



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

October 21, 2011

U.S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28801-5006

ATTN: Ms. Sarah Elizabeth Hair
NCDOT Coordinator

Dear Madam:

Subject: **REQUEST FOR THE LIFTING OF "ON HOLD STATUS"** for the Section 404 Nationwide 23, 33 and 13 Permits for the proposed replacement of Bridge No. 184 over Waxhaw Creek on SR 1113 (Davis Road) in Union County, Federal Aid Project No. BRZ-1113(3); Division 10; TIP No. B-4294; WBS 33632.1.1.

Reference: USACE Incomplete Application Notification dated July, 22, 2011.
Previous NCDOT Applications dated July 8, 2011 & September 28, 2011.
Concurrence Letter from the US Fish and Wildlife Service dated October 18, 2011.

This letter is in response to the US Army Corps of Engineer's Incomplete Application Notification for Transportation Improvement Project B-4294. The US Fish and Wildlife Service (USFWS), in consultation with the NCDOT, determined that a Biological Assessment and subsequent Biological Opinion are no longer required for this project. After further research, the previous data by the NC Wildlife Resources Commission that indicated the presence of a Carolina Heelsplitter (*Lasmigona decorata*) specimen in the project area was found to be misidentified. Also, after multiple surveys, no Carolina Heelsplitters were found, and poor habitat conditions exist throughout the project vicinity.

In consultation with the USFWS, the NCDOT has submitted a Biological Evaluation for the Carolina Heelsplitter. In response to this evaluation, the USFWS has concurred with the biological opinion of May Effect, Not Likely to Adversely Affect for the Carolina Heelsplitter. This concurrence is attached to this letter.

This resolution satisfies the deficiency noted on your letter dated July, 22, 2011 and the Department hereby requests the lifting of the "On Hold" Status and subsequent processing of the application thereof.

A copy of this request and its distribution list will be posted on the NCDOT Website at: <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>. If you have any questions or need additional information, please contact Michael Turchy at maturchy@ncdot.gov or (919) 707-6157.

Sincerely,

Gregory J. Thorpe, Ph.D.
Branch Manager, Project Development and Environmental Analysis Branch

cc: NCDOT Permit Application Standard Distribution List

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000
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WEBSITE: WWW.NCDOT.ORG/DOH/PRECONSTRUCT/PE/

LOCATION:
CENTURY CENTER, BUILDING A
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

October 18, 2011

Dr. Gregory J. Thorpe, Manager
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: Endangered species concurrence for replacement of Union County, North Carolina Bridge 184 on SR 1113 (Davis Road) over Waxhaw Creek, TIP No. B-4294

As requested by the North Carolina Department of Transportation (NCDOT), we have reviewed the information provided in the biological evaluation for the project B-4294, including the biological conclusion for federally protected species. The following comments are provided in accordance with the provisions of section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

Listed and candidate species known to occur in Union County, North Carolina include Carolina heelsplitter (*Lasmigona decorata*, Endangered); Michaux's sumac (*Rhus michauxii*, Endangered); Schweinitz's sunflower (*Helianthus schweinitzii*, Endangered); and Georgia aster (*Symphotrichum georgianum*, Candidate). The biological evaluation (document) provided indicates a biological conclusion of no effect for the species Michaux's sumac, Schweinitz's sunflower, and Georgia aster, based on negative survey data from the project site. The document indicates a biological conclusion of May Affect: Not Likely to Adversely Affect (NLTA) for Carolina heelsplitter, based on negative survey data and project commitments to avoid effects to the species. The project action area is located within designated critical habitat for Carolina heelsplitter. The document provided indicates a biological conclusion of May Affect: Not Likely to Adversely Affect (Adversely Modify) for Carolina heelsplitter critical habitat, based on preexisting poor quality of the habitat within the action area and project commitments to avoid further degradation of the constituent elements of the critical habitat.

There are existing records of live Carolina heelsplitter at sites in Waxhaw Creek upstream and downstream of the action area. To our knowledge, the only valid record of Carolina heelsplitter within the action area is a single relict shell from a deceased animal collected during NCDOT survey efforts in 2005. Two recent survey efforts were conducted in April and September 2011. Neither recent effort produced any evidence of

Carolina heelsplitter within the action area. Species richness and abundance of other mussel species declined within the action area between 2005 and the present. The substrate within the action area is covered with silt, mud and detritus; a condition that is not conducive to mussel persistence within a stream reach. During the September 2011 survey, Waxhaw Creek did not have observable flow and large numbers of dead mussel shells were observed. Information provided in the survey report indicates that the presence of live Carolina heelsplitter in the action area is unlikely.

In order to avoid effects to Carolina heelsplitter individuals that may be present but undetected and to avoid additional adverse effects to the constituent elements of the critical habitat in the action area, NCDOT has proposed avoidance strategies that are intended to eliminate adverse effects of the proposed action. NCDOT proposes to replace Union County Bridge 184 along existing alignment using off site detour. The existing 70 foot structure will be removed using NCDOT's Best Management Practices (BMPs) for Bridge Demolition and Removal. The existing structure will be removed in a manner that does not allow asphalt or other bridge material to fall into the water. The existing bridge has seven in-water driven wood piles that will be removed by being pulled from the substrate. It is our understanding that wooden piles can break during removal. In the case of breakage, it is acceptable to leave part of the wooden pile in the substrate as long as the part remaining is below the level of the existing substrate. Turbidity curtains will be used around the piles while pulling to minimize the amount of sediment that is distributed downstream during removal.

The new 100 foot structure is designed to be 43% longer than the existing structure, which, according to the provided analysis, provides an increase in hydraulic cross section and results in a 21% reduction in storm water velocities downstream of the bridge during a 100 year storm event when compared to the present structure. The new structure is a single span structure, eliminating the potential for bent associated scour in the stream. The increased hydraulic cross section additionally provides a flood plain bench for wildlife passage, as shown on the provided plan sheet.

NCDOT has proposed improvements to the storm drainage from the bridge and roadway. Bridge deck storm water drainage will be routed by shoulder berm gutter to a preformed scour hole on the east bank of the stream; this in conjunction with soil matting will provide for diffuse flow of water to the creek. On the west side of the creek the natural grade causes erosive velocities. Presently, unlined ditches are eroding. NCDOT proposes to stabilize these banks with Class I riprap. NCDOT will widen the ditches on the on the west side approach roadway and install rock checks to slow the velocity of storm water before reaching the stream. The document states that "NCDOT recommends doing so (widening the ditch and installing rock checks) only up to where the ditch becomes part of someone's yard." Because this is not shown on the provided plan sheet, it should be an item for discussion at the proposed preconstruction meeting or should be discussed prior to the preconstruction meeting, as final plans become available.

NCDOT proposes to implement these project specific measures, first discussed in a November 7, 2006 on-site meeting and subsequently modified by consultation between USFWS and NCDOT.

1. Design standards for Sensitive Watersheds will be incorporated into this project.
2. Existing timber piles will be pulled or broken off for removal.
3. End bents will be removed to approximately 1-foot below natural ground.
4. The asphalt wearing surface will be removed to eliminate asphalt from falling into the water when the deck is removed.
5. There will be no bents in the water.
6. The slopes under the footprint of the bridge are to be cut back 1-2 feet and replaced with rip rap. *(Since the November 7, 2006 meeting, further consultation, design, and minimization has occurred. As shown on the permit drawings, the rip rap zone will be approximately 76 linear feet on the south abutment and 75 feet on the north abutment. On the south side, there will be a minimum of 16 feet between the top of bank and the edge of rip rap and 14 feet on the north side between the top of bank and edge of rip rap.)* A rip rap lining will be used in the proposed ditch including its outlet into Waxhaw Creek. This is to stabilize the existing ditch and stream bank, which is presently eroding and dumping sediment into the creek.
7. A preconstruction meeting will be held on site with the Resident Engineer, Contractor and USFWS prior to work beginning on this project.
8. The proposed bridge will be 30 feet longer and will increase the hydraulic cross section from 578 square feet to 857 square feet. The proposed bridge will also decrease the stream velocities by 4-21%, depending on the storm event.

NCDOT DESIGN STANDARDS IN SENSITIVE WATERSHEDS

The Department of Transportation will adhere to the following guidelines when operating within sensitive watersheds.

A. Erosion and sedimentation control measures, structures, and devices within a sensitive watershed shall be so planned, designed and constructed to provide protection from the runoff of the 25 year storm which produces the maximum peak rate of runoff as calculated according to procedures in the "Erosion and Sediment Control Planning and Design Manual" or according to procedures adopted by the North Carolina Department of Transportation

B. Sediment basins within sensitive watershed shall be designed and constructed such that the basin will have a settling efficiency of at least 70 percent for the 40 micron (0.04mm) size soil particle transported into the basin by the runoff of the two year storm which produces the maximum peak rate of runoff as calculated according to procedures in the "Erosion and Sediment Control Planning and Design Manual" or according to procedures adopted by the North Carolina Department of Transportation.

C. Erosion and sedimentation control measures will include the use of flocculants in appropriate areas to improve the settling of sediment particles and reduce turbidity levels in construction runoff. The use of flocculants will conform to Division of Water Quality approved product list.

D. Newly constructed open channels in sensitive watersheds shall be designed and constructed with side slopes no steeper than two horizontal to one vertical if a vegetative cover is used for stabilization unless soil conditions permit a steeper slope or where the slopes are stabilized by using mechanical devices, structural devices or other acceptable ditch liners. In any event, the angle for side slopes shall be sufficient to restrain accelerated erosion.

E. Provide ground stabilization sufficient to restrain erosion must be provided for any portion of a land disturbing activity in a sensitive watershed within 14 calendar days following completion of construction or grading activities cease.

NCDOT proposes to designate a 50 foot stream buffer as an environmentally sensitive area. Project commitments within the environmentally sensitive area are described below.

Description

This project is located in an Environmentally Sensitive Area. This designation requires special procedures to be used for clearing and grubbing, temporary stream crossings, and grading operations within the Environmentally Sensitive Areas identified on the plans and as designated by the Engineer. This also requires special procedures to be used for seeding and mulching and staged seeding within the project.

The Environmentally Sensitive Area shall be defined as a 50-foot buffer zone on both sides of the stream or depression measured from top of streambank or center of depression.

Construction Methods

(A) Clearing and Grubbing

In areas identified as Environmentally Sensitive Areas, the Contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations as described in Article 200-1 of the Standard Specifications. Only clearing operations (not grubbing) shall be allowed in this buffer zone until immediately prior to beginning grading operations. Erosion control devices shall be installed immediately following the clearing operation.

(B) Grading

Once grading operations begin in identified Environmentally Sensitive Areas, work shall progress in a continuous manner until complete. All construction within these areas shall progress in a continuous manner such that each phase is complete and areas are permanently stabilized prior to beginning of next phase. Failure on the part of the Contractor to complete any phase of construction in a continuous manner in Environmentally Sensitive Areas will be just cause for the Engineer to direct the suspension of work in accordance with Article 108-7 of the Standard Specifications.

(C) Temporary Stream Crossings

Any crossing of streams within the limits of this project shall be accomplished in accordance with the requirements of Subarticle 107-13(B) of the Standard Specifications.

(D) Seeding and Mulching

Seeding and mulching shall be performed in accordance with Section 1660 of the Standard Specifications and vegetative cover sufficient to restrain erosion shall be installed immediately following grade establishment.

Seeding and mulching shall be performed on the areas disturbed by construction immediately following final grade establishment or grading activity will cease for more than 7 days. No appreciable time shall lapse into the contract time without stabilization of slopes, ditches and other areas within the Environmentally Sensitive Areas.

(E) Stage Seeding

Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 feet in height measured along the slope, or greater than 2 acres in area. Each stage shall not exceed the limits stated above.

If the measures outlined in this concurrence are implemented and strictly adhered to for this project, we believe the project will not adversely affect the Carolina heelsplitter or its critical habitat. We concur with the NCDOT's determination that this project may affect, but is not likely to adversely affect the Carolina heelsplitter and may affect, but is not likely to adversely modify Carolina heelsplitter critical habitat. Therefore, we believe the requirements under section 7(c) of the Act are fulfilled. However, obligations under section 7 of the Act 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 is determined that may be affected by the identified action.

If you have questions about these comments, please contact Mr. Jason Mays of our staff at 828/258-3939, Ext. 226. In any future correspondence concerning this project, please reference our Log Number 4-2-11-155.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Cole". The signature is fluid and cursive, with a large initial "B" and a smaller "C" followed by "ole".

Brian P. Cole
Field Supervisor

Cc:

Ms. Marla J. Chambers, Western NCDOT Permit Coordinator, North Carolina Wildlife Resources Commission, 12275 Swift Road, Oakboro, NC 28129

Ms. Polly Lespinasse, Mooresville Regional Office, North Carolina Division of Water Quality, 610 East Center Avenue, Suite 301, Mooresville, NC 28115

Ms. Liz Hair, Asheville Regulatory Field Office, U.S. Army Corps of Engineers, 151 Patton Avenue, Room 208, Asheville, NC 28801-5006