

Forest Plan Monitoring and Evaluation Report

Wayne National Forest



Restored channel, Work completed September and October 1999
Photo taken May 2000

Fiscal Years 1999, 2000 and 2001

Table of Contents

Topic	Page Number
Introduction	1
1. Actual Quantitative Outputs vs. Forest Plan Projections.	1
2. Effects of Applying Forest Plan Prescriptions, Practices, and Standards and Guidelines	8
3. Actual Cost vs. Forest Plan Estimated Cost	9
4. Timber Management	10
a. Restocking of Regeneration Harvested Lands	10
b. Unsuitable Lands	11
c. Pest Management	11
d. Maximum Timber Harvest Size Limits	11
5. Adequacy of Application of Forest Plan Prescriptions, Practices, and Standards and Guidelines	12
6. Effects on Other Lands and by Other Agencies on National Forest Lands	14
7. Research Needs	16
8. Management Indicator Species	17
a. Species and Trends	17
b. Fisheries	20
9. Threatened and Endangered Species	26
10. Land Adjustment	29
11. Vegetation Management	30
12. Off-Road Vehicle Use	30
13. Rare Plants	32
14. Noxious Weeds	32
15. Research Natural Areas, Special Areas, and Candidate Areas	32
16. Watershed Restoration	33
17. Ecosystem Analysis at the Watershed Scale	35
18. Law Enforcement	36
19. Heritage Program	37
20. Fire Prevention and Management	38

Listing of Tables

No.	Topic	Page Number
Table 1.	Forest Activities - Forest Plan Projected Outputs Compared to Actual Outputs by Fiscal Year	2
Table 2.	Forest Activities - Actual Activities Funded and/or Accomplished by Fiscal Year	5
Table 3.	Forest Plan Estimated Budget compared to Actual Funding Received	10
Table 4.	Management Indicator Species (MIS) - Trends by terrestrial and amphibious species	17
Table 5.	MIS Fish - Average Number of individual fish found per site, by drainage size, where management indicator species were collected	22
Table 6.	MIS Fish - Number of individual fish by species, captured in the restored Bar Run channel	25
Table 7.	MIS Fish - Number of individual fish by species, captured in the Bear Run main stem	25
Table 8.	Land Adjustment - Forest ownership by county and by date	29
Table 9.	Law Enforcement - Number of Incident Reports, Written Warnings and Citations Issued by Fiscal Year	36

Listing of Charts

No.	Topic	Page Number
Chart 1.	Budget - Forest Plan Estimated Budget compared to Actual Funding Received	9

INTRODUCTION

This Report is being prepared in accordance with the monitoring plan documented in Chapter 5 of the Wayne Forest Plan. The items identified in the Forest Plan are shown with information on the monitoring accomplished during fiscal years 1999, 2000 and 2001.

This report is organized following the monitoring items listed in Chapter 5 of the Wayne Forest Plan. The monitoring item is listed in bold, then comes the text listed in Chapter 5 describing the individual monitoring item (Forest Plan Monitoring Statement), lastly comes the monitoring and evaluation information for the three fiscal years covered by this report.

1. Quantitative estimate of performance comparing outputs and services with those projected by the forest plan [Ref. to Regs. 219.12(k)(1)].

Forest Plan Monitoring Plan Statement - A quantitative estimate of performance - Compare outputs/services accomplished with those projected in Forest Plan.

The units-of-measure for several outputs have changed since the Forest Plan was approved. Some of the new units-of-measure, do not correlate well to the units-of-measure shown in Table 4-1 of the Forest Plan (such as: MRVD's in the Forest Plan = Thousand of Recreation Visitor Days, a measure of use or projected use, does not correlate well to the current measure PAOT's = Persons at One Time, a measure of potential to handle a level of use at one point in time.)

See Tables 1 and 2 on the following pages. Table 1 is based on Table 4-1 from the Forest Plan. Table 2 is based on actual accomplishments reported for each of the two fiscal years.

TABLE 1
Forest Plan Upper Limit Projected Outputs (from Forest Plan Table 4-1)
Compared To Actual Output for Fiscal Years 1999, 2000, and 2001

Item	Unit of Measure	From Forest Plan Average Annual Per Decade		1999	2000	2001
		1986 1995 <u>Planned</u>	1996 2005 <u>Projected</u>			
<u>Recreation*</u>						
Semiprimitive, Nonmotorized ROS	MRVD's	26.7	27.9			
Roaded Natural Nonmotorized ROS	MRVD's	103.2	111.1	Not Used	Not Used	Not Used
Roaded Natural ROS	MRVD's	152.4	175.7	(PAOTS now)	(PAOTS now)	(PAOTS now)
Rural ROS	MRVD's	139.5	191.6			
Developed ¹	MRVD's	136.4	188.4			
Dispersed ²	MRVD's	285.4	318.0			
Hiking and Horse Trail Const./Reconst.	Miles	6.0	3.5	0	0	0
ORV Trail Const./ Reconst.	Miles	25.0	5.0	1.5	4.0	0
<u>Wildlife and Fish</u>						
<u>Habitat Improvements (New Developments)</u>				0	0	0
Openings Const. ³	Acres	70.5	70.5	0	0	0

¹ Includes large lake fishing.

² Includes small lake fishing.

Table 1 - Continued

Item	Unit of Measure	From Forest Plan Average Annual Per Decade		1999	2000	2001
		1986 1995	1996 2005			
Small Lakes / Ponds	Acres	1.0	1.0	0	0	0
Marshes 1/Year	Acres	1.0	1.0	0	0	0
<u>Range</u>						
Grazing Use	M AUM's	1	1	1.3	1.3	1.3
<u>Timber</u>						
Total Volume Offered	MMBF	7.5	11.2	0.4	0.4	.04
Hardwood Volume	MMBF	6.5	9.7	0.4	0.4	.04
Pine Volume	MMBF	1.0	1.5	0	0	0
Reforestation	M Acres	1.02	1.11	0.1	0.2	0.1

* Recreation can be measured in terms of actual use—MRVD (thousands of recreation visitor days), or in terms of opportunity or capacity provided—PAOT (persons at one time). Because actual visitation is often quite difficult to measure, the Forest Service decided in 1999 to begin measuring capacity provided for different types of recreation rather than actual visitation.

³ New openings can be created through a variety of management activities such as oil and gas developments and timber management and direct wildlife habitat improvements.

TABLE 1 (Continued)
 Forest Plan Upper Limit Projected Outputs (from Forest Plan Table 4-1)
 Compared To Actual Output for Fiscal Years 1999, 2000 and 2001

Item	Unit of Measure	From Forest Plan Average Annual Per Decade		1999 <u>Actual</u>	2000 <u>Actual</u>	2001 <u>Actual</u>
		1986 1995 <u>Planned</u>	1996 2005 <u>Projected</u>			
<u>Lands</u>						
Purchasing, Acquisition, and Exchange	M Acres	2.9	2.9	1.3	0.1	3.2
<u>Facilities</u>						
Permanent Rd. Const.	Miles	2.2	1.8	0	0	0
Permanent Rd. Reconst.	Miles	6.6	5.2	6	1.3	12
Total Permanent Roads	Miles	8.8	7.0	6	0	0
Temporary Const. ¹	Miles	1.6	2.0	0	0	0
Temporary Reconst. ⁴	Miles	4.8	6.0	0	0	1.0
Total Temp. Roads ¹	Miles	6.4	8.0	0	0	0
Roads Closed ²	Miles	78.8	13.9	1.0	2.0	0.3
<u>Cost</u>						
Total Funds 1985 dollars ³	MM \$	3.52	3.52	Data not available.		

¹ Represents miles of temporary roads estimated to be in use at one time during the decade.

² Includes county, township and old "woods" roads from Table 4-20, page 4-41 of DEIS and other permanent and temporary roads to be closed to public use.

³ One dollar in 1985 dollars is approximately equal to \$1.60 in 1999 dollars.

TABLE 2
Actual Activities Funded and/or Accomplished during Fiscal Years 1999, 2000 and 2001

Description	Unit of Measure	FY 1999		FY2000		FY 2001	
		Target	Actual Accomplishment	Target	Actual Accomplishment	Target	Actual Accomplishment
LRMP Monitoring/Evaluation	Reports	1	0	1	0	1	0
Riverine Stream R/C Unit Scl Inv	Miles	10	10	25	25	10	10
Riverine Valley Segment Scl Inv	Miles	20	20	25	25	10	10
Stream Aquatic Biota Inv	Miles	0	48	0	47	15	15
Reforestation	Acres	70	108	170	170	33	138
TSI	Acres	50	100	120	120	107	107
Volume Offered New	MBF	0	430	--	--	--	43
Volume Offered New	CCF	167	699	1620	449	--	72
Volume Sold	MBF	0	430	--	--	--	43
Volume Sold	CCF	0	699	449	449	--	72
Hazardous Fuel Reduction	Acres	480	480	250	0	--	--
Land Owner Adjustment (no Exchange)	Acres	1,313	1,277	98	98	na	3177
New Boundary Marked - Std	Miles	5	5	8	9	na	0
Special Uses Applications Processed	Permits	30	30	50	35	61	40
Special Use Pmt Administered to Standard	Permits	121	121	240	219	105	177
Special Use Pmt Administered - Total	Permits	0	414	757	254	na	0

Table 2 - Cont. Description	Unit of Measure	FY 1999		FY 2000		FY 2001	
		Target	Actual Accomplishment	Target	Actual Accomplishment	Target	Actual Accomplishment
Total Active Energy Operations	Operations	0	525	425	425	492	510
Energy Operations Administered to Standard	Operations	300	300	--	--	492	510
Energy Operations Process	Operations	35	35	55	24	0	1
Geologic Mgmt Areas Admin	Areas	0	1	0	0	0	0
Geologic Permit/Report Doc	Documents	0	1	0	0	0	0
Road Reconstruction	Miles	0	6	0	0	1.3	1.3
Roads Decommissioned	Miles	1	1	2	2	1	0.3
Roads Fully Maintained	Miles	0	27	95	27	95	29
Grazing Allotments Administered to Standard	Allotments	3	7	1	5	6	5
Grazing Allotments Administered - Total	Allotments	0	7	0	5	0	0
Grazing - Cattle & Horses	Head/month	4,000	1,308	1,300	1,300	1,300	1,300
Noxious Weed Treatment	Acres	40	40	55	32	9	36
Range Structural Improvement	Structures	0	1	0	0	1	0
Heritage Sites Interpreted	Sites	1	2	3	5	4	6
Heritage Sites Preserved/Protected	Sites	10	10	5	12	6	13
Heritage Inventory	Acres	0	2	11,333	11,500	1,000	5,094
Recreation Seasonal Capacity Available - Total	PAOT Day	678,000	678,000	678,000	678,000	678,000	610,000

Table 2 Cont. Description	Unit of Measure	FY 1999		FY 2000		FY 2001	
		Target	Actual Accomplishment	Target	Actual Accomplishment	Target	Actual Accomplishment
Recreation Special Uses - Administered	Permits	4	4	4	5	16	2
Soil & Water Resource Improve	Acres	25	36	15	23	500	525
Biological Assessment/Evaluation	Tasks	0	99	0	51	0	70
Inland Fish Lakes Restored / Protected	Acres	12	124	26	29	29	30
Inland Fish Stream Restored / Protected	Miles	1	1	0	0	0	0
Threatened & Endangered Species Habitat Inventory	Acres	7,000	10,000	0	30,950	0	3,200
Threatened & Endangered Species Terrestrial Habitat Restored/Enhance	Acres	0	10	24	0	0	3
Wildlife Habitat Inventory	Acres	0	480	0	4984	0	3378
Wildlife Structures	Structures	0	15	9	23	0	83
Terrestrial Wildlife Habitat Restored/Enhance	Acres	165	442	442	306	270	292
Volunteers in NF Programs	Enrollee Yrs	0	4	0	13.3	0	3.8

2. Documentation of measured prescriptions and effects, including significant changes in productivity of the land [Code of Federal Regulations (CFR) 219.12(k)(2)].

Forest Plan Monitoring Plan Statement - Document measured prescriptions/effects, including significant changes in productivity of the land. Determining the effects of applying Forest Plan prescriptions, practices, and standards and guidelines. (See CFR 219.29)

There were no timber sales sold or operated during FY 1999 - 2001 therefore there was no effect on productivity of the land.

The total amount of open-land on the forest (approximately 5 percent) generally meets the objectives of the forest plan, which calls for 2 percent to 6 percent in the largest Management Areas. Due to a lack of recent even-aged timber management, the total amount of forestland in the 0 to 10 year age class (approximately 3 percent) is far below the objective of the forest plan, which calls for 8 percent to 13 percent in the largest Management Areas. There is thus a growing shortage of habitat for wildlife that requires early successional forest. The forest is not providing the diversity of wildlife habitats as prescribed by the forest plan. Nor is it providing timber products as prescribed.

A new development on the Wayne National Forest has been a new headquarters building which houses both the Supervisor's Office and Athens Ranger District Office. In addition the Buffalo Beats Candidate Research Natural Area was formally designated on May 20, 1999 changing the area from MA 8.2 - Unique Natural Area, to MA 8.1 - Designated Research Natural Area.

With respect to the management prescription for recreation, the dam at Lake Vesuvius started undergoing reconstruction in FY 2001. This reconstruction has resulted in the closing of a major portion of the recreation sites at the Lake Vesuvius Recreation Area for FY 2001 and FY 2002.

A new sanitary facility was placed at Timbre Ridge Lake.

No new trails were constructed or designated during FY 1999-2001.

There is a user-developed rustic campsite at a horse trailhead in MA 6.2.

Trailhead facilities are provided at the Hanging Rock ORV area on the Ironton Ranger District and at the Dorr Run ORV area on the Athens Ranger District. A new sanitary facility was placed at one of the Hanging Rock trailheads.

All trails are being maintained for safety, but many sections are not meeting standards for user convenience. Trails and recreation sites are being inspected annually, but repairs are not always completed within 90 day as prescribed in the Forest Plan. Parking area capacity and trail density have not been meet as prescribed.

Noxious weed control efforts during 1999, 2000 and 2001 have concentrated on Purple loosestrife (*Lithrum salicaria* and Garlic mustard (*Alliaria petiolata*).

No significant changes in the productivity of the land occurred due to the maintenance of forest openings. During the years of 1999 -2001 no new wildlife openings were created by cutting trees. Existing openings designated as wildlife habitat were maintained in an early successional stage by mowing.

3. Documentation of costs associated with carrying out the planned management prescriptions as compared with cost estimates in the forest plan [CFR 219.12(k)(3)].

Forest Plan Monitoring Plan Statement - Document cost of actual management practices in relationship to estimated costs.

The Forest Plan projected an annual cost of 2.2 million dollars (1978 basis) to fully implement the planned program. In 1997, the Forest leadership estimated that, because of increases in the cost of forest management, full plan implementation would cost approximately 8.4 million dollars (see 1997 Wayne National Forest Monitoring Report).

The bar chart below shows the Forest Budget in millions of dollars by fiscal year. For each year the first bar shows the actual budget received by the Wayne NF less any Congressional earmarks; the second bar for each year show the Forest Plan projected budget inflated to the appropriate year; the third bar shows the 1997 Forest leadership team's projection of what full implementation of the forest plan would cost based on current standards, inflated to the appropriate fiscal year; and the fourth bar shows the amount of earmarked funds the forest actually received each year (Table 3 showing these figures follows the chart).

Chart 1 – Forest Plan Budget Compared to Actual Funding

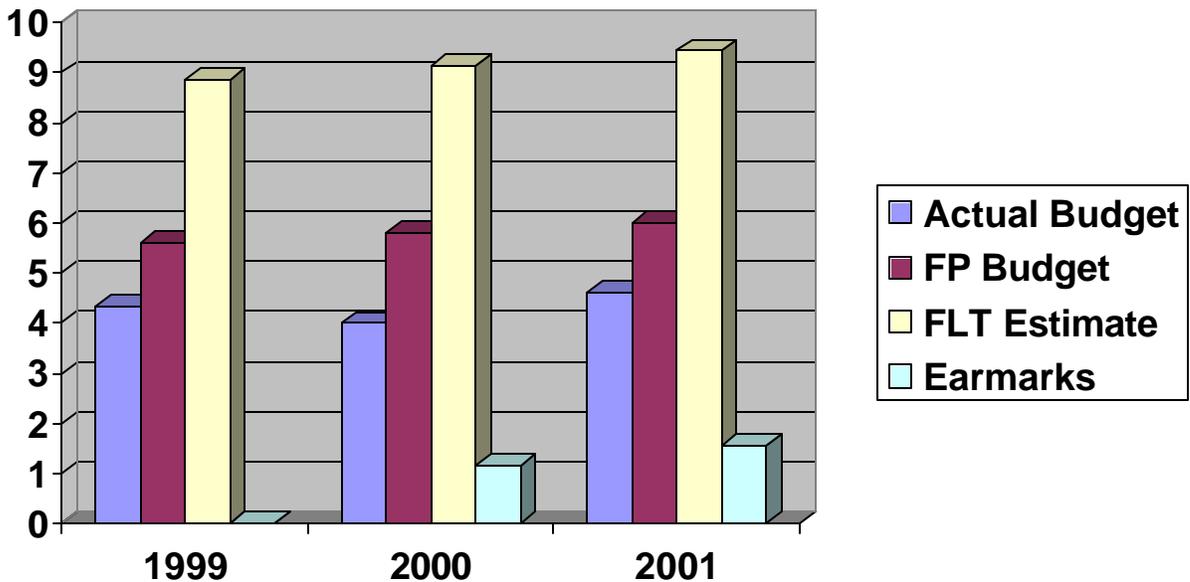


Table 3 – Budget Figures for Fiscal Years 1999, 2000 and 2001

	1999	2000	2001
Actual Budget	4.333	3.997	4.625
Forest Plan Budget	5.620	5.810	6.000
FLT Estimate	8.850	9.150	9.440
Earmarks	0.022	1.173	1.550

The US Congress and the Washington Office of the Forest Service sometimes provide funding for specific special projects. This funding is known as Earmarks. The Wayne received Earmark funding in fiscal years 1999, 2000 and 2001 as shown in the table and chart above. This Earmark funding has allowed the Forest to accomplish a number of items which otherwise would not have been possible. Earmarks have funded items such as treatment of noxious weeds, decommissioning of specific roads, inventory of coal mines in the Forest (many of which have long since been abandoned, recreation site planning, land acquisition, and funding clean water initiatives. In fiscal year 2000 and 2001, the major part of the Earmarks (\$1 million each year) was specifically directed to starting the cleanup of acid mine drainage on the Forest.

Each year the Forest negotiates the mix of funding that will be received within a total funding constraint. Those are the funds shown in the “Actual Budget” figures in the above table and chart. The Earmark funding is outside the normal budget process and is directed at exactly where the funding must be spent. Because the Earmarks can not be adjusted to provide a higher level of the balanced program of all activities on the Forest it was not included in the Forest “Actual Budget” figures shown in the chart and table above.

4. Document compliance with the following four standards: [CFR 219.12(k)(5)]

a) Lands are adequately restocked as specified in the Forest Plan. Assure lands adequately stocked within 5 years.

In 1994 there was a 13-acre Virginia pine clearcut. It was adequately stocked after 5 years. In 1995 a 30-acre stand was harvested with the Group Selection method. The groups within the stand were adequately stocked after 5 years.

In FY1999 ninety-nine (99) acres were surveyed the third year after planting (planted in 1996). Seventy-nine (79) acres were certified as adequately stocked in FY99. Twenty (20) acres were not certified but were designated for survey the following year.

In FY2000 ninety-one (91) acres were surveyed the third or fourth year after planting. All ninety-one (91) acres were certified as stocked. Seventy-one (71) acres were planted in 1997. Twenty (20) acres were planted in 1996 and were the areas surveyed in 1999 but not certified until 2000.

The Wayne National Forest has not harvested any areas using even-aged regeneration harvest methods during fiscal years 1999, 2000, or 2001.

- b) Lands identified as not suited for timber production are examined at least every 10 years, and if suited, are returned to timber production. Purpose is to determine availability of lands unsuitable.**

No lands identified in the Forest Plan as "not suited for timber production" were returned to timber production in fiscal years 1999-2001.

- c) Destructive insects/disease do not increase to potentially damaging levels. Determine extent and severity of insect and disease occurrence.**

Gypsy moth populations continue to increase. The Ohio Department of Agriculture surveys for gypsy moths every year. With the increasing age of oak trees mortality is beginning to occur. Oaks under stress are more likely to die from gypsy moth defoliation than non-stressed oak. Older black and scarlet oak are more susceptible to mortality by insects and disease, such as armillaria and two-lined chestnut borer because they are shorter lived than other oak species. During spring 1999 the 17-year cicada emerged and caused considerable damage and some mortality to young hardwood trees, especially in tree plantations, by laying eggs in their branches. In 2000 the pine engraver beetle (*Ips pini*) was found in dead white pine at Lamping Homestead Recreation Area in Monroe County. Plots were established to monitor future mortality. There has been no significant increase in mortality since then. A tornado occurred on the Marietta Unit on May 23, 2000, and some blowdown occurred in Virginia pine stands. No salvage was conducted because of the scattered nature of the blowdown and the low value of the pine. Dogwood has continued to suffer mortality from dogwood anthracnose.

The lethal canker-causing fungus, *Sirococcus clavigignenetii-juglandacearum*, is seriously threatening butternut (*Juglans cinerea*) trees in the eastern half of the United States, and likely contributes to its rareness in Ohio. Three new butternut occurrences were discovered on the Wayne National Forest in 2001. One appears to be canker-free and healthy, while the other two show signs of slight fungal damage, but are still alive. Currently, the Forest is not managing for the fungus directly, but is preventing damage to any existing butternut trees with less than 20 percent canker infestation. Mitigation on projects in the areas containing the newly discovered trees mentioned above prevents the removal of said trees.

d) Evaluate maximum size limits for harvest areas as specified in management prescriptions, standards and guidelines. Determine if standards and guidelines are achieving the desired results.

There were no timber sales sold or operated during FY 1999, 2000, or 2001 therefore no monitoring was done for this item.

5. Evaluate how well management prescriptions, practices, and standards and guidelines have been applied on the ground [CFR 219.12(k)]. Determine if Forest Plan prescriptions, practices, standards and guidelines are correctly being applied and adhered to.

There were no timber sales operated from FY 1999-2001, therefore no impacts on other resources either positive or negative occurred.

Recreation operations and maintenance annually occur without an Annual Operation and Maintenance Plan. Volunteer groups are being utilized to inspect and maintain the horse trails on the Ironton Ranger District and the Wildcat Hiking trail on the Athens Ranger District. Trails are routinely inspected and maintained for safety. However, due to inadequate funding and staffing not all trails and areas receive attention as prescribed in the Forest Service Handbook: e.g. logjams remain in Symmes Creek; maintenance is not completed in 60 days; trails are inadequately signed and not in accordance with the handbook.

Mountain biking is permitted on designated hiking (including the North Country Trail) and ORV trails without inclusion in the Forest Plan or contrary to the Memorandum of Understanding.

Law enforcement problems such as vandalism at the camp sites along the National Scenic Byway have deteriorated the recreational facilities to less than high standards. Also, illegal ORV use continues despite a concerted educational, signing and law enforcement effort to curtail it.

Yellow-Fringed orchid (*Platanthera ciliaris*)- *Platanthera ciliaris* is a Regional Forester Sensitive species for the Wayne National Forest, as well as a State-Threatened Species and Forest Service Species of Concern. The species grows in bogs, fields and open woods, and is vulnerable to over-shading by woody species, soil compaction and drought. Prescribed burning, which can increase sunlight to the forest floor by thinning dense understory vegetation, has been used to manage a large population (over 50 individuals) of *P. ciliaris* in Grandview Township, Washington County (T2N, R5W). The site has been burned twice (1994 and 1998), and should be burned again in 2002. An annual monitoring program for this species was in place from 1993 to 1998 to track the effects of burning, but was abandoned when the Forest botanist left in 1999. The population was monitored again on August 23, 2001 by Erin Larson and Marilyn Ortt. Data trends have not been evaluated to date, but analysis is planned for FY 2002, and will be included in the monitoring and evaluation report for FY02.

Blue-scorpion weed (*Phacelia ranunculaceae*)- *Phacelia ranunculacea* is a Regional Forester Sensitive and State endangered species. Three fairly robust populations were found in Symmes

Township, Lawrence County (T5N, R17W, Sec. 26) on a 40-50 acre post-oak barren (a.k.a. Handley Branch). Two of the populations were targeted by a prescribed burn in 1998. Judy Dumke informally monitored all the known populations of *P. ranunculaceae* on March 22, 2001, and noted that the populations in the burned region showed increased numbers compared to those in the unburned regions. Formal monitoring of the site, as well as the *P. ranunculaceae* populations, will begin in the spring of 2002, before the site is burned again in the fall. Results of this monitoring will be included in the monitoring and evaluation report for FY02.

Buffalo Beats Research Natural Area- The Nature Conservancy considers tall-grass prairie communities to be globally imperiled. Buffalo Beats is in the easternmost remnant of the prairie peninsula and has been studied extensively for many years. The 19-acre area in Dover Township, Athens County (T10N, R14W)] contain 3 state-listed species (*Gentiana alba* and *Liatris cylindracea* are threatened, and *Eryngium yuccifolium* is potentially threatened). In 1984, the Forest, in conjunction with The Nature Conservancy, initiated an active restoration and management program for the area with four management goals in mind: maintenance of the tall grass prairie habitat and expansion of the prairie opening on the clay lens, reduction of invading woody vegetation, reduction of leaf litter, and stimulation of germinating prairie plant seed in the surrounding woods. Prescribed burning and tree removal (1987, 1996 and 1998) were used to reach these management objectives, and the site was monitored four times between 1986 and 1991 and annually from 1994-1998. The site was also monitored on September 26, 2001 by Erin Larson and Marilyn Ortt. This new data will be combined with existing data and formally evaluated during FY 2002. Trends in the data will be reported in the FY02 M/E report. Though official analysis of the data has not been completed, populations of some of the target sensitive species seem to have increased post-burning and cutting, as has the size of the prairie area. Based on these trends, the area is scheduled for another prescribed burn in the spring of 2002.

During FY 1999-2001, wildlife biologists reviewed each planned project to ensure compliance with forest plan prescriptions and standards and guidelines applicable to wildlife. These reviews are documented in Biological Evaluations. A project may vary slightly during on-the-ground implementation, but if it needs to deviate significantly, the project documentation is reviewed again and the project or the project documentation is changed as necessary.

During FY99, risk evaluations on species located on the Wayne National Forest were conducted in order to update the Regional Forester's Sensitive Species list for all Forests in Region 9. After extensive and exhaustive reviews from partners, outside agencies, and interested parties, a new list of Regional Forester's Sensitive Species was designated for the Wayne in February 2000. This has now changed the list of Sensitive Species and Forest Species of Concern as listed in the Forest Plan. Currently there are 18 wildlife species and 11 plant species on the Regional Forester's Sensitive Species list for the Wayne National Forest.

Standards and Guidelines for Cultural Resources are found on page 4-18 of the Land and Resource Management Plan and are being applied in the following way: Utilizing the talents of the students provided to the Wayne National Forest under the HBCUCP (Historically Black Colleges and Universities Comprehensive Program) for the past several years, and an interactive GIS database has been developed that incorporates the historic records pertaining to the African American Underground Railroad (UR) settlement known as Pokepatch. During the summer of

2000, two Tennessee State University students collected information from land ownership records within the ten core sections of Pokepatch from the years 1827 - 1878. The amount of information was so considerable that it became vitally important to organize the data before collecting more. After discussions with the Forest GIS Coordinator, it was decided that GIS would best facilitate this organization. During the summer of 2001, the primary data collector was retained, and two GIS students from Lincoln University were hired. The team has successfully taken the land ownership data and recorded it on Excel spreadsheets and merged them into hand-digitized ownership parcels in the ten sections of the Pokepatch area for each of the study years.

The database can now answer questions of land ownership for any selected year. For example, one can see how much land John Campbell (a major UR abolitionist/conductor) owned in the Pokepatch area in 1838. The successful merger of these two fields allows the researcher to not only see the actual ownership parcels on the map, but simultaneously exhibits the detailed land information in a table.

The research has already confirmed that the early iron furnace industry subsidized the operation of the UR much more than previously thought. As contiguous sections are entered, it is hoped that the “boundaries” of what was once Pokepatch can be better defined. This database has far-reaching implications in that it can be shared and used by anyone who has GIS capabilities. Two sites have been officially determined eligible for the National Register of Historic Places – Payne Cemetery and Cambria Iron Furnace.

6. Effects of NF management on adjacent lands and effects upon NF lands by other government agencies [CFR 219.7 (f)]. Purpose is to identify emerging issues, concerns and opportunities (including problems of agency coordination).

Wayne NF received the Willow Island Locks parcel from Corps of Engineers for a future office site on the Marietta Unit.

The Federal Highways Department working with ODOT on the Nelsonville bypass has considered several alternatives that affect WNF lands and the designated Monday Creek ORV area.

The high degree of fragmented land ownership results in many miles of unmarked boundary. Due to boundaries not being adequately marked, many forest visitors including hunters, wander onto adjacent privately owned property. The forest works closely with the Ohio Division of Wildlife to help enforce hunting and fishing regulations on national forest land. Also there are instances of adjacent landowners illegally accessing all-terrain-vehicles trails from their property. The user-developed trails often lead to the problem of forest visitors driving onto adjacent private property. Other complaints voiced by adjacent landowners are about noise and pollution.

Incomplete marking of national forest boundary lines has led to numerous cases of trespasses. Adjacent private landowners have cut timber, established lawns and gardens, and even built

houses or garages on national forest land. In some cases trespasses are not discovered for years. During FY 1999-2001 at least 10 new cases of trespass were discovered. The forest lack adequate personnel and funds to investigate all reported trespasses. In FY2001, two large timber trespasses were investigated (at Pleasant Valley and Forest Ridge), requiring several man-months of time. A section of the forest horse trail was accidentally built on private land, demonstrating that poorly marked boundary lines can affect either landowner.

Most of the roads crisscrossing the Wayne National Forest are owned and maintained by other government entities, eg. the State of Ohio, various counties and townships. These roads provide the majority of Forest access as well as providing the overall public transportation system in the area. However, there are several of these roads and right-of-ways, mainly at the Township level, that are no longer being maintained for passenger vehicles. Some of these right-of-ways are being used by ORV's and other types of vehicles to access portions of the Wayne National Forest otherwise closed to these uses. This has led to some increase in resource damage and an increase in the need for law enforcement in these areas. In some cases if the township involved would vacate the road, the Forest would have better opportunities for recreation or other types of management.

Two populations of yellow gentian (*Gentiana alba*), a Regional Forester Sensitive and State Threatened species, were identified along State Route 685 on September 27, 2001. Though the Forest Service owns the land along this portion of the road, the Ohio Department of Transportation (ODOT) has a right-of-way up to 33 ft from the centerline on either side of SR 685, and thus, mows the area periodically. Since the timing of mowing jeopardizes the long-term health of *G. alba*. The Forest proposed a management prescription that would help protect the future viability of this species. A response from ODOT has not been received at this time. Assuming that they are willing to comply with the suggestions, the populations will be monitored again in 2002 to determine the effects of the management mitigations.

Beavers occasionally build dams on national forest land which causes water to back up on to adjacent private or public land or roads. The forest works with the other landowners to solve the problem using a variety of approaches such as removing the dam, trapping the beavers, or placing a perforated pipe in the dam to control water level.

Trees on national forest land along roads and utility lines (outside right-of-way) sometimes fall, or threaten to fall, onto private land, utility lines, or roads. Lengthy power outages can occur when trees fall on electric lines in remote areas. Hazard trees have fallen and caused personal injuries and property damage in the FY 1999-2001 time period. If informed, the forest takes the responsibility for safely removing these hazard trees.

Due to past strip-mining on land that now belongs to the national forest, many sediment ponds are located in drainages that flow directly onto private land. Some of the dams have breached, or are on the brink of breaching. The forest takes responsibility for ensuring the safety of these dams. In FY1999, several dams that were beginning to erode were repaired in the Fox Hollow area. Additional dams have been identified that are in need of repair.

Reintroduction of the federal endangered American Burying Beetle (ABB) occurred during the summers of 1999 and 2000 on an adjacent state wildlife research area. This area is located approximately 2 ¼ miles from the Athens Unit boundary. Reproduction has been documented within this population however no ABB's have been captured outside of the reintroduction area to date. In anticipation of their movement onto National Forest lands suitable habitat on National Forest land within a 10-mile radius of the site was analyzed and conservation recommendations have been incorporated within the Biological Opinion received from the U.S. Fish and Wildlife Service.

See also Section 16 (Watershed Restoration) and Section 20 (Fire Management) for additional information on joint management efforts with cooperating agencies and partners.

7. Identify research needs to support or improve NF management. Determine research implementation progress and opportunities [CFR 219.28]. Revise need and priorities of research.

Recreational uses and the amount of different types of recreation use have changed since the Forest Plan was developed. Some sectors of the public are suggesting that the economics of the recreation industry can more than offset the economics of consumptive resource management. Research into the economics of recreational uses and the relationship to local economies is needed.

Research is needed to determine the effects of various management activities that cause soil disturbance on the introduction and spread of Non-native Invasive Plant Species (NNIS). To aid in this analysis, a spreadsheet of Forest acres infested by NNIS is being compiled and will hopefully be incorporated into a GIS layer.

Kern Prairie- The Nature Conservancy considers the tall-grass prairie communities to be globally imperiled. The Kern Prairie [located in Starr Township, Hocking County (T12N, R16W, Sec. 16)] is the easternmost remnant of the prairie peninsula, and contain prairie-indicator species like Big and Little Bluestem (*Andropogon gerardii* and *Schizachyrium scoparium*, respectively). No rare plant species have yet been found in either area; however, the grass-duff layer in the Kern Prairie site is quite dense, and likely inhibiting germination and growth of other species. The Forest has proposed to restore prairie habitat and promote T/E species establishment through prescribed burning and selective tree removal. Vegetation on the site was monitored on August 22, 2000, and on August 2nd and September 27, 2001. In order to capture spring flora on the site, monitoring will continue into 2002 before the area is burned in 2003. The data collected thus far has not been evaluated, since no management prescription has been implemented. Trends will be analyzed after the burning in 2003 and reported in the FY03 M/E report.

Additional research needs are:

- Design MIS monitoring protocol;
- Determine monitoring that would accurately portray impacts of ORVs on wildlife;
- Determine effects of different timber harvest methods on the cerulean warbler;
- Study the possibilities of successful oak regeneration using a combination of both fire and timber cutting on the same site; and

- Determine the cumulative impacts of forest trails on soil erosion and sedimentation, at the watershed level.

8. Population trends of the management indicator species will be monitored and relationships to habitat changes determined in cooperation with State fish and wildlife agencies. Determine how much suitable habitat is available [CFR 219.19].

The following table is a list of wildlife MIS species and their population trends, particularly in southeastern Ohio, from literature and data collection sources.

TABLE 4 - MIS SPECIES AND TRENDS

<u>Species</u>	<u>Habitat Type</u>	<u>Trend for South eastern Ohio (including WNF)</u>	<u>Sources</u>
Pine Warbler <i>Dendroica pinus</i>	Conifer Forest	Unknown; known to occur on Marietta and Ironton Units	Peterjohn, 1989 WNF Forest Bird Inventory, 1992-94
Pileated Woodpecker <i>Dryocopus pileatus</i>	Mature Hardwoods	Increasing; Known from all Units on the Wayne.	Earnst and Andres, 1996 Peterjohn and Rice, 1991 WNF Forest Bird Inventory, 1992-94
Cerulean Warbler <i>Dendroica cerulea</i>	Close-canopied, Mature/Overmature Hardwoods	Stable; Known from all Units on the Wayne.	Earnst and Andres, 1996 Peterjohn and Rice, 1991 WNF Forest Bird Inventory, 1992-94
Ruffed Grouse <i>Bonasa umbellus</i>	Early Hardwoods	Declining; Known from all Units on the Wayne.	Based on drumming counts 1972-2001 Ohio Div. Of Wildlife 2001. WNF Early Succession Bird Inventory, 1995
White-eyed Vireo <i>Vireo griseus</i>	Late Succession	Increasing; Known from all Units on the Wayne	Earnst and Andres, 1996 Peterjohn and Rice, 1991 WNF Early Succession Bird Inventory, 1995

Common Yellowthroat <i>Geothlypis trichas</i>	Middle Succession	Increasing; Known from all Units on the Wayne.	Earnst and Andres, 1996 WNF Early Succession Bird Inventory, 1995
Field Sparrow <i>Spizella pusilla</i>	Early Succession	Declining; Known from all Units on the Wayne.	Earnst and Andres, 1996 Peterjohn and Rice, 1991 WNF Early Succession Bird Inventory, 1995 Personal Communication, Lynda Andrews
Virginia Rail <i>Rallus limicola</i>	Marsh	Trend Unknown; virtually not known to occur in southeast Ohio.	Peterjohn and Rice, 1991 Personal Communication, Lynda Andrews
Wood Frog <i>Rana sylvatica</i>	Vernal Ponds in Hardwoods	Trend unknown Known to occur on the Ironton and Athens Units. Suspected on the Marietta Unit.	Personal communication; Lynda Andrews and Kathy Flegel
Western Chorus Frog <i>Pseudacris triseriata</i>	Fishless Ponds in Fields	Trend unknown; Known to occur on the Ironton and Athens Units. Suspected on the Marietta Unit.	Personal communication; Lynda Andrews and Kathy Flegel.

Population trends and availability of suitable habitat for terrestrial MIS are in some cases inferred from monitoring done off-Forest and/or by non-Forest Service biologists. Silvexam data could be used to determine available habitat for some of the terrestrial MIS (cerulean warbler, pileated woodpecker, pine warbler, and ruffed grouse). Silvexam data plus GIS could probably yield information on available habitat for the other terrestrial MIS (white-eyed vireo, common yellowthroat, field sparrow, eastern bluebird, wood duck, Virginia rail, western chorus frog, and wood frog). Silvexam data is updated continuously but is not saved and analyzed each year. This would need to be done in order to detect habitat trends for MIS.

Note that the Virginia rail is an extremely rare bird in southeast Ohio and is therefore a very poor choice for an MIS. The two frogs are also rather poor choices because the western chorus frog is very rare and has a call that is indistinguishable from the upland chorus frog, and the wood frog calls only briefly in the early spring with a weak call heard only a short distance. Neither frog is detected very often on the forest.

The Ohio Division of Natural Resources – Division of Wildlife conducts annual ruffed grouse surveys. One to two routes are run in each county four times over a one-week period each April. The long-term trend shows a slight decline in southeast Ohio, due most likely to a decline in the early successional habitat required by the grouse. Wood duck populations are not monitored directly but the Division of Wildlife conducts an intensive banding program which yields information on mortality rates and causes. Harvest numbers for wood ducks have been fairly constant in southeast Ohio, indicating an apparently stable population. On the Ironton district, ten routes of point count bird surveys (12 points per route) were run twice each spring in mature forest habitat from 1992 to 1994. Since these surveys were done for only three years, population trend data was not possible to estimate. In the summer of 1995, territory mapping, which provided estimates of bird densities, was completed in 23 grassy/brushy and early successional stands. In spring 2000, 64 grassy/brushy, wetland and early successional stands were visited 77 times to perform presence/absence bird surveys and make general abundance estimates. In spring 2001, 43 pine stands were surveyed for bird species presence/absence. The results of all of the bird surveys described above indicate that all of the bird MIS, except the Virginia rail (which was not detected at all), are common and widespread on the forest. It is not possible to extrapolate population trend information from this survey data.

On the Ironton district, in 2001, for the seventh year in a row, frog and toad surveys were conducted. For the first four years, three routes were run (with seven to eight stops each). Then the routes were redesigned to conform to the Ohio Division of Wildlife Frog and Toad Calling Survey protocol, and for the past three years, two routes have been run (with 10 stops each). Sites were visited after sunset, approximately once a month, up to four times, between February and July. All species heard or seen were noted, and an estimate of abundance made. The most common species recorded were the spring peeper, green frog, bullfrog, American toad, gray tree frog and cricket frog. Out of a total of 418 survey sites visited over the seven years, western chorus frogs were detected possibly eight times (but never differentiated from the upland chorus frog), and wood frogs were detected 12 times. Long term population trends may be evident after several more years of sampling, but since the two MIS frogs are so rarely detected during surveys but are difficult to identify. Other frog species may show clearer trends.

Fisheries

There are eight fish listed as management indicator species in Table B-3 of the Forest Plan (page B-10 to B-18). These include the bluegill (*Lepomis macrochirus*), southern redbelly dace (*Phoxinus erythrogaster*), redbelly shiner (*Lythrurus umbratilis*), blackside darter (*Percina maculata*), rainbow darter (*Etheostoma caeruleum*), golden redbelly (*Moxostoma erythrurum*),

sand shiner (*Notropis stramineus*), and banded darter (*Etheostoma zonale*). There are three additional species of fish that were not adequately represented by the eight management indicator species because of their rare status, and are therefore considered management indicator species. These include the Ohio lamprey (*Ichthyomyzon bdellium*), rosyside dace (*Clinostomus funduloides*), and eastern sand darter (*Ammocrypta pellucida*).

A. Little Muskingum River and Ohio River Tributaries

In 1999 and 2000, a comprehensive fish community inventory was conducted in three 5th level watersheds within the Wayne National Forest. The work was specifically targeted at the Upper Little Muskingum River (HUC 05030201210), the Lower Little Muskingum River (HUC 05030201220), and the Ohio River Tributaries, Sunfish Creek to the Little Muskingum River (HUC 05030201100) watersheds. This inventory covered 20 percent of the 5th level watersheds that contain National Forest lands.

The purpose of the inventory was to document the distribution of all fishes across the three watersheds and to determine the existing biological health of streams in the watersheds. The data was used to characterize and compare fish communities within watersheds and within streams of similar drainage areas, and to produce Index of Biotic Community (IBI) scores for individual sampling sites. The data and analyses provide a baseline of existing conditions, but inventory methods and analyses can be easily duplicated to provide long term monitoring of selected sites in the watersheds. The inventory project was a Challenge Cost-Share project between the Forest Service and the Ohio Division of Natural Areas and Preserves (CCS-09-14-99-05).

Fish communities have long been used as indicators of water quality and habitat quality within streams. Fish are good indicators of the biological health of the stream because they are the top of the aquatic food chain and depend on the productivity of the entire stream for sustenance, reproduce yearly and live their entire lifespan in the stream, are sensitive to chemical and physical qualities of the stream, are easy to identify, and are recognized by the public as important. The IBI, designed by Dr. James Karr (1981) and adapted to Ohio streams by the Ohio EPA is used to produce a score that relates to the health of the stream by evaluating a series of indicators relating to biodiversity, feeding habits, tolerance to pollution, breeding habits, and number of fish in a stream. The IBI is important because it can integrate information from individual, population, community, zoogeographic, and ecosystem levels into a single ecologically based index of the quality of the water resource (Karr et. Al 1986). This gives a reproducible method of comparing and studying the health and biotic integrity of all streams.

This monitoring report will not address the IBI analysis of sites, but will only provide a brief summary on management indicator species. The final report is on file at the Wayne National Forest and is being used to develop a GIS layer for use in project and Forest planning. (Rice and Michael 2001)



Electro-fishing on the Little Muskingum River

In all, there were 147 sites sampled during the 1999-2000 survey (some sites were sampled more than once). Fish collections were made by using an electrofishing unit and by seining. The inventory and analyses were conducted in a manner that allowed data for management indicator species to be pulled out of the overall dataset. A total of 55,978 individuals, representing 57 species (plus hybrid minnows and sunfish) were captured during this study. Ten of the eleven management indicator species were collected. The rosyside dace was the only species not captured in the three watersheds.

For the ten management indicator species, Table 3 shows the average of individuals captured per site in the three watersheds. The data is grouped by drainage area. In general, small streams are considered 0-10 square miles in size, medium streams are 20-100 square miles in size, and large streams are over 100 square miles in size.

When looking at the average number of individuals per site, there is evidence of preferences for stream size by the majority of the management indicator species. For the most part, these preferences mirrored the stream size habitat component preferences identified for each management indicator species in the Forest Plan (Forest Plan, pages B-8, B-19, B-20):

southern redbelly dace	small stream/intermittent stream
redfin shiner	medium stream with sand/gravel pools
blackside darter	medium stream with silt pools
rainbow darter	medium stream with riffles
golden redbelly	large stream with pools
sand shiner	large stream with sand pools
banded darter	large stream with riffles
bluegill	artificial impoundments
eastern sand darter	medium/large stream with sand pools
Ohio lamprey	medium stream with riffles and pools

Table 5 - Average number of individuals per site, by drainage area, where management indicator species were collected.

Species	Small Streams			Medium Streams		Large Streams	
	0-1 mi ²	1-5 mi ²	5-10 mi ²	10-25 mi ²	25-100 mi ²	100-225 mi ²	> 225 mi ²
Bluegill	5.5	3.1	3.7	5.3	4.5	1.0	7.7
Southern Redbelly Dace	39.2	71.9	49.6	7.0			
Redfin Shiner	2.0	13.2	5.5	19.1	20.6		
Blackside Darter		1.5	3.4	1.5	5.1	4.0	1.8
Rainbow Darter	1.6	4.4	7.7	5.3	7.9	4.5	6.7
Golden Redhorse		10.8	6.5	4.1	24.5	40.4	16.9
Sand Shiner		2.4	13.7	25.7	32.1	40.0	34.5
Banded Darter				1.7	4.8	10.5	7.2
Eastern Sand Darter						3.0	3.4
Ohio Lamprey						3.0	2.0

Bluegill and rainbow darter were captured across the range of drainage areas. Bluegills are typically found in pools in most streams that have artificial impoundments on or adjacent to them.

Of special interest are the occurrences of the Ohio lamprey and the eastern sand darter. Both of these are considered Regional Forester Sensitive Species. Important areas for these two species are in close proximity to some of the Forest Service's canoe access points on the Little Muskingum River.

The Little Muskingum River is the only known breeding site for the Ohio lamprey in Ohio. During the 1999-2000 inventory, the field crews observed sexually mature Ohio lampreys and transformers (individuals changing from the larval stage to the subadult stage) on several riffles and in nests in the Little Muskingum mainstem. More lampreys were observed than were captured (Table 3 does not reflect all lampreys observed, just those captured). Water clarity and depth allowed visual counts of lampreys in the riffles and in the nests. The eastern sand darter had not been documented in the Little Muskingum River prior to the inventory, however it was collected at 10 sites.

The rosyside dace was the one management indicator species not captured during the inventory. This is significant because if it were to occur on the Wayne National Forest, it would likely occur in one of these three watersheds. Trautman (1981) reports that the species has been found in clear, limestone-bottomed streams which are 600 feet or more above sea level, in an area west of the Scioto River. However, Trautman (1981) marked potential locations for the species, based

on elevations. Some of these potential areas were located along the Ohio River in the Marietta Unit, and in the headwater areas of the Little Muskingum River. Future inventory efforts will continue to look for this species in these three watersheds, but this comprehensive inventory shows it is not likely present in the three watersheds.

The Forest Service intends to place the inventory data into an electronic database that will interface with GIS. Forest planners will be able to query the database for information about the management indicator species, IBI scores, habitat conditions, and other community information. For now, the data will be considered baseline information that can be used for future monitoring activities. Only then will we be able to see trends in management indicator species, fish communities, and IBI scores.

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B. Bear Run Stream Restoration Site

A fisheries survey was conducted as part of an annual monitoring plan for the Bear Run Stream Restoration site, located in Lawrence County, Ohio. A 1st order stream severely affected by sediment from old strip mines was restored using natural channel design concepts. The restoration work was completed in the Fall 1999. The fisheries survey was conducted on September 22, 2000 between 1415 and 1500 hours. The survey results will be used as a comparison for future surveys. A Smith-Root Model 12-B battery-powered backpack electro-fisher was used to sample the fish community.

Water levels in the channel were low, so only portions of the channel could be sampled. It is typical for water levels in small streams to be low during the fall months in southeastern Ohio. The channel has three separate "A" reaches (step-pool reaches), with "E" reaches (meandering, low gradient reaches) between the "A's". The three "A" reaches were sampled, along with a section of an "E" reach between the upper and middle "A" reaches.



Photo of the upper "A" reach in the restored channel, May 2000



Photo of an "E" reach in the restored channel, May 2000

A total of 6 species of fish were captured in the restored channel (Table 4). The restored channel is a 1st order stream with intermittent flow. The "A" reaches have maintained water in them since construction in November 1999. All fishes captured in the restored channel were from the "A" reaches; none were collected from the "E" channel. These fishes were typical species one finds in headwater streams in the Wayne National Forest. From personal observations, the stoneroller is generally found in headwater streams that are slightly larger than the restored channel. However, it is an herbivore and was likely taking advantage of the algae growing in the restored channel. This restored channel has no riparian canopy, so algae have readily grown on the rocks and substrate in the channel.

Table 6 - Number of individuals, by species, captured in the restored channel.

Species	Downstream “A” Reach	Middle “A” Reach	Upper “A” and Upper “E” Reaches
Creek chub (<i>Semotilus atromaculatus</i>)	7	14	4
White sucker (<i>Catostomus commersoni</i>)	5	1	0
Fantail darter (<i>Etheostoma flabellare</i>)	1	0	0
Stoneroller (<i>Campostoma anomalum</i>)	3	1	0
Blacknose dace (<i>Rhinichthys atratulus</i>)	0	1	0
Southern redbelly dace (<i>Phoxinus erythrogaster</i>)	0	0	2

Only one management indicator species was captured in the restored channel. The southern redbelly dace is a species that prefers small streams and intermittent streams.

The main stem of Bear Run was also sampled with the electro-fisher. The restored channel flows into Bear Run. A riffle and pool were sampled immediately above and below the confluence of the restored channel and the main stem.

The Bear Run main stem is a 3rd order stream, where the restored channel flows into it. A total of 8 species of fish were captured (Table 5). With the exception of the trout-perch, the species assemblage is typical of that found in headwater streams in the Forest. The trout-perch has been found in some streams in the Symmes Creek and Pine Creek watersheds; it is not widespread in distribution like the other species.

Table 7 - Number of individuals, by species, captured in the Bear Run main stem.

Species	Bear Run Main stem
Creek chub (<i>Semotilus atromaculatus</i>)	3
White sucker (<i>Catostomus commersoni</i>)	2
Fantail darter (<i>Etheostoma flabellare</i>)	3
Stoneroller (<i>Campostoma anomalum</i>)	10
Striped shiner (<i>Luxilus chrysocephalus</i>)	5
Bluntnose minnow (<i>Pimephales notatus</i>)	7
Trout-perch (<i>Percopsis omiscomaycus</i>)	1
Johnny darter (<i>Etheostoma nigrum</i>)	2

The main stem assemblage is similar to that found in the restored channel. The fishes found inhabiting the restored channel most likely moved upstream from the main stem during high water events.

The “A” reaches appear to be a refuge for the headwater fishes when the water level in the “E” reaches are low or non-existent. Riparian plantings along the restored channel would encourage canopy closure and protection of water temperatures. Introduction of stable woody debris into the “A” reaches would provide necessary cover in the pools. At the time of the survey, the fish were found hiding in any shelf-like area in the pools.

Annual follow-up surveys should be conducted to see if fish abundance increases over time, and whether young-of-the year are collected in the future. Trends in numbers of management indicator species should also be monitored.

9. Habitat determined to be critical for threatened and endangered species shall be identified, and measures shall be prescribed to prevent the destruction or adverse modification of such habitat (CFR 219.19). Federally listed endangered species will be monitored to protect, maintain and/or enhance principle habitat(s) to achieve recovery objectives. Determine changes in populations resulting from management. All Federally listed species that may be present within the Forest and affected by management.

The Forest has conducted informal consultation with US Fish and Wildlife Service for other ongoing projects. The US Fish & Wildlife Service has not identified any Wayne National Forest lands as critical habitat for any of the threatened or endangered species on the forest

FY 1999 - Forest started process of amending the Forest Plan based on newly identified Threatened and Endangered Species. Working with US Fish and Wildlife Service on the consultation process and the needs of the species. Due to the presence of Indiana bat in the vicinity of the Bluegrass Timber Sale and the Markin Fork Timber Sale, and the perceived potential impact associated with timber harvesting, the Forest has continued the suspension of activity on these timber sales until formal consultation with the USDI Fish and Wildlife Service is completed on the Indiana bat.

A mist net and radio telemetry study was conducted on the Athens and Ironton units of the Forest. This study focused on the Indiana bat and the identification of their diurnal roost trees. In FY-99 six Indiana bats were captured and seven roost trees were located, used by three of the bats (Summary Report – Oct. 1999, Katrina Schultes). Physical, biological and ecological characteristics of identified roost trees, and the surrounding forest, were also taken and analyzed.

On the Ironton district, in October 1998, two abandoned limestone mines were netted, one night each, yielding eight bats (four big brown, three little brown, and one male Indiana). In February 1999, two mines were entered and approximately 150 hibernating Indiana bats were found in one mine. During the summer of 1999, a contractor netted 18 sites on 24 nights, catching 288 bats of seven species: northern long-eared, big brown, red, eastern pipistrelle, little brown, silver-haired,

and five Indiana (one female and four males). All of the Indiana bats were outfitted with radio transmitters and two were tracked to daytime roosts: one to a large (24 inch diameter) dead American elm, the other to a small (five inch) dead sugar maple. The others were never relocated, despite repeated attempts, and may have been just “passing through” on the way toward hibernation sites.

FY 2000 - Forest starting process of Formal Consultation with US Fish and Wildlife Service. Forest administered a contract to prepare a Biological Assessment (BA) for the Forest Plan, addressing three federally listed terrestrial animals, two federally listed aquatic animals, and four federally listed plants. The Forest expects the BA to be completed in FY 2001. Due to the presence of Indiana bat in the vicinity of the Bluegrass Timber Sale and the Markin Fork Timber Sale, and the perceived potential impact associated with timber harvesting, the Forest has continued the suspension of activity on these timber sales until formal consultation with the USDI Fish and Wildlife Service is completed on the Indiana bat. The Forest has conducted informal consultation with US Fish and Wildlife service for other ongoing projects.

The mist net and radio telemetry study was continued for another year on the Athens and Ironton units. In FY-00 three (two) Indiana bats were captured and two of them were tracked to a total of seven roost trees (Summary Report – Nov. 2000, Katrina Schultes). Roost trees characteristics were also recorded. Additionally, twelve northern bats were outfitted with radio transmitters and seven of the northern bats were followed to 21 different roost trees. A comparison of the roost trees between these two forest dwelling bats was made.

On the Ironton district, in October 1999, three abandoned limestone mines were netted one night, yielding 169 bats (eastern pipistrelle, northern long-eared, little brown, red, and one male Indiana). In March 2000, two mines (which had not been surveyed internally before) were entered and three species of bats were found, but no Indiana bats. During the summer of 2000, a contractor netted 21 sites on 24 nights, catching 425 bats of seven species: eastern pipistrelle, little brown, northern long-eared, red, big brown, hoary, and one male Indiana. The Indiana bat was fitted with a radio transmitter but was never relocated despite repeated attempts.

FY 2001 Forest completed the Biological Assessment on the Wayne Forest Plan and received the final Biological Opinion from the US Fish and Wildlife Service in September 2001. Began the process for amending the Forest Plan in September. No mist netting for bats was done during FY 2001. There was a confirmed sighting of an adult Bald eagle flying over the dry lakebed of Lake Vesuvius in June 2001.

Biological Assessments/Evaluations-

Biological Evaluations, which establish compliance with the Endangered Species Act, the National Forest Management Act and the National Environmental Policy Act were conducted and written for 26 projects, and Effects Analyses were written for 2 projects. Forest Service program areas covered under these projects were: Ecosystem (Acid Mine Land reclamation projects including subsidence closures and stream channel reconstructions); Recreation (horse trail reroutes, hike/bike trail construction or maintenance, campground improvements, and Lake Vesuvius recreation projects), and Special Uses (oil and gas roads and lines, waterlines, powerlines, private land access, spill simulation, and gravel excavation). Three of the biological

evaluations were for collective permit renewals, which account for the reevaluation of a total of 75 projects (N = 14 Athens, N = 19 Ironton, and N = 42 Marietta).

T/E habitat inventory-

No acres were formally inventoried for threatened or endangered plant species habitat in 2001.

T/E habitat restored/enhanced-

No terrestrial habitat was restored/enhanced for any threatened or endangered plant species in 2001.

The US Fish and Wildlife Service was consulted on two biological evaluations which were assessing projects in areas thought to contain suitable habitat for threatened and endangered plant species. The projects include a subsidence closure in Hocking County and various recreation endeavors around Lake Vesuvius in Lawrence County. Compliance was received on both projects.

10. Land Adjustment - Progress toward land consolidation that meets objectives by exchange, purchase, or donation. Changes in total acres by counties:

Table 8 - Wayne National Forest -Acreage by County

County	Gross Area within National Forest Proclamation Boundary	Acreage as of:			
		10/01/98 (Start of FY 1999)	10/01/99 (End of FY 1999 & Start of FY 2000)	09/30/00 (End of FY 2000 & Start of FY 2001)	09/30/01 (End of FY 2001)
Athens	81,213	18,171	18,197	18,197	18,365
Gallia	106,017	16,954	16,954	16,954	16,954
Hocking	59,174	23,095	23,328	23,348	24,151
Jackson	7,440	1,701	1,701	1,701	1,701
Lawrence	157,766	68,880	68,880	68,842	68,843
Monroe	142,854	24,097	24,097	24,097	24,137
Morgan	7,637	3,328	3,328	3,328	3,328
Noble	5,531	388	694	694	694
Perry	79,798	19,962	20,502	20,504	22,257
Scioto	32,438	11,365	11,513	11,625	11,625
Vinton	27,239	1,869	1,869	1,869	1,869
Washington	126,883	38,589	38,589	38,590	39,002
TOTAL ACREAGES	833,990	228,399	229,652	229,749	232,926
Change from Previous Year	0 acres	N/A	Increase of 1253 acres	Increase of 98 acres	Increase of 3,177 acres

11. Vegetative Management:

- a) **Verify research conclusions that use various silvicultural systems to achieve multiple use objectives.**
- b) **Determine public reaction to visual quality of vegetative management.**
- c) **Determine if significant soil damage or loss occurs as a result of vegetative management as measured by soil compaction (bulk density) and soil movement.**
- d) **Determine effects of vegetative management on water quality.**

There were no timber sales operated during FY 1999 , 2000, or 2001 therefore the above 4 items were not monitored.

12. Off-Road Vehicle Use: ORV use in Management Areas 2.3 and 3.2

- a) **Determine ORV effects on other recreation uses, 2.3 and 3.2 management areas. Forest Recreation Visitors - RVDs.**

The affects of ORV use on other recreation uses have been monitored by Comment Cards. The following general comments have been received but no scientific analysis has been completed in regards to these comments.

Common comments received are:

The noise and speed of ORV's are detrimental to hiking and mountain-biking. (The persons commenting feel the noise either spoils the setting and/or they are intimidated by the speed.)

Hunters do not appreciate stalking or waiting for game when there is a chance that an ORV may come by at any time, and frighten the game away.

Recreationists who do not ride ORVs frequently express concern about many issues, including the possible impacts from ORVs on animals, wildlife habitat, soil stability, forest fragmentation, noise, pollution, "peace and quiet," law enforcement, community economics, the negative balance of trade, conflict with private enterprise and safety. Commonly heard concerns include: "ORVs scare away wildlife." "People with disabilities need ORVs to get around in the forest." Some complaints are from ORV riders about other ORV riders.

ORV use has been designed in MA's 2.3 and 3.2 between April 15th and Decemeber 15th. The designated area is to provide a specific area for ORV's and to allow the remainder of the forest for other forms of recreational where visitors can feel free of noise from off-road-vehicles and enjoy some "peace and quiet". Hunters also can choose not to hunt near the designated ORV trail systems, but some hunters with disabilities take advantage of the trail system by using their ORV as a tool for accessing the woods so they can enjoy the sport.

Illegal ORV use is reported in MA 2.2, 6.1, 6.2, 8.1, 8.2, 9.1 and 9.2.

No monitoring was done to determine the effects of ORV use on trailside vegetation, which includes wildflowers and economically desirable plants, both of which are enjoyed by the public. Not only do ORVs likely directly affect the flora through trampling and soil disturbance, but indirectly as well, through the potential introduction and spread of Non-native Invasive Species (NNIS). More research needs to be done in the coming years on the effects of ORV use on trailside flora, so that appropriate mitigating measures regarding potential impacts can be incorporated into the Forest Plan.

b) Determine if ORV use significantly effects silt volume in streams or drainages in 2.3 and 3.2 management areas. Water Quality - Suspended sediment (mg/L)

Sediment transport has long been a debate in the scientific community. Determining how much sediment is moving offsite and where that sediment is being deposited is at times nearly impossible. There is no doubt that some sediment from ORV trails does make it to some of our streams. We have not monitored turbidity (which is the method for quantifying mg/l) in streams in the 2.3 or 3.2 management areas. Some qualitative monitoring was completed by the Forest Hydrologist in the Dorr Run ORV area. The Forest Hydrologist also observed some areas where fine sediments were entering the stream and other areas where sediment was not entering the streams. Most of the observations made where sediment is entering the streams are in places where the trail crosses the streams and the catchment basins and where the water bars are not functioning properly. Most of these trails in the specific areas contributing sediment are located on steep slopes and in close proximity to the stream.

c) Determine if ORV use significantly effects hunted and non-hunted populations. (compare similar) 2.2 and 2.3, and 3.1 and 3.2 areas: Pileated Woodpecker - [Methods: 1) Population trend expected from changes in availability of suitable habitat. Sampling involves about 10 percent of Forest per year through integrated resources surveys, (including TMIS and WMIS data base). 2) Population trends based upon field sampling of animals or their sign by USFS, State, USF&WS, and others.]

Monitoring of this nature has not been conducted at this time due to other Forest priorities.

Monitoring that specifically addresses this item has not been done. However, in FY2000 an Indiana bat with a radio transmitter was found to be roosting in trees with 60 feet of an ORV trail for several days on the Athens Ranger District during the active ORV use season. There is an opportunity for research in regards to this issue (Item#7).

OTHER MONITORING INFORMATION

The following information is not required in Chapter 5 of the LRMP. However this information is important and is included at this point.

13. RARE PLANTS

1. Goldenseal (*Hydrastis canadensis*)-

Though this species is not listed on the Regional Forester Sensitive species list for the Wayne National Forest, it is listed in several surrounding forests, and is becoming increasingly rare in Ohio due to over-harvesting pressures. Five permanent plots in the Athens Ranger District were monitored on July 13, 1999 by Rosemarie Boyle. Two of the five populations identified in 1998 could not be relocated (translating into the loss of 35 stems from one non-colonial population and a colonial population with ~30 percent cover). One of the non-colonial populations showed an increase in stem numbers (from 30 to 36 individuals). The two remaining colonial populations showed no change in cover, though one appeared to have shifted partially to outside the plotted area. Loss of two of the populations could be due to harvesting, though confirmation is impossible. Field notes indicate that June 1999 was the driest June on record to date.

2. Blue Scorpion-weed (*Phacelia ranunculacea*)-

A large, vigorous population of *Phacelia ranunculacea*, a Regional Forester Sensitive and State endangered species exists within a 40-50 acre remnant post-oak barren located in Symmes Township, Lawrence County (T5N, R17W, sec. 26). The barren was burned once in 1998 after a thorough plant survey of the area. Informal monitoring of *P. ranunculacea* populations was done by Judy Dumke in 1999 and 2000, and indicate that.....

14. NOXIOUS WEEDS

Purple loosestrife (*Lithrum salicaria*)-

Purple loosestrife is an invasive wetland species that has invaded areas along Leith Run near the Leith Run Campground on the Marietta unit of the Athens Ranger District. Species of *Galerucella* beetles have been shown to successfully control populations of loosestrife by feeding on their leaves. From mid-May to late June of 2000, Marilyn Ortt reared 200 of these adult beetles in netted pots for eventual release upon pupae emergence. On July 13, 2000, 10 pots (1 ft in diameter by 4 ft high) of *Galerucella* beetles (~1000 per pot) were released on ~ 2 acres of a Leith Run embayment that has been overrun with purple loosestrife. The population will be monitored for several years starting in 2001 to determine the effectiveness of the beetles in controlling this loosestrife outbreak.

15. RESEARCH NATURAL AREAS, SPECIAL AREAS AND CANDIDATES

The 15-acre target for noxious weeds extrication was exceeded by pulling garlic mustard (*Allaria petiolata*) from 37 acres of the Little Storms Creek Special Area on the Ironton Ranger District. A prison crew working for the Ironton Ranger District pulled twenty-two bags in 1999, and 45 bags in 2000. The increase in the number of bags pulled is not necessarily a sign that the pulls have been ineffective, but rather, more likely an indication of inconsistencies in human labor effort and management. The hand pulling is designed to remove the plant before it develops a seed head. By repeated pulling over a 3-5 year period, the population is eradicated since no new

seeds have been allowed to be produced. The current hand pulling is anticipated to continue on a yearly basis for the next 3 years.

16. WATERSHED RESTORATION

The watershed restoration team on the Wayne National Forest was first organized in fiscal year 2000. This report covers monitoring completed during fiscal year 2000 and fiscal year 2001.

Happy Hollow: (FY 2000)

The Forest received funds from the Ohio Council on Un-reclaimed Strip Mines (Ohio DNR) to restore water quality at the Happy Hollow pond site in 1997. This pond was created during the reclamation phase of a coal strip mine project in 1984 when a subsidence occurred into a deeper vein of coal. Water from this vein was good, so a pond was built to contain it. A ditch was built to convey deep mine drainage from another site across Happy Hollow Road away from the site. In the next 8 years, this ditch silted in, beavers dammed up the combined mine and pond drainage, and the acid water began to seep from the ditch into the pond. The pond pH dropped from one supporting a bass population (according to local fishermen) to 4.0, too low for aquatic life. The pond turned an aquamarine blue color.

A temporary ditch clean-out was done by hand in the summer of 1999 prior to machine maintenance, and pond water immediately rose above pH 6. This provided additional proof that maintenance of the ditch would solve the contamination problem.

The Forest Service contracted with the Corps of Engineers in late 1999 (early FY 2000) to clean out the ditch, channel the mine water past the dam of the pond, and add fill material to the dam to raise it's level above the adjacent ditch carrying the mine water. It was also agreed with ODNR to add limestone to a nearby stream to add alkalinity and treat the mine water before it leaves the site entirely. This work was completed in late fall of 1999, early FY 2000. After the maintenance project, effectiveness monitoring indicated the pond water returned to a pH of 7.0 and fish could be seen in the vegetation now growing at the pond's edge.

By late 2000, grasses began filling in the ditch. It is critical that the FS continue ditch maintenance to prevent contamination from re-occurring.

Future needs: It is speculated that subsidence's occurring in the York Clay project area (north of the artesian flow that feeds Happy Hollow) contribute to the AMD flow in Happy Hollow. Re-construction of the stream in this 120-acre drainage may reduce the AMD flowing near the pond. This flow also impacts several fresh-water emergent swamps in the floodplain of Monday Creek below the drainage and west of Happy Hollow.

Rock Run 24 and Rock Run Gob Pile Maintenance: (FY 2000)

The forest received funds from OSM, Appalachian Clean Streams Initiative, in the amount of \$135,000 to restore water quality at both sites. Contributions were:

- OSM = \$80,000
- ODNR = \$40,000

- USFS = \$14,000
- Duck Unlimited = \$1,000

Rock Run 24: (FY 2001)

Baseline monitoring by FS personnel in 1999 found that highly acidic groundwater discharged from a pipe lodged into an abandoned underground mine complex at a base rate of 50 to 100 gallons per minute. The site made a significant contribution to acid pollution in the main stem of Rock Run.

Treatment entailed modifying the existing drainage by installing a 550-foot open limestone drain. A related action was the construction of a temporary trail to allow access to the site. Trash and debris that has been dumped at the site was consolidated and buried using silt and plant debris removed from the channel. The disposal site was fertilized, seeded and mulched. The site was protected from erosion with approximately 500 feet of silt fencing.

To test the effectiveness of the project monitoring of the water quality was conducted by MCRP, indicating the water entering the main stem now has a pH of 6.0+.

Rock Run Gob Pile Maintenance (FY 2001)

Monitoring by FS personnel and Ohio University found that groundwater discharging from the toe of the reclaimed refuse pile continued to add acid mine drainage to Rock Run main stem. The source of this pollution was surface water percolating into the reclaimed gob pile from a 20-acre drainage near a shallow depression in the reclaimed area and ground water that is discharging from sandstone under the reclaimed area.

The maintenance implemented was to stop the surface water percolation by filling a depression with borrow from the previously used borrow area west of the reclaim and construct a lined channel to carry the surface water away from the area and into the main stem, resulting in dilution effects. Extending an open limestone drain 700 feet downstream was implemented to neutralize the acidity discharging from the toe of the refuse pile. Effectiveness monitoring by FS personnel and MCRP indicate the water quality pH has been raised to 6.0.

Majestic Mine: (FY 2001 – FY 2002)

In 1999 the Wayne National Forest, OSM, and MCRP closed a large underground mine subsidence that was capturing fresh surface water and discharging at the mine portal with a pH of 3.3. A graduate student at Ohio University implemented a monitoring plan in 2001. Preliminary results indicate that the discharge from the mine portal has been reduced by approximately 40 percent. The student's master's thesis will be completed this fall.

Kimble Creek Mine: (FY 2000 – FY 2002)

Kimble Creek mine is a small abandoned mine. The discharge from this mine is highly acidic. Forest Service monitoring of the site indicated a pH of 2.8, with acidity content as high as 5 thousand parts-per-million (0.5 percent). A contract is currently evaluating various treatment alternatives in terms of feasibility, effectiveness and cost. This contract is expected to be completed in FY 2002.

Abandoned and Inactive Mine Inventory (AIM) – (FY 2000 – FY 2001)

From 1800 to the present, about 3.6 billion tons of coal have been produced in southeastern Ohio. This mining in southeastern Ohio resulted in about 6,000 abandoned deep mines and approximately 400,000 acres of abandoned strip mines. The heart of the Athens unit of the Athens Ranger District consists of some of the most severely impacted mine land in southeastern Ohio. Although the Forest realized the area was severely impacted, the total extent was unknown in terms of the number sites, the type of sites, and the severity of the impacts. The Forest needed baseline inventory data in order to prioritize rehabilitation work by watershed and within a watershed and to identify safety concerns. Therefore, the Wayne National Forest worked through the Army Corps of Engineers to conduct an inventory of the abandoned mine land sites on the forest.

The Abandoned and Inactive Mine Inventory on the Wayne National Forest has been incorporated into a comprehensive, integrated, state of the art database. Each feature has been located with global positioning coordinates, described in terms of size, pH, temperature, whether it's a release site, and if so, it's discharge rate, whether it's dangerous to the public, and each point on the map is then linked to digital photos of the site. The types of sites inventoried are; portals, strip ponds, subsidences, highwalls, gob piles, seeps, slumps, structures, and trash piles. Although the inventory is only about 70 percent complete, the Forest is already using the database for areas completed, which has identified about 5,000 mining features.

Through discussions with the Army Corp of Engineers and the Wayne National Forest, the Monday Creek Restoration Project decided for the sake of consistency to extend the Abandoned and Inactive Mine Inventory to the private lands in the Monday Creek Watershed using the same personnel that conducted the Wayne's inventory. This provides all partners with a complete look at the Abandoned Mine Land problems in this watershed, and all partners have access to both databases. The benefits to watershed related projects are obvious, but this database is also being used by other disciplines. Wildlife biologists are using it to locate abandoned portals with characteristics that may make them suitable habitat for bats. NEPA specialists are using it for cumulative effects analysis. Lands specialists are using it to identify mining features on land the Forest is interested in purchasing. The inventory will be complete for all mined watersheds on the forest in FY2002.

17. ECOSYSTEM ANALYSIS AT THE WATERSHED SCALE

Pine Creek Watershed

The Pine Creek Watershed Analysis was completed in June 2001. The purpose of the analysis is to provide baseline data on the history and current condition of the watershed, discuss trends, relate the prominent watershed features and processes, and make recommendations to address a number of issues and key questions identified for the watershed. The baseline information is expected to be directly relevant and useful in project planning, NEPA analysis, and other analyses required to implement projects by the Forest Service on Wayne National Forest lands. It will aid also in any FS activities jointly

undertaken with other agencies and entities on State or private lands in the watershed. The report is available on the Wayne National Forest web page.

Little Muskingum Watershed

The analysis of the Little Muskingum watershed is currently underway and is expected to be completed March 31, 2002. This ecosystem analysis at the watershed scale will provide similar information as the Pine Creek assessment but for the Little Muskingum watershed.

18. LAW ENFORCEMENT

It is always the Forest Service's policy to provide a safe environment for our users. It is our preference to have voluntary compliance with all laws, regulations and policy relating to use of the National Forest. Unfortunately that is not always the case. Forest employees who have undergone specific training are authorized to issue written warnings and citations (violation notices). The following chart shows: the number of incidents of unlawful damage or actions have been documented; the number of written warning that have been issued to individuals; and the number of violation notices that have been issued to individuals on the Wayne National Forest over the 1999-2001 period.

TABLE 9 – LAW ENFORCEMENT

	1999	2000	2001
Incident Reports 1/	784	712	548
Written Warnings	240	64	41
Violation Notices	231	311	195

1/ - Incident Report numbers include the number of written warnings but do not include the number of violation notices.

This table does not indicate the thousands of contacts made every year by forest law enforcement personnel with individuals who may just need information.

Part of the law enforcement strategy is to ensure we have Forest Service personnel out in the Forest 7 days a week during the spring summer and fall seasons, and to a lesser extent during the winter. These employees can issue warnings or citations when needed, but spend much more time doing customer service contacts with law abiding users.

The Forest has cooperative agreements with most counties that have National Forest System lands in them. In some instances Sheriff Office's receive funds to help patrol and ensure public safety, especially around developed recreation areas.

19. HERITAGE RESOURCES

In FY 2001, the Wayne National Forest, along with the Shawnee and Hoosier NF's, received both an Eastern Region Honors Award and USDA Secretary's Award for: "Innovative Methods in Creating Employment Opportunities for Minority Students to Research the African American Heritage of the Southern Tier Forests and the Underground Railroad"

Accomplishments:

- Two historic sites evaluated: Payne Cemetery on Athens Ranger District and the Cambria Iron Furnace on the Ironton Ranger District.
- Six sites interpreted: New Wayne National Forest Office Welcome Center; Vesuvius Iron Furnace Underground Railroad marker; Regional Leadership Team guided tour; Payne Cemetery – Little Cities of Black Diamonds public tours; Payne Cemetery – Underground Railroad PowerPoint; Pokepatch – Underground Railroad PowerPoint
- Thirteen sites preserved/protected: Buffalo Creek Rockshelter; Groundhog Rockshelter; New Straitsville Mound; Payne Cemetery; Tinkers Cave; Shawnee Tower; Monday Creek Rockshelter; Vesuvius Furnace; Edington Cabin; Ring House; Pokepatch; Cambria Furnace; and 33HO611
- Completed heritage inventory on 5,094 acres of National Forest lands.
- Three new Heritage Resource sites inventoried – Payne Cemetery, Cambria Iron Furnace, & Lindamood Property.
- Two sites officially determined eligible for the National Register of Historic Places – Payne Cemetery & Cambria Iron Furnace.
- ARPA permit – 1 (ASC Group, Inc.; arch work for Nelsonville By-Pass)
- Volunteer Hours – 98 total hours
- Continued Underground RR Preservation Initiative
- Continued partnerships with Friends of Freedom and Ohio University

Historically Black Colleges and Universities Comprehensive Program Underground Railroad Database Project

Utilizing the talents of the students provided to the Wayne National Forest under the HBCUCP (Historically Black Colleges and Universities Comprehensive Program) for the past several years, an interactive GIS database has been developed that incorporates the historic records pertaining to the African American Underground Railroad (UR) settlement known as Pokepatch.

In FY 2000, Tennessee State University students collected a vast amount of land ownership records within the ten core sections of Pokepatch from the years 1827 - 1878. The amount of information was so considerable that it became vitally important to organize the data before collecting more. It is housed in the Forest's Geographic Information System (GIS).

In FY 2001, the primary data collector returned to the project, and two GIS students from Lincoln University were hired. The team successfully took the land record data recorded on

Excel spreadsheets and merged them into the hand-digitized ownership parcels in the ten sections for each of the study years.

The database can now answer questions of land ownership for any selected year. For example, one can see how much land John Campbell (a major Underground Railroad abolitionist/conductor) owned in the Pokepatch area in 1838. The successful merger of the mapping and the database allows researchers to not only see the actual ownership parcels on the map, but simultaneously exhibits the detailed land information in a table.

The research has already confirmed that the early iron furnace industry subsidized the operation of the Underground Railroad much more than previously thought. As contiguous sections are entered, it is hoped that the “boundaries” of what was once the community of Pokepatch can be better defined. This database has far-reaching implications in that it can be shared and used by anyone who has GIS capabilities.

20. FIRE MANAGEMENT

FIRE MANAGEMENT

- The Fire Management Program received additional personal with the hiring of 3 permanent fire positions: (1)-Fire Management Officer, (1)-Asst. Fire Management Officer, (1)-13/13 Senior Fighter. In addition, 2 new prison crew leaders were brought on that have fire fighting responsibilities and were made available during fire season.
- A 1-ton chassis dump truck was converted to a Type VI engine with a new 250-gallon slip on unit with foam capability.

2001 Wayne NF Fire Season Highlights

- Spring Fire Season - First Fire: 02/12/01 Last Fire: 05/06/01
Relatively dry spring with warmer than average temperatures. No real significant rain until mid-May when the Ironton Ranger District received torrential rains, causing wide spread flooding. Fires were occurring well past green-up, the normal end of spring fire season. Leaf litter and duff layers remained dry until significant moisture was received.
- Fall Fire Season – First Fire: 09/19/2001 Last Fire 12/05/2001
Drought conditions, early leaf drop, tree and plant dormancy, overall lack of precipitation along with arson activity contributed to an active, extended fall season. Fuel moistures were down with 100 Hour fuel moisture as low as 5 percent and Fine Fuels as low as 3-4 percent at times. In addition 1000 Hour fuels were also lower than normal and contributed to frequent spot fires and higher heat intensities. Dense smoke coming across the river from wild fires in Kentucky and the lower Haines indexes resulted in several fires remaining undetected for several hours, allowing them to increase in size and intensity. Season ending rain arrived after the Thanksgiving Holiday.

PRESCRIBED FIRE

- No prescribed fires were conducted during fiscal year 2001. Several Rx burns are being planned for the upcoming years.

WILDFIRES

- 84 Fires for FY01
- Utilized a 10-person AD fire crew from Hocking College.
- Requested and hosted a Type II crew and a ICT3 for large fire suppression and support during November.
- 2 Class D fires (300 and 174 acres) and 9 Class C fires (35.0, 35.0, 63.0, 10.0, 15.0, 68.0, 55.0, 20.0 and 21.7 acres)
- Total of 945.9 acres burned (FS and PVT) within forest fire protection boundary.
- Special Agent now on Forest to investigate and pursue intentionally set fires.

COST EFFECTIVENESS

Utilized an on Forest supply/expanded team to receive and document supply orders, place resource orders, procure supplies, provide support for incoming resources and track expenditures.

COOPERATIVE EFFORTS

- Held an I200 Basic Incident Command utilizing FS and State Division of Forestry instructors.
- Sent Wayne employees to State of Ohio sponsored NWCG training courses.
- Utilized a State Division of Forestry dozer crew on fires in Ironton Ranger district.
- Assisted with technical expertise, information and planning activities with Hocking College on Rx burns.
- Utilized Redcarded students and staff from Hocking College to assist with fire suppression.
- Held interagency meetings with FS, NPS, NWS, Ohio Division of Forestry, Hocking College, and OSU – Dept. of Natural Resources and various Fire departments.
- Received assistance from VFD's on wildfire control and supported their efforts through Equipment Rental Agreements.
- Wrote letters of support for cooperating VFD's grant applications.
- Dispatched fire personnel from FS, NPS, State Division of Forestry, and also AD personnel to numerous Western states in a variety of firefighting, command and staff positions in coordination with EACC.
- Conducted an interagency 190/130 Basic Firefighter training session for local, state and FS personnel.

2001 WILDFIRE STATISTICS

All fires on the Wayne National Forest were due to human factors. 59 fires were suspected arson and 25 were for other causes.