

## Forest Management Survey, FWS Regions 3 and 5

This survey was issued 11 July 2006 to Refuge System biologists and project leaders in FWS Regions 3 (Midwest) and 5 (Northeast); the survey closed 25 July 2006. One submission was accepted for each station that responded. The purpose of the survey was to obtain information about Refuge forest management issues and needs in Regions 3 and 5. This information was used in a workshop for Refuge staff and scientists, held 8-10 August 2006 at Big Oaks National Wildlife Refuge, Madison, Indiana. The purpose of the workshop was to solicit and document refuge problems, threats, and needs with regard to management of forested ecosystems and to help plan future USGS research on this topic.

The following summary is the best information we have about refuge needs across Regions 3 and 5 with regard to forest management. Some of the questions required answers to be in text form. These answers have been consolidated into common themes. The total number of answers represented by a general theme is given at the end of each theme.

Total number of stations surveyed:	147
<u>Total response:</u>	<u>92</u>
Total response rate	63%

Response by region:

2. Choose your region:



	Number of Responses	Response Ratio
Region 3	45	49%
Region 5	47	51%
<b>Total</b>	92	100%

## Forest Management

Does your station currently manage or plan to manage forest habitats?

4. habitats?



	Number of Responses	Response Ratio
Yes	63	68%
No	29	32%
<b>Total</b>	92	100%

Note: The following responses represent the 63 stations that answered 'Yes' to Question 4. The stations that answered 'No' to Question 4 automatically exited the survey.

How important is forest management on your station?

5. Please rate with 1 being least important and 5 being most important.



6. Has forest management occurred on your station in the past (e.g. timber harvest, tree planting, prescribed fire, whole tree chipping)?



7. Was a person with forestry training (e.g. a forester or forest ecologist) consulted prior to, or during, forest management planning/implementation?



8. What is the total extent of forest management (e.g. timber harvest, tree planting, prescribed fire, whole tree chipping) that has occurred on your refuge over the past 10 years?



What is the total extent of forest management planned to occur over  
**9.** the next 10 years?

	Number of Responses	Response Ratio
0 acres	1	2%
1-100 acres 	15	24%
101-500 acres 	16	25%
501-1,000 acres 	7	11%

Which of the following is the most important factor in your forest  
**14.** management decisions?

	Number of Responses	Response Ratio
Ecological integrity (Managing for the historic range of natural variation of structure and composition) 	35	56%
Focal species (Managing to provide habitat for species that have been identified as priority resources of concern) 	23	37%
Other 	5	8%
<b>Total</b>	<b>63</b>	<b>100%</b>

Note: Most “Other” responses indicate that both were equally important

**15.** Please explain your answer to the previous question:

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1. Ecological Integrity explained

a. Common themes:

- i. Both Integrity and Focal species at the same time (12)
- ii. Poor or reduced forest conditions to start with (invasives, hydrology, soils, ag., etc.) (8)
- iii. Restore native communities/conditions (6)
- iv. Manage for integrity for the sake of itself (5)
  - v. Managing for integrity first then wildlife species will follow (5)
- vi. Management for a range of habitats desired for a diversity of wildlife species (2)
- vii. Manage for integrity due to unique forest conditions (3)
- viii. Conflicting management goals between integrity and focal species (1)

2. Focal Species expanded

a. Common Themes

- i. CCP mandates or species of concern (9)
- ii. Multiple Species Management...migratory birds, rare plants etc (5)
- iii. Single species focus...woodcock, Kirtlands warbler (3)

What information or assistance do you need to develop clear, measurable forest habitat management objectives or make better forest management decisions?

**VIEW** 63 Responses

**1. Common Themes**

- a. An expert to consult....staff forester, Zone/Regional Forester, consultant (12)
- b. Need help with initial planning – need information...literature, guidance, inventory, research, database, BMP's (12)
- c. Funding and/or Staff (7)
- d. Information on existing condition of forest....inventory, studies, veg mapping, Best Management Practices to achieve objectives (training)(6)
- e. All of the above/multiple needs....GIS Analysis,inventory,guidance,assistance (6)
- f. Need information on wildlife habitat requirements for species (5)
- g. Don't know (3)
- h. Any information will help (2)
- i. Nothing (2)
- j. Not Applicable (2)

What types of forest are on your station? Check all that apply.

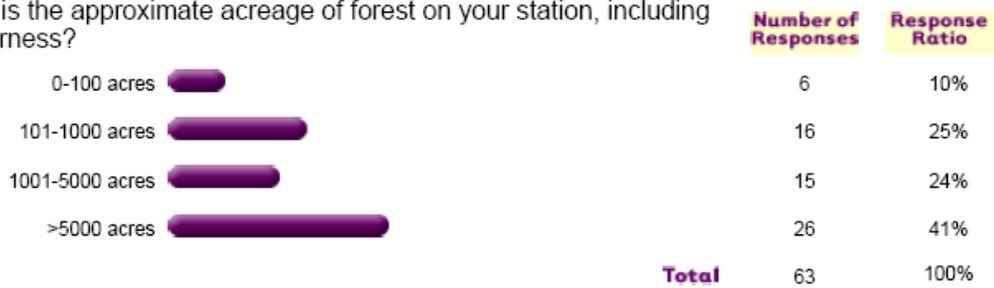
To classify your forests, first consider what the dominant tree species is within a habitat. Then, place that species within one of the following major forest types. For example, if your dominant species in a floodplain are Baldcypress and Tupelo, the forest is an Oak-Gum-Cypress forest type. If Red Maple dominates your forest, the forest

**18.**type is Maple-Beech-Birch.

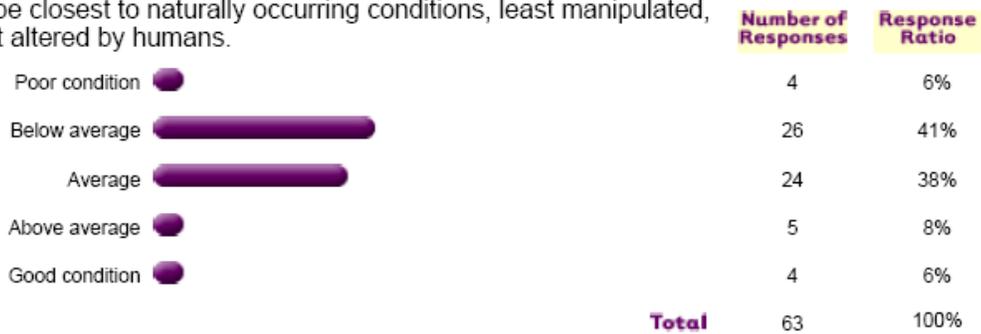
**Number of Responses**   **Response Ratio**

Type	Number of Responses	Response Ratio	
Spruce-Fir	14	11%	Northern
Maple-Beech-Birch	33	25%	Northern
Aspen-Birch	14	11%	Northern
White-Red-Jack Pine	17	13%	Northern
Oak-Hickory	35	27%	Central
Oak-Pine	21	16%	Central
Longleaf -Slash Pine	0	0%	Southern
Loblolly-Shortleaf Pine	9	7%	Southern
Oak-Gum-Cypress	12	9%	Bottomland
Elm-Ash-Cottonwood	37	28%	Bottomland

What is the approximate acreage of forest on your station, including  
**19.** Wilderness?



Rate your forest on a scale of overall condition? Consider a poor condition as being furthest from naturally occurring conditions, heavily manipulated, or heavily altered by humans. A good condition would be closest to naturally occurring conditions, least manipulated,  
**21.** or least altered by humans.



## Data

Has your station employed the following in the past, or are you expecting to do so in the future?

*The top percentage indicates total respondent ratio; the bottom number represents actual number of respondents selecting the option*

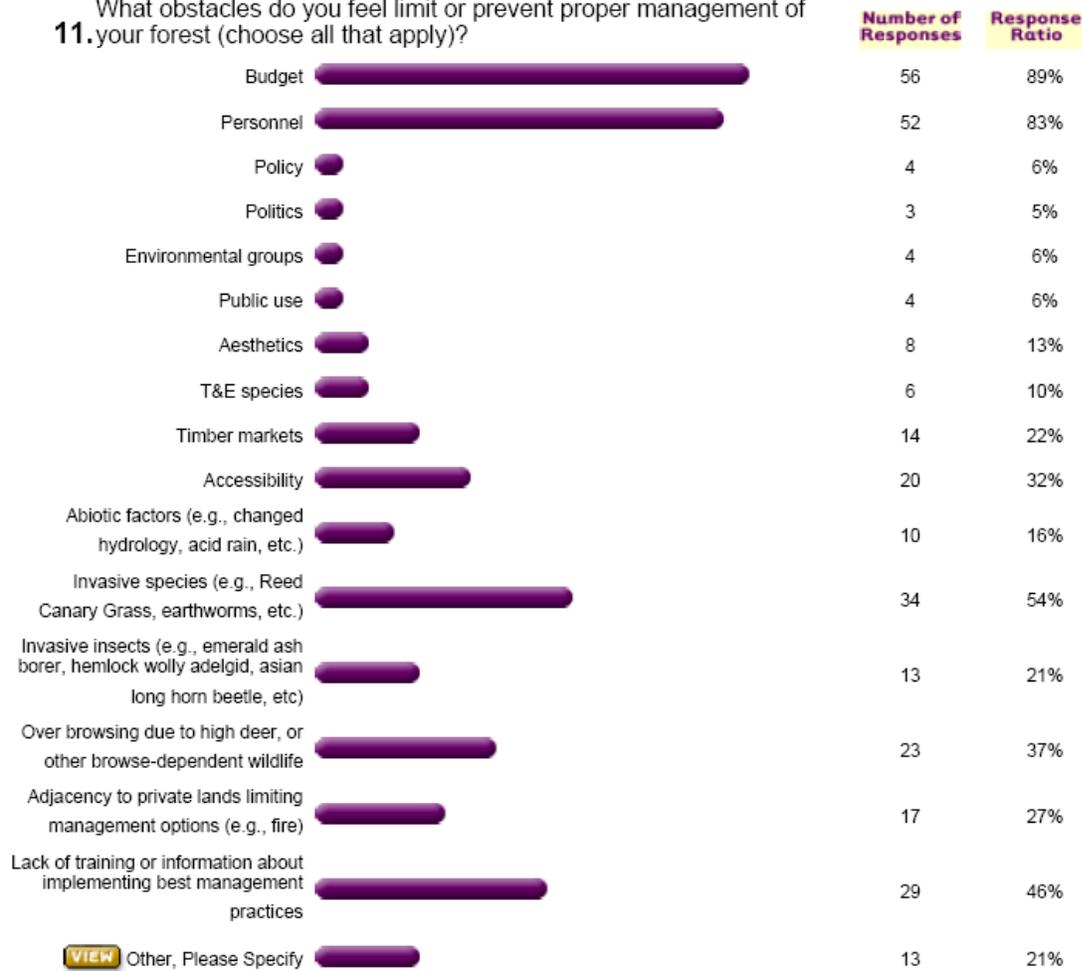
	1 No	2 Planned	3 In Process	4 Analysis or reporting	5 Completed
1. Forest inventory	29% 18	24% 15	24% 15	6% 4	17% 11
2. Forest monitoring	13% 8	41% 26	35% 22	2% 1	10% 6
3. Forest research	43% 27	32% 20	11% 7	5% 3	10% 6
4. Forest related GIS analysis	29% 18	33% 21	22% 14	3% 2	13% 8

20. What types of forest-related data do you have for your refuge?

	Number of Responses	Response Ratio
Cover type map for ecological region	24	38%
Cover type map for refuge	48	76%
Aerial photo interpretation	31	49%
Ecological Land Units (ELU)	5	8%
Bird data	52	83%
Other wildlife data	24	38%
Soil data	41	65%
Abiotic (water quality, air quality)	10	16%
Disturbance ecology information	14	22%
Natural community	16	25%
Habitat inventory	15	24%

## Obstacles/Problems/Issues

What obstacles do you feel limit or prevent proper management of  
**11.** your forest (choose all that apply)?



### 1. Other:

- a. Inability to use funds generated by timber sales (3)
- b. State limited prescribed burn window (2)
- c. No ground disturbance permitted
- d. Lack of staff forester
- e. Zone identified the need for Forestry support
- f. disease (oak wilt)
- g. munitions
- h. unexploded military ordnance issues/concerns
- i. National Wilderness Area
- j. We have no obstacles to proper forest management

12. Do you have mandates that would limit your forest management?

	Number of Responses	Response Ratio
Yes 	16	25%
No 	47	75%
<b>Total</b>	63	100%

13. If yes, please list:

[VIEW](#) 16 Responses

1. Common Themes

- a. Wilderness Area /Special Lands Designation (7)
- b. T & E/Special Concern Species (3)
- c. COE – General Plan Lands (2)
- d. Cultural Resources (1)
- e. Multiple mandates (1)
- f. Other (3)

16. What are the prime questions you have regarding the management of your forest?

[VIEW](#) 63 Responses

2. Common Themes

- a. Don't know where to start...need guidance, more data, better info on management direction (20)
- b. Impact and control of invasive species (14)
- c. Silviculture/Reforestation techniques....need guidance, more species specific info (veg and habitat)(10)
- d. Specific species requirements....need specific species research, information, and data(4)
- e. Hydrology...impacts, role, accounting for (3)
- f. Role of forest management in USFWS present and future....in regards to budget climate, staffing, and timber markets (6)
- g. No questions (5)

23. Are there enough training opportunities for refuge staff with regard to forest management?

	Number of Responses	Response Ratio
Yes 	6	10%
No 	33	52%
Unsure 	24	38%
<b>Total</b>	63	100%

## Threats

22. What do you feel are the biggest threats to your forest?

 63 Responses

### 1. Common Themes

- a. Multiple threat concerns....climate change, invasives (plant/insect), fire suppression, success of reforestation/regeneration, hydrology, over browsing, urbanization, fragmentation, fire suppression, insect/disease, budgets, seral stages not in balance. (33)
- b. Invasives/Diseases.....some identified - asian long horn beetle, gypsy moth, emerald ash borer, reed canary grass, buckthorn, beech bark disease, earthworms, viburnum leaf beetle, (16)
- c. Hydrology....flooding, altered (2)
- d. Regeneration (2)
- e. Other...funding/budget, urbanization, fire suppression, lack of information, lack of harvesting/management resulting in high risk condition, the unknown, continued degradation of natural communities, staffing, fragmentation, edge, cormorant guano (12)