Appendices

Appendix A

US Forest Service Schedule of Proposed Actions (SOPA)

Appendix B

Agency Response Letters

Appendix C

Regional Forester's Sensitive Species List

Appendix D

Existing and Projected Traffic Volume

Appendix E

Agency Scoping Letter

Appendix F

Public Involvement

Appendix A

US Forest Service Schedule of Proposed Actions (SOPA)

Non-Maintenance Past Actions (1999-2006)

Maintenance Actions (1999-2007)

Non-Maintenance Past Actions (1999-2008)

USFS Schedule of Proposed Actions Non-Maintenance Past Actions (1999 – 2008)

Year	Month	Project	Description		
1999	April	Badin Lake Campground Bathhouse Construction	The proposed action is to construct a bathhouse at the Badin Lake Campground.		
1999	July	Badin Lake Road Improvement	The proposed action is to repave a portion of Mcleans Creek Road and new paving on Mullinix Road in the Badin Lake area. Upon completion, an easement would be granted to the NC DOT for long-term maintenance.		
2000	April	Kings Mountain Point Day- use Area Development	The proposed action is to construct a toilet building, picnic sites, shelter, access drive, and parking lot at the Kings Mountain Point Site.		
2000	April	Cove Boat Ramp Reconstruction	The proposed action is to reconstruct the Cove Boat Ramp and parking area to accommodate increased public use.		
2000	October	Cove Boat Ramp Road Repaving	This proposed action involves reconstruction and paving of Cove Boat Ramp Road for approximately 0.8 miles. This road provides access to Arrowhead Campground.		
2000	October	Reconstruction/Paving of FS Roads 576, 544 & 597	The proposed action involves the reconstruction and paving of approximately 6 miles of Forest Service Roads and replacement of approximately 3 bridges in the Badin Lake Area.		
2001	October	Hwy 109/Uwharrie River Bridge Replacement	This proposed action involves the replacement of the existing bridge with a new bridge approximately 360 feet long, either at the current location or a new location to the east of the existing bridge.		
2002	January	Pleasant Grove Road NCDOT Paving Project	This proposed action involves grading, widnening, drainage, paving, and realignment of approx. 1 mile of Pleasant Grove Road through the Uwharrie National Forest. This is a NC Hyw Department project.		
2002	October	Hallyburton Road ROW	This proposed action involves grading, widening, drainage and paving of approximately one-half mile of existing road through Uwharrie National Forest. This is an NCDOT project.		
2003	July	Futrell Road ROW	This proposed action involves new road construction and paving of approximately 900 feet across the Uwharrie National Forest to provide access to National Forest Lands and adjacent private property.		
2004	January	Hilton Cochran Road Use Permit	The proposed action involves the use of FSR 6752 and reconstruction of a temporary road for approximately 2000 feet across National Forest Lands to provide access to adjacent private property for timber management activities.		

Year	Month	Project	Description
2004	April	Flintlock Valley Shooting Range	The proposed action is to add the shooting range to the fee demo program.
2004	October	Forest Service Roads # 597 and #553 Open Road Runoff Control	The proposed action involves constructing trail ditches and silt traps to control runoff.
2004	October	Pekin Ecosystem Management Project	The proposed action includes various management activities, including harvesting timber, reforestation activities, and heritage resource conservation. These actions will be accomplished to meet a desired future condition identified in the Uwharrie LMP
2005	April	Ophir Dirt Road (aka Tower Road), SR 1134, NCDOT Project	NCDOT has proposed improvements to Ophir Dirt Road, SR 1134, in Montgomery County. Proposed improvements include grading, widening, drainage, and paving
2005	July	Forest Service Roads # 576 and #553 Open Road Runoff Control and Cotton Place project	The proposed action involves constructing tail ditches, silt traps and closing an illegal OHV trail to control runoff.
2006	April	Lomax Baptist Church Special Use Permit	Reauthorization of Special Use Permit for maintaining a sign and parking lot on Forest service Lands.
2006	April	NC 24/27 Widening Project, NCDOT Project	Widening from two lanes to four lanes of NC 24/27 from NC 73 to the Troy Bypass. Approximately 2.7 miles of this 11 mile project are located on Forest Service lands.
2006	April	Prospect Baptist Church Special Use Permit	Reauthorization of a special use permit for maintaining a sign and yard on Forest Service Lands.
2006	April	Reconstruction/Paving of Forest Service Road 597	The proposed action involves the reconstruction and paving of approximately 3.4 miles of Forest Service Road 597.
2006	April	Reconstruction/Paving of Forest Service Roads 544 and 576.	The proposed action involves the reconstruction and paving of approximately 1.3 miles of Forest Service Roads 544 and 576.
2006	July	Buck Mountain Cellular Telephone Tower	The proposed action will involve the construction of a cellular telephone tower on Buck Mountain.

Year	Month	Project	Description
2006	July	Deep Water OHV Trailhead Parking Lot Construction	The proposed action will involve the construction of a parking lot approximately 3 acres in size to provide additional parking for forest visitors and increase public safety by preventing the need to park along the shoulders of the road.
2006	July	Flatwoods OHV Parking Lot Expansion	The proposed action will increase the existing parking lot to approximately 2 acres. This additional parking area will prevent Forest visitors from parking along the shoulders of the road and increase public safety.
2006	July	Handy Sanitary District Sewer Line	The proposed action involves the installation, operation and maintenance of a 12-inch wastewater forcemain on National Forest System lands as part of the Badin Lake Regional Sewer Project.
2006	July	Maness Nature Trail	The proposed action involves the construction of approximately 1 mile of hiking trail within the Densons Creek Nature area on National Forest System Lands to connect segments of trail already constructed on adjoining lands owned by the town of Troy.
2006	July	Sawmill OHV Trail Reroute	The proposed action will relocate a portion of the Sawmill off-highway vehicle(OHV) trail from its current location to an adjacent site. Approximately 1 mile of existing trail will be relocated. The purpose of relocation is to provide for public safety.
2006	July	Thousand Bale Bottom Fishing Access	The proposed action will involve the construction of a parking lot of approximately 1 acre and bank stabilization on the Uwharrie river to provide access for fishing.
2006	July	Wolf Den OHV Trailhead Parking Lot Expansion	The proposed action will increase the size of the existing parking lot to approximately 2 acres. The additional parking capacity will prevent forest visitors from parking along the shoulders of the road and in turn increase public safety.
2006	October	Chriscoe Road Easement	Provide legal access to private property which is completely surrounded by National Forest lands. Private landowner will use existing road to access the property.
2006	October	Chriscoe Road Easement	The proposed action involves granting a road easement to a private landowner to access their property.
2007	September	Panther Ridge Homeowners Easement	Applicant request for an easement across National Forest lands to access private property.
2007	October	Embarq Fiber Optic Telecommunications Line	Installation of a fiber optic line along approximately 3 miles of highway by constructing a narrow trench (< 6 inches in width and 36 inches deep) for line placement. Directional boring would be used to avoid disturbance of sensitive sites.

2007	July	Smith Branch Stream Rehabilitation	The Forest Service proposes to rehabilitate the stream ecosystem of Smith Branch where a trespass caused channel instability.
2007	October	Handy Sanitary District Sewer Line	The proposed action involves the installation, operation and maintenance of a 12-inch wastewater force main on National Forest System lands as part of the Badin Lake Regional Sewer Project.
2007	October	Tot Hill Farm Trailhead parking lot	The proposed action involves the construction of a parking lot and Trailhead access point.
2008	February	McLeans Creek Connector Horse Trail	The proposed action is to develop a horse trail near McLeans Creek involving new trail construction of approximately 500-750 feet from Forest System Road 6622.
2008	February	Proposed Baptist Church Special Use Permit	Reauthorization of a special use permit for maintaining a sign and yard on Forest Service Lands.

Maintenance Actions (1999-2008)

USFS Schedule of Prop	osed Actions
Maintenance Actions	(1999 – 2008)

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Year	Month	Project	Description
1999	April	Badin Lake SPB Salvage	The proposed action is to salvage insect damaged trees attacked by Southern Pine Beetle on approximately two acres within the Badin Lake area in Montgomery County.
1999	October	Utility Right-of-Way Maintenance with herbicides	The proposed action is to maintain existing power and telephone line corridors with herbicides. Seven utilities own lines across the Forest. This request consists of using backpack sprayers to target tall growing trees. Shrubs and low-growing trees, such as dogwood, would not be sprayed.
2000	January	Badin Wildlife Habitat Improvement Project	The proposed action is to eliminate fescue, small saplings, and other vegetation on approximately 20 acres of abandoned wildlife fields. The objective is to promote native grasses and wildflowers for the benefit of songbirds and other wildlife species.
2002	January	Prescribe Burning for Fuel Reduction and W/L Habitat Improvement	The proposed action is to prescribe burn approx. 650 acres in Montgomery Co., Badin Lake Area of the Uwharrie RD. Maps showing the exact location of the proposed activity are available at the District Office in Troy.
2002	October	Prescribe Burning for Fuel Reduction and W/L Habitat Improvement	The proposed action is to prescribe burn approx. 3000 acres in Montgomery and Randolph Counties of the Uwharrie RD. Maps showing the exact location of the proposed activity are available at the District Office in Troy.
2003	October	Prescribe Burning for Fuel Reduction and W/L Habitat Improvement	The proposed action is to prescribe burn approx. 1708 acres in Montgomery and Co. of the Uwharrie RD. Maps showing the exact location of the proposed activity are available at the District Office in Troy.
2004	October	Prescribed Burning for Hazardous Fuel Reduction	This proposed action is to prescribe burn approx. 2800 acres in Montgomery and Randolph Counties to reduce hazardous fuel build-up.
2004	October	Prescribed Burning for Hazardous Fuel Reduction	The proposed action is to prescribe burn approx. 4300 acres in Montgomery and Randolph Counties of the Uwharrie National Forest to reduce hazardous fuel build-up.
2006	April	Prescribed Burning for Hazardous Fuel Reduction	The proposed action is to prescribe burn approximately 2900 acres in Montgomery County of the Uwharrie National Forest to reduce hazardous fuel build-up.
2006	April	Uwharrie First Thinnings	Initial thinning of overstocked stands that are at high risk of attack by Southern Pine Beetle.

Year	Month	Project	Description		
2006	July	Prescribe Burning for Fuel Reduction and Wildlife Habitat Improvement	The proposed action is to prescribe burn a maximum of 4500 acres in Montgomery County of the Uwharrie National Forest. This project would reduce the combustible fuels and improve wildlife habitat by providing more palatable vegetation for wildlife.		
2006	July	Wildlife Openings Herbicide EA	The proposed action involves the use of herbicides within and adjacent to all wildlife openings to control nonnative and other undesirable species to prevent the loss of native grasses and increase availability of forage for wildlife		
2006	October	Pekin Wildlife Openings Enlargement and Daylighting	This project involves the enlargement of the existing wildlife openings. Expansion will be dependent upon the adjacent land topography. Timber adjacent to access roads leading to the wildlife openings will be thinned (daylighted).		
2007	April	Big Creek Thinning	This proposed action will thin approximately 53 acres of overstocked loblolly and shortleaf pine stands, ranging in age from 47 to 52 years and have never been thinned, to increase the health and vigor of the stands.		
2007	April	Crown Touch and Release Timber Stand Improvement	Removing vegetation that is competing with oaks, other mast producing hardwoods and pine to improve tree growth and vigor. Using hand-operated power tools to cut all brush and tree saplings touching the crown of each selected tree on appox 1160 acres		
2008	February	Prescribe Burning for Hazardous Fuel Reduction and Wildlife Habitat Improvement	The proposed action is to prescribe burn approximately 2000 acres in Montgomery and Randolph Counties to reduce hazardous fuels and improve wildlife habitat by providing more palatable vegetation for wildlife.		
2008	March	Plantation First Thinning Project	The proposed action is an initial thinning of approximately 1700 acres of overstocked stands that are at high risk of attack by Southern Pine Beetle.		

Appendix B

Agency Response Letters

United States Fish and Wildlife Service, May 2006

North Carolina State Historic Preservation Office, March 2006

North Carolina State Clearinghouse, June 2006

North Carolina Department of Environment and Natural Resources, June 2006

North Carolina State Historic Preservation Office, July 2006

North Carolina State Historic Preservation Office, December 2008



United States Department of the Interior

FISH AND WILDLIFE SERVICE Raleigh Field Office Post Office Box 33726 Raleigh, North Carolina 27636-3726

May 22, 2006

Laurence Meisner Kimley Horn and Associates, Inc. P.O. Box 33068 Raleigh, NC 27636-3068

Dear Mr. Alberts:

Thank you for your letter regarding the proposed improvements to Forest Developmental Road 597 in the Uwharrie National Forest in Montgomery County, North Carolina. This letter provides the U.S. Fish and Wildlife Service's (Service) response pursuant to section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531 et seq.) (Act).

Based on the information provided and other information available, it appears that this project site does not contain any federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing under the Act. We believe that the requirements of section 7(a)(2) of the Act have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

Thank you for the opportunity to review this project. If you have any questions or comments regarding our response, please contact Mr. Dale W. Suiter of this office at (919) 856-4520, Ext. 18 or Dale_Suiter@fws.gov.

Sincerely,

Pete Benjamin

Ecological Services Supervisor



North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Tasley, Governor Lisbeth C. Evans, Secretary Jeffrey J. Crow, Deputy Secretary Office of Archives and History Division of Historical Resources David Brook, Director

March 27, 2006

Kevin S. Rose
Environmental Protection Specialist
U.S. Department of Transportation
Federal Highway Administration
Eastern Federal lands
21400 Ridgetop Circle
Sterling VA 20166-6511

RECEIVED

2006 APR -3 PH 3: S
EASTERLING VA
STERLING VA

Re:

Environmental Assessment for Rehabilitation of Forest Developmental Road (FDR) 597 in Uwharrie National Forest, Montgomery County, ER06-0696

Dear Mr. Rose:

Thank you for your letter of March 7, 2006, concerning the above project. Based on the topographic and hydrological situation that exists within the proposed project area, we have determined that there is a very high probability that archaeological sites exist in the project area. In addition there are numerous archaeological sites located adjacent to the proposed undertaking that are unassessed in regards to their eligibility for listing in the National Register of Historic Places. We therefore recommend that a comprehensive archaeological survey be conducted by an experienced archaeologist to identify and evaluate the significance of any archaeological remains that may be damaged or destroyed by the proposed project. Potential effects on unknown resources must be assessed prior to the initiation of any earth moving activities. As always, we will be happy to assist you in planning your archaeological survey strategy

Two copies of the resulting archaeological survey report, as well as one copy of the appropriate site forms, should be forwarded to us for review and comment as soon as they are available and well in advance of any earth moving activities.

A list of archaeological consultants who have conducted or expressed interest in contract work in North Carolina is available at www.arch.dcr.state.nc.us/consults. The archaeologists listed, or any other experienced archaeologists may be contacted to conduct the recommended survey.

We have determined that the project as proposed will not affect any historic structures

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and considerations. If you have any questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919.733.4763. In all future communication concerning this project, please cite the above referenced tracking number.

Vera Glill-Early

Peter Sandbeck



North Carolina Department of Administration

Michael F. Easley, Governor

Britt Cobb, Secretary

May 3, 2006

Mr. Nicholas Finch

Kimley-Horn and Assoc., Inc.

P.O. Box 33068

Raleigh NC 27636-3068

Rec'd 5.8.06 RZL MK+q.

Dear Mr. Finch:

Subject: Scoping - Proposal to widen and resurface FDR 597, replace vented ford structure over Reeves Spring Branch with a bridge, & reconstructing stone masonry culverts.

Rehabilation of Forest Developmental Road (FDR) 597 in Unwharrie National Forest

The N. C. State Clearinghouse has received the above project for intergovernmental review. This project has been assigned State Application Number 06-E-0000-0320. Please use this number with all inquiries or correspondence with this office.

Review of this project should be completed on or before 06/03/2006. Should you have any questions, please call (919)807-2425.

Sincerely,

Ms. Chrys Baggett

Environmental Policy Act Coordinator

Chryp Bag sett



North Carolina Department of Administration

Michael F. Easley, Governor

June 8, 2006

Britt Cobb, Secretary

TENTEDENT OF SECTION O

Mr. Nicholas Finch
Federal Highway Administration
Eastern Federal Lands Highway Division
21400 Ridgetop Circle
Sterling, VA 20166-6511

Dear Mr. Finch:

Re: SCH File # 06-E-0000-0320; Scoping; Proposal to widen and resurface FDR 597, replace vented ford structure over Reeves Spring Branch with a bridge, & reconstructing stone masonry culverts. Rehabilitation of Forest Developmental Road (FDR) 597 in Unwharrie National Forest

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are the comments made by agencies in the course of this review.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

Chryp Baggett ST6
Ms. Chrys Baggett

Environmental Policy Act Coordinator

Attachments

cc: Region G

Mailing Address: 1301 Mail Service Center Raleigh, NC 27699-1301 Telephone: (919)807-2425 Fax (919)733-9571 State Courier #51-01-00 e-mail Chrys.Baggett@ncmail.net Location Address: 116 West Jones Street Raleigh, North Carolina



North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

MEMORANDUM

TO:

Chrys Baggett

State Clearinghouse

FROM:

Melba McGee V

Environmental Review Coordinator

SUBJECT:

06-0320 Scoping for the Proposed Rehabilitation of Forest

Developmental Road in Uwharrie National Forest in Montgomery

County

DATE:

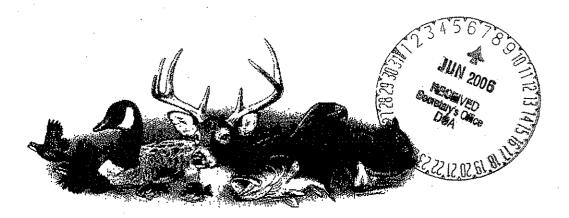
June 6, 2006

The Department of Environment and Natural Resources has reviewed the proposed information. The attached comments are for the applicant's information.

Thank you for the opportunity to review.

Attachments





North Carolina Wildlife Resources Commission

Richard B. Hamilton, Executive Director

MEMORANDUM

TO:

Melba McGee

Office of Legislative and Intergovernmental Affairs, DENR

FROM:

Travis Wilson, Highway Project Coordinator

Habitat Conservation Program

DATE:

May 26, 2006

SUBJECT:

Response to the start of study notification from the Federal Highway Administration regarding fish and wildlife concerns for the proposed rehabilitation of Forest Developmental Road (FDR) 597 in Uwharrie National Forest, Montgomery County, North Carolina. SCH Project No.

06-0320.

This memorandum responds to a request for our concerns regarding impacts on fish and wildlife resources resulting from the subject project. Biologists on the staff of the N. C. Wildlife Resources Commission (NCWRC) have reviewed the proposed improvements. Our comments are provided in accordance with certain provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

Forest Developmental Road 597 is currently an unpaved roadway that parallels the eastern shore of Badin Lake traversing both National Forest lands and private lands. Upgrading FDR 597 to a paved, state maintained facility will increase the potential for these private lands to be fully developed. Development of this area will likely influence the current uses of the National Forest Lands and their management. This should be addressed in the Indirect and Cumulative Assessment for this project. Furthermore, to help facilitate document preparation and the review process, our general informational needs are outlined below:

> 1. Description of fishery and wildlife resources within the project area. including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with:

The Natural Heritage Program
N. C. Division of Parks and Recreation
1615 Mail Service Center
Raleigh, N. C. 27699-1615
(919) 733-7795
WWW.ncsparks.net/nhp

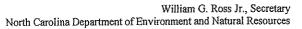
and,

NCDA Plant Conservation Program P. O. Box 27647 Raleigh, N. C. 27611 (919) 733-3610

- 2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities.
- 3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.
- 4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.
- 5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).
- 6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.
- 7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.
- 8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.
- If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

Thank you for the opportunity to provide input in the early planning stages for this project. If we can further assist your office, please contact me at (919) 528-9886.

Cc: Richard Spencer, USACE Chris Militscher, EPA Polly Lespinasse, DWQ Gary Jordan, USFWS



Alan W. Klimek, P.E. Director Division of Water Quality

May 24, 2006



MEMORANDUM

To:

Melba McGee

From:

Polly Lespinasse, Division of Water Quality, Mooresville Regional Office

Subject:

Comments on the Proposed Environmental Assessment Related to the Rehabilitation of

Forest Developmental Road (FDR) 597 in the Uwharrie National Forest, DENR Project

Number 06-0320, Montgomery County

This office has reviewed the referenced document dated May 8, 2006. The Division of Water Quality (DWQ) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. The DWQ offers the following comments based on review of the aforementioned document:

Project Specific Comments:

Review of the project reveals the presence of surface waters classified as Water Supply (WS-IV) (Reeves Spring Branch and Moccasin Creek), Water Supply Critical Area (WS-IV, CA) (Reeves Spring Branch) and WS-IV, CA, B (Badin Lake) in the project study area. Given the potential for impacts to these resources during the project implementation, the DWQ requests that the applicant strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" (15A NCAC 04B .0124) throughout design and construction of the project. This would apply for any area that drains to streams having WS CA (Water Supply Critical Area) classifications.

Should a bridge project be located within the Critical Area of a Water Supply, the applicant will be required to design, construct, and maintain hazardous spill catch basins in the project area. The number of catch basins installed should be determined by the design of the bridge, so that runoff would enter said basin(s) rather than flowing directly into the stream, and in consultation with the DWQ.

General Comments:

- 1. The environmental document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
- 2. Environmental assessment alternatives should consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives should include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ Storm Water Best Management Practices, such as grassed swales, buffer areas, preformed scour holes and retention basins.

 North Carolina Naturally

North Carolina Division of Water Quality Internet: www.ncwaterquality.org

610 East Center Avenue, Suite 301 Mooresville, NC 28115 Phone (704) 663-1699 FAX (704) 663-6040

- 3. The applicant is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.
- 4. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.
- Future documentation, including the 401 Water Quality Certification Application, should continue to include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.
- 6. DWQ is very concerned with sediment and erosion impacts that could result from this project. The applicant should address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
- 7. An analysis of cumulative and secondary impacts anticipated as a result of this project may be required. The type and detail of analysis should conform to the NC Division of Water Quality Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.
- 8. The applicant is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.
- 9. Where streams must be crossed, the DWQ prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, the applicant should not install the bridge bents in the creek, to the maximum extent practicable.
- 10. Sediment and erosion control measures should not be placed in wetlands or streams.
- 11. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.
- 12. The 401 Water Quality Certification application will need to specifically address the proposed methods for storm water management. More specifically, storm water should not be permitted to discharge directly into streams or surface waters.
- 13. Based on the magnitude of impacts to wetlands and streams, either an Individual Permit (IP) or Nationwide Permit (NWP) application to the Corps of Engineers and corresponding 401 Water Quality Certification will be required. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the NCDOT and written concurrence from the NCDWQ.

Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable storm water management plan, and the inclusion of appropriate mitigation plans where appropriate.

- 14. Bridge supports (bents) should not be placed in the stream when possible.
- 15. Whenever possible, the DWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allow for human and wildlife passage beneath the structure, do not block fish passage and do not block navigation by canoeists and boaters.
- 16. Bridge deck drains should not discharge directly into the stream. Storm water should be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NC DWQ Storm Water Best Management Practices.
- 17. If concrete is used during construction, a dry work area should be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete should not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
- 18. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas should be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
- 19. Placement of culverts and other structures in waters, streams, and wetlands shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
- 20. If multiple pipes or barrels are required, they should be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
- 21. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3494/Nationwide Permit No. 6 for Survey Activities.
- 22. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.

- 23. All work in or adjacent to stream waters should be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures should be used to prevent excavation in flowing water.
- 24. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
- 25. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
- 26. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
- 27. Riparian vegetation (native trees and shrubs) should be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

The NCDWQ appreciates the opportunity to provide comments on your project. Should you have any questions or require any additional information, please contact Polly Lespinasse at (704) 663-1699.

cc: Richard Spencer, US Army Corps of Engineers, Wilmington Field Office Ron Lucas, Federal Highway Administration Chris Militscher, Environmental Protection Agency Travis Wilson, NC Wildlife Resources Commission Gary Jordan, US Fish and Wildlife Service Ken Averitte, NCDWQ Fayetteville Regional Office Sonia Gregory, NCDWQ Central Office, Wetlands Unit File Copy

MEMORANDUM

TO:

Melba McGee

FROM:

Michael P. Schafale, Natural Heritage Program

Muchael P. Suppas

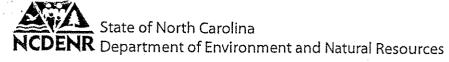
SUBJECT:

06-0320: Proposal to widen and resurface FDR 597 in Uwharrie National Forest

DATE:

May 30, 2006

FDR 597 crosses a Significant Natural Heritage Area on Uwharrie National Forest lands. This area, known as West Branch/Eldorado Forests contains a diverse collection of typical and rare Piedmont natural communities in exemplary condition. If the proposed widening will be confined to a narrow area immediately adjacent to the existing road right-of-way and little expansion of the right-of-way is planned, it should not affect a significant amount of any of the communities. If any construction on new location is proposed on the National Forest lands north of Skiers Cove, the assessment should address the amount of acreage of natural forests lost.



Reviewing Office: Fayellevelle	RO	
7		_

	06-	03	20	05 3000
Project Number:			Due Date:	05,29,06

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

After review of this project it has been determined that the DENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of this form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (Statutory Time Limit)
۵	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
	NPDES-permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection preapplication conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90 - 120 days (N/A)
	Water Use Permit	Preapplication technical conference usually necessary	30 days (N/A)
	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Preapplication conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
42	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100, 2Q.0300, 2H.0600)	N/A	60 days
W	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900		
	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 2D.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-733-0820.	N/A	60 days (90 days)
	Complex Source Permit required under 15 A NCAC 2D.0800		
Ø	The Sedimentation Pollution Control Act of 1973 must b control plan will be required if one or more acres to be d days before beginning activity. A fee of \$50 for the first a	e properly addressed for any land disturbing activity. An erosion & sedimentation isturbed. Plan filed with proper Regional Office (Land Quality Section) at least 30 icre or any part of an acre.	20 days (30 days)
	The Sedimentation Pollution Control Act of 1973 must b	e addressed with respect to the referenced Local Ordinance.	30 days
	Sedimentation and erosion control must be addressed in given to design and installation of appropriate perimeter	n accordance with NCDOT's approved program. Particular attention should be or sediment trapping devices as well as stable stormwater conveyances and outlets.	
	Mining Permit	On-site inspection usual. Surety bond filed with DENR. Bond amount varies with type mine and number of acres of affected land. Any are mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
	North Carolina Burning permit	On-site inspection by N.C. Division of Forest Resources if permit exceeds 4 days	1 day (N/A)
	Special Ground Clearance Burning Permit-22 counties in coastal N.C. with organic soils.	On-site inspection by N.C. Division of Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
	Oil Refining Facilities	N/A	90 - 120 days (N/A)

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Tim
	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, certify construction is according to DENR approved plans. May also require permit under mosquito control program, and a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of \$200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion.	(Statutory Time Lim 30 days (60 days)
<u> </u>	Permit to drill exploratory oil or gas well	File surety bond of \$5,000 with DENR running to State of N.C. conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DENR rules and regulations.	10 days (N/A)
_	Geophysical Exploration Permit	Application filed with DENR at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days
]	State Lakes Construction Permit	Application fees based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property.	(N/A) 15 - 20 days
1	401 Water Quality Certification	N/A	(N/A) 55 days
<u> </u>	CAMA Permit for MAJOR development	\$250.00 fee must accompany application	(130 days) 60 days
-	CAMA Permit for MINOR development	\$50.00 fee must accompany application	(130 days)
1		oroject area. If any monument needs to be moved or destroyed, please notify: Box 27687 Raleigh, N.C. 27611	(25 days)
	Abandonment of any wells, if required must be in accord	ance with Title 15A. Subchapter 2C.0100:	
	Abandonment of any wells, if required must be in accord	lance with Title 15A. Subchapter 2C.0100: Orphan" underground storage tanks (USTS) are discovered during any excavation operation.	on.
	Abandonment of any wells, if required must be in accord Notification of the proper regional office is requested if " Compliance with 15A NCAC 2H 1000 (Coastal Stormwate	lance with Title 15A. Subchapter 2C.0100. Orphan" underground storage tanks (USTS) are discovered during any excavation operation of the storage tanks (USTS) are discovered during any excavation operation	
	Abandonment of any wells, if required must be in accord	lance with Title 15A. Subchapter 2C.0100. Orphan" underground storage tanks (USTS) are discovered during any excavation operation of the storage tanks (USTS) are discovered during any excavation operation	ion. 45 days
	Abandonment of any wells, if required must be in accord Notification of the proper regional office is requested if " Compliance with 15A NCAC 2H 1000 (Coastal Stormwate	lance with Title 15A. Subchapter 2C.0100. Orphan" underground storage tanks (USTS) are discovered during any excavation operation of the storage tanks (USTS) are discovered during any excavation operation	ion. 45 days
	Abandonment of any wells, if required must be in accord Notification of the proper regional office is requested if " Compliance with 15A NCAC 2H 1000 (Coastal Stormwate	lance with Title 15A. Subchapter 2C.0100. Orphan" underground storage tanks (USTS) are discovered during any excavation operation of the storage tanks (USTS) are discovered during any excavation operation	ion. 45 days

REGIONAL OFFICES

Questions regarding these po	ermits should be addressed	to the Regional Office marked below.
Acheville Porional Occi		to the regional Office marked below.

- ☐ Asheville Regional Office 59 Woodfin Place Asheville, N.C. 28801 (828) 251-6208
- ☐ Fayetteville Regional Office 225 Green Street, Suite 714 Fayetteville, N.C. 28301 (910) 486-1541
- ☐ Mooresville Regional Office 919 North Main Street Mooresville, N.C. 28115 (704) 663-1699
- ☐ Raleigh Regional Office 3800 Barrett Drive, P.O. Box 27687 Raleigh, N.C. 27611 (919) 571-4700
- ☐ Washington Regional Office 943 Washington Square Mall Washington, N.C. 27889 (252) 946-6481
- ☐ Wilmington Regional Office 127 Cardinal Drive Extension Wilmington, N.C. 28405 (910) 395-3900
- ☐ Winston-Salem Regional Office 585 Waughtown Street Winston-Salem, N.C. 27107 (336) 771-4600



2006 AUG - 3 PM 3: 19

North Carolina Department of Cultural Resources **State Historic Preservation Office**

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor Lisbeth C. Evans, Secretary Jeffrey J. Crow, Deputy Secretary Office of Archives and History Division of Historical Resources David Brook, Director

July 31, 2006

Kevin S. Rose Federal Highway Administration Eastern Federal Lands 21400 Ridgetop Circle Sterling VA 20166-6511

Re:

Project NC PFH 49(3), Rehabilitation of FDR 597 from SR 1179 to FDR 544, Uwharrie National Forest, Montgomery County, ER06-0696

Dear Mr. Rose:

Thank you for your letter of July 5, 2006, concerning the above project. The report was extremely well written and informative. We concur that numerous archaeological resources are located within and immediately adjacent to the Area Of Potential Effect (APE) and that additional archival and archaeological investigations will be necessary to adequately determine their significance in relation to the National Register of Historic Places. As stated in our letter of March 15, 2006, potential effects on unknown resources must be assessed prior to the initiation of any earth moving activities. We look forward to reviewing the additional information as it becomes available and to assisting you in planning your archaeological survey strategy.

Two copies of the resulting archaeological survey report, as well as one copy of the appropriate site forms, should be forwarded to us for review and comment as soon as they are available and well in advance of any earth moving activities.

A list of archaeological consultants who have conducted or expressed interest in contract work in North Carolina is available at www.arch.dcr.state.nc.us/consults. The archaeologists listed, or any other experienced archaeologists may be contacted to conduct the recommended survey.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and considerations. If you have any questions concerning the above

Mailing Address

comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919.733.4763. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Peter Sandbeck



RECEIVED

2009 JAN 13 PM 12: 36

North Carolina Department of Cultural Resources DERAL LANDS HIGHWAY DIVISION State Historic Preservation Office STERLING, VA

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor Lisbeth C. Evans, Secretary Jeffrey J. Crow, Deputy Secretary

Office of Archives and History Division of Historical Resources David Brook, Director

December 30, 2008

Kevin Rose U.S. Department of Transportation Federal Highway Administration 21400 Ridgetop Circle Sterling, VA 20166-6511

Project NC PFH 49(3) Rehabilitation of FDR 597 from SR 1179 to FDR 544 Uwharrie National Forest, Montgomery County, ER06-0696

Dear Mr. Rose:

Thank you for your letter of December 9, 2008, transmitting the above referenced report. We found the archaeological field investigations and the accompanying written descriptions to be clear, concise, and informative. Further we concur with the report authors assessment regarding archaeological properties 31MG495, 31MG633, 31MG1834, 31MG509/31MG 1835, 31MG1836, 31MG1837, 31MG1922-31MG1929, and the portion of 31MG1930 that extends into the project right-of-way, as not eligible for inclusion in the National Register of Historic Places.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and considerations. If you have any questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919.807.6579. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Peter Sandbeck

Kense Glidhill-Early

Appendix C

Regional Forester's Sensitive Species List

COMMON NAME FWS G	/T/N S	RNK	SCIENTIFIC NAME	FOREST
SANTEETLAH DUSKY SALAMANDER	3	2	Desmognathus santeetlah	NFS IN NORTH CAROLINA
SALAMANDER, JUNALUSKA	2	2	Eurycea junaluska	NFS IN NORTH CAROLINA
SALAMANDER, TELLICO	2	2	Plethodon aureolus	NFS IN NORTH CAROLINA
FROG, CAROLINA GOPHER	3	2	Rana capito capito	NFS IN NORTH CAROLINA
A LAMPSHADE SPIDER	2	2	Hypochilus sheari	NFS IN NORTH CAROLINA
SPIDER, LINVILLE CAVERN	1	1	Ivesia carolinensis	NFS IN NORTH CAROLINA
SPIDER, LOST NANTAHALA CAVE	1	1	Nesticus cooperi	NFS IN NORTH CAROLINA
SPIDER, NESTICID	1	1	Nesticus crosbyi	NFS IN NORTH CAROLINA
SPIDER, NESTICID	2	2	Nesticus mimus	NFS IN NORTH CAROLINA
SPIDER, NESTICID	2	2	Nesticus sheari	NFS IN NORTH CAROLINA
SPIDER, NESTICID	2	2	Nesticus silvanus	NFS IN NORTH CAROLINA
SPARROW, BACHMAN'S	3	2	Aimophila aestivalis	NFS IN NORTH CAROLINA
FLOATER, BROOK	3	2	Alasmidonta varicosa	NFS IN NORTH CAROLINA
SLABSHELL, NUESE	1	1	Elliptio judithae	NFS IN NORTH CAROLINA
LANCE, YELLOW	1	2	Elliptio lanceolata	NFS IN NORTH CAROLINA
SLABSHELL, ROANOKE	2	1	Elliptio roanokensis	NFS IN NORTH CAROLINA
PIGTOE, TENNESSEE	2	1	Fusconaia barnesiana	NFS IN NORTH CAROLINA
PIGTOE, ATLANTIC	2	1	Fusconaia masoni	NFS IN NORTH CAROLINA
A BIVALVE	1		Lampsilis conspicuous	NFS IN NORTH CAROLINA
HEELSPLITTER, TENNESSEE	2	1	Lasmigona holstonia	NFS IN NORTH CAROLINA
FLOATER, GREEN	3	1	Lasmigona subviridis	NFS IN NORTH CAROLINA
GREEN FLOATER	3	1	Lasmigona subviridis	NFS IN NORTH CAROLINA
LILLIPUT, SAVANNAH	3	1	Toxolasma pullus	NFS IN NORTH CAROLINA
RAINBOW, ALABAMA (MUSSEL)	3	2	Villosa nebulosa	NFS IN NORTH CAROLINA
CREEKSHELL, CAROLINA	3	1	Villosa vaughaniana	NFS IN NORTH CAROLINA
CRAYFISH, LITTLE TENNESSEE	1	1	Cambarus georgiae	NFS IN NORTH CAROLINA
CRAYFISH, PARRISH	1	1	Cambarus parrishi	NFS IN NORTH CAROLINA
CRAYFISH, FRENCH BROAD	2	2	Cambarus reburrus	NFS IN NORTH CAROLINA
CRAYFISH, TAR RIVER	2	2	Procambarus medialis	NFS IN NORTH CAROLINA
CRAYFISH, CROATAN	2	2	Procambarus plumimanus	NFS IN NORTH CAROLINA
STURGEON, LAKE	3	X	Acipenser fulvescens	NFS IN NORTH CAROLINA
ROANOKE BASS	3	3	Ambloplites cavifrons	NFS IN NORTH CAROLINA
SANTEE CHUB	3	3	Cyprinella zanema	NFS IN NORTH CAROLINA
DARTER, SHARPHEAD	2	1	Etheostoma acuticeps	NFS IN NORTH CAROLINA
CAROLINA DARTER	3	3	Etheostoma collis	NFS IN NORTH CAROLINA
DARTER, WOUNDED	3	2	Etheostoma vulneratum	NFS IN NORTH CAROLINA
MADTOM, CAROLINA	3	2	Noturus furiosus	NFS IN NORTH CAROLINA
DARTER, BLOTCHSIDE	2	1	Percina burtoni	NFS IN NORTH CAROLINA
DARTER, LONGHEAD	3	X	Percina macrocephala	NFS IN NORTH CAROLINA
DARTER, OLIVE	3	2	Percina squamata	NFS IN NORTH CAROLINA
MINNOW, KANAWHA	3	2	Phenacobius teretulus	NFS IN NORTH CAROLINA
CHUB, SANDHILLS	3	3	Semotilus lumbee	NFS IN NORTH CAROLINA
MOTH, BUCHHOLZ'S DART	2	2	Agrotis buchholzi	NFS IN NORTH CAROLINA
SKIPPER, AROGOS	1	1	Atrytone arogos arogos	NFS IN NORTH CAROLINA
MAYFLY, AMERICAN SAND	2	1	Dolania americana	NFS IN NORTH CAROLINA
MAYFLY, ARGO EPHEMERELLAN	1	1	Ephemerella argo	NFS IN NORTH CAROLINA

MOTH, LOOPER	2	1	Euchlaena milnei	NFS IN NORTH CAROLINA
FLY, MARY ALICE'S SMALL-HEADED	1	1	Eulonchus marialiciae	NFS IN NORTH CAROLINA
SKIPPER, DUKE'S	3	2	Euphyes dukesi	NFS IN NORTH CAROLINA
DRAGONFLY, BRIMLEYS	3	1	Gomphus cavillaris brimleyi	NFS IN NORTH CAROLINA
CLUBTAIL, CHEROKEE	2	1	Gomphus consanguis	NFS IN NORTH CAROLINA
DIMINUTIVE CLUBTAIL	3	1	Gomphus diminutus	NFS IN NORTH CAROLINA
CLUBTAIL, SANDHILLS	2	1	Gomphus parvidens carolinus	NFS IN NORTH CAROLINA
SEPTIMA'S CLUBTAIL	2	1	Gomphus septima	NFS IN NORTH CAROLINA
GREEN-FACED CLUBTAIL	3	1	Gomphus viridifrons	NFS IN NORTH CAROLINA
MOTH, VENUS FLYTRAP CUTWORM	1	1	Hemipachnobia subporphyrea subp	orphyreaNFS IN NORTH CAROLINA
SKIPPER, SEMINOLE	3	2	Hesperia attalus slossonae	NFS IN NORTH CAROLINA
CRUISER, MARGARET'S RIVER	2	1	Macromia margarita	NFS IN NORTH CAROLINA
COMMON NAME FWS G	/T/N S	S RNK		<u>FOREST</u>
SMOKY SHADOWFLY	3	2	Neurocordulia molesta	NFS IN NORTH CAROLINA
SNAKETAIL, EDMUNDS	1	1	Ophiogomphus edmundo	NFS IN NORTH CAROLINA
SNAKETAIL, PYGMY	3	1	Ophiogomphus howei	NFS IN NORTH CAROLINA
SKIPPER, RARE	2	1	Problema bulenta	NFS IN NORTH CAROLINA
SKIPPER, BYSSUS	3	2	Problema byssus	NFS IN NORTH CAROLINA
SANDDRAGON, BELLE'S	3	1	Progomphus bellei	NFS IN NORTH CAROLINA
SKIPPER, GRIZZLED	2	Н	Pyrgus wyandot	NFS IN NORTH CAROLINA
MOTH, FRASER FIR GEOMETRID	2	1	Semiothisa fraserata	NFS IN NORTH CAROLINA
MAYFLY, SPICILOSE SERATELLAN	Н	Н	Serratella spiculosa	NFS IN NORTH CAROLINA
MOTH, CARTER'S NOCTUID	2	2	Spartiniphaga carterae	NFS IN NORTH CAROLINA
FRITILLARY, DIANA	3	3	Speyeria diana	NFS IN NORTH CAROLINA
FRITILLARY, REGAL	3	1	Speyeria idalia	NFS IN NORTH CAROLINA
TOWNES' CLUBTAIL	3	1	Stylurus townesi	NFS IN NORTH CAROLINA
A GROUND BEETLE	1	1	Trechus balsamensis	NFS IN NORTH CAROLINA
A GROUND BEETLE	1	1	Trechus carolinae	NFS IN NORTH CAROLINA
A GROUND BEETLE	2	2	Trechus luculentus luculentus	NFS IN NORTH CAROLINA
A GROUND BEETLE	2	2	Trechus luculentus unicoi	NFS IN NORTH CAROLINA
A GROUND BEETLE	1	1	Trechus mitchellensis	NFS IN NORTH CAROLINA
A GROUND BEETLE	1	1	Trechus roanensis	NFS IN NORTH CAROLINA
A GROUND BEETLE	1	1	Trechus rosenbergi	NFS IN NORTH CAROLINA
A GROUND BEETLE	1	1	Trechus satanicus	NFS IN NORTH CAROLINA
A GROUND BEETLE	1	1	Trechus subtilis	NFS IN NORTH CAROLINA
VOLE, SOUTHERN ROCK	3	2	Microtus chrotorrhinus carolinensis	
MYOTIS, EASTERN SMALL-FOOTED	3	2	Myotis leibii	NFS IN NORTH CAROLINA
SHREW, SOUTHERN WATER	3	1	Sorex palustris punctulatus	NFS IN NORTH CAROLINA
FRASER FIR	2	2	Abies fraseri	NFS IN NORTH CAROLINA
INCISED GROOVEBUR	3		Agrimonia incisa	NFS IN NORTH CAROLINA
STRIPED GARLIC	3	1	Allium cuthbertii	NFS IN NORTH CAROLINA
PIEDMONT INDEGO-BUSH	3	2	Amorpha schwerinii	NFS IN NORTH CAROLINA
BOG BLUESTEM	3	1	Andropogon mohrii	NFS IN NORTH CAROLINA
STALKED MILKWEED	3	2	Asclepias pedicellata	NFS IN NORTH CAROLINA
A HORNWORT	1	1	Aspiromitus appalachianus	NFS IN NORTH CAROLINA
ALEXANDER'S ROCK ASTER	3	1	Aster avitus	NFS IN NORTH CAROLINA
GEORGIA ASTER	2	1	Aster georgianus	NFS IN NORTH CAROLINA
OZOROBITEDI DI			115001 500151411415	THE HATTORITI OF MODIFIED

PIEDMONT ASTER	2	2	Aster mirabilis	NFS IN NORTH CAROLINA
CREEPING ASTER	3		Aster surculosus	NFS IN NORTH CAROLINA
ROAN FALSE GOAT'S BEARD	Н	Н	Astilbe crenatiloba	NFS IN NORTH CAROLINA
SANDHILLS MILKVETCH	3	3	Astragalus michauxii	NFS IN NORTH CAROLINA
DW ARF APPLE MOSS	3	1	Bartramidula wilsonii	NFS IN NORTH CAROLINA
A LIVERWORT	2	2	Bazzania nudicaulis	NFS IN NORTH CAROLINA
PEAK MOSS	2	1	Brachydontium trichodes	NFS IN NORTH CAROLINA
ANDERSON'S BRACHYMENIUM	Н	Н	Brachymenium andersonii	NFS IN NORTH CAROLINA
GORGE MOSS	2	Н	Bryocrumia vivicolor	NFS IN NORTH CAROLINA
SWORD MOSS	3	1	Bryoxiphium norvegicum	NFS IN NORTH CAROLINA
PIRATEBUSH	2	2	Buckleya distichophylla	NFS IN NORTH CAROLINA
BUG-ON-A-STICK	2	Н	Buxbaumia aphylla	NFS IN NORTH CAROLINA
HUMP-BACKED ELVES	2	Н	Buxbaumia minakatae	NFS IN NORTH CAROLINA
REGEL'S RAGWORT	3	3	Cacalia rugelia	NFS IN NORTH CAROLINA
CAIN'S REEDGRASS	1	1	Calamagrostis cainii	NFS IN NORTH CAROLINA
BLUE RIDGE BIND WEED	2	2	Calystegia catesbiana ssp. sericat	a NFS IN NORTH CAROLINA
CLIFF CAMPYLOPUS	3	1	• • •	tifoliu NFS IN NORTH CAROLINA
SAVANNA CAMPYLOPUS	1	1	Campylopus carolinae	NFS IN NORTH CAROLINA
PARADOXICAL CAMPYLOPUS	3	1	Campylopus paradoxus	NFS IN NORTH CAROLINA
MOUNTAIN BITTERCRESS	2	2	Cardamine clematitis	NFS IN NORTH CAROLINA
DISSECTED TOOTHWORT	3	1	Cardamine dissecta	NFS IN NORTH CAROLINA
LONG'S BITTERCRESS	3	1	Cardamine longii	NFS IN NORTH CAROLINA
BILTMORE SEDGE	3	3	Carex biltmoreana	NFS IN NORTH CAROLINA
CHAPMAN'S SEDGE	2	3	Carex chapmanii	NFS IN NORTH CAROLINA
CILLINITEDEDOL				
	G/T/N S		SCIENTIFIC NAME	FOREST
COMMON NAME FWS			SCIENTIFIC NAME	
COMMON NAME FWS A SEDGE	G/T/N S	RNK 1	SCIENTIFIC NAME Carex impressinervia	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE	G/T/N S	RNK	SCIENTIFIC NAME	NFS IN NORTH CAROLINA NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE	G/T/N S 1 2	RNK 1 2	SCIENTIFIC NAME Carex impressinervia Carex manhartii	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE	G/T/N S 1 2 3 1	1 2 3	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera	NFS IN NORTH CAROLINA NFS IN NORTH CAROLINA NFS IN NORTH CAROLINA NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE	G/T/N S 1 2 3 1 3 1 3	RNK 1 2 3 1 1	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE	G/T/N S 1 2 3 1	1 2 3 1 1	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT	G/T/N S 1 2 3 1 3 2 1	1 2 3 1 1 1 H	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT	G/T/N S 1 2 3 1 3 2 1 H	RNK 1 2 3 1 1 1 H H	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD	G/T/N S 1 2 3 1 3 2 1 H 3	1 2 3 1 1 1 H H 3	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT	G/T/N S 1 2 3 1 3 2 1 H 3 1	1 2 3 1 1 1 H H 3 1 1	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3	1 2 3 1 1 1 H H 3 1 3 3	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia	NFS IN NORTH CAROLINA
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COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 3 3	RNK 1 2 3 1 1 1 H H 3 1 H H H	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha	NFS IN NORTH CAROLINA
A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 3 3 3	RNK 1 2 3 1 1 1 H H 3 1 H 1 1 1 1 1 1 1 1 1 1 1	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR CREAMY TICK-TREFOIL	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 3 3 2	RNK 1 2 3 1 1 1 H H 3 1 H 1 1 1 1 1 1 1 1 1 1 1	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum Desmodium ochroleucum	NFS IN NORTH CAROLINA
COMMON NAME FWS A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR CREAMY TICK-TREFOIL HIRSTS' PANIC GRASS	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 3 2 1 1 1 3 1 1 3 1 1 3 1 1 1 1	RNK 1 2 3 1 1 1 H H 3 1 1 1 1 1 1 1 1 1 1 1 1 1	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum Desmodium ochroleucum Dichanthelium sp.1	NFS IN NORTH CAROLINA
A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR CREAMY TICK-TREFOIL HIRSTS' PANIC GRASS RIVERBANK BUSH-HONEYSUCKLE	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 2 1 E 3	RNK 1 2 3 1 1 1 H H 3 1 1 1 1 1 1 1 1 1 1 1	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum Desmodium ochroleucum Dichanthelium sp.1 Diervilla rivularis	NFS IN NORTH CAROLINA
A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR CREAMY TICK-TREFOIL HIRSTS' PANIC GRASS RIVERBANK BUSH-HONEYSUCKLE	G/T/N S 1 2 3 1 3 2 1 H 3 3 3 3 2 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3	RNK 1 2 3 1 1 1 H H 3 1 1 1 1 1 1 1 3 1 1 1 1 1	SCIENTIFIC NAME Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum Desmodium ochroleucum Dichanthelium sp.1 Diervilla rivularis Dionaea muscipula	NFS IN NORTH CAROLINA
A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR CREAMY TICK-TREFOIL HIRSTS' PANIC GRASS RIVERBANK BUSH-HONEYSUCKLE VENUS FLYTRAP AMBIGUOUS DITRICHUM	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 2 1 E 3 3 3 3	RNK 1 2 3 1 1 1 H H 3 1 1 1 1 1 1 1 1 1 1 1 1 1	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum Desmodium ochroleucum Dichanthelium sp.1 Diervilla rivularis Dionaea muscipula Ditrichum ambiguum	NFS IN NORTH CAROLINA
A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR CREAMY TICK-TREFOIL HIRSTS' PANIC GRASS RIVERBANK BUSH-HONEYSUCKLE VENUS FLYTRAP AMBIGUOUS DITRICHUM A LIVERWORT	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 2 1 E 3 3 3 2	RNK 1 2 3 1 1 1 H H 3 1 1 1 1 1 1 1 1 1 1 1 1 1	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum Desmodium ochroleucum Dichanthelium sp.1 Diervilla rivularis Dionaea muscipula Ditrichum ambiguum Drepanolejeunea applachiana	NFS IN NORTH CAROLINA
A SEDGE MANHART'S SEDGE WRETCHED SEDGE ROAN SEDGE SCHWEINITZ'S SEDGE RADFORD'S SEDGE A LIVERWORT A LIVERWORT CUTHBERT'S TURTLEHEAD A LIVERWORT BROADLEAF TICKSEED COPPER GRIMMIA A LIVERWORT TALL LARKSPUR CREAMY TICK-TREFOIL HIRSTS' PANIC GRASS RIVERBANK BUSH-HONEYSUCKLE VENUS FLYTRAP AMBIGUOUS DITRICHUM	G/T/N S 1 2 3 1 3 2 1 H 3 1 3 3 2 1 E 3 3 3 3	RNK 1 2 3 1 1 1 H H 3 1 1 1 1 1 1 1 1 1 1 1 1 1	Carex impressinervia Carex manhartii Carex misera Carex roanensis Carex schweinitzii Carex sp. 3 Cephaloziella obtusilobula Cheilolejeunea evansii Chelone cuthbertii Chiloscyphus appalachianus Coreopsis latifolia Coscinodon cribrosus Cylindrocolea rhizantha Delphinium exaltatum Desmodium ochroleucum Dichanthelium sp.1 Diervilla rivularis Dionaea muscipula Ditrichum ambiguum	NFS IN NORTH CAROLINA

HALL'S POCKET MOSS	2	1	Fissidens hallii	NFS IN NORTH CAROLINA
LARGE FOTHERGILLA	3	2	Fothergilla major	NFS IN NORTH CAROLINA
BENT AVENS	2	2	Geum geniculatum	NFS IN NORTH CAROLINA
SMOKY MOUNTAIN MANNA GRASS	2	2	Glyceria nubigena	NFS IN NORTH CAROLINA
APPALACHIAN OAK FERN	3	1	Gymnocarpium appalachianum	NFS IN NORTH CAROLINA
AN ALUMROOT	3	1	Heuchera americana var. hispida	NFS IN NORTH CAROLINA
MOUNTAIN HEARTLEAF	3	1	Hexastylis contracta	NFS IN NORTH CAROLINA
FRENCH BROAD HEARTLEAF	2	2	Hexastylis rhombiformis	NFS IN NORTH CAROLINA
SHARP'S HOMALIADELPHUS	2	1	Homaliadelphus sharpii	NFS IN NORTH CAROLINA
GRANITE DOME BLUET	2	3	Houstonia longifolia var. glabra	NFS IN NORTH CAROLINA
APPALACHIAN FIR CLUBMOSS	3	2	Huperzia appalachiana	NFS IN NORTH CAROLINA
GORGE FILMY FERN	1	1	Hymenophyllum tayloriae	NFS IN NORTH CAROLINA
LONG-STALKED HOLLY	3	1	Ilex collina	NFS IN NORTH CAROLINA
VIRGINIA QUILLWORT	1	1	Isoetes virginica	NFS IN NORTH CAROLINA
ROUGH RUSH	2	1	Juncus caesariensis	NFS IN NORTH CAROLINA
SOUTHERN BUGBUTTON 2		2	Lachnocaulon beyrichianum	NFS IN NORTH CAROLINA
A LIVERWORT	1	1	Lejeunea blomquistii	NFS IN NORTH CAROLINA
A LIVERWORT	2	1	Lejeunea dimorphophylla	NFS IN NORTH CAROLINA
GRANDFATHER MT. LEPTODONTIUM	2	1	Leptodontium excelsum	NFS IN NORTH CAROLINA
MOUNT LECONTE MOSS	1	1	Leptohymenium sharpii	NFS IN NORTH CAROLINA
SHALE-BARREN BLAZING STAR	3	1	Liatris turgida	NFS IN NORTH CAROLINA
GRAY'S LILY	3	3	Lilium grayi	NFS IN NORTH CAROLINA
YELLOW-FRUITED FLAX	3	1	Linum floridanum var. chrysocarpum	NFS IN NORTH CAROLINA
PONDSPICE	3	2	Litsea aestivalis	NFS IN NORTH CAROLINA
BOYKIN'S LOBELIA	2	1	Lobelia boykinii	NFS IN NORTH CAROLINA
PRAIRIE BIRDFOOT-TREFOIL	3	3	Lotus unifoliolatus var. helleri	NFS IN NORTH CAROLINA
FRASER'S LOOSESTRIFE	2	2	Lysimachia fraseri	NFS IN NORTH CAROLINA
CAROLINA BOGMINT	2	1	Macbridea caroliniana	NFS IN NORTH CAROLINA

COMMON NAME FWS G/I	ľ/N S	RNK	SCIENTIFIC NAME F	OREST
LARGE-FL. BARBARA'S BUTTONS	2	Н	Marshallia grandiflora	NFS IN NORTH CAROLINA
BROADLEAF BARBARA'S BUTTONS	3	Н	Marshallia trinervia	NFS IN NORTH CAROLINA
A HORNWORT	2	2	Megaceros aenigmaticus	NFS IN NORTH CAROLINA
GODFREY'S SANDWORT	1	1	Minuartia godfreyi	NFS IN NORTH CAROLINA
SWEET PINESAP	3	2	Monotropsis odorata	NFS IN NORTH CAROLINA
LOOSE WATER MILFOIL	3	1	Myriophyllum laxum	NFS IN NORTH CAROLINA
A BOG ASPHODEL C	2		Narthecium americanum	NFS IN NORTH CAROLINA
BIGLEAF SCURFPEA	Н	Н	Orbexilum macrophyllum	NFS IN NORTH CAROLINA
TRANSLUCENT ORTHODONTIUM	3	1	Orthodontium pellucens	NFS IN NORTH CAROLINA
KEEVER'S BRISTLE-MOSS	1	1	Orthotrichum keeverae	NFS IN NORTH CAROLINA
SAVANNA COWBANE	3	3	Oxypolis ternata	NFS IN NORTH CAROLINA
CAROLINA GRASS-OF-PARNASSUS	2	2	Parnassia caroliniana	NFS IN NORTH CAROLINA
GLADE WILD QUININE	3	1	Parthenium integrifolium var. auriculate	um NFS IN NORTH CAROLINA
CANBY'S MOUNTAIN-LOVER	2		Paxistima canbyi	NFS IN NORTH CAROLINA
A LIVERWORT	3	1	Plagiochila austinii	NFS IN NORTH CAROLINA
A LIVERWORT	2	1	Plagiochila caduciloba	NFS IN NORTH CAROLINA
A LIVERWORT	1	Н	Plagiochila columbiana	NFS IN NORTH CAROLINA
A LIVERWORT	3	2	Plagiochila corniculata	NFS IN NORTH CAROLINA
A LIVERWORT	1	1	Plagiochila echinata	NFS IN NORTH CAROLINA
A LIVERWORT	2	2	Plagiochila sharpii	NFS IN NORTH CAROLINA
A LIVERWORT	1	1	Plagiochila sullivantii var. spinigera	NFS IN NORTH CAROLINA
A LIVERWORT	2	2	Plagiochila sullivantii var. sullivantii	NFS IN NORTH CAROLINA
A LIVERWORT	2	1	Plagiochila virginica var. caroliniana	NFS IN NORTH CAROLINA
A LIVERWORT	1	1	Plagiochila virginica var. euryphylla	NFS IN NORTH CAROLINA
CAROLINA MNIUM	2	2	Plagiomnium carolinianum	NFS IN NORTH CAROLINA
WHITE FRINGELESS ORCHID	2	X	Platanthera integrilabia	NFS IN NORTH CAROLINA
PRINGLE'S EURHYNCHIUM	2	1	Platyhypnidium pringlei	NFS IN NORTH CAROLINA
BOG BLUEGRASS	3	1	Poa paludigena	NFS IN NORTH CAROLINA
HOOKER'S MILKWORT	3	2	Polygala hookeri	NFS IN NORTH CAROLINA
A LIVERWORT	1	1	Porella appalachiana	NFS IN NORTH CAROLINA
A LIVERWORT	1	1	Porella wataugensis	NFS IN NORTH CAROLINA
ROAN MOUNTAIN RATTLESNAKE ROOT	3	3	Prenanthes roanensis	NFS IN NORTH CAROLINA
A LIVERWORT	1	1	Radula voluta	NFS IN NORTH CAROLINA
AWNED MEADOW BEAUTY	3	3	Rhexia aristosa	NFS IN NORTH CAROLINA
CUMBERLAND AZALEA	3	1	Rhododendron cumberlandense	NFS IN NORTH CAROLINA
PINK SHELL AZALEA	3	3	Rhododendron vaseyi	NFS IN NORTH CAROLINA
SWAMP FOREST BEAKRUSH	3	1	Rhynchospora decurrens	NFS IN NORTH CAROLINA
HARPER'S BEAKRUSH	3	1	Rhynchospora harperi	NFS IN NORTH CAROLINA
FRUITFUL LOCUST	2	1	Robinia hispida var. fertilis	NFS IN NORTH CAROLINA
HARTWIG'S LOCUST	1	1	Robinia viscosa var. hartwegii	NFS IN NORTH CAROLINA
PINNATE-LOBED BLACK-EYED SUSAN	2	1	Rudbeckia triloba var. pinnatiloba	NFS IN NORTH CAROLINA
RUGEL'S RAGWORT	2	3	Rugelia nudicaulis	NFS IN NORTH CAROLINA
CHAPMAN'S ARROWHEAD	3	1	Sagittaria graminea var. chapmanii	NFS IN NORTH CAROLINA
GOLDEN-EYE SAXIFRAGE	3	3	Saxifraga careyana	NFS IN NORTH CAROLINA
CAROLINA SAXIFRAGE	2	2	Saxifraga caroliniana	NFS IN NORTH CAROLINA
HIGHLANDS MOSS	2	1	Schlotheimia lancifolia	NFS IN NORTH CAROLINA

APPALACHIAN SKULLCAP	2	Н	Scutellaria arguta	NFS IN NORTH CAROLINA
DIVIDED-LEAF GROUNDSEL	2	2	Senecio millefolium	NFS IN NORTH CAROLINA
NORTHERN OCONEE BELLS	1	1	Shortia galacifolia var. brevistyla	NFS IN NORTH CAROLINA
OCONEE BELLS	2	2	Shortia galacifolia var. glacifolia	NFS IN NORTH CAROLINA
MOUNTAIN CATCHFLY	3	2	Silene ovata	NFS IN NORTH CAROLINA
BILTMORE CARRION-FLOWER	3	3	Smilax biltmoreana	NFS IN NORTH CAROLINA
YADKIN RIVER GOLDENROD	1	Н	Solidago plumosa	NFS IN NORTH CAROLINA
CAROLINA GOLDENROD	2	3	Solidago pulchra	NFS IN NORTH CAROLINA
GRAINITE DOME GOLDENROD	2	1	Solidago simulans	NFS IN NORTH CAROLINA
SPRING-FLOWERING GOLDENROD	2	3	Solidago verna	NFS IN NORTH CAROLINA
FITZGERALD'S PEATMOSS	2	2	Sphagnum fitzgeraldii	NFS IN NORTH CAROLINA
A LIVERWORT	2	2	Sphenolobopsis pearsonii	NFS IN NORTH CAROLINA
COMMON NAME FWS G	/T/N S	S RNK	SCIENTIFIC NAME	<u>FOREST</u>
GIANT SPIRAL ORCHID	3	1	Spiranthes longilabris	NFS IN NORTH CAROLINA
SOUTHERN DUNG MOSS	2	Н	Splachnum pennsylvanicum	NFS IN NORTH CAROLINA
CLINGMAN'S HEDGE-NETTLE	3	1	Stachys clingmanii	NFS IN NORTH CAROLINA
SWEET INDIAN-PLA INTAIN	3	Н	Synosma suaveolens	NFS IN NORTH CAROLINA
JAPANESE YEW MOSS	3	1	Taxiphyllum alternans	NFS IN NORTH CAROLINA
ASH-LEAVED GOLDEN-BANNER	3	2	Thermopsis mollis var. fraxinifolia	NFS IN NORTH CAROLINA
CAROLINA ASHPHODEL	3	3	Tofieldia glabra	NFS IN NORTH CAROLINA
AMMONS'S TORTULA	1	1	Tortula ammonsiana	NFS IN NORTH CAROLINA
CAROLINA FLUFF GRASS	3	3	Tridens carolinianus	NFS IN NORTH CAROLINA
MOTTLED TRILLIUM	3	1	Trillium discolor	NFS IN NORTH CAROLINA
LEAST TRILLIUM	3	1	Trillium pusillum	NFS IN NORTH CAROLINA
CAROLINA LEAST TRILLIUM	2	1	Trillium pusillum var. pusillum	NFS IN NORTH CAROLINA
SWEET WHITE TRILLIUM	3	1	Trillium simile	NFS IN NORTH CAROLINA
HAIRY BLUEBERRY	3	2	Vaccinium hirsutum	NFS IN NORTH CAROLINA
PIEDMONT STRAWBERRY	2	Н	Waldsteinia lobata	NFS IN NORTH CAROLINA
A FOLIOSE LICHEN	2	2	Xanthoparmelia monticola	NFS IN NORTH CAROLINA
CHAPMAN'S YELLOW-EYED GRASS	3	2	Xyris chapmanii	NFS IN NORTH CAROLINA
HARPER'S YELLOW-EYED GRASS	3	2	Xyris scabrifolia	NFS IN NORTH CAROLINA
TURTLE, BOG (S.O. POPULATION)	3	2	Clemmys muhlenbergii	NFS IN NORTH CAROLINA
SNAKE, CAROLINA SALT MARSH	3	3	Nerodia sipedon williamengelsi	NFS IN NORTH CAROLINA
LIZARD, MIMIC GLASS	3	2	Ophisaurus mimicus	NFS IN NORTH CAROLINA
GLYPH, FRAGILE	1	1	Glyphyalinia clingmani	NFS IN NORTH CAROLINA
TALLUS COIL	2	1	Heliodiscus sheari	NFS IN NORTH CAROLINA
MANTLESLUG, BLACK	3	2	Pallifera hemphilli	NFS IN NORTH CAROLINA
SUPERCOIL, GLOSSY	3	2	Paravitrea placentula	NFS IN NORTH CAROLINA
SUPERCOIL, SCULPTED	2	2	Paravitrea ternaria	NFS IN NORTH CAROLINA
SUPERCOIL, ROAN	2	2	Paravitrea varidens	NFS IN NORTH CAROLINA
DOME, BIDENTATE	3	2	Ventridens coelaxis	NFS IN NORTH CAROLINA

Appendix D

Existing and Projected Traffic Volumes

Historic Traffic Counts

Existing Traffic Counts

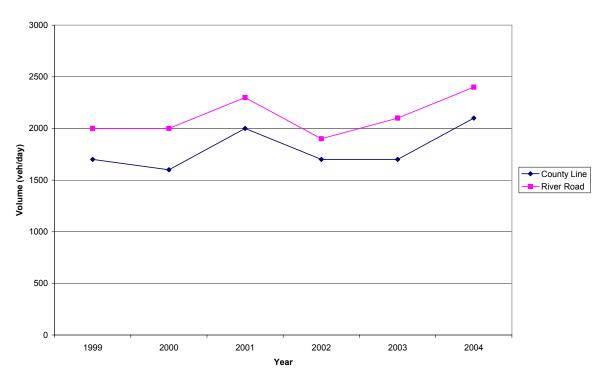
Projected Traffic Volumes

Historic Traffic Counts

Source: Traffic Safety and Needs Report (Kimley-Horn and Associates, June 2006).

Historic Average Annual Daily Traffic on NC 109 in Northern Montgomery County

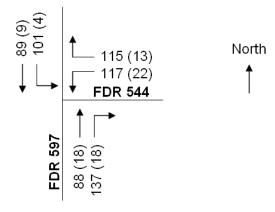
Historic Average Annual Daily Traffic - NC 109



Existing Traffic Counts

Source: Traffic Safety and Needs Report (Kimley-Horn and Associates, June 2006).

Existing (2006) Turning Movement Count – FDR 597 at FDR 544



Source: Carolina Traffic Services

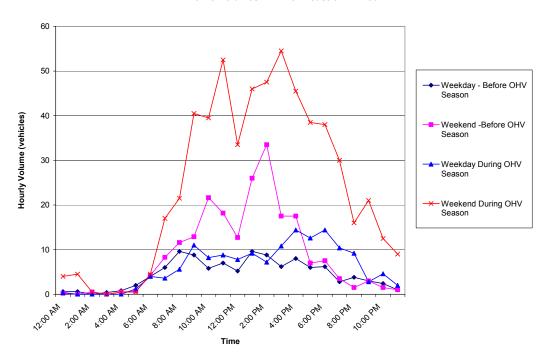
Legend

XX Weekend 2030 Daily Turning Movement Volume

(XX) Weekend 2030 Peak Hour Turning Movement Volume

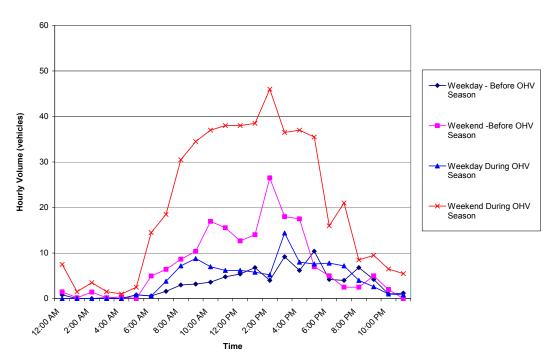
Hourly Traffic Volumes on FDR 544 east of FDR 597

Traffic Volumes - FDR 544 east of FDR 597



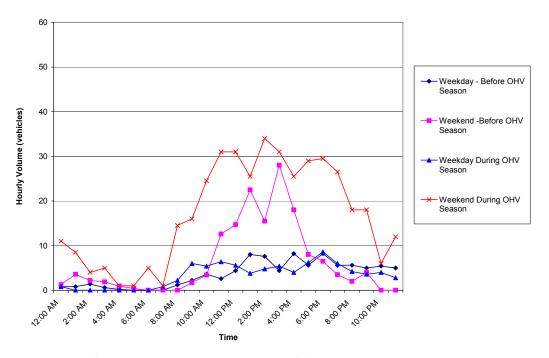
Hourly Traffic Volumes on FDR 597 south of FDR 544

Traffic Volumes - FDR 597 south of FDR 544



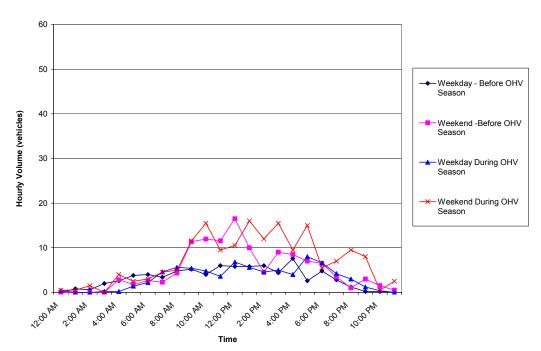
Hourly Traffic Volumes on FDR 597A west of FDR 597

Traffic Volumes - FDR 597A west of FDR 597



Hourly Traffic Volumes on FDR 597 south of SR 1179

Traffic Volumes - FDR 597 south of SR 1179



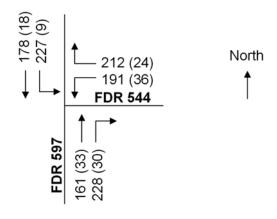
Projected Traffic Volumes

Source: Traffic Safety and Needs Report (Kimley-Horn and Associates, June 2006).

Peak Segment Trip Generation

Time	Direction	Existing Traffic	2030 Background Traffic	Total New Residential Trips	Adjusted New Residential Trips	Total Trips
Weekend	Northbound	38	63	21	5	68
Peak	Southbound	20	33	21	5	38
Hour	TOTAL	58	96	42	10	106
Weekend	Northbound	291	480	117	15	495
Daily	Southbound	226	373	117	15	388
	TOTAL	517	853	234	30	883
Weekday	Northbound	31	51	43	7	58
Peak	Southbound	13	21	43	4	25
Hour	TOTAL	44	72	86	11	83
Weekday	Northbound	154	254	119	15	269
Daily	Southbound	96	158	119	15	173
	TOTAL	250	412	238	30	442

Projected Turning Movement Counts – FDR 597 at FDR 544



Legend

XX Weekend 2030 Daily Turning Movement Volume

(XX) Weekend 2030 Peak Hour Turning Movement Volume

Appendix E

Agency Scoping Letter



Eastern Federal Lands Highway Division 21400 Ridgetop Circle Sterling, VA 20166-6511

Federal Highway Administration

Refer to: HFPP-15

MAR 0 3 2006

Mr. Tim Johnson Division Engineer North Carolina Department of Transportation Highway Division 8 P.O. Box 1067 Aberdeen, NC 28315

Subject: Environmental Assessment for Rehabilitation of Forest Developmental Road

(FDR) 597 in Uwharrie National Forest

Dear Mr. Johnson:

The Federal Highway Administration, in cooperation with the United States Forest Service, is in the process of preparing an Environmental Assessment for rehabilitation of Forest Developmental Road (FDR) 597 in Uwharrie National Forest. This project will include widening and resurfacing FDR 597, replacing a "vented ford" structure over Reeves Spring Branch with a bridge, and reconstructing stone masonry culverts. The primary purpose for this project is to bring FDR 597 up to current NCDOT design standards for local rural roads, as NCDOT plans to add Forest Highway 49 (which includes FDR 597) to the NCDOT system. The roadway is currently only 13 to 16 feet wide with a gravel surface, and the vented ford frequently clogs with natural debris and causes it to be overtopped by the stream. The project study area is located in Montgomery County, North Carolina, and extends from State Route 1179 to FDR 544, McLean's Creek Road, a distance of approximately 3.5 miles (see attached map). The objective of the EA is to evaluate all reasonable alternatives for the proposed roadway reconstruction of FDR 597, including the no build alternative.

This study is in the early stages of development and we would like to invite your participation. We request your input early in this environmental scoping process to assist us in determining the range of issues to be addressed and to identify significant issues related to the proposed action. As the project moves forward, your agency will be asked to review the analysis portion of the environmental document concerning issues in which your Agency has jurisdiction and/or special expertise.

We are also requesting your participation in our ongoing discussions, meetings, and the preparation of submissions to the appropriate Commissions and Agencies for review and/or approval. Upon completion, we anticipate that the Environmental Assessment be





sufficient to address the needs of our Agencies and stakeholders and to serve as a decision-making document.

We would appreciate your response at your earliest convenience to identify a representative from your Agency to assist us in this study and to confirm attendance at the agency scoping/kick-off meeting, scheduled for Wednesday, March 22, 2006, at 10:00 AM at Partnership for Children, 404 N. Main Street (Hwy 134), Troy, North Carolina (located 1 block north of City Hall). Following the meeting, there will be an opportunity to review the project area in the field.

Sincerely yours,

Kevin S. Rose

Environmental Protection Specialist

Duplicate Original to:

Mr. Art King Division Environmental Officer North Carolina Department of Transportation Highway Division 9 P.O. Box 1068 Aberdeen, NC 28316

Ms. Chrys Baggett North Carolina Department of Administration State Clearinghouse 1302 Mail Service Center Raleigh, NC 27699

Mr. Keith Harris U.S. Army Corps of Engineers Wilmington Field Office P.O. Box 1890 69 Darlington Avenue Wilmington, NC 28402

Ms. Renee Gledhill-Earley NC State Historic Preservation Office 4617 Mail Service Center Raleigh, NC 27699

Mr. Ken Averitte
North Carolina Department of
Environment and Natural Resources
Fayetteville Regional Office
Systel Building
225 Green Street
Suite 714
Fayetteville, NC 28301

Appendix F

Public Involvement

Letter to Adjacent Landowners and Tenants, August 2006

Forest Service **Uwharrie Ranger District**

789 Hwy 24/27 East Troy, NC 27371

File Code: 1950

Date: *

Dear Friend of the Uwharrie National Forest:

The Uwharrie National Forest is considering a proposal from Federal Highways to improve Forest Development Road (FDR) 597, also known as Badin Lake Road, from the intersection with McLeans Creek Road (FSR 544) north to the intersection with Shamrock Road (SR 1179). A total of 3.5 miles of road have been identified for upgrading to a two-lane, paved road. Construction work would begin in the summer of 2007. The location of the project area can be found on the map in the attached draft newsletter.

The improvements under consideration would provide a wider two-lane paved road and a bridge over Reeves Spring Branch, as well as replace or reconstruct existing culverts under the road. These improvements would bring Badin Lake Road to current North Carolina Department of Transportation (NCDOT) design standards, thus enabling NCDOT to take over maintenance of the road in the future and provide a safer road for public travel. As part of the improvement study process, an Environmental Assessment is being conducted to develop and evaluate several alternatives, including the "no action" alternative which would leave the road in its current condition

Because construction alternatives could impact adjacent property owners and users of Badin Lake Road, the U.S. Forest Service is interested in discussing this proposal with you. If you have any questions or concerns regarding this project, please contact me at the U.S. Forest Service Office in Troy, North Carolina, by telephone at (910) 576-6391, or by e-mail at deborahwalker@fs.fed.us. If you or your neighbors are interested in talking to my staff or the contractor involved with the project to further discuss the potential impacts, I would be willing to set up a meeting with you individually or as a small group. Depending on the level of interest expressed by the public, a larger public meeting could be scheduled to provide additional information about the study and proposed improvements. The attached draft newsletter will be finalized and mailed to other interested citizens after receiving your comments.

I look forward to hearing from you with any comments about this project or how best to include you in the public involvement process.

Sincerely,

DEBORAH WALKER District Ranger, Uwharrie National Forest



