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Finger Lakes National Forest

Annual Monitoring and Evaluation Report

Fiscal Year 2007



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Annual Monitoring and Evaluation Report

Finger Lakes National Forest

USDA Forest Service
Eastern Region
Milwaukee, Wisconsin
March 2008

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Executive Summary

This is the second Monitoring and Evaluation Report compiled under the 2006 Finger Lakes National Forest (FLNF) Land and Resource Management Plan (Forest Plan). The FLNF monitoring and evaluation plan are described in Chapter 4 of the Forest Plan. As explained in more detail in Chapter 4, monitoring items consist of mandatory components found in every forest plan, as well as monitoring items that are tailored to address FLNF issues raised through public scoping and interdisciplinary team review.

The Annual M&E Report provides an opportunity to track progress towards the implementation of revised Forest Plan decisions and the effectiveness of specific management practices. The focus of the evaluation is on providing short- and long-term guidance to ongoing management. Guidance for development of the Annual M&E Report is provided in Chapter 4 of the Forest Plan and 36 CFR 219.6(a)(3) and (b)(2) requiring monitoring results be evaluated annually and provide for:

- (i) Monitoring to determine whether plan implementation is achieving multiple use objectives
- (ii) Monitoring to determine the effects of various resource management activities within the plan area on the productivity of the land
- (iii) Monitoring of the degree to which on-the-ground management is maintaining or making progress toward the desired future conditions and objectives for the Forest Plan
- (iv) Adjustment of the monitoring program as appropriate to account for unanticipated changes in conditions

The information gained from the Monitoring and Evaluation Report is used to determine how well the desired conditions, goals, objectives, and outcomes of the Forest Plan have been met. At this point, two years after implementation of the revised Forest Plan, however, trends, patterns, and results generally are not clearly defined. Evaluations and conclusions that would lead to changes in the Forest Plan are not expected. Rather, this report focuses more on what we monitored, how it was monitored, how easy and efficient the protocols were to use, and how effective they were at answering the monitoring questions.

Highlights from the Report

In 2007, the FLNF staff monitored 35 items covering 17 areas. Highlights of these monitoring efforts include:

- Offered and sold 505,000 board feet of timber
- Conducted broad scale site inventory surveys for heritage resources on 3,700 acres
- Improved the Tunison pasture pond and fenced riparian and wetland areas in the pasture
- Monitored water quality in streams, recreational ponds, and a planned timber sale site
- Surveyed odonates (dragonflies) and Lepidoptera (butterflies)
- Surveyed 9 occurrences of Regional Forester's Sensitive Species (RFSS) list plants
- Surveyed non-native invasive species (NNIS) in several areas and implemented hand pulling in some of these areas
- 4 special areas monitored
- 6 insect or disease agents tracked
- 151 hazardous fuels reduction
- Assisted with or conducted 8 education activities or programs

Key Events and Achievements in Fiscal Year 2007

Completion of Monitoring and Evaluation Guide

After completing the 2006 Forest Plan, the Monitoring and Evaluation Guide was developed. The Guide provides specific information on implementing the monitoring strategy outlined in Chapter 4 of the 2006 Forest Plan. During development of the Monitoring Guide, the importance of including only those items necessary to meet the intent of measuring and evaluating the implementation, effectiveness, and validation of the Forest Plan was emphasized. Monitoring tasks were designed to link directly to monitoring questions in Chapter 4 of the 2006 Forest Plan.

The Monitoring and Evaluation Guide provides specific technical guidance that describes how, where, and when to accomplish the monitoring prescribed in the Forest Plan. It provides specific methods, protocols, and analytical procedures. The Guide establishes and schedules the priorities and should ensure efficient use of limited time, money, and personnel. The Guide is intended to be flexible and may be modified in response to new information, updated procedures or protocols, emerging issues, and budgetary considerations without amending the Forest Plan.

The Monitoring Guide contains a menu of activities from which monitoring actions may be selected; there is no requirement to achieve the entire list of activities. A set of questions was identified to assist in the prioritization of monitoring tasks. Monitoring Guide activities are included in the Annual Monitoring Schedule based on priorities and funding availability. The Monitoring Guide was completed in June of 2007 and is available at:

http://www.fs.fed.us/r9/gmfl/nepa_planning/monitoring_and_evaluation_reports/index.htm

Outreach and Education

2007 was an important year for partnerships and interpretation as we planted the seeds for conservation and education and began growing our program and engaging various groups in natural resource management and conservation. This year we participated in local fairs and expos, helped with grant-writing workshops and worked with schools and universities to deliver our conservation and multiple-use messages.

Botany & Non-native invasive species (NNIS)

In late spring, a local 4-H club began a volunteer project mapping garlic mustard on two trails – the Gorge Trail and a section of the North Country Trail. This NNIS is believed to have a negative affect on the biodiversity of the forest understory, especially tree seedling regeneration, and it is thought to be spread primarily through human activity. We initiated the invasive plant control environmental analysis in 2007 and plan to complete the environmental assessment in 2008 with a signed decision sometime this fall

Grazing

The Forest, in partnership with the HGA, completed approximately 2000 acres of mowing to stimulate forage production and to combat invasive goldenrod in pastures. Given the importance of maintaining important grassland habitat on nearly 5,000 acres of the Forest for nesting birds and livestock, a review of multiple invasive plant control methods is being analyzed in an environmental assessment for 2008.

This year we fenced a riparian area and pond in Tunison Pasture to protect wetlands. This will improve water quality, aquatic and riparian habitats, and stream bank stability over time.

Forest Plan Appeal Resolution

The Finger Lakes Forest Plan appeal was successfully resolved through an informal resolution process resulting in the appellants withdrawing their appeal. The appeal focused on the protection of stands with a year of origin of 1907 or earlier, approximately 228 acres, and some other older forest areas. The resolution of the appeals did not require a Forest Plan Amendment. The Forest Service and the appellants agreed to apply many of these stands towards meeting the Forest Plan objectives for vegetation old age classes; and delay entry for vegetation management into identified older stands until a more in-depth evaluation can be made and appropriate management for these areas determined. The appeal resolution is an example of collaborative problem solving from all parties

Other Project Monitoring

Monitoring of projects, large and small, occurs on all the districts and involves numerous resource professionals across the Forest. Examples include sale administrators checking loggers for compliance with contract specifications; field checking timber marking to determine consistency with marking guides; conducting regeneration surveys to determine stocking levels; checking harvest units to determine if results incorporated and achieved silvicultural prescriptions objectives and EA direction; and checking application of mitigation measures to determine if they are appropriate and effective. Often times the monitoring is informal consisting of general field observations. Other times monitoring is more formal and entails following protocols. Results from formal monitoring efforts are generally included in the Annual M&E Reports.

Public Involvement

The Forest Service continues to publish the Finger Lakes National Forest Schedule of Proposed Actions, a newsletter containing information about upcoming and on-going projects to implement the Forest Plan. The purpose of the Schedule is "to give early informal notice of proposals so the public can become aware of Forest Service activities and indicate their interest in specific proposals" (FSH 1909.15, Section 07). We encourage the public to become part of our management process by commenting on project proposals through the National Environmental Policy Act (NEPA) process. Information about planning our projects and project contacts can be found on the Internet at: www.fs.fed.us/r9/gmfl/nepa_planning/index.htm

Approval

Having reviewed the FLNF Monitoring and Evaluation Report, I am satisfied with its findings and intend to consider recommendations made therein. The Monitoring and Evaluation report meets the intent of both the Forest Plan (Chapter 4) as well as the regulations contained in 36 CFR 219. As always, we encourage public involvement during the process of developing individual project proposals.


MARGARET MITCHELL
Forest Supervisor

Date: 4/7/08

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1.1 INTRODUCTION

1.1.1 Introduction

Monitoring and evaluation (M&E) are required by the National Environmental Policy Act and the National Forest Management Act to determine how well the Land and Resource Management Plan (Forest Plan) is being implemented. The M&E process enables the Forest Service to assess its effectiveness in moving toward stated management goals and desired conditions. The 2006 Forest Plan may be amended or revised to adapt to new information and changed conditions identified through M&E efforts. Through this adaptive management approach, the Forest Plan is kept current.

Monitoring is conducted to accomplish several objectives, including:

- To determine how well the goals and objectives of the Forest Plan have been met
- To determine how closely Forest Plan management Standards and Guidelines have been followed
- To determine if conditions or demands in the area covered by the Forest Plan have changed significantly enough to require a revision to the Plan

Monitoring of the Finger Lakes National Forest (FLNF) began in 1987 with guidance provided in the 1987 Forest Plan. A revised Forest Plan was completed in February 2006 and includes programmatic direction for monitoring and evaluating Forest Plan implementation. Chapter 4 (M&E Chapter) of the 2006 Forest Plan defines the over-arching, strategic questions that must be addressed by the Forest Service through monitoring, including broad timetables and schedules for analysis and reporting.

In addition to direction for monitoring and evaluation, the Forest Plan describes the current state of the FLNF as well as the ideal state, which the Forest Service and interested publics envisioned as the Forest's "desired future condition." The Forest Plan allocated land to different management areas, each with a unique desired future condition, major emphasis, and management direction.

Coordination of management projects to bring about the desired future conditions stated in the Forest Plan is a complex task. The Forest Service wants to ensure that the highest priority projects are located in the most suitable areas, and that management of all resources in a particular area is integrated to improve efficiency and reduce impacts on the natural and social environments.

1.1.2 Monitoring and Evaluation Guide

In addition to the guidance outlined in the 2006 Forest Plan, the FLNF staff completed an M&E Guide in June of 2007. The M&E Guide provides more specific procedural guidance to implement the monitoring strategy outlined in the Forest Plan. The M&E Guide contains specific monitoring elements, along with methods, protocols, and analytical procedures to be followed. The M&E Guide is a suite of monitoring activities that may be used to help managers understand and answer the Forest Plan monitoring questions. The Forest Service will select specific monitoring activities from the M&E Guide during Forest Plan implementation.

1.1.3 Annual Monitoring and Evaluation Reports

Purpose and Scope

The Annual M&E Report provides a forum for the review of current-year findings. This report displays monitoring results including:

- What monitoring activities were completed?
- What Forest Plan monitoring questions were addressed?
- How well did the monitoring address those questions?
- Do future monitoring activities need modified?

The Annual M&E Report is prepared by an interdisciplinary Forest Service team that incorporates information gathered from Forest Service specialists, partners, private citizens, and non-profit organizations. The Forest Service is grateful to the people who contribute their monitoring efforts and results and who take an interest in actively participating in the management of the FLNF.

This Annual M&E Report evaluates the results of the monitoring accomplished during Fiscal Year 2007 (October 1, 2006-September 30, 2007), hereafter referred to as FY07. This report describes monitoring items by resource category, provides data pertaining to the effects and effectiveness of Forest Plan management direction, and discusses various resource management efforts in which the FLNF engaged in FY07.

A major part of monitoring and evaluation is to determine if the resource outputs, management costs, returns, and environmental objectives were achieved as predicted in the Forest Plan. To do this, the report compares the objectives stated in the Forest Plan with what was actually accomplished during FY07.

Annual Monitoring and Evaluation Report Outline

The remainder of this report is divided into four chapters.

- Chapter 2 consists of monitoring for 17 elements from the Forest Plan monitoring requirements. Each includes where feasible: background information; brief explanation of the monitoring activities and protocols; and discussion on the evaluation, conclusions, or recommendations.
- Chapter 3 provides a brief summary of on-going research and studies on the Forest.
- Chapter 4 discusses adjustments or corrections to the Forest Plan.
- Chapter 5 is a list of the Forest Service employees that provided information contained in this report.

The activities and outputs we monitor may be traced to one of three sources:

1. NFMA implementing regulations requirements (36 CFR 219 (1982)), which outline specific activities and outputs to be monitored
2. Forest Plan requirements (Chapter 4) selected to facilitate comparison between actual conditions and desired future conditions
3. Questions derived from public comments which are particularly useful for monitoring public satisfaction with the resources and services the FLNF provides.

1.1.4 Partnerships and Collaboration

Partnerships and collaboration are essential throughout all levels of the Forest Service. Retired Chief of the Forest Service Dale Bosworth has stated that *“As we enter the Forest Service’s second century of caring for the land and serving people, a strong spirit of partnership and collaboration is more important than ever.”* The FLNF staff has worked with partners throughout its history to achieve social, economic, and ecological goals. Each year, the FLNF staff continues relationships with existing cooperators and enters into new ones. This collaboration has resulted in increased public service and improved land stewardship, both which enhance the Forest Service’s effort to meet desired conditions. This overview will share information on both formal agreements and informal cooperative efforts. Information is presented as a collective report for the Green Mountain and Finger Lakes (GMFL) National Forests for FY07 as the information is tracked regionally in a combined report.

Formal Agreements:

The Forest Service uses many types of agreements to document its work with other organizations and entities. Each of these has specific Congressional legal authority and requirements. The appropriate instrument depends on what the partnership will accomplish, who will benefit, and who is providing funding. The Forest Service must have appropriate statutory authority prior to entering into any agreement, which could result in the use, obligation, or other commitment of any Forest Service resources.

During FY07, there were a total of 34 signed grants and agreements that provided or obligated \$599,953.39 worth of cash, goods, and services to the GMFL from partners, and \$457,306.12 worth of cash, goods, and services to partners from the GMFL.

Volunteer Agreements

In FY07, 135 volunteers provided 26,376 hours of service at an appraised value of \$495,078 to the Green Mountain and Finger Lakes National Forests.

Total to the Forest:

Including formal and volunteer agreements, partners gave a total value of \$599,953.39 to the GMFL in FY07. This includes:

- cash contributions of over \$200,000
- in-kind contributions of over \$163,000
- non-cash contributions of over \$235,000.

Total to Partners:

Contributions also went to various partners for the work they provided to support the GMFL. In FY07, there was over \$405,000 in funds and over \$51,000 in non-cash contributions that were obligated and/or provided by the GMFL to partners, including: challenge cost-share agreements, law enforcement agreements, and roads agreements. There were also partnerships where Forest Service’s and partner’s funds combined to pay for land improvements.

The GMFL has had numerous on-going informal agreements with State, county, local and other federal agencies, and non-profits that benefit the Forests. These informal partnerships have not been documented through the formal agreement process and are not accounted for in the numbers listed above; however, they do greatly benefit the GMFL.

2.1 DISCUSSION OF MONITORING

The following table (Table 2.1-1) consists of elements from Tables 4.1-3 through 4.1-7 of the Forest Plan. It identifies the resource element, monitoring question and drivers, and frequency

of measurement that are discussed on the pages that follow in this report.

Table 2.1-1: Resource areas, monitoring questions and drivers, and measurement frequency discussed in this report.

	Resource	Monitoring Question(s)	Monitoring Driver	Frequency of Measurement
1	All	How close are actual outputs and services to projected outputs and services?	A quantitative estimate of performance comparing outputs and services with those projected by the 2006 Forest Plan.	Annual
2	All	How close are actual costs to projected costs?	Documentation of costs for carrying out the planned management prescriptions as compared with costs estimated in the Forest Plan.	Annual
3	All	To what extent have Objectives been attained?	Forest Plan Objectives	Annual
4	All	To what extent have Standards and Guidelines been applied?	Forest Plan Standards and Guidelines	Annual
5	All	What are the effects of management practices prescribed by the 2006 Forest Plan?	Forest Plan Management Area Guidance	Annual
6	Transportation System	Is the use of vehicles off roads causing considerable adverse effects on resources or other forest visitors; how effective are forest management practices in managing vehicle use off roads?	36 CFR 295 Use of vehicles off roads shall be planned, implemented and monitored in order to protect resources and visitors from considerable adverse effects, promote public safety, and minimize conflicts with other NFS land uses of the NFS lands	Annual
7	Recreation	Is the quality of the Forest Service trail system and recreation facilities being improved through operation and maintenance?	Forest Plan Goal 12	Annual
8	Soil Quality	To what extent are Forest Service management and restoration activities maintaining or improving soil quality?	Forest Plan Goal 3	1-5 Years
9	Water Resources	To what extent is Forest management affecting water quality, quantity, flow timing, and the physical features of aquatic, fisheries, riparian, vernal pool, and wetland	Forest Plan Goal 4	1-5 Years

		habitats?		
10	Wildlife: Management Indicator Species	To what extent are forest management activities providing habitat for MIS?	Forest Plan Goal 2, Maintain and restore quality, quantity, amount, and distribution of habitats to produce viable and sustainable populations of native and desirable non-native plants and animals.	Annual
11	Native and Desired Non-Native Species	To what extent are management activities contributing toward population viability for native and desired non-native species? To what extent do management activities contribute toward restoration and maintenance of habitat for native and desirable non-native species?	Forest Plan Goal 2	Variable
12	Vegetation	Are harvested lands adequately restocked according to Plan goals?	Lands are adequately restocked as specified in the Forest Plan.	Annual
13	Insects and Disease	Are insect and disease levels compatible with objectives for maintaining healthy forest conditions?	Destructive insects and disease organisms do not increase to potentially damaging levels following management activities.	Annual
14	Interpretation and Education	In what way is the Forest Service providing information and education opportunities that enhance the understanding of the GMNF?	Forest Plan Goal 19	Annual

Forest Plan Implementation

Evaluation Question:

How do actual outputs compare to those projected in Forest Plan Appendix D, Proposed and Probable Practices, specifically related to heritage, recreation, roads, vegetation, rare, ecological, wildlife, and fisheries resources?

Monitoring Question: How close are actual outputs and services to projected outputs and services?

Monitoring Driver: A quantitative estimate of performance comparing outputs and services with those projected by the 2006 Forest Plan.

Background: : This monitoring element is used to determine if outputs and services for the FLNF are being accomplished as outlined in Appendix D of the Forest Plan. In Appendix D, Table D-5 lists a summary of the proposed management practices that could be expected to occur on the FLNF over the first decade of Forest Plan implementation. This is an estimate made by the various resource managers during Forest Plan revision.

Monitoring Activities: There were numerous outputs and services provided on the FLNF during FY 2007. These outputs are displayed in Table 2.1-3 Estimated and Actual Outputs Achieved in Fiscal Year 2007

Evaluation and Conclusions: Many resource areas provided close to the estimated amount of outputs and services. Heritage notably over achieved acres surveyed which is a benefit to the protection of these resources. Although timber volume was offered and sold, the actual harvests have not yet occurred. This explains the lack of vegetation management outputs which should change in the near future.

Recommendations: Continue to monitor outputs and services to determine if there are shortcomings in services provided and/or if adjustments should be made to the estimated outputs.

Evaluation Question:

How do actual outputs compare to those projected in Forest Plan Appendix D, Proposed and Probable Practices, specific to timber offered and sold?

Monitoring Question: How close are actual outputs and services to projected outputs and services?

Monitoring Driver: A quantitative estimate of performance comparing outputs and services with those projected by the 2006 Forest Plan.

Background: This monitoring element is used to determine if timber sale outputs for the FLNF are being accomplished as outlined in Appendix D of the Forest Plan. In Appendix D, Table D-5 lists a summary of the proposed management practices that could be expected to occur on the FLNF over the first decade of Forest Plan implementation. Probable timber volume offered and sold for the first decade of 2.58 million board feet (mmbf) would translate to an average offering of 258 thousand board feet (mbf) in any given year.

Monitoring Activities: Forest Activity Tracking System (FACTS) was used to monitor timber offered and sold along with the type of timber harvesting practices used to implement the Forest Plan.

Evaluation and Conclusions: FLNF staff offered and sold 505 thousand board feet (MBF) or 821 hundred cubic feet (CCF) of sawtimber and pulpwood in FY 2007, roughly 200% of the Forest Plan

Allowable Sale Quantity (ASQ) annual average of 258 MBF (420 CCF). ASQ is the maximum amount of timber volume that may be offered and sold during the 10 years of Decade 1, expressed on an annual basis. The harvest of this timber has not yet occurred and is slated to begin in 2008.

Recommendations: Continue to monitor. With less than two years of Forest Plan implementation underway, and only one timber sale offered, it is too early to conclude that timber offerings will exceed the decadal ASQ. As such, the Forest Service will continue to monitor the sale of timber and pulpwood from the Finger Lakes National Forest. Currently, there are no projected new offerings of timber sales for the immediate future.

Estimates of Management Practices	Annual Acres in Decade 1 Acres	Acres Completed FY 2007	% of Annual Acres
Even-aged Regeneration Harvest	16	12	75
Even-aged Intermediate Harvest	35	53	151
Uneven-aged Harvest	36	.25	1
Total Harvest	87	65	75

Activity or Practice	Unit of Measure	Estimated Amount (Decade 1)	Actual Amount Achieved in FY07
Recreation Resources			
Trail Improvement	Miles	3-6	0
Trail Maintenance – to standard	Miles	50-200	10
Trail Rehabilitation	Miles	20-40	0
Trail Maintenance – total system	Miles	380	2
Vegetation Management			
Site Preparation/ Reforestation	Acres	250	0
Stand Improvement	Acres	80-120	0
Thinning Harvest	Acres	250-300	0
Shelterwood Regeneration	Acres	100-150	0
Shelterwood Removal	Acres	50-100	0
Selection Harvest	Acres	325-375	0
Clearcut	Acres	30-50	0
Wildlife, Fisheries, Rare Plant, Rare or Outstanding Natural Community Resources			
Shrub Opening Maintenance	Acres	1,000-1,500	0
Wildlife Pond Maintenance	Ponds	6	0
Pasture Maintenance			
Mowing	Acres	7,500-10,000	1812
Liming	Acres	500-1,000	109
New Fencing	Miles	4-6	.85
Reconstruct Fence	Miles	20-30	.30
New Stock Pond	Ponds	3	0
Facilities	Facilities	5	1
Total Forage Production	Animal Unit	108,500	9,549

	Month		
Non-Commercial Clearcutting of Aspen	Acres	80	0
Monitor condition of sites and species under special forest product permits	Sites	All	0
Inventory for TES species and rare or outstanding natural communities	Acres	1,600	2 acres for plants
Monitor known rare or outstanding ecological, biological, or geological features, including TES occurrences	Sites	All	9 occurrences of plants on the RFSS 4 special areas
Prepare conservation plans for each rare or outstanding area	Sites	7	0
Establish RNAs	Sites	2	0
Protect known occurrences of TES species	Sites	All	All
Protect, and where feasible, improve or restore habitat conditions for TES species	Sites	All	No habitat was restored or improved for plants on the RFSS list
Protect important habitat sites for TES bats	Roost and den trees	Adequate numbers of roost and den trees	
Update conservation assessments for RFSS	Species	All	0 for plants
Fish Stocking	Ponds	6	7
Fish Surveys	Surveys	3	0
Heritage Resource Protection Acres Surveyed	Acres	250-750	3700
Agreements w/County Law	Agreements	2	1
NF land signs placed and/or maintained	Signs	20-30	42

Evaluation Question:

To what extent is the Forest Service providing a mix of products, services, and amenities?

Monitoring Question: How close are actual costs to projected costs?

Monitoring Driver: Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the Forest Plan.

Background: The cost of implementing the 2006 Forest Plan was based on current budgets for all program areas except the timber outputs. The cost of implementing the 2006 Forest Plan timber outputs was estimated to be \$315,000. The Washington and Region 9 Offices of the Forest Service track some outputs related to Forest Plan implementation, otherwise known as targets, on a yearly basis. Cost of providing these outputs can be estimated through FLNF staff work plans.

Monitoring Activities: Table 2.1-4 displays the targets that were achieved on the Green Mountain and Finger Lakes National Forests in 2007, and the estimated cost for achieving that target. Information is presented as a collective report for the Green Mountain and Finger Lakes (GMFL) National Forests for FY07 as the information is tracked regionally in a combined report.

Table 2.1- 4: Fiscal Year 07 Target Accomplishments and Estimated Cost		
TARGET ACTIVITY	AMOUNT ACCOMPLISHED	ESTIMATED COST
Inventory and Monitoring		
Annual monitoring requirements completed	20 items	\$41,732
Inventory data collected or acquired to standard	11,690 acres	\$60,453
Facilities		
Forest administrative and other facilities maintained to standard	33 facilities	\$116,000
Recreation sites managed to standard	102 sites	\$115,900
Hazardous Fuels		
Treated to reduce the risk of catastrophic wildland fire	5446 acres Includes grazing acres	\$179,000
Lands		
Land Acquisitions/adjustments	970 acres	\$40,000
Boundaries marked	12 miles	\$108,000
Special use permits administered to standard	40 permits	\$45,000
Special use applications processed	2 applications	\$30,000
Rights Of Way acquired	1 easement	\$1,800
Vegetation and Watershed		
Forest vegetation established	33 acres	\$18,000
Timber stand & genetic tree improvement	102 acres	\$24,000
Treated annually for noxious weeds and invasive plants	480 acres	\$13,000
Range land vegetation improved	500 acres	\$23,473
Soil and Water resource acres improved	5 acres	\$15,000
Wildlife, Fish and Threatened, Endangered and Sensitive Species		
Lake habitats restored or enhanced	50 acres	\$41,000
Stream habitats restored or enhanced	82 miles	\$108,000
Terrestrial habitats restored or enhanced	400 acres	\$70,000
Range		
Grazing allotments managed to 100% standard	5053 acres	\$83,000
Recreation		
Heritage assets managed to standard	15 assets	\$25,000
Recreation site capacity operated to Standard	160,000 PAOT days	\$361,475
Number of interpretive and conservation education plans implemented	1 Plan	\$9,983

Recreation special use authorizations administered to standard	32 permits	\$78,500 (50% of estimated allocation for special uses)
Trails improved to standard	5 miles	\$30,000 (estimated portion of CMTL budget)
Trails maintained to standard	132 miles	\$340,100
Wilderness Areas managed to standard	2 areas	\$166,683
Roads		
Roads decommissioned	0 miles	0
High clearance roads maintained	16 miles	\$40,800
Passenger car roads improved	0 mile	0
Passenger car roads maintained	72.5 miles	\$201,905
Lands covered by motor vehicle use map (MVUM)	16,125 acres	\$7,250
Timber		
Timber volume sold	7,000 ccf	\$578,000

Evaluation and Conclusions: Tracking costs of Forest Plan implementation activities will provide program managers unit cost information that is helpful in the development of work plans and out-year planning. Over an extended period, tracking these costs can be used to develop management activity unit cost trend information. This will enable managers to make more informed decisions about the costs of management activities.

Recommendations: Continue to track Forest Plan implementation achievements and estimated costs to develop trend information, and improve efficiency and effectiveness.

Evaluation Question:

What activities have occurred in management areas? How have these management actions helped to achieve the desired future condition of the management area? Have activities occurred that detract from the desired future condition of the management area?

Monitoring Question: What are the effects of management practices prescribed by the 2006 Forest Plan?

Monitoring Driver: Forest Plan Management Area Guidance

Background: The 2006 Forest plan describes desired future conditions (DFC) for ten different management areas and provides standards and guidelines that apply to these management areas. Forest Plan implementation activities are usually designed to bring the FLNF closer to the DFC. There may be times when management activities for some reason do not realize the goal of moving toward the DFC, and fact may move away from the DFC. It is important to track activities and projects that will clearly move toward or away from the DFC for a management area or that move toward meeting plan objectives in order monitor progress in Forest Plan implementation.

Monitoring Activities: A number of projects implemented in 2007 were reported to have clearly moved toward the DFC for the Grassland for Grazing management area (MA). These projects are:

- Pasture Maintenance
 - Mowing pastures (15 pastures)

- lime spreading (Butcher Hill)
- reconstruct fencing (6 pastures)
- facilities (Aman West corral)
- total forage production (38 pastures)
- Tunison Riparian and Wetland Area Fencing
 - Streamside riparian areas and wetlands were fenced in the pasture to exclude livestock

Evaluation and Conclusions: The desired future condition of this management area is “demonstrate...ecologically sound management practices” (see Plan, p. 41). These results contribute to achieving Forest Plan Goal 4: Maintain or restore aquatic, fisheries, riparian, vernal pool, and wetland habitats. They also brought us into compliance with Grassland for Grazing G-1 (addresses protection of water quality) and Soil, Water and Riparian Area Protection and Restoration S-2 and G-10. These projects also work toward Goal 3: Maintain or restore the natural, ecological functions of the soil. Open condition of pastures are dominated by grasses and forbs and are suited for livestock forage as well as for wildlife such as raptors, rodents, rabbits, bluebirds, bobolinks, and flycatchers. Livestock ponds provide water in each pasture. The work done demonstrates low energy, ecologically sound pasture management practices.

Recommendations: Continue management activities that improve the DFC for Grassland for Grazing MA. Develop projects that will move toward the DFCs in other management areas. Continue to monitor progress in reaching DFCs.

Evaluation Question:

Are standards, guidelines, and mitigation measures being implemented on projects consistent with Forest Plan and project National Environmental Policy Act (NEPA) direction? Are these measures effective at achieving the desired results? Are there other measures that could be more effective?

Monitoring Question: To what extent have Standards and Guidelines been applied?

Monitoring Driver: Forest Plan Standards and Guidelines

Background: The 2006 Forest Plan states: “standards and guidelines (S&Gs) apply to all Forest areas for the purpose of protecting or managing forest resources. Standards and guidelines are designed to achieve the desired conditions, goals, and objectives stated in the 2006 Forest Plan. They are usually mitigation measures that minimize or negate the effects of a management action or land use.” Design criteria and mitigation measures may be added during the development of a project to further protect resources or lessen impacts. These design criteria and mitigation measures are incorporated in the NEPA documentation for a project.



Monitoring Activities: S&Gs, design criteria and mitigations are monitored to determine if they are being implemented correctly; and, if implemented correctly, are these measures achieving the desired results.

Evaluation and Conclusions: The Tunison Riparian and Wetland Area Fencing project brought us into compliance with Grassland for Grazing G-1 (addresses protection of water quality) and Soil, Water and Riparian Area Protection and Restoration S-2 and G-10. The fencing achieved the desired results, and it was the most effective way of achieving these results. Riparian and wetland area fencing will increase the streamside vegetation and shading, triggering long-term improvement in water quality and the aquatic community. It is reasonable to assume soil quality and wetland integrity in fenced areas will improve because:

- Soil compaction and displacement will decrease and soil aeration will improve, because soils will no longer be subject to trampling by livestock.
- Lack of trampling and grazing, coupled with greater vegetative growth should result in greater accumulation of organic matter. This will improve soil aeration, structure and drainage.

Recommendations: Continue to monitor area to determine if assumptions on soil and water improvements are validated.

Evaluation Question:

Did any project require guideline deviation or a Forest Plan amendment to modify a standard? If so, what was the project? Which standard was changed or which guideline required deviation? What was the rationale for the change or deviation?

Monitoring Question: To what extent have Standards and Guidelines been applied?

Monitoring Driver: Forest Plan Standards and Guidelines

Background: The 2006 Forest Plan defines S&Gs in this way: "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 Plan. 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 Forest Plan amendment, but it does require that the rationale for deviation be disclosed in the project decision documents and analysis." The occurrences of deviations from S&Gs, and the reason for these deviations are being tracked so that FLNF staff can evaluate any deviations from S&Gs.

Monitoring Activities: There were no amendments to the Forest Plan and no known deviations from guidelines in 2007.

Evaluation and Conclusions: Not Applicable

Recommendations: None.

Recreation

Evaluation Question:

Is the Forest Service reducing deferred maintenance on developed recreation facilities and sites? Is

the Forest increasing the number of recreation facilities that are maintained to standard?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: The FLNF has a number of small recreation facilities, and like most National Forests, has a limited budget to operate and maintain all the sites. We are pursuing partners that can contribute to some portion of the maintenance but this may not be sufficient to meet long term needs. With a desire to provide high quality recreation we need to monitor to determine if the management of our recreation facilities is being improved. The recreation site monitoring that we are using began in FY 1999 as a result of Congressional direction regarding deferred maintenance reporting. We have completed some level of monitoring and data clean-up since that time. During the first years of this process we were required to sample approximately 20% of the facilities in any given year. We will continue to update that data for Forest Plan monitoring through the life of the plan.

Monitoring Activities: Deferred Maintenance Condition Surveys were completed in FY 2007 using national protocols. On the Finger Lakes NF, deferred maintenance condition surveys were completed for 16 separate recreation sites (campground, day use areas, trailheads) These surveys were completed at a level sufficient to maintain our data to national standards. This monitoring was completed using FLNF staff.

Evaluation and Conclusions: The protocols being used are consistent with national direction and provide very good information to answer this monitoring question. A more thorough review of recreation site data was completed in FY 2007 in conjunction with a comprehensive Recreation Facility Analysis. It appears the existing protocols will be adequate to maintain our data sufficiently to answer this monitoring question. In the future, changes in national standards may require adjustment in monitoring procedures.

At the end of FY 2007 deferred maintenance for recreation facilities on the Finger Lakes NF was approximately \$41,047. It is recommended that this number be used as a baseline for future monitoring and evaluation to determine if progress is being made on this item. Analysis shows that with projected budgets and revenues we can complete annual maintenance, and still make some progress toward deferred maintenance reduction.

Recommendations: Continue to use the existing protocols for the near-term. At this time sample size appears to be adequate to maintain developed site data. Changing national direction might eventually reduce the quality of our data over time. If this occurs, it is recommended that a larger sample be completed when funding allows.

Updated deferred maintenance reports should be produced at the end of FY 2008 to begin development of trend data.

Evaluation Question:

What are the trends in the illegal use of vehicles off roads?

Monitoring Question: Is the use of vehicles off roads causing considerable adverse effects on resources or other forest visitors; how effective are forest management practices in managing vehicle use off roads?

Monitoring Driver: 36 CFR 295 Use of vehicles off roads shall be planned, implemented and monitored in order to protect resources and visitors from considerable adverse effects, promote public safety, and minimize conflicts with other uses of the National Forest System lands

Background: There is a long standing concern about the illegal use of motor vehicles on the FLNF. This is well documented in both the 1987 and the 2006 Forest Plan. In addition, this is a national issue that prompted a significant change in policy and direction regarding wheeled motorized vehicles. Though a significant issue, the development of monitoring protocols is difficult due to the scattered nature of violations that often happen in remote areas at nights and during time periods when there are few patrols available. It was decided to utilize existing protocols used by law enforcement personnel as the starting point for monitoring of this activity.

Monitoring Activities: In FY 2007, monitoring continued in conjunction with routine law enforcement patrols. As patrols document incidents or the issuance of notices of violation, the records are recorded and entered into a database. Data is entered and stored in the Law Enforcement and Investigation Management Attainment and Reporting System (LEIMARS). Retrieved data can be used to show some trends, though there are some limitations since the data is dependant on the availability of personnel.

This item is being monitored as an initial step to determine if the use of vehicles off roads is causing considerable adverse effects on resources or other forest visitors; and how effective are forest management practices in managing vehicle use off roads? This type of monitoring is also required by regulatory requirement (36 CFR 295). Though there are concerns about snowmobiles, the main focus for this monitoring item is wheeled motorized vehicles.

Evaluation and Conclusions: As a starting point, data entered the last three fiscal years is displayed. This shows current trends and provides baseline data to which monitoring data can be added annually. Data are separated into Incidents (includes warnings or visual identification of a violation) and Notices of Violation where somebody receives a citation for the infraction. Currently data for wheeled motorized vehicles and snowmobiles is combined under an off highway vehicle category. Three year data for the Finger Lakes NF shows:

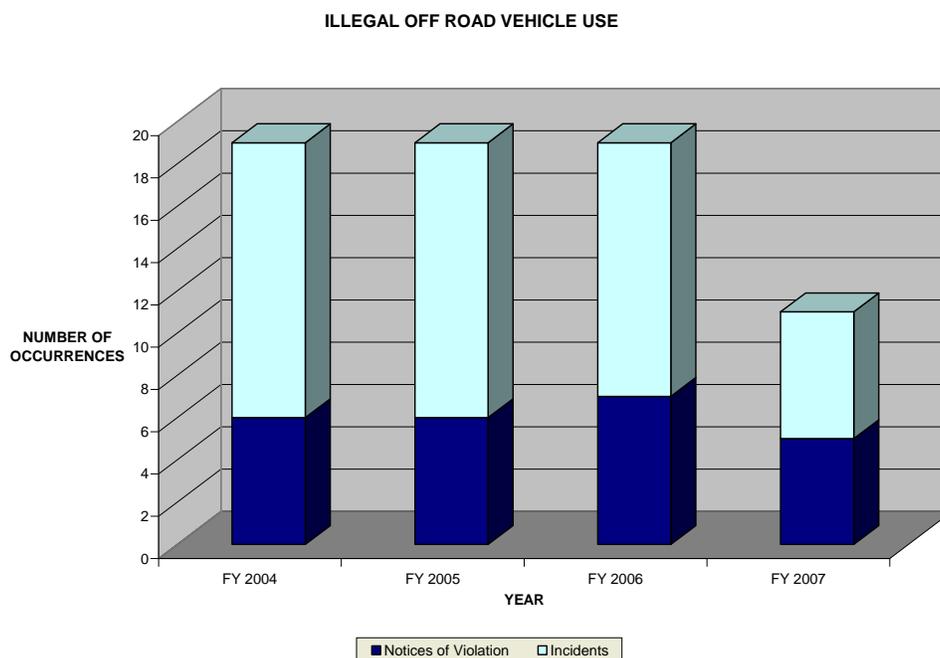


Figure 2.1-1 Illegal Off- Road Vehicle Use Occurrences

The data shows a relatively stable trend line in the initial three year period. There was a drop in incidents and Notices of Violation in 2007. Law enforcement personnel think the drop in incidents may be related to a reduction in actual staff time in the field due to other assignments or may mean fewer incidents are actually occurring. The data in any given year is dependant on availability of law enforcement personnel so short term trends like this need to be considered accordingly. Two consecutive years of significantly higher, or lower, data would indicate a probable change in the amount of illegal use but further monitoring should occur to validate this information. Though it is desirable to use this protocol since it is an existing national data system, it is recognized that more work is needed to refine these protocols to expand on this information.

Recommendations: Continue to work with law enforcement to determine if a method can be developed to separate data for wheeled motorized vehicles from snowmobiles. Ideally this could be achieved without labor intensive review of documentation.

Continue to search for additional protocols that can measure the effects of this use on both the physical and social resource. Conversations with law enforcement show a promising possibility of using the existing LEIMARS system and data to document physical damage to the trail system. This should be pursued for the 2008 report. New monitoring will need to be cost effective, and would hopefully use an existing monitoring system or be conducted with ongoing planning for implementation of the Forest Plan.

Evaluation Question:

Is the amount of deferred maintenance on the FLNF trail system being reduced?

Monitoring Question: Is the quality of the Forest Service trail system and recreation facilities being improved through operation and maintenance?

Monitoring Driver: Forest Plan Goal

Background: The FLNF has a popular and diverse trail system, and like most National Forests, has a limited budget to operate and maintain the trails. There are a few partners that contribute to some portion of the maintenance, and FLNF staff is pursuing the development of additional cooperators. Though desirable, this still may not be sufficient to meet long term needs. With a desire to provide high quality recreation and trails, FLNF staff monitors to determine if the system is being improved. The trail system monitoring currently being used began in FY 1999 as a result of Congressional direction regarding deferred maintenance reporting. Some level of monitoring and data clean-up has been completed since that time. During the first years of this process, FLNF staff was required to sample 20% of the trail system in any given year, and will continue to update that data for Forest Plan monitoring.

Monitoring Activities: In FY 2007, we didn't complete any Condition Surveys on the FLNF since none of the forest trails were selected in a national sampling method for a statistical sample of trails. Normally this monitoring would be completed using FLNF staff.

Evaluation and Conclusions: The protocols normally used for this monitoring are consistent with national direction and provide very good information to answer this monitoring question. In FY 2007, Monitoring procedures were reviewed and think the national sampling procedure will be insufficient to maintain the data on a long-term basis. It is recognized that surveys can be completed to a higher standard as long as survey procedures meet national requirements.

As recommended in the FY 2006 report, FLNF staff has completed an assessment of total deferred maintenance needs on the FLNF trail system. Total deferred maintenance needs for the FLNF trail

system (identified as reference costs in the INFRA database) are approximately \$72,596. This number should be considered the baseline for examination of this item for future monitoring.

This deferred maintenance total appears to be relatively large, but does represent the current data in the database. It should be recognized that some of this data is relatively old and should be examined during pending trail data reviews that are planned. Regardless of the quality of data, we are looking at a significant deferred maintenance backlog that will be difficult to reduce with current and projected budgets.

Recommendations: Continue to use the existing monitoring protocols for the near-term and consider utilizing our own sampling procedures to ensure the data is updated. Changing national direction that is trending toward reduced sample size is reducing the quality of our data. It is recommended that a larger sample be completed when funding allows. FLNF staff is pursuing that option in FY 2008.

It is also recommended that, in conjunction with planned trail data clean-up, deferred maintenance data be critically reviewed and updates for future monitoring reports be completed.

Visuals

Evaluation Question:

Is the FLNF being managed in accordance with the Forest Plan Visuals Standards and Guidelines (S&Gs) and are the Visuals S&Gs and any additional site-specific design criteria effective in helping to meet the Visual Quality Objectives (VQOs)?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: Timber has not been harvested on the FLNF since the late 1990's. However, past monitoring has shown that visual quality was achieved through strict application of S&G's.

Monitoring Activities: In FY 07, visual monitoring on the overall appearance of the FLNF was accomplished while doing field work on project planning for future projects.

Evaluation and Conclusions: The overall appearance of the FLNF met the VQO's. It was noted that some site furnishings such as picnic tables and grills are in need of replacement due to weathering and use.

Recommendations: In FY 08/09, create a list of site furnishings needing replacement, and seek out funding sources or alternatives to replacements.

Heritage

Evaluation Question:

Have Heritage Resources across the FLNF been inventoried and protected?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: There are more than 100 historic period archaeological sites on the FLNF. An accurate and comprehensive inventory of these sites has not been completed, but progress is made annually in small increments and we believe that a significant majority of sites have been identified. The associated monitoring of these sites' condition over time has been informal.

Monitoring Activities: A Forest Service archaeologist (on detail from the White Mountain National Forest) and a District assistant conducted broad-scale site inventory surveys on the FLNF. At the same time, they monitored the condition of known sites within the survey areas.



Evaluation and Conclusions: While direct observation is a reasonable and direct method for assessing site condition, the frequent lack of baseline data (i.e., prior condition reports to compare with the present condition) makes it difficult to document change over time. By establishing baseline information through off-site sources (e.g., through interviews with long-term Forest employees and volunteers interested in historic sites), we could establish an at least informal baseline for site conditions for a majority of the 100+ historic period sites on the Forest. The resulting knowledge about the nature of condition change over time (e.g., changes caused by natural

processes vs. human activity) will help inform us about how to minimize these changes. It is relevant to note here that the results of the 2006 SUNY Brockport archaeological field school research includes the conclusion that sites located in grazing allotments that otherwise appear (visually, at least) to be severely compromised do, in fact, yield interesting and useful data. Thus, the appearance alone (and visual surface evidence of site disturbance) does not mean the site is not worth protecting.

Recommendations: Continue both inventory and monitoring activities in combination with establishing better baseline data about site conditions.

Soil

Evaluation Question:

Were Forest Plan Standards and Guidelines (S&Gs) and mitigation measures implemented on selected projects, and to a lesser extent, were they effective in protecting the soil, water and wetland resources? Are soil quality standards met?

Note: For additional information related to soil resources, see Section 5: Forest Plan Management Area Guidance, Evaluation Question #5.

Monitoring Question: To what extent are Forest Service management and restoration activities maintaining or improving soil quality?

Monitoring Driver: Forest Plan Goal 3

Background: Most S&Gs are implemented most of the time, and are usually effective in protecting the soil, water and wetlands resources. Deviations from S&Gs and mitigation measures are reported, along with their effects.

Monitoring Activities: Improvements to the Tunison grazing allotment stock pond and fencing of the riparian areas including wetlands, were monitored in 2007. All monitoring was visual, based on field visits to the allotment.

Evaluation and Conclusions: Tunison Pasture pond was dredged in late 2006 because the pond had become too full of sediment. Following dredging the pond banks were smoothed, seeded and mulched to hasten revegetation and minimize erosion. In the summer of 2007, the FLNF staff observed the pond functioning properly, erosion was minor, and the banks were largely revegetated. It was also observed that the pond work complied with Forest Plan S&Gs.

In 2007, the pond and streamside riparian areas and wetlands, were fenced to exclude livestock grazing. This should increase the streamside vegetation and shading, triggering long-term improvement in water quality and the aquatic community. Soil quality standards were not monitored in this pasture, however, it is reasonable to assume soil quality and wetland integrity in fenced areas will improve because:

- Soil compaction will decrease and soil aeration will improve because soils will no longer be subject to trampling by livestock
- Lack of trampling and grazing, coupled with greater vegetative growth should result in greater accumulation of organic matter. This will improve soil aeration, structure and drainage.

Recommendations: No further action is needed in the Tunison pasture.



Water

Evaluation Question:

What is the existing status of water quality on the FLNF, and how are Forest Service management activities affecting water quality?

Monitoring Question: To what extent is Forest Service management affecting water quality, quantity, flow timing, and the physical features of aquatic, fisheries, riparian, vernal pool, and wetland habitats?

Monitoring Driver: Forest Plan Goal 4

Background: Water quality monitoring on the FLNF has occurred since 2000. From 2000 through 2003, the water quality monitoring occurred on several streams and ponds in FLNF grazing areas, and on control streams and ponds throughout the FLNF. The monitoring tracks the effects of cattle grazing on water quality and riparian areas. Since 2004, water quality monitoring on the FLNF consisted of monitoring control streams and ponds to characterize the condition of water quality throughout the FLNF, and monitoring recreational fishing ponds to characterize the condition of water quality in and riparian areas around the fishing ponds.

The water quality monitoring results from the fishing ponds and control sites were compared to the State of N.Y. standards for Class D Waters (the lowest water quality class). In general, the majority of the parameters tested met Class D standards, except for turbidity, phosphorous and temperature. The elevated turbidity levels are probably due to sedimentation, and the elevated phosphorus levels are likely due to runoff from historic agricultural land-use areas. The source and significance of the phosphorus will have to be investigated further. The elevated temperature levels at the fishing ponds may be due to low water levels during the warmer months and insufficient riparian vegetation for shading.

Monitoring Activities: Water quality is a critical component of aquatic, riparian, fisheries, and wetland resources. In 2007, the water quality monitoring on the FLNF continued the monitoring of control streams and ponds, and recreational fishing ponds; and for the first year, monitoring a future timber sale. All monitoring was conducted bi-weekly from late spring to early fall.

For information on wetland and riparian monitoring, see the Soils Resource response section, p. ??

Evaluation and Conclusion: The 2007 water quality monitoring at the control sites showed elevated levels of phosphorus above NY State standards, probably due to historic agricultural land use practices.

The 2007 water quality monitoring at the recreational fishing ponds showed elevated levels of phosphorus and turbidity, due to runoff and sedimentation from nearby agricultural land and historic agricultural land use practices.

The 2007 water quality monitoring of a future timber sale showed normal levels of turbidity.

Recommendations: Continue water quality monitoring of control streams and ponds throughout the FLNF, monitoring of recreational fishing ponds, and monitoring an active timber sale.

Riparian, vernal pool, and wetland habitats are being maintained or restored on the FLNF by surveys and inventories that are being conducted during the planning stages of inter-disciplinary projects, in order to protect, manage, and improve the condition of those resources. Monitoring riparian, vernal pool, and wetland habitats before and after management activities is also potential needs for 2008. Continue water quality and flow monitoring on the FLNF in the future as long as funding is available.

Wildlife

Evaluation Question:

Do we have bald eagles on/near the FLNF? Are they nesting? Are they nesting successfully? Do they need site-specific protection or habitat management?

Monitoring Question: To what extent are Forest Service management activities contributing toward population viability for native and desired non-native species?

Monitoring Driver: Forest Plan Goal 2

Background: According to the New York Department of Environmental Conservation (NYDEC), specifically their New York State Bald Eagle Report of 2005, bald eagles have been on the increase since 1993 across New York state. Bald eagles, however do not nest on the FLNF, they do nest on the nearby Montezuma Wildlife Refuge.

Monitoring Activities: FLNF staff continued working cooperatively with local conservation organizations, State and Federal agencies in 2007. Each year, as the New York and nation-wide bald eagle population grows, individuals eagles are sighted more often in and around the FLNF. Each sighting is noted, considered, and follow-up actions including area surveys and monitoring occur to determine the status of the bird sighted.

Evaluation and Conclusions: Given the visibility of the bald eagle to the general public, and to agencies tasked with tracking populations of this species, it is likely that the FLNF will be made fully aware of any nesting eagles located on the FLNF. If and when this happens, a more site specific analysis of the management guidelines for the area hosting such a nesting pair would need to be evaluated.

Recommendations: No changes needed at this point.

Evaluation Question:

Do Indiana and Eastern Small-footed bats roost, forage, hibernate on GMNF? Do they need protection or habitat management?

Monitoring Question: To what extent are Forest Service management activities contributing toward population viability for native and desired non-native species?



Monitoring Driver: Forest Plan Goal 2

Background: FLNF staff continues to participate in forest-wide and State-wide, woodland bat surveys and monitoring; efforts designed to better understand how, and where, all of our woodland bats, including the Eastern small-footed bat and the federally endangered Indiana bat in particular, use the New York landscape. This is a cooperative effort involving the USFWS, Vermont's Department of Fish & Wildlife, New York's Department of Environmental Conservation, University of Vermont, and numerous local volunteers.

Monitoring Activities: In 2007, the FLNF staff did not initiate or participate in any monitoring activities on the FLNF, but did continue to work cooperatively with State and Federal agencies in monitoring and surveying for bats.

Evaluation and Conclusions: No further evaluations or conclusions were made as the result of the 2007 monitoring year.

Recommendations: Continue to participate in woodland bat survey and monitoring; efforts designed to better understand how, and where, woodland bats and the federally endangered Indiana bat in particular, use the NY landscape.

Evaluation Question:

Do West Virginia whites occur on the FLNF? Do they need protection or habitat management?

Monitoring Question: To what extent are Forest Service management activities contributing toward population viability for native and desired non-native species?

Monitoring Driver: Forest Plan Goal 2

Background: NY occurrences are based on data reported by the NY Natural Heritage Program. The West Virginia white was found in 2001 on Burnt Hill Road. More recent surveys on the FLNF, including those in 2007 have been unsuccessful in relocating individuals or populations. Habitat is available on FLNF and there continues to be a high probability that this species may be found on the FLNF. The FLNF and the Finger Lakes region are not important to the species' overall distribution.

Monitoring Activities: Monitoring activities included primarily volunteers who spent a total of over 400 hours in 2006 surveying for odonates and lepidopteron spp. Surveys occurred at various times of the year and have provided information on over 50 individual butterfly species and over 60 individual species of damselflies and dragonflies. Other monitoring activities were not as focused, but included several hours of directed surveys of pastures and forested stands for breeding birds and Management indicator species, where other butterfly species were identified and noted.

Evaluation and Conclusions: Monitoring activities to this point have resulted in a relatively complete documentation of all lepidopteron species occurring on the FLNF, but are not complete enough to provide a basis for any conclusions at this point.

Recommendations: Continue to work with volunteers and staff to survey and monitor sites for lepidopteron species including the West Virginia White, and increase the number of sites monitored each year as time and funds allow.

Wildlife: Management Indicator Species

Evaluation Question:

What are population trends of Management Indicator Species (MIS)? To what extent are MIS responding to Forest Service management of suitable habitat?

Monitoring Question: To what extent are forest management activities providing habitat for MIS?

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

Background: FLNF staff began monitoring MIS in 1987. Collection of population data has been facilitated through the efforts of the local universities, the NYDEC, and numerous volunteer groups and individuals. While it has proven difficult to consistently collect annual population data due to a variety of factors such as weather, staffing, funding, etc, FLNF staff consistently collects some annual information about each of the Management Indicator Species (MIS).

Monitoring Activities: FLNF staff continues to work cooperatively with local volunteers, conservation organizations, and State and Federal agencies to gather data for FLNF MIS. In FY 2007, the FLNF staff and volunteers collected data on gray squirrels, American woodcock, and ruffed grouse and chestnut-sided warbler. This monitoring was done in an effort to add data and continue the pursuit of quantifiable information. This will determine the trends of populations and their habitats as the result of the management practices on the FLNF. Each of the monitoring activities was completed using FLNF staff and volunteers who followed protocols established for that purpose in 1982.

Evaluation and Conclusions: MIS survey data have been collected since the mid 1980's. This data was assessed in FY2001 in an effort to detect trends; data collected since then has not changed that assessment.

Recommendations: Continue collecting data and assessing every opportunity to increase effectiveness and methods of data gathering and public participation.

Evaluation Question:

What are habitat trends for MIS? To what extent is FS management accomplishing desired distribution of age class and habitat type as desired and outlined in Forest Plan objectives?

Monitoring Question: To what extent are forest management activities providing habitat for MIS?

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

Background: FLNF Management Indicator Species (MIS) for the 1987 Forest Plan are chestnut sided warbler, ruffed grouse, American woodcock, white-tailed deer, gray squirrel, eastern bluebird and northern goshawk. These species were monitored on the FLNF since 1987 in an effort to assess changes in their preferred habitat. Due to sample size limitations, statistically significant trends are very difficult to detect for the FLNF.

In 2006, the revision of the Forest Plan dropped some species while it added others. The current list of MIS for the FLNF include Savannah sparrow, bobolink, and eastern meadowlark which represent changes in grasslands, common yellowthroat indicating changes in shrubland habitats, black-throated blue warbler indicating changes in contiguous forest habitat, chestnut-sided warbler indicating changes in young deciduous forest, ruffed grouse indicating changes in aspen habitats, and gray squirrel indicating differences in oak-hickory habitats.

The following data and analysis were collected prior to Forest Plan revision and will continue to be applicable to the MIS analysis:

- A review conducted in 2000 found that occurrence of chestnut-sided warblers on the FLNF was nearly 6 times the densities found on nearby lands.
- In recent years, ruffed grouse populations are on a downward trend, contrasted to an apparent increase in American woodcock populations.
- The occurrences and populations of gray squirrel appear to remain constant.

- The FLNF has very limited occurrence of northern goshawk (1 to 2 breeding territories). The use of these territories has been constant in the recent past.

Monitoring Activities: In FY 07, monitoring activities including species specific surveys and general biological surveys for chestnut-sided warblers, ruffed grouse, American woodcock, and the grassland bird species were conducted.

Evaluation and Conclusions: The survey and monitoring protocols are effective in that they are easy to follow, and they can and do provide information that can be duplicated each year. The monitoring protocols, however, are limited in the amount of data they can provide, and one must use the data in conjunction with other information gathered at the state and even regional levels. It is clear that the desired conditions for forest age class and species composition will be difficult to obtain. Local opportunities exist to improve and maintain habitats necessary for the maintenance of MIS populations and habitats.

Recommendations: Continue to increase monitoring, evaluation, and partnerships with the goal of obtaining more and greater reliability of data.



Grazing Resources

Evaluation Question:

Is the Forest Service maintaining forage production sufficient to support approximately 10,000 Animal Unit Months (AUMs) annually?

Monitoring Question: To what extent have Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: Annual forage monitoring was intended to assess forage availability for livestock. Specifically, it provides an estimate of individual pasture productivity for desirable grasses and legumes. The average late summer production of forage for all 38 areas surveyed was 2,546 lbs. per acre. Utilization by livestock of measured forage was estimated to average 62 percent at that time across all 4,800 acres.

Monitoring Activities: Annual forage monitoring following established protocol was done in 2007. This includes monitoring all fields grazed with livestock for desirable grasses and forb production. Monitoring was done through issuance of a contract to a firm from Corning, New York.

Evaluation and Conclusions: An estimated 60 lbs. per day dry matter (forage) per animal unit (1000 lb. cow or cow/calf pair) is needed for livestock. The FLNF's 38 pastures were producing sufficient forage based on late summer monitoring to provide needs for the approximately 2.0 animals grazing per acre, or the approximately 9,549 AUMs grazed through the 5 month season.

Recommendations: Goldenrod and non-native invasive species (NNIS) pose management challenges to long-term livestock grazing and forage production. Completion of an environmental analysis to determine various control strategies is recommended.

Evaluation Question:

Is the Forest Service providing functioning livestock watering facilities to support approximately 10,000 Animal Unit Months (AUMs) annually?

Monitoring Question: To what extent have Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: The Forest Service manages the FLNF to provide for the sustainable use of grasslands for grazing by providing functioning watering facilities (i.e. ponds, troughs, pipelines) to support needs of approximately 10,000 Animal Unit Months (AUMs) annually.

Monitoring Activities: FLNF staff and Hector Cooperative Grazing Association (HGA) annually inspect all watering facilities to assess maintenance needs, and adequacy of systems. HGA provided maintenance throughout 2007 including valve repair at several pasture troughs. In 2007, HGA staff also built fencing to ensure dam and water protection at the Predmore Pasture pond. Total Animal Unit Months in 2007 supported with functioning watering facilities was approximately 9,549 AUMs.

Evaluation and Conclusions: Of the 44 manmade ponds providing water to livestock on the FLNF, reviews throughout 2007 indicate that although all were functioning, several ponds will require dredging to remove sediment and to repair earthen dams damaged from nearly 40 years of natural rodent (i.e. beaver and muskrat), and livestock-caused bank erosion. The Predmore Pasture pond was dredged in 2007 to remove sediment and to repair breached areas of the dam. Continued future use for livestock and wildlife needs will require continued annual prioritization of repairs. Assessment, repair and replacement of pipelines and trough fixtures will continue to ensure livestock watering needs are met.

Recommendations: HGA should continue seeking innovative ways to fund watering facility maintenance needs. HGA staff routinely provides maintenance and monitoring of watering areas, but increasing emphasis on providing fencing to enhance water quality and riparian protection in pastures for wildlife and livestock will result in increased costs. Continue monitoring in 2008 to ensure livestock watering facilities are providing sufficient water.

Botanical Resources

Evaluation Question:

What are the population trends for sensitive plants on the FLNF? To what extent is management sustaining or enhancing habitat conditions for populations?

Monitoring Question: To what extent are Forest Service management activities contributing toward population viability for native and desired non-native species?

Monitoring Driver: Forest Plan Goal 2

Background: Sensitive plant species tracked by the FLNF have been monitored periodically by the Forest Service, including Forest staff and local botanists under contract. Currently there are 15 plants the FLNF classifies as Regional Forester Sensitive Species (RFSS). The New York Natural Heritage Program (NYNHP) has a national database that records information about populations they track, which includes some of the plants considered RFSS on the FLNF. The database includes population data such as numbers of plants, their condition, flowering/fruitletting, any management concerns or issues, and a general rank of the occurrence from A (excellent estimated viability) to D (poor estimated viability). Until recently, most of the RFSS plants recorded for the FLNF were actually reported outside federal lands but within Seneca and Schuyler Counties, with potential habitat on the FLNF. None of these RFSS were tracked as rare plants by New York, but were rare or scarce in the Finger Lakes region. New inventories and evaluations of species viability over the past several years have led to a revised list containing only those species occurring on or very close to federal lands, and including three species listed as threatened or endangered by New York -*Arabis drummondii* (= *Boechera stricta*)= Drummond rockcress, *Sisyrinchium mucronatum*= Michaux blue-eyed grass, and *Veronicastrum virginicum*=Culver's root. This has brought more focus to the rare plant program and allowed scarce resources to be applied more effectively for rare plant conservation.

Over the past 10 years, Region 9 of the Forest Service has been working with local National Forests to develop conservation plans and assessments for species of concern. Currently there are two conservation plans or assessments developed for RFSS plants on the FLNF: one for *Juglans cinerea* (butternut) and one for *Lilium canadense* (Canada lily).

Monitoring Activities: No changes to the plant RFSS list have occurred since it was updated in FY06, and FLNF staff continue to track 15 plant species (see list at end of document). Monitoring activities in FY07 have included:

- A collaborative effort to locate a known population of *Lilium canadense* (Canada lily)
- FLNF staff monitoring of *Veronicastrum virginicum* (Culver's root) at its only documented location on the FLNF
- Searching Caywood Point Recreation and Education Special Area, where most of the plants on our RFSS list occur, to record better location information on individual populations
- Project reviews that included searches for both plant RFSS and non-native invasive plants

Monitoring protocols were consistent with NRIS TES Plants, the new USDA Forest Service corporate database.

Evaluation and Conclusions: Last year we reported a desire to develop a more standardized approach to monitoring of our RFSS plant species. During FY07, we began using the new forms associated with the new NRIS TES Plants corporate database. These forms facilitated collection of data that is more consistent with that collected by NYNHP and others doing similar monitoring. Using the new protocol has had mixed results. The paperless protocol (collecting data in the field with a personal data recorder) is not yet functional nation-wide, and may not be for another year or two. The paper forms are cumbersome long and detailed, and were often filled out incompletely, suggesting that a more streamlined version is needed.

In FY06 we reported a plan to monitor 4 populations during FY07, in order to get all our populations on a five-year schedule. While we met this expectation, we also discovered discrepancies between different sources of data for many populations and imprecise location data for many populations, making relocation difficult, at best. Keeping these complications in mind, the results of this year's monitoring were as follows:

- At a site where at least 50 stems of *Lilium canadense* (Canada lily) had previously been reported, only one was found this year. This may be at least partially due to discrepancies in location data.

- At the site where numerous *Veronicastrum virginicum* (Culver's root) had previously been reported, with clumps on both sides of a road, all but one clump were relocated. The missing clump was on the opposite side of the road from the others, and it is uncertain whether plants may have simply been hard to locate because of the early monitoring date, or they may have been destroyed by roadside maintenance.
- At Caywood Point, *Solidago squarrosa* (squarrose goldenrod), *Solidago ulmifolia* (elmleaf goldenrod), and *Shepherdia canadensis* (Canada buffalo-berry) were found and populations were healthy. *Morus rubra* (red mulberry), *Quercus muehlenbergia* (chinquapin oak), *Celastrus scandens* (American bittersweet), and *Oryzopsis racemosa* (black-fruit mountain-ricegrass) were not found, but are believed to have been searched for in the wrong location. *Arabis drummondii* (Drummond rockcress) was not found, but is believed to occur in an area that was fairly inaccessible for monitoring. Non-native invasive species (NNIS) are prevalent at Caywood Point and could pose a threat to RFSS.

Recommendations: Revise the new paper form for monitoring plants to a more streamlined version that is easier to work with in the field, especially for volunteers, but still includes all the required information and is consistent with data collected by NYNHP.

Reconcile RFSS plant location data, including visiting sites to re-record location information, followed by development of a new layer of electronic information using GIS (Geographic Information Systems). Once complete, these tasks will facilitate more timely and successful plant monitoring.

Search for small patches of *Lilium canadense* (Canada lily), that have been reported elsewhere on the FLNF. Record their location information in the new GIS layer, to facilitate future monitoring.

Visit the site for *Veronicastrum virginicum* (Culver's root) that occurs along a road edge, and is just barely beyond the right-of-way for maintenance of this town road with the town road supervisor, discuss potential impacts of road maintenance on this site, and develop a management plan if needed.

Develop a plan for managing NNIS at Caywood Point to prevent competition between NNIS and RFSS. In addition, since this year's monitoring had multiple objectives and not all RFSS that occur there were found, a future visit should occur that focuses entirely on monitoring RFSS.

Cultivate local partnerships with individuals and organizations who are interested in rare plants in order to expand the capacity of FLNF staff to monitor rare plant populations.

Evaluation Question:

To what extent are non-native invasive species impacting other Forest resources?

Monitoring Question: To what extent are Forest Service management activities contributing toward population viability for native and desired non-native species?

Monitoring Driver: Forest Plan Goal 2

Background: The impact of non-native invasive species (NNIS) of concern on the FLNF has been monitored by surveying the extent of infestations in areas FLNF staff want to protect or in areas most likely to be sources of seeds or plant propagules that could be dispersed to areas to be protect. It also includes determinations of invasiveness and the results of treatment efforts. So far, most monitoring efforts have focused on surveying the extent of infestations, in preparation for developing a proposal to treat invasive plants across the FLNF. FLNF staff and volunteers have surveyed the extent of infestations along many roads, trails, and developed recreation sites (all are potential sources of seeds



or other plant propagules for dispersal), as well as Special Areas, candidate Natural Research Areas, grasslands, woodlands, and project sites (places we want to protect). In general, surveys of natural communities have focused on edges of habitats rather than interiors, e.g., woodland edge rather than deep into the woods, because edges tend to be more susceptible to infestation and are easier to access for surveys. Results of edge surveys can then suggest where to focus future surveys of habitat interiors. Most sites surveyed have had infestations of one or more NNIS, although in some cases infestations are small and isolated. Some species that had rarely been noted ten or more years ago (anecdotally, prior to formal data collection) are now widespread. No ponds have been surveyed for aquatic NNIS. The FLNF list of non-native invasive plant species includes two trees, twelve shrubs, two woody vines, two herbaceous vines, eight herbaceous species, two grasses, and three aquatic plants (see Appendix A).

Monitoring Activities: In May through August of 2007, the following monitoring activities occurred:

- One trail was monitored for all NNIS by volunteer Kate Bartholomew
- The Vesa Road garlic mustard site controlled annually by volunteers was monitored by FLNF staff, and manually treated by volunteers
- The Cotton Mill project area was monitored and manually treated by FLNF staff
- Two sections of trails were monitored for garlic mustard by a local 4-H club, led by Kate Bartholomew and Tim Hicks; club members volunteered to monitor and hand-pull garlic mustard on as part of a project on GIS (geographic information systems).
- One roadside, four ponds, and their surrounding grasslands, were monitored by volunteer Sue Gregoire.
- Permanent monitoring plots were established for three leafy spurge infestations in or adjacent to grasslands.
- Ground disturbing projects that were surveyed for rare plants were surveyed for NNIS at the same time.
- Special Areas Mill Creek Ravine, Breakneck Creek, Townsend Road Oak Woods, and Caywood Point were monitored by Forest staff.

Because trails can serve as avenues of dispersal for NNIS, and infestations that occur along them indicate the extent to which different NNIS are widespread across the FLNF, they were considered important to monitor, and this year's work by various volunteers is just the beginning of that effort. The Vesa Road garlic mustard site controlled annually by volunteers was monitored to determine the effectiveness of hand-pulling garlic over a period of several years. The Cotton Mill project area was monitored in preparation for project implementation, to determine the extent and effectiveness of manual NNIS control of garlic mustard, multiflora rose, buckthorn, and morrow honeysuckle. As a result of the previously stated need to establish long-term monitoring plots of at least one NNIS that has limited distribution, FLNF staff established three leafy spurge plots this summer. Sites of proposed projects were monitored to evaluate the potential for NNIS to spread during project implementation, per Forest Plan direction. Special Areas were monitored because they are places we want to protect from ecological degradation. All data was gathered using the USDA Forest Service Natural Resources Information System (NRIS) protocol, to be entered into the newly revised NRIS corporate database. All sites monitored will provide baseline information for the Invasive Plant Control Project currently undergoing environmental analysis.

Evaluation and Conclusions: While monitoring indicated the extent of NNIS infestations, FLNF staff does not currently have a means of measuring the effect of NNIS on other resources. FLNF staff does not have measurements of these infestations over time, which would indicate how invasive a particular NNIS can be (although we have set up one set of permanent plots this FY). Monitoring protocols were otherwise efficient and easy to use; an indication of this is that volunteers have been fairly easily trained and assigned to projects.

As was previously reported, the results of road surveys indicated the need to work cooperatively with towns and private landowners to control NNIS along roads that cross the FLNF. NNIS infestations are often continuous across lands under different ownership, and infestations controlled by one land owner but not by adjacent landowners, would simply re-establish on land where they have been controlled. This led FLNF staff to offer a workshop for town road crews in July 2007, which is hoped to be the beginning of a long-term partnership that will help reduce the impacts of NNIS on other resources. Results of monitoring the volunteer garlic mustard control site indicated there has been a gradual reduction in garlic mustard at this site over time, but that it is not disappearing. This result is not unexpected, since the seed bank is likely to continue producing garlic mustard plants for five or more years from the start of the project (2004). In 2007, FLNF staff also received funding to develop sources of native plant materials that can be used for restoration of this site and other future sites. Results of the Cotton Mill monitoring indicated that NNIS are continuing to spread in the project area, that NNIS control must occur repeatedly over time in order to exhaust NNIS seed banks, and that a more effective and efficient "toolbox" of treatment options is needed. All Special Areas were infested except Townsend Road Oak Woods (though mainly its interior was surveyed); most infestations were of garlic mustard, although in Mill Creek Ravine, there was also swallow-wort, a species which has been found very infrequently on the FLNF.

The fact that most sites monitored showed a need for ongoing control suggests that there is little change in potential impacts to other resources. Previously it was reported that monitoring results pointed to the need to develop a plan for integrated pest management for all NNIS, forest-wide. FLNF staff are pleased to report that the Invasive Plant Control Project environmental assessment is underway, with a decision expected before the end of FY08.

Recommendations: Monitor representative adjacent natural communities in order to understand the extent to which roadside infestations indicate a potential NNIS problem on adjacent lands,. Share information about NNIS with road crews in towns that maintain roads that cross the FLNF (a workshop for road crews occurred in FY07, but data sharing is still needed). Determine whether the Vesa Road garlic mustard control project is effective, and conduct ongoing control and monitoring until the seed

bank is presumably exhausted. We reported last year that site restoration (planting with appropriate native species) might be necessary to combat new infestations; development of a source of native plant materials has begun, but implementing the restoration work and then monitoring the results will still need to occur. Implement the Finger Lakes Invasive Plant Control Project, and monitor the results.

Timber

Evaluation Question:

Are lands adequately restocked according to stocking surveys?

Monitoring Question: Are harvested lands adequately restocked according to Plan goals?

Monitoring Driver: Lands are adequately restocked as specified in the Forest Plan.

Background: The National Forest Management Act (NFMA) of 1976 provided requirements that all stand regeneration harvest activities on suitable timberlands that create forest openings be quickly reforested. For the FLNF, this requires that any harvest activity effectively beginning stand-origination is reforested within 5 years of the harvest event that creates the opening. This monitoring item helps to determine if the Forest is meeting the requirements of NFMA.

Monitoring Activities: No first year evaluation surveys were completed in stands by FLNF staff in FY 2007, as no recent reforestation has taken place. Were it to occur, the work involves visiting harvested stands and sampling the new regeneration using numerous 1/700 and 1/100 acre sized circular plots in each stand to count seedlings and saplings. A plot is considered stocked if at least one acceptable seedling or sapling occurs in it. The plot data is summed and a percent of total stocking is determined for each stand and results are reported in the FACTS data base.

Evaluation and Conclusions: Reforestation monitoring is an integral part of National Forest management operations and has standardized requirements. Monitoring protocols have been rigorously tested, certifications of successful reforestation have requisites, and procedures are detailed in the Forest Service Handbook (FSH 2409.17, Silvicultural Practices). Reforestation success is measured on new plantations or harvested stands in years one, three, and five (if needed) following the planting or other regeneration effort. Successful reforestation is assured when new stands are certified as "free to grow" by year five.

Recommendations:

This monitoring item is on track. Continue to conduct first, third, and if necessary fifth year plantation survival evaluations to determine if survival and growth of any new planted stock is adequate following reforestation efforts, and that adequate reforestation has been undertaken and achieved on all other units of regeneration harvesting.

Evaluation Question:

Is the maximum opening size for even- aged harvesting being met and are we accomplishing resource objectives. Are we meeting wildlife habitat regeneration objectives in both size and quantity of openings by habitat types? This is a required Forest Plan monitoring item. It helps whether we have met standards for maximum opening size and scenic integrity.

Monitoring Question: Are maximum size limits for harvest areas appropriate, and should these limits be retained?

Monitoring Driver: Opening size is consistent with Forest Plan S&G 2.3.5 – Openings, and NFMA requirement on opening size.

Background: Temporary openings created through even-aged regeneration harvests should not exceed 30 acres in size; exceptions may include salvage of timber resulting from natural catastrophes caused by fire, insects, disease, ice or windstorm.

Monitoring Activities: FLNF staff analyzed the size of even-aged regeneration harvest units, (clearcuts, shelterwoods or variants) that were offered for sale in FY 2007. Three of these types of units were sold during 2007, and the size of openings ranged from a minimum of 0.25 acre to one 11 acre opening being the largest.

Evaluation and Conclusions: The 30 acre size limit for temporary openings created by even-aged regeneration harvest has not been exceeded. Planning for and achieving openings closer to the full 30 acre limitation may be difficult to implement due to public desires, which may at some point affect the ability to achieve the desired future condition (DFC) for acres of treatments, age classes and habitat. This is because in many cases stand acres proposed for this type of harvest are reduced to maintain other resource conditions such as deer wintering habitat, visual quality guidelines along roads, trails and visually prominent locations or to buffer wetlands.

Budget and logistical constraints affect how much forestland is analyzed and planned for vegetation management treatments, to the effect that not all suitable timber areas with regeneration harvests are reviewed every 10 years. It is likely the trend of not maintaining the 0-9 year old age classes for all forest types and related habitats would continue for new projects into the future as well. The FLNF staff continues to incorporate as much of these types of harvests as possible in vegetation management proposals, and look for opportunities to create the maximum acre size of units in those proposals.

Recommendations: Continue to identify stand conditions in future Integrated Resource Projects (IRPs), proposing treatments that include even-aged regeneration harvest as appropriate. Locating openings away from areas where standards and guidelines or other desired resource conditions limit cutting unit size will better achieve stand sizes and acres treated.

Special Forest Products

Evaluation Question:

How many and what special forest products (SFPs) do people gather? How many require permits, and how many permits were issued annually, for which products/species? How many requests for permits were denied? How many SFPs are being evaluated for permit requirement?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: The Forest Service currently issues permits for gathering of the following special forest products on the FLNF: saplings, dead/down wood, and firewood. The agency evaluated this level of gathering for the revision of the Forest Plan, and found it to be ecologically sustainable, but little was known about gathering of other desirable products for which permits are not ordinarily issued. During revision, Marla Emery of the Northern Research Station (NRS) in Burlington drafted a proposal to assess the uses of special forest products in and around the FLNF, which the agency did not implement at that time. FLNF staff believes that this assessment would still be a valuable tool to help the agency identify which species require permits and what permit rules should apply. This will lead to greater certainty both within the Forest Service, and among the public, regarding which products can be collected sustainably, in what locations, and what type of permit or restrictions apply.

Monitoring Activities: Currently, the FLNF monitors the number and type of SFPs for which permits were issued for gathering, as well as those for which permits were denied. In FY07, permits were issued for the following products:

Product	Quantity
• Firewood	10 cords
• Dead/down wood	0
• Saplings	0

Evaluation and Conclusions: Firewood is the only product that has been gathered over the past 7 years on the FLNF. Firewood gathering was lower than the average over the past several years. Gathering continues at a low level, and requests for SFP permits beyond the usual kind are rare, happening less than yearly; there were no requests in FY07. An assessment of SFP uses across the Forest is still desirable, and was built into the Monitoring Guide. Otherwise, current methods and data collected appear to provide an effective measure of SFP use and sustainability for those products requiring permits.

Recommendations: Implement the assessment proposed by Marla Emery of NRS to assess SFP use across the Forest. Work with Marla in FY08 to refine the project plan, and then implement the assessment sometime in the following 2-3 years.

Rare Features

Evaluation Question:

To what extent are rare and outstanding biological, ecological, or geological features on the FLNF being protected, maintained, or enhanced? To what extent do ecological types recognized on the Forest accurately represent the diversity of ecosystems and potential natural vegetation on the Forest?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: The significant ecological features to be monitored and evaluated for this question are listed in Table 3.10-3 of the Final Environmental Impact Statement for the revised Forest Plan. The primary emphases of monitoring to address this question during plan implementation will be (1) to evaluate these significant ecological features in terms of quality and disturbances, and (2) to maintain them at their current level of quality or higher. This may mean controlling incursions of non-native invasive species and ATVs, and it could mean using prescribed fire to maintain a natural disturbance regime. Monitoring will occur before and after any management activities to determine if actions contributed to or detracted from composition, structure, and function of the sites in relation to their values.

In addition to the known significant features, 14 stands were identified during plan revision as old forest areas of interest. These stands include trees of at least 100 years of age that are not currently in one of the reference area designations (Future Old Forest, Ecological Special Areas, Caywood Point Recreation and Education Area, candidate Research Natural Areas), and that records suggest have had limited forest management. While the reference area designations include some stands that are of similar or older age, this group of stands identified during revision has not been evaluated in the field as to their ecological condition, quality or evidence of disturbance. It is the FLNF's intent to work with partners such as Hobart and William Smith College and local volunteers to evaluate these areas and determine if they should be managed differently than they are currently.

A monitoring schedule was established in FY06 in which on average 2 significant sites are visited every year, and every site is visited at least once every 5 years. Sites in which concerns are identified may be revisited more frequently. Also during FY06, indicators were identified that would be used as measures to address this evaluation question. These indicators include number of conservation actions, ranked condition of the sites (A-D ranks based on Natural Heritage Program [NHP] methodology), and number of acres surveyed for rare or outstanding features. During early 2007, existing Natural Heritage Program (NHP) monitoring protocols were evaluated and adapted for use during monitoring. These protocols were tested during the summer field season.

Monitoring Activities: Four sites were visited during FY07: Mill Creek Ravine, Breakneck Creek, Townsend Road Oak Woods, and Caywood Point. Caywood Point was last visited in 2005, but was visited this year in order to review proposed trail development in association with the Caywood Point site development project. Breakneck Creek was last visited in 2003 to evaluate it for inclusion as an Ecological Special Area in the 2006 Forest Plan. The remaining 2 sites have not been visited since initially evaluated in 1988. None of the sites except the Blueberry Patch Swamp have been ranked by the NY NHP, and so initial monitoring visits gathered data needed to evaluate size, quality, and context for ranking. Another objective was to evaluate non-native invasive species (NNIS) conditions, because original evaluation reports indicated minimal incursions of NNIS at these sites.

At each site, field notes are taken addressing the condition and quality of the site, as well as its landscape context. Information gathered included basic site and topographic characteristics, size, species lists, natural community descriptions, and descriptions of threats, disturbances, management needs, maturity, connectivity, and landscape condition. These notes are then incorporated into site reports that are prepared during the winter months.

No conservation actions had been identified for any significant ecological features in prior years, and so no actions were taken in FY07. There was no inventory conducted this year to evaluate potential areas or old forest areas of interest for ecological significance.

Evaluation and Conclusions: At Mill Creek Ravine, two concerns were noted that appeared to have been changes from the original inventory and evaluation. Several NNIS were noted at the site, including in particular garlic mustard and swallowwort. Both species tend to be more concentrated along the edges, but since this area is associated with a ravine and is therefore more linear in shape, incursions from the edges can quickly have major impacts on the flora and processes of the ravine. The swallowwort is of particular concern as it is a more recent invader and this is one of few occurrences on the FLNF. During FY08, an environmental assessment (EA) will be prepared allowing the use of an integrated pest management (IPM) approach to the control of NNIS species. FLNF staff will work to determine the most appropriate course of action in controlling the NNIS at this site. In addition to NNIS, the landscape surrounding the ravine includes agriculture, road right-of-ways, and private homes. In the case of adjacent homeowners, there is one case of old appliances, vehicles, and other metal debris being dumped across the property line into the site. There is also some recreational use along the river where lawn chairs and some other rudimentary camping or day use structures were present during July. These types of uses will be discussed with law enforcement to determine a course of action to protect the site. FLNF staff noted that the southern third of the area (south of the road) was higher quality with fewer NNIS than the northern two-thirds, possibly because the ravine was a little deeper and the forested area was a little wider.

At Breakneck Creek Ravine, we noted that the ravine was generally in good condition, with limited invasions of NNIS and mature forested stands. The ravine is generally surrounded by agriculture except at the northern end, and like Mill Creek is a more linear feature, and so more susceptible to NNIS impacts. There is a small disturbed island in the ravine bottom that is covered with NNIS (particularly multiflora rose and garlic mustard) and some non-invasive exotics like day-lily, but these

species were generally restricted to this island and the edges of the ravine near it. The steep slopes were free of NNIS. Toward the middle of the ravine, a large landslide had occurred recently because there was no vegetation on the debris pile and the stream was still cloudy from the sediment that had moved into the creek. It was unclear if the slide was natural in origin. There did not appear to be much evidence of recreational use, so the level of current use does not appear to be affecting the quality of the area. As with Mill Creek Ravine, FLNF staff will work to design the most appropriate control program for the currently existing NNIS.

Townsend Road Oak Woods is a high quality but very small patch of Appalachian Oak-Hickory Forest. The patch had no NNIS occurrences in the core. The edges of this area were not surveyed, and occurrences of garlic mustard may be present along the edges. The stand is mature, with large trees, and most of the flora one would expect from a small patch of this natural community. The landscape in which it sits is a mix of forest and agriculture, with forest to the north, northeast, southeast, and southwest, and a mix of shrubland and pasture elsewhere. A road forms the northern boundary and the Interloken Trail passes through the stand, but there seem to be limited impacts from these travelways currently. There were not indications of unauthorized use or recreational impacts at the site. At the current time, it appears this site continues to exhibit the qualities for which it was originally identified in the late 1980s, and does not require any immediate management actions.

The high quality natural communities associated with the lake cliffs and the dry, open woods just upslope of the cliffs at Caywood Point were recognized in 2005. This area included some forest patches that appeared quite old, and included native red pine and pitch pine, as well as some extremely old hemlock of dwarf stature. Although the area has received a great deal of recreational use associated with the old Boy Scout Camp, the site appears to be recovering from that use. Forestry practices in these lake cliffs and associated uplands appear to be of limited extent. The monitoring in 2007 focused on the northern portion of the site from the Boy Scout Camp north to the property boundary. During the monitoring at this site, several concerns were noted. First, there are abundant occurrences of garlic mustard throughout the site, particularly in areas further than 100 feet or so from the cliff edge. Second, two potential routes for an access trail/road down to the lake passed through some of the highest quality and least invaded portions of the site. There is potential that placing such an access road in the high quality portions of the site will facilitate the spread of NNIS throughout the area, impacting several rare and uncommon plants along the cliff edges. A third concern has to do with evaluation of the rank of this area. High quality areas are patchy and embedded within areas of younger forest where recreational use and NNIS have had a major impact. FLNF staff will work to develop a plan to best protect the site while providing required access to the lake, and to control NNIS at this site.

Overall, the monitoring protocols and evaluation procedures worked well. It is likely that most of the significant sites will have NNIS infestation concerns that will need to be addressed. It will be important to clearly document these infestations on the NNIS program forms immediately following the monitoring so that information and management can be effectively coordinated. It is also likely that as a result of NNIS concerns, and other potential issues, sites will need to be visited more frequently than the 5-year cycle developed in 2006, particularly if management actions are undertaken. It will be important to prioritize sites for monitoring, with least disturbed examples possibly being visited less frequently. FLNF staff can increase capacity to monitor sites by training technicians and volunteers to use basic site reporting protocols and gather enough information at these sites for the FLNF Ecologist to evaluate condition and quality, and determine if the rank has changed or if management actions are required.

Recommendations: Monitor 3 significant sites on the FLNF in FY 08, and evaluate their condition and quality to determine if management actions are needed. Develop action plans for the three sites where NNIS and other concerns were noted to address those concerns. The EA that will enable the Forest to use IPM techniques for NNIS control will not be completed until the end of FY 08, which means the focus for management in FY08 will be NNIS mapping and control planning. Initiate the evaluation of

the old forest areas of interest to determine their ecological significance and changes to management direction for these stands.



Insects and Disease

Evaluation Question:

To what extent have destructive insects and disease organisms increased?

Monitoring Question: Are insect and disease levels compatible with objectives for maintaining healthy forest conditions?

Monitoring Driver: Destructive insects and disease organisms do not increase to potentially damaging levels following management activities.

Background: This monitoring item helps track trends in insect and disease (I&D) activity on the FLNF. Monitoring of insect and disease pathogens can be employed to determine when, how much, and what kinds of management actions, if necessary, should take place to prevent or suppress undesirable I&D agents. As the FLNF provides a portion of host material for a variety of I&D agents found within upstate New York, this monitoring element is best undertaken in a more “landscape” context with adjacent landowners, municipalities and local, state and federal monitoring organizations. For instance, monitoring of emerging insect or disease agent threats, such as the emerald ash borer, an exotic insect pest, has become a national monitoring effort. In this case, early detection efforts are the combined focus of forest research and management organizations at the state, federal and university levels.

Monitoring Activities: In FY 2007, a number of insect and disease monitoring efforts were undertaken on the FLNF, in concert with numerous individual and agency partners. The following insects and diseases were tracked, and listed below are the organizations or agencies involved in, and the dates and types of insect and disease (I&D) monitoring efforts used.

Insect or Disease Agent	Organization & Date of Monitoring	Type of Monitoring Effort
Forest tent caterpillar, oak defoliation by gypsy moth, bark beetles, locust borer and locust leafminer	Northeastern Area State & Private Forestry, USDA Forest Service - July 9, 2007	Aerial Detection Survey of forest health conditions with 1,364 acres mapped by damage class
(as above)	Northeastern Area State & Private Forestry, USDA Forest Service - July 13, 2007	Aerial observations above ground checked by Kevin Dodds
<u>Sirex noctilio</u> was confirmed on Finger Lakes NF	Northeastern Area State & Private Forestry, USDA Forest Service - August, 2007	Destructive sampling of individual trees, specimen rearing at Cornell lab

Evaluation and Conclusions: Insect epidemics tend to occur with great variations in population numbers, a result of the combination of susceptible host habitats, favorable weather conditions, and previous year population levels. In 2007, a total of 1,364 acres of damage was mapped, including nearly 1,100 acres from forest tent caterpillar. In one area of 151 acres, defoliation from forest tent caterpillar on sugar maple and defoliation of ashes from gypsy moth were observed. Also found was a 28 acre red pine stand that had blown down due to wind and discoloration from bark beetles. There were a few areas of damage from unknown causes. The confirmation of Sirex noctilio (wood wasp) on the FLNF is indicative of a destructive insect that will be a primary causal agent in increased red pine mortality across the forest.

Recommendations: Continue annual aerial and on-the-ground insect and disease detection monitoring efforts.

Fire

Evaluation Question:

How many wildfires were suppressed with no reportable accidents/injuries or damage to private property? How many acres of private property burned from fires with ignition on Forest Service land?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: Although there is a low occurrence rate of large fires on the FLNF today, large fires probably occurred between 1790 and 1890, during European settlement, as a result of human activities such as land clearing and logging slash. From the late 1790s until 1890, the forests in the region were cleared for agriculture or harvested for timber. Unnatural fuel accumulations in combination with drought resulted in severe fires. Although most current day wildfires are relatively small, there was a history of large fires during the last 150 years.

Between 1890 and the Great Depression, farmland within the FLNF was abandoned due to soil depletion and other factors. Legislation during the 1930s authorized the reforestation of abandoned farmland and planting of conifers on the most eroded, depleted soils by the USDA Soil Conservation Service. Modern fire control was initiated during this "Conservation Era." The FLNF has had seven wildfires totaling six acres during the 20-year period from 1983 to 2002. This averages approximately 0.5 wildfires per year burning a total of 0.4 acres annually. All wildfires on the FLNF during this period were human-caused.

Monitoring Activities: There were no reportable wildland fires in FY2007.

Evaluation and Conclusions: Based on FLNF vegetation conditions and observed fire weather conditions for FY2007, fire preparedness and other fire management actions was adequate and consistent with the level of risk.

Recommendations: Ensure VFD agreements are still in place, and ensure coordination and communication is ongoing between fire management staff and the VFD personnel. Although, fire risk is low, fire staffing and other preparedness actions should be continuously monitored during fire season.

Evaluation Question:

To what extent have hazardous fuels been reduced?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: There is concern that increased fuel loading across the FLNF will lead to an increasing risk of larger wildfires occurring within the wildland urban interface areas. Currently, timber harvesting and mechanical treatments are the primary management tools used to reduce hazardous fuels and meet ecological objectives on the FLNF. Timber harvest methods used to achieve hazardous fuels reduction include: ground harvest methods. Mechanical treatments include the use of chainsaws, brush saws, brush-hogs or related equipment to remove or reduce specific vegetation from a site.

In addition to fuels reduction through mechanical and harvest treatments, fire provides an additional tool for mimicking natural processes and disturbance. There are different effects on resources when using fire versus timber management as a tool to achieve ecological objectives and fuels reduction. Fire contributes to a host of functions and processes in ecosystems. Fire reduces accumulations of organic material, which in turn reduces wildfire hazard. It recycles nutrients and alters soil chemistry, aids in decomposition, and influences soil structure and stability. Fire effects can vary depending on fire intensity, severity, and frequency, the primary factors that define fire regimes.

Monitoring Activities: FLNF staff implemented approximately 151 acres of hazardous fuels reduction activities utilizing prescribed fire as a tool, and reported it as a core accomplishment. Additionally, grazing provided secondary benefit for hazardous fuels reduction with over 5000 acres being reported.

Fire Regime Condition Classes, both pre and post treatment observations were made. Post treatment observations showed a move to a better condition class, and all treatments were reported in FACTS.

Evaluation and Conclusions: The use of prescribed fire treatments to reduce hazardous fuels was effective in FY07. Hazardous fuels treatments also provided secondary benefit objectives, which included ecosystem restoration and wildlife habit maintenance and improvement.

Recommendations: Continue to use prescribed fire on the FLNF as a vital tool for the reduction of hazardous fuels, to maintain wildlife habitat, for timber stand improvements, and to restore and enhance ecosystems. Mechanical treatment should also supplement prescribed fire treatments in order to effectively reduce larger diameter woody vegetation that may not be fully treated utilizing prescribed fire only. Therefore, the use of it should be an ongoing management practice in the future. The FLNF should look at developing agreements with outside partners, namely the Montezuma NWR, in an effort to utilize NWR personnel and resources for Forest use in implementing hazardous fuels projects (Prescribed Fire).

Evaluation Question:

Is prescribed fire being effectively used as a tool to meet management objectives set forth in the Forest Plan? Are prescribed burns meeting the fire effect objectives set forth in each burn plan?

Monitoring Question: What are the effects of management practices prescribed by the 2006 Forest Plan?

Monitoring Driver: Forest Plan Management Area Guidance

Background: Prior to European settlement, the use of fire by the Iroquois had an ecological role as a disturbance factor on the land between Seneca and Cayuga Lakes, which is now part of the FLNF. The 1790 Land Survey records of the military tracts that are now the FLNF show that brushy open conditions, and evidence of fire were prevalent in the area between Seneca and Cayuga Lakes. It is suspected that fires in this area were used by the Iroquois, possibly to drive deer or to clear brush between Seneca and Cayuga Lakes.

The 18th century land records for the Finger Lakes region recorded disturbances caused by wind, fire, beavers, and native people. Data from these records suggest that fire played an important ecological role on the FLNF. Fire appeared to be the most prevalent disturbance in the FLNF region.

Throughout the 20th century, Forest Service fire management policies have evolved in response to land and resource management needs, growing knowledge of the natural role of fire, and increased effectiveness of fire suppression. During the earliest years of wildland fire management (1940s), the existing state of knowledge indicated that aggressive, total suppression was the best solution to limit widespread, damaging fires. As knowledge, understanding, and experience expanded, it became apparent that complete fire exclusion was not the best management direction to support a balanced resource management program. Fires can be managed for resource benefits through the use of management-ignited prescribed fire. On the FLNF, prescribed fire can be used to meet particular objectives in management areas that allow its use. Some of these objectives include:

- Reduce hazardous fuel loading in the Wildland Urban Interface to reduce the risk of intense wildfire
- Create, maintain, or improve wildlife habitat (grassland, shrubland, and permanent upland openings)
- Prepare sites for restoration of species such as oak, pine, and aspen
- Create, maintain or improve plant community composition by influencing the scale and pattern of vegetation across the landscape including changing successional patterns while maintaining ecological functions and processes
- Control interactions between plant communities and insects and/or disease
- Promote blueberry production
- Create or maintain scenic vistas
- Maintain and enhance rangeland

The use of prescribed fire is an integral component of the FLNF fuels treatment program which started in earnest during the mid-1970s to achieve multiple vegetative management objectives. The program consists of both mechanical as well as prescribed fire activities. Mechanical treatment includes the use of chainsaws, brush saws, brush-hogs or related equipment to remove or reduce specific vegetation from a site. The use of prescribed fire will almost always accomplish multiple objectives within the same treatment area or unit. For example, a prescribed burn to maintain wildlife habitat may also reduce fuel loadings. An understory burn to promote fire adapted oak may also benefit individual fire adapted ground flora.

A prescribe burn plan outlines the perimeters under which a burn is conducted and list operations procedures during the burn.

Although all management areas allow for the use of prescribed fire, the Existing and Candidate Research Natural Areas specify that prescribed fire can only be used where needed to maintain the values for which the areas were established.

Monitoring Activities:

3 burn units were implemented for a total of 151 acres. Pre- and post-burn monitoring was conducted on all of the prescribed burns implemented in FY2007. Monitoring focused on measuring pre- and post-dead fuel accumulations as well as examining fire's effects on reducing woody encroachment (mortality).

Prescribed fire planning was accomplished with over 5 prescribed burn plans being shelf stocked for use in FY08. Each prescribed fire plan based parameters on pre-burn observations of the site. There are two main objectives associated with each plan, one objective focused on broad resource results, and the other targeting specific objectives resulting to the fuels from the prescribed fire. In general, the resource objectives are:

- to truncate approximately 80% of invading woody vegetation consisting of shrubs and tree seedlings/saplings through repeated fire entrances
- promote an increase of native grasses and forbs to cover approximately 90% of the unit by repeated fire entrances, maintaining an open grass like state

Although, site specific, the majority of the burn plans had prescribed fire objectives and acceptable range of results being: To reduce the 1hour fuels by 75% and 10 hour fuels by 50%,

Evaluation and Conclusions: Post-burn results from prescribed fire implementation did show success in reducing overall fuel loads of the burn units 1hour and 10 hour fuels were reduced to acceptable levels as prescribed. 100 hour and 1000 hour accumulations were not a considerable factor for these units, therefore not evaluated. Mortality of small diameter woody vegetation (shrubs and tree seedlings/saplings) from implemented prescribed burns were at acceptable levels for prescribed burns that were implemented further into the spring season as opposed to burns implemented in early spring which produced less mortality. In all of the units, there were small increases of Native grasses and forbs. Fire Regime Condition Class improvements were obtained in all burn units.

Recommendations: Continue to use prescribed fire as an effective tool for managing hazardous fuels on the Forest. Although, monitoring showed that prescribed burning in spring produced favorable results for reducing light dead fuels (1hr and 10hr) and small diameter woody vegetation, delaying prescribed fire implementation for warmer months (growing season) may produce better results in the promotion of native grasses and forbs, as well as effecting increased mortality in woody vegetation.

Information, Education, Partnerships, and Payments to Counties

Evaluation Question:

Are partnerships active and effective on the FLNF and are Forest Service personnel participating in partnership activities?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: Partnerships and collaboration are essential throughout all levels of the Forest Service. Retired Chief of the Forest Service Dale Bosworth has stated that *“As we enter the Forest Service’s second century of caring for the land and serving people, a strong spirit of partnership and collaboration is more important than ever.”* The GMNF staff has worked with partners throughout its history to achieve social, economic, and ecological goals. Each year, the GMNF staff continues relationships with



existing cooperators and enters into new ones. This collaboration has resulted in increased public service and improved land stewardship, both which enhance the Forest Service’s effort to meet desired conditions. This overview will share information on both formal agreements and informal cooperative efforts. Information is presented as a collective report for the Green Mountain and Finger Lakes (GMFL) National Forests for FY07 as the information is tracked regionally in a combined report.

Monitoring Activities: The Forest Service uses many types of agreements to document its work with other organizations and entities. Each of these has specific Congressional legal authority and requirements. The appropriate instrument depends on what the partnership will accomplish, who will benefit, and who is providing funding. The Forest Service must have appropriate statutory authority prior to entering into any agreement, which could result in the use, obligation, or other commitment of any Forest Service resources.

Formal Agreements:

During FY07, there were a total of 34 signed grants and agreements that provided or obligated \$599,953 worth of cash, goods, and services to the GMFL from partners, and \$457,306 worth of cash, goods, and services to partners from the GMFL.

Volunteer Agreements

In FY07, 130 volunteers provided 30,776 hours of service at an appraised value of \$553,968 to the Green Mountain and Finger Lakes National Forests.

Total to the Forest:

Including formal and volunteer agreements, partners gave a total value of \$1,153,920 to the GMFL in FY07. This includes:

- cash contributions of over \$200,383
- in-kind contributions of over \$163,817
- non-cash contributions of over \$789,720.

Total to Partners:

Contributions also went to various partners for the work they provided to support the GMFL. In FY07, there was over \$403,673 in funds and over \$51,904 in non-cash contributions that were obligated and/or provided by the GMFL to partners, including: challenge cost-share agreements, law enforcement agreements, and roads agreements. There were also partnerships where Forest Service's and partner's funds combined to pay for land improvements.

The GMFL has had numerous on-going informal agreements with State, county, local and other federal agencies, and non-profits that benefit the Forests. These informal partnerships have not been documented through the formal agreement process and are not accounted for in the numbers listed above; however, they do greatly benefit the GMFL

Evaluation and Conclusions: Formal and informal agreements with State, county, local and other federal agencies, and non-profits can increase the amount of management and educational activities that occur on the GMNF. Partnerships also increase the ownership that these organizations have in the GMNF. These agreements also provide GMNF staff with an opportunity to contribute to work that partner organizations value.

Recommendations: Continue working with existing partners and volunteers and cultivate new partners and volunteers where there is an interest from partner groups, and a potential benefit to the GMNF and nearby communities.

Evaluation Question:

How many agreements for fire management have been developed and maintained with outside partners?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: FLNF staff has had and continues to maintain strong partnerships with the Department of Defense. Agreements are maintained with the U.S. Army Environmental Center (State and Private Forestry-NA) for Ft. Drum (Army) in New York, Westover Air Reserve Base (Air Force) in Massachusetts, and New Boston Air Force Station in New Hampshire. Although each has separate agreements, the scope of work remains fairly the same: to plan and implement prescribed burns for the reduction of hazardous fuels, and to provide fire training to DOD employees.

These partnerships are very beneficial to FRLNF staff for a number of reasons. The Department of Defense issues Military Interdepartmental Purchase Requests, providing supplemental funds to the FLNF's fire program. The implementation also is beneficial because it provides good experience and training opportunities to fire personnel.

FLNF staff also maintains 5 agreements and partnerships with Volunteer Fire Departments. These agreements are very beneficial by providing suppression support if needed on wildland fire incidents as well as aiding in the preparedness planning across the FLNF. The following tables displays the VFD's under agreement, and the location on the forest in which the agreement serves.

FLNF staff also maintains an agreement with the Northeast Forest Fire Protection Compact for interagency fire planning benefits, and participates on an ongoing basis with a variety of working teams within the compact.

DISTRICT	NAME
Hector	Lodi Fire Department
Hector	Ovid Fire Department
Hector	Trumansburg Fire Company
Hector	Interlaken Fire Department
Hector	Schuyler Fire Comapany

Monitoring Activities: Management of these agreements is continuous and on-going, requiring coordination with all parties within the agreement as well as with grants and agreement specialists within the agency. All of the FLNF agreements are re-written every 5 years, with operating plans being done on an annual basis.

In FY07, the FLNF staff provided hazardous fuels project planning and implementation for Fort Drum Military installation. In early May, the FLNF staff burned over 3233 acres over a three day period at Fort Drum using a combination of ground and aerial ignition.

There were no wildfire occurrences on the FLNF in FY2007 that required a VFD response and working under the authority of an agreement.

Preliminary discussions were conducted with The Nature Conservancy (TNC) in New York to develop a prescribed fire and fuels Memorandum of Understanding. This MOU would allow for the exchange of personnel and resources for implementing prescribed burning on Forest Service and TNC lands.

Evaluation and Conclusions: Partnership agreements provide valuable services that help the Forest Service achieve desired management objectives. It is essential that agreements be kept current.

Recommendations: Desired partnerships with organizations (Land trusts, Clubs, private landowners, etc.) that provide opportunities to assist with FLNF and adjacent lands fuels management should be targeted. This might offer opportunities to reduce financial burdens on the Forest Service by offering more cost effective means to treat hazardous fuels, and possibly increase the amount of acres treated per year. Additionally, FLNF staff should pursue modifying existing VFD suppression agreements adding a mechanism to utilize VFD personnel and equipment on prescribed burns.

Evaluation Question:

What was the amount paid to each FLNF town through PILT, 25% fund or Secure Schools? What type of communications has occurred on this topic with each town?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: There are three types of federal payments reaching municipalities that have U.S. Forest Service land: 1) Payments in Lieu of Taxes (PILT); and Public Law 106-393 – **Secure Rural Schools and Community Self-Determination Act of 2001**, comprised of the 2) 25-Percent and 3) Full Payment Funds. PILT funds are directed to towns, and the Public Law 106-393 funds (either the 25-Percent or the Full Payment Funds) are directed to school districts.

PAYMENTS IN LIEU OF TAXES (PILT)

Generally, federal lands may not be taxed by State or local governments unless they are authorized to do so by Congress. Since local governments are often financed by property or sales taxes, this inability to tax the property values or products derived from the federal lands may affect local tax bases significantly. Instead of authorizing taxation, Congress created various payment programs designed to make up for lost tax revenue.

Under current federal law, local governments are compensated through various programs for losses to their tax bases due to the presence of most federally owned land. The most widely applicable program, while run by the Bureau of Land Management (BLM), applies to many types of federally owned land, and is called "Payments in Lieu of Taxes" or PILT. The level of PILT payments is calculated under a complex formula which takes into account figures such as acres of eligible lands, population, and previous year payments from other federal agencies. The PILT, made in or around October, is indexed by the inflation rate and set by federal law. Congress, however, rarely appropriates the full amount of the PILT.

Each town can receive additional PILT dollars if they contain other federal lands, such as National Park Service or Army Corps of Engineer lands. Not all federal acres within the towns however, are entitled to PILT payments.

SECURE SCHOOLS ACT

The **Secure Rural Schools and Community Self-Determination Act of 2001** (Secure Schools Act) was promulgated by Congress to restore stability and predictability to the annual payments made to states and counties containing National Forest System lands for the benefit of schools, roads, and other purposes. Prior to the passage of the Secure Schools Act, these payments were based upon income generated by the U.S. Forest Service, typically through timber sales. As this timber sale-related income fluctuated and generally waned, communities that relied on the annual payments for the support of their schools suffered from a lack of funding stability and predictability, to the detriment of their educational systems. The Secure Schools Act severs the tie between rural school funding and timber sale income so as to offer rural school systems continual, level funding.

Current law mandates a floor for payment levels of 25 percent of forest product receipts. The law also provides the option for the distribution of funds above the floor based on the average of the three highest years of 25 percent payments.

Monitoring Activities:

County	Acres of NFS Lands	PILT 2007 (\$)	Secure Schools 2007 (\$)
Schuyler	11,145 acres	\$7,948	\$12,114
Seneca	5,294 acres	\$4,500	\$4,759

Evaluation and Conclusions: Towns are sent information regarding payments as soon as it is released.

Recommendations: Continue informing towns of the status of the Payment to Counties legislation as well as the yearly appropriations.

Evaluation Question #1

Did teacher professional development in Forest stewardship occur?

Background: As described in the 2006 Forest Plan, the role of the FLNF reflects a history of demonstration and education that the Forest Service will continue to provide 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. The Forest Service is committed to promoting an awareness of natural resource management and a strong conservation ethic. Included in the role of the FLNF is the importance of working with local schools and communities to provide educational opportunities on the Forest.

Monitoring Activities: In alignment with the role of the FLNF, the Forest Service provided the following opportunities and assistance related to teacher professional development and opportunities to enhance the understanding of the FLNF:

1. Participated with the Backbone Ridge History Group in a joint program with Interlaken High Scholl (HS), Lodi HS, Ovid, and Romulus HS on the Lehigh Valley Railroad. Prepared an exhibit, facilitated the evening's events, and located some youth volunteers to assist.
2. Met with Tanya Warren, Research Associate with Dr. Judith Wellman, at Waterloo Memorial Day Museum, to talk about Fossenvue and have the FLNF included in their site documentation for places of importance for women's rights.
3. Formulated the Backbone Ridge History Group, which is made up of members of the Interlaken Historical Society, Lodi Historical Society, Finger Lakes National Forest, Seneca County Historian's Office, SUNY Brockport, and many interested individuals in the community. As part of this project, Forest Service staff has contributed communication plans, news releases, and success stories. In addition, the Forest Service set up a community history seminar in Hector in February, and contracted with a guest speaker and volunteers for this program. The program was very well received in the local community.
4. Provided a Grant Writing Workshop while working with a new partner who hosted the seminar: "Friends of the Three Bears" in Ovid, NY.
5. Participated in South Seneca 4th grade field trip to the Interlaken Farmer's Museum. Forest



Service staff prepared booklets for teachers. The focal topics were parallel to the agricultural curriculum topics that COMET (a Seneca County Museum Group) is working on for the area schools.

6. Prepared a powerpoint presentation, hand-outs, and lessons for Girl Scouts at Camp Comstock. Visited the camp to discuss historical Fossenvue.
7. Collaborated with Hillside Children's Center whose teachers utilize the FLNF for hands-on training and outdoor classrooms.
8. Received a "More Kids in the Woods" grant from the Forest Service for Urban Forest Adventures, a partnership with the Tompkins County Extension Service and Cornell University. Our project expands an existing environmental education program to underserved, low-income youth in Ithaca, New York.

Evaluation and Conclusions: The FLNF is being used more and more as a living classroom for teachers and students.

Recommendations: Continue to provide and expand professional teacher development opportunities.

Lands

Evaluation Question:

To what extent has the FLNF land base been adjusted through purchase, exchange, transfer, interchange, boundary adjustment and donation?

Monitoring Question: To what extent have Forest Plan Objectives been attained?

Monitoring Driver: Forest Plan Objectives

Background: In FY06, no properties were purchased or land adjustments made. In FY07, efforts continued to acquire 1 property entirely surrounded by National Forest System land, identify other lands of importance for acquisition, and conduct a land exchange.

Monitoring Activities: Communication occurs with conservation partners such as the Finger Lakes Land Trust, The Trust for Public Land and National Wild Turkey Federation. These partnerships will assist us in the land adjustment program through identifying a variety of opportunities for land conservation, including federal ownership. Monitoring activities in the form of the information sharing described above will continue to enhance the land adjustment program.

Evaluation and Conclusions: The Finger Lakes Land Trust is conducting an “Emerald Necklace” project, which is evaluating land conservation efforts on a regional scale, which includes the Finger Lakes National Forest. The National Wild Turkey Federation recently inquired as to whether we would be interested in partnering to acquire additional lands to and near the Forest. We plan to participate in both of these efforts.

Recommendations: Continue to work with partners, national and state entities, counties, townships and communities to help identify, evaluate and subsequently adjust the FLNF’s land base.

3. RESEARCH AND STUDIES

Assessment of the Effects of Past Agricultural Land Use on Current Forest Herb Communities

Forest herbs are an important component of the forests of New York State, including the lands managed by FLNF staff. Forest-dwelling herb species appear to be quite limited in their ability to colonize post-agricultural, second growth forests. This project would elucidate the mechanisms (e.g., dispersal, mycorrhizal dysfunction, deer and/or small mammal browse) that are limiting the reassembly of forest herb communities, and would provide managers of FLNF with information to help determine what remedial measures might be needed to re-establish the full flora of FLNF. The project proponent is a professor at the College of Environment Science and Forestry in Syracuse, NY.

4. ADJUSTMENTS OR CORRECTIONS TO THE FOREST PLAN

Administrative corrections to the Forest Plan are defined at 36 CFR 219.31(b) in the 2000 Planning Rule and may be made at any time. Administrative corrections are not plan amendments or revisions, and do not require public notice or the preparation of an environmental document under Forest Service NEPA procedures. Administrative corrections include the following:

1. Corrections and updates of data and maps,
2. Updates to activity lists and schedules (proposed actions, anticipated outcomes, projected range of outcomes);
3. Corrections of typographical errors or other non-substantive changes; and
4. Changes in monitoring methods other than those required in a monitoring strategy (referring to the requirements for monitoring sustainability criteria in the 2000 rule.)

Corrections (“errata”) to the Final Environmental Impact Statement to accompany the Forest Plan are permitted by Forest Service Environmental Policy and Procedures Handbook, FSH 19809.15, Chapter 10, Sections 18.1 and 18.2.

Following release of the 2006 Forest Plan, the staff of the FLNF began gathering information and errors contained within the final documents. In August 2007, the FLNF staff issued one administrative correction to the Forest Plan. The correction was made available on the following website: http://www.fs.fed.us/r9/gmfl/nepa_planning/plan_amendments/index.htm

The administrative correction is to:

- Remove an error in the second objective under Goal 5 by changing the term fire use to prescribed fire.

We will likely issue administrative corrections in the future. Corrections as well as the corrected pages from the set of Plan documents will be posted at the above internet link and we encourage people to use this resource for accessing the most up to date information on administrative corrections. We will continue to provide opportunity for public involvement at the project level and during any substantive changes to the Forest Plan.

There have been no amendments to the revised Forest Plan.

5. LIST OF PREPARERS

The following people collected, evaluated, or compiled data for the fiscal year 2006 Monitoring and Evaluation Report:

Name	Position
Melissa Reichert	Interdisciplinary Team Leader/Forest Planner
Diane Burbank	Ecologist
Nancy Burt	Soil Scientist
Chris Casey	Forest Silviculturist
Pat D'Andrea	Realty Specialist
Mary Beth Deller	Botanist
Kathleen Diehl	Partnership and Conservation Education Coordinator
Kathy Donna	NEPA Coordinator
Chris Fors	Law Enforcement Officer
Pam Gaiotti	Budget and Accounting Officer
Rob Hoelscher	Wildlife Biologist
Holly Knox	Writer-Editor
Dave Lacy	Archaeologist and Heritage Resource Specialist
Donna Marks	Landscape Architect
Susan Mathison	Eastern Region Winter Sports Team NEPA Coordinator
Bill Peterson	Forest Management Team Leader
Steve Roy	Fisheries Biologist
Brian Schaffler	Fire Management Officer
John Sease	Wildlife Biologist
Doreen Urquhart	Realty Specialist
Chad VanOrmer	Recreation Planner
Greg Wright	Recreation Forester
Chris Zimmer	Assistant Ranger

APPENDIX A: REGIONAL FORESTER SENSITIVE SPECIES, RARE OR UNCOMMON NATURAL COMMUNITIES, AND NON-NATIVE INVASIVE SPECIES

FLNF Regional Forester Sensitive Species (RFSS): Plants, 2007

Arabis drummondii
Baptisia tinctoria
Carex tuckermanii
Celastrus scandens
Juglans cinerea
Lilium canadense
Morus rubra
Phegopteris hexagonoptera
Piptatherum racemosum (= *Oryzopsis racemosa*)
Quercus bicolor
Quercus muehlenbergii
Shepherdia canadensis
Sisyrinchium mucronatum
Solidago squarrosa
Solidago ulmifolia
Veronicastrum virginicum

RARE OR UNCOMMON NATURAL COMMUNITIES RECOGNIZED AS SIGNIFICANT BY THE FLNF (based on Forest Plan-FEIS, 2006, Table 3.10-3)

Site Name	2006 Plan Management Area Designation
Hector Oak Woods	Candidate Research Natural Area
Potomac Creek Woods	Ecological Special Area
Blueberry Patch¹	Ecological Special Area
Sawmill Creek Ravine	Candidate Research Natural Area
Townsend Road Oak Woods	Ecological Special Area
Mill Creek Ravine	Ecological Special Area
The Ravine	Ecological Special Area
The Gorge	Ecological Special Area
Potomac Ravine	Ecological Special Area
Breakneck Creek	Ecological Special Area
Caywood Point Cliff Forest and Woodland²	Recreation and Education Special Area
¹ Includes South of Blueberry Patch and Blueberry Patch Swamp ² This site was discovered in 2005 between the draft and final EIS; while it did not receive the same level of evaluation as the other sites, it is considered an exemplary area and was recognized as a distinct part of the Recreation and Education Area in which it occurs.	

Provisional List of Invasive Plant Species for Finger Lakes National Forest

Originally created by F. Robert Wesley (1995)

Update by MaryBeth Deller (2004 & 2007)

Species listed in federal noxious weed legislation

1. *Heracleum mantegazzianum* – Giant hogweed

Other NNIS of concern on the FLNF

2. *Acer platanoides* – Norway maple
3. *Ailanthus altissima* – Tree of heaven, ailanthus
4. *Alliaria petiolata* – Garlic mustard
5. *Berberis thunbergii* – Japanese barberry
6. *Berberis vulgaris* – Common barberry
7. *Celastrus orbiculatus* – Oriental bittersweet
8. *Centaurea jacea* – Brown knapweed
9. *Centaurea x moncktonii* – Meadow knapweed
10. *Cirsium arvense* – Canada thistle
11. *Cirsium vulgare* – Bull thistle
12. *Cynanchum rossicum* (=Vincetoxicum rossicum)
13. *Elaeagnus umbellata* – Autumn olive
14. *Euphorbia esula* – Leafy spurge
15. *Ligustrum vulgare* – Common privet
16. *Ligustrum obtusifolium* – Border privet
17. *Lonicera japonica* – Japanese honeysuckle
18. *Lonicera maackii* – Amur honeysuckle
19. *Lonicera tatarica*, *L. xylosteum*, *L. morrowii* and hybrids – Shrub honeysuckles
20. *Lythrum salicaria* – Purple loosestrife
21. *Microstegium vimineum* – Japanese stilt grass
22. *Myriophyllum spicatum* – Eurasian watermilfoil
23. *Phragmites australis* – Common reed
24. *Polygonum cuspidatum* (=Fallopia japonica) – Japanese knotweed
25. *Potamogeton crispus* – Curly pondweed
26. *Rhamnus cathartica* – Common buckthorn
27. *Rhamnus frangula* – Smooth buckthorn
28. *Rosa multiflora* – Multiflora rose
29. *Trapa natans* – Water chestnut
30. *Vinca minor* – periwinkle