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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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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.

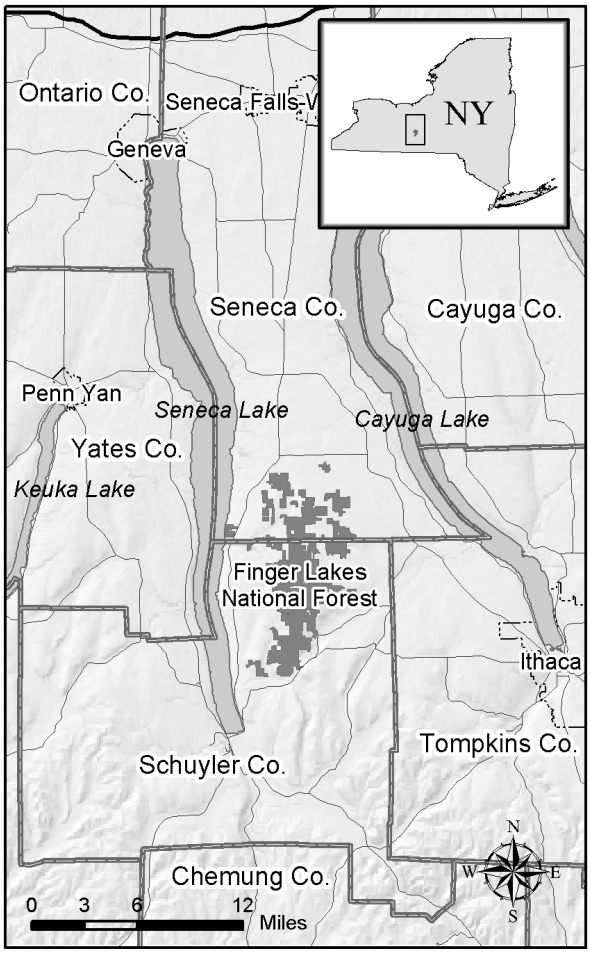


Figure 1.1-1: Location of the Finger Lakes National Forest in New York

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.

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2.1 ROLE OF THE FINGER LAKES NATIONAL FOREST

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.



Interloken 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.

Table 2.2-1: Habitat Composition Objectives for all FLNF Lands

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.

Table 2.2-2: Age-class Distribution Objectives for Suitable Lands Managed Using Even-aged Silvicultural Systems

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.

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.

Lecture to Girl Scout Troop

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)

Table 2.3-1: Protective Strip Width Guide

% Slope of land between disturbed area and water source	Width of protective strip between disturbed area and water source (ft) [1]
0-10	50
11-20	70
21-30	90
31-40*	110

[1]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 tees; 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

Table 2.3-2: Visual Condition Guidelines for On-Site and Off-Site Views

Viewer Sensitivity:	Visual Condition On-Site (within ½ mile):[1]
High	Up to 10% of travel corridor may be PERMANENT MODIFICATION. At least 90% will be RETENTION[2].
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.[2]
Low	Up to 1% per 1000 acres may be PERMANENT MODIFICATION. Up to 10% per 1000 acres may be TEMPORARY MODIFICATION.
Viewer Sensitivity:	**Visual Condition Off-Site (more than ½ mile):**
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)

[1] 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.
[2] 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.

Table 2.3-3: Visual Condition Guidelines Related to Timber Harvesting Activities on the Finger Lakes National Forest			
ACTIVITY	**VISUAL SENSITIVITY (foreground)**	**VISUAL QUALITY AND TIME**	**PERCEIVED SIZE AND SHAPE OF TEMPORARY OR PERMANENT OPENINGS[1]**
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
SHELTERWOOD WITH RESERVES, TWO CUT SHELTERWOOD, AND THREE CUT SHELTERWOOD	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.
	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.
CLEARCUT	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.
	Moderate	Partial retention within 1 year. Retention within 15 years.	Up to 5 acres with islands and irregular shape. Road and trailside 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.
VISUAL RESOURCE MITIGATIONS SHOULD BE DETERMINED ON A CASE BY CASE BASIS.			
[1] 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.

GRASSLAND FOR GRAZING (1.1)

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.

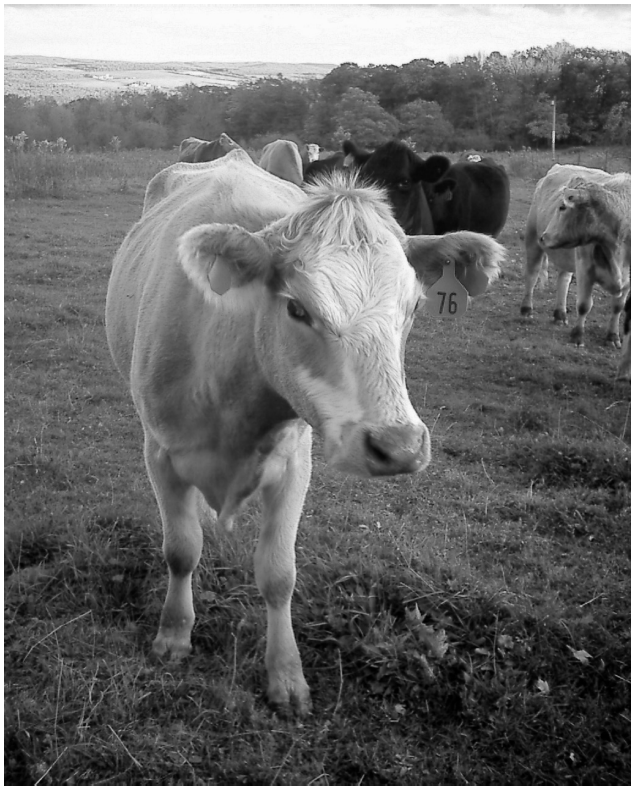
G-2: Old unused structures, such as wells and buildings, that are determined to not have significant historical value should be removed as funds permit.

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.



Cattle grazing 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.

GRASSLAND FOR WILDLIFE (1.2)

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

SHRUBLAND (1.3)

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 interspersion 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

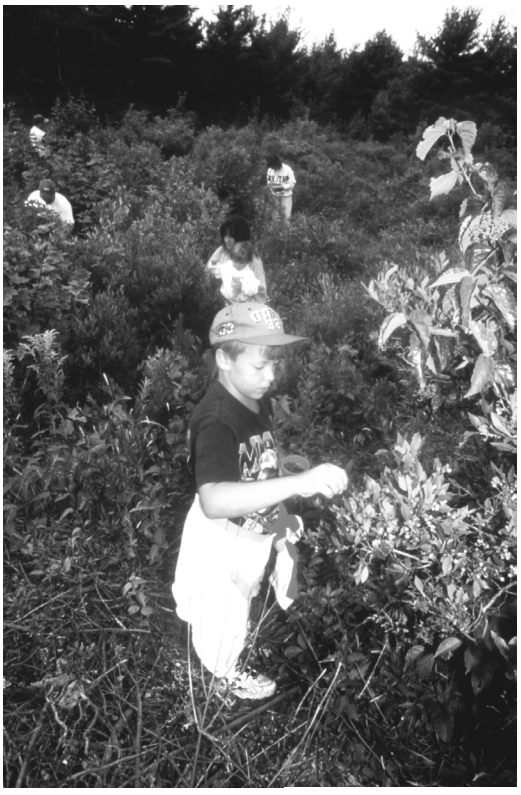
Guideline:

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

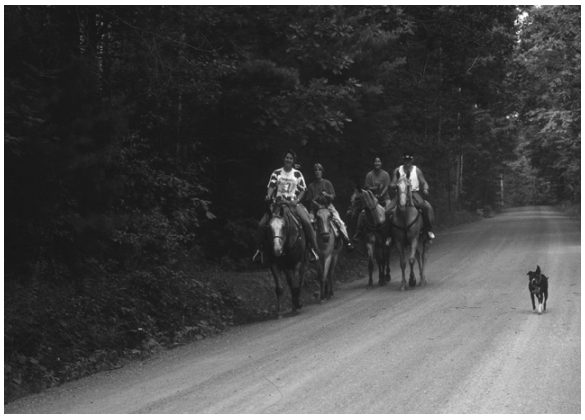
This management area emphasizes oak/hickory forests. Vegetation management emphasis is placed on production of high-quality sawtimber and other timber products on a sustained basis. Management actions provide a mix of habitats for wildlife species, emphasizing hard mast production. Public use is managed 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

FUTURE OLD FOREST (6.1)

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.

NORTH COUNTRY NATIONAL SCENIC TRAIL SPECIAL AREA (8.1)

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.

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.

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.

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

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.

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

Table 3.1-1: Recreation and Education Special Area and Associated Special Values

Recreation and Education SA	Special Values
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.

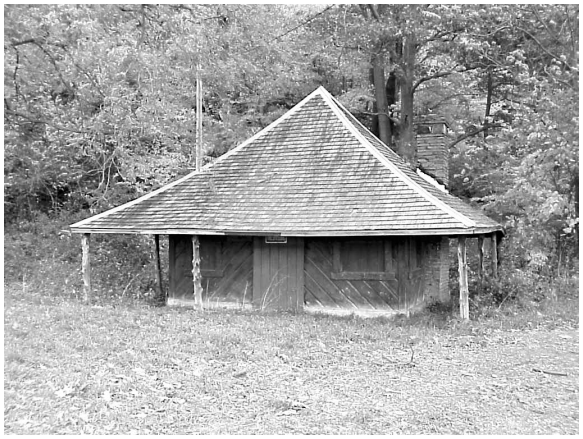
Guidelines:

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

Table 3.1-2: Candidate Research Natural Areas and their Special Values

Research Natural Areas	Special Values
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

Table 3.1-3: Ecological Special Areas and their Special Values

Ecological Special Areas	Special Values
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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Goshawk with transmitter

4.1 MONITORING AND EVALUATION

4.1.1 Introduction

The Finger Lakes National Forest Land and Resource Management Plan (Forest Plan) provides management direction in terms of desired conditions, goals, objectives, and standards and guidelines at the Forest and Management Area scales. Monitoring and evaluation are separate, sequential activities required by the National Forest Management Act (NFMA) to determine how well this management direction is being met, and to provide a basis for the periodic evaluation of the Forest Plan. The Finger Lakes National Forest Monitoring Program (Chapter 4 of the Forest Plan) describes what will be monitored and what Forest Service staff expect to learn from that monitoring and subsequent evaluation.

Monitoring is the systematic collection of information about resource conditions, management actions, and emerging issues in a way that will reflect changes in conditions and relationships over time and space. The objective of a plan monitoring program is to:

1. Enable the Responsible Official to determine if a change in Forest Plan components or other Forest Plan content may be needed.
2. Inform the management of resources through means such as testing relevant assumptions, tracking relevant changes, and measuring management effectiveness and progress toward achieving or maintaining the Forest Plan's desired conditions or objectives.
3. Support an adaptive land management planning process that includes social, economic, and ecological evaluations.

Evaluation is the analysis and interpretation of the information collected during monitoring. Evaluation results form the basis for adaptively managing National Forests because they:

1. Evaluate the validity of assumptions used in Forest Plan development,
2. Verify the effectiveness of Forest Plan standards and guidelines,
3. Assess program and project effects on resource conditions in relation to management goals and desired conditions, and
4. Determine when goals, objectives, desired conditions, standards, or guidelines need to change.

The Forest Plan Monitoring Program falls 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).

Table 4.1-1: Monitoring Categories

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

These three areas of focus are interwoven within the monitoring and evaluation plan as a means of measuring the Forest Service's success in achieving Forest Plan goals and objectives, and

applying Forest Plan standards and guidelines. Monitoring design and data collection follow accepted national standards. Monitoring is not performed on every activity, nor is most of it expected to meet the statistical rigor of formal research.

Implementation monitoring is done primarily at the project level and is completed on a day-to-day basis. It occurs hundreds of times each year and includes activities such as timber sale inspections, interdisciplinary project reviews, backcountry observations by Wilderness rangers, and construction inspections. Effectiveness and validation monitoring are more programmatic which entails Forest-wide monitoring that is done annually or every few years to track long-term progress and effects.

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.

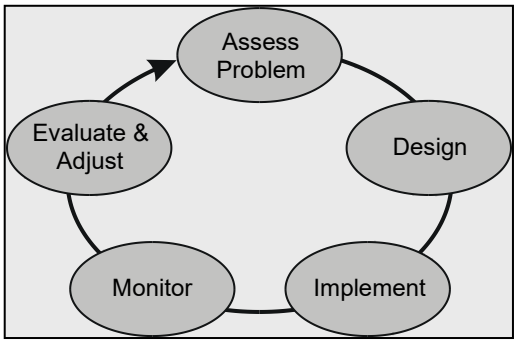


Figure 4.1-1: Monitoring, Evaluation, and Adaptive Management

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 Forest Plan dynamic, relevant, and responsive to changing issues.

4.1.3 Monitoring and Evaluation Components

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

1. Monitoring Plan
2. Monitoring Implementation Guide
3. Annual Monitoring Schedule
4. Biennial 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 establishes questions to be answered, timeframes for reporting, and indicators for required monitoring topics. Monitoring Plan direction is broad and ties directly to decisions made in this Forest Plan.

Monitoring items and questions included here are intended to provide the basis for more specific and focused monitoring items to be included in the *Monitoring Implementation Guide*. Changing the Monitoring Plan requires an Administrative Change to the Forest Plan (36 CFR 219.13).

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 Service's monitoring program in its entirety. The Monitoring Guide is founded on guidance contained in the Monitoring Plan, expanded into greater detail. The Monitoring 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, scientific literature, or other sources.

Program managers responsible for Forest Plan implementation are involved in updating the Monitoring Guide. The list of monitoring items is beyond that normally funded; final selection of the

items to be monitored in a given year is primarily based on available funding and staffing, and the priorities and timing provided in the Monitoring Guide.

The Monitoring Guide is intended to be a flexible component that can change as new methodologies and techniques are developed, or to be more responsive to changing needs and new information. The Monitoring Guide can be modified without an Administrative Change to the Forest Plan.

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 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 Service's annual work planning process also will establish or revise priorities for the monitoring schedule.

Biennial Monitoring and Evaluation Report

Every two years, Forest Service staff will produce and make available a *Biennial Monitoring and Evaluation Report* that shares new information gathered through the Monitoring Program and relevant information from the broader-scale strategy. The purpose of the biennial report is to:

1. Make the information obtained from monitoring available to the public in a form that is readily understandable.
2. Transform monitoring data into information that supports adaptive management so the Responsible Official can determine whether changes to the Forest Plan, management activities, or the Monitoring Program are warranted.

4.1.4 Monitoring Plan

The Finger Lakes National Forest Monitoring Plan consists of a set of required monitoring questions (Table 4.1-2). Evaluation of information collected to answer each monitoring question provides the Responsible Official the basis to determine whether changes are needed to Forest Plan components (goals, objectives, desired conditions, and standards and guidelines). These changes can be made through the amendment process to ensure the Forest Plan remains current by adapting to new information and changed conditions.

The Monitoring Plan also provides information to track resource trends, and measure management effectiveness and progress toward achieving Forest Plan goals, objectives, and desired conditions. Lastly, evaluation of monitoring information may provide the basis for design changes to management activities to better meet overall Forest Plan direction.

4.1.5 Required Monitoring

The National Forest System Land Management Planning Rule (36 CFR 219.12(a)(5)) requires the Forest Plan Monitoring Plan to include at least one monitoring question and associated indicator(s) for each of eight monitoring elements. Table 4.1-2 shows the monitoring questions and associated measurement indicators selected to address each element.

Table 4.1-2: Required Monitoring Elements

Required Element	Monitoring Question	Measurement Indicator(s)
1. Status of select watershed conditions.	To what extent are management activities maintaining or restoring watershed functions?	• Number of sub-watersheds in each watershed condition class • Number of essential projects completed in priority watersheds per year
2. Status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.	To what extent are management activities and natural processes leading to increased structural diversity within forested stands and across forested landscapes, moving areas toward desired objectives identified under Goal 2 of the Forest Plan?	• Number of acres and proportion of each forest type in each age class • Number of acres and proportion of harvest acres treated with uneven-aged management • Number of acres treated explicitly to enhance early successional characteristics • Number of acres treated explicitly to enhance late successional characteristics • Number of acres treated with various methods to explicitly enhance health, longevity, and/or structural diversity of forested stands at the stand and landscape scales
	To what extent are management activities conserving or improving water quality?	• Miles of stream and acres of lake/ pond on National Forest System lands by Vermont water quality classification • Implementation and effectiveness monitoring for Best Management Practices (BMPs)
3. Status of focal species to assess the ecological conditions required under § 219.9.	Does the grasslands ecosystem provide a full array of habitat types across FLNF and align with the Forest Plan for overall abundance?	• Detection and non-detection, and relative abundance of savannah sparrow (*Passerculus sandwichensis*)
4. Status of a select set of the ecological conditions required under § 219.9 to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern.	What are the population trends for sensitive plants (increasing, decreasing, or stable)? To what extent are management activities affecting conditions for sensitive plant populations?	Population trends for plants listed as Regional Forester Sensitive Species: • Number of ramets or genets • Percent reproductive • Spatial extent of population • Number of populations of a species • Ranked condition of populations

Required Element	Monitoring Question	Measurement Indicator(s)
5. Status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.	To what extent are management activities providing high quality recreation services that meet the expectations of the public?	• Percent Meets Expectations (PMEs) in National Visitor Use Monitoring (mean visitor satisfaction compared to mean importance). PME data reported for developed facilities, access, services, and feeling of safety in developed sites, undeveloped areas, and designated wilderness. • Trend in number of visitors, visitor satisfaction and changes in visitor participation by activity over 5-year NVUM reporting periods.
6. Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.	To what extent are insects and disease organisms impacting forest conditions?	Insect or disease infestations: • Number of outbreaks by species • Acres affected by species • Trends in outbreak persistence, spread, and associated tree mortality
7. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.	How do actual resource and service accomplishments compare to those projected in the Forest Plan Appendix D, Proposed and Probable Practices?	• Actual annual resource and service accomplishments for management activities listed in the Forest Plan, Appendix D, Table D-5.
8. The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)).	To what extent are management activities impacting soil quality and productivity?	Within the Forest Service Soil Disturbance Monitoring Protocol sampling and monitoring areas including select areas where timber harvest, prescribed fire, and other management activities have been implemented: • Amount of forest floor impacted • Amount of topsoil displacement • Severity of rutted, burned or compacted soil • Severity of platy/massive soil structures, or puddled soil

4.1.6 Other Monitoring

In addition to the monitoring questions selected to address the eight required elements listed in Table 4.1-2, other monitoring questions have been developed to assist in determining how well management activities are meeting Forest Plan direction. While none of these questions have been selected to address any of the required elements and are not part of the formal Monitoring Plan, Forest Service staff can use them to supplement the monitoring and evaluation plan to improve the Forest Plan or refine management activities pending budget and staffing capacity. The details for these other monitoring questions can be found in the Monitoring Guide including the Forest Plan component they address, associated measurement indicators, monitoring protocol and methodology, and reporting frequency.

4.1.7 Biennial Monitoring and Evaluation Report

Information derived from the monitoring and evaluation of required and other monitoring questions forms the basis for continuous improvement of the Forest Plan needed for

consideration for adaptive management strategies. Biennial monitoring and evaluation reporting is key for the Responsible Official to determine if and where changes are needed in Forest Plan components, other Forest Plan content, and projects and activities. Monitoring also provides feedback to prioritize and improve the Monitoring Program and broader-scale monitoring strategy provided by other monitoring questions.

The biennial evaluation of monitoring is intended to collect, evaluate, and report on new data or results. The report does not need to evaluate all questions or indicators on a biennial basis but must focus on new data and results that provide new information for adaptive management.

Every two years, the Forest Service will summarize what monitoring has been completed and the most recent evaluation results.

At a minimum, the evaluation should:

1. Enable the Responsible Official to assess if there have been changes in the condition of the land that indicate a need for changes to Forest Plan components, the Monitoring Program, or management activities.
2. Be used to inform adaptive management of the plan area.
3. Provide a basis for determining the accuracy of management effects.
4. Consider how well goals, objectives, and desired conditions have been met and how closely standards and guidelines have been applied.

Chapter 5 Literature Cited

5.1. Literature Cited in the Forest Plan 79

5.1 LITERATURE CITED

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6.1 GLOSSARY

Abbreviations and Acronyms

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

METAPOPULATION – 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 that 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

SERAL – 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 are/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.

VIABLE 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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