



United States
Department of
Agriculture

Forest
Service

National Forests in North Carolina
Croatan National Forest
Croatan Ranger District

141 East Fisher Avenue
New Bern, NC 28560-8468
252-638-5628

File Code: 1950
Date: July 12, 2004

Dear Friend of the Croatan National Forest:

Enclosed is a copy of the Decision Memo (DM) for proposed wildlife habitat improvement activities in Craven and Jones Counties. The activities would take place in existing wildlife openings (97 acres) and in the Catfish Lake Waterfowl Impoundment (800 acres). The actions are located in Compartments 3, 8, 39, and 48. See Appendix A of the DM for maps of the treatment areas and Appendix B of the DM for a summary of the treatment areas.

I have decided to allow wildlife habitat improvement activities for the purpose of converting these areas to species more desirable for forage, nesting, and cover for species that require early successional habitat. The conversion to more desirable species is expected to result in a well developed herbaceous understory which would provide more nutritious and palatable forage, increased nesting cover and suitable nesting habitat.

This decision is not appealable pursuant to 36 CFR 215.12(f). The decision is not appealable because it is Categorically Excluded from an Environmental Assessment or Environmental Impact Statement. This decision may be implemented immediately.

For additional information concerning this decision, contact me or Mike Brod at 141 E. Fisher Avenue, New Bern, North Carolina 28560 or at (252) 638-5628. Thank you for your time and interest in the management activities on the Croatan National Forest.

Sincerely,

/s/ Gary Sullivan (for)
LAUREN L. HILLMAN
District Ranger, Croatan Ranger District

Enclosure



DECISION MEMO

Maintenance of Wildlife Fields and the Catfish Lake Waterfowl Impoundment

USDA Forest Service
Croatan National Forest
Craven and Jones Counties

I. Proposed Action

The Croatan National Forest has proposed wildlife habitat maintenance in Craven and Jones Counties. The proposed activities would take place in existing wildlife openings (97 acres) and in the Catfish Lake Waterfowl Impoundment (800 acres). The proposed actions are located in Compartments 3, 8, 39, and 48. Maps showing the location of the proposed project areas are included as Appendix A. A summary chart showing the treatment areas is located in Appendix B.

Currently, the existing wildlife openings are occupied by low-quality and less-desirable wildlife species such as Fescue, Johnson Grass, Red Maple, Loblolly Pine, and Sweetgum. These species do not provide suitable forage, nesting, and cover for species such as Eastern Wild Turkey, Bobwhite Quail, Cottontail Rabbit, White-tailed Deer, and a variety of songbirds requiring a well developed herbaceous understory. Each year the Catfish Lake Waterfowl Impoundment becomes overgrown with invasive weeds, such as *Phragmites*; therefore, decreasing the habitat suitability for migratory waterfowl.

I have decided to allow wildlife habitat improvement activities for the purpose of converting these areas to species more desirable for forage, nesting, and cover for species that require early successional habitat. The conversion to more desirable species is expected to result in a well developed herbaceous understory which would provide more nutritious and palatable forage, increased nesting cover and suitable nesting habitat.

I am approving any one or a combination of treatments 1-4 for the treatment areas listed in Appendix B.

1. Mowing of wildlife fields and the Catfish Lake Waterfowl Impoundment.
2. Disking of wildlife fields and the Catfish Lake Waterfowl Impoundment.
3. Planting of seeds including: Clover, White Proso, Millet, Milo, Sorghum, Sunflower, Corn, Wheat, Partridge Pea, Cow Pea, Hairy Vetch, Chufa, Alfalfa, Smart Weed, Cereal Grains, Big Bluestem, Little Bluestem, Indian Grass, Switch Grass, and Purpletop.
4. Applying fertilizer and lime to wildlife fields and the Catfish Lake Waterfowl Impoundment where needed as determined by soil tests.

The following mitigation measures will be implemented for the protection of sensitive resource areas:

- ❖ No wildlife opening maintenance activities will take place within 30 feet of perennial streams, lakes, and wetlands.
- ❖ No wildlife opening maintenance activities will be implemented during extremely wet periods in order to reduce off-site movement of soil, lime and fertilizers.
- ❖ All wildlife fields will be monitored after disking for exposure of archeological resources. In addition, on site monitoring by a Heritage Resource Technician or Archeologist is required during disking at Hill Field Road fields, the two southern most fields in the Brice Creek Dove Fields (a.k.a. Farrior Farm fields), and the two northwestern fields of the Brice Creek Dove Fields (a.k.a. George Branch fields).

II. Project Scoping

A letter was mailed to persons who have expressed interest in receiving information on projects in the proposal area. The proposal appeared in the January and April 2004 Schedule of Proposed Actions for the National Forests in North Carolina, which is published quarterly. In addition, the following persons were consulted:

- 1) Mike Brod, Wildlife Biologist – Croatan and Uwharrie National Forests
- 2) Rodney Snedeker, Archeologist – National Forests in North Carolina
- 3) Robert Kaylor, Heritage Resources Technician, Croatan National Forest
- 4) John Fussell, Botanist – Contractor to the Croatan National Forest

Appendix C includes a Biological Evaluation for the project. The Biological Evaluation concluded that the proposed activities would have no effect on federally Proposed, Endangered and Threatened species; as well as, no impact on Regionally Sensitive or locally rare species.

The following issues were identified through a public participation process, which included input from Forest Service natural resource specialists, other government agencies, and private groups and individuals:

Issue 1: The “Purpose and Need” as stated in your scoping letter suggests that all sites to be treated support an abundance of weedy “less desirable” species. Is this true for all areas proposed for treatment and do any of the sites support native species?

The majority of the areas proposed for treatment do support an abundance of low-quality and less-desirable wildlife species. This decision approves all treatments for all areas to provide maximum flexibility to the land managers; however, prior to treatment each site will be individually evaluated for needs. Areas with native plant species desirable for early successional wildlife species will not be replaced with non-native plant species.

Issue 2: What native plant species would provide food and cover the wildlife species of concern and how effective would they be in comparison to the non-native species proposed for planting?

Some of the species proposed for planting are native warm season grasses including Big Bluestem, Little Bluestem, Indian Grass, Switch Grass, and Purpletop. These species will be used on sites where it is determined to be suitable and appropriate.

Issue 3: All of the species chosen for emphasis in this proposal have other habitats that are needed for providing food, cover, and nesting.

All of the species listed benefit from a variety of habitats. This project proposes improvements to one type of habitat required by these species.

Issue 4: The proposed activities may increase stream siltation and introduce increase levels of phosphates into area streams.

Mitigation measures such as buffer zones around streams and other water bodies and erosion control measures have been prescribed for the protection of area waters.

Issue 5: Wildlife food plot emphasis areas that feature habitat for rare species or that are adjacent to rare species should be eliminated from the proposed project.

According to the Biological Evaluation (Appendix C) completed for this proposal “[n]o proposed, endangered, threatened, sensitive, or locally rare plant species have a documented occurrence within the existing wildlife openings or the waterfowl impoundment”.

Issue 6: Does the Croatan National Forest Land and Resource Management Plan (Forest Plan) specifically authorize the Croatan National Forest to plant and cultivate non-native vegetation for the benefit of wildlife.

The Forest Plan identifies species that will be used for Management Indicator Species (MIS) to monitor the effects of management activities. Eastern Wild Turkey was chosen as the MIS to represent species that require grasses and forbs and hardmast in a matrix of late successional forests (FEIS, p. 498). Probable management activities for areas represented by Eastern Wild Turkey as an MIS include grass/forb planting and maintenance (FEIS, p. 496).

Issue 7: The Croatan Forest Plan directs that the forest restore pine savanna habitat. The restoration and maintenance of wildlife food plots is not a restoration of the native savanna ecosystem.

The proposed activities are not claiming to be restoration of the native pine savanna ecosystem as directed by the Forest Plan. The areas proposed for treatment make up less than one percent of the total area of the Croatan National Forest (CNF). Removing the waterfowl impoundment from this figure because it has a specialized management prescription (Forest Plan, p. 81) the area proposed for wildlife habitat improvement is less than 1/10th of one percent of the CNF. Activities to restore the native pine savanna ecosystem are outside the scope of this proposal.

III. Reasons for Categorical Exclusion of Project

This project is categorically excluded from documentation in an Environmental Impact Statement or an Environmental Assessment under Section 31.2 (6) of the Environmental Policy and Procedures Handbook FSH 1909.15-92-1, for actions where a Decision Memo and project file are required. This project meets the requirements of this section because it involves wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standard road construction. There are no extraordinary circumstances that exist which might cause the action to have significant effects.

IV. Findings

1. The actions of this project are consistent with the Forest-wide direction in the Land and Resource Management Plan for the Croatan National Forests (Forest Plan) given in Chapter II.
2. The actions of this project are consistent with the Forest Plan because mitigation measures for impacts have been fully applied in the planned actions. The project is feasible and reasonable, and will result in applying management practices that meet the Forest Plan's overall direction of protecting the environment while producing goods and services.
3. The actions of this project, including the implementation of mitigation measures, have met all requirements of the Endangered Species Act and all agreements with the State Natural Heritage Program, in that there are no impacts expected on Threatened or Endangered species or Forest Sensitive species or critical habitat for these species. In addition, there are no impacts expected on species of Forest Concern.

4. The project area has been reviewed for heritage resources and no significant sites have been identified. In addition, monitoring of all treated wildlife openings has been prescribed for further protection of heritage resources.
5. There are no irreversible or irretrievable resource commitments.

V. Implementation and Appeal

This decision is not appealable pursuant to 36 CFR 215.12(f). This decision is not appealable because it is Categorical Excluded from an Environmental Assessment or Environmental Impact Statement. The deciding officer may implement this decision immediately upon signature.

For additional information concerning this decision, contact Mike Brod at 141 E. Fisher Avenue, New Bern, North Carolina 28560 or at (252) 638-5628.

/s/ Gary Sullivan (for) _____
LAUREN L. HILLMAN
District Ranger

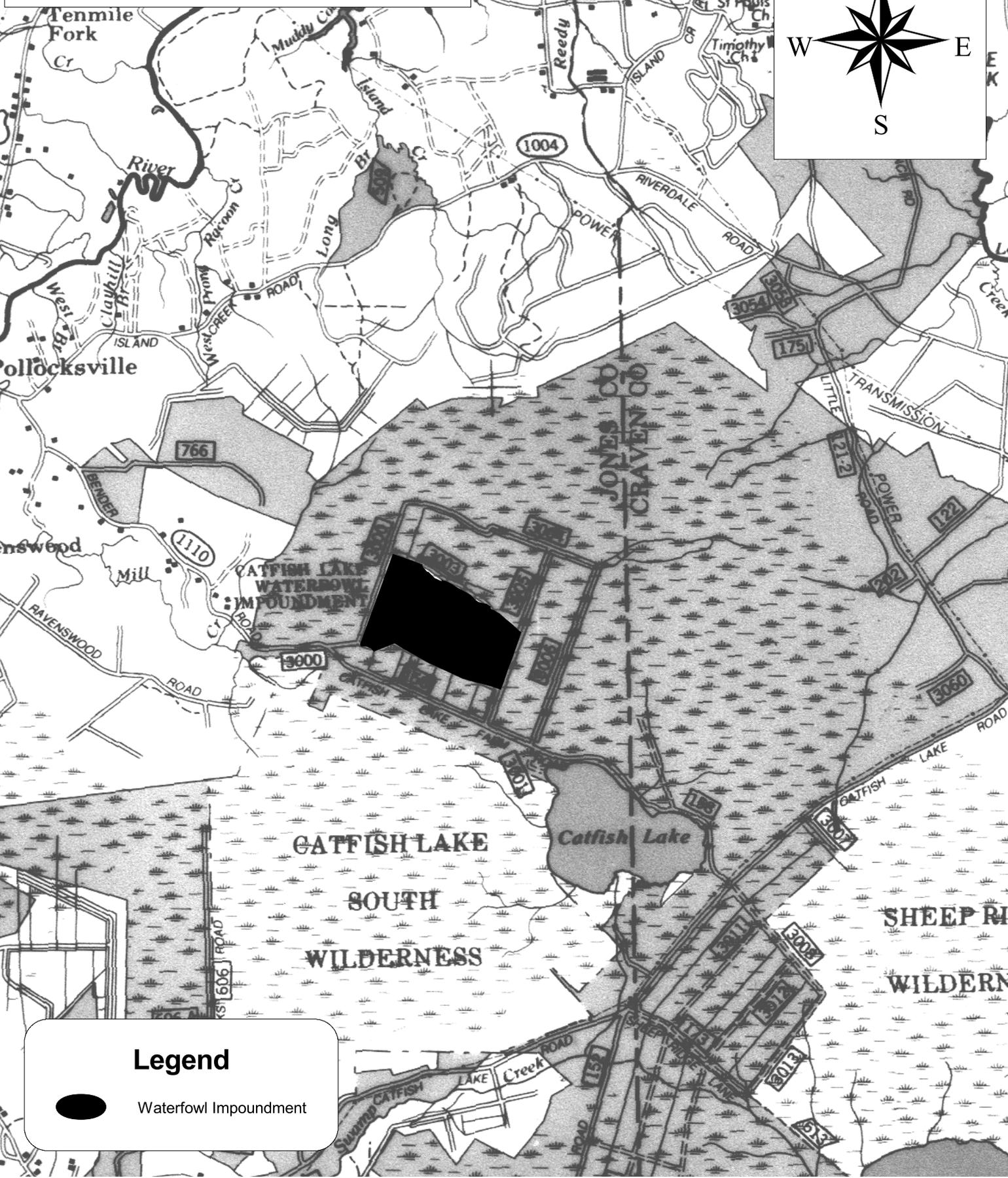
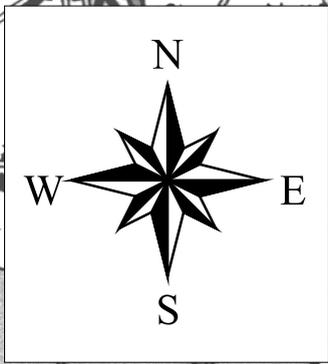
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APPENDIX A

**Maintenance of Wildlife Fields
and the Catfish Lake Waterfowl Impoundment**

Maps of the Proposed Treatment Areas

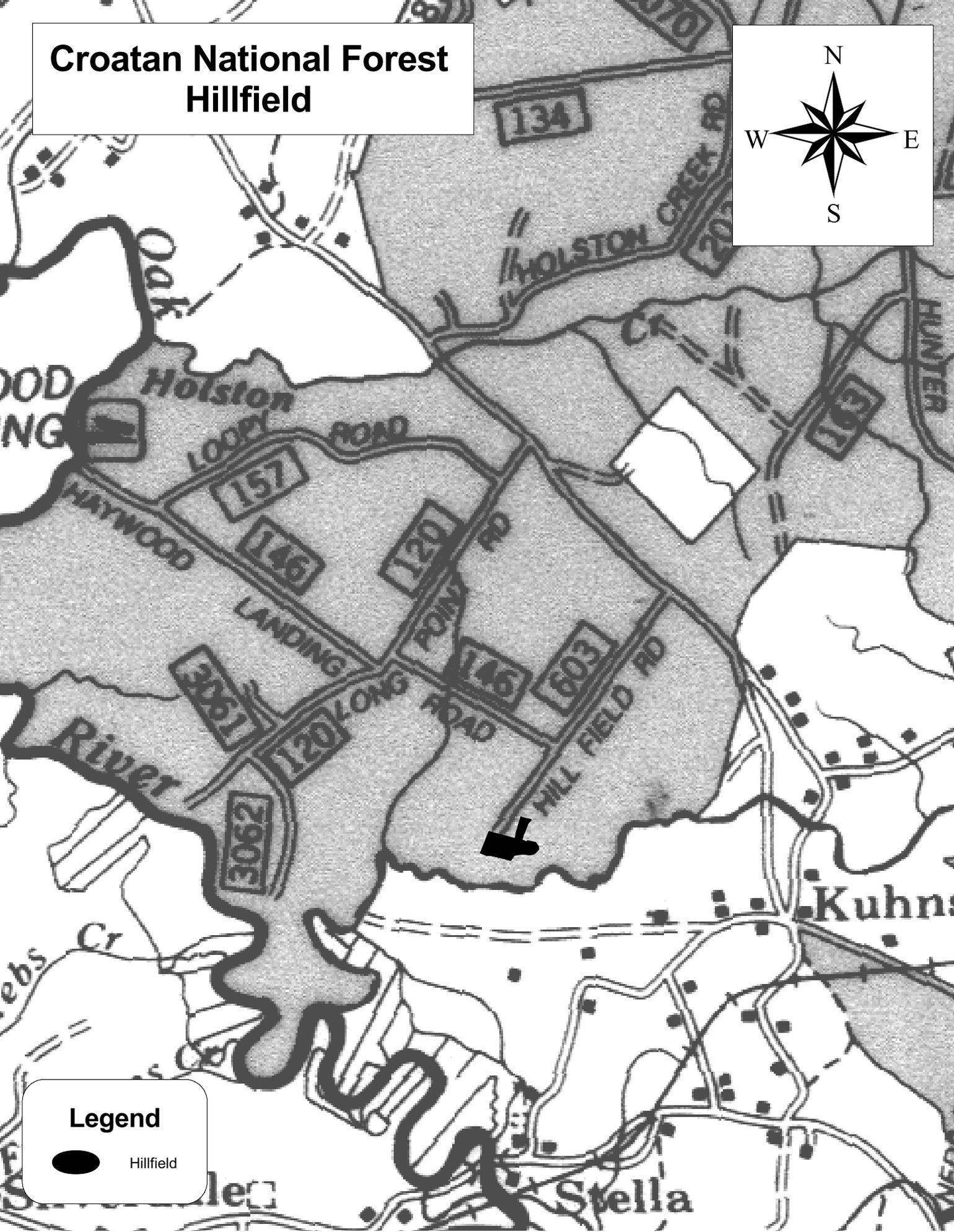
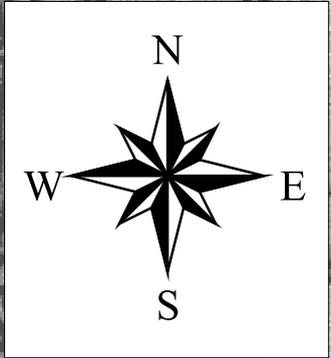
Croatan National Forest Waterfowl Impoundment



Legend

-  Waterfowl Impoundment

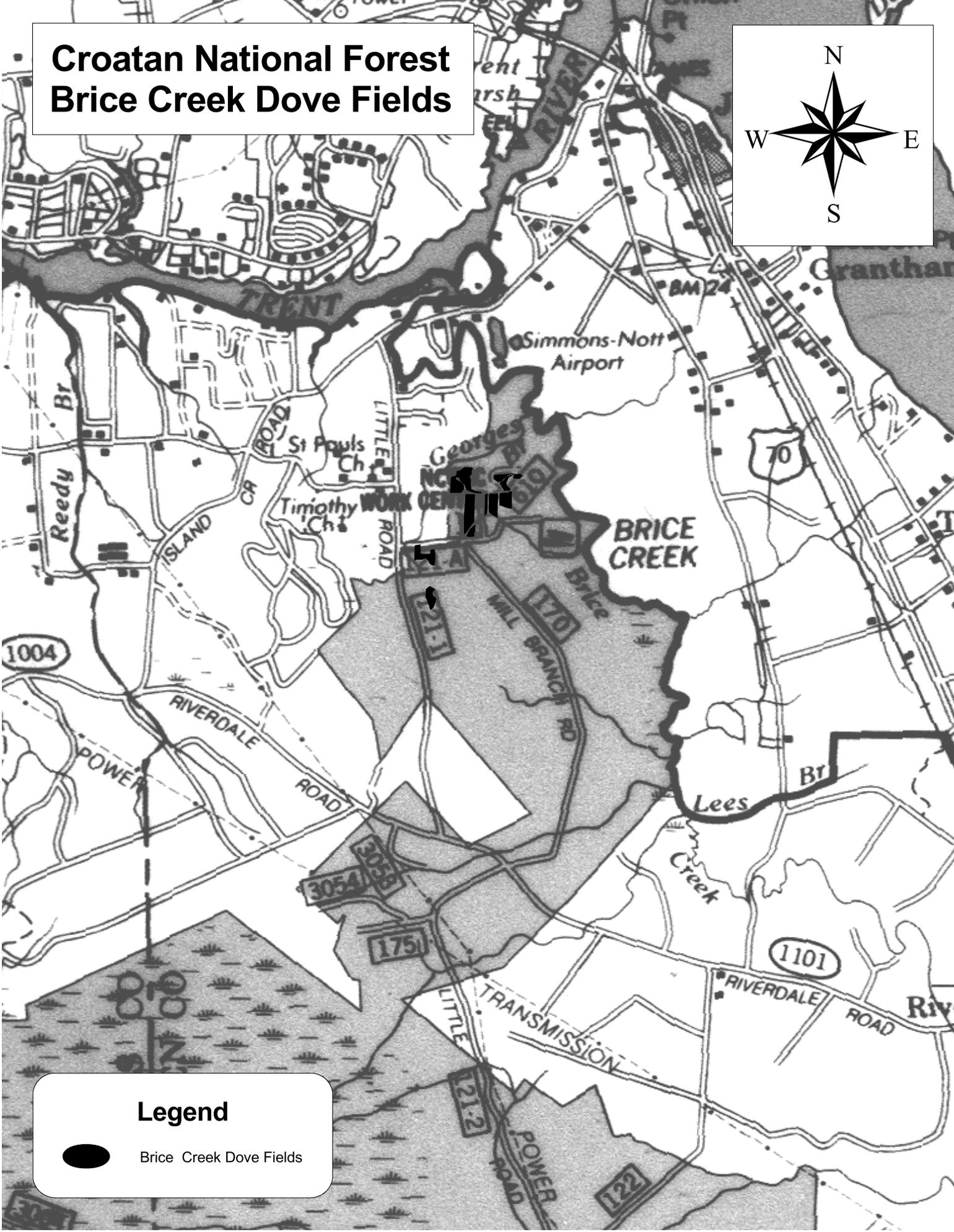
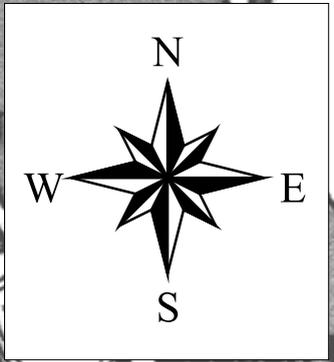
Croatan National Forest Hillfield



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-  Hillfield

Croatan National Forest Brice Creek Dove Fields

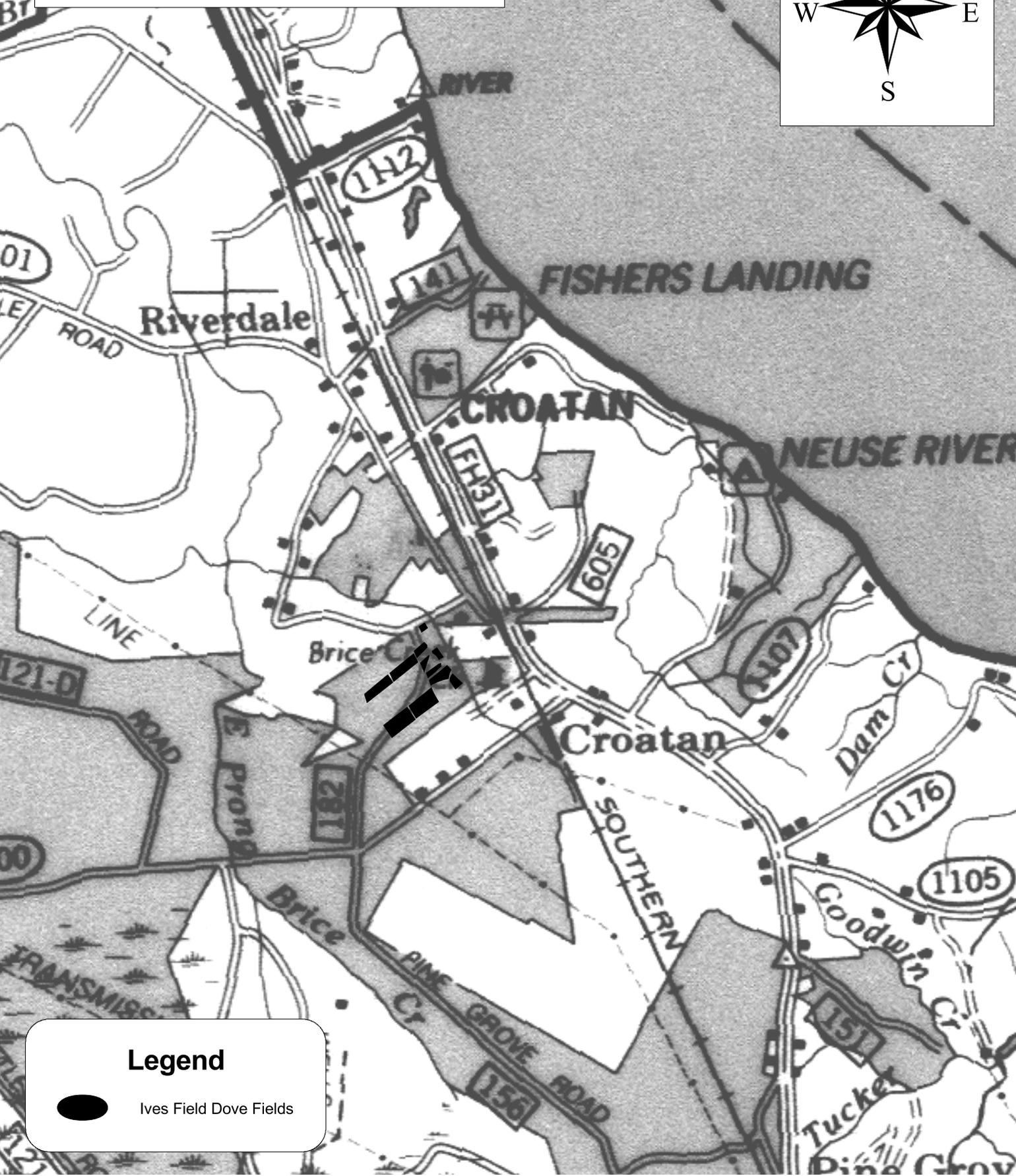
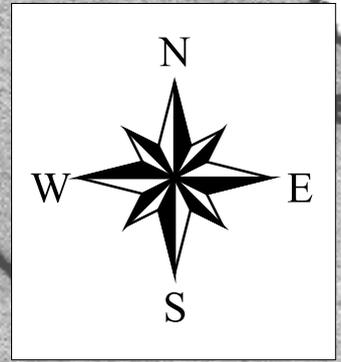


Legend



Brice Creek Dove Fields

Croatan National Forest Ives Field Dove Fields



Legend



Ives Field Dove Fields

APPENDIX B

**Maintenance of Wildlife Fields
and the Catfish Lake Waterfowl Impoundment**

Summary of Treatment Areas

SUMMARY OF TREATMENT AREAS

Maintenance of Wildlife Fields and the Catfish Lake Waterfowl Impoundment

TREATMENT AREA	COUNTY	COMPARTMENT	ACRES
Catfish Lake Waterfowl Impoundment	Jones	48	800
Hill Field Road Fields	Jones	39	16
Brice Creek Dove Fields	Craven	3	46
Ives Field Dove Fields	Craven	8	35

APPENDIX C

**Maintenance of Wildlife Fields
and the Catfish Lake Waterfowl Impoundment**

Biological Evaluation

BIOLOGICAL EVALUATION
For
Maintenance of Wildlife Fields and the Catfish Lake Waterfowl Impoundment
On
The Croatan National Forest

This biological evaluation (BE) addresses periodic maintenance of wildlife fields and the Catfish Lake Waterfowl Impoundment on the Croatan National Forest.

PROPOSED ACTION

This BE addresses planned maintenance activities such as discing, planting, seeding, fertilizing, liming, and mowing of existing wildlife openings and the Catfish Lake Waterfowl Impoundment, with the following mitigations:

1. No wildlife opening maintenance activities will take place within 30 feet of perennial streams, lakes, and wetlands.
2. No wildlife opening maintenance activities will be implemented during extremely wet periods in order to reduce off-site movement of soil, lime and fertilizers.

PROJECT AREA

See attached map for project area locations.

SPECIES CONSIDERED AND SPECIES EVALUATED

All federally threatened or endangered species, Regional Forester's sensitive species, and locally rare species that occur or could occur on the CNF (Appendix C: Rare species, CNF Land and Resource Management Plan, 2002) were considered in this BE. There are 7 federally threatened and endangered species, 61 sensitive and 74 locally rare species that occur or could on the CNF (Appendix A, Table 1). Four threatened and endangered species are known to occur, 2 may occur, and one has been extirpated.

The Wildlife Openings and the Catfish Lake Waterfowl Impoundment were surveyed by John Fussell (June 2004). Fussell primarily used habitat suitability surveys to identify remnant natural communities and associated rare plant species. Habitat suitability surveys were also used to determine the "value" of supplemental wildlife openings. For example, there is little wildlife value for supplemental wildlife openings within a longleaf savanna that contains a well developed herbaceous understory. North Carolina Natural Heritage Program Rare Species Element Occurrence Records were also used to identify

rare species occurrences within or adjacent to maintained wildlife openings and the waterfowl impoundment.

POTENTIAL EFFECTS

No proposed, endangered, threatened, sensitive, (PETS) or locally rare plant species have a documented occurrence within the existing wildlife openings or the waterfowl impoundment. Although Fussell (June 2004) did not observe any PETS or locally rare species adjacent to the existing wildlife openings or the waterfowl impoundment, the aforementioned mitigation measures were developed in order to avoid indirect impacts to PETS, locally rare species and remnant natural communities. Since the areas proposed for maintenance represent a small portion of the Croatan National Forest, it is assumed there will be no cumulative effects related to these maintenance activities. Therefore, it is anticipated that the proposed activities will have no direct, indirect or cumulative effect on any PETS or locally rare species.

DETERMINATION OF EFFECT

Given that the above characteristics are met, this type of activity will have no effect on federally Proposed, Endangered and Threatened species, as well as, no impact on Sensitive or Locally Rare species. Consultation with the United States Fish and Wildlife Service is not required.

/s/ Mike Brod
Name

7/7/04
Date

Wildlife Biologist
Title

Appendix A: Occurrence and status of rare (threatened, endangered, sensitive and locally rare) species on the Croatan National Forest, North Carolina (Species with a documented occurrence on the CNF are **highlighted**).

SCIENTIFIC	COMMON	STATUS			RANK		Dominant Habitat	Life-Form
		F.S.	U.S.	N.C.	Global	N.C.		
<i>Acipenser oxyrinchus</i>	Atlantic sturgeon	S		SC	G3	S3	water	fish
<i>Aeschynomene</i>	sensitive jointvetch	T	T	E	G2	S1	marshes	plant
<i>Agalinis aphylla</i>	scale-leaf gerardia	LR		SR-P	G3G4	S3	savanna	plant
<i>Agalinis virgata</i>	branched gerardia	LR		SR-P	G3G4Q	S2	savanna	plant
<i>Aimophila aestivalis</i>	Bachman's sparrow	S	FSC	SC	G3	S2S3	savanna	bird
<i>Alasmidonta undulata</i>	triangle floater	LR		T	G4	S2	rivers	mollusk
<i>Alligator mississippiensis</i>	American alligator	T/SA	T/SA	T	G5	S3	water	reptile
<i>Ammodramus henslowii</i>	Henslow's sparrow	LR		SR	G4	S2S1	pocosin	bird
<i>Andropogon mohrii</i>	bog bluestem	LR		SR-P	G4?	S1	savanna	plant
<i>Anhinga anhinga</i>	anhinga	LR		SR	G5	S2SZ	water	bird
<i>Asclepias pedicellata</i>	stalked milkweed	LR		SR-P	G4	S2	savanna	plant
<i>Asplenium heteroresiliens</i>	Carolina spleenwort	S	FSC	E	G2Q	S1	marl	plant
<i>Atrytone arogos</i>	arogos skipper	S	FSC	SR	G4T1T2	S1	savanna	insect
<i>Baetisca laurentina</i>	a mayfly	LR		SR	G5	SU	rivers	insect
<i>Botaurus lentiginosus</i>	American bittern	LR		SR	G4	S1B,S3N	marsh	bird
<i>Calopogon multiflorus</i>	many-flower grass	S	FSC	E	G2G3	S1	savanna	plant
<i>Campylopus carolinae</i>	savanna campylopus	S	FSC	SR-T	G1G2	S1	savanna	moss
<i>Canus rufus</i>	red wolf	E-XN	E-XN	SR	G1	S1	swamps	mammal
<i>Cardamine longii</i>	Long's bittercress	S		SR-T	G3	S1	marsh	plant
<i>Carex wildenowii megarrhyncha</i>	southern Willdenow's	LR		SR-T	G5T3?	S1	marl	plant
<i>Circus cyaneus</i>	northern harrier	LR		SR	G5	S1B,S4N	marsh	bird
<i>Cladium mariscoides</i>	twig-rush	LR		SR-O	G5	S2	bogs	plant
<i>Cleistes bifaria</i>	small spreading	S		W7	G3G4	S2?	savanna	plant
<i>Corynorhinus</i>	Rafinesque's big-	S	FSC	(PT)	G3G4	S3	variable	mammal
<i>Coturnicops noveboracensis</i>	yellow rail	LR		SR	G4	S2N	marsh	bird
<i>Crotalus adamanteus</i>	eastern diamondback	LR		(PE)	G4	S1	savanna	reptile
<i>Cylindrocolea rhizantha</i>	a liverwort	S		SR-P	G3?	SH	marl	liverwort
<i>Cystopteris tennesseensis</i>	Tennessee bladder-fern	LR		E-SC	G5	S1	marl	plant
<i>Dichantherium hirstii</i>	Hirst's panic grass	S	C	E	G1	S1	savanna	plant
<i>Dionaea muscipula</i>	Venus flytrap	S	FSC	SR-L	G3	S3	savanna	plant
<i>Eleocharis robbinsii</i>	Robbins's spikerush	LR		SR-P	G4G5	S2	ponds	plant
<i>Eleotris pisonis</i>	Spinycheek sleeper	LR		SR	G5	S2	water	fish
<i>Euphyes berryi</i>	Berry's skipper	LR		SR	G3G4	S1?	ponds	insect

Table 1 (continued):

SCIENTIFIC NAME	COMMON NAME	STATUS			RANK		Dominant Habitat	Life-Form
		F.S	U.S	N.C.	Global	N.C.		
<i>Euphyes bimacula</i>	two-spotted skipper	LR		SR	G4	S2	marsh	insect
<i>Euphyes dukesi dukesi</i>	Duke's skipper	S		SR	G3T3	S1S2	marsh	insect
<i>Evorthodus lyricus</i>	lyre goby	LR		SR	G5	S2	water	fish
<i>Ferrissia hendersoni</i>	blackwater ancyloid	LR		SC	G?	S1	lake margin	gastropod
<i>Fissidens hallii</i>	Hall's pocket moss	S		SR-T	G2	S1	swamp	moss
<i>Frullania donnellii</i>	a liverwort	S		SR-T	G3?	SH	marsh	liverwort
<i>Fusconaia masoni</i>	Atlantic pigtoe	S	FSC	(PE)	G2	S1	water	mollusk
<i>Haliaeetus leucocephalus</i>	Bald eagle	T	T	(PT)	G4	S3B,S3N	Near water	bird
<i>Helenium pinnatifidum</i>	dissected sneezeweed	LR		SR-P	G4	S2	savanna	plant
<i>Hemipachnobia subporphyrea</i>	Venus flytrap cutworm moth	S	FSC	SR	G1	S1?	savanna	insect
<i>Hesperia attalus slossonae</i>	dotted skipper	S		SR	G3G4T	S2S3	savanna	insect
<i>Heterodon simus</i>	southern hognosed snake	LR	FSC	(PSC)	G2	S2	sandhills	reptile
<i>Himantopus mexicanus</i>	black-necked stilt	LR		SR	G5	S2B	pond	bird
<i>Hypsoblennius ionthas</i>	freckled blenny	LR		SR	G5	S2	water	fish
<i>Ictinia mississippiensis</i>	Mississippi kite	LR		SR	G5	S2B	bottomland	bird
<i>Isoetes microvela</i>	quillwort	S		SR-L	G1	S1	riverbanks	plant
<i>Kalmia cuneata</i>	white wicky	S	FSC	SR-L	G3	S3	pocosin	plant
<i>Lachnocaulon beyrichianum</i>	southern bogbutton	S		W1	G2G3	S3	sandhills	plant
<i>Lampetra aepytera</i>	least brook lamphrey	S		(PT)	G5	S2	water	fish
<i>Lampsilis radiata radiata</i>	eastern lampmussel	LR		(PT)	G5	S1S2	water	mollusk
<i>Lampsilis species 2</i>	a bivalve	LR		SR	G1	S1	water	mollusk
<i>Lanius ludovicianus migrans</i>	migrant loggerhead shrike	S		SC	G5T3Q	S3B, S3N	fields	bird
<i>Lasmigona subviridis</i>	green floater	S	FSC	E	G3	S1	water	mollusk
<i>Lejeunea bermudiana</i>	a liverwort	LR		SR-P	G3G4	SH	swamp	liverwort
<i>Lejeunea dimorphophylla</i>	a liverwort	S		SR-L	G2G3	S1	maritime	liverwort
<i>Lithacodia</i> sp.	a bird-dropping moth	LR		W3	G4	S1S3	pocosin	insect
<i>Lithophane lemmeri</i>	Lemmer's pinion	LR		SR	G3G4	S1S3	wetlands	insect
<i>Litsea aestivalis</i>	pondspice	S	FSC	SR-T	G3	S2	pond	plant
<i>Lobelia boykinii</i>	Boykin's lobelia	S	FSC	SR-T	G2G3	S1	savanna	plant
<i>Ludwigia linifolia</i>	flaxleaf seedbox	LR		SR-P	G4	S2	pond	plant
<i>Ludwigia ravenii</i>	Raven's seedbox	LR		SR-T	G2?	S2?	savanna	plant
<i>Lynceus gracilicornis</i>	graceful clam shrimp	LR		SR	G?	S2?	temp.water	crustacea
<i>Lysimachia asperulifolia</i>	rough-leaf loosestrife	E	E	E	G3	S3	ecotones	plant
<i>Lythrurus matutinus</i>	pinewoods shiner	LR	FSC	SR	G3	S3	water	fish
<i>Macbridea caroliniana</i>	birds-in-a-nest	S	FSC	PT	G2G3	S2	swamp	plant
<i>Malaxis spicata</i>	Florida adder's mouth	LR		SR-P	G4?	S1	swamp	plant
<i>Melanoplus attenuatus</i>	slender-bodied melanoplus	S		SR	G2G3	S1S3	wet swales	insect
<i>Melanoplus nubilus</i>	a short-winged melanoplus	S		SR	G3?	S2S3	savanna	insect
<i>Meropleon diversicolor sullivanii</i>	an owlet moth	LR		SR	G4T1T3	S1S3	marsh	insect

Table 1 (continued):

SCIENTIFIC NAME	COMMON NAME	STATUS			RANK		Dominant Habitat	Life-Form
		F.S	U.S	N.C.	Global	N.C.		
<i>Metzgeria uncigera</i>	a liverwort	S		W7	G3	S1	maritime	liverwort
<i>Minuartia godfreyi</i>	Godfrey's sandwort	S	FSC	E	G1	S1	marsh	plant
<i>Myriophyllum laxum</i>	loose watermilfoil	S	FSC	T	G3	S1	pond	plant
<i>Necturus lewisi</i>	Neuse river waterdog	LR		SC	G3	S3	water	amphibian
<i>Neotoma floridana</i> pop. 1	eastern woodrat-coastal	LR		T	G5T5	S1	forests	mammal
<i>Nerodia sipedon williamengelsi</i>	Carolina salt marsh snake	S		SC	G5T3	S3	marsh	reptile
<i>Notropis bifrenatus</i>	bridle shiner	LR		SC	G5	S1	water	fish
<i>Nopturus furiosus</i>	Carolina madtom	S		SC	G3T2Q	S2	water	fish
<i>Nuphar sagittifolia</i>	narrowleaf cowlilly	S		W1	G5T2	S2	water	plant
<i>Ophisarus mimicus</i>	mimic glass lizard	S	FSC	SC	G3	S2	savanna	reptile
<i>Orconectes carolinensis</i>	N.C spiny crayfish	LR		(PSC)	G3	S4	water	crustacean
<i>Oxypolis ternata</i>	Piedmont cowbane	S	FSC	W1	G3	S3	savanna	plant
<i>Panicum tenerum</i>	southeastern panic grass	LR		SR-P	G3	S3	savanna	plant
<i>Panopea bitruncata</i>	Atlantic geoduck	LR		W3	G3?	S?	water	mollusk
<i>Parietaria praetermissa</i>	large-seed pellitory	S		SR-P	G3G4	S1	maritime	plant
<i>Parnassia caroliniana</i>	Carolina grass of <small>parnassus</small>	S	FSC	E	G3	S2	savanna	plant
<i>Peltandra sagittifolia</i>	spoonflower	LR		SR-P	G3G4	S2S3	pocosin	plant
<i>Phalacrocorax auritus</i>	double-crested	LR		SR	G5	S1B,S5N	lake	bird
<i>Phragmitiphila interrogans</i>	an owl moth	LR		SR	G3G4	S2?	canebrake	insect
<i>Picoides borealis</i>	red-cockaded woodpecker	E	E	E	G3	S2	savanna	bird
<i>Pinguicula pumila</i>	small butterwort	LR		SR-P	G4	S2	savanna	plant
<i>Plagiochila miradorensis mirador.</i>	a liverwort	LR		SR-P	G4?T4	SH	maritime	liverwort
<i>Plantago sparsiflora</i>	pineland plantain	S	FSC	E	G3	S1	savanna	plant
<i>Platanthera integra</i>	yellow fringeless orchid	LR		T	G3G4	S1	savanna	plant
<i>Platanthera nivea</i>	snowy orchid	LR		T	G5	S1	savanna	plant
<i>Polygala hookeri</i>	Hooker's milkwort	S		SR-T	G3	S2	savanna	plant
<i>Polygonum hirsutum</i>	hairy smartweed	LR		SR-P	G4G5	S1	ponds	plant
<i>Ponthieva racemosa</i>	shadow-witch	LR		SR-P	G4G5	S2	swamp	plant
<i>Procambarus medialis</i>	Tar River crayfish	S	FSC	W3	G2	S2	water	crustacean
<i>Procambarus plumimanus</i>	Croatan crayfish	LR	FSC	W3	G3	S2S3	water	crustacean
<i>Ptichodis bistrigata</i>	southern ptichodis	S		SR	G3	S2S3	savanna	insect
<i>Puma concolor cougar</i>	eastern cougar	E	E	E	G5TH	SH	remote area	mammal
<i>Pyreferra ceramatica</i>	annointed swallow moth	LR	FSC	SR	GU	S1S2	near stream	insect
<i>Rana capito capito</i>	Carolina gopher frog	S	FSC	(PT)	G3T3	S2	savanna	amphibian
<i>Rhexia aristosa</i>	awned meadow-beauty	S	FSC	T	G3	S3	pond	plant
<i>Rhexia cubensis</i>	West Indies meadow beauty	LR		SR-P	G4G5	S1	pond	plant
<i>Rhynchospora harperi</i>	Harper's beakrush	LR		SR-P	G4?	S1	pond	plant
<i>Rhynchospora oligantha</i>	feather-bristle beakrush	LR		SR-P	G4	S2S3	savanna	plant

Table 1 (continued):

SCIENTIFIC NAME	COMMON NAME	STATUS		RANK			Dominant Habitat	Life-Form
		F.S	U.S	N.C.	Global	N.		
<i>Rhynchospora pleiantha</i>	coastal beaksedge	S		SR-T	G2	S1	pond	plant
<i>Rhynchospora scirpoides</i>	long-beak bald-sedge	LR		SR-O	G4	S2	pond	plant
<i>Rhynchospora thornei</i>	Thorne's beaksedge	S	FSC	E	G1G2	S1	savanna	plant
<i>Sagittaria graminea chapmanii</i>	Chapman's arrowhead	S		SR-P	G5T3?	S1	pond	plant
<i>Sagittaria graminea weatherbiana</i>	grassleaf arrowhead	S		SR-T	G5T2	S2	marsh	plant
<i>Scirpus lineatus</i>	drooping bulrush	LR		SR-P	G4	S2	marl	plant
<i>Scleria baldwinii</i>	Baldwin's nutrush	LR		SR-P	G4	S1	savanna	plant
<i>Scleria georgiana</i>	Georgia nutrush	LR		SR-P	G4	S2	savanna	plant
<i>Seminatrix pygaea</i>	black swampsnake	LR		SR	G5	S2	ponds	reptile
<i>Semotilus lumbee</i>	sandhills chub	S		SC	G3	S3	water	fish
<i>Solidago gracillima</i>	graceful goldenrod	LR		W1	G4?	S3	savanna	plant
<i>Solidago leavenworthii</i>	Leavenworth's goldenrod	LR		SR-P	G3G4	S1	savanna	plant
<i>Solidago pulchra</i>	Carolina goldenrod	S	FSC	E	G3	S3	savanna	plant
<i>Solidago verna</i>	spring-flowering goldenrod	S	FSC	SR-L	G3	S3	pinelands	plant
<i>Solidago villosacarpa</i>	coastal goldenrod	S		SR-L	G1	S1	maritime	plant
<i>Spariniphaga carterae</i>	Carter's spariphaga	S	FSC	SR	G2G3	S2S3	savanna	insect
<i>Sphagnum fitzgeraldii</i>	Fitzgerald's peatmoss	S		SR-T	G2G3	S2S3	pocosin	plant
<i>Spiranthes longilabris</i>	giant spiral orchid	S		SR-T	G3	S1	savanna	plant
<i>Strophitus undulatus</i>	squawfoot	LR		T	G5G4	S2S3	water	mollusk
<i>Synoptomys cooperi helaletes</i>	Dismal Swamp S. bog lemming	LR		SR	G5T3	S2	pocosin	mammal
<i>Teloschistes flavicans</i>	sunrise lichen	S		SR-P	G3G4	S1	maritime	lichen
<i>Thalictrum macrostylum</i>	Piedmont meadowrue	S		W7	G3G4	S2?	bog	plant
<i>Tofieldia glabra</i>	Carolina asphodel	S	FSC	W1	G3	S3	savanna	plant
<i>Toxolasma pullus</i>	savannah lilliput	S	FSC	(PE)	G2	S1	water	mollusk
<i>Utricularia olivacea</i>	dwarf bladderwort	LR		T	G4	S2	pond	plant
<i>Xyris flabelliformis</i>	savanna yellow-eyed grass	LR		W1	G4	S3	savanna	plant
<i>Xyris stricta</i>	a yellow-eyed-grass	LR		SR-P	G3G4	S1	savanna	plant

