore the sustainability of ecosystems and to provide present and future generations a continuous flow of multiple benefits in a manner that is harmonious with ecosystem sustainability.

**ECOSYSTEM RESTORATION** – The process of reestablishing, to the extent possible, the structure, function, and composition of ecosystems.

**ECOTONE** – The transition zone between two biotic communities, such as between a wetland and adjacent forest, or between a mixed hardwood forest type and a white pine forest type.

**EDGE** – The margin where two or more vegetation patches meet such as a permanent or temporary opening, a grassland opening next to a mature forest stand, or a northern hardwood stand next to an aspen stand.

**ELEMENT (of ecosystems)** – An identifiable component, process, or condition of an ecosystem.

**ELIGIBILITY** – Qualification of a river for possible inclusion in the national Wild and Scenic River system through determination that it is free-flowing and with its adjacent land area possesses at least one outstandingly remarkable value.

**ENDANGERED SPECIES** – A plant or animal that is in danger of extinction throughout all, or a significant portion, of its range. Endangered species are identified by the Secretary of the Interior in accordance with the Endangered Species Act of 1973.

**ENDEMIC PLANT/ORGANISM** – A plant or animal that occurs naturally in a certain region and whose distribution is relatively limited geographically.

**ENVIRONMENTAL ANALYSIS** – An analysis of alternative actions and their predictable long and short-term environmental effects. Environmental analyses include physical, biological, social, and economic factors.

**ENVIRONMENTAL ASSESSMENT** – A brief version of an Environmental Impact Statement.

**ENVIRONMENTAL IMPACT STATEMENT (EIS)** – A statement of environmental effects of a proposed action and alternatives to it. The EIS is released to other agencies and the public for comment and review.

**EPHEMERAL STREAM** – A stream, or portion of a stream, with a recognizable streambed, typically consisting of stones, cobbles, or bedrock, that flows each year only in direct response to precipitation and receives little or no water from springs and no long-continued supply from melting snow or other sources. Its channel is at all times above the water table.

**ERICACEOUS** – Pertaining to or like plants of the heath family, which are low growing woody plants with small evergreen leaves and small, bell-shaped, pink or purple flowers, common in nutrient-poor environments like bogs. Examples include heather or cranberry.

**EROSION** – The wearing away of the land surface by wind, water, ice, or other geological agents.

**EVALUATION PLANTATION** – A planting of genetically superior trees to compare the performance of trees or families of trees, and to provide a source for future reforestation efforts.

**EVEN-AGED SYSTEM** – Silvicultural system that produces stands in which all trees are about the same age; that is, the difference in age between trees forming the main crown canopy level will usually not exceed 20 percent of the rotation length (FSM 2470).

**EXPLORATION (MINERALS)** – Establishing the location, size, grade, or reserves of a mineral or energy resource by gathering direct evidence of the resource. Direct data gathering techniques may include drilling holes or digging pits to sample or test a known suspected zone of interest.

**EXTANT** – Still in existence; not extinct, destroyed, or lost.

**EXTIRPATE** – Eradicate, or cause the extinction of, a plant or animal species on a local or regional scale. For example, eastern cougars and gray wolves were effectively extirpated from New York State by the late 1800s because of loss of habitat and directed killing for predator control.

**EXTIRPATION** – Eradication or extinction of a plant or animal species on a local or regional scale.

**EXTRACTION** – The process of mining or removing mineral deposits, oil, or gas from the earth.

## **[F]**

**FAUNA** – The animal life of an area.

**FEATHERING** – Partial cutting of trees along an edge to create a transition in heights between areas and/or a transition in stand density between stands of different densities (FSH 559).

**FELLING** – Cutting down trees.

**FINAL CUT** – The removal of the last seed bearers or shelter trees after regeneration of new trees has been established in a stand being managed under the shelterwood system of silviculture.

**FINE FILTER MANAGEMENT** – Management that focuses on the welfare of a single species, or only a few species, rather than the broader habitat or ecosystem (see Coarse Filter Management).

**FIRE CYCLE** – The average time between fires in a given area.

**FIRE MANAGEMENT PLAN** – A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational plans such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans (Zimmerman and Bunnell 1998).

**FIRE REGIME** – The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, and seasonality.

**FIRE USE** – The combination of wildland fire and prescribed fire application used to meet resource objectives (Zimmerman and Bunnell 1998).

**FISHERIES HABITAT** – Streams, lakes, and reservoirs that support, or have the potential to support, fish.

**FIXED ASSET** – A constructed feature such as a building, dam, bridge, road, campground, trail, or other item of infrastructure. Real property improvements. Facilities in the general sense. These are things for which we have a responsibility.

**FLOOD PLAIN** – A lowland adjoining a watercourse. At a minimum, the area is subject to a one percent or greater chance of flooding in a given year.

**FLORA** – The plant life of an area.

**FORAGE** – All browse and non-woody plants that are eaten by wildlife and livestock.

**FORB** – A broadleaf plant that has little or no woody material in it.

**FOREGROUND** – A term used in management of visual resources or scenery. The part of a scene or landscape that is nearest to the viewer, generally found from the observer up to one-half mile away.

**FOREST** – When used with a capital “F,” this term refers to the Finger Lakes National Forest.

**FOREST COVER TYPE** – see Cover Type

**FOREST HEALTH** – A measure of the robustness of forest ecosystems. Aspects of forest health include biological diversity; soil, air, and water productivity; natural disturbances; and the capacity of the forest to provide a sustainable flow of goods and services for people.

**FOREST MATRIX** – The least fragmented, most continuous pattern element of a landscape; the vegetation type that is most continuous over a landscape.

**FOREST PLAN** – see Land and Resource Management Plan

**FOREST PLAN REVISION** – A formal modification of an existing Forest Plan used to address changes in the natural, social, and economic environment. The Plan revision takes into account new information and scientific knowledge about resources on and off National Forests that shed new light on the assumptions of the existing Plan, and make the predicted impacts of the existing Plan less accurate and/or acceptable.

**FOREST ROADS OR TRAILS** – A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

**FOREST SUPERVISOR** – The official responsible for administering National Forest System lands on an administrative unit, usually one or more National Forests. The Forest Supervisor reports to the Regional Forester.

**FOREST VEGETATION SIMULATION (FVS)** – A national computer model used for growth and yield projections.

**FRAGMENTATION** – The physical division of contiguous areas into progressively smaller patches of increasing degrees of isolation from each other.

**FROST HEAVE** – A land surface that is pushed up by the accumulation of ice in the underlying soil.

**FUELS** – Plants and woody vegetation, both living and dead, that are capable of burning.

**FUELS MANAGEMENT** – The treatment of fuels that would otherwise interfere with effective fire management or control. For instance, prescribed fire can reduce the amount of fuels that accumulate on the forest floor before the fuels become so heavy that a natural wildfire in the area would be explosive and impossible to control.

**FUELWOOD** – Wood cut into short lengths for burning.

**FUNCTION** – All the processes within an ecosystem through which the elements interact, such as succession, the food chain, fire, weather, and the hydrologic cycle.

## [G]

**GAME SPECIES** – Any species of wildlife or fish that is harvested according to prescribed limits and seasons.

**GENERAL FOREST AREA** – National Forest System lands outside of Developed Recreation Sites and trails, and excluding designated wilderness, that typically contain a wide spectrum of recreation settings and opportunities.

**GEOCACHING** – A sport where individuals or organizations set up caches, using Global Positioning System (GPS) coordinates, and share the locations of these caches on the Internet. GPS users can then use the location coordinates to find the caches.

**GEOMORPHIC PROCESSES** – Processes that change the form of the earth, such as volcanic activity, running water, and glacial action.

**GEOMORPHOLOGY** – The science that deals with the relief features of the earth's surface.

**GEOGRAPHIC INFORMATION SYSTEMS (GIS)** – GIS is both a database designed to handle geographic data as well as a set of computer operations that can be used to analyze the data.

**GLOBAL POSITIONING SYSTEM (GPS)** – a navigational system using satellite signals to fix the location of a receiver on or above the earth's surface.

**GOAL** – A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principle basis from which objectives are developed. Goals serve as a blueprint for the Forest Plan and lay the groundwork for the rest of the Plan.

**GOODS AND SERVICES** – The various outputs, including on-site uses, produced by forest and rangeland resources (36 CFR 219.3).

**GRASSLAND FOR GRAZING** – Areas where grassland forage is primarily managed for livestock.

**GRASSLAND FOR WILDLIFE** – Areas where grasslands are primarily managed for wildlife habitat and no livestock grazing occurs.

**GROUND FIRE** – A fire burning along the forest floor that does not affect trees with thick bark or high crowns.

**GROUND WATER** – The supply of fresh water under the earth's surface in aquifers and soils.

**GROUP SELECTION CUTTING** – Uneven-aged cutting method in which small groups of trees, usually no more than one acre in size, are removed to meet a predetermined goal of size distribution and species in the remaining stand.

**GUIDELINE** – A guideline is a preferred or advisable course of action that promotes the achievement of Forest Plan goals and objectives. A project-level analysis and a signed decision (by the responsible official) are required in order to deviate from an established guideline.

**GUIDING** – Providing services or assistance (such as supervision, protection, education, training, packing, touring, subsistence, interpretation, or other assistance) to individuals or groups, in their pursuit of a natural resource-based outdoor activity, for pecuniary remuneration or other gain. The term "guide" includes the holder's employees, agents, and instructors.

## [H]

**HABITAT** – The area where a plant or animal lives and grows under natural conditions.

**HABITAT CAPABILITY** – The ability of a land area or plant community to support a given plant or animal species.

**HABITAT DIVERSITY** – The number of different types of plant or animal species habitat within a given area.

**HABITAT DIVERSITY INDEX** – A measure of improvement in habitat diversity.

**HARD SNAG** – Snags composed essentially of sound wood on the outside.

**HAZARDOUS FUELS** – Naturally occurring vegetation, both live and dead, that given a wildfire occurrence would present a higher than normal resistance to control. Hazardous fuels may be measured by tons per acre, fuel arrangement, and/or continuity or burning characteristics.

**HEALTHY FOREST** – A condition wherein a forest has the capacity, across the landscape, for renewal, for recovery from a wide range of disturbances, and for retention of ecological resiliency, while meeting current and future needs of people for desired levels of values, uses, products and services.

**HERITAGE RESOURCE** – Historic landscapes, archaeological sites, buildings, structures, features, artifacts, Native American Traditional Cultural properties, and/or related clusters of these (referred to as “districts”). They are deemed “significant” if they meet, or may meet, the criteria for eligibility to the National and State Registers of Historic Places (NR). Any Heritage Resource that is considered significant (NR-eligible) may be referred to as a “historic property.”

**HIBERNACULA** – Plural form of hibernaculum.

**HIBERNACULUM** – A shelter, such as a cave or abandoned mine, occupied during the winter by a hibernating animal, such as an Indiana bat. A known Indiana bat hibernaculum is one in which Indiana bats have been found hibernating during any winter since 2000/2001.

**HIGH RISK STAND** – Stand that will not survive another ten years or will have a net loss of timber volume in the next ten years.

**HISTORIC LANDSCAPE** – A geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general types of historic landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

**HORIZONTAL DIVERSITY** – The distribution and abundance of different plant and animal communities, or different stages of plant succession, across an area of land; the greater the numbers of communities or successional stages in a given area, the higher the degree of horizontal diversity.

**HYDROLOGIC CYCLE** – Also called the water cycle, this is the process of water evaporating, condensing, falling to the ground as precipitation, and returning to the ocean as run-off.

**HYDROLOGY** – The study of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

**[I]**

**IGNEOUS ROCK** – Rocks formed when high temperature, molten mineral matter cools and solidifies.

**IMPLAN®** – An economic impact assessment modeling system. IMPLAN allows the user to easily build economic models to estimate the impacts of economic changes in their states, counties, or communities.

**IMPOUNDMENTS** – Structures used to collect and confine water, as if in a pond.

**IMPROVED ROAD** – An improved road is any constructed or existing feature or facility created on the land for the purpose of travel by passenger vehicles (four wheeled, two wheel drive) which are legally owned and operated on Forest roads and highways, and vehicles are greater than 50 inches in width. Said facility will have an area for vehicles to travel on and will incorporate some manner for disposal of surface runoff.

**IMPROVEMENT CUTTING** – Intermediate cutting made in stands that are past the sapling stage, for the purpose of improving the composition and quality by removing trees of undesirable species, form, or condition, from the main canopy (FSM 2470).

**INCIDENTAL TAKE** – Harassment, harm, or other injury of an endangered or threatened species that occurs as a secondary result from an otherwise lawful activity. This is in contrast to “directed take,” in which the harassment, harm, or other injury is the specific purpose of the activity.

**INDICATOR SPECIES** – A plant or animal species related to a particular kind of environment. Its presence indicates that specific habitat conditions are also present.

**INDIGENOUS (species)** – Any plant or animal species native to a given land or water area by natural occurrence.

**INDIVIDUAL TREE SELECTION** – Uneven-aged cutting method in which selected trees from specified size or age classes are removed over the entire stand area to meet a predetermined goal of size or age distribution and species composition in the remaining stand (FSM 2470).

**INFRA** – An integrated data management tool where Forest managers enter, manage, and report accurate information and associated financial data in an inventory of constructed features on the land (such as buildings, dams, bridges, water systems, roads, trails, developed recreation sites, range improvements, administrative sites, heritage sites, general forest areas, and wilderness). The database also includes information on permits and contracts that alter Forest land.

**INSTREAM FLOW** – The quantity of water necessary to meet seasonal stream flow requirements to accomplish the purposes of the national forests, including, but not limited to fisheries, visual quality, and recreational opportunities.

**INTEGRATED PEST MANAGEMENT (IPM)** – A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed. The information considered in selecting appropriate strategies includes the impact of the unregulated pest population on various resources values, alternative regulatory tactics and strategies, and benefit/cost estimates for these alternative strategies. Regulatory strategies are based on sound silvicultural practices and ecology of the pest-host system and may consist of a combination of tactics such as timber stand improvement plus selective use of pesticides. A basic principle in the choice of strategy is that it be ecologically compatible or acceptable.

**INTERDISCIPLINARY TEAM** – A team of individuals with skills from different disciplines that focuses on the same task or project.

**INTERIOR FOREST** – An area of late successional or old growth forest that is large enough, and of an appropriate shape, to provide conditions that minimize predation, parasitism, and microclimate fluctuations associated with forest edges. These interior forest conditions provide habitat for a diversity of wildlife and plant species.

**INTERMEDIATE CUT** – The removal of trees from a stand sometime between the beginning or formation of the stand and the regeneration cut. Types of intermediate cuts include thinning, release, and improvement cuttings (FSM 2470).

**INTERMITTENT STREAM** – A stream that flows: 1) part of the time, such as after a rainstorm, during wet weather, or during part of the year; 2) only at certain times, when it receives water from springs (spring fed) or from some surface source (surface fed), such as melting snow in mountainous areas.

**INTERPRETATION** – Communication and education that forges emotional and intellectual connections between the interests of the audience and the inherent meanings in the resource.

**INTRADEME INTERACTIONS** – Interactions like breeding and dispersal within a locally interbreeding population of organisms or deme

**INVASIVE SPECIES** – A species that is: 1) non-native (or alien) to the ecosystem under consideration, and 2) whose introduction causes, or is likely to cause, economic or environmental harm or harm to human health.

## INVASIVE SPECIES, APPROACHES:

- Contain – Prevent the spread of the invasive species beyond the perimeter of patches or infested areas. Tolerate invasive species within established infestation areas, but suppress or eradicate outside those areas.
- Eradicate – Totally eliminate an invasive species from the Forest or location. Eradication methods may include the following, either individually or in combination:
- Suppress – Prevent reproduction throughout the target area and reduce the area coverage of the invasive species. Prevent the invasive species from dominating the area, but accept low levels.
- Tolerate – Accept the continued presence of established infestations and the probable spread to ecological limits for certain invasive species. Use preventive practices to preclude new infestations.

## INVASIVE SPECIES, METHODS OF CONTROL:

- Biological – The deliberate introduction and establishment of natural enemies to reduce the target species' competitive or reproductive capacities. Includes, but is not limited to, insects and pathogens such as fungi. The purpose is not eradication, but to reduce densities and rate of spread to an acceptable level.
- Chemical – Direct and broadcast application of approved herbicides, following EPA label requirements, USDA policy, and Forest Service policy and direction (FSM 2150, FSH 2109.11, FSH 2109.12, and FSH 2109.13).
- Cultural/Land Use – Practices that discourage initial infestation of invasive species. Includes, but is not limited to, seeding, planting and retaining brush and tree canopy cover, and minimizing the extent and duration of exposed soil during management actions.

- Physical/Mechanical – Hand or mechanical labor to physically remove all or any part of the plant. Includes, but is not limited to, hand digging, mowing, tilling, and burning.

**IRRETRIEVABLE** – One of the categories of impacts mentioned in the National Environmental Policy Act to be included in Environmental Impact Statements. An irretrievable effect applies to losses of production or commitment of renewable natural resources. For example, while an area is used as a ski area, some or all of the timber production there is irretrievably lost. The loss of timber production during that time, however, is not irreversible, because it is possible for timber production to resume if the area is no longer used as a ski area.

**IRREVERSIBLE** – A category of impacts mentioned in statements of environmental impacts that applies to non-renewable resources, such as minerals and archaeological sites. Irreversible effects can also refer to effects of actions that can be renewed only after a very long period of time, such as the loss of soil productivity.

**ISSUE** – A subject or question of wide-spread public discussion or interest regarding management of National Forest System land.

**[L]**

**LADDER FUELS** – Vegetation located below the crown level of forest trees that can carry fire from the forest floor to tree crowns. Ladder fuels may be low-growing tree branches, shrubs, or smaller trees.

**LAND ADJUSTMENT** – Changing National Forest System land ownership through acquisition, exchange, or disposal of land or interest in land.

**LAND ALLOCATION** – The commitment of a given area and its resources to the compatible combination of goods, services, and uses specified by a regional management goal or by a past management prescription.

**LAND CAPABILITY** – Tendency of a land area to grow a particular natural community (i.e. hardwoods, spruce-fir) due to various environmental factors like soil or climate, if management were not applied. In many places on the Forest, the current community is different from land capability (as indicated by the Ecological Landtype) for the same area because past management altered the vegetation on the site. Given enough time without additional management, the vegetation may revert to the community indicated by land capability.

**LANDFORM** – A natural feature of the surface of the land; includes such features as slopes, valleys, plateaus, and ridges.

**LANDSCAPE CHARACTER** – Particular attributes, qualities, and traits of a landscape that give it an image and make it identifiable or unique.

**LANDING** – Any place where cut timber is assembled for further transport from the timber sale area.

**LANDLINE** – National Forest System boundary lines.

**LANDSCAPE** – A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts. Landscapes are often used for coarse filter analysis.

**LAND AND RESOURCE MANAGEMENT PLAN (LRMP)** – Formal name for the Forest Plan, the LRMP is a document that guides all long-range natural resource management activities for a National Forest. It is a roadmap and tool for reaching a collective vision for the future. It is a living, flexible document and can be amended to a variety of changing conditions over time. The Plan establishes goals and management standards and guidelines for all management programs and practices, resource uses, and resource protection measures.

**LAND USE PLANNING** – The process of organizing the use of lands and their resources to best meet people's needs over time, according to the land's capabilities.

**LAND TYPE ASSOCIATION (LTA)** – Areas of common ecosystem characteristics that generally number in the thousands of acres. LTAs are defined by similarities in general topography, geomorphic processes, geology, soil, and potential plant community patterns.

**LATE SUCCESSIONAL FOREST** – A forest beyond the age of economic maturity, generally beyond 100 years of age. These forests are older, have larger trees, and have more structural complexity than mature forest, and they are either in the process of or have developed old growth characteristics. They may exhibit evidence of past human or natural disturbances. These forests may exist as entire stands or as smaller patches within younger stands. (see Succession)

**LEASABLE MINERALS** – These include coal, oil, gas, phosphate, sodium, potassium, oil shale, and geothermal steam (FSM 2811.2).

**LEAVE NO TRACE** – A program supported by the non-profit Leave No Trace Center for Outdoor Ethics, in partnership with public and private land managers, to promote and inspire responsible outdoor recreation through education and research. Four federal land management agencies, including the USDA Forest Service, actively promote the Leave No Trace principles of responsible, low-impact use to build awareness, appreciation, and respect for our wildlands.

**LIBERATION CUTTING** – Form of release cutting that removes older, larger trees that overtop a more desirable younger stand (FSM 2470).

**LIFE HISTORY** – The sequence of changes making up the span of an organism's life.

**LITTER (forest litter)** – The freshly fallen, or only slightly decomposed, plant material on the forest floor. This layer includes foliage, bark fragments, twigs, flowers, and fruit.

**LOGGING RESIDUE (slash)** – The residue left on the ground after timber cutting. It includes unutilized logs, uprooted stumps, broken branches, bark, and leaves. Certain amounts of slash provide important ecosystem roles, such as soil protection, nutrient cycling, and wildlife habitat.

**LONG-TERM SUSTAINED YIELD** – The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified management intensity consistent with multiple-use objectives.

**LOW-QUALITY STAND** – Stand made up of trees that have a poor potential to produce timber products.

## [M]

**M** – Thousand. Five thousand board feet of timber can be expressed as 5M board feet.

**MACRO-CLIMATE** – The general, large-scale climate of a large area, as distinguished from the smaller scale micro climates within it.

**MAINTENANCE** – The act of keeping fixed assets in acceptable condition. It includes preventive maintenance, normal repairs, replacement of parts and structural components, and other activities needed to preserve a fixed asset, so that it continues to provide acceptable service and achieves its expected life. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, those originally intended.

**MANAGEMENT ACTION** – Any activity undertaken as part of the administration of the National Forest.

**MANAGEMENT AREAS** – Areas of the National Forest designated in the Forest Plan as having similar management objectives. Similar to city planning zones.

**MANAGEMENT DIRECTION** – A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

**MANAGEMENT INDICATOR SPECIES (MIS)** – A wildlife species whose population will indicate the health of the ecosystem in which it lives and, consequently, the effects of forest management activities to that ecosystem. MIS species are selected by land management agencies. (see Indicator Species)

**MANAGEMENT PRACTICE** – A specific activity, measure, course of action, or treatment.

**MANAGEMENT PRESCRIPTION** – Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

**MASS MOVEMENT/WASTING** – The down-slope movement of large masses of earth material by the force of gravity. Also called a landslide.

**MAST TREES** – Species that provide nuts and fruits. These include the oak group, American beech, hop hornbeam and black cherry.

**MATURE TIMBER** – Trees that have attained full development, especially height, and are in full seed production.

**MEAN ANNUAL INCREMENT OF GROWTH** – The total increase in size or volume of individual trees. Can also refer to the increase in size and volume of a stand of trees at a particular age divided by that age in years.

**MESIC** – Moderately moist

**METAPOPOPULATION** – A group of locally interbreeding populations, or demes, each isolated in a patch of habitat. The persistence of the metapopulation is dependent on the persistence of the demes and movement of animals among demes to exchange genes.

**MICRO-CLIMATE** – The climate of a small site. It may differ from the macro-climate of the area due to aspect, tree cover (or the absence of tree cover), or exposure to winds.

**MIDDLEGROUND** – A term used in the management of visual resources, or scenery. It refers to the visible terrain between the foreground and background in a landscape. The area is located from one-half to four miles from the observer.

**MINERAL** – Inorganic material that includes sand, gravel, and stone.

**MINERAL MATERIALS, COMMON VARIETY** – Also referred to as Salable Minerals or Mineral Materials, include construction and landscaping materials (cinders, sand, gravel, boulders, loose rock, and common clay) and minerals of similar occurrence commonly used as aggregate, rip-rap, ballast, borrow, or fill.

**MINERAL RIGHTS** – Owning minerals beneath the surface of the ground; often it is someone other than the owner of the surface.

**MINERAL SOIL** – Soil that consists mainly of inorganic material, such as weathered rock, rather than organic matter.

**MISSION (of the USDA Forest Service)** – "To Care for the Land and Serve the People." As set forth in law, the Forest Service mission is to achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of people.

**MITIGATION** – Actions taken to avoid, minimize, or rectify the impact of a land management practice.

**MIXED STAND** – A stand consisting of two or more tree species.

**MONITORING AND EVALUATION** – The periodic evaluation of forest management activities to determine how well objectives are met and how management practices should be adjusted. (see Adaptive Management)

**MORTALITY** – Trees that were merchantable and have died within a specified period of time. The term mortality can also refer to the rate of death of a species in a given population or community.

**MOSAIC** – Areas with a variety of plant communities over a landscape, such as areas with trees and areas without trees occurring over a landscape.

**MOTORIZED VEHICLES** – Any contrivance which travels over ground, snow, or water on wheels, tracks, skids, or by floatation and is propelled by a nonliving power source contained, or carried on or within, the device.

**MULTIPLE-USE** – Managing National Forest resources in a manner to best meet the needs of the American people, recognizing that not all uses can occur on all acres, and that changing needs and conditions over time will change the combination and intensity of use. Productivity of the land and sustainability of ecosystems is maintained, and the interrelationships among resources and the effects of use are monitored and evaluated. Multiple-use management does not necessarily prescribe the combination of uses that will give the greatest dollar return or the greatest unit output.

## **[N]**

**NATIONAL AND STATE REGISTERS OF HISTORIC PLACES (NR)** – Listings of historic properties (or heritage resources) that meet the criteria of significance established by the National Historic Preservation Act and New York State Historic Preservation Act.

**NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA)** – The Congress passed NEPA in 1969 to encourage productive and enjoyable harmony between people and their environment. One of the major tenets of NEPA is its emphasis on public disclosure of possible environmental effects of any major action on public lands. Section 102 of NEPA requires a statement of possible environmental effects to be released to the public and other agencies for review and comment.

**NATIONAL FOREST MANAGEMENT ACT OF 1976 (NFMA)** – NFMA is the primary statute governing the administration of National Forests. NFMA requires the Secretary of Agriculture to assess forest lands, develop management programs based on multiple-use and sustained yield principles, and implement a Land and Resource Management Plan for each National Forest.

**NATIONAL FOREST SYSTEM ROADS** – Those roads wholly or partly within, or adjacent to and serving, the national forests, and other areas administered by the Forest Service that have been included in the Forest Transportation Atlas (36 CFR 212.1 and 261.2).

**NATIONAL FOREST SYSTEM TRAILS** – Those trails wholly or partly within, or adjacent to and serving, the National Forests, and other areas administered by the Forest Service that have been included in the Forest Transportation Atlas (36 CFR 212.1 and 261.2).

**NATIONAL PARK SERVICE (NPS)** – The agency of the US Department of the Interior responsible for the administration of National Parks, Monuments, and Historic Sites. The NPS is distinct from the USDA Forest Service both administratively and by mission.

**NATIONAL QUALITY STANDARDS** – The level of quality the Forest Service expects to provide the public at recreation sites and trails. These standards form the baseline for estimating the total cost of providing quality opportunities for recreation visitors and customers' desires.

**NATURAL BARRIER** – A natural feature, such as a dense stand of trees or downfall that will restrict animal travel.

**NATURAL DISTURBANCE** – *see* Disturbance

**NATURAL INTEGRITY** (a.k.a. ecosystem integrity) – The capability of an ecosystem to support and maintain the structure and function characteristic of its particular location.

**NATURAL RANGE OF VARIATION** – *see* Range of Variability

**NEST TREE** – Tree containing large nests, built by crows, herons, or hawks, that from the ground resemble a platform of sticks and are two to three feet in diameter. These may be used by owls, which do not build nests, or they may be re-used by crows, herons, and hawks, among other species.

**NET PUBLIC BENEFITS** – An expression used to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from management of the National Forest units is consistent with the principles of multiple-use and sustained-yield management.

**NO-ACTION ALTERNATIVE** – The most likely condition expected to exist in the future if management practices continue unchanged.

**NON-COMMERCIAL VEGETATIVE TREATMENT** – The removal of trees for reasons other than timber production.

**NON-CONSUMPTIVE USE** – The use of a resource that does not reduce the supply. For instance, bird watching is a non-consumptive use of wildlife. Boating and fishing are non-consumptive uses of water.

**NON-CONVERTIBLE PRODUCTS** – Timber products that do not have a common standard conversion to cubic feet of solid wood (FSH 2409.18).

**NON-DECLINING YIELD** – A level of timber production planned so that the planned sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade.

**NON-GAME** – Wildlife species that are not hunted for sport.

**NON-NATIVE INVASIVE SPECIES (NNIS)** – An organism that has been purposefully or accidentally introduced outside its original geographic range, and that is able to proliferate and aggressively alter its new environment, causing harm to the economy, environment, or human health (Executive Order 13112).

**NON-POINT SOURCE POLLUTION** – Pollution whose source is not specific in location. The sources of the discharge are dispersed, not well defined, or constant. Rain storms and snowmelt often make this type of pollution worse. Examples include sediments from logging activities and runoff from agricultural chemicals.

**NON-RECREATION SPECIAL USE PERMITS** – A general definition other than the recreation class of special uses. These include agriculture, community and public information, energy generation and transmission, communications, feasibility, research, training, cultural resources, and historical classes, among other uses.

**NON-RENEWABLE RESOURCE** – A resource whose total quantity does not increase measurably over time, so that each use of the resource diminishes the supply.

**NORTHERN HARDWOODS** – Primarily sugar maple, yellow birch, and beech. May include red maple, white ash, black cherry, white pine, and hemlock.

**NOTICE OF INTENT (NOI)** – A notice in the federal register of intent to prepare an environmental impact statement on a proposed action.

**NOXIOUS WEED** – A plant species generally considered detrimental to the environment, crops or other desirable plants, livestock, land, or other property, or to be injurious to public health. Noxious weeds can be native or exotic, invasive or non-invasive.

**NUTRIENT CYCLE** – The circulation of chemical elements and compounds, such as carbon and nitrogen, in specific pathways from the non-living parts of ecosystems into the organic substances of the living parts of ecosystems, and then back again to the non-living parts of the ecosystem. For instance, nitrogen in wood is returned to the soil as the dead tree decays. The nitrogen again becomes available to living organisms in the soil and, upon their death, the nitrogen is available to plants growing in that soil.

## [O]

**OBJECTIVE** – A concise, time-specific statement of measurable and planned results that respond to pre-established goals. An objective forms the basis for further planning by defining both the precise steps to be taken and the resources to be used in achieving identified goals. Objectives identify quantities of items within the 15 year Forest Plan time frame.

**OFF-ROAD VEHICLE** – Any motorized vehicle designed for or capable of cross-country travel on, or immediately over, land, water, sand, snow, ice, marsh, swampland, or other natural terrain; except that such term excludes (A) any registered motorboat, (B) any fire, military, emergency, or law enforcement vehicle when used for emergency purposes, and any combat or combat support vehicle when used for national defense purposes, and (C) any vehicle whose use is expressly authorized by the respective agency head under a permit, lease, license, or contract.

**OFF SITE VIEWS** – A term used in management of visual resources. The view beyond foreground, includes middleground and background views.

**OLD GROWTH FOREST** – A patch of relatively old forest of at least 5 to 10 acres that has escaped catastrophic or stand-replacing disturbance associated with the prevailing natural disturbance regimes of the Forest. Such old growth stands exhibit a long history of continuity and a demonstrated future via replacement dynamics.

**ON-SITE VIEW** – A term used in management of visual resources. see Foreground

**OPENING** – An area where crown closure of vegetation is less than 50 percent and height of vegetation is less than 20 percent of that of the surrounding trees. *see also* “permanent upland opening,” “temporary opening,” and “wetland opening.”

**OPERATIONS** – Activities related to the normal performance of the functions for which a fixed asset or component is intended to be used. Includes tasks such as janitorial services, vault toilet pumping, grounds upkeep, and law enforcement patrols.

**ORGANIC SOIL** – Soil at least partly derived from living matter, such as decayed plant material.

**OUTFITTING** – Providing, through rental or livery, any saddle or pack animal, vehicle or boat, tents or camp gear, or similar supplies or equipment, for pecuniary remuneration or other gain. The term “outfitter” includes the holder’s employees, agents, and instructors.

**OUTSTANDING MINERAL RIGHTS** – Rights owned by a party other than the surface owner at the time the surface was conveyed to the United States.

**OUTSTANDINGLY REMARKABLE VALUES** – The identification of outstandingly remarkable values is one of the primary bases for determining Wild and Scenic River eligibility. The Wild and Scenic Rivers Act defines these values as those characteristics that make the river worthy of special protection. Outstandingly Remarkable Values can include scenery, recreation, fish and wildlife, geology, history, culture, and other similar values.

**OVERMATURE TIMBER** – Trees that have attained full development, particularly in height, and are declining in vigor, health, and soundness.

**OVERSTORY** – The upper canopy layer; the plants below comprise the understory.

## [P]

**PARENT MATERIAL** – The mineral or organic matter from which the upper layers of soil are formed.

**PARTIAL RETENTION** – A visual quality objective which, in general, means human activities may be evident but must remain subordinate to the characteristic landscape.

**PASSERINE** – A bird of the very large and diverse taxonomic order Passeriformes, sometimes referred to as perching birds or, less accurately, as songbirds. More than half of all living species of birds are passerines, including species as varied as chickadees, crows, jays, wrens, thrushes, swallows, warblers, and sparrows.

**PATCH** – An area of vegetation that is similar in structure and composition.

**PATCH CUT** – A clearcut that creates small temporary openings in a stand of trees, usually between 1 to 15 acres in size.

**PEOPLE AT ONE TIME (PAOT)** – A recreation capacity determination expressed in the number of people a recreation site, facility or area can accommodate at one time.

**PERCOLATION** – Downward flow or infiltration of water through the pores or spaces of rock or soil.

**PERENNIAL STREAM** – A stream that contains permanently present surface water and where water flows occur throughout the year except possibly during extreme drought or during extreme cold when ice forms (FSM 2526.05).

**PERMANENT UPLAND OPENING** – An opening dominated by perennial grasses, forbs, sedges and shrubs, that has less than 16 percent stocking of trees and less than 10 percent tree cover. Vegetation in permanent upland openings is periodically cut or burned to prevent vegetative succession and tree growth. Optimal size of permanent upland openings is one-half to ten acres. Permanent upland openings may be designed primarily for single or multiple uses, including but not limited to wildlife habitat, recreational uses, or scenic vistas.

**PERMITTED GRAZING** – Grazing on a National Forest range allotment under the terms of a grazing permit.

**PERSONAL USE** – The use of a forest product, such as firewood, for home use and not for commercial use.

**PERSONAL USE OF MINERALS** – Recreational mineral activities which contribute to the personal enjoyment of mineral collecting as a leisure activity and not for the purpose of realizing personal financial gain either through the sale of the material or through an exchange for other goods or services. The exchange of mineral specimens, and/or the fabrication by the collector of functional or decorative items from the collected material, and the disposal of same, are not considered to constitute a commercial activity as long as the motive for doing so is the further enjoyment of a leisure activity and not for profit.

**PEST** – A plant, animal, or environmental stress which the land manager determines to be detrimental to achieving resource management objectives

**PLANNING AREA** – The area of National Forest System land covered by a Regional Guide or Forest Plan.

**PLANNING PERIOD** – The time frame for which goods, services, and effects were projected in the development of the Forest Plan.

**PLANTATION** – A forest crop or stand raised artificially, either by seeding or planting of young trees.

**POINT SOURCE POLLUTION** – Pollution traceable to a discharge of pollutants from a discernable, confined, and discrete conveyance, such as a discharge from a sewage treatment plant.

**POLE/SAPLING** – The stage of forest succession in which trees are between 3 and 7 inches in diameter and are the dominant vegetation.

**POLE TIMBER** – Trees at least 5 inches in diameter, but smaller than the minimum size for sawtimber.

**PRE-COMMERCIAL THINNING** – Removing some of the trees from a stand that are too small to be sold for lumber or firewood, so the remaining trees will grow faster.

**PREDATOR** – An animal that lives by preying on other animals. Predators are at or near the tops of food chains.

**PRE-EXISTING USE** – Land use that may not conform to a zoning ordinance but existed prior to the enactment of the ordinance.

**PREFERRED ALTERNATIVE** – Chosen from among the alternatives developed to address the range of solutions to the Forest's management problems. The Regional Forester, using the Decision Criteria, selects the preferred alternative that he/she feels best resolves management problems within the context of the mission and priorities of the Forest Service. This Alternative then becomes the basis for the Forest Plan and Final Environmental Impact Statement.

**PREPARATORY CUT** – The removal of trees near the end of a rotation to open the canopy and allow the crowns of seed bearing trees to enlarge. Improves seed production and encourages natural regeneration. (see Rotation)

**PREPAREDNESS** – Activities that lead to a safe, efficient, cost-effective fire management program in support of land and resource management objectives through appropriate planning and coordination (Zimmerman and Bunnell 1998).

**PRESCRIBED FIRE** – Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist and NEPA requirements must be met prior to ignition (Zimmerman and Bunnell 1998).

**PRESCRIPTION** – Management practices selected to accomplish specific land and resource management objectives.

**PRESENT NET VALUE (PNV)** [a.k.a. Net Present Value (NPV) or present net worth] – The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area.

**PRODUCTIVE** – The ability of an area to provide goods and services and to sustain ecological values.

**PROTECTIVE STRIP** – A portion of land that provides largely undisturbed soil to separate soil-disturbing activities from streams, ponds, wetlands, and seasonal pools. The purpose of the protective strip is to protect the soil's infiltration capacity and to filter out sediment.

**PUBLIC LAND** – Land for which title and control rests with a federal, state, regional, county, or municipal government.

**PUBLIC INVOLVEMENT** – The use of appropriate procedures to inform the public, obtain early and continuing public participation, and consider the views of interested parties in planning and decision making.

**PULPWOOD** – Wood suitable for manufacturing into wood pulp for paper products.

## [R]

**RANGE** – Land on which the principle natural plant cover is composed of native grasses, forbs, and shrubs that are valuable as forage for livestock and big game.

**RANGE MANAGEMENT** – The art and science of planning and directing range use; intended to yield the sustained maximum animal production and perpetuation of the natural resources.

**RANGE OF VARIABILITY** (a.k.a. natural range of variation or historic range of variability) – The variability in composition, structure, and dynamics of ecosystems before EuroAmerican influence, including the variation of physical and biological conditions within an area due to climatic fluctuations and disturbances of wind, fire, and flooding.

**RANGER DISTRICT** – The administrative sub-unit of a National Forest that is supervised by a District Ranger who reports directly to the Forest Supervisor.

**RAPTOR** – A bird of prey, such as an eagle or hawk.

**RARE OR UNCOMMON (NATURAL) COMMUNITIES** – Natural communities defined by the New York Natural Heritage Program (NYNHP; Thompson and Sorenson, 2000), which are assigned ranks of "S1", "S2", or "S3" by NYNHP. These ranks represent the State or "subnational" conservation status of each community, and are defined by NatureServe (<http://www.natureserve.org>). S1 - critically imperiled S2 - imperiled S3 - vulnerable to extirpation or extinction

**RECHARGE** – The addition of water to ground water by natural or artificial processes.

**RECORD OF DECISION (ROD)** – An official document in which a deciding official states the alternative that will be implemented from a prepared Environmental Impact Statement.

**RECREATION EVENTS SPECIAL USE PERMITS** – A special use designation within the Recreation Special Use category of “Facility Related Activities.” Recreation events include organized events of a temporary nature, such as animal, vehicle, or boat races; fishing contests; rodeos; adventure games; and fairs

**RECREATION OPPORTUNITY SPECTRUM (ROS)** – A formal Forest Service classification system designed to delineate, define, and integrate outdoor recreation opportunities in land and resource management planning. ROS classes are used to describe all recreation opportunity settings, from natural, undisturbed, and undeveloped to heavily used, modified and developed. ROS designations attempt to describe the kind of recreation experience one may expect to have in a given part of the National Forest. The ROS classes include:

- **Urban** – This setting is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor vehicle use and parking are available. Regimentation and controls are obvious and numerous.
- **Rural** – This setting is characterized by a substantially modified natural environment. Sights and sounds of humans are readily evident and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people and are often provided for special activities. Facilities for intensified use and parking are available. Motorized use may be present on designated roads and trails and off-road (where not restricted). In this setting the probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of

sites and opportunities. Opportunities for challenges, risk taking, and use of outdoor skills are generally unimportant. Management activities and designed roads or highways may dominate the natural landscape. Structures are readily apparent.

- **Roaded Natural** – This setting is characterized by a predominately natural appearing environment with moderate evidence of the sights and sounds of people. Interaction between users may be low to moderate, but with evidence of other users prevalent. Opportunities for both motorized and non-motorized forms of recreation are possible. Motorized use may be present on designated roads and trails, and off-road (where not restricted). In this setting there is an equal probability of experiencing affiliation with other user groups and experiencing isolation from sights and sounds of humans. Challenge and risk opportunities associated with more primitive types of recreation are not very important. Natural settings may have modifications that range from being easily noticed to strongly dominant; roads and/or highways present; structures readily apparent.
- **Semi-primitive Motorized** – This setting is characterized by a predominately natural or natural-appearing environment of moderate to large size (generally greater than 2,500 acres). Interaction between users is low, but there is often evidence of other users. Motorized use may be present on designated roads and trails and off-road (where not restricted). In this setting there is a moderate probability of experiencing isolation from the sights and sounds of humans and self-reliance through the application of outdoor skills in an environment that offers challenge and risk. Management activities mimic natural occurrences. Primitive roads may be present, but structures are rare and isolated. Snowmobile use is possible.
- **Semi-primitive Non-motorized** – This setting is characterized by a predominately natural or natural-appearing environment of moderate to large size (generally greater than 2,500

acres). Interaction between users is low, but there is often evidence of other users. Motorized use is generally not present. In this setting there is a high probability of experiencing isolation from the sights and sounds of humans and self-reliance through the application of outdoor skills in an environment that offers challenge and risk. Management activities mimic natural occurrences. Primitive roads may be present and structures are rare and isolated.

- Primitive – A classification of wilderness and recreation opportunity. It is characterized by an essentially unmodified environment where trails may be present, but structures are rare, and where it is highly probable to be isolated from the sights and sounds of people.

ROS CLASS, DESIRED – Management tool used to describe the desired array of recreation settings across the Forest. Desired ROS classes guide recreation management and describe the desired condition of the Forest in the future. All management areas have an associated Desired ROS class to guide recreation management.

ROS CLASS, INVENTORIED – An inventory tool used to describe the existing array of recreation settings for lands within the Forest boundary. Inventoried ROS describes the existing condition of the Forest. (*see also* Recreation Opportunity Spectrum (ROS) and Desired ROS Class.)

RECREATION RIVER – Wild and Scenic Rivers Act Usage: Classification applied to rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

RECREATION SPECIAL USE PERMITS – A class of special use permits for recreation uses that serve the public, protect public health and safety, and protect the resource. These include such categories as outfitting and guiding, group use, facility related activities, and winter recreation. Within each of these categories there could be several “designations” of special use permits (FSM 2720).

REFORESTATION – The restocking of an area with forest trees, by either natural or artificial means, such as planting.

REGENERATION – The renewal of a tree crop by either natural or artificial means. The term is also used to refer to the young crop itself.

REGENERATION CUTTING (Harvest Cut) – Includes four basic cutting methods used to regenerate a forest: clearcut, seed-tree cut, shelterwood cut, and selection cut. Trees are removed from the stand to create conditions that will allow the forest to renew or reproduce itself. This is accomplished under either an even-aged management system or an uneven-aged management system.

REGIONAL FORESTER – The official of the USDA Forest Service responsible for administering an entire region of the Forest Service.

REGIONAL FORESTER SENSITIVE SPECIES – Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by:

- Significant current or predicted downward trends in population numbers or density.
- Significant current or predicted downward trends in habitat capability that would reduce a species existing distribution (FSM 2670.5).

RELEASE TREATMENT – Intermediate treatment or cutting designed to free a young stand (not past the sapling stage) of desirable trees from the competition of undesirable trees that threaten to suppress them. Cleaning and liberation cutting are types of release (FSM 2470).

**REMOVAL CUT** – The removal of the last seed bearers or shelter trees after regeneration is established.

**REPAIR (OF ASSETS)** – Work to restore a damaged, broken, or worn-out fixed asset, component, or item of equipment to normal operating condition. Repairs may be done as annual maintenance or deferred maintenance activities.

**REHABILITATION (OF ASSETS)** – Renovation or restoration of an existing fixed asset or any of its components in order to restore the functionality or life of the asset. Because there is no significant expansion or change of purpose for the fixed asset, the work primarily addresses deferred maintenance.

**REPLACEMENT (OF ASSETS)** – Substitution or exchange of an existing fixed asset or component with one having essentially the same capacity and purpose.

**REPLACEMENT TREE** – A live or partially dead tree left to become a hard snag and eventually a soft snag replacement.

**RESEARCH NATURAL AREA (RNA)** – A physical or biological unit in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural physical and biological processes to prevail without human intervention. Under unusual circumstances, however, deliberate manipulation may be utilized to maintain the unique feature that the Research Natural Area was established to protect. Research natural areas are part of a national network of ecological areas designated in perpetuity for research and education and/or to maintain biological diversity on National Forest System lands. RNAs are intended for non-manipulative research, observation, and study (FSM 4060).

**RESERVE TREES** – Trees left for wildlife in areas where timber is being cut. See snag, den, and mast trees.

**RESIDUAL STAND** – The trees remaining standing after an event such as selection cutting.

**RESILIENCE** – The degree, manner and pace of restoration of the structure and function of the original ecosystem after disturbance (Westman 1978).

**RESOURCE ASSESSMENT** – A compilation of background material on the status of a particular resource area, on a local, regional and national scale. The Resource Assessment describes the present condition of a particular resource, and speculates on the future condition of the resource based on current and expected trends.

**RESPONSIBLE OFFICIAL** – The Forest Service employee who has been delegated the authority to carry out a specific planning action.

**RESTORATION (of ecosystems)** – see Ecosystem Restoration

**REVEGETATION** – The re-establishment and development of a plant cover by either natural or artificial means, such as re-seeding.

**RIPARIAN AREAS** – Riparian areas are three-dimensional ecotones (an ecological transition zone) where functional and process interactions take place between terrestrial and aquatic ecosystems. Riparian areas extend down into the groundwater, up above the canopy, outward across the floodplain and up the near-slopes draining water from the terrestrial ecosystem, and along the water course or feature. Riparian areas are geographically delineable, highly variable in width, and include the water feature: stream, wetland, pond, or seasonal pool (Paraphrased from Riparian Management in Forests of the Continental Eastern United States, p. 29).

**RIPARIAN ECOSYSTEM** – A transitional ecosystem between the aquatic ecosystem and the adjacent terrestrial ecosystem; identified by soil characteristics or distinctive vegetation communities that require free or unbound water.

**ROAD DECOMMISSIONING** – Activities that result in the stabilization and restoration of unneeded roads to a more natural state.

**ROAD DENSITY** – Quantity of road mileage per unit area, commonly measured as miles of road per square mile of land area.

**ROAD IMPROVEMENT** – Activity that results in an increase of an existing road's traffic service level, expansion of its capacity, or change in its original design function.

**ROAD MAINTENANCE** – The ongoing upkeep of a road necessary to regain or restore the road to the approved road management objective (FSM 7712.3).

**ROAD MANAGEMENT OBJECTIVE (RMO)** – Defines the intended purpose of an individual road based on management area direction and access management objectives. Road management objectives contain design criteria, operation criteria, and maintenance criteria (FSH 7709.55).

**ROAD OBLITERATION** – Process of removing a road from the landscape. Obliterations are used on system and temporary roads, which are to be removed from service (decommissioned). Obliteration can include removing evidence of any access points; removing any structures from the roadbed (such as culverts, bridges, signs, guide rails, etc.); and restoring wetlands and riparian areas.

**ROAD OPERATION MAINTENANCE LEVEL (ROML)** – The level of service provided by, and maintenance required for, a specific road (FSH 7709.58).

- Level 1 (Closed for more than 1 year) – Assigned to intermittent-service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Roads receiving maintenance Level 1 may be of any type, class, or construction standard, and may be managed at any other maintenance level while they are open for traffic. While being maintained at

Level 1, they are closed to vehicular traffic, but may be open and suitable for non-motorized uses.

- Level 2 (High-clearance vehicles) – Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or specialized uses. Log haul may occur at this level.
- Level 3 (Passenger vehicles; surface not smooth) – Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material.
- Level 4 (Passenger vehicles; smooth surface) – Assigned to roads that provide a moderate degree of user comfort and convenience at moderate traffic speeds. Most roads are double lane and aggregate surfaced. Some roads, however, may be single lane. Some roads may be paved and/or dust abated.
- Level 5 (Passenger vehicles-dust free; possibly paved) – Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated.

**ROAD, PRIVATE** – A road under private ownership authorized by a Special-Use Authorization, or a road that provides access pursuant to a reserved or private right.

**ROAD, PUBLIC** – Any road or street under the jurisdiction of and maintained by a public authority and open to public travel (23 U.S.C. 101(a)).

**ROAD, TEMPORARY** – Road authorized by contract, permit, lease, other written authorization, or emergency operation, not intended to be part of the forest transportation system and not necessary for long-term resource management.

**ROAD, TRAFFIC SERVICE (LEVELS) –**

- A: Free flowing, mixed traffic; stable, smooth surface; provides safe service to all traffic.
- B: Congested during heavy traffic, slower speeds and periodic dust; accommodates any legal-sized load or vehicle.
- C: Interrupted traffic flow, limited passing facilities, may not accommodate some vehicles. Low design speeds. Unstable surface under certain traffic or weather.
- D: Traffic flow is slow and may be blocked by management activities. Two-way traffic is difficult, backing may be required. Rough and irregular surface. Accommodated high clearance vehicles. Single purpose facility.

**ROAD, UNCLASSIFIED** – Roads on National Forest System lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail. Includes those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization (36 CFR 212.1).

**ROTATION** – The number of years required to establish and grow timber crops to a specified condition of maturity.

**ROUNDWOOD** – Pulpwood and fuelwood prepared in the round state, such as house logs and telephone poles.

**RUN-OFF** – The portion of precipitation that flows over the land surface or in open channels.

**[S]**

**SALVAGE CUTTING** – Intermediate cutting made to remove trees that are dead or in imminent danger of being killed by injurious agents (FSM 2470).

**SANITATION CUTTING** – Intermediate cutting made to remove dead, damaged, or susceptible trees to prevent the spread of pests or pathogens (FSM 2470).

**SAPLING** – A general term for a young tree more than a few feet tall and an inch or so in diameter that is typically growing vigorously.

**SAWTIMBER** – Trees that are nine inches in diameter at breast height or larger that can be made into lumber.

**SCALE** – In ecosystem management, it refers to the degree of resolution at which ecosystems are observed and measured.

**SCENERY MANAGEMENT SYSTEM (SMS)** – A systematic approach for determining the relative value and importance of scenery in a national forest. SMS is to be used in the context of ecosystem management to inventory and analyze scenery in a national forest, to assist in establishment of overall resource goals and objectives, to monitor the scenic resource, and to ensure high-quality scenery for future generations.

**SCENIC RIVER** – Wild and Scenic Rivers Act Usage: Classification applied to rivers, or sections of rivers, that are free of impoundments; where shorelines or watersheds are still largely primitive and shorelines are largely undeveloped, but accessible at places by a road.

**SCOPING** – The ongoing process to determine public opinion, receive comments and suggestions, and determine issues during the environmental analysis process. It may involve public meetings, telephone conversations, or letters.

**SEASONAL POOL** (a.k.a. vernal pool) – A seasonal pool is a contained basin depression lacking a permanent above ground outlet. In the Northeast, it fills with water with the rising water table of fall and winter or with the melt-water and runoff of winter and spring snow and rain. Many vernal pools in the Northeast are covered with ice in the winter months. They contain water for a few months in the spring and early summer. By late summer, a vernal pool is generally, but not always, dry.

A seasonal pool, because of its periodic drying, does not support breeding populations of fish. Many organisms have evolved to use a temporary wetland where they are not eaten by fish. These organisms are considered connected to, or indicative of, vernal pools because they use a vernal pool for various parts of their life cycle. In New England and New York, the easily recognizable connected species are the fairy shrimp, the wood frog, and salamanders of the genus *Ambystoma* (e.g. spotted, Jefferson, marbled, and blue-spotted salamanders). The Green Mountain and Finger Lakes National Forests will define Seasonal Pools as those seasonally filled basins that are occupied for breeding purposes by one or more of these connected species (Kellogg et al. 2004).

**SECOND-GROWTH FOREST** – An area of forest that has established after some kind of human intervention that has removed some or all of the previous forested area.

**SEED TREE CUTTING** – Even-aged cutting method in which most of the mature timber from an area is removed in one cut except for a small number of desirable trees retained to provide seed or shelter for regeneration (FSM 2470).

**SEEP** - A common but small wetland community associated with groundwater seepage. They occur on benches, in coves, and on or near the bases of slopes in upland forests. A layer of bedrock or hardpan often forces groundwater to flow horizontally rather than down, discharging water at the ground surface and creating the wetland conditions associated with seeps.

**SENSITIVE SPECIES** – see Regional Forester Sensitive Species

**SERIAL** – Any stage of the sequence of changes in plant and animal communities on a site over time (see Succession).

**SHADE TOLERANT SPECIES** – Term used to describe plants that prefer to grow in the shade (for example, sugar maple or hemlock).

**SHADE INTOLERANT SPECIES** – Term used to describe plants that prefer to grow in sunny, open conditions (for example, aspen or black locust).

**SHELTERWOOD CUTTING** – Even-aged cutting method in which a stand of trees is removed through a series of cuttings designed to establish a new crop with seed and protection provided by a portion of the stand (FSM 2470).

**SHELTERWOOD WITH RESERVES** – see Delayed Shelterwood

**SIDE TRAIL (SPUR TRAIL/CONNECTING TRAILS)** – Side trails and connecting trails provide additional points of public access to national recreation, national scenic or national historic trails and connections between such trails. Spur trails may intersect a national trail and provide passage to points of interest or facilities within the trail corridor.

**SILVICULTURAL SYSTEM** – Entire process by which forest stands are tended, harvested, and replaced. It includes all cultural practices performed during the life of the stand, such as regeneration cutting, fertilization, thinning, improvement cutting, and use of genetically improved sources of tree seeds and seedlings.

**SILVICULTURE** – Application of principles underlying the growth and development of single trees and of the forest as a biological unit, to control forest establishment, composition, structure and growth. The selection of an appropriate silviculture system for a management area depends on the stated resource objectives.

**SINGLE TREE SELECTION** – see Individual Tree Selection

**SITE PREPARATION** – The general term for removing unwanted vegetation, slash, roots, and stones from a site before reforestation. Naturally occurring wildfire, as well as prescribed fire, can prepare a site for natural regeneration.

**SIZE CLASS** – One of the three intervals of tree stem diameters used to classify timber in the Forest Plan database. The size classes are: Seedling/Sapling (less than five inches in diameter); Pole Timber (five to seven inches in diameter); Sawtimber (greater than seven inches in diameter).

**SKID ROADS** (a.k.a. tractor roads) – Roads constructed for the purpose of transporting cut trees to a landing. They are ordinarily constructed by ground clearing and/or excavation (FSH 2409.15).

**SKID TRAILS** – Trails constructed for the purpose of transporting cut trees to a skid road or landing. The resultant ground disturbance created by skidding logs on the ground by all skidding and yarding methods. Skid trail construction normally does not include ground excavation or clearing (FSH 2409).

**SKIDDING** – Hauling logs by sliding with a cable, not on wheels, from stump to a collection point.

**SKIJORING** – A winter sport in which a person wearing skis is drawn over snow or ice by a dog.

**SLASH** – The residue left on the ground after timber cutting or left after a storm, fire, or other event. Slash includes unused logs, uprooted stumps, broken or uprooted stems, branches, bark, among others.

**SLUMP** – A landslide where the underlying rock masses tilt back as they slide from a cliff or escarpment.

**SMALL GAME** – Birds and other small animals normally hunted or trapped.

**SNAG** – Includes standing dead or partially dead trees that are at least six inches in diameter at breast height (dbh) and 20 feet tall. (see Hard Snag and Soft Snag)

**SNOWMOBILE** – A motor vehicle that is designed exclusively for use over snow and that runs on a track or tracks and/or a ski or skis.

**SOFT SNAG** – Snags with wood, especially sapwood, in an advanced stage of decay.

**SOIL COMPACTION** – The reduction of soil volume. For instance, the weight of heavy equipment on soils can compact the soil and thereby change it in some ways, such as in its ability to absorb water.

**SOIL PRODUCTIVITY** – The inherent capacity of a soil to support the growth of specified plants, plant communities, or a sequence of plant communities. Soil productivity may be expressed in terms of volume or weight/unit area/year, percent plant cover, or other measures of biomass accumulation (FSM 2509.18, 2.05; Effective 9/3/91).

**SOIL QUALITY** – The capacity of the soil to function within ecosystem boundaries to sustain biological productivity, maintain or enhance water and air quality, and support human health and habitation.

**SOUND WOOD** – Timber that is in solid, whole, good condition. Sound wood is free from damage, decay, or defects.

**SPECIAL AREA (SA)** – National Forest System lands (except wilderness) that contain outstanding examples of plant and animal communities, geological features, scenic grandeur, or other special attributes. SAs can be designated by the Forest Service or by legislation. SAs are managed to emphasize recreational and other specific related values. Other uses are permitted within SAs to the extent that they are in harmony with the purpose for which the area was designated.

**SPECIAL FOREST PRODUCTS** – Products or natural resources that are not the traditional timber and fiber products. Examples include such products as floral greenery, Christmas trees and boughs, mushrooms, transplants (trees, shrubs or herbaceous plants), cones, medicinal plants, cuttings, herbs, fuelwood, tree sap, nuts, berries, lichen, fungi, decorative wood, and pitch.

**SPECIAL USE AUTHORIZATION** – An authorization issued to an individual or group by the USDA Forest Service for use of National Forest System land for a special purpose. Examples might be a Boy Scout Jamboree, a water system serving private land, or a bicycle race. Authorizations can be in the form of permits, easements, or leases.

**SPECIES OF LOCAL INTEREST** – Species having State, or local, importance. These may be species with declining populations, appearing on State lists but not Federal Threatened and Endangered or Eastern Region's Sensitive Species lists; they may be locally abundant species presenting extraordinary opportunities.

**SPECIES VIABILITY EVALUATION (SVE)** – A qualitative process for gathering information on species for which viability may be a concern now or during the next 10 to 20 years. The process includes identifying at-risk species, compiling literature and unpublished information on those species, and using that information to develop and analyze Forest Plan revision alternatives.

**SPECTRUM** – A specific linear program model designed for Forest Service planning.

**STAND** – A group of trees that occupies a specific area and is similar in species, age, and condition.

**STANDARD** – A required course of action, or level of attainment, that promotes the achievement of forest plan goals and objectives. Standards found in a forest plan impose limits on natural resource management activities, generally for environmental protection.

**STATE HISTORIC PRESERVATION OFFICE(R) (SHPO)** – The National Historic Preservation Act establishes an oversight role for this office/position vis-à-vis federal agencies operating within the states. Thus, the SHPO must concur with federal agency decisions which have the potential to affect NR-eligible properties (a.k.a. "significant Heritage Resources").

**STEWARDSHIP** – Caring for the land and its resources to pass healthy ecosystems to future generations.

**STOCKING LEVEL** – The number of trees in an area as compared to the desirable number of trees for best results, such as maximum wood production.

**STRUCTURE** – How the parts of ecosystems are arranged, both horizontally and vertically. Structure might reveal a pattern, mosaic, or total randomness of vegetation.

**SUCCESSION** – The sequence of changes in plant and animal communities on a site over time.

**SUCCESSIONAL STAGE** – see Seral

**SUITABILITY** – The appropriateness of certain resource management to an area of land. Suitability can be determined by environmental and economic analysis of management practices.

**SUITABLE FOREST LAND** – Forest land that constitutes the land base for determining the allowable sale quantity (ASQ) and is managed for timber production on a regulated basis.

**SUMMER OFF-ROAD VEHICLE** – All off-road vehicles except snowmobiles. (see Off-Road Vehicle)

**SURFACE RESOURCES** – Renewable resources that are on the surface of the earth, such as timber and forage, in contrast to ground water and minerals which are located beneath the surface.

**SURFACE RIGHTS** – Ownership of the surface of the land only; right to use the surface of the land.

**SUSTAINABILITY (ecosystem sustainability)** – The ability of an ecosystem to maintain its structure and function, and to remain resilient, in order to continue to support its biological diversity and productivity over time (see also Resilience).

**SUSTAINABILITY (general)** – The ability of an ecological, economic, and/or social system to maintain structure and function, and to remain resilient, in order to continue to support biological diversity (including humans and their social and economic organization) and system productivity over time.

**SUSTAINABLE** – The yield of a natural resource that can be produced continually at a given intensity of management is said to be sustainable.

**SUSTAINED YIELD** – The yield that a renewable resource can produce continuously at a given intensity of management.

## [T]

**TAKE** – Take is defined in the Endangered Species Act as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species. Harm may include significant habitat modification that kills or injures a listed species through impairment of essential behavior such as nesting or reproduction.

**TARGET** – A national forest's annual accomplishment goals for natural resource programs. Targets represent the commitment the Forest Service has to the Congress to accomplish the work that the Congress has funded and are often used as a measure of the Agency's performance.

**TAXON (TAXA)** – A group of organisms at any level of the taxonomic hierarchy. The major taxa are the species and genus and the higher taxa, including the family, order, class, phylum, and kingdom. Minor taxa include subspecies and varieties.

**TEMPORARY OPENING** – An opening created by silvicultural treatment (for example clearcut or shelterwood cut), or natural event for example wind throw, ice damage, pest outbreak), that is intended and allowed to be reoccupied by young trees. Temporary openings are dominated by tree seedlings and saplings and, with time, will grow into a wooded stand.

**TEMPORARY ROAD** – Road needed only for short-term use, such as by timber purchasers for access to a single timber sale.

**THERMAL COVER** – Cover used by animals against weather.

**THINNING** – Intermediate cutting made to stimulate the growth of the trees that remain and to increase the total yield of useful material from the stand (FSM 2470).

**THREATENED, ENDANGERED, AND SENSITIVE (TES) SPECIES** - Plant or animal species that are federally listed under the Endangered Species Act as Threatened or Endangered, or are listed by the Regional Forester for Region 9 and the Finger Lakes National Forest as Sensitive.

**THREATENED SPECIES** – Those plant or animal species likely to become endangered throughout all or a specific portion of their range within the foreseeable future as designated by the US Fish and Wildlife Service under the Endangered Species Act of 1973.

**TIMBER CLASSIFICATION** – The classification of forested lands into land management alternatives according to how the land relates to management of the timber resource there.

**TIMBER STAND IMPROVEMENT (TSI)** – Actions to improve growing conditions for trees in a stand, such as thinning, pruning, prescribed fire, or release cutting.

**TRACTOR LOGGING** – A logging method that uses tractors to carry or drag logs from the stump to a collection point.

**TRAIL** – A designated path or travelway of varying width which is maintained for varied recreational uses.

**TRAIL VEHICLE** – Vehicles designed for trail use, such as bicycles, snowmobiles, trail bikes, trail scooters, and all-terrain vehicles (ATVs).

**TREATMENT AREA** – The site-specific location of a resource improvement activity.

**TREE IMPROVEMENT** – The science of dealing with the causes of resemblances and differences among trees related by descent. It considers the effects of genes and the response to environmental factors.

**TYPE CONVERSION** – The conversion of the dominant vegetation in an area from forested to non-forested or from one species to another.

## [U]

**UNDERBURN** – A burn by a surface fire that can consume ground vegetation and "ladder" fuels.

**UNDERSTORY** – The trees and woody shrubs growing beneath the overstory in a stand of trees.

**UNEVEN-AGED SYSTEM** – Silvicultural system involving manipulation of a forest to simultaneously maintain: a) continuous high-forest cover, b) recurring regeneration of desirable species, and c) orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection (FSM 2470).

**UNREGULATED HARVEST** – Tree harvest that is not part of the allowable sale quantity (ASQ). It can include the removal of cull or dead material or non-commercial species. It also includes volume removed from non-suitable areas for research, to meet objectives other than timber production (such as wildlife habitat improvement), or to improve administrative sites (such as campgrounds).

**UNSUITABLE LANDS** – Forest land that is not managed for timber production because (a) the land has been withdrawn by the Congress, the Secretary of Agriculture, or the Chief of the Forest Service; (b) the land is not producing or capable of producing crops of industrial wood; (c) technology is not available to prevent irreversible damage to soils, productivity, or watershed conditions; (d) there is no reasonable assurance that lands can be adequately restocked within 5 years after final harvest, based on existing technology and knowledge, as reflected in current research and experience; (e) there is at present, a lack of adequate information to respond to timber management activities; or (f) timber management is inconsistent with or not cost efficient in meeting the management requirements and multiple-use objectives specified in the Forest Plan.

**UTILITY CORRIDOR** – A linear tract of land of varying width, forming a passageway through which various commodities such as oil, gas, electronic intelligence, and electricity may be transported.

**[V]**

**VARIETY CLASS** – A way to classify landscapes according to their visual features. This system is based on the premise that landscapes with the greatest variety or diversity have the greatest potential for scenic value.

**VEGETATION MANAGEMENT** – Activities designed primarily to promote the health of forest vegetation for multiple-use purposes.

**VEGETATION TYPE** – A plant community with distinguishable characteristics.

**VERNAL POOL** – see Seasonal Pool

**VERTICAL DIVERSITY** – Stand diversity that results from different canopy layers or tiers of vegetation.

**VIALBLE POPULATION** – A population that has the estimated numbers and distribution of reproductive individuals to ensure the continued existence of the species throughout its existing range within the planning area (FSM 2670.5).

**VIEWER SENSITIVITY** – Amount and expectation of viewers determined for all areas of the National Forest using the defined areas described below.

- High Viewer Sensitivity Locations: federal or State highways; Roads averaging at least 150 vehicles per day; Roads primarily providing access to highly sensitive recreation sites; National Scenic or National Recreation trails; Heavily used seasonal trails through areas with recognized scenic attractions; Riparian areas with heavy fishing, boating, swimming, and other uses highly dependent on viewing scenery; Recreation and Education Special Areas; Ecological Special Areas with unique scenic features; Town centers or concentrations of residences; Developed recreation sites except for trailheads within moderately sensitive locations; Observation sites along highly

sensitive travelways.

- Moderately sensitive locations do not qualify as highly sensitive but get more than twice as much use as general undeveloped areas that provide the same recreation opportunity. Moderately sensitive locations include the following areas: Roads and trails shown on National Forest recreation maps except those described as least sensitive; Concentrated use areas and observation sites along moderately sensitive travelways; Riparian areas receiving low to moderate use which is double that of adjacent undeveloped lands;
- Least sensitive locations are all areas not qualifying as having high or moderate sensitivity. They include: Travelways maintained primarily for non-recreation purposes such as timber access roads and utility line clearings; Areas where use primarily has little dependence on scenic viewing. Use examples include hunting or gathering of fuelwood and Christmas trees.

**VISUAL CONDITIONS:**

- Permanent – A visual condition is being maintained over time. Permanent alterations include but are not limited to: wetland and permanent upland openings, scenic vistas, parking areas, roads, trails, signs, ski facilities, towers, and other structures.
- Temporary – A visual condition is allowed to recover over time. Temporary alterations include but are not limited to: timber harvest.
- Enhancement – A visual condition is improved by increasing positive scenic attributes in the landscape.
- Rehabilitation – A visual condition is improved by removing existing visual impacts.

**VISUAL QUALITY OBJECTIVE (VQO)** – A desired level of excellence based on physical and sociological characteristics of an area. Refers to degree of acceptable alteration of the natural appearing landscape. The five levels of VQO are:

- (1) Preservation – Alterations are caused by ecological changes only.
- (2) Retention – Alterations made by people are not visually evident to the casual forest visitor
- (3) Partial Retention – Alterations made by people must appear subordinate within the surrounding natural appearing landscape.
- (4) Modification – Alterations may dominate the original surrounding landscape, but constructed facilities must be compatible with the landscape.
- (5) Maximum Modification – Alterations dominate the original surrounding landscape to a high degree, and do not relate completely to natural appearing form, line, color, or texture.

**VISUAL RESOURCE** – A part of the landscape important for its scenic quality. It may include a composite of terrain, geologic features, or vegetation.

## [W]

**WATCH LIST** – A list of plant and animal species that may be of concern to the Forest, but which do not meet criteria for inclusion in the Regional Forester sensitive species list. These species could include those that are not known to occur now on the Forest although they may have historically been here; species that may not be of viability concern on the Forest but are rare or listed in the State; species that are exhibiting population trends that are starting to be of concern, but not to the point where viability on the Forest is at moderate or high risk; or species that are new to the Forest and have not yet been evaluated for viability.

**WATERSHED** – The entire region drained by a waterway or into a lake or reservoir. More specifically, a watershed is an area of land above a given point on a stream that contributes water to the streamflow at that point.

**WATER TABLE** – The upper surface of groundwater. Below it, the soil is saturated with water.

**WATER YIELD** – The runoff from a watershed, including groundwater outflow.

**WETLAND** – Those areas that under normal circumstances are inundated by surface or ground water with a frequency sufficient to support a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar area such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds (FSM 2527.05).

**WETLAND OPENING** – Includes open and shrub wetland areas dominated by mosses, herbaceous plants, and shrubs of varying heights. Trees are absent or sparse, generally representing less than 25 percent of the cover. Wetland openings on the FLNF include beaver meadow complexes, shrub swamps, marshes, sedge meadows, wet upland meadows, and wet shores. Most open wetlands on the FLNF are associated with rivers and are influenced by recent beaver activity; few are old and stable wetlands like peatlands. *see also* Wetland

**WHOLE TREE LOGGING** – The process of felling and transporting the trimmed bole in one piece to a landing. The bole is then separated into wood products at the landing that include sawlogs, pulpwood, firewood, and/or tops for wood chips.

**WILD RIVER** – Wild and Scenic Rivers Act Usage: Congressionally designated rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.

**WILDLAND FIRE** – Any non-structure fire, other than prescribed fire, that occurs in the wildland (Zimmerman and Bunnell 1998).

**WILDLAND FIRE SUPPRESSION** – An appropriate management response to wildland fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire. All wildland fire suppression activities provide for firefighter and public safety as the highest consideration, but minimize loss of resource values, economic expenditures, and/or the use of critical firefighting resources (Zimmerman and Bunnell 1998).

**WILDLAND FIRE USE** – The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in Forest Fire Management Plans. Operational management is described in the Wildland Fire Implementation Plan. Wildland fire use is not to be confused with “fire use,” which is a broader term encompassing more than just wildland fires (Zimmerman and Bunnell 1998). (see Fire Use)

**WILDLIFE HABITAT DIVERSITY** – The distribution and abundance of different plant and animal communities and species within a specific area.

**WINDTHROW** – Trees uprooted by wind.

**WIND TOWERS** – Includes individual wind towers for wind energy testing and monitoring facilities (small individual site-specific meteorological towers and instrumentation facilities) as well as wind energy development projects (includes wind turbine facilities, as well as access roads, electrical and transmission facilities, and other support facilities).

**WOOD FIBER PRODUCTION** – The growing, tending, harvesting, and regeneration of harvestable trees.

**WOODLAND PRODUCTS** – Harvestable items from forests. These include fuelwood, posts, fruit, maple sap, and Christmas trees.

## [Y]

**YARDING** – Moving the cut trees from where they fell to a centralized place (landing) for hauling away from the stand.

## [Z]

**ZONE OF INFLUENCE (ZOI)** – The area influenced by Forest Service management activities.

## 7.1 INDEX

This index contains a list of a few key words that some people may want to search the document for. It is not exhaustive, but is one more tool for using this document. For each term, pages are listed on which either the term is used substantively or the topic is discussed substantively even though the term isn't used. Where a range is identified, that may indicate a long discussion or separate uses of the term on each page.

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## 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 Finger Lakes National Forest (FLNF) in June 2002 and published as: *Implementing the Finger Lakes National Forest Land and Resource Management Plan: A 15 Year Retrospective* (“the *Retrospective*”).

The *Retrospective* described the past 15 years of management on the FLNF, including creation of the 1987 Forest Plan and the issues the 1987 Plan addressed. The *Retrospective* also examined the current situation on the FLNF, 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 FLNF 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 three major issues that are Addressed Differently in Each Alternative.

Detailed Analysis of the Management Situation papers were prepared for the three main issues on the Finger Lakes National Forest, including: Ecosystem Management, Recreation, and Timber Management. 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 Forest Plan. The format of the AMS summary is generally as follows:

1. Introduction
2. Projection of Demand – Assessment of the Demand from the Finger Lakes National Forest and Assessment of the Finger Lakes 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 FLNF 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 Forest Service 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 Forest Service also needs to review outputs and develop measurements that accurately measure how well the Forest 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. These management areas have generally been effective in guiding the activities that occur. There have been concerns, however, 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, and 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 effects has proven effective in measuring how well the Forest Plan is being implemented. Concerns related to S&Gs, however, 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 suggested for standards and guidelines, for example to ensure 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 use, with new uses such as mountain bikes and ATVs, changing user demographics, and changes in recreation technology
- Customer service
- Partnerships
- Ecosystem approach to natural resource management
- Revenue flow to local communities
- Grassland management
- Increased urbanization
- New land acquisitions
- Funding for Forest Plan implementation

The *Retrospective* summarizes the last 15 years of multiple-use management of the Finger Lakes National Forest. It concludes that the FLNF has provided a wide range of recreation opportunities, a variety of wildlife habitat, protection of 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

The issue of Ecosystem Management includes the issues of wildlife management, range and grazing, and fire management. These issues have to do with providing different types of habitat for different species, the conservation of biodiversity, management of threatened, endangered and sensitive species, and invasive species.

The 1987 Forest Plan addressed biodiversity primarily at small scales, such as tree and stand diversity (species, within-stand features like snags, vegetation composition objectives, and age of vegetation) and individual species (Endangered, Threatened, Sensitive and Indicator). Plan revision will consider biodiversity and natural communities at a variety of landscape scales and landscape patterns.

Public concern includes debate about the appropriate distribution and amount of three vegetative conditions: grassland, shrubland, and forest habitats. These vegetative conditions provide a majority of the wildlife habitat options, and diversity, available on the FLNF.

This issue will be addressed in the revision process by:

1. Providing mixes of desired and viable plant and animal species populations, natural communities, and landscape patterns
2. Revising the FLNF's management indicators including Management Indicator Species

## Projection of Demand

### Assessment of the Demand for Goods and Services from the Finger Lakes National Forest

As with most of the demands for other goods and services from the National Forest, the public's demand for wildlife habitat includes a wide range of desires. Within this range, habitat demands may complement or directly conflict with each other. Therefore, the starting points are those national and regional demands that have been incorporated into the laws and policies that guide Forest Service management. 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, including wildlife, 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).

On the State and local levels the public is in general agreement with these goals and objectives and demands healthy, sustainable wildlife populations. But for most wildlife species, particularly animals, it is difficult to precisely assess, quantify, or put economic values on those demands.

### Assessment of FLNF Ability to Supply Goods and Services

The physical and biological composition, structure, and ecological function of every acre of National Forest System land provide the “goods and services” of wildlife habitat. Through forest management the National Forest, in general, has an ability to supply a wide array of habitats. Management choices include maintaining, restoring, or altering (either decreasing or increasing) the amounts, quality, and distribution of habitats and the rates and direction of habitat change. These choices are neither good nor bad for wildlife as a whole; depending upon the species a management scenario may benefit, negatively affect, or have no impact on an individual species. This ability, however, varies by issue (desired habitats) and by scale. On the smaller scales – such as stands or microhabitats within stands or lakes and streams – the Forest generally has an ability to provide desired habitat conditions. In fact, these are the scales at which many species habitat requirements are best understood. Examples of habitats at this scale that the Forest has an ability to supply include: woody debris; reserve areas and wildlife trees; stand horizontal and vertical structural diversity; protection of spawning areas, nests, dens, or large old trees; diversity of tree species within stands; buffer zones between habitats; and an array of age classes of stands. These conditions can be addressed by selecting and implementing a variety of management activities or “tools” such as protecting sites from any manipulation, harvesting trees using a variety of techniques, planting trees, or using prescribed fire.

On larger landscape scales – from ecological subsection to landtype association to Management Area – the Forest also has an ability to address many of the issues. This is because land owned by the Forest Service includes blocks of relatively contiguous land. Examples include: providing regenerating young forests adjacent to mature forests; managing to maintain a variety of patch sizes; providing

habitat linkages or corridors; and providing a mix of forest cover types within the forest matrix. The challenge is understanding what configuration of patch sizes and distributions of forest types and ecosystem processes wildlife species require – there is less research at the larger landscape scales. On the largest landscape scales, from international to ecological section the ability of the Forest to provide desired habitats may diminish for some habitats, but still be good for others. The ability to supply these services is also dependent on the scale of time for which the public has a demand for those populations or habitats. For example, the Forest's ability to provide a large amount of white pine old growth forest habitat in the next 15 years is limited, but across a 150-year planning horizon, the ability increases.

## **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; incorporate increased scientific understanding; and address the changed variety of public demands for wildlife habitat. Because every acre of the National Forest is wildlife habitat and therefore is affected by any forest management, 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 needs to be incorporated into the revision of the Forest Plan. 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 the MIS program.

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

- Determining types, mixes, and spatial relationships of habitat (forest, shrubland, grassland) the Forest will provide and maintain, and the techniques used to accomplish this
- Determining the appropriate amount and location of lands with little or no management activities
- 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
- Changing social demographics and the desire for certain habitat conditions
- Considering threatened, endangered, sensitive, and extirpated species
- Providing more guidance for the management of non-native and invasive species

### **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 habitats and populations is based on public desires. Because there are conflicting desires for habitat conditions, the planning process is unlikely to resolve everyone's 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 Plan revision process provide opportunities for public input specific to these issues. Assessments included in 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 Forest Service the ability to resolve issues by revising those standards and guidelines. The planning process also includes the ability to refine management areas, which will also address this issue.

## Recreation

### Introduction

The Finger Lakes National Forest's Plan revision process offers opportunities to further refine recreation management on the Forest in the context of a 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. The appropriate mix of recreational opportunities and forest settings
2. The need for expansion or improvement of recreation opportunities
3. Adequate maintenance of existing trails, signs, and information
4. The need for a comprehensive Forest-wide trail system
5. The need to increase education regarding appropriate recreational uses

It is believed that there have been increases in many recreational uses during the life of the Forest Plan. People want to ensure that the Forest continues to place emphasis on providing high-quality recreation opportunities. The appropriate mix of low-density recreation opportunities, and more developed, higher density recreation opportunities, as well as motorized (for example, snowmobile and OHV) and non-motorized (for example, ski, hike, mountain bike, and horse) trail use is debatable. Some people want new or improved facilities for particular recreation activities and improved signage and information about recreation opportunities. The revised Forest Plan will consider the effects of recreational use on the ecosystem as well as conflicting recreational uses. Furthermore, the analysis for the Forest Plan will consider current and projected use, 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 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 increase from 800 million to 1.2 billion visits to the national forests per year (USDA 2004). 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 Finger Lakes National Forest

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 Finger Lakes National Forest (FLNF) is based on recent surveys that identify and quantify:

- Estimated number of current recreation visits to the FLNF
- Participation rates for recreation activities within the State of New York and Finger Lakes Region
- 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 FLNF (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, there were 27,200 recreation visits to the Finger Lakes National Forest in 2000 (USDA 2001). Developed recreation areas (day-use and overnight) on the FLNF accommodate approximately 33 percent of the estimated recreation visits, and the remaining 68 percent of recreation visits can be defined as "dispersed recreation" that occurs away from developed sites in general forest areas.

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)	68%

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

Current and future recreation demand is also addressed in the New York State "Final Statewide Comprehensive Outdoor Recreation Plan" (State of New York 2003). This report provides recreation participation rates within New York and estimates future trends and growth through 2020 (Table A-2). Out of those surveyed activities that occur on the Finger Lakes National Forest, visiting historic sites and hiking are the most popular. Visiting historic sites is projected to receive the most growth in New York (6.38%) through 2020.

Activity	1998 Participation	1998 % Population	Projected Increase - 2020
Visiting Historic Sites	3.68	24.83%	6.38%
Hiking	3.15	21.25%	4.87%
Camping	1.92	12.92%	5.24%
Hunting	1.87	12.64%	5.92%
Horseback Riding	1.36	9.10%	4.83%
Cross-Country Skiing	.78	5.26%	5.42%
Snowmobiling	.76	5.12%	4.20%

Source: NY State Final Statewide Comprehensive Outdoor Recreation Plan (2003)

The New York State report also provided a county analysis of recreation supply and demand by selected activities. Table A-3 shows a “relative index of need” that indicates the degree to which additional facilities are needed to meet future demand. The 10-point scale provides an index where one indicates an ample supply of recreation resources relative to demand and ten indicates the opposite, that most sites are heavily used (Table A-3).

<b>County</b>	<b>Camping</b>	<b>Hiking</b>	<b>Cross-country Skiing</b>	<b>Snowmobiling</b>
Schuyler	5	4	4	5
Seneca	5	5	5	4

Source: NY State Final Statewide Comprehensive Outdoor Recreation Plan (2003)  
Notes: 10-point scale where one indicates a large availability of recreation resources relative to demand and ten indicates most sites are heavily used.

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 FLNF will increasingly be seen as a place of relaxation, a quiet retreat from the built environment. As forest recreation demand grows, recreation activities are likely to conflict, especially on trails, in backcountry, at developed sites, and on roads and their nearby environs (Cordell 1999).

### **Assessment of FLNF 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 Finger Lakes 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 FLNF inventoried ROS indicates that current FLNF conditions can provide limited opportunities, settings, and experiences. Two ROS classes are currently inventoried on the FLNF: Roaded Natural and Rural (Table A-4). Approximately 45 percent of the Forest is inventoried in the Roaded Natural ROS class. Within these areas, developed recreation opportunities such as campgrounds, picnic areas, and other facilities are common. The remainder of the Forest (55%) is inventoried in the Rural ROS class. Within the Rural areas, the environment may be considerably altered and private homes and communities may be present. Sights and sounds of people are common, and visitor interactions are moderate to high.

ROS	Acres	Percent
Rural (R)	9,103	55%
Roaded	7,336	45%
Natural (RN)		

Source: FLNF GIS Data (layer: fl\_ros)

The FLNF 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 six developed sites managed by the FLNF to accommodate an array of recreation activities. Table A-5 lists the facility types provided across the Forest and their current capacity in PAOTs.

Developed Recreation Facility Type	Total Number of Areas	Total Capacity (PAOT) <sup>1</sup>
Campgrounds	3	175
Trail Shelters	1	6
Fishing Sites	2	39

Source: FLNF INFRA Data  
<sup>1</sup> PAOT is the capacity of developed recreation facilities in terms of “people at one time” a site can support

The Finger Lakes 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, horseback riding, snowmobiling, and 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 on the Forest. One indicator of recreation supply in terms of dispersed recreation opportunities is the mileage of trails on the Forest. FLNF trails provide a multitude of day, and limited overnight hiking opportunities (Table A-6).

Trail Managed Use	Miles
Hike	32
Horseback ride	17
Cross-country ski	15
Snowmobile	14
Mountain Bike	7

Source: FLNF INFRA Data  
 Notes: Total trail system is 38 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 Finger Lakes National Forest’s recreation benchmarks identify the maximum production potential for recreation settings, in terms of ROS class provided. Table A-7 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 Semi-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 Semi-primitive recreation opportunities. In this case, the FLNF would only be able to provide 821 acres of Semi-primitive opportunities. All of the remaining acreage would provide Roaded Natural opportunities. Furthermore, the Maximum Semi-primitive figures were calculated by hypothetically closing all class 1,2, or 3 Forest Service jurisdictional roads and generating ROS figures. In this case, closing all roads under Forest Service jurisdiction would still not provide any true Semi-primitive opportunities. This can only be achieved by acquiring key parcels of private land, which would allow the abandonment of town roads. The second 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 figures in the last row in the table, "Maximum Rural," represent the current condition on the Forest.

The last column in the table, Total MRVD, shows the maximum FLNF production potential in each ROS class, in terms of thousand Recreation Visitor Days. The current level of demand on the FLNF is 27.2 MRVD. Therefore, the maximum recreation capacity of the Forest currently exceeds the demand in all ROS recreation settings.

<b>Management alternative</b>	<b>Acres/ RVD provided per ROS class</b>			
	<b>Semi-Primitive*</b>	<b>Roaded Natural</b>	<b>Rural</b>	<b>Total MRVD</b>
Maximum Semi-primitive	821/ 14,923	15,618/ 8,550,855	0/0	8,566
Maximum Roaded Natural	0/0	16,439/ 9,000,353	0/0	9,000
Maximum Rural	0/0	9,103/ 4,983,893	7,336/ 12,049,380	17,033

\*The FLNF does not currently provide inventoried Semi-primitive ROS settings. The Semi-primitive acres in this column are used in this analysis only, and can only be created as described above.

## The Need for Change

### Known Problems with Existing Direction

There are several areas of concern with the existing recreation direction of the Finger Lakes National Forest. One area of significant concern involves conflicting expectations between various user groups on the FLNF, including the horseback riding, mountain biking, and hiking communities. Use conflicts, such as between horseback riding and hiking in the summer, or between cross-country skiing and snowmobiling in the winter, continue to be a concern. A public group that was formed to address this situation has proposed changes to the existing trail system that would attempt to resolve conflicts and add new uses in other areas. Due to competing priorities and concerns about declining trail budgets, however, the Forest Service has been unable to make significant progress in the analysis of this proposal.

The supply of various types of trail opportunities also remains an issue. There are a few specific user groups asking for increased use levels in the Forest. For example, the mountain biking community is voicing increasing interest in using more of the Forest's trails. There is also demand for summer off-road vehicle (ORV) use of Forest trails. Illegal trail use is also occurring. In addition, the standards and guidelines currently allow horses and hikers on all portions of the Forest not specifically designated against their use. This S&G is causing resource damage and unauthorized trails, and needs to be reviewed.

Management of lands immediately adjacent to recreation trails also continues to be a concern. The current designation of a 100-foot wide corridor on both sides of forested recreation trails needs clarification. Although the Forest Plan's Record of Decision states a trail width for the trails in the Interloken and Finger Lakes Trail Systems, this direction was not translated into formal trail corridors with a distinct MA. As recreation trails cross several different Management Areas, it can be difficult to simultaneously meet trail objectives and those of adjacent MAs.

Additional Management Area concerns include the need for the MAs to reflect the different management objectives for the Finger Lakes Trail, which is part of the North Country National Scenic Trail, and the Interloken Trail, which is a National Recreation Trail.

Management direction for the Ravine Trail also needs to be strengthened. The fact that this trail is a de facto old growth Management Area needs to be reflected in the MAs stated purpose, by including old growth ecological objectives. The standards and guidelines for this trail need to be reconciled so that both recreation and old growth goals can be achieved.

### **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 provided 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. Furthermore, the Plan revision process includes a review of standards and guidelines, which gives the FLNF the ability to resolve issues by revising those standards and guidelines. The planning process also includes the ability to refine management areas, which will address the concerns noted above.

## **Timber Management**

### **Introduction**

A major issue for timber management on the FLNF 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 have had mixed results. Intolerant species such as oak and aspen cannot be regenerated using these silvicultural methods. In addition, sun-loving shrub species such as blueberries were being lost. Monitoring indicated that uneven-aged management, the primary 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 locust plantations as well as enhance wildlife habitat for certain species. Forest age class composition objectives have generally been met. The desired results in terms of acres treated and vegetative response have been satisfactory, although there has been an under achievement of acres treated and, consequently, volume. The lack of markets for small diameter trees and competition for funding between the FLNF and GMNF may account for the under achievement. In MA 3.1, the even-aged management emphasis 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 (ASQ) is defined as the maximum amount of chargeable timber volume that can be sold from a plan area (the National Forest) 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 ASQ. Each Forest Plan that provides for a timber sale program must establish an ASQ. 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 ASQ should be for any given national forest, or how it should be determined. The range includes high extremes by setting the ASQ at the maximum sustainable harvest level calculated at biological potential, to low extremes where no timber harvest would occur on National Forest System lands (an ASQ of zero). Although ASQ is defined as a ceiling, it has often been perceived by some members of the public as a firm target to be met, even at the expense of other resources.

The FLNF 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 FLNF 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). This output is then converted to thousands of board feet (MBF).

The National Forest Management Act (NFMA) requires that 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 ASQ focus from volume harvested to acres managed/sold.

The FLNF has been unable to offer timber for sale at the Forest Plan level projected ASQ of 400 thousand board feet (MBF) annually. The primary reason is that markets for pulpwood are poor in the Finger Lakes region. Within Seneca and Schuyler Counties, a total of 1.7 million cubic feet of timber was processed by local mills. Sawtimber represented 63 percent, pulpwood contributed 2 percent, and firewood represented 35 percent of the volume. Pulpwood volume contributes about half of the FLNF ASQ. An average of 248 MBF has been offered annually from 1987 to 2003. Local sawmills are not dependent upon the supply of FLNF timber. This has required careful timber sale planning to select harvest units with marketable products without compromising forest plan objectives.

Under the 1987 Forest Plan, FLNF ASQ targets were calculated as a combined value with the Green Mountain National Forest. In 1986, the FLNF portion was separated and an ASQ was determined specific to the FLNF. During Forest Plan revision, it was decided to conduct a separate ASQ determination for each National Forest. This will provide better projections for each National Forest because issues, forest types, and markets are varied between New York and Vermont.

Although pulpwood markets are not expected to improve in the Finger Lakes region, other factors have influenced the need to re-calculate the ASQ for the FLNF. The factors include: FLNF timber is a small part of Seneca and Schuyler Counties' total timber harvest, however, it represents a high-value niche; sawtimber stumpage prices have increased tremendously since 1986; new data is available from a Forest-wide stand inventory conducted in 2001; before 2001, much of the existing stand data was over 20 years old and it did not reflect current conditions. In addition, more than 2,980 acres of newly acquired land had been purchased since 1987; stand examination on the newly acquired lands was required to determine timber suitability for Forest Plan revision. ASQ levels needed to be recalculated to reflect new conditions, revised forest plan goals, standards, and guidelines, updated national

direction on ecosystem management, and other stewardship responsibilities of National Forest land managers.

## **Projection of Demand**

### **Assessment of the Demand for Goods and Services from the Finger Lakes 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 two to three percent 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 new homes and repair older homes will continue to increase into the 21<sup>st</sup> 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 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 an increasingly important source of wood fiber, up from 27 percent of total wood fiber used in 1991, to an estimated 44 percent in 2040 (USDA 1993).

Sawtimber markets are expected to remain strong within the Finger Lakes region. 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. FLNF sawtimber receipts have increased between 1986 and 2003. High-quality hardwood markets are expected to remain especially strong.

### **Assessment of FLNF Ability to Supply Goods and Services**

Table A-8 depicts updated information prepared during Forest Plan revision for the FLNF. The acreages not appropriate for timber management will vary by alternative, as identified during the revision of the Forest Plan. As a result, identifying the amount of suitable lands is not possible at this time and the figures shown in Table A-7 vary by alternative. 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. 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-9.

**Table A-8: Current Land Status on the Finger Lakes National Forest as related to timber production**

<b>Land Status</b>	<b>1986 (acres)</b>	<b>2004 (acres)</b>	<b>Change (acres)</b>
Total Land Area (net)	13,232	16,212	+ 2,980
Non-forested areas (land and water)	6,450	7,368	+ 918
Lands legally withdrawn from timber production (ex. Wilderness)	0	0	0
Lands not physically suited for timber production (ex. low site-productivity)	123	103	- 13
Lands not cost efficient for timber production and lands managed for other emphasis (ex. campgrounds, grazing, shrublands, TES species)	573	289	- 284
Lands Suitable for timber management or	6,086	6,677	+ 591
Lands Tentatively Suitable for timber management	0	1,775	+ 1,775

The Minimum Level Benchmark represents the least amount of management needed to maintain and protect the Forest as part of the National Forest System. 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 Present Net Value (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.

<b>Total Timber Volume (MCF/ Decade)</b>	<b>Minimum Management</b>	<b>Benchmarks Maximum Volume</b>	<b>Maximum PNV</b>
Decade 1 (Planned)	0	2020 MCF	1730 MCF
Decade 2 (Projected)	0	2020 MCF	1730 MCF
Decade 3 (Projected)	0	2020 MCF	1730 MCF
Decade 4 (Projected)	0	2020 MCF	1730 MCF
Decade 5 (Projected)	0	2020 MCF	1730 MCF

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 Finger Lakes National Forest. One area of concern involves the difficulty the FLNF has had achieving the desired sell 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 ASQ, resulting in an inaccurate projection of ASQ levels. In addition, FLNF stand data was combined with GMNF data to determine the ASQ for both Forests. Factors that would influence the FLNF ASQ were discounted, due to the overwhelming size of the GMNF portion of the analysis.

Another known problem under the 1987 Plan includes outdated, incomplete data. In 1986, the majority of the FLNF stand data was derived from inventories conducted prior to 1976. In 2001, a Forest-wide stand data collection project was completed. This inventory included newly acquired forested land and other FLNF forested lands. The new stand data provided the Forest with a unique opportunity to conduct an ASQ analysis with a high confidence of reliability.

An additional area of concern includes selection of appropriate harvest methods. Current direction in the 2002 Resources Planning Act indicates that the amount of clearcutting will be reduced (USDA 2002b). The FLNF scheduled clearcutting to regenerate aspen and locust, and to convert non-native pine stands to native hardwoods. 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. A stand was harvested on the FLNF using this technique in 1994, near the Potomac campground. Annual monitoring of regeneration and residual tree response was conducted and the results showed that this harvesting method was, and could continue to be, used successfully on the FLNF. Data from monitoring was incorporated into FVS modeling for Plan revision. There is a need to address the problems with the timber sale outputs and to re-examine harvest methods. The land suitability classification is required to be reviewed and if changes in classification occur, it will directly relate to changes in 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 2004) to manage natural resources using an ecological approach to create diverse, healthy, productive, and sustainable ecosystems. There is a need to incorporate this direction in revised Forest Plans.

### **Assessment of the Ability to Resolve Concerns through the Planning Process**

The Plan revision process offers various opportunities to address the timber management concerns noted above. Updated modeling procedures and more accurate ground data allow for improved ASQ predictions. Another issue for ASQ is tied to how much timber volume is harvested from the FLNF, subsequent to the planning process. Actual annual timber sell volumes are determined through the federal budget process at the national level. The budget is proposed by the Executive branch and approved by the 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 FLNF is administratively considered a part of the Green Mountain National Forest (GMNF) and therefore receives allocated dollars and targets in combination with the GMNF. 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 will be addressed through the planning process is 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 FLNF. In addition, some public concern has stressed the need to manage the FLNF for future old growth. The issues of forest age-class distribution, uneven-aged versus even-aged prescriptions, 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.

## Literature Cited

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USDA Forest Service. 2002b. "Planning Act - Timber Outputs by County: Standard 42 tables for Seneca and Schuyler Counties, NY."

USDA Forest Service. 2004. Superior National Forest Land and Resource Management Plan. Milwaukee, WI.

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## APPENDIX B RECREATION OPPORTUNITY SPECTRUM (ROS)

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<b>Introduction and Protocol</b> .....	B – 1
<b>FLNF Data Sources</b> .....	B – 1
<b>FLNF Results</b> .....	B – 2
<b>Recreation Opportunity Spectrum Maps</b> .....	B – 3

### Introduction and Protocol

Appendix B, Recreation Opportunity Spectrum (ROS), summarizes the ROS Inventory for the Finger Lakes National Forest (FLNF). ROS has been used as a framework for identifying, classifying, planning, and managing a range of recreation settings. Six distinct settings – Urban, Rural, Roded Natural, Semi-primitive Motorized, Semi-primitive Non-motorized, and Primitive – are defined using specific physical, managerial, and social criteria. For detailed information on ROS categories and criteria, refer to the ‘Recreation Opportunities and Forest Settings’ Section, Chapter 3, Final Environmental Impact Statement or *ROS User Guide, 1982 USDA Handbook*, and the *ROS Primer and Field Guide, 1990 USDA, R6-REC-021-90*. Additional information on applications, refer to *Forest Service Manuals 2311 and 2330*.

Direction for the FLNF ROS inventory was interpreted from *National ROS Inventory Mapping Protocol* (USDA 2003). The protocol addresses the need and benefits of using ROS and stresses the importance of consistent definitions and methodologies for mapping a nationally recognized classification. The protocol includes general guidelines, inventory mapping steps, and supplemental material to assist in the ROS inventory. A key supplement provided with the protocol is an ARC Macro Language file, or AML. An AML is a proprietary high-level algorithmic language for generating end-user applications in ArcInfo Workstation. Utilizing the AML, the Geographic Information System (GIS) component of the ROS inventory is automated and standardized. It is important to note that the AML takes the ROS inventory through Step 8. Step 9 in the protocol states “resolve inconsistencies,” and is not covered in the AML and the analysis.

### FLNF Data Sources

- **Better than primitive roads** – product of FLNF system roads GIS layer (*travel\_route\_road*). Selected set includes all roads with an operational maintenance level (OML) 3-5 and OML 2 **NOT** with local function classification and native material surface type. Roads not identified on FLNF system and surrounding FLNF were put into this category. Information was not available spatially for further analysis.
- **Primitive roads** – product of GMNF system roads GIS layer (*travel\_route\_road*). Selected set includes all roads with an operational maintenance level (OML) 1 and OML 2 with local function classification and native material surface type.
- **Motorized trails** – product of FLNF system trails (*travel\_route\_trail*) and verbal communication with FLNF staff identifying motorized trails on the FLNF system (Backbone, No-Tan-Takto, and Burnt Hill Trail).

- **Motorized lakes** – selected lakes were Seneca and Cayuga. Verbal communication with FLNF staff confirmed no lakes on the FLNF are open to motorized use.
- **Railroad** – no active railroads are within the area of influence for analysis.

## FLNF Results

The FLNF ROS analysis results are shown below in Table B-1. The table represents the ROS classifications as directed by the National ROS Inventory Mapping Protocol (12/2003) and considers step 6, distinguishing between Roaded Natural, Rural, and Urban ROS classes. The step 6 exercise was determined by the Recreation Program Manager's field judgment with verification by FLNF field staff. Otherwise, the entire FLNF would be classified as Roaded Natural. Table B-2 represents the results before step 4, refine primitive and semi-primitive polygons applying the size criteria. No area on the FLNF meets the size criteria for Primitive and Semi-primitive classification. The classifications are useful, however, for identifying potential areas, on a small scale, where managers may manage toward more 'remote' recreational opportunities.

ROS Winter	Acres	Percent of FLNF
Urban	0	0%
Rural	9,103	55%
Roaded Natural	7,336	45%
Semi-primitive Motorized	0	0%
Semi-primitive Non-motorized	0	0%
Primitive	0	0%
<b>Total</b>	<b>16,439</b>	<b>100%</b>

ROS Winter (pre-step 4 <sup>1</sup> )	Acres	Percent of FLNF
Urban	0	0%
Rural	0	0%
Roaded Natural	15,618	95%
Semi-primitive Motorized SMALL	814	5%
Semi-primitive Non-motorized SMALL	7	0%
Primitive	0	0%
<b>Total</b>	<b>16,439</b>	<b>100%</b>

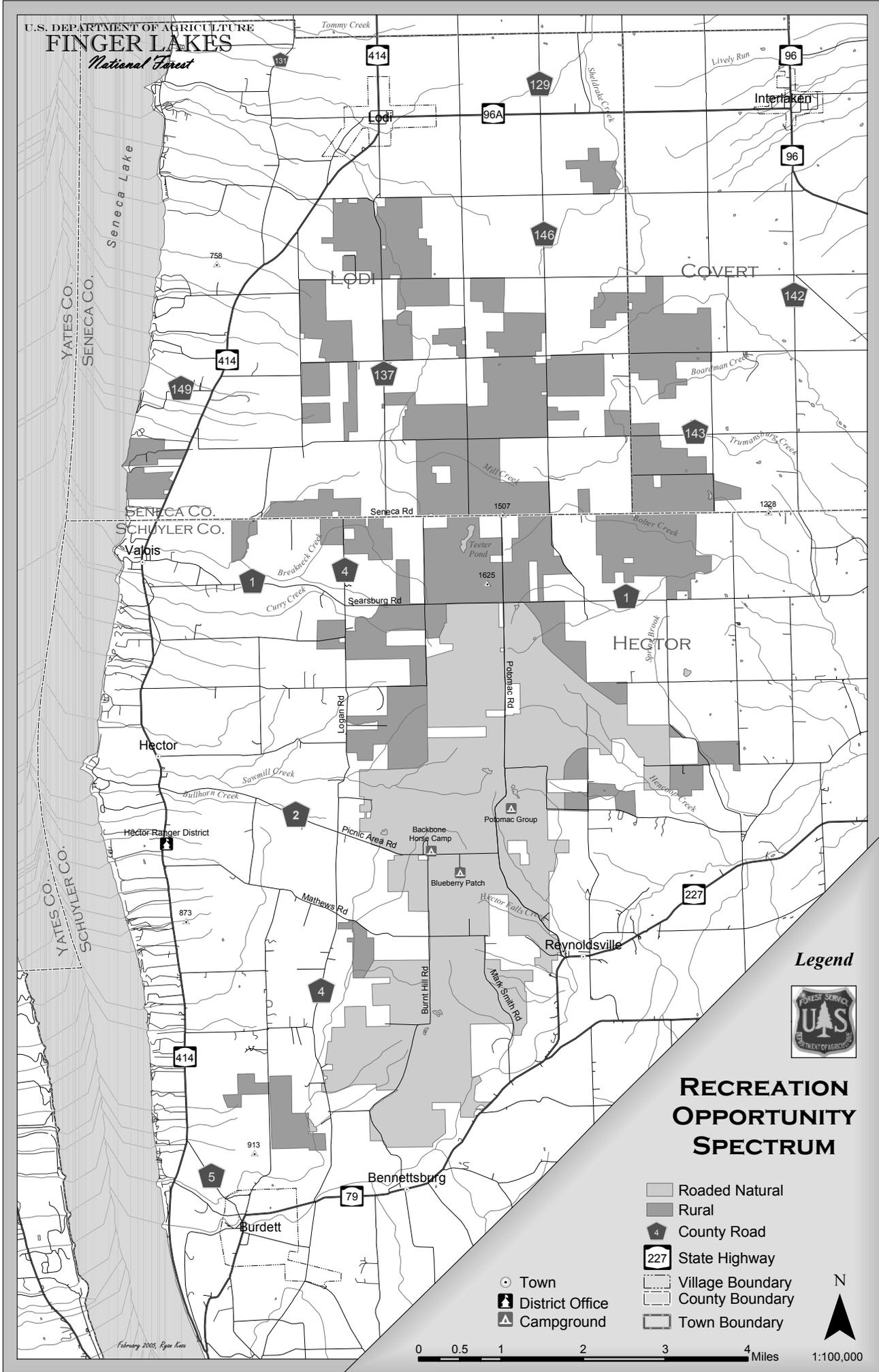
<sup>1</sup> Step 4: Refine primitive and semi-primitive polygons applying size criteria

## Literature Cited

USDA Forest Service. 1982. 1982 ROS User Guide.

USDA Forest Service. 1990. ROS Primer and Field Guide, R6-REC-021-90.

USDA Forest Service. 2003. National ROS Inventory Mapping Protocol



*Legend*



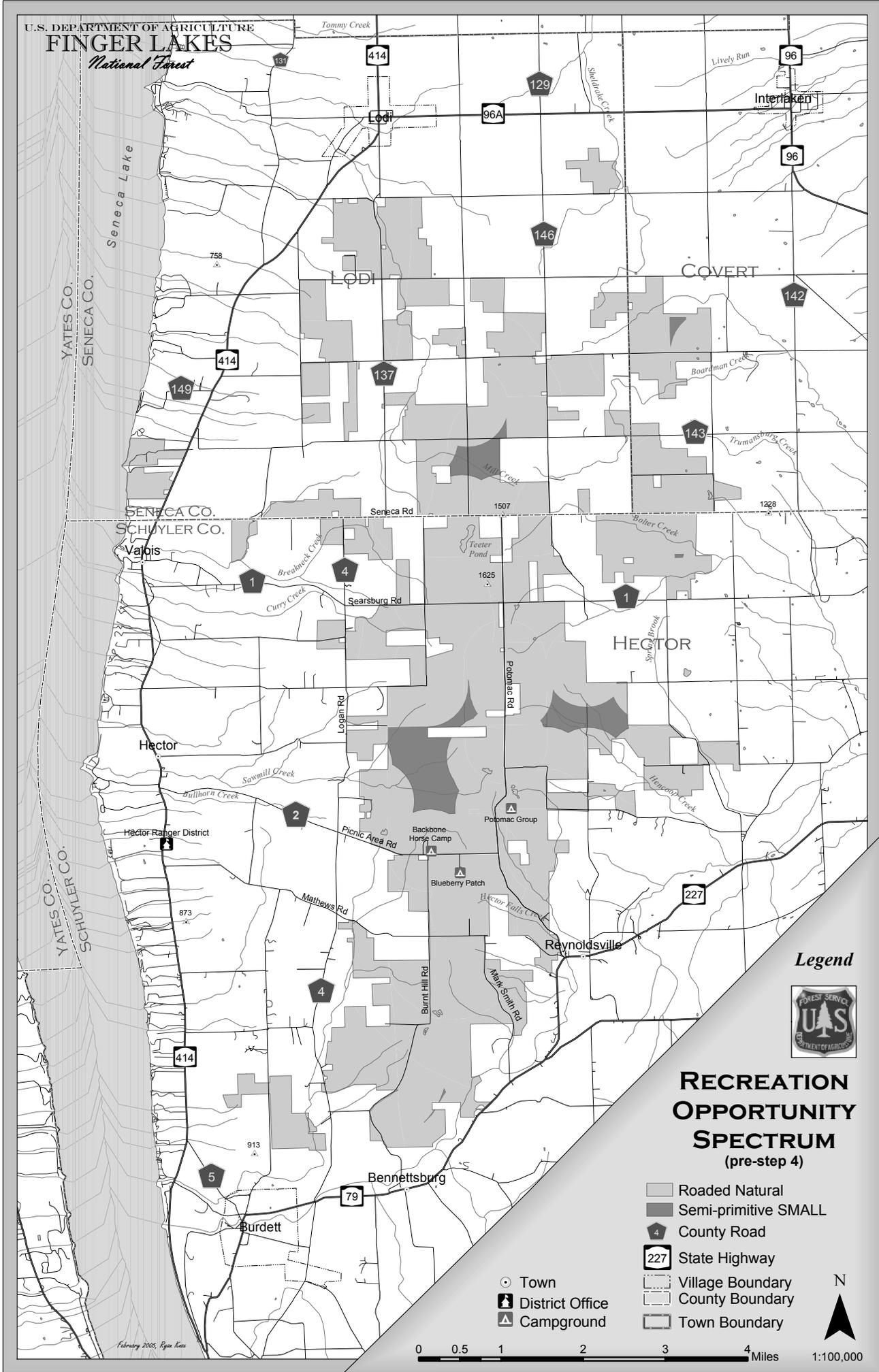
**RECREATION  
 OPPORTUNITY  
 SPECTRUM**

- Roded Natural
- Rural
- County Road
- State Highway
- Village Boundary
- County Boundary
- Town Boundary

- Town
- District Office
- Campground



*February 2005, Ryan Kuss*



*Legend*



**RECREATION  
 OPPORTUNITY  
 SPECTRUM**  
 (pre-step 4)

- Routed Natural
- Semi-primitive SMALL
- County Road
- State Highway
- Village Boundary
- County Boundary
- Town Boundary

- Town
- District Office
- Campground



*February 2005, Ryan Kuss*

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## APPENDIX C MANAGEMENT INDICATOR SPECIES (MIS)

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Management indicator species (MIS) are vertebrate or invertebrate species selected for monitoring habitat conditions on the Forest, because their population changes are believed to indicate the effects of management activities (36 CFR 219.19(a)(1)). Appendix C of the 1987 Forest Plan (USDA 1987: pp. C.03-C.04) lists 11 MIS for the FLNF.

The Forest Service made several changes in MIS for the 2006 Forest Plan. In 1988, the Forest Service recognized that four species listed as MIS for the FLNF were inappropriate (USDA 1989; Toth 2000; C. Grove, personal communication, September 2004). Occurrence of the species and suitable habitat are limited on the FLNF for the barred owl (MIS for mature and over-mature northern hardwood forest) and blackpoll warbler (MIS for high-elevation spruce-fir forest). The yellow-bellied sapsucker (MIS for mature-old growth aspen and birch) and tree swallow (MIS for beaver flowage-wetland) were judged to be ineffective indicators for their respective habitats because these species adapt readily to a variety of habitat conditions.

MIS selected for the 2006 Forest Plan generally link to issues or conditions directly associated with active habitat manipulation and to habitat conditions expected to change substantially over time. Three of the revised MIS are linked to indicators identified for wildlife and wildlife habitat in the Final Environmental Impact Statement (FEIS, section 3.6): grassland, shrubland, and contiguous, mature forest. Grassland and shrubland habitats are maintained through vegetation management, particularly mowing, prescribed fire, and timber management. The FLNF has the unique opportunity in the Finger Lakes Region to provide large areas of contiguous, mature and older forest. The selected MIS can track the influence of this contiguous forest condition on regional wildlife. The remaining three revised MIS are linked to three important wildlife habitat types on the FLNF: young deciduous trees, aspen, and oak-hickory. In the Draft Environmental Impact Statement (DEIS), the Forest Service selected American woodcock (*Scolopax minor*) as MIS for grassland. The Forest Service based the selection on the woodcock's use of open fields as singing grounds, acknowledging that woodcock rely on other habitat types extensively for nesting and brood rearing. Based on public comments and consultation with Forest Service staff and other biologists, the Forest Service replaced American woodcock with an assemblage of grassland birds that are linked more directly to grassland habitat: savannah sparrow, bobolink, and eastern meadowlark. Rationale for selection of MIS for the 2006 Forest Plan is presented in greater detail in FEIS section 3.6 (Wildlife and Wildlife Habitat). Table C-1 lists MIS for the 2006 Forest Plan, along with their associated issue or habitat condition. Table C-2 lists the 11 MIS for the 1987 Forest Plan, along with the representative habitat and disposition of each for the 2006 Forest Plan.

**Table C-1: MIS for the 2006 Forest Plan, linked to resource issues or important habitat types and conditions**

MIS	Issue or habitat
Savannah sparrow ( <i>Passerculus sandwichensis</i> ) Bobolink ( <i>Dolichonyx oryzivorus</i> ) Eastern meadowlark ( <i>Sturnella magna</i> )	Grassland
Common yellowthroat ( <i>Geothlypis trichas</i> )	Shrubland
Black-throated blue warbler ( <i>Dendroica caerulescens</i> )	Contiguous mature forest
Chestnut-sided warbler ( <i>Dendroica pennsylvanica</i> )	Young deciduous trees (age 0-9 years)
Ruffed grouse ( <i>Bonasa umbellus</i> )	Aspen
Gray squirrel ( <i>Sciurus carolinensis</i> )	Oak-hickory

**Table C-2: Disposition of 1987 Finger Lakes National Forest Land and Resource Management Plan (LRMP) Management Indicator Species (MIS).**

MIS	Representative habitat	Disposition for 2006 Forest Plan
American woodcock	Permanent openings; grass/forb (pasture)	Initially in 2006 Forest Plan as MIS for grassland, replaced in favor of an assemblage of three grassland bird species Ruffed grouse in 2006 Forest Plan as MIS for aspen;
Ruffed grouse	Permanent openings, shrub; regenerating and young aspen	Common yellowthroat selected as a more appropriate MIS for shrubland In 2006 Forest Plan as MIS for young deciduous trees (age 0-9 years)
Chestnut-sided warbler	Regenerating (Appalachian) hardwood forest	In 2006 Forest Plan as MIS for young deciduous trees (age 0-9 years)
Gray squirrel	Mature and over-mature Appalachian hardwoods; mature and old growth oak	In 2006 Forest Plan as MIS for oak-hickory forest
White-tailed deer ( <i>Odocoileus virginianus</i> )	Mature-old growth softwood forest	Not in 2006 Forest Plan as MIS; not linked to habitat associated with active manipulation
Eastern bluebird ( <i>Sialia sialis</i> )	Cavities, snags; open areas; orchards	Not in 2006 Forest Plan as MIS; no longer a species of concern on the FLNF; maintenance and monitoring of nest boxes will continue
Northern goshawk ( <i>Accipiter gentilis</i> )	Mature hardwood forest	Not in 2006 Forest Plan as MIS; will be monitored as RFSS; nests too infrequently on FLNF to be an effective MIS
Barred owl ( <i>Strix varia</i> )	Mature and over-mature northern hardwoods	Not in 2006 Forest Plan as MIS; limited occurrence and habitat on the FLNF
Blackpoll warbler ( <i>Dendroica striata</i> )	High-elevation, mature softwood forest	Not in 2006 Forest Plan as MIS; limited occurrence and habitat on the FLNF
Yellow-bellied sapsucker ( <i>Sphyrapicus varius</i> )	Mature and old growth aspen and birch	Not in 2006 Forest Plan as MIS; ineffective indicator for representative habitat because of adaptability to a variety of habitat conditions
Tree swallow ( <i>Tachycineta bicolor</i> )	Beaver flowage-wetland	Not in 2006 Forest Plan as MIS; ineffective indicator for representative habitat because of adaptability to a variety of habitat conditions

## Literature Cited

- Grove, C. Wildlife Biologist, Green Mountain and Finger Lakes National Forests, retired. Personal communication to Sue Howle, Environmental Coordinator, Green Mountain and Finger Lakes National Forests, 23 September 2004.
- Toth, E. 2000. A Systematic Review of the selection, use, and monitoring of management indicator species on the Green Mountain and Finger Lakes National Forests. Unpublished Report. Green Mountain and Finger Lakes National Forests, Rutland, VT. Revised 19 December 2000.
- USDA Forest Service. 1987. Land and Resource Management Plan. Finger Lakes National Forest, Hector, NY.
- USDA Forest Service. 1989. Forest Plan monitoring and evaluation report 1988. Finger Lakes National Forest, Hector, NY.

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## APPENDIX D PROPOSED AND PROBABLE PRACTICES

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<b>Introduction</b> .....	D – 1
<b>Land Classification</b> .....	D – 1
<b>Timber Practices</b> .....	D – 2
<b>Other Management Practices</b> .....	D – 3

### Introduction

The purpose of this appendix is to display estimates of the proposed and probable management practices expected on the Forest during the next two decades of Plan implementation, as well as estimates of the goods and services provided by the Finger Lakes National Forest (FLNF). Appendix D also includes information on how FLNF lands are classified in terms of multiple-use objectives. The information in this appendix refers to practices and goods expected under the Selected Alternative at its full implementation level.

Proposed management practices are practices expected on the Forest during the first ten years of Plan Implementation (Decade 1). Probable management practices are those expected on the Forest during the second ten years of Plan Implementation (Decade 2). The schedule of management practices provides information and direction to achieve the desired future conditions (DFCs) set out in the Forest Plan goals and objectives. Proposed actions will require an analysis to determine whether Forest Service or non-Forest Service proposals are within Forest Plan direction, in compliance with the National Forest Management Act and the National Environmental Policy Act, and meet other appropriate laws and regulations.

The proposed and probable practices and outputs are projections and estimates, however, which are subject to many variables and changing conditions. Actual amounts may vary from these projections. Many of these estimates are based on available inventory data, and some are based on computer modeling. Some of the factors that may influence these projected outputs and amounts are:

- Proposals are subject to site specific analysis to determine actual outputs.
- Outputs are subject to Forest Service budgets and funding of specific FLNF resource programs.
- Some outputs are dependent upon actions of Forest Service cooperators.

### Land Classification

The amount of land available to contribute to the timber sale program on a regularly scheduled basis can be compared to the total acreage of National Forest System land. Table D-1 compares the acreage of lands suitable for timber production on the FLNF to other land classifications on the Forest.

<b>Classification</b>	<b>Acres</b>
Total National Forest System Land	16,439
Non-forest and water	7,595
Legally withdrawn (Experimental Forests, RNA's)	0
Land not physically suited for timber production	103
Land not appropriate for timber production due to other resource management (riparian, campgrounds, Ecological Areas, candidate Research Natural Areas, Future Old Forest)	3,041
Lands suitable for timber production	5,700
Source: FLNF Timber Model GIS layer, CDS database, September 2004.	

## Timber Practices

### Average Annual Allowable Sale Quantity (ASQ)

The average annual allowable sale quantity of timber (ASQ) is the maximum amount of volume that may be offered and sold during a decade of Forest Plan implementation from land identified for timber management. During Decade 1 (the first ten years of plan implementation), the average annual ASQ on the FLNF is 258 thousand board feet. During Decade 2, the average annual ASQ is 258 thousand board feet. Average annual ASQ means that the amount of timber that may be sold on the Forest in a given year may exceed 258 thousand board feet as long as the decadal ASQ is not exceeded.

Table D-2 shows the volumes that can be harvested in each decade on a long term, sustained yield capacity. Volume between decades varies less than three percent.

<b>Decade</b>	<b>MBF</b>
1	258
2	258
3	258
4	258
5	258
6	258
7	258
8	258
9	258
10	258

### Proposed and Probable Sawtimber and Pulpwood

Table D-3 shows the proposed (Decade 1) and probable (Decade 2) volumes of sawtimber and pulpwood expected to be produced on the Forest.

	<b>Decade 1</b>	<b>Decade 2</b>
Sawtimber (average MBF/year)	155	181
Pulp (average MBF/year)*	103	77
*For comparison, 2 pulpwood cords = 1 MBF		

### Proposed and Probable Harvest Management Practices

Table D-4 lists the estimated acreage of silvicultural practices that would be used to work toward the vegetative and other multiple-use desired conditions and objectives of the Forest Plan. The table displays the amount of each harvest treatment for the first two decades of plan implementation based on modeling. Actual treatments during plan implementation may vary from these modeled outputs. Even-aged regeneration harvest set the tree stand back to age zero, meeting the 0-9 year old age class objective. As the name implies, uneven-aged treatments are intended to create and maintain an uneven-aged stand condition.

<b>Estimates of Management Practices</b>	<b>Decade 1 Acres</b>	<b>Decade 2 Acres</b>
Even-aged Regeneration Harvest	156	250
Even-aged Intermediate Harvest	352	133
Uneven-aged Harvest	360	513
<b>Total Harvest</b>	<b>868</b>	<b>896</b>

### Other Management Practices

In addition to timber production and vegetative management activities, other forest management activities are also proposed on the FLNF. Table D-5 lists the other Forest management activities that are proposed to work toward the desired conditions and objectives during the first 10 years of plan implementation. As with all estimates in this appendix, however, these proposed practices and activities are projections only, and actual amounts may vary, depending on factors such as budgets and partner cooperation.

<b>Table D-5: Proposed Management Practices</b>		
<b>Activity or Practice</b>	<b>Unit of Measure</b>	<b>Estimated Amount (Decade 1)</b>
<b>Recreation Resources</b>		
Trail Improvement	Miles	3-6
Trail Maintenance – to standard	Miles	50-200
Trail Rehabilitation	Miles	20-40
Trail Maintenance – total system	Miles	380
<b>Vegetation Management</b>		
Site Preparation/ Reforestation	Acres	250
Stand Improvement	Acres	80-120
Thinning Harvest	Acres	250-300
Shelterwood Regeneration	Acres	100-150
Shelterwood Removal	Acres	50-100
Selection Harvest	Acres	325-375
Clearcut	Acres	30-50
<b>Wildlife, Fisheries, Rare Plant, Rare or Outstanding Natural Community Resources</b>		
Shrub Opening Maintenance	Acres	1,000-1,500
Wildlife Pond Maintenance	Ponds	6
Pasture Maintenance		
Mowing	Acres	7,500-10,000
Liming	Acres	500-1,000
New Fencing	Miles	4-6
Reconstruct Fence	Miles	20-30
New Stock Pond	Ponds	3
Facilities	Facilities	5
Total Forage Production	Animal Unit Month	108,500
Non-Commercial Clearcutting of Aspen	Acres	80
Monitor condition of sites and species under special forest product permits	Sites	All
Inventory for TES species and rare or outstanding natural communities	Acres	1,600
Monitor known rare or outstanding ecological, biological, or geological features, including TES occurrences	Sites	All
Prepare conservation plans for each rare or outstanding area	Sites	7
Establish RNAs	Sites	2
Protect known occurrences of TES species	Sites	All
Protect, and where feasible, improve or restore habitat conditions for TES species	Sites	All
Protect important habitat sites for TES bats	Roost and den trees	Adequate numbers of roost and den trees
Update conservation assessments for RFSS	Species	All
Fish Stocking	Ponds	6
Fish Surveys	Surveys	3
Heritage Resource Protection Acres Surveyed	Acres	250-750
Agreements w/County Law	Agreements	2
NF land signs placed and/or maintained	Signs	20-30

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## APPENDIX E RELEVANT LAWS

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<b>Introduction</b> .....	E – 1
<b>Forest Service Policies</b> .....	E – 1
<b>Federal Laws and Regulations</b> .....	E – 2
<b>State and Local Laws and Regulations</b> .....	E – 5
<b>Agreements and Memorandums of Understanding</b> .....	E – 5

### Introduction

This appendix lists the statutes, regulations, policies, and agreements that are relevant to forest planning and forest management activities on National Forest System lands.

### Forest Service Policies

The following is a partial listing of Forest Service policies relevant to the Forest Plan. A complete listing can be found in the Forest Service Manual and the Forest Service Handbook. Together, these are known as the Forest Service Directives System. The Forest Service Directives System is the primary basis for the management and control of all internal programs, and serves as the primary source of administrative direction to Forest Service employees. The system sets forth legal authorities, management objectives, policies, responsibilities, delegations, standards, procedures, and other instructions.

The Forest Service Manual (FSM) contains legal authorities, goals, objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis by Forest Service line officers and primary staff, in more than one unit, to plan and execute assigned programs and activities. Forest Service Handbooks (FSH) are directives that provide instructions and guidance on how to proceed with a specialized phase of a program or activity. Handbooks are either based on a part of the Manual or they incorporate external directives.

The majority of standards and guidelines used to implement Forest Plans are located in the Directives System under the following general headings and codes:

- 1010 Laws, Regulations, and Orders
- 1030 Forest Service Mission
- 1500 External Relations
- 1600 Information Services
- 1900 Planning
- 2060 Eco-system Classification, Interpretation, and Application
- 2070 Biological Diversity (Reserved)
- 2090 Aquatic Ecosystem Management
- 2200 Range Management
- 2300 Recreation, Wilderness, and Related Resource Management
- 2400 Timber Management
- 2500 Watershed and Air Management
- 2600 Wildlife, Fish, and Sensitive Plant Habitat Management

2700 Special Uses Management  
2800 Minerals and Geology  
3400 Forest Pest Management  
5100 Fire Management  
5400 Land Ownership  
7400 Public Health and Pollution Control Facilities  
7500 Water Storage and Transmission  
7700 Transportation System

The intent of many Forest-wide standards and guidelines is incorporated into permits that authorize specific uses on the National Forests. General permitting requirements can be referenced as follows:

Minerals FSM 2800  
Range Management FSM 2200  
Recreation FSM 2300  
Special Uses FSM 2700  
Timber Management FSM 2400  
Transportation System FSM 7700

## Federal Laws and Regulations

### Statutes

Alaska National Interest Lands Conservation Act of 1980  
American Indian Religious Freedom Act of August 11, 1978  
Americans with Disabilities Act of 1990  
Anderson-Mansfield Reforestation and Revegetation Act of October 11, 1949  
Antiquities Act of June 8, 1906  
Archaeological Resources Protection Act of October 31, 1979, as amended 1988  
Architectural Barriers Act of 1968  
Bankhead-Jones Farm Tenant Act of July 22, 1937  
Clarke-McNary Act of June 7, 1924  
Clean Air Act of August 7, 1977, as amended (1977 and 1990)  
Clean Water Acts (1948-87)  
Clean Water Amendments, ("Federal Water Pollution Control Act Amendments of 1972")  
Color of Title Act of December 22, 1928  
Common Varieties of Mineral Materials Act of July 31, 1947  
Cooperative Forestry Assistance Act of July 1, 1978  
Disaster Relief Act of May 22, 1974  
Eastern Wilderness Act of January 3, 1975  
Economy Act of June 30, 1932  
Emergency Flood Prevention (Agricultural Credit Act) Act of August 4, 1978  
Endangered Species Act (ESA) of December 28, 1973  
Energy Policy Act of 2005  
Energy Security Act of June 30, 1980  
Federal Advisory Committee Act of October 6, 1972  
Federal Cave Resources Protection Act of November 18, 1988  
Federal Insecticide, Rodenticide, and Fungicide Act of October 21, 1972  
Federal Land Policy and Management Act of October 21, 1976  
Federal Noxious Weed Act of 1974  
Federal Plant Protection Act of 2000  
Federal Power Act of June 10, 1920

Federal Oil and Gas Leasing Reform Act of 1987  
Federal-State Cooperation for Soil Conservation Act of December 22, 1944  
Federal Water Pollution Control Act of July 9, 1956, as amended, (Water Quality Act of 1965, Clean Water Restoration Act of 1966)  
Federal Water Project Recreation Act of July 9, 1965  
Fish and Wildlife Conservation Act of September 15, 1960  
Fish and Wildlife Coordination Act of March 10, 1934  
Forest Highways Act of August 27, 1958  
Forest and Rangeland Renewable Resources Planning Act of August 17, 1974  
Freedom of Information Act of November 21, 1974  
Granger-Thye Act of April 24, 1950  
Historic Sites Act of 1935  
Joint Surveys of Watershed Areas Act of September 5, 1962  
Knutson-Vandenberg Act of June 9, 1930  
Land Acquisition Act of March 3, 1925  
Land Acquisition - Declaration of Taking Act of February 26, 1931  
Land Acquisition - Title Adjustment Act of July 8, 1943  
Land and Water Conservation Fund Act of September 3, 1964  
Law Enforcement Authority Act of March 3, 1905  
Leases around Reservoirs Act of March 3, 1962  
Migratory Bird Treaty Act of July 13, 1918  
Minerals Act of July 31, 1947  
Mineral Leasing Act of February 25, 1920  
Mineral Leasing Act for Acquired Lands Act of August 7, 1947  
Mineral Resources on Weeks Law Lands Act of March 4, 1917  
Mineral Springs Leasing Act of February 28, 1899  
Mining Claims Rights Restoration Act of August 11, 1955  
Mining and Minerals Policy Act of December 31, 1970  
Multiple-Use Mining Act of July 23, 1955  
Multiple-Use Sustained-Yield Act of June 12, 1960  
National Environmental Education Act of November 16, 1990  
National Environmental Policy Act (NEPA) of January 1, 1970  
National 1990 Farm Bill (title XII – Forest Stewardship Act) Act of November 28, 1990  
National Forest Management Act (NFMA) of October 22, 1976  
National Forest Roads and Trails Act of October 13, 1964  
National Historic Preservation Act of October 15, 1966, as amended (1980 and 1992)  
National Register of Historic Places  
National Trails System Act of October 2, 1968  
Native American Graves Protection and Repatriation Act of November 16, 1990  
Occupancy Permits Act of March 4, 1915  
Oil and Gas Leasing Reform Act of 1987  
Organic Administration Act of June 4, 1897  
Petrified Wood Act of September 28, 1962  
Pipelines Act of February 25, 1920  
Planning Rule of January 5, 2005 (70 FR 1023; 36 CFR 219.14)  
Preservation of American Antiquities Act of June 8, 1906  
Preservation of Historical and Archaeological Data Act of May 24, 1974  
Public Buildings Cooperative Use Act of 1976  
Public Land Surveys Act of March 3, 1899  
Public Rangelands Improvement Act of October 25, 1978  
Rehabilitation Act of 1973, as amended  
Renewable Resources Extension Act of June 30, 1978

Reorganization Plan Numbered 3 of 1946  
 Research Grants Act of September 6, 1958  
 Right of Eminent Domain Act of August 1, 1888  
 Rural Development Act of August 30, 1972  
 Safe Drinking Water Amendments Act of November 16, 1977  
 Shipstead-Newton-Nolan Act of July 10, 1930  
 Sikes Act of October 18, 1974  
 Small Tracts Act of January 22, 1983  
 Soil and Water Resources Conservation Act of November 18, 1977  
 Solid Waste Disposal (Resource Conservation & Recovery Act) Act of October 21, 1976  
 Supplemental National Forest Reforestation Fund Act of September 18, 1972  
 Surface Mining Control And Reclamation Act of August 3, 1977  
 Sustained Yield Forest Management Act of March 29, 1944  
 Telecommunications Act of 1996  
 Timber Export Act of March 4, 1917  
 Timber Exportation Act of April 12, 1926  
 Title Adjustment Act of April 28, 1930  
 Toxic Substances Control Act of October 11, 1976  
 Transfer Act of February 1, 1905  
 Twenty-Five Percent Fund Act of May 23, 1908  
 Uniform Federal Accessibility Standards U.S. Criminal Code (Title 18 USC Chapter 91 - Public Lands) Act of June 25, 1948  
 U.S. Mining Laws (Public Domain Lands) Act of May 10, 1872  
 Volunteers in the National Forests Act of May 18, 1972  
 Water Quality Improvement Act of April 3, 1965  
 Water Resources Planning Act of July 22, 1965  
 Watershed Protection and Flood Prevention Act of August 4, 1954  
 Weeks Act Status for Certain Lands Act of September 2, 1958  
 Weeks Act of March 1, 1911  
 Wild and Scenic Rivers Act of October 2, 1968  
 Wilderness Act of September 3, 1964  
 Wildlife Game Refuges Act of August 11, 1916  
 Wood Residue Utilization Act of December 19, 1980  
 Woodsy Owl/Smokey Bear Act of June 22, 1974  
 Youth Conservation Corps Act of August 13, 1970

### Code of Federal Regulations (CFR)

36 CFR 60	National Register of Historic Places
36 CFR 63	Determinations of Eligibility for Inclusion in the National Register of Historic Places
36 CFR 65	National Historic Landmarks Program
36 CFR 68	The Secretary of the Interior's Standards for Historic Preservation Projects
36 CFR 79	Cultural Resources
36 CFR 212	Forest Development Transportation System
36 CFR (Parts 212, 251, 261, and 295)	Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule
36 CFR 213	Administration Under Bank-Jones Act
36 CFR 219	Planning
36 CFR 221	Timber Management Planning
36 CFR 222	Range Management
36 CFR 223	Sale and Disposal of NFS Timber

36 CFR 228	Minerals
36 CFR 241	Fish and Wildlife
36 CFR 251	Land Uses
36 CFR 254	Landownership Adjustments
36 CFR 261	Prohibitions
36 CFR 291	Occupancy and Use of Developed Sites and Areas of Concentrated Public Use
36 CFR 292	National Recreation Areas
36 CFR 293	Wilderness Primitive Areas
36 CFR 294	Special Areas
36 CFR 295	Use of Motor Vehicles off Forest Development Road
36 CFR 296	Protection of Archaeological Resources
36 CFR 297	Wild and Scenic Rivers
36 CFR 800	Protection of Historic Properties
40 CFR 10	Native American Graves Protection and Repatriation Act Regulations
40 CFR 1500-1508	Council on Environmental Quality

### Executive Orders (EO)

EO 11593	Protection and Enhancement of Cultural Environment
EO 11990	Protection of Wetlands
EO 11991	Protection and Enhancement of Environmental Quality
EO 11644/11989	Use of Off-Roads Vehicles
EO 11988	Floodplain Management
EO 12113	Independent Water Project Review
EO 12682	Setting Customer Service Standards
EO 12898	Environmental Justice
EO 13007	Indian Sacred Sites
EO 13112	Invasive Species
EO 13186	Migratory Bird Protection
EO 13306	Amendment to EO 13212, Actions to Expedite Energy Related Projects

### State and Local Laws and Regulations

1975 NYSDEC Freshwater Wetlands Act  
New York State Best Management Practices (BMPs)

### Agreements and Memorandums of Understandings

<b>Cost Share and Cooperative Agreements</b>	
<b>Partner Name</b>	<b>Purpose</b>
Lodi Historical Society	Heritage Significance of Caywood Point
Schuyler County Sheriff Department	Cooperative Law Enforcement
Seneca County Sheriff Department	Cooperative Law Enforcement
Catherine Valley Chap. National Wild Turkey Federation	Annual Cost Share Agreement For Habitat Enhancement

## Agreements and Memorandums of Understandings (continued)

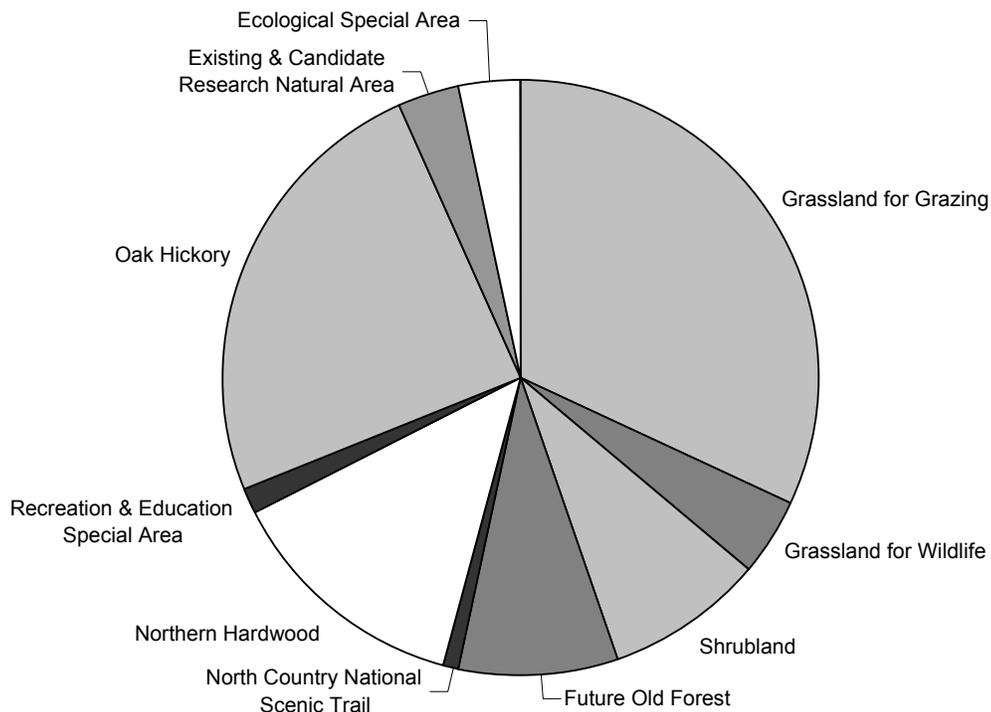
<b>Memorandums of Understanding (MOUs)</b>	
<b>Partner Name</b>	<b>Purpose</b>
Schuyler County	Cooperative Fire Agreement
Cornell University	Cooperation to ensure current, state-of-the-art techniques & information for management of the FLNF
Twin Lakes Snowmobile Association	Cooperate in maintaining snowmobile trails on the FLNF
NY Programmatic Agreement with SHPO	Cultural Resource Protection
ENFIA (Eastern National Forest Interpretive Assoc.)	Visitor Center Interpretive Information
Finger Lakes Trail Conference	Finger Lakes Trail maintenance
National Wild Turkey Federation	Wildlife habitat relations
NYS DEC, The Nature Conservancy, US Fowl, DOD	Prescribed burning
Student Conservation Association	Education / Project specific
Hector Grazing Association	Rangeland Management
Seneca Schuyler Wildlife	Wildlife habitat restoration

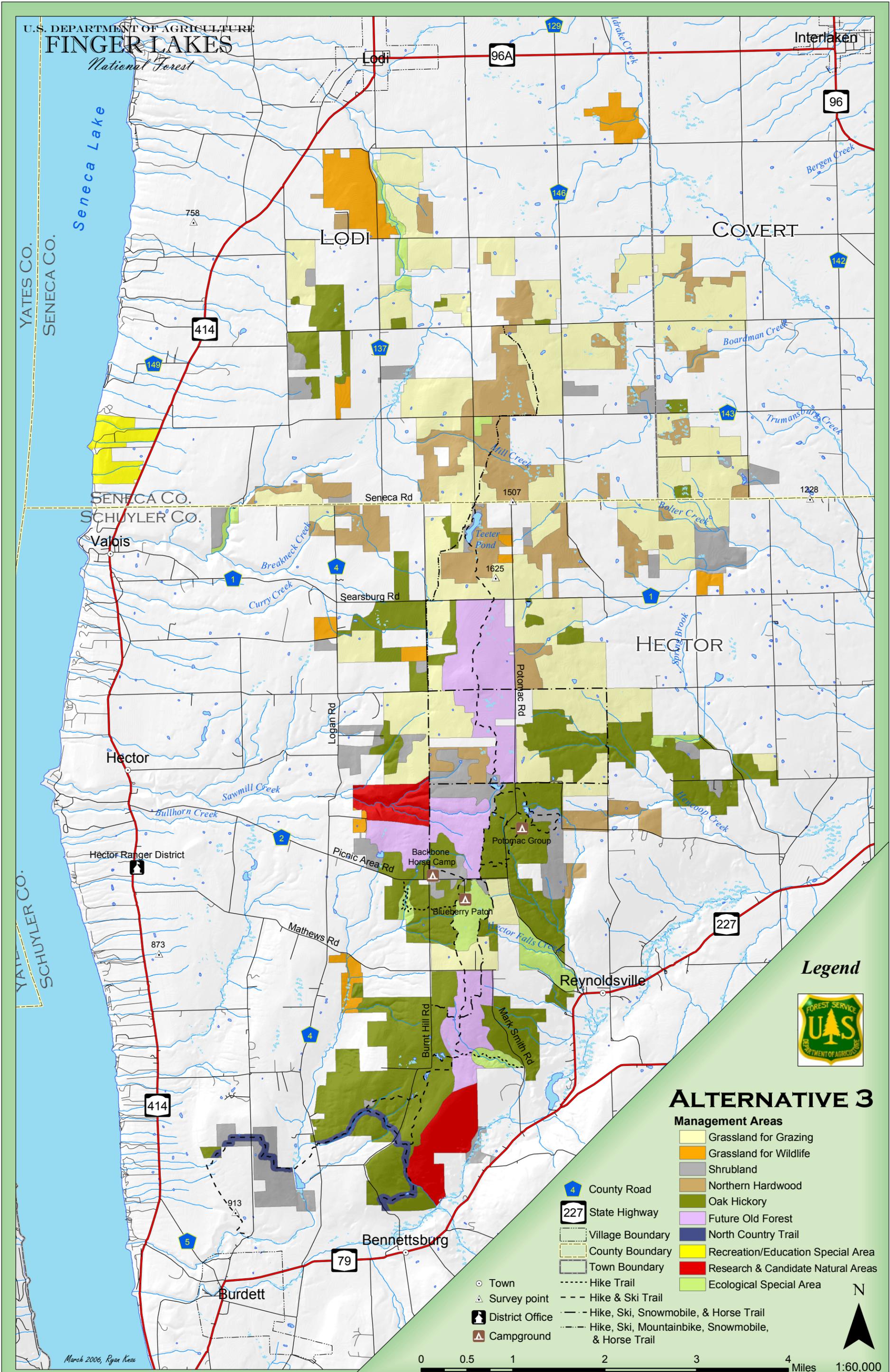
## APPENDIX F MAP

This appendix contains the management area acres and map for the Finger Lakes National Forest's 2006 Forest Plan.

### Management Area Allocations

Management Area (MA)	Acres	% FLNF
Grassland for Grazing	5,250	32%
Grassland for Wildlife	688	4%
Shrubland	1,421	9%
Northern Hardwood	2,189	13%
Oak Hickory	4,036	25%
Future Old Forest	1,398	9%
North Country National Scenic Trail	164	1%
Recreation & Education Special Area	218	1%
Existing & Candidate Research Natural Area	544	3%
Ecological Special Area	531	3%
<b>Total Forest GIS Acres</b>	<b>16,439</b>	





**Legend**



**ALTERNATIVE 3**

**Management Areas**

- Grassland for Grazing
- Grassland for Wildlife
- Shrubland
- Northern Hardwood
- Oak Hickory
- Future Old Forest
- North Country Trail
- Recreation/Education Special Area
- Research & Candidate Natural Areas
- Ecological Special Area

- 4 County Road
- State Highway
- Village Boundary
- County Boundary
- Town Boundary
- Hike Trail
- Hike & Ski Trail
- Hike, Ski, Snowmobile, & Horse Trail
- Hike, Ski, Mountainbike, Snowmobile, & Horse Trail

- Town
- Survey point
- District Office
- Campground

