



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

December 15, 2017

MEMORANDUM TO: Brian Burch, P.E.  
Division 14 Engineer

FROM: Philip S. Harris, III, P.E., Manager  
for Environmental Analysis Unit 

SUBJECT: Transylvania County; Replacement of Bridge 12 on SR 1538 over  
Hogshead Creek; Federal Aid Project Number. BRZ-1538 (9);  
WBS Element 38593.1.2; **TIP B-4823**

Attached are the US Army Corps of Engineers Nationwide Permits and N.C. Division of Water Resources (NCDWR) Water Quality Certification. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:  
<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>  
**Quick Links>Permit Documents> Issued Permits.**

cc: w/o attachment (see website for attachments)

Mr. Ron Davenport, P.E. State Contract Officer  
Mr. Dave McHenry, Division 14 Environmental Officer  
Dr. Majed Al-Ghandour, P.E., Programming and TIP  
Mr. Derrick Weaver, P.E., Project Delivery  
Mr. Carl Barclay, P.E., Utilities Unit  
Mr. Stephen Morgan, P.E., Hydraulics  
Mr. Brian Hanks, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. Ron Hancock, P.E., State Roadway Construction Engineer  
Ms. Beth Harmon, NC Division of Mitigation Services  
Ms. Cheterra Sheff, Single Audit Compliance

# PROJECT COMMITMENTS

T.I.P Project No. B-4823  
Bridge No. 12 on SR 1538 over Hogsed Creek  
Transylvania County  
Federal Project No. BRZ-1538(9)  
WBS Element 38593.1.2

## COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

*Current status, changes, or additions to the project commitments as shown in the environmental documents are printed in italics.*

### **Division Fourteen Construction, Resident Engineer's Office – Offsite Detour**

~~In order to have time to adequately reroute school busses, Transylvania County Schools will be contacted at least one month prior to road closure.~~

~~Transylvania County Emergency Services will be contacted at least one month prior to road closure to make the necessary temporary reassignments to primary response units.~~

*No longer necessary, the traffic control plan no longer requires an Offsite Detour and traffic will be maintained during staged construction.*

### **PDEA – Formal Section 7 Consultation for the Appalachian elktoe**

The Natural Environment Section with assistance from Project Development will pursue a formal Section 7 Consultation with the USFWS for the endangered Appalachian elktoe. This consultation will be completed prior to permitting and must be completed prior to requesting construction authorization.

*Formal Section 7 Consultation has been completed. On September 14, 2017, the USFWS submitted their Biological Opinion for the proposed project. Please see additional endangered species related commitments below.*

### **All Design Groups/Division Resident Construction Engineer – Trout Issues**

- NCDOT will implement **Design Standards in Sensitive Watersheds** for this project
- NCDOT will observe a **moratorium** on in-water work from October 15 – April 15 of any given year.

*This commitment will be implemented during project construction.*

### **Division 14 Construction**

*BO Reasonable and Prudent Measure (a.): The FHWA/NCDOT will ensure that the contractor understands and follows the measures listed in the “Conservation Measures”, “Reasonable and Prudent Measures” and “Terms and Conditions” sections of this [Biological] Opinion.*

*BO Condition (a.): A Service biologist and a NCDOT biologist (Mike Sanderson) will be present at the on-site preconstruction meeting to cover permit conditions and discuss any questions the contractor has regarding implementation of this project. After the contractor submits plans for various stages of the project, a Service Biologist and a NCDOT biologist (Mike Sanderson) will review and provide comments on the plans and will attend any meetings to discuss implementation of the plans.*

*BO Condition (b.): Activities in the floodplain will be limited to those absolutely necessary to remove the existing bridge and install the RCBCs. Areas used for borrow or construction by-products will not be located in wetlands or the 100-year floodplain.*

*BO Conservation Measure: Machines will be refueled outside of the Environmentally Sensitive Area and inside a specific containment area designed to contain any spills and facilitate easy cleanup.*

*BO Conservation Measure: Machines will be inspected daily to catch and repair leaks of hydraulic fluid.*

### **Roadside Environmental Unit (REU)**

*BO Condition (c.): Where possible, the NCDOT will plant trees that provide shade to impervious surfaces in order to reduce heat pollution in the river.*

### **Environmental Analysis Unit (EAU) Biological Surveys Group (BSG)**

*BO Conservation Measure: As part of the NCDOT and FHWA's section 7.a.1 regulatory requirement under the Act, and to offset the long-term effects to freshwater mussel habitat in the vicinity of this proposed project (B-4823), the NCDOT and FHWA (in consultation with the Service) have agreed to provide \$15,000 to the NCWRC mussel propagation program at UNCA. Propagation and population augmentation through these efforts is intended to assist in the recovery of species in the French Broad River and to have a positive effect on the environmental baseline, which is greater than the perceived negative impact of the loss of habitat due to this bridge project.*

## COMMITMENTS FROM PERMITTING

### **Division 14 Construction, EAU – BSG, REU**

404 Condition 2: The U.S. Fish and Wildlife Service's (USFWS's) Biological Opinion (BO), dated September 14, 2017, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" of the Appalachian elktoe (*Alasmidonta raveneliana*). Your authorization under this USACE permit is conditioned on your compliance with the following: (1) all conservation measures (pages 5-7 of the BO); (2) all reasonable and prudent measures (page 23 of the BO), and; (3) all terms and conditions (page 23 of the BO). Failure to comply with all of the above noted items would constitute non-compliance with your USACE permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA. The BO is attached to this verification letter for reference.

**U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT**

Action ID. SAW-2017-02435 TIP No. B-4823 County: Transylvania

**GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION**

Property Owner / Authorized Agent: North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
Philip S. Harris III, P.E., C.P.M.  
Natural Environment Section Head

Address: 1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Telephone No.: 919-707-6103

Size and location of property (water body, road name/number, town, etc.): The project is located at Bridge 12 on SR 1538 near Brevard in Transylvania County, North Carolina.

Description of project area and activity: In order to replace the bridge with a culvert, the permittee is authorized to impact waters of the U.S. as follows:

**Summary of Authorized Impacts and Required Mitigation**

Impact ID #	NWP / GP #	Open Water (ac)		Wetland (ac)		Stream (lf)	
		Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Site 1 (Hogsed Creek)	<u>23</u>						<b>42'</b> (fill/culvert)
Site 1 (Hogsed Creek)	<u>13 and 23</u>						<b>65'</b> (rip rap/stabilization/ bench construction)
Site 1 (Hogsed Creek)	<u>33</u>					<b>58'</b> (dewater)	
<b>Impact Totals</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58'</b>	<b>107'</b>
Total Loss of waters of the U.S. (wetlands and/or open waters in ac)			<b>0</b>	Total Loss of waters of the U.S. (streams in lf)			<b>42'</b>
Required Wetland Mitigation (ac)			<b>0</b>	Required Stream Mitigation (lf)			<b>84</b>

Applicable Law:  Section 404 (Clean Water Act, 33 USC 1344)  
 Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: Regional General Permit Number:  
 Nationwide Permit Number: 13, 23, and 33

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions, your submitted plans, and the following special conditions:

**Special Conditions**

1. All work must be performed in strict compliance with the description of work and plans in the application dated October 10, 2017. Any modification to the description of work and/or the permit plans must be approved by the USACE prior to implementation.

2. The U.S. Fish and Wildlife Service's (USFWS's) Biological Opinion (BO), dated September 14, 2017, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" of the Appalachian elktoe (*Alasmidonta raveneliana*). Your authorization under this USACE permit is conditioned on your compliance with the following: (1) all conservation measures (pages 5-7 of the BO); (2) all reasonable and prudent measures (page 23 of the BO), and; (3) all terms and conditions (page 23 of the BO). Failure to comply with all of the above noted items would constitute non-compliance with your USACE permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA. The BO is attached to this verification letter for reference.

3. The permittee shall ensure that the environmental project commitments listed on the green sheet will be implemented. These include implementation of Design Standards in Sensitive Watersheds and prohibiting in-water work from October 15-April 15 of any given year.

4. As noted in the attached email from the NC Wildlife Resources Commission dated November 13, 2017, the permittee shall ensure that no land disturbance occurs within the 25' trout buffer from October 15-April 15 of any given year.

5. In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.

6. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this authorization letter in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this authorization letter, all conditions, and any authorized modifications. A copy of this authorization letter, all conditions, and any authorized modifications, shall be available at the project site during construction and maintenance of this project.

Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 828-296-4500) to determine Section 401 requirements.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Lori Beckwith at 828-271-7980.

Corps Regulatory Official: Lori Beckwith **BECKWITH.LORETTA.ANN.1173452264**  
Date: November 24, 2017 Expiration Date of Verification: March 18, 2022

Digitally signed by  
BECKWITH.LORETTA.ANN.1173452264  
DN: c=US, o=U.S. Government, ou=DoD,  
ou=PKI, ou=USA,  
cn=BECKWITH.LORETTA.ANN.1173452264  
Date: 2017.11.24 17:12:39 -05'00'

Action ID Number: SAW-2017-02435 TIP No. B-4823

County: Transylvania

Permittee: NCDOT, Mr. Philip S. Harris III, P.E., C.P.M.

Project Name: NCDOT/B-4823/Bridge 12/Div 14

Nationwide Permit: 13, 23, and 33

Date Verification Issued: November 24, 2017

Project Manager: Lori Beckwith

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT  
Attn: Lori Beckwith  
151 Patton Avenue  
Room 208  
Asheville, NC 28801-5006

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

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Signature of Permittee

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Date

**U.S. ARMY CORPS OF ENGINEERS**  
**Wilmington District**  
**Compensatory Mitigation Responsibility Transfer Form**

**Permittee:** North Carolina Department of Transportation  
**Project Name:** TIP B-4823/Bridge No. 12 on SR 1538

**Action ID:** SAW-2017-02435  
**County:** Transylvania

**Instructions to Permittee:** The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

**Instructions to Sponsor:** The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

**Permitted Impacts and Compensatory Mitigation Requirements**

**Permitted Impacts Requiring Mitigation\*:** **8-digit HUC and Basin:** 06010105, French Broad River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
		42				

\*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

**Compensatory Mitigation Requirements:** **8-digit HUC and Basin:** 06010105, French Broad River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
		84				

**Mitigation Site Debited:** NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

**Section to be completed by the Mitigation Sponsor**

**Statement of Mitigation Liability Acceptance:** I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

**Mitigation Sponsor Name:** NCDMS

**Name of Sponsor's Authorized Representative:** Brian Harmon

Brian Harmon 11/28/2017  
**Signature of Sponsor's Authorized Representative** **Date of Signature**

**USACE Wilmington District  
Compensatory Mitigation Responsibility Transfer Form, Page 2**

**Conditions for Transfer of Compensatory Mitigation Credit:**

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

**Comments/Additional Conditions:**

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).*** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

**USACE Project Manager:** Lori Beckwith  
**USACE Field Office:** Wilmington Regulatory Field Office  
US Army Corps of Engineers  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

**Email:** [loretta.a.beckwith@usace.army.mil](mailto:loretta.a.beckwith@usace.army.mil)

**BECKWITH.LORETT  
A.ANN.1173452264**

Digitally signed by  
BECKWITH.LORETTA.ANN.1173452264  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,  
ou=USA,  
cn=BECKWITH.LORETTA.ANN.1173452264  
Date: 2017.11.24 17:20:39 -05'00'

**USACE Project Manager Signature**

**November 24, 2017**

**Date of Signature**

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

**NATIONWIDE PERMIT 13  
DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS  
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS  
FEDERAL REGISTER  
AUTHORIZED MARCH 19, 2017**

**Bank Stabilization.** Bank stabilization activities necessary for erosion control or prevention, such as vegetative stabilization, bioengineering, sills, rip rap, revetment, gabion baskets, stream barbs, and bulkheads, or combinations of bank stabilization techniques, provided the activity meets all of the following criteria:

- (a) No material is placed in excess of the minimum needed for erosion protection;
- (b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects (an exception is for bulkheads – the district engineer cannot issue a waiver for a bulkhead that is greater than 1,000 feet in length along the bank);
- (c) The activity will not exceed an average of one cubic yard per running foot, as measured along the length of the treated bank, below the plane of the ordinary high water mark or the high tide line, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;
- (d) The activity does not involve discharges of dredged or fill material into special aquatic sites, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;
- (e) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the United States;
- (f) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas);
- (g) Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization;
- (h) The activity is not a stream channelization activity; and
- (i) The activity must be properly maintained, which may require repairing it after severe storms or erosion events. This NWP authorizes those maintenance and repair activities if they require authorization.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the bank stabilization activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

**Notification:** The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the bank stabilization activity: (1) involves discharges into special aquatic sites; or (2) is in excess of 500 feet in length; or (3) will involve the discharge of greater than an average of one cubic yard per running foot as measured along the length of the treated bank, below the plane of the ordinary high water mark or the high tide line. (See general condition 32.) (Authorities: Sections 10 and 404)

**NATIONWIDE PERMIT 23  
DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS  
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS  
FEDERAL REGISTER  
AUTHORIZED MARCH 19, 2017**

**Approved Categorical Exclusions.** Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

(a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 et seq.), that the activity is categorically excluded from the requirement to prepare an environmental impact statement or environmental assessment analysis, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and

(b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP.

**Notification:** Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letters. (Authorities: Sections 10 and 404)

**Note:** The agency or department may submit an application for an activity believed to be categorically excluded to the Office of the Chief of Engineers (Attn: CECW-CO). Prior to approval for authorization under this NWP of any agency's activity, the Office of the Chief of Engineers will solicit public comment. As of the date of issuance of this NWP, agencies with approved categorical exclusions are: the Bureau of Reclamation, Federal Highway Administration, and U.S. Coast Guard. Activities approved for authorization under this NWP as of the date of this notice are found in Corps Regulatory Guidance Letter 05-07, which is available at: <http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-07.pdf>. Any future approved categorical exclusions will be announced in Regulatory Guidance Letters and posted on this same web site.

**NATIONWIDE PERMIT 33**  
**DEPARTMENT OF THE ARMY**  
**CORPS OF ENGINEERS**  
**FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS**  
**FEDERAL REGISTER**  
**AUTHORIZED MARCH 19, 2017**

**Temporary Construction, Access, and Dewatering.** Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard. This NWP also authorizes temporary structures, work, and discharges, including cofferdams, necessary for construction activities not otherwise subject to the Corps or U.S. Coast Guard permit requirements. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if the district engineer determines that it will not cause more than minimal adverse environmental effects. Following completion of construction, temporary fill must be entirely removed to an area that has no waters of the United States, dredged material must be returned to its original location, and the affected areas must be restored to pre- construction elevations. The affected areas must also be revegetated, as appropriate. This permit does not authorize the use of cofferdams to dewater wetlands or other aquatic areas to change their use. Structures left in place after construction is completed require a separate section 10 permit if located in navigable waters of the United States. (See 33 CFR part 322.)

**Notification:** The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the activity is conducted in navigable waters of the United States (i.e., section 10 waters) (see general condition 32). The pre- construction notification must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions. (Authorities: Sections 10 and 404)

## NATIONWIDE PERMIT GENERAL CONDITIONS

The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.  
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.  
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
  
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.
  
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
  
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
  
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
  
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status,

unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that

might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWP.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory

birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-

lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill

material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:  
“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To

validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the

prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters.

Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and

supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

### **DISTRICT ENGINEER'S DECISION**

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal

individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and

include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

### **FURTHER INFORMATION**

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

## DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water’s surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National

Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the

primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Protected tribal resources: Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by, or reserved by or for, Indian tribes through treaties, statutes, judicial decisions, or executive orders, including tribal trust resources.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine- marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water

surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.

## **FINAL 2017 REGIONAL CONDITIONS**

### *NOTICE ABOUT WEB LINKS IN THIS DOCUMENT:*

*The web links (both internal to our Wilmington District and any external links to collaborating agencies) in this document are valid at the time of publication. However, the Wilmington District Regulatory Program web page addresses, as with other agency web sites, may change over the timeframe of the five-year Nationwide Permit renewal cycle, in response to policy mandates or technology advances. While we will make every effort to check on the integrity of our web links and provide re-direct pages whenever possible, we ask that you report any broken links to us so we can keep the page information current and usable. We apologize in advanced for any broken links that you may encounter, and we ask that you navigate from the Regulatory home page (Regulatory Permit Program Wetlands and Streams) of the Wilmington District Corps of Engineers, to the “Permits” section of our web site to find links for pages that cannot be found by clicking directly on the listed web link in this document.*

### **Final 2017 Regional Conditions for Nationwide Permits (NWP) in the Wilmington District**

#### **1.0 Excluded Waters**

The Corps has identified waters that will be excluded from the use of all NWP’s during certain timeframes. These waters are:

##### **1.1 Anadromous Fish Spawning Areas**

Waters of the United States identified by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are excluded during the period between February 15 and June 30, without prior written approval from the Corps and either NCDMF or NCWRC.

##### **1.2 Trout Waters Moratorium**

Waters of the United States in the designated trout watersheds of North Carolina are excluded during the period between October 15 and April 15 without prior written approval from the NCWRC, or from the Eastern Band of Cherokee Indians (EBCI) Fisheries and Wildlife Management (FWM) office if the project is located on EBCI trust land. (See Section 2.7 for information on the designated trout watersheds).

##### **1.3 Sturgeon Spawning Areas as Designated by the National Marine Fisheries Service (NMFS)**

Waters of the United States designated as sturgeon spawning areas are excluded during the period between February 1 and June 30, without prior written approval from the NMFS.

## **2.0 Waters Requiring Additional Notification**

The Corps has identified waters that will be subject to additional notification requirements for activities authorized by all NWPs. These waters are:

### **2.1 Western NC Counties that Drain to Designated Critical Habitat**

For proposed activities within waters of the United States that require a Pre-Construction Notification (PCN) and are located in the sixteen counties listed below, permittees must provide a copy of the PCN to the U.S. Fish and Wildlife Service (USFWS), 160 Zillicoa Street, Asheville, North Carolina 28801. This PCN must be sent concurrently to the U.S. Fish and Wildlife Service and the Corps Asheville Regulatory Field Office. Please see General Condition 18 for specific notification requirements related to the Endangered Species Act and the below website for information on the location of designated critical habitat.

Counties with tributaries that drain to designated critical habitat that require notification to the Asheville U.S. Fish and Wildlife Service: Avery, Cherokee, Forsyth, Graham, Haywood, Henderson, Jackson, Macon, Mecklenburg, Mitchell, Stokes, Surry, Swain, Transylvania, Union and Yancey.

Website and office addresses for Endangered Species Act Information:

The Wilmington District has developed the following website for permittees which provides guidelines on how to review linked websites and maps in order to fulfill NWP General Condition 18 requirements:

<http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram/AgencyCoordination/ESA.asp>

Permittees who do not have internet access may contact the appropriate U.S. Fish and Wildlife Service offices listed below or Corps at (910) 251-4633:

Asheville U.S. Fish and Wildlife Service Office counties: All counties west of and including Anson, Stanly, Davidson, Forsythe and Stokes Counties.

U.S. Fish and Wildlife Service  
Asheville Field Office  
160 Zillicoa Street  
Asheville, NC 28801  
Telephone: (828) 258-3939

Raleigh U.S. Fish and Wildlife Service Office counties: all counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

U.S. Fish and Wildlife Service  
Raleigh Field Office  
Post Office Box 33726

Raleigh, NC 27636-3726  
Telephone: (919) 856-4520

## **2.2 Special Designation Waters**

Prior to the use of any NWP, except NWP 3, that involves a discharge of dredged or fill material in any of the following identified waters and/or adjacent wetlands in North Carolina, permittees shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32). The North Carolina waters and wetlands that require additional notification requirements are:

“Outstanding Resource Waters” (ORW) or “High Quality Waters” (HQW) as designated by the North Carolina Environmental Management Commission; “Primary Nursery Areas” (PNA), including inland PNA, as designated by the North Carolina Marine Fisheries Commission and the NCWRC; or wetlands adjacent to these waters. Definitions of ORW, HQW and PNA waters can be found in the North Carolina State Administrative Code, Title 15A, Subchapters 2B and 10C (15A NCAC 02B, 15A NCAC 10C) and at the following World Wide Web page: <http://reports.oah.state.nc.us/ncac.asp?folderName=\Title%2015A%20-%20Environmental%20Quality&lookupError=15A%20NCAC%20000%20>. Surface water classifications for waters in North Carolina can be viewed at the North Carolina Division of Water Resources website or at the following World Wide Web Page: <https://deq.nc.gov/about/divisions/water-resources/planning/classification-standards/classifications>

Permittees who do not have internet access may contact the Corps at (910) 251- 4633.

## **2.3 Coastal Area Management Act (CAMA) Areas of Environmental Concern**

Non-federal permittees for any NWP in a designated “Area of Environmental Concern” (AEC) in the twenty (20) counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA) must also obtain the required CAMA permit. Development activities for non-federal projects may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – 69 Darlington Avenue, Wilmington, NC 28403, (910) 251-4802 or Washington Field Office – 2407 West 5th Street, Washington, NC 27889, (910) 251-4610).

## **2.4 Barrier Islands**

Prior to the use of any NWP on a barrier island of North Carolina, permittees must submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32).

## **2.5 Mountain or Piedmont Bogs**

Prior to the use of any NWP in a Bog, as classified by the North Carolina Wetland Assessment Methodology (NCWAM), permittees shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32). The latest version of NCWAM can be

viewed on the Corps RIBITS (Regulatory In-lieu Fee and Bank Information Tracking System) website or at the following World Wide Web Page:  
[https://ribits.usace.army.mil/ribits\\_apex/f?p=107:27:0::NO::](https://ribits.usace.army.mil/ribits_apex/f?p=107:27:0::NO::)

## 2.6 Animal Waste Facilities

Prior to use of any NWP for construction of animal waste facilities in waters of the United States, including wetlands, permittees shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32).

## 2.7 Trout Waters

Prior to any discharge of dredge or fill material into streams, waterbodies or wetlands within the 294 designated trout watersheds of North Carolina, the permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to commencing the activity, unless other thresholds are established in the Regional Conditions in Section 4 (Additional Regional Conditions for Specific Nationwide Permits). The permittee shall also provide a copy of the notification to the appropriate NCWRC office, or to the EBCI FWM Office (if the project is located on EBCI trust land), to facilitate the determination of any potential impacts to designated Trout Waters.

Notification to the Corps will include a statement with the name of the NCWRC or EBCI FWM biologist contacted, the date of the notification, the location of work, a delineation of wetlands and waters, a discussion of alternatives to working in the mountain trout waters, why alternatives were not selected, and, if applicable, a plan to provide compensatory mitigation for all unavoidable adverse impacts to mountain trout waters.

NCWRC and NC Trout Watersheds:

<b>NCWRC Contact**</b>	<b>Counties that are entirely within Trout Watersheds*</b>	<b>Counties that are partially within Trout Watersheds*</b>
Mountain Coordinator Balsam Depot 20830 Great Smoky Mountain Expressway Waynesville, NC 28786 Telephone: (828) 558-6011  For NCDOT Projects:  NCDOT Coordinator 206 Charter. Street Albemarle, NC 28001 Telephone: (704) 982-9181	Alleghany    Jackson Ashe            Macon Avery            Swain Graham        Transylvania Haywood       Watauga	Burke            McDowell Buncombe      Mitchell Caldwell        Polk Cherokee       Rutherford Clay             Surry Henderson     Wilkes Madison         Yancey

\*NOTE: To determine notification requirements, contact the Corps Asheville Regulatory Field Office at (828) 271-7980 or view maps for each County at the following World Wide Web page: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout/>.

\*\*If a project is located on EBCI trust land, submit the PCN in accordance with Section 3.14. Contact the Corps Asheville Regulatory Field Office at (828) 271-7980 with questions.

## **2.8 Western NC Waters and Corridors**

The permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to commencing the activity in waters of the United States if the activity will occur within any of the following identified waters in western North Carolina, within 0.5 mile on either side of these waters, or within 0.75 mile of the Little Tennessee River, as measured from the top of the bank of the respective water (i.e., river, stream, or creek):

Brasstown Creek  
Burningtown Creek  
Cane River  
Caney Fork  
Cartoogechaye Creek  
Chattooga River  
Cheoah River  
Cowee Creek  
Cullasaja River  
Deep Creek  
Ellijay Creek  
French Broad River  
Garden Creek  
Hiwassee River  
Hominy Creek  
Iotla Creek  
Little Tennessee River (within the river or within 0.75 mile on either side of this river)  
Nantahala River  
Nolichucky River  
North Fork French Broad River  
North Toe River  
Nottley River  
Oconaluftee River (portion not located on trust/EBCI land)  
Peachtree Creek  
Shooting Creek  
Snowbird Creek  
South Toe River  
Stecoah Creek  
Swannanoa River  
Sweetwater Creek

Tuckasegee River (also spelled Tuckaseegee or Tuckaseigee)  
Valley River  
Watauga Creek  
Watauga River  
Wayah Creek  
West Fork French Broad River

To determine notification requirements, contact the Corps Asheville Regulatory Field Office at (828) 271-7980 or view maps for all corridors at the following World Wide Web page:  
<http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Designated-Special-Waters.aspx>

### **3.0 List of Corps Regional Conditions for All Nationwide Permits**

The following conditions apply to all Nationwide Permits in the Wilmington District:

#### **3.1 Limitation of Loss of Stream Bed**

NWPs may not be used for activities that may result in the loss or degradation of more than 300 total linear feet of stream bed, unless the District Engineer has waived the 300 linear foot limit for ephemeral and intermittent streams on a case-by-case basis and has determined that the proposed activity will result in minimal individual and cumulative adverse impacts to the aquatic environment. Waivers for the loss of ephemeral and intermittent streams must be in writing and documented by appropriate/accepted stream quality assessments\*. This waiver only applies to the 300 linear feet threshold for NWPs.

This Regional Condition does not apply to NWP 23 (Approved Categorical Exclusions).

\*NOTE: Permittees should utilize the most current methodology prescribed by Wilmington District to assess stream function and quality. Information can be found at:  
[https://ribits.usace.army.mil/ribits\\_apex/f?p=107:27:0::NO::](https://ribits.usace.army.mil/ribits_apex/f?p=107:27:0::NO::)

#### **3.2 Mitigation for Loss of Stream Bed**

For any NWP that results in a loss of more than 150 linear feet of stream, the permittee shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment. For stream losses of 150 linear feet or less that require a PCN, the District Engineer may determine, on a case-by-case basis, that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.

#### **3.3 Pre-construction Notification for Loss of Streambed Exceeding 150 Feet**

Prior to use of any NWP for any activity which impacts more than 150 total linear feet of perennial stream, intermittent or ephemeral stream, the permittee shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32). This applies to

NWPs that do not have specific notification requirements. If a NWP has specific notification requirements, the requirements of the NWP should be followed.

### **3.4 Restriction on Use of Live Concrete**

For all NWPs which allow the use of concrete as a building material, live or fresh concrete, including bags of uncured concrete, may not come into contact with the water in or entering into waters of the United States. Water inside coffer dams or casings that has been in contact with wet concrete shall only be returned to waters of the United States after the concrete is set and cured and when it no longer poses a threat to aquatic organisms.

### **3.5 Requirements for Using Riprap for Bank Stabilization**

For all NWPs that allow for the use of riprap material for bank stabilization, the following measures shall be applied:

**3.5.1.** Where bank stabilization is conducted as part of an activity, natural design, bioengineering and/or geoen지니어ing methods that incorporate natural durable materials, native seed mixes, and native plants and shrubs are to be utilized to the maximum extent practicable.

**3.5.2.** Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters. The placement of filter fabric is not required if the riprap will be pushed or “keyed” into the bank of the waterbody. A waiver from the specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional Condition would result in greater adverse impacts to the aquatic environment.

**3.5.3.** The placement of riprap shall be limited to the areas depicted on submitted work plan drawings.

**3.5.4.** The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities that would not have an adverse environmental effect.

**3.5.5.** It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

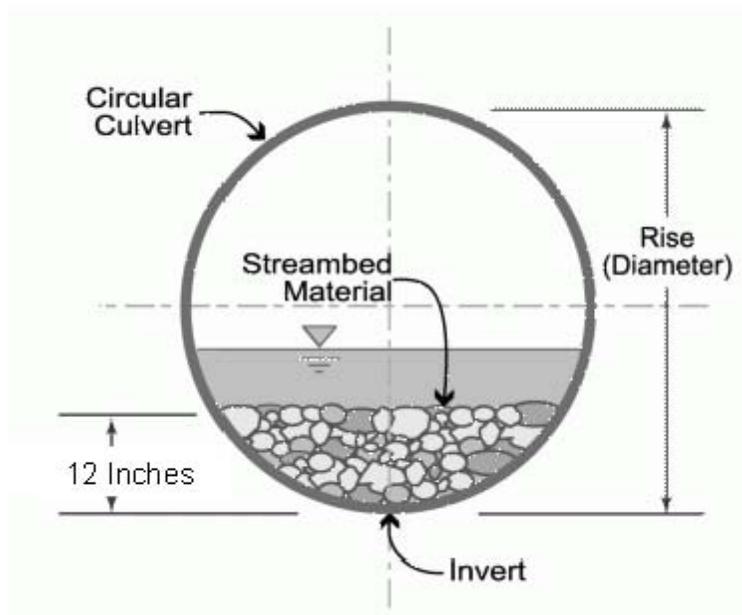
**3.5.6.** The riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.

### **3.6 Requirements for Culvert Placement**

**3.6.1** For all NWPs that involve the construction/installation of culverts, measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by altering the width or depth of the stream profile in connection with the construction activity. The width, height, and gradient of a proposed culvert should be

sufficient to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow is the seasonal sustained high flow that typically occurs in the spring. Spring flows should be determined from gage data, if available. In the absence of such data, bank-full flow can be used as a comparable indicator.

In Public Trust Areas of Environmental Concern (AEC) and/or the Estuarine Waters AEC as designated by the Coastal Area Management Act (CAMA): All pipes/culverts must be sufficiently sized to allow for the burial of the bottom of the culvert at least one foot below normal bed elevation.



In all other areas: Culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter or less shall be buried to maintain aquatic passage and to maintain passage during drought or low flow conditions, and every effort shall be made to maintain the existing channel slope.

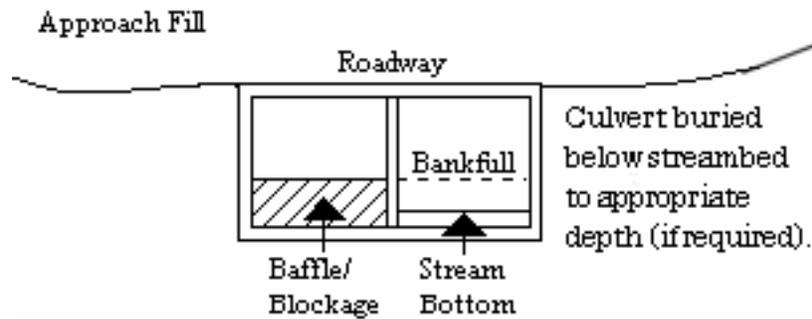
Culverts must be designed and constructed in a manner that minimizes destabilization and head cutting. Destabilizing the channel and head cutting upstream should be considered and appropriate actions incorporated in the design and placement of the culvert.

A waiver from the depth specifications in this condition may be requested, in writing, by the permittee and issued by the Corp; this request must be specific as to the reasons(s) for the request. The waiver will be issued if it can be demonstrated that the proposed design would result in less impacts to the aquatic environment.

All counties: Culverts placed within riparian and/or riverine wetlands must be installed in a manner that does not restrict the flow and circulation patterns of waters of the United States.

Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried, but the culverts must be of adequate size and/or number to ensure unrestricted transmission of water.

**3.6.2** Bank-full flows (or less) shall be accommodated through maintenance of the existing bank-full channel cross sectional area. Additional culverts or culvert barrels at such crossings shall be allowed only to receive bank-full flows.



**3.6.3** Where adjacent floodplain is available, flows exceeding bank-full should be accommodated by installing culverts at the floodplain elevation. Additional culverts or culvert barrels at such crossings should not be buried, or if buried, must have sills at the inlets to ensure that they only receive flows exceeding bank-full.

**3.6.4** Excavation of existing stream channels shall be limited to the minimum necessary to construct or install the proposed culvert. The final width of the impacted stream at the culvert inlet and outlet should be no greater than the original stream width. A waiver from this condition may be requested in writing; this request must be specific as to the reason(s) for the request. The waiver will be issued if the proposed design would result in less impacts to the aquatic environment and/or if it can be demonstrated that it is not practicable to restore the final width of the impacted stream at the culvert inlet and outlet to the width of the original stream channel.

**3.6.5** The width of the culvert shall be comparable to the width of the stream channel. If the width of the culvert is wider than the stream channel, the culvert shall include baffles, benches and/or sills to maintain the width of the stream channel. A waiver from this condition may be requested in writing; this request must be specific as to the reason(s) for the request. The waiver will be issued if it can be demonstrated that it is not practicable or necessary to include baffles, benches or sills and the design would result in less impacts to the aquatic environment.

### **3.7 Notification to NCDEQ Shellfish Sanitation Section**

Permittees shall notify the NCDEQ Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination from the disposal area and cause a temporary shellfish closure to be made. Such notification shall also be provided to the appropriate Corps Regulatory Field Office. Any disposal of sand to the ocean beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand

should be used and no dredged sand from closed shell fishing areas may be used. If beach disposal were to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swimming advisory shall be posted, and a press release shall be issued by the permittee.

### **3.8 Submerged Aquatic Vegetation**

Impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP, except NWP 48, unless EFH Consultation has been completed pursuant to the Magnuson-Stevens Fisheries Conservation and Management Act (Magnuson-Stevens Act). Permittees shall submit a PCN (See NWP General Condition 32) to the District Engineer prior to commencing the activity if the project would affect SAV. The permittee may not begin work until notified by the Corps that the requirements of the Magnuson-Stevens Act have been satisfied and that the activity is authorized.

### **3.9 Sedimentation and Erosion Control Structures and Measures**

All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the United States. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.

### **3.10 Restoration of Temporary Impacts to Stream Beds**

Upon completion of work that involves temporary stream impacts, streambeds are to be restored to pre-project elevations and widths using natural streambed material such that the impacted stream reach mimics the adjacent upstream and downstream reach. The impacted area shall be backfilled with natural streambed material to a depth of at least 12 inches or to the bottom depth of the impacted area if shallower than 12 inches. An engineered in-stream structure or material can be used to provide protection of a buried structure if it provides benefits to the aquatic environment and can be accomplished by a natural streambed design. A permittee may request a waiver of this condition if it is determined a buried structure needs significant physical protection beyond those provided in this condition. This condition does not apply to NWP 27 – Aquatic Habitat Restoration, Enhancement, and Establishment Activities.

### **3.11 Restoration of Temporary Impacts to Stream Banks**

Upon completion of work involving temporary stream bank impacts, stream banks are to be restored to pre-project grade and contours or beneficial grade and contours if the original bank slope is steep and unstable. Natural durable materials, native seed mixes, and native plants and shrubs are to be utilized in the restoration. Natural designs which use bioengineered and/or geo-engineered methods are to be applied. An engineered structure or material can be used to provide protection of a buried structure if it provides benefits to the stream bank environment, provided it is not in excess of the minimum amount needed for protection and does not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark. A permittee may request a waiver of this condition if it is determined a buried structure

needs significant physical protection beyond those provided in this condition. This condition does not apply to NWP 27 – Aquatic Habitat Restoration, Enhancement, and Establishment Activities.

### **3.12 Federal Navigation Channel Setbacks and Corps Easements**

**3.12.1** Authorized structures and fills located in or adjacent to Federally authorized waterways will be constructed in accordance with the latest setback criteria established by the Wilmington District Engineer. You may review the setback policy at <http://www.saw.usace.army.mil/Missions/Navigation/Setbacks.aspx>. This general permit does not authorize the construction of hardened or permanently fixed structures within the Federally Authorized Channel Setback, unless the activity is approved by the Corps. The permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to the construction of any structures or fills within the Federally Authorized Channel Setback.

**3.12.2** The permittee shall obtain a Consent to Cross Government Easement from the Wilmington District’s Land Use Coordinator prior to any crossing of the Corps easement and/or prior to commencing construction of any structures, authorized dredging or other work within the right-of-way of, or in proximity to, a federally designated disposal area. The Land Use Coordinator may be contacted at: CESA-W-OP-N, 69 Darlington Avenue, Wilmington, North Carolina 28403-1343, email: [SAWWeb-NAV@usace.army.mil](mailto:SAWWeb-NAV@usace.army.mil)

### **3.13 Northern Long-eared Bat – Endangered Species Act Compliance**

The Wilmington District, U.S. Army Corps of Engineers has consulted with the United States Fish and Wildlife Service (USFWS) in regards to the threatened Northern long-eared bat (NLEB) (*Myotis septentrionalis*) and Standard Local Operating Procedures for Endangered Species (SLOPES) have been approved by the Corps and the USFWS. This condition concerns effects to the NLEB only and does not address effects to other federally listed species and/or federally designated critical habitat.

A. Procedures when the Corps is the lead federal\* agency for a project:

The permittee must comply with (1) and (2) below when:

- the project is located in the western 41 counties of North Carolina, to include non-federal aid North Carolina Department of Transportation (NCDOT) projects, OR;
- the project is located in the 59 eastern counties of North Carolina, and is a non-NCDOT project.

\*Generally, if a project is located on private property or on non-federal land, and the project is not being funded by a federal entity, the Corps will be the lead federal agency due to the requirement to obtain Department of the Army authorization to impact waters of the United States. If the project is located on federal land, contact the Corps to determine the lead federal agency.

(1) A permittee using a NWP must check to see if their project is located in the range of the NLEB by using the following website:

<http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>. If the project is within the range of the NLEB, or if the project includes percussive activities (e.g., blasting, pile driving, etc.), the permittee is then required to check the appropriate website in the paragraph below to discover if their project:

- is located in a 12-digit Hydrologic Unit Code area (“red HUC” - shown as red areas on the map), AND/OR;
- involves percussive activities within 0.25 mile of a red HUC.

Red HUC maps - for the western 41 counties in NC (covered by the Asheville Ecological Services Field Office), check the project location against the electronic maps found at: [http://www.fws.gov/asheville/htmls/project\\_review/NLEB\\_in\\_WNC.html](http://www.fws.gov/asheville/htmls/project_review/NLEB_in_WNC.html). For the eastern 59 counties in NC (covered by the Raleigh Ecological Services Field Office), check the project location against the electronic maps found at:

[https://www.fws.gov/raleigh/NLEB\\_RFO.html](https://www.fws.gov/raleigh/NLEB_RFO.html).

(2) A permittee must submit a PCN to the District Engineer, and receive written authorization from the District Engineer, prior to commencing the activity, if the activity will involve any of the following:

- tree clearing/removal, construction/installation of wind turbines in a red HUC, AND/OR;
- bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, (applies anywhere in the range of the NLEB), AND/OR;
- percussive activities in a red HUC, or within 0.25 mile of a red HUC.

The permittee may proceed with the activity without submitting a PCN to either the Corps or the USFWS, provided the activity complies with all applicable NWP terms and general and regional conditions, if the permittee’s review under A.(1) and A.(2) above shows that the project is:

- located outside of a red HUC (and there are no percussive activities), and the activity will NOT include bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, OR;
- located outside of a red HUC and there are percussive activities, but the percussive activities will not occur within 0.25-mile of a red HUC boundary, and the activity will NOT include bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, OR;

- located in a red HUC, but the activity will NOT include: tree clearing/removal; construction/installation of wind turbines; bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, and/or; any percussive activities.

B. Procedures when the USACE is not the lead federal agency:

For projects where another federal agency is the lead federal agency - if that other federal agency has completed project-specific ESA Section 7(a)(2) consultation for the NLEB, and has (1) determined that the project would not cause prohibited incidental take of the NLEB, and (2) completed coordination/consultation that is required by the USFWS (per the directions on the respective USFWS office's website), that project may proceed without notification to either the USACE or the USFWS, provided all General and Regional Permit Conditions are met.

The NLEB SLOPES can be viewed on the USACE website at the following World Wide Web Page: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/>. Permittees who do not have internet access may contact the USACE at (910) 251- 4633.

### **3.14 Work on Eastern Band of Cherokee Indians Land**

All PCNs submitted for activities in waters of the United States on Eastern Band of Cherokee Indians (EBCI) trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land), must comply with the requirements of the latest MOU between the Wilmington District and the Eastern Band of Cherokee Indians.

## **4.0 Additional Regional Conditions for Specific Nationwide Permits**

### **4.1 NWP #13 – Bank Stabilization**

**4.1.1** Unanchored trees, treetops, or debris may not be used as stream bank stabilization material.

**4.1.2** Properly anchored and cabled structural stabilization techniques, such as timber crib structures, revetments, and root wads, are acceptable materials to stabilize stream banks.

**4.1.3** If riprap stabilization is needed, it should be placed only on the stream banks, or, if it is necessary to be placed in the stream bed, the finished top elevation of the riprap should not exceed that of the original stream bed.

**4.1.4** In designated trout watersheds, PCN is not required for impacts to a maximum of 100 linear feet (150 linear feet for temporary dewatering) of streams or waterbodies for bank stabilization activities not adjoining, adjacent to, or in the relative vicinity of existing stabilization structures. Materials for the stabilization structure(s) and design of the project must be constructed to withstand normal and expected high stream flows. In designated trout waters, the permittee shall submit a PCN (see Regional Condition 2.7 and General Condition 32) to the District Engineer prior to commencing the activity if 1) impacts (other than temporary

dewatering to work in dry conditions) to streams and waterbodies exceed 100 linear feet; 2) temporary impacts to streams or waterbodies associated with dewatering to work in dry conditions exceed 150 linear feet; or 3) the activity will be constructed during the trout waters moratorium (October 15 through April 15).

**4.1.5** The permittee shall submit a PCN to the District Engineer prior to commencing the activity if the activity will involve the discharge of dredged or fill material into more than 150 linear feet of stream channel for the construction of temporary access fills and/or temporary road crossings. The PCN must include a restoration plan that thoroughly describes how all temporary fills will be removed, describes how pre-project conditions will be restored, and includes a timetable for all restoration activities.

- located in a red HUC, but the activity will NOT include: tree clearing/removal; construction/installation of wind turbines; bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, and/or; any percussive activities.

B. Procedures when the USACE is not the lead federal agency:

For projects where another federal agency is the lead federal agency - if that other federal agency has completed project-specific ESA Section 7(a)(2) consultation for the NLEB, and has (1) determined that the project would not cause prohibited incidental take of the NLEB, and (2) completed coordination/consultation that is required by the USFWS (per the directions on the respective USFWS office's website), that project may proceed without notification to either the USACE or the USFWS, provided all General and Regional Permit Conditions are met.

The NLEB SLOPES can be viewed on the USACE website at the following World Wide Web Page: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/>. Permittees who do not have internet access may contact the USACE at (910) 251- 4633.

### **3.14 Work on Eastern Band of Cherokee Indians Land**

All PCNs submitted for activities in waters of the United States on Eastern Band of Cherokee Indians (EBCI) trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land), must comply with the requirements of the latest MOU between the Wilmington District and the Eastern Band of Cherokee Indians.

## **4.0 Additional Regional Conditions for Specific Nationwide Permits**

### **4.1 NWP #23 - Approved Categorical Exclusions**

**4.1.1** The discharge of dredged or fill material associated with this NWP must not cause the loss of greater than 1 acre of waters of the United States or 500 linear feet of stream bed for each single and complete project.

**4.1.2** No development activities authorized by this NWP may begin until the permittee obtains a consistency concurrence or a CAMA permit from the North Carolina Division of Coastal Management, if either is required.

- located in a red HUC, but the activity will NOT include: tree clearing/removal; construction/installation of wind turbines; bridge removal or maintenance, unless the bridge has been inspected and there is no evidence of bat use, and/or; any percussive activities.

B. Procedures when the USACE is not the lead federal agency:

For projects where another federal agency is the lead federal agency - if that other federal agency has completed project-specific ESA Section 7(a)(2) consultation for the NLEB, and has (1) determined that the project would not cause prohibited incidental take of the NLEB, and (2) completed coordination/consultation that is required by the USFWS (per the directions on the respective USFWS office's website), that project may proceed without notification to either the USACE or the USFWS, provided all General and Regional Permit Conditions are met.

The NLEB SLOPES can be viewed on the USACE website at the following World Wide Web Page: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/>. Permittees who do not have internet access may contact the USACE at (910) 251- 4633.

### **3.14 Work on Eastern Band of Cherokee Indians Land**

All PCNs submitted for activities in waters of the United States on Eastern Band of Cherokee Indians (EBCI) trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land), must comply with the requirements of the latest MOU between the Wilmington District and the Eastern Band of Cherokee Indians.

## **4.0 Additional Regional Conditions for Specific Nationwide Permits**

### **4.1 NWP #33 – Temporary Construction, Access, and Dewatering**

**4.1.1** The permittee shall submit a PCN to the District Engineer prior to commencing the activity if the activity will involve the discharge of dredged or fill material into more than 1/10-acre of wetlands or 150 linear feet of stream channel for the construction of temporary access fills and/or temporary road crossings.

**4.1.2** For activities that require a PCN, the PCN must include a restoration plan that thoroughly describes how all temporary fills will be removed, describes how pre-project conditions will be restored, and includes a timetable for all restoration activities.



ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

S. JAY ZIMMERMAN  
Director

October 20, 2017  
Transylvania County  
NCDWR Project No. 2017-1283  
Bridge 12 on SR1538  
TIP Project No. B-4823

**APPROVAL of 401 WATER QUALITY CERTIFICATION, with ADDITIONAL CONDITIONS**

Mr. Philip S. Harris, P.E..  
NCDOT, Environmental Analysis Unit  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of bridge replacement in Transylvania County.

**Stream Impacts in the French Broad River Basin**

Site	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)
1	42		42
2	65		65
2		58	58
<b>TOTAL</b>	<b>107</b>	<b>58</b>	<b>165</b>

**Total Stream Impact for Project: 165 linear feet.**

The project shall be constructed in accordance with your application dated August 10, 2017. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Numbers 7087, 4093, and 4094. This certification correspond to the **Nationwide** Permits 13, 23, and 33 issued by the Corps of Engineers In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification(s) and any additional conditions listed below.

## Condition(s) of Certification:

### Project Specific Conditions

1. The permittee will need to adhere to all appropriate in-water work moratoria (including the use of pile driving or vibration techniques) prescribed by the **NC Wildlife Resources Commission**. No in-water work is permitted between October 15 and April 15 of any year, without prior approval from the NC Division of Water Resources and the NC Wildlife Resources Commission.

### General Conditions

1. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams 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 downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
2. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
3. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
4. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
5. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
6. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
7. All work in or adjacent to stream waters shall 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 shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
8. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
9. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
10. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
11. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]

12. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
13. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
14. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
15. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
16. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
17. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
18. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
19. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0231(a)(6)]
20. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.[15A NCAC 02H.0506(b)(3) and (c)(3)]
21. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
  - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
  - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

22. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

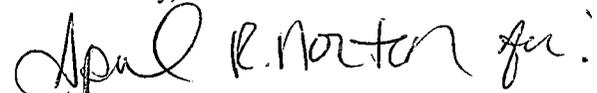
Office of Administrative Hearings  
6714 Mail Service Center  
Raleigh, NC 27699-6714  
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Sam M.Hayes, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Kevin Barnett at (828) 296-4657 or kevin.barnett@ncdenr.gov.

Sincerely,



S. Jay Zimmerman, Director  
Division of Water Resources

Electronic copy only distribution:

Lori Beckwith, US Army Corps of Engineers, Asheville Field Office  
David McHenry, Division 14 Environmental Officer  
Colin Mellor, NC Department of Transportation  
Erin Cheely, NC Department of Transportation  
Marla Chambers, NC Wildlife Resources Commission  
File Copy



Environmental Quality

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

S. JAY ZIMMERMAN  
Director

NCDWR Project No.: \_\_\_\_\_ County: \_\_\_\_\_

Applicant: \_\_\_\_\_

Project Name: \_\_\_\_\_

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

**Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

**Applicant's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Agent's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Engineer's Certification**

\_\_\_\_\_ Partial \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_

Date \_\_\_\_\_

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER RESOURCES

**WATER QUALITY GENERAL CERTIFICATION NO. 4087**

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS

- NATIONWIDE PERMIT NUMBER 13 (BANK STABILIZATION),
- NATIONWIDE PERMIT NUMBER 27 (AQUATIC HABITAT RESTORATION, ESTABLISHMENT AND ENHANCEMENT ACTIVITIES), AND
- REGIONAL GENERAL PERMIT 197800080 (BULKHEADS AND RIP-RAP)

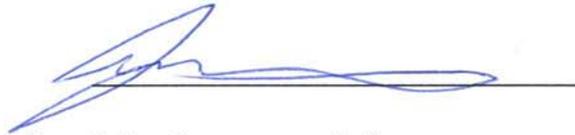
Water Quality Certification Number 4087 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in 33 CFR 330 Appendix A (B) (13 and 27) of the US Army Corps of Engineers regulations and Regional General Permit 197800080.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Effective date: March 19, 2017

Signed this day March 3, 2017

By



*for* S. Jay Zimmerman, P.G.  
Director

## GC4087

**Activities meeting any one (1) of the following thresholds or circumstances require written approval for a 401 Water Quality Certification from the Division of Water Resources (DWR):**

- a) If any of the conditions of this Certification (listed below) cannot be met; or
- b) Any permanent fill into or modification of wetlands and/or waters except for single and independent stream stabilization or enhancement projects involving in-stream structures that are designed based on current natural channel techniques and do not exceed a total of three structures within 100 feet of stream length; or
- c) Any stream relocation; or
- d) Any dewatering activity related to dam maintenance or removal; or
- e) Total temporary and permanent impacts to streambanks of greater than 150 feet for bank stabilization projects when non-natural armoring techniques (e.g. rip-rap, gabion baskets, deflection walls) are utilized; or
- f) Total temporary and permanent impacts to streambanks of greater than 500 feet for bank stabilization projects when natural techniques (e.g. sloping, vegetation, geolifts) are used; or
- g) Any impacts to waters, or to wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, Trout, or North Carolina or National Wild and Scenic River; or
- h) Any impacts to coastal wetlands [15A NCAC 07H .0205], or Unique Wetlands (UWL); or
- i) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), NC Surface Water or Wetland Standards (15A NCAC 02B .0200), or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200); or
- j) Any impacts to subject water bodies and/or state regulated riparian buffers along subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless*:
  - i) The activities are listed as "EXEMPT" from these rules; or
  - ii) A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or
  - iii) A Buffer Authorization Certificate or a Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23.

**Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval.**

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## I. ACTIVITY SPECIFIC CONDITIONS:

1. Any repairs or adjustments to the site shall be made according to the approved plans. Repairs that result in a change from the approved plans must receive written approval from DWR prior to commencement of the repairs. [15A NCAC 02H .0501 and .0502]
2. Written authorization for a compensatory mitigation project does not represent an approval of credit yield for the project. [15A NCAC 02H .0500(h)]

## II. GENERAL CONDITIONS:

1. When written authorization is required, the plans and specifications for the project are incorporated into the authorization by reference and are an enforceable part of the Certification. Any modifications to the project require notification to DWR and may require an application submittal to DWR with the appropriate fee. [15A NCAC 02H .0501 and .0502]
2. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) as authorized in the written approval from DWR; or beyond the thresholds established for use of this Certification without written authorization. [15A NCAC 02H .0501 and .0502]

No removal of vegetation or other impacts of any kind shall occur to state regulated riparian buffers beyond the footprint of impacts approved in a Buffer Authorization or Variance or as listed as an exempt activity in the applicable riparian buffer rules. [15A NCAC 02B .0200]

3. In accordance with 15A NCAC 02H .0506(h), compensatory mitigation may be required for losses of greater than 150 linear feet of streams and/or greater than one (1) acre of wetlands. Impacts to isolated and other non-404 jurisdictional wetlands shall not be combined with 404 jurisdictional wetlands for the purpose of determining when impact thresholds trigger a mitigation requirement. For linear publicly owned and maintained transportation projects that are not determined to be part of a larger common plan of development by the US Army Corps of Engineers, compensatory mitigation may be required for losses of greater than 150 linear feet per stream.

Compensatory stream and/or wetland mitigation shall be proposed and completed in compliance with G.S. 143-214.11. For applicants proposing to conduct mitigation within a project site, a complete mitigation proposal developed in accordance with the most recent guidance issued by the US Army Corps of Engineers Wilmington District shall be submitted for review and approval with the application for impacts.

4. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2 of Title 15A.

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5. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200].

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NCDOT Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

6. Sediment and erosion control measures shall not be placed in wetlands or waters except within the footprint of temporary or permanent impacts authorized under this Certification. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0501 and .0502]
7. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02B .0201]
8. An NPDES Construction Stormwater Permit (NCG010000) is required for construction projects that disturb one (1) or more acres of land. The NCG010000 Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If the project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. [15A NCAC 02H .0506(b)(5) and (c)(5)]

## GC4087

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit. [15A NCAC 02H .0506(b)(5) and (c)(5)]

9. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the *NC Sediment and Erosion Control Manual*, or the *NC DOT Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(3) and (c)(3)]
10. If activities must occur during periods of high biological activity (e.g. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities. [15A NCAC 02H .0506(b)(2) and 15A NCAC 04B .0125]

All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium. A copy of the approval from the resource agency shall be forwarded to DWR.

Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers), or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

11. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. [15A NCAC 02H .0506(b)(2) and (c)(2)]

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life.

If multiple pipes or barrels are required, they shall be designed to mimic the existing stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided.

## GC4087

When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross vanes, etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 60 calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 60 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application to and written approval from DWR.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

12. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(5)]
13. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A NCAC 02B .0200 and 15A NCAC 02B .0231]
14. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. [15A NCAC 02B .0200]

## GC4087

15. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, planform pattern, and longitudinal bed profile. For projects that receive written approval, no temporary impacts are allowed beyond those included in the application and authorization. All temporarily impacted sites shall be restored-and stabilized with native vegetation. [15A NCAC 02H .0506(b)(2) and (c)(2)]
16. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b)(2) and (c)(2)]
17. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or in a manner that precludes aquatic life passage. [15A NCAC 02H .0506(b)(2)]
18. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b)(2)]
19. Applications for rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405.
20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication and general equipment maintenance shall not take place within 50 feet of a waterbody or wetlands to prevent contamination by fuels and oils. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0211 (12)]
21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance. [15A NCAC 02H .0506 (b)(3) and (c)(3)]

## GC4087

22. In accordance with 143-215.85(b), the applicant shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.
23. If an environmental document is required under the State Environmental Policy Act (SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse. If an environmental document is required under the National Environmental Policy Act (NEPA), then this General Certification is not valid until a Categorical Exclusion, the Final Environmental Assessment, or Final Environmental Impact Statement is published by the lead agency. [15A NCAC 01C .0107(a)]
24. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.
25. The applicant and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. If DWR determines that such standards or laws are not being met, including failure to sustain a designated or achieved use, or that State or Federal law is being violated, or that further conditions are necessary to assure compliance, then DWR may revoke or modify a written authorization associated with this General Water Quality Certification. [15A NCAC 02H .0507(d)]
26. When written authorization is required for use of this Certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return a certificate of completion (available on the DWR website: <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>). [15A NCAC 02H .0502(f)]
27. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards. [15A NCAC 02H .0507(c)]
28. If the property or project is sold or transferred, the new Permittee shall be given a copy of this Certification (and written authorization if applicable) and is responsible for complying with all conditions. [15A NCAC 02H .0501 and .0502]

### III. GENERAL CERTIFICATION ADMINISTRATION:

1. In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. An applicant for a

## GC4087

CAMA permit under Article 7 of Chapter 113A of the General Statutes for which a water quality Certification is required shall only make one payment to satisfy both agencies; the fee shall be as established by the Secretary in accordance with 143-215.3D(e)(7).

2. This Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and this Certification does not create any prescriptive right or any right of priority regarding any usage of water. This Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.
3. This Certification grants permission to the Director, an authorized representative of the Director, or DWR staff, upon the presentation of proper credentials, to enter the property during normal business hours. [15A NCAC 02H .0502(e)]
4. This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit and/or Regional General Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this Certification. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes any of the corresponding Nationwide Permits and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Resources.
5. Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.
6. The Director of the North Carolina Division of Water Resources may require submission of a formal application for Individual Certification for any project in this category of activity if it is determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the water or downstream waters are precluded.
7. Public hearings may be held prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Resources.

*History Note: Water Quality Certification (WQC) Number 4087 issued March 3, 2017 replaces WQC 3885 issued March 19, 2012; WQC Number 3689 issued November 1, 2007; WQC Number 3626 issued March, 2007; WQC Number 3495 issued December 31, 2004; and WQC Number 3399 issued March 2003.*

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER RESOURCES

**WATER QUALITY GENERAL CERTIFICATION NO. 4093**

**GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS**

- **NATIONWIDE PERMIT NUMBER 23 (APPROVED CATEGORICAL EXCLUSIONS)**

Water Quality Certification Number 4093 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in 33 CFR 330 Appendix A (B) (23) of the US Army Corps of Engineers regulations.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Effective date: March 19, 2017

Signed this day March 3, 2017

By



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*for* S. Jay Zimmerman, P.G.  
Director

## GC4093

**Activities meeting any one (1) of the following thresholds or circumstances require written approval for a 401 Water Quality Certification from the Division of Water Resources (DWR):**

- a) If any of the conditions of this Certification (listed below) cannot be met; or
- b) Total permanent impacts to streams equal or greater than 40 linear feet; or
- c) Any stream relocation or stream restoration; or
- d) Any impacts to streams from excavation or dredging; or
- e) Total temporary or permanent impacts to wetlands and/or open waters equal to or greater than one-tenth (1/10) acre; or
- f) Any impacts to waters, or wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, Trout, or a North Carolina or National Wild and Scenic River; or
- g) Any impacts to coastal wetlands [15A NCAC 7H .0205], or Unique Wetlands (UWL) [15A NCAC 2H .0506]; or
- h) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), NC Surface Water or Wetland Standards (15A NCAC 02B .0200), or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200); or
- i) Any impacts to subject water bodies and/or state regulated riparian buffers along subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless*:
  - i) The activities are listed as "EXEMPT" from these rules; or
  - ii) A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or
  - iii) A Buffer Authorization Certificate or a Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23.

**Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval.**

### **I. ACTIVITY SPECIFIC CONDITIONS:**

1. For the North Carolina Department of Transportation, compliance with the NCDOT's individual NPDES permit NCS000250 shall serve to satisfy this condition. For all other projects that disturb one acre or more of land (including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale); have permanent wetland, stream, or open water impacts; and are proposing new built-upon area shall comply with the following requirements: [15A NCAC 02H .0506 (b)(5) and (c)(5)]:

## GC4093

- a. Stormwater management shall be provided throughout the entire project area in accordance with 15A NCAC 02H .1003. For the purposes of 15A NCAC 02H .1003(2)(a), density thresholds shall be determined in accordance with 15A NCAC 02H .1017.
- b. Projects that have vested rights, exemptions, or grandfathering from state or locally-implemented stormwater programs do not satisfy this condition. Projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs do not satisfy this condition.
- c. Projects that require written authorization from DWR shall submit the following with their application for review and approval:
  - i. For projects that have a stormwater management plan (SMP) reviewed under a state stormwater program<sup>1</sup> or a state-approved local government stormwater program<sup>2</sup> shall submit plans that show the location and approximate size of all proposed stormwater measures;
  - ii. All other low density projects not covered above shall submit a completed low density supplement form with all required items; and
  - iii. All other high density projects not covered above shall submit a completed SMP, including all appropriate stormwater control measure (SCM) supplemental forms and associated items, that complies with the high density development requirements of 15A NCAC 02H .1003.
- d. Projects that do not require written approval from DWR shall obtain approval of the SMP, when required, before any impacts authorized by this Certification occur.
- e. SMPs approved by DWR may be phased on a case-by-case basis. SMPs for each future phase must be approved before construction of that phase commences. Approved SMPs may not be modified without prior written authorization from DWR.

### II. GENERAL CONDITIONS:

1. When written authorization is required, the plans and specifications for the project are incorporated into the authorization by reference and are an enforceable part of the Certification. Any modifications to the project require notification to DWR and may require an application submittal to DWR with the appropriate fee. [15A NCAC 02H .0501 and .0502]
2. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters, beyond the footprint of the impacts (including temporary impacts) as authorized in the written approval from DWR; or beyond the thresholds established for use of this Certification without written authorization. [15A NCAC 02H .0501 and .0502]

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<sup>1</sup> e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

<sup>2</sup> e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

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No removal of vegetation or other impacts of any kind shall occur to state regulated riparian buffers beyond the footprint of impacts approved in a Buffer Authorization or Variance or as listed as an exempt activity in the applicable riparian buffer rules. [15A NCAC 02B .0200]

3. In accordance with 15A NCAC 02H .0506(h), compensatory mitigation may be required for losses of greater than 150 linear feet of streams and/or greater than one (1) acre of wetlands. Impacts to isolated and other non-404 jurisdictional wetlands shall not be combined with 404 jurisdictional wetlands for the purpose of determining when impact thresholds trigger a mitigation requirement. For linear publicly owned and maintained transportation projects that are not determined to be part of a larger common plan of development by the US Army Corps of Engineers, compensatory mitigation may be required for losses of greater than 150 linear feet per stream.

Compensatory stream and/or wetland mitigation shall be proposed and completed in compliance with G.S. 143-214.11. For applicants proposing to conduct mitigation within a project site, a complete mitigation proposal developed in accordance with the most recent guidance issued by the US Army Corps of Engineers Wilmington District shall be submitted for review and approval with the application for impacts.

4. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2 of Title 15A.
5. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200]

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NCDOT Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

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If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

6. Sediment and erosion control measures shall not be placed in wetlands or waters except within the footprint of temporary or permanent impacts authorized under this Certification. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0501 and .0502]
7. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02B .0201]
8. An NPDES Construction Stormwater Permit (NCG010000) is required for construction projects that disturb one (1) or more acres of land. The NCG010000 Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If the project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. [15A NCAC 02H .0506(b)(5) and (c)(5)]

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit. [15A NCAC 02H .0506(b)(5) and (c)(5)]

9. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the *NC Sediment and Erosion Control Manual*, or the *NC DOT Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(3) and (c)(3)]
10. If activities must occur during periods of high biological activity (e.g. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities. [15A NCAC 02H .0506 (b)(2) and 15A NCAC 04B .0125]

All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium. A copy of the approval from the resource agency shall be forwarded to DWR.

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Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers), or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

11. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. [15A NCAC 02H .0506(b)(2) and (c)(2)]

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life.

If multiple pipes or barrels are required, they shall be designed to mimic the existing stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided.

When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross vanes, etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 60 calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as, a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 60 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application to and written approval from DWR.

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Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

12. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(5)]
13. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A NCAC 02B .0200 and 15A NCAC 02B .0231]
14. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. [15A NCAC 02B .0200]
15. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, planform pattern, and longitudinal bed profile. For projects that receive written approval, no temporary impacts are allowed beyond those included in the application and authorization. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H .0506(b)(2) and (c)(2)]
16. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b)(2) and (c)(2)]

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17. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or in a manner that precludes aquatic life passage. [15A NCAC 02H .0506(b)(2)]
18. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b)(2)]
19. Applications for rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405.
20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication and general equipment maintenance shall not take place within 50 feet of a waterbody or wetlands to prevent contamination by fuels and oils. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0211 (12)]
21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance. [15A NCAC 02H .0506(b)(3) and (c)(3)]
22. In accordance with 143-215.85(b), the applicant shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.
23. If an environmental document is required under the State Environmental Policy Act (SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse. If an environmental document is required under the National Environmental Policy Act (NEPA), then this General Certification is not valid until a Categorical Exclusion, the Final Environmental Assessment, or Final Environmental Impact Statement is published by the lead agency. [15A NCAC 01C .0107(a)]

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24. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.
25. The applicant and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. If DWR determines that such standards or laws are not being met, including failure to sustain a designated or achieved use, or that State or Federal law is being violated, or that further conditions are necessary to assure compliance, then DWR may revoke or modify a written authorization associated with this General Water Quality Certification. [15A NCAC 02H .0507(d)]
26. When written authorization is required for use of this Certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return a certificate of completion (available on the DWR website <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>). [15A NCAC 02H .0502(f)]
27. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards. [15A NCAC 02H .0507(c)]
28. If the property or project is sold or transferred, the new Permittee shall be given a copy of this Certification (and written authorization if applicable) and is responsible for complying with all conditions. [15A NCAC 02H .0501 and .0502]

### III. GENERAL CERTIFICATION ADMINISTRATION:

1. In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. An applicant for a CAMA permit under Article 7 of Chapter 113A of the General Statutes for which a Water Quality Certification is required shall only make one payment to satisfy both agencies; the fee shall be as established by the Secretary in accordance with 143-215.3D(e)(7).
2. This Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and this Certification does not create any prescriptive right or any right of priority regarding any usage of water. This Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.

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3. This Certification grants permission to the Director, an authorized representative of the Director, or DWR staff, upon the presentation of proper credentials, to enter the property during normal business hours. [15A NCAC 02H .0502(e)]
4. This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit and/or Regional General Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this Certification. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes any of the corresponding Nationwide Permits and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Resources.
5. Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.
6. The Director of the North Carolina Division of Water Resources may require submission of a formal application for Individual Certification for any project in this category of activity if it is determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the water or downstream waters are precluded.
7. Public hearings may be held prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Resources.

*History Note: Water Quality Certification (WQC) Number 4093 issued March 3, 2017 replaces WQC 3891 issued March 19, 2012; WQC 3701 issued November 1, 2007; WQC Number 3632 issued March 2007; WQC Number 3403 issued March 2003; WQC Number 3361 issued March 18, 2002; WQC Number 3107 issued February 11, 1997; WQC Number 2734 issued May 1 1993; and WQC Number 2670 issued on January 21, 1992.*

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER RESOURCES

**WATER QUALITY GENERAL CERTIFICATION NO. 4094**

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS

- NATIONWIDE PERMIT NUMBER 33 (TEMPORARY CONSTRUCTION, ACCESS AND DEWATERING)

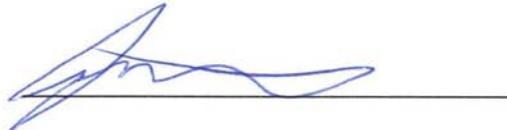
Water Quality Certification Number 4094 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in 33 CFR 330 Appendix A (B) (33) of the US Army Corps of Engineers regulations.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Effective date: March 19, 2017

Signed this day March 3, 2017

By



*for* S. Jay Zimmerman, P.G.  
Director

## GC4094

**Activities meeting any one (1) of the following thresholds or circumstances require written approval for a 401 Water Quality Certification from the Division of Water Resources (DWR):**

- a) If any of the conditions of this Certification (listed below) cannot be met; or
- b) Any permanent fill into or modification of wetlands and/or waters; or
- c) Total temporary impacts to streams greater than 150 feet; or
- d) Total temporary impacts to wetlands greater than 0.10 acre; or
- e) Any stream relocation or stream restoration; or
- f) Any dewatering activity related to dam maintenance or removal; or
- g) Any impacts to waters, or to wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, Trout, or North Carolina or National Wild and Scenic River; or
- h) Any impacts to coastal wetlands [15A NCAC 07H .0205], or Unique Wetlands (UWL); or
- i) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), NC Surface Water or Wetland Standards (15A NCAC 02B .0200), or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200); or
- j) Any impacts to subject water bodies and/or state regulated riparian buffers along subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless*:
  - i) The activities are listed as "EXEMPT" from these rules; or
  - ii) A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or
  - iii) A Buffer Authorization Certificate or a Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23.

**Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval.**

### **I. GENERAL CONDITIONS:**

1. When written authorization is required, the plans and specifications for the project are incorporated into the authorization by reference and are an enforceable part of the Certification. Any modifications to the project require notification to DWR and may require an application submittal to DWR with the appropriate fee. [15A NCAC 02H .0501 and .0502]
2. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) as authorized in the written approval from DWR; or beyond the thresholds established for use of this Certification without written authorization. [15A NCAC 02H .0501 and .0502]

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No removal of vegetation or other impacts of any kind shall occur to state regulated riparian buffers beyond the footprint of impacts approved in a Buffer Authorization or Variance or as listed as an exempt activity in the applicable riparian buffer rules. [15A NCAC 02B .0200]

3. In accordance with 15A NCAC 02H .0506(h), compensatory mitigation may be required for losses of greater than 150 linear feet of streams and/or greater than one (1) acre of wetlands. Impacts to isolated and other non-404 jurisdictional wetlands shall not be combined with 404 jurisdictional wetlands for the purpose of determining when impact thresholds trigger a mitigation requirement. For linear publicly owned and maintained transportation projects that are not determined to be part of a larger common plan of development by the US Army Corps of Engineers, compensatory mitigation may be required for losses of greater than 150 linear feet per stream.

Compensatory stream and/or wetland mitigation shall be proposed and completed in compliance with G.S. 143-214.11. For applicants proposing to conduct mitigation within a project site, a complete mitigation proposal developed in accordance with the most recent guidance issued by the US Army Corps of Engineers Wilmington District shall be submitted for review and approval with the application for impacts.

4. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2 of Title 15A.
5. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506 (b)(3) and (c)(3) and 15A NCAC 02B .0200].

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NCDOT Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

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If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality (HQW), or Outstanding Resource waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

6. Sediment and erosion control measures shall not be placed in wetlands or waters except within the footprint of temporary or permanent impacts authorized under this Certification. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0501 and .0502]
7. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02B .0201]
8. An NPDES Construction Stormwater Permit (NCG010000) is required for construction projects that disturb one (1) or more acres of land. The NCG010000 Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If the project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. [15A NCAC 02H .0506(b)(5) and (c)(5)]

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit. [15A NCAC 02H .0506(b)(5) and (c)(5)]

9. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the *NC Sediment and Erosion Control Manual*, or the *NC DOT Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(3) and (c)(3)]
10. If activities must occur during periods of high biological activity (e.g. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities. [15A NCAC 02H .0506 (b)(2) and 15A NCAC 04B .0125]

All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium. A copy of the approval from the resource agency shall be forwarded to DWR.

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Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers), or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

11. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. [15A NCAC 02H .0506(b)(2) and (c)(2)]

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life.

If multiple pipes or barrels are required, they shall be designed to mimic the existing stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided.

When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross vanes, etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 60 calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as, a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 60 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application to and written approval from DWR.

## GC4094

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

12. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(5)]
13. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A NCAC 02B .0200 and 15A NCAC 02B .0231]
14. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. [15A NCAC 02B .0200]
15. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, planform pattern, and longitudinal bed profile. For projects that receive written approval, no temporary impacts are allowed beyond those included in the application and authorization. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H .0506(b)(2) and (c)(2)]
16. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b)(2) and (c)(2)]

## GC4094

17. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or in a manner that precludes aquatic life passage. [15A NCAC 02H .0506(b)(2)]
18. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b)(2)]
19. Applications for rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405.
20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication and general equipment maintenance shall not take place within 50 feet of a waterbody or wetlands to prevent contamination by fuels and oils. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0211 (12)]
21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance. [15A NCAC 02H .0506(b)(3) and (c)(3)]
22. In accordance with 143-215.85(b), the applicant shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.
23. If an environmental document is required under the State Environmental Policy Act (SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse. If an environmental document is required under the National Environmental Policy Act (NEPA), then this General Certification is not valid until a Categorical Exclusion, the Final Environmental Assessment, or Final Environmental Impact Statement is published by the lead agency. [15A NCAC 01C .0107(a)]

## GC4094

24. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with your project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.
25. The applicant and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. If DWR determines that such standards or laws are not being met, including failure to sustain a designated or achieved use, or that State or Federal law is being violated, or that further conditions are necessary to assure compliance, then DWR may revoke or modify a written authorization associated with this General Water Quality Certification. [15A NCAC 02H .0507(d)]
26. When written authorization is required for use of this Certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return a certificate of completion (available on the DWR website <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>). [15A NCAC 02H .0502(f)]
27. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards. [15A NCAC 02H .0507(c)]
28. If the property or project is sold or transferred, the new Permittee shall be given a copy of this Certification (and written authorization if applicable) and is responsible for complying with all conditions. [15A NCAC 02H .0501 and .0502]

### II. GENERAL CERTIFICATION ADMINISTRATION:

1. In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. An applicant for a CAMA permit under Article 7 of Chapter 113A of the General Statutes for which a Water Quality Certification is required shall only make one payment to satisfy both agencies; the fee shall be as established by the Secretary in accordance with 143-215.3D(e)(7).
2. This Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and this Certification does not create any prescriptive right or any right of priority regarding any usage of water. This Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.

## GC4094

3. This Certification grants permission to the Director, an authorized representative of the Director, or DWR staff, upon the presentation of proper credentials, to enter the property during normal business hours. [15A NCAC 02H .0502(e)]
4. This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit and/or Regional General Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this Certification. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes any of the corresponding Nationwide Permits and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Resources.
5. Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.
6. The Director of the North Carolina Division of Water Resources may require submission of a formal application for Individual Certification for any project in this category of activity if it is determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the water or downstream waters are precluded.
7. Public hearings may be held prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Resources.

*History Note: Water Quality Certification (WQC) Number 4094 issued March 3, 2017 replaces WQC 3893 issued March 19, 2012; WQC Number 3688 issued November 1, 2007; WQC Number 3634 issued March 19, 2007; WQC Number 3366 issued March 18, 2002; WQC Number 3114 issued February 11, 1997; and WQC Number 2727 issued May 1, 1992.*

## Cheely, Erin K

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**From:** Chambers, Marla J <marla.chambers@ncwildlife.org>  
**Sent:** Monday, November 13, 2017 1:18 PM  
**To:** Beckwith, Loretta A CIV USARMY CESAW (US); Alsmeyer, Eric C CIV USARMY CESAW (US); Barnett, Kevin  
**Cc:** Buncick, Marella  
**Subject:** [EXTERNAL] FW: PCN Request for Comments - Replacement of Bridge 12 over Hogsed Creek on SR 1538

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

We concur with the commitment to adhere to the trout moratorium, which prohibits in-stream work and land disturbance within the 25-foot trout buffer from October 15 to April 15, and to use sediment and erosion control measures that adhere to the Design Standards in Sensitive Watersheds. Reasons for replacing the existing bridge with a culvert were not provided. This project has gone through the consultation process with the USFWS regarding possible impacts to the Appalachian Elktoe.

Marla

**\*\*PLEASE NOTE MY NEW PHONE NUMBER\*\***

**Marla Chambers // NCDOT Coordinator**  
Habitat Conservation Program

**NC Wildlife Resources Commission**

c/o NCDOT

206 Charter Street

Albemarle, North Carolina 28001

**Direct Office Line: 704-244-8907**

mobile: 704-984-1070

[Marla.chambers@ncwildlife.org](mailto:Marla.chambers@ncwildlife.org)

[ncwildlife.org](http://ncwildlife.org)



**From:** laserfiche@ncdenr.gov [mailto:laserfiche@ncdenr.gov]  
**Sent:** Tuesday, October 10, 2017 3:07 PM  
**To:** Marella\_Buncick@fws.gov; Chambers, Marla J <marla.chambers@ncwildlife.org>  
**Subject:** PCN Request for Comments - Replacement of Bridge 12 over Hogsed Creek on SR 1538

The North Carolina Division of Water Resources (DWR) has just received a new pre-construction notification application that may be related to your agency's work.

The application can be found here: .

If you wish to offer DWR feedback on this application, please upload your comments at [Blockedhttps://edocs.deq.nc.gov/Forms/Supplemental-Information-Form](https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form))

Project Name: Replacement of Bridge 12 over Hogsed Creek on SR 1538

ID #: 20171283 Version: 1

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# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Asheville Field Office  
160 Zillicoa Street, Suite B  
Asheville, North Carolina 28801



September 14, 2017

Mr. John F. Sullivan, III, P.E.  
Division Administrator  
Federal Highway Administration  
310 New Bern Avenue, Suite 410  
Raleigh, North Carolina 27601

Dear Mr. Sullivan:

Subject: Proposed Replacement of Bridge No. 12 over Hogsed Creek on State Route 1538 (TIP B-4823), Transylvania County, North Carolina

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion (Opinion), based on our review of the proposed replacement of Bridge 12 over Hogsed Creek on State Route (SR) 1538 in Transylvania County, North Carolina, and its effects on the federally endangered Appalachian elktoe (*Alasmidonta raveneliana*), and is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

This Opinion is based on information provided in a Biological Assessment (BA) submitted to the Service, received on July 28, 2017; field investigations; personal communications with experts on the affected species; and other sources of information. This document repeats much of the information provided in the BA, altered as needed to match style and preserve consistency, so that the Opinion can serve as a stand-alone document. A complete administrative record of this consultation is on file at this office.

In the BA, the North Carolina Department of Transportation (NCDOT), in association with the Federal Highway Administration (FHWA), determined that the following federally listed species would not be affected by the proposed bridge replacement project: bog turtle (*Glyptemys muhlenbergii*), Carolina northern flying squirrel (*Glaucomys sabrinus coloratus*), gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), rusty patched bumblebee (*Bombus affinis*), mountain sweet pitcherplant (*Sarracenia rubra* ssp. *jonesii*), small whorled pogonia (*Isotria medeoloides*), spreading avens (*Geum rediatum*), swamp pink (*Helonias bullata*), Virginia spiraea (*Spiraea virginiana*), and

rock gnome lichen (*Gymnoderma lineare*). In view of this information, we concur with your determination that the bridge replacement project will have no effect on these species. Therefore, we believe the requirements under section 7 of the Act are fulfilled for these species. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals effects 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.

## **CONSULTATION HISTORY**

May 30, 2012 - Site visit was made by NCDOT personnel Karen Kendig, Logan Williams, and Mike Sanderson and Service personnel Jason Mays and John Fridell. In this area, Hogsed Creek flows through a sod farm with very little riparian buffer before it joins the French Broad River.

August 23, 2012 – Qualitative timed searches for mussels were conducted at four sites on the main stem of the French Broad River by NCDOT personnel Logan Williams, Karen Kendig, Mary Frazer, and Mike Sanderson and Service personnel John Fridell and Jason Mays. All sites were located downstream of the mouth of Hogsed Creek. The creeper mussel (*Strophitus undulatus*) was collected at every site, indicating suitable mussel habitat. Additionally, live Appalachian elktoe mussels were collected 12 river miles (RM) (19.31 kilometers [km]) upstream from the mouth of the Davidson River, the previous known upstream extent of the species in the French Broad, indicating that the Appalachian elktoe is expanding its range upstream in the French Broad River and is frequently detected at locations where the creeper mussel is already known to occur.

October 25, 2013 – Email from Mike Sanderson (NCDOT) to Neil Medlin (NCDOT) stating that the proposed bridge site is less than 0.2 RM (0.32 km) from the confluence with the French Broad River in an area that is known to be habitat that is occupied by the Appalachian elktoe.

March 28, 2014 – Email from Mike Sanderson (NCDOT) to John Williams (NCDOT) stating that Jason Mays (Service) indicated that he was not opposed to a reinforced concrete box culvert (RCBC) (personal communication, March 28, 2014) as long as it was larger than the existing structure. His biggest concern would be any structure that is likely to cause bank destabilization.

April 12, 2014 – Email from John Williams (NCDOT) to Jason Mays (Service), which summarized their conversation from the previous day. It stated that Mays' field investigation indicated that the condition upstream from the bridge was surprisingly good given the open fields that flank it. The condition of the banks between Bridge 12 and Culvert 20 downstream was poor, which potentially resulted from constricted flow with the two structures. If so, the constricted flow may have created accelerated water coming out of Bridge 12, resulting in scour just downstream and ponding water behind Culvert 20, causing the banks to get soft and slough off.

May 15, 2014 – John Williams (NCDOT) coordinated a meeting with NCDOT design staff and Service personnel to discuss structure type, stream restoration opportunities to offset potential effects to the Appalachian elktoe, and alternatives. The NCDOT indicated they would move forward with an RCBC and pursue coordination with the landowner.

March 17, 2015 – Email from Mike Sanderson (NCDOT) to NCDOT personnel indicating that Jason Mays (Service) stated verbally that a determination of “may affect, not likely to adversely affect” is what he is likely to concur with. He did mention that it would be necessary to visit the French Broad River for a survey at the mouth of the creek.

May 13, 2015 – NCDOT Preliminary Plan Review Meeting. Hydrologic analyses determined that a two-barrel RCBC would not function adequately. The existing grade would be matched as much as possible.

April 13, 2016 – Final Programmatic Categorical Exclusion (PCE) distributed by the NCDOT.

October 26, 2016 – Mussel survey by Mike Sanderson (NCDOT) and Jason Mays (Service) found the Appalachian elktoe in the French Broad River, directly downstream of its confluence with Hogsed Creek. Project moved to formal consultation.

November 1, 2016 – The NCDOT (Mike Sanderson and Erin Cheely) consulted with the Service (Jason Mays and Andrew Henderson) via phone and discussed the time frame of the BA/BO with regard to permitting. Both agencies decided that the most beneficial way to proceed forward was to secure conservation measures in the form of funding for mussel programs and retain the current final design of the project. Propagation efforts are underway for the wavy-rayed lampmussel (*Lampsilis fasciola*) and the creeper mussel, both of which are also native to the French Broad River system and commonly co-occur with the Appalachian elktoe. These species are good indicators of mussel persistence and habitat quality in the French Broad River. They could be used as test animals in mussel propagation and population augmentation efforts and to build partnerships, as well as facilitate outreach and educational opportunities between the University of North Carolina at Asheville (UNCA), North Carolina Wildlife Resources Commission (NCWRC), and the Service.

## **BIOLOGICAL OPINION**

### **I. DESCRIPTION OF THE PROPOSED ACTION**

As defined in the Service’s section 7 regulations (50 CFR 402.02), “action” means “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas.” The action area is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” The direct and indirect effects of the actions and activities must be considered in conjunction with the effects of other past and present Federal, state, or private activities, as well as the cumulative effects of reasonably certain future state or private activities within the action area. This Opinion addresses

only those actions for which we believe adverse effects may result. In their BA, the FHWA outlined those activities involved in the replacement of Bridge No. 12 on SR 1538 over Hogsed Creek (B-4823) that would affect the Appalachian elktoe. This Opinion addresses whether replacing the existing bridge is likely to jeopardize the continued existence of the Appalachian elktoe.

The NCDOT has determined that the existing bridge is deficient because of its deteriorating structural integrity. NCDOT Bridge Management Unit records indicate Transylvania County Bridge No. 12 has a sufficiency rating of 43 out of a possible 100 for a new structure. With a deck geometry rating of 2, the bridge is considered functionally obsolete according to FHWA standards. The bridge had temporary shoring put in place in 2014 to keep it sound until replacement. The posted weight limit on the bridge is 14 tons for single vehicles and 19 tons for truck-tractor semi-trailers. Bridge No. 12 currently carries 600 vehicles per day, with 700 vehicles per day projected for 2040. In addition, the superstructure and substructure of Bridge No. 12 have timber elements that are 55 years old. Timber components have a typical life expectancy between 40 and 50 years due to the natural deterioration rate of wood. The bridge is approaching the end of its useful life, and replacement will result in safer traffic operations.

The proposed action, as defined in the BA, involves replacement of the existing one-lane bridge in place with a three-barrel RCBC, 11 feet (ft) (3.35 meters [m]) by 6 ft (1.83 m). The project is scheduled to be completed within 1 year. An off-site detour on State Highway 276 will be used for traffic during project construction activities. The RCBC will be installed on the existing channel alignment at the stream crossing. The proposed RCBC design will maintain the same stream slope (1.25 percent) as the existing stream slope; therefore, the proposed low-flow velocities through the RCBC are intended to be consistent with the existing low-flow velocities in the stream. The proposed RCBC would provide a slightly larger hydraulic opening than the existing bridge structure. Streamside slopes would be 2:1.

Hogsed Creek is about 13 ft (3.96 m) wide upstream and 11 ft (3.35 m) wide downstream of the existing bridge proposed for replacement with the RCBC. The new RCBC will maintain this channel width in the center low-flow barrel of the RCBC. Floodplain benches will be shaped for both outside high-flow barrels, and bank stabilization will be used to maintain channel structure near the crossing. The RCBC will be buried 1.0 ft (0.31 m) deep, and 1.0-ft (0.31-m) sills will be used at the inlet and outlet ends of the low-flow (center) barrel. The high-flow barrels will have 2.0-ft (0.61-m) sills. The RCBC will be backfilled with native stream material to sill height. Only material that is excavated from the streambed will be used in the low-flow barrel, and the high-flow barrels may be supplemented with riprap if needed. If riprap is used in the high-flow barrels, native material will be placed on top.

## **A. Action Area**

The project action area is defined as all areas to be affected, directly or indirectly, by the Federal action and not merely the immediate area involved in the action (50 CFR §402.02).

For this bridge replacement with an RCBC, the limits of effects are considered to include the limits of construction of the approach and any area receiving runoff from the construction activity, including the receiving river, extending 1,314 ft (400.51 m) downstream and 328 ft (99.97 m) upstream of the structure. The proposed project intersects Hogsed Creek, less than 0.2 RM (0.32 km) from the French Broad River, and the Appalachian elktoe has been collected immediately downstream of the confluence of Hogsed Creek and the French Broad River.

## **B. Conservation Measures**

Conservation measures represent actions, pledged in the project description, that the action agency will implement in order to minimize the effects of the proposed action and further the recovery of the species under review. Such measures should be closely related to the action and should be achievable within the authority of the action agency. We consider the beneficial effects of conservation measures in making our determination of whether the project will jeopardize the species and in the analysis of incidental take.

The following “Design Standards in Sensitive Watersheds” are incorporated into FHWA/NCDOT projects that occur within or upstream of water bodies that contain federally protected aquatic species:

- Erosion- and sedimentation-control measures, structures, and devices within a sensitive watershed shall be so planned, designed, and constructed in a manner that provides 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 NCDOT.
- Sediment basins within sensitive watersheds shall be designed and constructed such that the basin will have a settling efficiency of at least 70 percent for the 40-micron- (0.04-mm-) size soil particles transported into the basin by the runoff of the 2-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 NCDOT.
- 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 the approved product list of the North Carolina Division of Water Resources (NCDWR). No flocculants will be used at the perimeter of the site, and erosion-control measures will be designed to prevent the release of treated soil into the stream.

- 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.
- Ground cover 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 development.

Because the project is located in an environmentally sensitive area, special procedures will also be used for clearing and grubbing, temporary stream crossings, and grading operations. This also requires that special procedures be used for seeding and mulching and staged seeding within the project.

The environmentally sensitive area shall be defined as a 50-foot (ft) buffer zone on both sides of the stream or depression measured from the top of the streambank or center of the depression.

- Clearing and Grubbing - In areas identified as environmentally sensitive, 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.
- 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 so that each phase is complete and areas are permanently stabilized prior to beginning the 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*.
- Temporary Stream Crossings - Any crossing of streams within the limits of this project shall be accomplished in accordance with the requirements of Subarticle 107-12(B) of the *Standard Specifications*.

- Native Vegetation 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. No appreciable time shall lapse into the contract time without stabilization of slopes, ditches, and other areas within the environmentally sensitive areas. Penalties to the contractor may apply if this condition is not met.
- Stage Seeding - The work covered by this section shall consist of the establishment of a vegetative cover on cut-and-fill slopes as grading progresses. Seeding and mulching shall be done in stages on cut-and-fill slopes that are greater than 20 ft (6.10 m) in height, measured along the slope, or greater than 2 acres in area. No stage shall exceed the limits stated above.

The following are additional measures intended to further reduce deleterious construction-related effects to the waterway:

- Machines will be refueled outside of the environmentally sensitive area and inside a specific containment area designed to contain any spills and facilitate easy cleanup.
- Machines will be inspected daily to catch and repair leaks of hydraulic fluid.
- A stormwater management plan will be submitted for review and approval with the permit package.
- As part of the FHWA's section 7.a.1 regulatory requirement under the Act and to offset the long-term effects to freshwater mussel habitat in the vicinity of this proposed project (B-4823), the NCDOT and FHWA (in consultation with the Service) have agreed to provide \$15,000 to the NCWRC mussel propagation program at UNCA. Propagation and population augmentation through these efforts is intended to assist in the recovery of species in the French Broad River and to have a positive effect on the environmental baseline, which is greater than the perceived negative impact of the loss of habitat due to this bridge project.

## **II. STATUS OF THE SPECIES AND ITS CRITICAL HABITAT**

### **A. Appalachian elktoe (*Alasmidonta raveneliana*)**

Status: Endangered

Family: Unionidae

Listed: September 3, 1993

## 1. Characteristics

Isaac Lea (1834) described the Appalachian elktoe from the French Broad River system in North Carolina. Its shell is thin, but not fragile, oblong and somewhat kidney-shaped, with a sharply rounded anterior margin and a broadly rounded posterior margin. Parmelee and Bogan (1998) site a maximum length of 3.1 inches (78.74 millimeters [mm]). However, recently observed individuals from the Little River (French Broad River basin) in Transylvania County and the West Fork Pigeon River (French Broad River basin) in Haywood County measured in excess of 3.9 inches (99.06 mm) in length (Service 2009). The periostracum (outer shell) of the adult Appalachian elktoe varies in color from dark brown to yellowish-brown. Rays may be prominent in some individuals, usually on the posterior slope, and nearly obscure in other specimens. The nacre (inside shell surface) is a shiny bluish-white, changing to a salmon color in the beak cavity portion of the shell. A detailed description of the shell characteristics is contained in Clarke (1981). Ortmann (1921) provides descriptions of the soft anatomy.

The reproductive cycle of the Appalachian elktoe is similar to that of other native freshwater mussels. Males release sperm into the water column, and the sperm are then taken in by the female through their siphons during feeding and respiration. The females retain the fertilized eggs in their gills until the larvae (glochidia) fully develop. The mussel glochidia are released into the water, and within a few days they must attach to the appropriate species of fish, which they parasitize for a short time while they develop into juvenile mussels. They then detach from their fish host and sink to the stream bottom where they continue to develop, provided they land in a suitable substrate with the correct water conditions (Service 2002). The Appalachian elktoe is a bradyctictic (long-term) breeder, with the females retaining glochidia in their gills from late August to mid-June (Service 2009). Glochidia are released in mid-June, attaching to either the gills or fins of a suitable fish host species. Transformation time for the Appalachian elktoe occurs within 18 to 22 days at a mean temperature of 18°C. The Appalachian elktoe can use a variety of common fish hosts but appears to specialize on infesting darters and sculpins, which are common in the action area.

## 2. Distribution and Habitat Requirements

The Appalachian elktoe is known only from the mountain streams of western North Carolina and eastern Tennessee. Historically, the species has also been recorded from Tulula Creek (Tennessee River drainage), the main stem of the French Broad River, and the Swannanoa River (French Broad River system) (Clarke 1981), but it was reported to have been eliminated from these streams (Service 1994, 1996). Currently, it is known to occur in low numbers in a reach of the main stem of the French Broad River in Transylvania County (see discussion below). It is unclear whether this represents a recolonization or an

erroneous conclusion of extirpation. There is also a historical record of the Appalachian elktoe from the North Fork Holston River in Tennessee (S.S. Haldeman collection); however, this record is believed to represent a mislabeled locality (Gordon 1991). If the historical record for the species in the North Fork Holston River is a valid record, the species has apparently been eliminated from this river as well.

Although the complete historic range of the Appalachian elktoe is unknown, available information suggests that the species once lived in the majority of the rivers and larger creeks of the upper Tennessee River system in North Carolina, with the possible exception of the Hiwassee and Watauga River systems (the species has not been recorded from either of these river systems). In Tennessee, the species is known only from its present range in the main stem of the Nolichucky River. At the time of listing, two known populations of the Appalachian elktoe existed--the Nolichucky River, including its tributaries (the Cane River and the North Toe River), and the Little Tennessee River and its tributaries. The record in the Cane River was represented by one specimen found just above its confluence with the North Toe River (Service 1996). Since listing, the Appalachian elktoe has been found in additional areas. These occurrences include extensions of the known ranges in the Nolichucky River (North Toe River, South Toe River, and Cane River) and the Little Tennessee River (Tuckasegee River and Cheoah River) as well as a rediscovery in the French Broad River basin (Pigeon River, Little River, Mills River, and the main stem of the French Broad River). Many of these newly discovered populations are relatively small in size and range.

In the Little Tennessee River system in North Carolina, subpopulations survive in three rivers--the Little Tennessee, Tuckasegee, and Cheoah. These subpopulations are likely functionally isolated from each other by Fontana Reservoir. The main stem of the Little Tennessee River subpopulation occurs from the City of Franklin downstream to the backwaters of Fontana Reservoir in Swain and Macon Counties, covering an area of about 600 acres. Much of the area of the Little Tennessee River occupied by the Appalachian elktoe is part of the Nantahala National Forest. The Appalachian elktoe has been reported from relatively shallow, medium-sized creeks and rivers with cool, clean, well-oxygenated, moderate- to fast-flowing water. The species is most often found in riffles, runs, and shallow flowing pools with stable, relatively silt-free, coarse sand and gravel substrate associated with cobble, boulders, and/or bedrock (Gordon 1991; Service 1994, 1996, 2009). Stability of the substrate appears to be critical to the Appalachian elktoe, and the species is seldom found in stream reaches dominated by silt or shifting sand.

With the exception of the Nolichucky River basin and the Tuckasegee populations, all of the other populations were generally considered small in number and/or restricted to short reaches of isolated streams. The Little Tennessee River population was once considered the stronghold for the species;

however, densities have declined by over 90 percent in the river since 2004, and the species is now very rare throughout most of the occupied reach. The cause of this decline remains uncertain (NCWRC, unpublished data, Aquatics Database, 2014). The other populations of the Appalachian elktoe currently appear to be comprised of scattered individuals restricted to very short stream reaches, and their viability is questionable (Service 2009). The Cheoah River, Pigeon River, Little River, Mills River and French Broad River populations are restricted to scattered areas of suitable habitat in stream reaches of about 3.60 RM (5.79 km), 14.04 RM (22.60 km), 11.1 RM (17.86 km), 2.0 RM (3.22 km), and 17.4 RM (28.00 km), respectively, making them vulnerable to extirpation from a single catastrophic event, such as a major chemical spill (Service 2009).

### 3. Threats to the Species

The decline of the Appalachian elktoe throughout its historic range has been attributed to a variety of factors, including sedimentation, point and nonpoint-source pollution, and habitat modification (impoundments, channelization etc.). The low numbers of individuals and the restricted range of most of the surviving populations make them extremely vulnerable to extirpation from a single catastrophic event or activity. Catastrophic events may consist of natural events, such as flooding or drought, as well as human influenced events, such as toxic spills associated with highways or railroads.

Portions of the French Broad River basin and most of western North Carolina experienced catastrophic flooding in late summer 2004 as a result of Tropical Storms Francis, Ivan, and Jeanne. Numerous dead mussels, including the Appalachian elktoe, were observed in over-wash areas along the Little Tennessee River after the flood events. Additionally, surveys conducted in the Little Tennessee River after the flooding yielded noticeably lower catch per unit effort of live mussels, including the Appalachian elktoe, compared to past survey efforts in this section of the river (Service 2009).

Siltation resulting from improper erosion control of various types of land usage, including agriculture, forestry, road construction, and development, has been recognized as a major contributing factor to the degradation of mussel populations (Service 1996). Siltation has been documented to be extremely detrimental to mussel populations by degrading substrate and water quality, increasing potential exposure to other pollutants, and direct smothering of mussels (Ellis 1936, Marking and Bills 1979). Sediment accumulations of less than an inch have been shown to cause high mortality in most mussel species (Ellis 1936). In Massachusetts, a bridge construction project decimated a population of the endangered dwarf wedgemussel (*Alasmidonta heterodon*) because of accelerated sedimentation and erosion (Smith 1981). The abrasive action of sediment on mussel shells has been shown to cause erosion of the outer shell, which allows acids to reach and corrode underlying layers (Harman 1974).

Sewage treatment effluent has been documented to significantly affect the diversity and abundance of mussel fauna (Goudreau et al. 1988). Goudreau et al. (1988) found that recovery of mussel populations might not occur for up to 2 RM (3.22 km) below points of chlorinated sewage effluent. Most of the water bodies where Appalachian elktoe still exist have relatively few point source discharges within the watershed and are rated as having “good” to “excellent” water quality (NCDWR 2012, Service 1996).

The introduction of exotic species, such as the Asian clam and zebra mussel (*Dreissena polymorpha*), has also been shown to pose significant threats to native freshwater mussels. The Asian clam is now established in most of the major river systems in the United States (Fuller and Powell 1973). At the time the Appalachian elktoe was listed, the Asian clam was not known from the stretch of the Little Tennessee River that it occupies; however, it has been observed in the Little Tennessee River in recent years and, as mentioned earlier, may be a contributing factor to the decline of that population. Concern has been raised over competitive interactions for space, food, and oxygen between this species and native mussels, possibly at the juvenile stages (Neves and Widlak 1987; Alderman 1997). When the Appalachian elktoe was listed, it was speculated that, due to its restricted distribution, it “may not be able to withstand vigorous competition” (Service 1996).

Another exotic species that has the potential to adversely impact aquatic species, including Appalachian elktoe, is the Japanese knotweed (*Fallopia japonica*). The plant is considered to be an invasive species that can reproduce from its seed or from its long, stout rhizomes. It can tolerate a variety of conditions, such as full shade, high temperatures, high salinity, and drought. It can be spread by wind, water, and soil movement to an area where it quickly forms dense thickets that exclude native vegetation and greatly alter the natural ecosystem. This species has become established in riparian habitats throughout western North Carolina. The species has a very shallow root system; because of this shallow root system and its preclusion of other vegetation, areas where this species has been established may be susceptible to erosion during flood events.

Prior residential development and agricultural practices have had serious impacts on riparian and aquatic habitat in the project area. Much of the riparian habitat within the project area has been severely degraded by agricultural activities, including sod farming. Because riparian areas have been cleared of trees and other woody vegetation by landowners, high-water events have resulted in bank erosion and scour along and within Hogsed Creek and along much of the French Broad River upstream and downstream of the project area. The poor condition of the riparian habitat along Hogsed Creek also likely leads to excessive runoff from adjacent agriculture fields that contain not only silt but also fertilizers and pesticides that are used in those fields.

#### 4. Designated Critical Habitat

- a. In accordance with section 4 of the Act, critical habitat for listed species consists of:
  - (1) The specific areas within the geographical area occupied by the species at the time it is listed in which are found those physical or biological features (constituent elements) that are essential to the conservation of the species and which may require special management considerations or protection.
  - (2) The specific areas outside the geographical area occupied by the species at the time it is listed upon a determination by the Secretary that such areas are “essential for the conservation of the species.”
- b. Critical habitat for Appalachian elktoe has been designated in 144.3 total RM (232.23 km) in six distinct units. Those units are as follows:
  - (1) Encompasses about 24 RM (38.62 km) of the main stem of the Little Tennessee River from the Lake Emory Dam in Franklin, Macon County, North Carolina, downstream to the backwaters of Fontana Reservoir in Swain County, North Carolina
  - (2) Encompasses about 26 RM (41.84 km) of the main stem of the Tuckasegee River from the SR 1002 bridge in Cullowhee, Jackson County, North Carolina, downstream to the NC 19 bridge north of Bryson City, Swain County, North Carolina.
  - (3) Encompasses about 9.1 RM (14.65 km) of the main stem of the Cheoah River from the Santeelah Dam, downstream to its confluence with the Little Tennessee River, in Graham County, North Carolina.
  - (4) Encompasses about 4.7 RM (7.56 km) of the main stem of the Little River (French Broad River basin) from the Cascade Lake Power Plant, downstream to its confluence with the French Broad River in Transylvania County, North Carolina.
  - (5) Encompasses about 11.1 RM (17.86 km) of the main stem of the West Fork Pigeon River (French Broad River basin) from the confluence with the Little East Fork Pigeon River, downstream to the confluence with the East Fork Pigeon River; and the main stem of the Pigeon River from the confluence of the East Fork Pigeon River and West Fork Pigeon River, downstream to the NC 215 crossing, south of Canton, Haywood County, North Carolina.

- (6) Encompasses about 3.7 RM (5.96 km) of the main stem of the North Toe River, Yancey and Mitchell Counties, North Carolina, from the confluence with Big Crabtree Creek, downstream to the confluence of the South Toe River; about 14.1 RM (22.69 km) of the main stem of the South Toe River, Yancey County, North Carolina, from the SR 1152 crossing, downstream to its confluence with the North Toe River; about 21.6 RM (34.76 km) of the main stem of the Toe River, Yancey and Mitchell Counties, North Carolina, from the confluence of the North Toe River and South Toe River, downstream to the confluence of the Cane River; about 16.5 RM (26.55 km) of the main stem of the Cane River, Yancey County, North Carolina, from the SR 1381 crossing, downstream to its confluence with the Toe river; and about 13.5 RM (21.73 km) of the main stem of the Nolichucky River from the confluence of the Toe River and the Cane River in Yancey and Mitchell Counties, North Carolina, downstream to the US 23/19W crossing, southwest of Erwin, in Unicoi County, Tennessee.
- c. When designating critical habitat, the Service identifies physical and biological features (primary constituent elements) that are essential to the conservation of the species and that may require special management considerations or protection. The primary constituent elements essential for the conservation of Appalachian elktoe are:
- (1) Permanent, flowing, cool, clean water.
  - (2) Geomorphically stable stream channels and banks.
  - (3) Pool, riffle, and run sequences within the channel.
  - (4) Stable sand, gravel, cobble, and boulder or bedrock substrates with no more than low amounts of fine sediment.
  - (5) Moderate to high stream gradient.
  - (6) Periodic natural flooding.
  - (7) Fish hosts, with adequate living, foraging, and spawning areas for them.

Although there are specific sites within the six units that do not contain all of the primary constituent elements, these elements are found consistently throughout the designated river reaches and are present at the sites containing the “healthiest” of the occurrences (Service 2002).

### **III. ENVIRONMENTAL BASELINE**

Under section 7(a)(2) of the Act, when considering the effects of an action on federally listed species, we are required to take into consideration the environmental baseline. The environmental baseline includes past and ongoing natural factors and past and present impacts from all Federal, state, or private actions and other activities in the action area (50 CFR 402.02), including Federal actions in the area that have already undergone section 7 consultation and the impacts from state or private actions that are contemporaneous with the consultation in progress. The environmental baseline for this Opinion considers all projects approved prior to the initiation of formal consultation.

#### **A. Hogsed Creek**

##### **1. Water Quality**

Hogsed Creek is located in the French Broad River basin (U.S. Geological Survey, Hydrologic Unit 06010105). Hogsed Creek has been identified by the North Carolina Department of Environmental Quality (NCDEQ) as trout waters. There are no designated outstanding resource waters, high quality waters, or water supply watersheds (WS-I or WS-II) within 1.0 RM (1.61 km) downstream of the study area. The NCDEQ's 2014 Final 303(d) list of impaired waters does not identify Hogsed Creek or any other streams within 1.0 RM (1.61 km) of the study area as impaired.

##### **2. Survey Information**

Collection records available from the NCWRC's database indicate that the Appalachian elktoe was collected from the main stem of the French Broad River at the Crab Creek Road crossing, near the town of Penrose, in 2005, during surveys conducted to assess damage from flooding that occurred late in 2004. This location is about 12 RM (19.31 km) downstream of the proposed project on Hogsed Creek. Prior to this record, the Appalachian elktoe was known to have been present in the French Broad River; however, decades of pollution and development degraded the habitat, and there were no contemporary records of this species from the river.

##### **3. Status of the Species Within the Action Area**

Since 2005, the Appalachian elktoe has experienced an expansion in the French Broad River and is currently known to occupy a portion of the upper French Broad River between the towns of Mills River and Rosman. Aquatic surveys conducted in anticipation of the Hogsed Creek bridge replacement in the summer of 2012 noted suitable habitat at the mouth of Hogsed Creek, downstream of the proposed construction project. The creeper mussel, a closely related species often found with the Appalachian elktoe in the French Broad, was collected live at the mouth of Hogsed Creek and downstream in the French Broad River, hinting that

the Appalachian elktoe was likely also present, but undetected, during the surveys conducted at that time.

An additional survey conducted in the fall 2016 at the same site detected live Appalachian elktoes at the mouth of Hogsed Creek and demonstrated that the Appalachian elktoe is present within the action area and is likely to be affected by the proposed project. Hogsed Creek discharges within the area sparsely populated by Appalachian elktoe in the French Broad River. Because the extent of this colonization by the species appears to be relatively small, it is likely particularly vulnerable to changes in population numbers.

#### **IV. EFFECTS OF THE ACTION**

Under section 7(a)(2) of the Act, “effects of the action” refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action. The Federal agency is responsible for analyzing these effects. The effects of the proposed action are added to the environmental baseline to determine the future baseline, which serves as the basis for the determination in this Opinion. Should the effects of the Federal action result in a situation that would jeopardize the continued existence of the species, we may propose reasonable and prudent alternatives that the Federal agency can take to avoid a violation of section 7(a)(2).

The discussion that follows is our evaluation of the anticipated direct, indirect, and cumulative effects of implementing the proposed action. Direct effects are actions that may result in immediate effects to the species, including the construction of temporary causeways, land-clearing, potential toxic spills, and erosion. All of these activities have the potential to kill or injure the species under consideration, by either injuring them, poisoning them, or causing habitat alteration. Indirect effects are those caused by the proposed action that occur later in time but that are still reasonably certain to occur. Cumulative effects are those effects of future state or private activities, not involving Federal activities, which are reasonably certain to occur within the action area of the proposed Federal action (50 CFR 402.02).

##### **A. Factors to be Considered**

1. Proximity of the Action – Based on recent surveys within the action area conducted by the NCDOT and the Service, the Appalachian elktoe is within the project impact area and could be directly and indirectly affected. The Appalachian elktoe recently was found downstream of the proposed project.
2. Nature of the Effect – In-stream habitat will be affected permanently by the installation of an RCBC within the stream channel. Both in-stream habitat and habitat within the floodplain will be affected for the duration of the construction and RCBC installation activities and likely for some period after completion of

the project. Portions of the stream channel will be impacted permanently by installation of the RCBC and shaping of the floodplain benches. Also, stream discharge velocities and patterns will be altered, resulting in changes to physical habitat within Hogsed Creek. Although the clearing of riparian vegetation will be minimal due to the lack of established vegetative cover at the existing bridge crossing, riparian areas further from the stream used for equipment access could result in minor changes in water chemistry, including temporary increases in water temperature. An increase in access for large construction vehicles to cross the creek may have cumulative effects that include increased development of the watershed in an area that was previously not accessible for some types of construction.

3. Disturbance Duration, Frequency, and Intensity – Direct and indirect disturbances to the streambed will occur during removal of the existing bridge and installation of the RCBC, including backfilling sills with native material within the RCBC. Effects to the streambed from installation within the RCBC footprint are a significant impact to stream habitat. The installation of an RCBC at this site is considered a permanent 130-ft (~40-m) impact to Hogsed Creek and will result in the functional loss of streambed in the footprint of the installed RCBC at least until particle sorting within the RCBC achieves a stable equilibrium. Mechanical bridge removal and RCBC installation will likely result in high-intensity compaction and disturbance of the streambanks and stream substrate for a short duration. Although the total surface-water impacts for the entire project are relatively small (~0.05 acre), the true extent of these impacts is unknown because rivers and streams are linear features, and cumulative impacts of activities throughout watersheds are not easily quantified. The RCBC will result in disturbance to stream-flow patterns and substrate throughout the life of the structure and may cause the conversion of stable stream habitat to scoured habitat, which is considered a permanent effect. The project is scheduled to be completed within 1 year.

Once construction is completed, stream riparian areas will be stabilized through erosion-control measures and a combination of hardened slope protection or immediate seeding and mulching. However, minor temporary increases in siltation and sedimentation associated with stormwater runoff are anticipated to occur during project implementation, even with the incorporation of preformed scour holes (PSHs) in the project design. Temporary impacts will likely include increased erosion and bank instability. Stabilization with nonnative rock within the floodplain may lead to permanent alteration of local air and water temperatures due to a combination of the loss of any existing riparian shading and the heating of impervious surfaces. Effects of streambed loss will likely include benthic habitat loss in Hogsed Creek, potential fragmentation of habitat for mussels and host fishes at extremely low flows, and overall decreased benthic productivity within the stream.

To minimize the potential for sedimentation, the NCDOT has developed specific erosion-control measures for this project designed to protect environmentally sensitive areas. Although there are no practical erosion-control measures that can totally eliminate the chance for sedimentation from a project site, if the erosion-control plans are properly incorporated into project construction and strictly adhered to, adverse effects to the aquatic habitat of Hogsed Creek and the French Broad River from erosion and sedimentation should be minimal.

Stormwater coming off the new structure will not directly enter the river; rather it will be directed into inlets placed just off the end of the bridge into PSHs in the floodplain, where it will be treated via a vegetated buffer before flowing into the river. This conservation measure should allow some road-derived pollutants to be sequestered within the PSHs, thereby reducing to the pollutant load within the river.

## **B. Analyses of the Effects of the Action**

### **1. Appalachian elktoe**

#### **a. Potential Beneficial Effects**

The NCDOT and FHWA have committed to participating in a partnership with the Service, NCWRC, and UNCA to propagate and restore the Appalachian elktoe and other native mussels in the French Broad River. Propagation efforts to reintroduce native freshwater mussels in this river should have population-level benefits.

#### **b. Direct Effects**

Potential direct effects to mussel species associated with transportation projects include substrate disturbance/loss, siltation, and alteration of flows and the introduction of toxic compounds. Under normal conditions, the removal of a bridge over a stream is a relatively minor disturbance to the stream habitat; however, construction activities invariably have some adverse effects on the aquatic habitat by increasing the amount of erosion, siltation, and chemical pollution to the impacted waters. Additionally, the purpose of the proposed project is to install a three-barrel RCBC at the site of the existing bridge, which will result in a direct effect and a permanent impact to Hogsed Creek. All of these activities have the potential to kill or injure mussels by poisoning them with the release of some toxic substance or causing siltation that may suffocate them. These actions may result in direct harm to individuals or negative changes in suitable habitat downstream of the project site.

The above-mentioned conservation measures will be incorporated by the FHWA and NCDOT to avoid/minimize effects to Hogsed Creek and the

French Broad River. Strict implementation of these measures will reduce the chance that the effects will be detrimental to the Appalachian elktoe in the impact area downstream of the proposed bridge replacement. It should be assumed that the Appalachian elktoe is continually present downstream of the project site. Due to the close proximity of known occurrences, losses of the species in the French Broad River could occur downstream of the site of the RCBC installation on Hogsed Creek. The potential loss of individual Appalachian elktoes would normally not be expected to adversely affect the overall population within the French Broad River; however, given the known limited extent of this population, each individual mussel has increased importance. Installation of the RCBC will result in the placement of permanent and temporary fill into Hogsed Creek. The following direct effects to the creek are anticipated as a result of construction activities, though these numbers may change slightly in the final design.

- Permanent (RCBC and fill) – 130 ft<sup>2</sup> (12.08 m<sup>2</sup>)
- Temporary (stream stabilization) – 18 ft<sup>2</sup> (1.67 m<sup>2</sup>)

The detrimental effects of siltation on aquatic species have already been listed in this document. Suspended solids, sedimentation, and turbidity result in reduced biodiversity as well as a decline in productivity at all trophic levels (Gilbert 1989). Because of the topography and the erodible nature of the soils in the project area, project construction has the potential to result in sedimentation in Hogsed Creek and the French Broad River.

Geomorphically stable stream channels and banks are a primary constituent element essential for the survival and conservation of the Appalachian elktoe. Stream channel instability, caused by excavation and construction activities associated with bridge removal and installation of the proposed RCBC on Hogsed Creek, could lead to reduced numbers of Appalachian elktoes. Natural stream stability is achieved when the stream exhibits a stable dimension, pattern, and profile such that, over time, the channel features are maintained and the channel neither aggrades nor degrades. Channel instability occurs when scour results in degradation or when sediment deposition leads to aggradation (Rosgen 1996). The placement of fill materials and RCBCs into streams can alter the normal flow pattern of a water body by reducing flow velocities upstream, thus increasing sedimentation and flow velocities downstream, resulting in scour and erosion. Lack of native riparian vegetation at the project site has the potential to contribute to sedimentation downstream in Hogsed Creek and the French Broad River.

Numerous pollutants have been identified in highway runoff, including various metals (lead, zinc, iron, etc.), sediment, pesticides, deicing salts, nutrients (nitrogen, phosphorus), and petroleum hydrocarbons (Yousef et al. 1985, Gupta et al. 1981). The sources of these runoff constituents range from

construction and maintenance activities to daily vehicular use. Hoffman et al. (1984) concluded that highway runoff can contribute up to 80 percent of the total pollutant loadings to receiving water bodies. Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, lead, and zinc were some of the pollutants identified. The potential for the introduction of these pollutants into Hogsed Creek and the French Broad River is increased with the short-term associated increases in construction equipment and long-term two-lane capacity of vehicular traffic over Hogsed Creek on SR 1538.

c. Indirect Effects

Indirect effects are those effects that are caused by or will result from the proposed action and are later in time but are still reasonably certain to occur (50 CFR 402.02). These types of effects can include natural responses to the proposed action's direct effects or human-induced effects associated with the proposed action. The indirect effects of replacing a bridge with an RCBC are not well known. The initial installation of an RCBC is known to cause changes in the flow of the stream and corresponding erosive processes that can alter the adjacent habitat, regardless of efforts to "backfill" the RCBC with native stream material. Adding instream structures will likely cause minor local scour below the RCBC until a state of equilibrium is reached.

The existing bridge structure has not resulted in the temporary trapping of logs and woody debris on the upstream side of the crossing, but there is potential for those conditions to increase with the addition of an RCBC with three barrels. In addition to the direct effects of RCBC installation that were discussed above, another concern with RCBC installation is the potential for the RCBC to act as a barrier to fish migration. Disruption of fish migrations can indirectly affect freshwater mussels if the fish that are disturbed serve as fish hosts for the mussel species and are infested with glochidia (juvenile mussels) at the time when their migration patterns are disrupted. The permanence of the RCBC is not expected to interfere with normal seasonal migration of any fish species in Hogsed Creek due to backfill of the RCBC with native stream material. Temporary disruptions to the normal migration of individuals of some fish species may occur while the RCBC is installed. Individual fish, particularly benthic species, may be restricted, or deterred from swimming upstream of the RCBC; however, these temporary disruptions to fish behavior are not expected to significantly affect the survival of transforming Appalachian elktoes as there is ample habitat downstream in the French Broad River for transformed mussels. Additionally, the temporary restriction of individual fish from habitat upstream of the RCBC is not anticipated to affect the distribution of the Appalachian elktoe upstream of the RCBC as the identified potential fish host species that occur in Hogsed Creek and the French Broad River are widely distributed throughout the river.

Project-induced changes in land use are also considered indirect effects. These types of land use changes are not direct consequences of the road construction but result from modifications in access to parcels of land and from modifications in travel time between various areas (Mulligan and Horowitz 1986). This project involves the installation of a structure in essentially the same location on existing alignment; however, the new structure will permit the crossing of much larger and heavier vehicles that may be used to more effectively bring large construction equipment and prefabricated construction elements across the creek. There are other routes available to transport these types of cargo; and, presently, development pressure in the area across Hogsed Creek is low to moderate, so it is unknown if the increase in access will indirectly affect development within the watershed.

One other indirect effect that roadway crossings of water bodies can have on the aquatic environment is the potential for toxic spills once the roadway alterations and bridge replacement with an RCBC are completed and the roadway is operational again. However, when, where, and how these events may occur is unpredictable. Stormwater coming off the new structure will not directly enter Hogsed Creek; rather, it will be directed into inlets placed just off the end of the bridge into PSHs in the floodplain, where it will be treated via vegetated buffer before flowing into the river. This conservation measure should allow for some road-derived pollutants to be sequestered within the PSHs, thereby reducing the pollutant load within the creek.

d. Interrelated and Interdependent Actions

An interrelated activity is an activity that is part of the proposed action and depends on the proposed action for its justification. An interdependent activity is an activity that has no independent utility apart from the action under consultation. There are no known interrelated or interdependent actions that should be considered in this Opinion.

e. Cumulative Effects

Cumulative effects are those effects of future state or private activities, not involving Federal activities, which are reasonably certain to occur within the action area of the proposed Federal action. As discussed earlier, the Appalachian elktoe population in the upper main stem French Broad River has expanded in the past decade, for reasons not understood. The French Broad River basin has experienced water-quality degradation from past mining, development, and agricultural practices. This degradation undoubtedly adversely affected the aquatic fauna of the watershed, including the Appalachian elktoe. Given the dynamic nature of riverine habitats and the large amount of land area encompassed in a watershed, it is virtually

impossible to eliminate all potential effects to the aquatic species in these habitats.

In addition to the effects associated with the bridge construction addressed in the BA, other effects to the Appalachian elktoe population in Hogsed Creek and the French Broad River basin have occurred and will continue to occur. These types of effects are difficult to identify or quantify but may include: (1) sedimentation/erosion effects from agricultural and residential land use; (2) water-quality effects (fertilizers, pesticides, etc.) from agricultural and residential sources; (3) small-scale littering into the creek and the river; (4) effects from recreational uses of the river (fishermen stepping on individual mussels, using mussels as bait, etc.); and (5) others, all of which could adversely impact individual mussels or their habitat. These potential effects are expected to be localized and small, and their cumulative effect is not likely to be large enough to cause serious declines in the overall population.

The NCDOT's analysis of future land use did not identify any other major projects planned in the action area that would threaten the viability of the Appalachian elktoe population in Hogsed Creek and the French Broad River; however, localized land-use effects, such as agricultural practices or illegal pollution (dumping into the river, etc.), may occur in the watershed that could result in small-scale adverse effects to the species.

#### f. Conclusion

After reviewing (1) the current status of the Appalachian elktoe, (2) the environmental baseline for the action area, (3) the effects of implementation of the proposed action, (4) the measures identified in the BA to help minimize the potential effects of the proposed project and the proposal to assist in the management and recovery of the species, and (5) any potential cumulative effects, it is the Service's biological opinion that implementing this project is not likely to jeopardize the continued existence of the Appalachian elktoe.

## 2. Appalachian Elktoe Critical Habitat

There is no critical habitat for the Appalachian elktoe in Hogsed Creek or the main stem of the French Broad River, but critical habitat has been designated in the Little River, a tributary to the French Broad River. Critical habitat unit 4 for the Appalachian elktoe encompasses 4.7 RM (7.56 km) of the main stem of the Little River. The Little River enters the French Broad River about 12.5 RM (20.12 km) downstream of the mouth of Hogsed Creek. Critical habitat for the Appalachian elktoe in the Little River is not within the project action area nor is any other critical habitat. Therefore, no critical habitat would be affected by the proposed project.

## V. INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the taking of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, such as breeding, feeding, or sheltering. Harass is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not for the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered to be prohibited under the Act, provided that such taking is in compliance with the terms and conditions of this incidental take statement.

### A. Amount of Take Anticipated

We anticipate that incidental take of the Appalachian elktoe may occur as a result of the removal of the existing bridge structure and installation of the proposed three-barrel RCBC. During construction, individual mussels may be harmed by siltation or other water-quality degradation or dislocated because of physical changes in their habitat.

The project will involve the disturbance of ~0.05 acre of land adjacent to the river; 18 ft<sup>2</sup> (1.67 m<sup>2</sup>) of the streambed will be temporarily affected by stream stabilization measures; and 135 ft<sup>2</sup> (12.08 m<sup>2</sup>) of the streambed will be permanently affected by the placement of RCBCs. An area of nonlethal disturbance is expected to extend up to 1,312 ft (399.90 m) downstream from the causeways, where mussels or fish will be harmed by disturbance. We anticipate this take to be a short-term disruption of their normal life history. Cumulative effects may have harmful effects throughout the watershed, but we expect these effects to be below a measureable threshold. These assumptions are made (1) based on the project being constructed as planned; (2) with careful adherence to conservation measures, other environmental regulations, and best management practices (BMPs); and (3) without unforeseen circumstances or accidents that may have a greater effect than that which is considered in this document. If project effects extend beyond the expected disturbance distances considered or if incidental take is exceeded, all work should stop, and the Service should be contacted immediately.

### B. Effect of the Take

In this Opinion, we have determined that the level of take associated with this project is not likely to result in jeopardy to the Appalachian elktoe or to result in the

destruction or adverse modification of critical habitat. This Opinion is based on the expected small area of disturbance and the inclusion of conservation measures that minimize take to the degree that we expect population-level effects will not be measureable.

## **1. Reasonable and Prudent Measures**

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of the Appalachian elktoe. These nondiscretionary measures include, but are not limited to, the terms and conditions outlined in this Opinion.

- a. The FHWA/NCDOT will ensure that the contractor understands and follows the measures listed in the “Conservation Measures,” “Reasonable and Prudent Measures,” and “Terms and Conditions” sections of this Opinion.
- b. Construction activities shall be implemented consistent with measures developed to protect the Appalachian elktoe, including those measures intended to maintain, improve, or enhance its habitat.
- c. All appropriate FHWA/NCDOT BMPs for bridge maintenance and construction will be followed or exceeded for this project, and any BMPs listed in the “Terms and Conditions” section of this Opinion will be followed.

## **2. Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, the FHWA/NCDOT must comply with the following terms and conditions, which implement the reasonable and prudent measures described previously and outline required reporting and/or monitoring requirements. These terms and conditions are nondiscretionary.

- a. A Service biologist will be present at the on-site preconstruction meeting to cover permit conditions and discuss any questions the contractor has regarding implementation of this project. After the contractor submits plans for various stages of the project, a Service biologist will review and provide comments on the plans and will attend any meetings to discuss implementation of the plans.
- b. Activities in the floodplain will be limited to those absolutely necessary to remove the existing bridge and install the RCBCs. Areas used for borrow or construction by-products will not be located in wetlands or the 100-year floodplain.
- c. Where possible, the NCDOT will plant trees that provide shade to impervious surfaces in order to reduce heat pollution in the river.

## **VI. CONSERVATION RECOMMENDATIONS**

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The following conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- A. Pursue funding and partnership opportunities to complete any additional research, inventory, and monitoring work in order to better understand the distribution and autecology of the rare species in the French Broad watershed.
- B. Where opportunities exist, work with landowners, the general public, and other agencies to promote education and the dissemination of information about endangered species and their conservation.
- C. Pursue additional buffers and conservation opportunities along the main stem of the French Broad River and its tributaries, either individually or in concert with other conservation organizations.
- D. Explore opportunities to work with local and state water-quality officials in order to minimize or eliminate sources of pollution, including wastewater and stormwater discharges into the upper French Broad watershed.
- E. Consult with the Service on projects that affect aquatic habitat in the French Broad drainage, regardless of the funding source, to ensure compliance with all provisions of the Act.

In order for the Service to be kept informed about actions that minimize or avoid adverse effects or that benefit listed species or their habitats, we request notification of the implementation of any conservation recommendations.

## **VII. REINITIATION/CLOSING STATEMENT**

This concludes formal consultation on the actions outlined in your formal consultation letter and BA dated July 28, 2017, requesting formal consultation. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion, (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this Opinion, or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of

incidental take is exceeded, any operation causing such take must cease, pending reinitiation.

Consultation should also be reinitiated if new biological information becomes known that invalidates the assumptions made regarding the biology or distribution of the Appalachian elktoe in the French Broad River in North Carolina.

If you or your staff have any questions concerning this Opinion, please contact Mr. Andrew Henderson of our staff at 828/258-3939, Ext. 227, or me, Ext. 223. We have assigned our Log No. 4-2-12-065 to this project; please refer to it in any future correspondence concerning this project.

Sincerely,



Janet Mizzi  
Field Supervisor

Electronic copy to:

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

Mr. Dave McHenry, Division 14 Environmental Supervisor, North Carolina Department of Transportation, 253 Webster Road, Sylva, NC 28779

Mr. Colin Mellor, Natural Environment Unit Project Management Group Supervisor, North Carolina Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598

Mr. J. Michael Sanderson, Natural Environment Unit Biological Surveys Group, North Carolina Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598

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

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North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN  
FOR NCDOT PROJECTS



(Version 2.02; Released April 2015)

WBS Element: 38593.1.2      TIP No.: B-4823      County(ies): Transylvania      Page 1 of 2

General Project Information

WBS Element:	38593.1.2	TIP Number:	B-4823	Project Type:	Bridge Replacement	Date:	9/19/2017
NCDOT Contact:	Andrew H. McDaniel, PE		Contractor / Designer:	Joshua G. Dalton, PE, CPESC			
Address:	NCDOT Hydraulics Unit 1590 MSC, Raleigh, NC 27699 1020 Birch Ridge Rd, Raleigh, NC 27610		Address:	Sungate Design Group, PA 915 Jones Franklin Rd. Raleigh, NC 27606			
	Phone:	(919) 707-6737		Phone:	(919) 859-2243		
	Email:	ahmcdaniel@ncdot.gov		Email:	jdalton@sungatedesign.com		
City/Town:	Brevard		County(ies):	Transylvania			
River Basin(s):	French Broad		CAMA County?	No			
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.13	Surrounding Land Use:	Rural, Residential					
	Proposed Project		Existing Site					
Project Built-Upon Area (ac.)	0.3	ac.	0.2	ac.				
Typical Cross Section Description:	Two 10 ft. wide paved travel lanes with 3 ft wide unpaved shoulders (7 ft. with guard rail) and 2:1 to 4:1 fill slopes.			Two 9 ft. paved travel lanes with variable width unpaved shoulders and fill slopes.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	700	Year:	2040	Existing:	617	Year:	2017
General Project Narrative: (Description of Minimization of Water Quality Impacts)	B-4823 consists roadway and shoulder improvements along with the replacement of an existing, single span, 24' long bridge with a 3 @ 11' x 6' concrete box culvert. An existing ditches at the beginning of the project (SW quadrants) will be relocated to accommodate the new roadway alignment. Temporary matting will be used until permanent vegetation is established in the ditch. Coir fiber matting will be utilized to protect the ditch along the NE quadrant of the project from Mill Cove Road to the end of the project. The proposed culvert will be buried a minimum of 1.0 ft. and have one low flow barrel and two high flow barrels. This configuration will closely mimic the existing stream characteristics. The high flow barrels will have floodplain benches at the inlet and outlet ends, which will be covered with coir fiber matting, and side slopes lined with class 'I' rip-rap for bank stabilization. All ditch outlets will have class 'I' rip-rap at embankments. Impervious dikes will be constructed to dewater the work area. A temporary stilling basin will be utilized during dewatering. Standard erosion and sediment control practices will be followed during construction and until the site is stabilized.							

Waterbody Information

Surface Water Body (1):	Hogsed Creek		NCDWR Stream Index No.:	6-26			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C					
	Supplemental Classification:	Trout Waters (Tr)					
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	N/A		Buffer Rules in Effect:	N/A			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?	N/A	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
	(If yes, provide justification in the General Project Narrative)						



**North Carolina Department of Transportation**  
**Highway Stormwater Program**  
**STORMWATER MANAGEMENT PLAN**  
**FOR NCDOT PROJECTS**



(Version 2.02; Released April 2015)

**WBS Element:** 38593.1.2    **TIP No.:** B-4823    **County(ies):** Transylvania    **Page** 2 **of** 2

**Bridge to Culvert Avoidance and Minimization**

**Proposed Structure Summary**

<b>Sheet No. &amp; Station</b>	<b>Sheet No.:</b> 4   <b>Station:</b> 17+23 -L-	<b>Number of Culverts:</b>	3
<b>Drainage Area (ac or sq mi):</b>	3.4 Sq. Miles	<b>Culvert Width/Diameter (ft):</b>	11
<b>Surface Water Body:</b>	(1)Hogsed Creek	<b>Culvert Height (ft):</b>	6
<b>Culvert Type:</b>	Reinforced Concrete Box Culvert	<b>Culvert Length (ft)</b>	42

**Avoidance and Minimization Efforts: (Bridge to Culvert)**  
 Proposed culvert is consistent with existing stream slope. Proposed low flow dimensions through the culvert are consistent with the existing low flow channel dimensions in the stream. Prop. low flow velocities through the culvert are consistent with the existing low flow velocities in the stream. Prop. culvert is buried a minimum of 1.0 ft. to retain bed material. Proposed culvert length has been minimized by using minimum fill and 2:1 side slopes.

**Stream Slope**

<b>Existing Average Stream Slope (%):</b>	1.25 %
<b>Proposed Culvert Slope (%):</b>	1.25 %

**Culvert Burial**

<b>Proposed Culvert Burial Depth (ft):</b>	1
<b>Existing Streambed Material:</b>	Sand, silt, cobbles, and boulders.

**Proposed Sills/Baffles:**  
 1.0 ft tall sills proposed at entrance and exit of low flow barrel. 2.0 ft tall sills proposed at entrance and exit of high flow barrels. No baffles are proposed.

**Fish and/or Aquatic Life Passage**

**Existing Low Flow Channel Dimensions in the Stream:**  
 Avg. upstream width = 13 ft.  
 Avg. downstream width = 11 ft.

**Proposed Low Flow Dimensions Through the Culvert:**  
 Single low flow barrel = 11 ft.

**Existing Low Flow Velocities in the Stream (ft/s):**  
 V(2yr) = 4.8 fps

**Proposed Low Flow Velocities Through the Culvert (ft/s):**  
 V(2yr) = 4.8 fps

**Alternating Low Flow Sills/Baffles:**  
 1.0 ft tall low flow sills proposed at entrance and exit of low flow barrel to retain bed material and maintain natural stream characteristics.

**Culvert/Stream Alignment**

**Stream Patterns Upstream and Downstream of the Culvert that Could Affect Fish Passage and Bank Stability:** None observed.

**Bed Forms Impacted by Culvert (riffles, pools, glides, etc.):** No impacts to bed forms anticipated from the installation of the proposed culvert.

**Low Flow Floodplain Bench Required? (provide justification)**    Yes    Floodplain benches are specified for two of the three proposed culvert barrels. Specifying one barrel as a low flow barrel most closely mimics the existing channel dimensions.

**Sharp Bends at Inlet/Outlet? (describe culvert alignment with stream)**    No    The proposed culvert alignment matches the existing channel alignment at the crossing.

**Stream Realignment Necessary? (provide justification)**    No

**Bank Stabilization:** Class 'I' rip-rap bank stabilization is proposed for a distance of approximately 40 ft. both up and down stream of the culvert.

**Outlet Velocities**

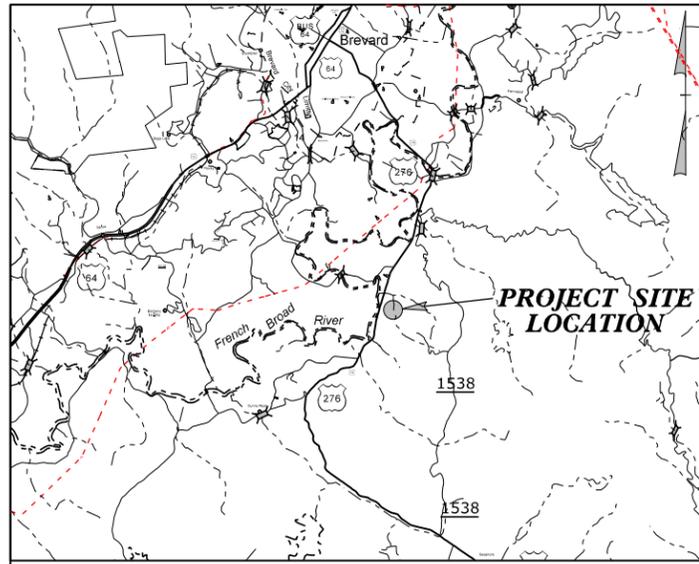
<b>Natural Stream Channel 2-yr Velocity (ft/s):</b>	4.8	<b>Natural Stream Channel 10-yr Velocity (ft/s):</b>	5.6
<b>Proposed Culvert 2-yr Outlet Velocity (ft/s):</b>	4.8	<b>Proposed Culvert 10-yr Outlet Velocity (ft/s):</b>	5.6

**Roadway Geometric Considerations**

**Evaluate/Describe Roadway Geometric Constraints:**  
 There are no roadway geometric constraints that prevent ideal culvert design and installation.

09/08/19

See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Symbols



VICINITY MAP

N.T.S.

6/27/2017 Rev. Preliminary Plans

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

TRANSYLVANIA COUNTY

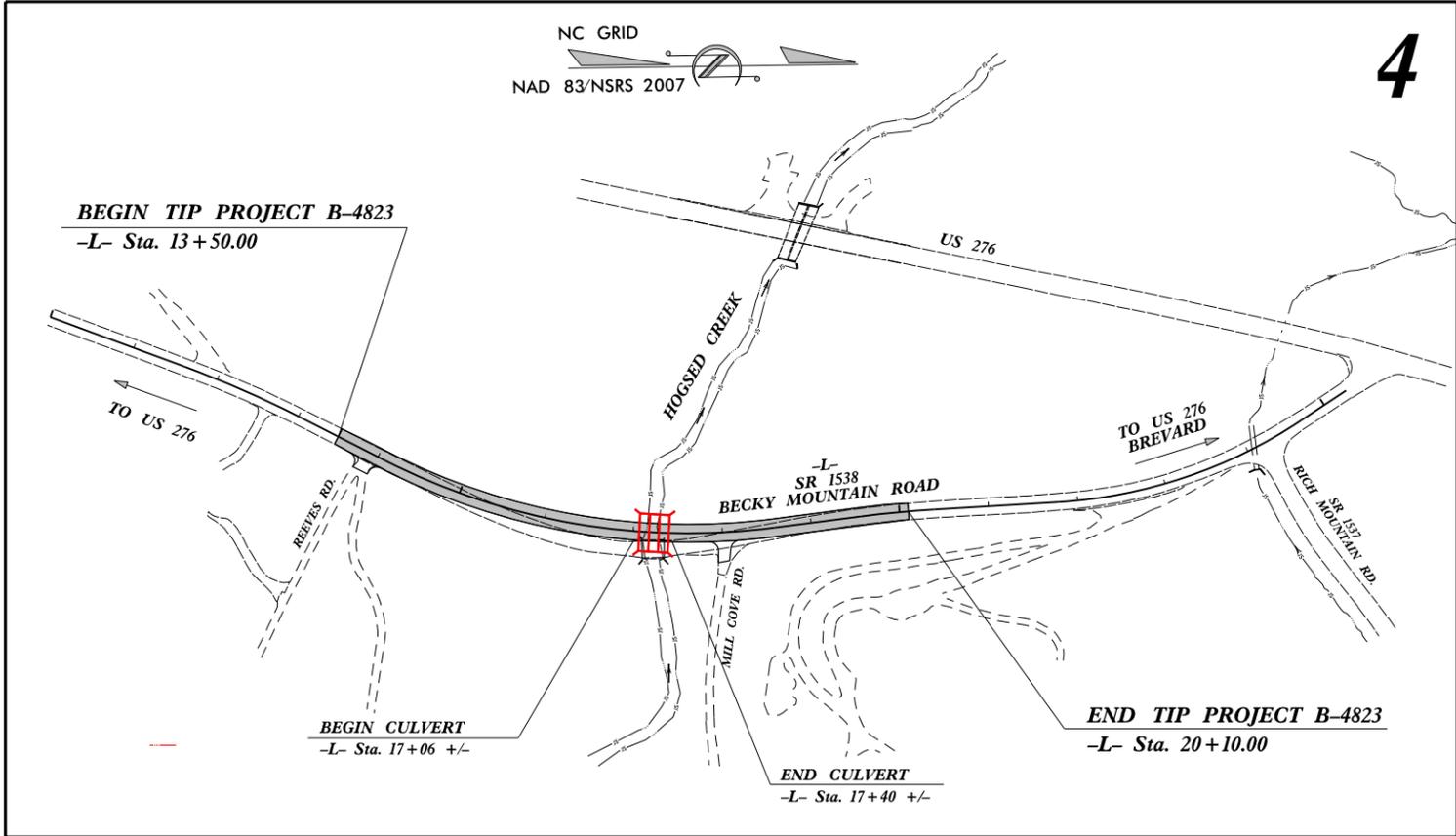
LOCATION: BRIDGE NO. 12 OVER HOGSED CREEK  
ON SR 1538 (BECKY MOUNTAIN ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND CULVERT

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4823	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38593.1.2	BRZ-1538(9)	P.E.	
38593.2.1	BRZ-1538(9)	R/W	
38593.3.1	BRZ-1538(9)	CONST.	

PERMIT DRAWING  
SHEET 1 OF 7



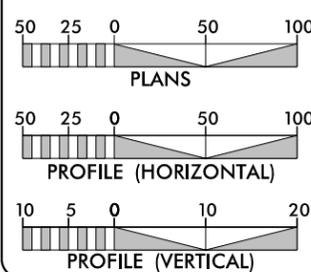
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD II.  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION  
INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

TIP PROJECT: B-4823

CONTRACT: Cxxxxxx

GRAPHIC SCALES



DESIGN DATA

ADT 2017 = 617  
ADT 2040 = 700  
K = 11 %  
D = 65 %  
T = 3 % \*  
V = 45 MPH  
\* TTST = 1% DUAL 2%  
FUNC CLASS = LOCAL  
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4823 = 0.119 mi.  
LENGTH STRUCTURE TIP PROJECT B-4823 = 0.006 mi.  
TOTAL LENGTH TIP PROJECT B-4823 = 0.125 mi.

PLANS PREPARED BY:  
**CH ENGINEERING**  
3220 GLEN ROYAL RD. RALEIGH, NC 27617  
TEL: 919.788.0223 FAX: 919.788.0292  
NC LICENSE #P-0189

PLANS PREPARED FOR:  
DIVISION OF HIGHWAYS  
1000 Birch Ridge Dr.  
Raleigh, NC 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
JULY 15, 2016

LETTING DATE:  
FEBRUARY 20, 2018

BRIAN A. WILES, PE  
PROJECT ENGINEER

BRENDA MOORE, PE  
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.



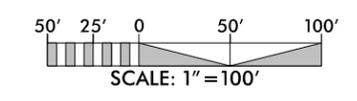
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B4823\_Hyd\_prm\_wet\_psh\_01.dgn  
jnarvey

8/17/99

**CH ENGINEERING**  
 3220 GLEN ROYAL RD. RALEIGH, NC 27617  
 TELE 919.788.0224 FAX 919.788.0232  
 NC LICENSE #P-0189

PROJECT REFERENCE NO. B-4823	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

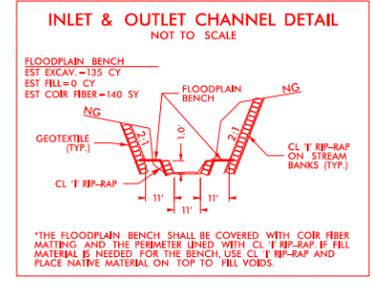
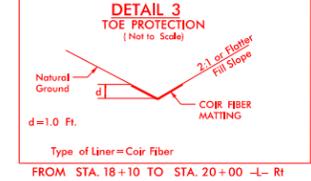
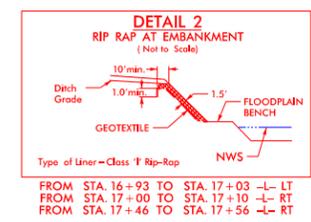
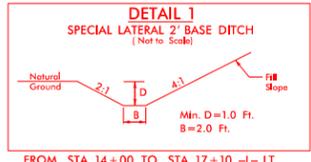
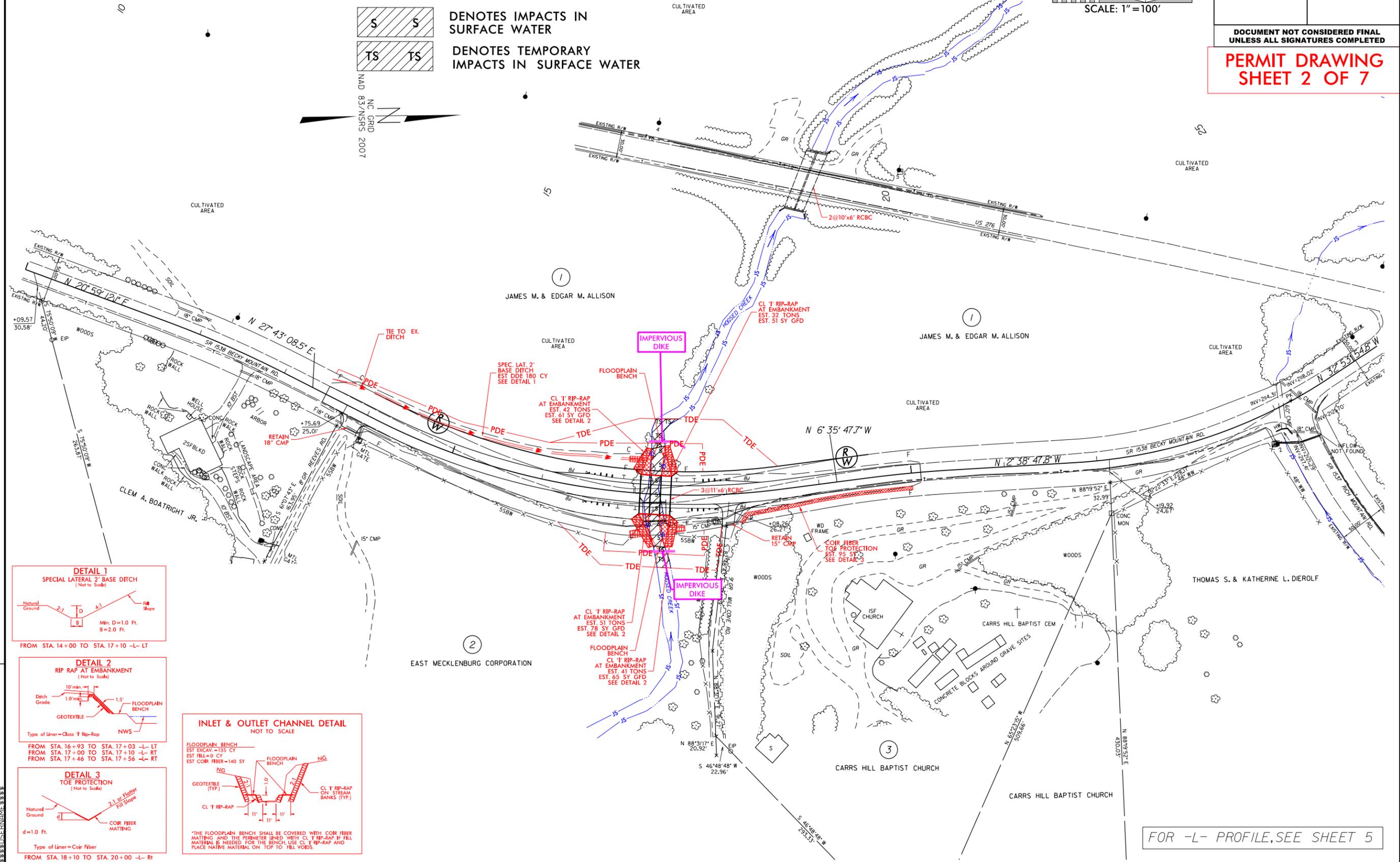
NAD 83/NSRS 2007



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

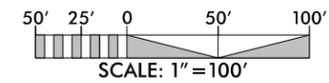
**PERMIT DRAWING SHEET 2 OF 7**

8/xx/2017 Right-of-Way Revision Roadway and Hydraulics redesigned to allow for onsite detour.



8/17/99  
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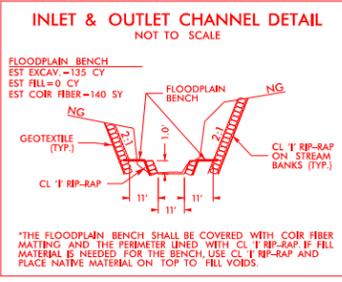
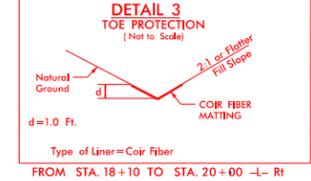
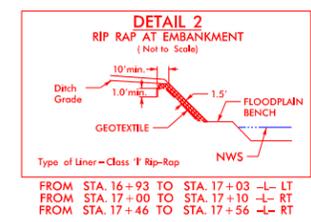
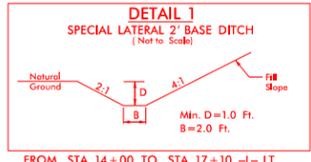
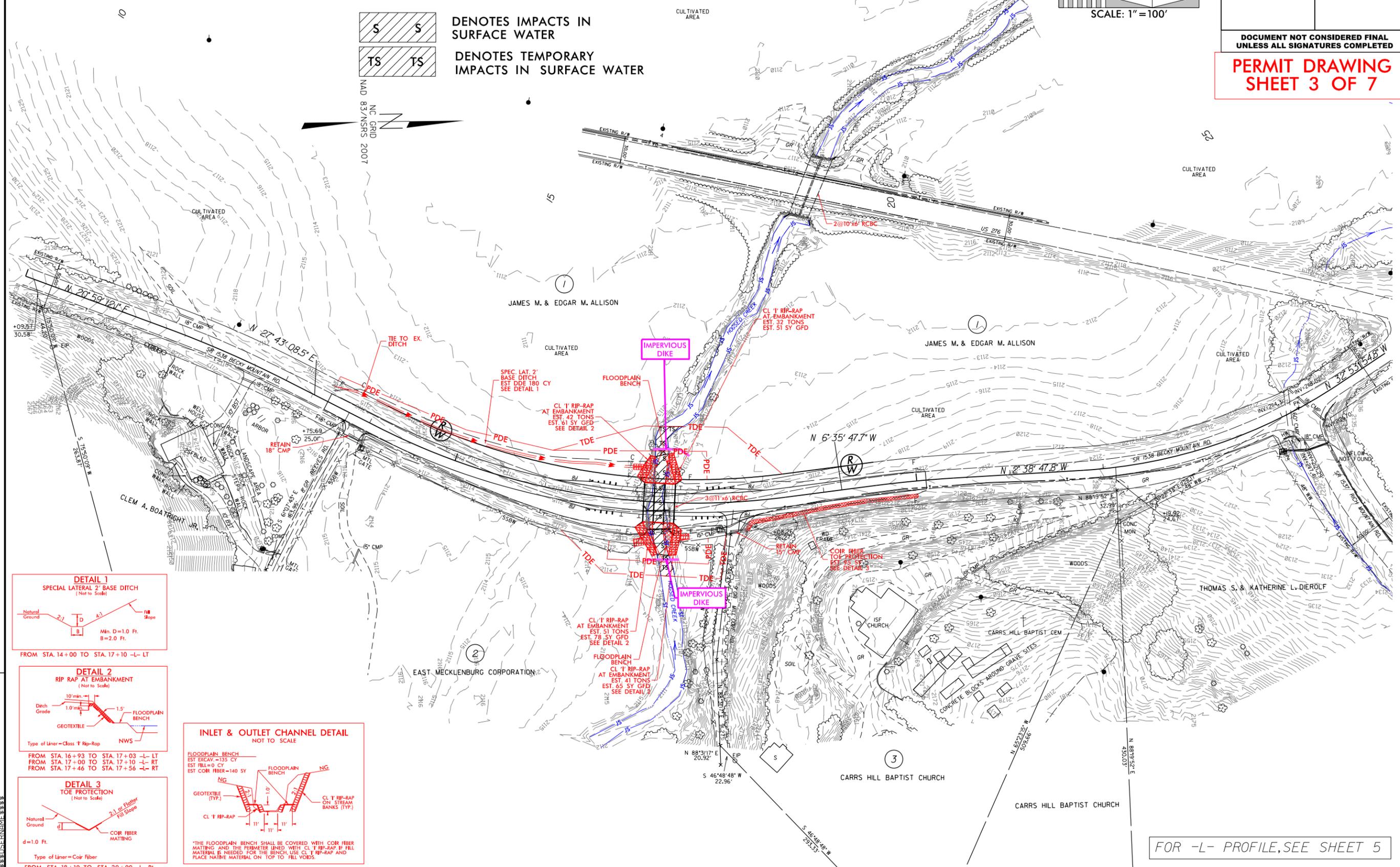
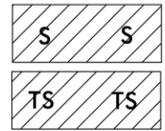
FOR -L- PROFILE, SEE SHEET 5



PROJECT REFERENCE NO. B-4823	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING SHEET 3 OF 7**

NAD 83/NSRS 2007



REVISIONS  
8/xx/2017 Right-of-Way Revision Roadway and Hydraulics redesigned to allow for onsite detour.

FOR -L- PROFILE, SEE SHEET 5

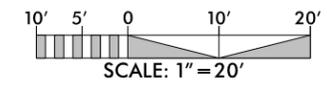
8.17.99



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

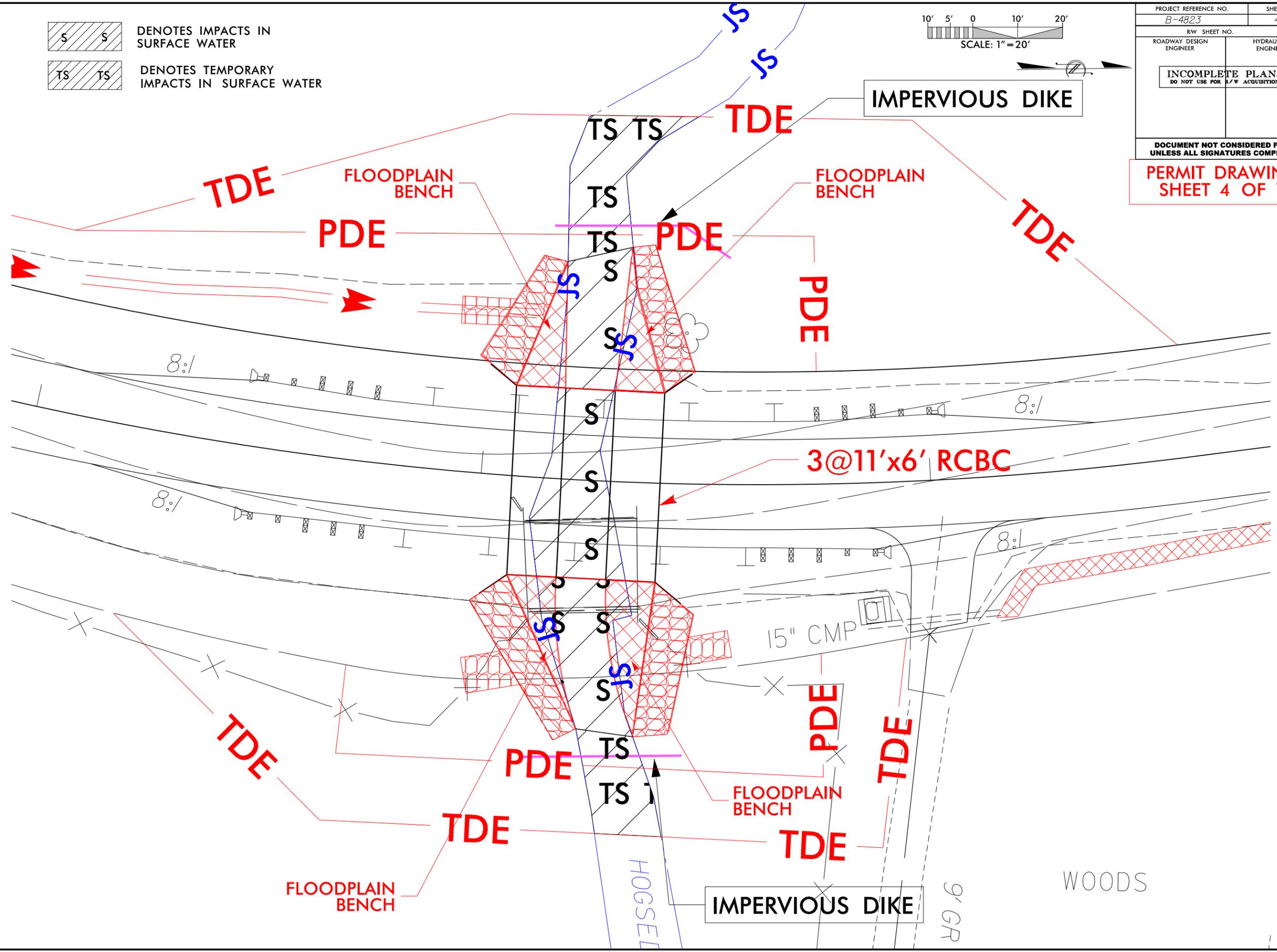


PROJECT REFERENCE NO. B-4823	SHEET NO. 4c
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**PERMIT DRAWING**  
SHEET 4 OF 7

REVISIONS



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5/14/99

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**PERMIT DRAWING**  
**SHEET 5 OF 7**

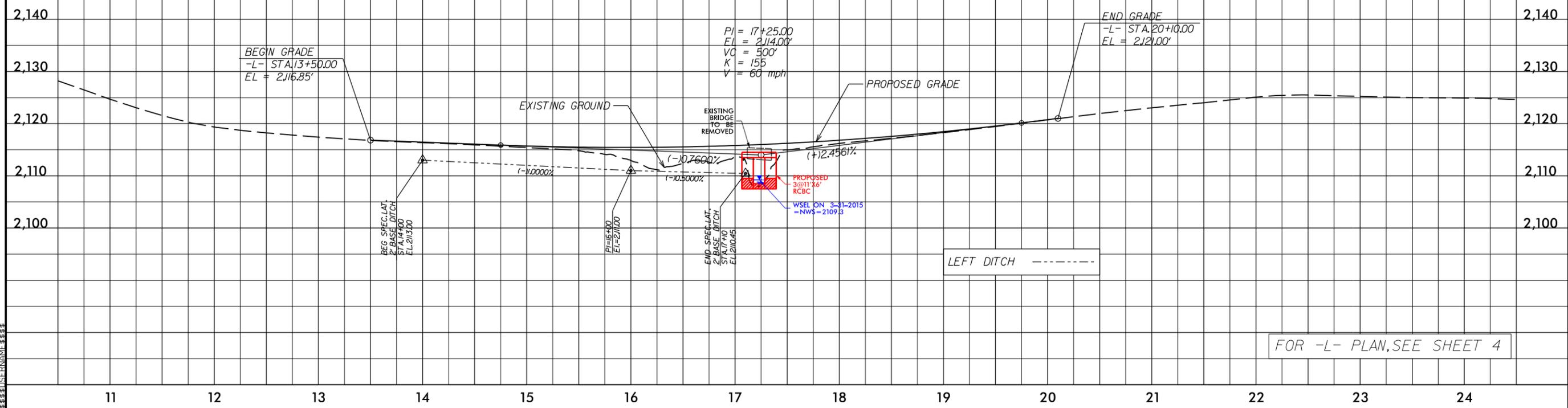
BM 1 ELEV = 2,140.75'  
 N 549,600 E 890,345  
 -L- STA 11+17 66' RIGHT  
 8 INCH SPIKE SET IN TOP  
 OF A 18" HOLLY STUMP

BM 2 ELEV = 2,124.15'  
 N 550,284 E 890,546  
 -L- STA 18+16 54' RIGHT  
 8 INCH SPIKE SET IN THE BASE  
 OF A 40 INCH WHITE OAK TREE

BM 3 ELEV = 2,125.03'  
 N 550,870 E 890,432  
 -L- STA 24+04 27' RIGHT  
 CHISELED "X" IN THE NORTHERN  
 END OF CONC. HEADWALL

**CULVERT HYDRAULIC DATA**

DESIGN DISCHARGE = 1000 CFS  
 DESIGN FREQUENCY = 25 YRS  
 DESIGN HW ELEVATION = 2113.8 FT  
 BASE DISCHARGE = 1400 CFS  
 BASE FREQUENCY = 100 YRS  
 BASE HW ELEVATION = 2115.9 FT  
 OVERTOPPING DISCHARGE = 1400 CFS  
 OVERTOPPING FREQUENCY = 100 YRS  
 OVERTOPPING ELEVATION = 2115.9 FT  
 Sta.15+93 -L-



FOR -L- PLAN, SEE SHEET 4

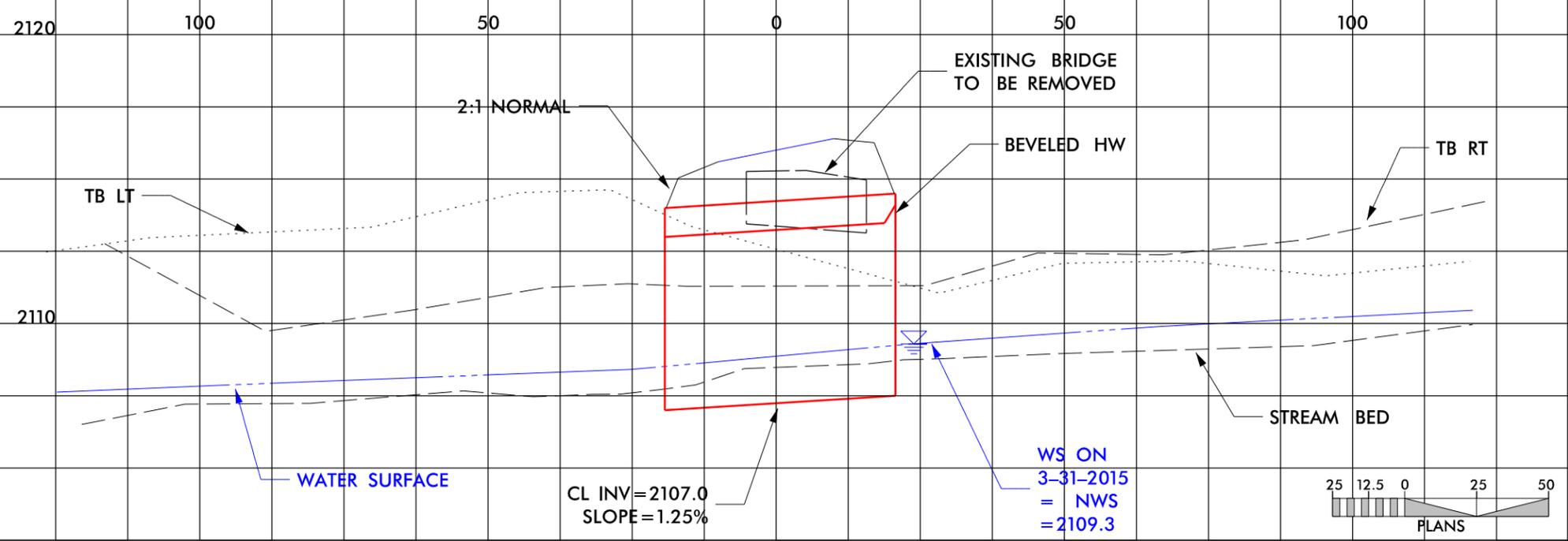
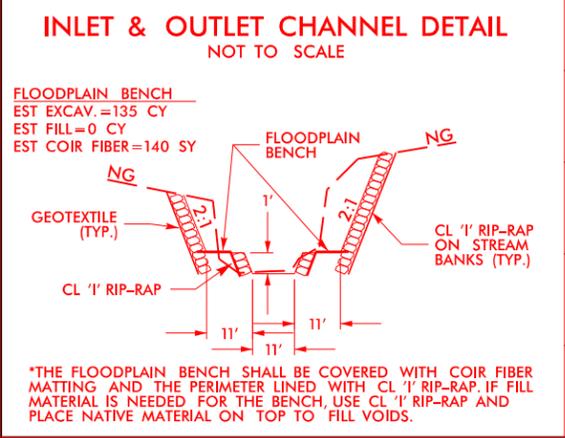
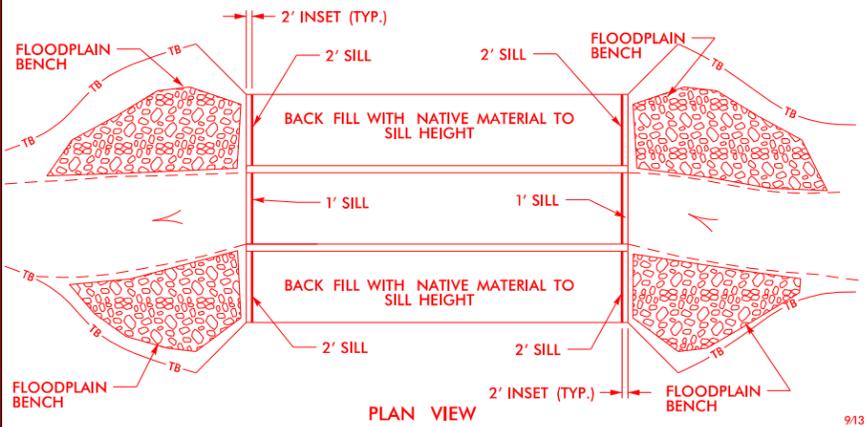
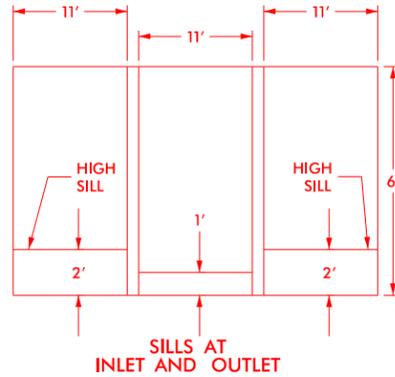
5/14/99  
 CH ENGINEERING  
 3220 GLEN ROYAL RD.  
 RALEIGH, NC 27617  
 TEL 919.788.0224  
 FAX 919.788.0232  
 NC LICENSE #P-0189

# DETAIL (NOT TO SCALE)

## MULTI-BARREL CULVERT LOW FLOW CHANNEL, SILLS AND FLOOD PLAIN BENCH

**\*NOTES:**

- 1) NATIVE MATERIAL BETWEEN SILLS IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL. NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE THE STREAM OR FLOODPLAIN AT THE PROJECT SITE DURING CONSTRUCTION. ONLY MATERIAL THAT IS EXCAVATED FROM THE STREAM BED MAY BE USED TO LINE THE LOW FLOW CULVERT BARREL. RIP-RAP MAY BE USED TO SUPPLEMENT THE NATIVE BED MATERIAL IN THE HIGH FLOW CULVERT BARREL(S). IF RIP-RAP IS USED TO LINE THE HIGH FLOW CULVERT BARREL(S), NATIVE MATERIAL SHOULD BE PLACED ON TOP TO FILL VOIDS AND PROVIDE A FLAT SURFACE FOR ANIMAL PASSAGE. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.
- 2) SILLS ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
- 3) DO NOT SET ELEVATION OF HIGH SILLS ABOVE BANK FULL.



PROJECT REFERENCE NO. <i>B-4823</i>	SHEET NO. <i>4d</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 6 OF 7	

