



## Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits  
(along with corresponding Water Quality Certifications)

December 4, 2023 Ver 4.3

Please note: fields marked with a red asterisk \* below are required. You will not be able to submit the form until all mandatory questions are answered.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=2196924>

### A. Processing Information



If this is a courtesy copy, please fill in this with the submission date.

Does this project involve maintenance dredging funded by the Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund, electric generation projects located at an existing or former electric generating facility, or involve the distribution or transmission of energy or fuel, including natural gas, diesel, petroleum, or electricity? \*

Yes  No

Is this project connected with ARPA funding? \*

Yes  No

County (or Counties) where the project is located: \*

Onslow

Is this a NCDMS Project? \*

Yes  No

Click Yes, only if NCDMS is the applicant or co-applicant.

**DON NOT CHECK YES, UNLESS YOU ARE DMS OR CO-APPLICANT.**

Is this project a public transportation project? \*

Yes  No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? \*

Yes  No

(NCDOT only) T.I.P. or state project number:

BR-0194

WBS # \*

67194.1.1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: \*

- Section 404 Permit (wetlands, streams and waters, Clean Water Act)  
 Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

Has this PCN previously been submitted? \*

Yes  
 No

1b. What type(s) of permit(s) do you wish to seek authorization? \*

- Nationwide Permit (NWP)  
 Regional General Permit (RGP)  
 Standard (IP)

1c. Has the NWP or GP number been verified by the Corps? \*

Yes  No

Nationwide Permit (NWP) Number:

6 - Survey Activities

NWP Numbers (for multiple NWPS):

List all NW numbers you are applying for not on the drop down list.

**1d. Type(s) of approval sought from the DWR: \***

check all that apply

- 401 Water Quality Certification - Regular
- Non-404 Jurisdictional General Permit
- Individual 401 Water Quality Certification
- 401 Water Quality Certification - Express
- Riparian Buffer Authorization

**1e. Is this notification solely for the record because written approval is not required?**

\*

For the record only for DWR 401 Certification:  Yes  No

For the record only for Corps Permit:  Yes  No

**1f. Is this an after-the-fact permit application? \***

Yes  No

**1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?**

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

Yes  No

**Acceptance Letter Attachment**

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

**1h. Is the project located in any of NC's twenty coastal counties? \***

Yes  No

**1i. Is the project located within a NC DCM Area of Environmental Concern (AEC)? \***

Yes  No  Unknown

**1j. Is the project located in a designated trout watershed? \***

Yes  No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

## B. Applicant Information



**1a. Who is the Primary Contact? \***

Jason Dilday

**1b. Primary Contact Email: \***

jdilday1@ncdot.gov

**1c. Primary Contact Phone: \***

(xxx)xxx-xxxx  
(919)707-6111

**1d. Who is applying for the permit? \***

Owner (Check all that apply)  Applicant (other than owner)

**1e. Is there an Agent/Consultant for this project? \***

Yes  No

### 2. Owner Information

**2a. Name(s) on recorded deed: \***

NCDOT

**2b. Deed book and page no.:**

**2c. Contact Person:**

(for Corporations)

**2d. Address \***

Street Address

1000 Birch Ridge Drive

Address Line 2

City

Raleigh

Postal / Zip Code

27610

State / Province / Region

NC

Country

USA

**2e. Telephone Number: \***

(xxx)xxx-xxxx

(919)707-6111

**2f. Fax Number:**

(xxx)xxx-xxxx

**2g. Email Address: \***

jdilday1@ncdot.gov

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## C. Project Information and Prior Project History

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### 1. Project Information

**1a. Name of project: \***

Bridge 29 over Chainey Creek on US17Bus

**1b. Subdivision name:**

(if appropriate)

**1c. Nearest municipality / town: \***

Jacksonville

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### 2. Project Identification

**2a. Property Identification Number:**

(tax PIN or parcel ID)

**2b. Property size:**

(in acres)

**2c. Project Address**

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

**2d. Site coordinates in decimal degrees**

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

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**Latitude: \***

34.756384  
ex: 34.208504

**Longitude: \***

-77.421661  
-77.796371

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### 3. Surface Waters

**3a. Name of the nearest body of water to proposed project: \***

Chaney Creek

**3b. Water Resources Classification of nearest receiving water: \***

SC, NSW

[Surface Water Lookup](#)

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**3c. What river basin(s) is your project located in? \***

White Oak

**3d. Please provide the 12-digit HUC in which the project is located. \***

03030001

[River Basin Lookup](#)

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### 4. Project Description and History

**4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: \***

Land use in the project vicinity consists of commercial development alongside a forested floodplain.

**4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? \***

Yes  No  Unknown

**4f. List the total estimated acreage of all existing wetlands on the property:**

0.44

**4g. List the total estimated linear feet of all existing streams on the property:**

(intermittent and perennial)

500

**4h. Explain the purpose of the proposed project: \***

The purpose of the project is to replace a bridge that has deteriorated to the point in which maintenance is no longer feasible and the structure needs to be replaced.

**4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: \***

This request is for 4 investigative, geotechnical borings of Chainey Creek. The bores, with casing measures approximately 4-inches in diameter. The borings will be performed from the existing bridge deck, meaning no in-water structures will be needed.

## 5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? \*

Yes  No  Unknown

Comments:

5b. If the Corps made a jurisdictional determination, what type of determination was made? \*

Preliminary  Approved  Not Verified  Unknown  N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Vickie Miller

Agency/Consultant Company: HDR

Other:

## 6. Future Project Plans

6a. Is this a phased project? \*

Yes  No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

## D. Proposed Impacts Inventory

### 1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

Wetlands  Streams-tributaries  Buffers  
 Open Waters  Pond Construction

### 3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact* (?)	3b. Impact type*	3c. Type of impact*	3d. S. name*	3e. Stream Type* (?)	3f. Type of Jurisdiction*	3g. S. width* Average (feet)	3h. Impact length* (linear feet)
S1	Borings	Temporary	Other	Chainey Creek	Perennial	Both	60	0

\*\* All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

0

3i. Total temporary stream impacts:

0

3i. Total stream and ditch impacts:

0

3j. Comments:

Proposed 4 geotechnical borings through the deck of existing bridge by a 4-inch drill with casing.

## E. Impact Justification and Mitigation

### 1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: \*

Borings will be conducted from the existing bridge, drilling through the deck. In-water work consist of only 4 individual bores.

**1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: \***

There will be no permanent impact associated with the proposed work.

**2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State**

**2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?**

Yes  No

**2b. If this project DOES NOT require Compensatory Mitigation, explain why:**

This request is for geotechnical borings only.

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

**F. Stormwater Management and Diffuse Flow Plan (required by DWR)**

\*\*\* Recent changes to the stormwater rules have required updates to this section. \*\*\*

**1. Diffuse Flow Plan**

**1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?**

Yes  No

For a list of options to meet the diffuse flow requirements, click [here](#).

**If no, explain why:**

This project is for geotechnical borings in open water. There will be no concentrated flow resulting from this work.

**2. Stormwater Management Plan**

**2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? \***

Yes  No

**2b. Does this project meet the requirements for low density projects as defined in 15A NCAC 02H .1003(2)? \***

Yes  No

To look up low density requirement click here [15A NCAC 02H .1003\(2\)](#).

**2c. Does this project have a stormwater management plan (SMP) reviewed and approved under a state stormwater program or state-approved local government stormwater program? \***

Yes  N/A - project disturbs < 1 acre  No

Hint: projects that have vested rights, exemptions, or grandfathering from state or locally implemented stormwater programs or projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs should answer no to this question.

**Comments:**

**G. Supplementary Information**

**1. Environmental Documentation**

**1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? \***

Yes  No

**1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? \***

Yes  No

**1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) \***

Yes  No

**Comments: \***

This work is to be performed before the environmental document for the project has been finalized.

**2. Violations (DWR Requirement)**

**2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? \***

Yes  No

**3. Cumulative Impacts (DWR Requirement)**

**3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? \***

Yes  No

3b. If you answered "no," provide a short narrative description.

The borings are needed to assist with the design for the future bridge replacement.

#### 4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? \*

Yes  No  N/A

#### 5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? \*

Yes  No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? \*

Yes  No

5c. If yes, indicate the USFWS Field Office you have contacted.

Raleigh

5d. Is another Federal agency involved? \*

Yes  No  Unknown

What Federal Agency is involved?

NOAA Fisheries

5e. Is this a DOT project located within Division's 1-8? \*

Yes  No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? \*

NC Natural Heritage databases and field surveys conducted in June 2024 for species that could potentially be found within the study area.

#### 6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? \*

Yes  No

Are there submerged aquatic vegetation (SAV) around the project vicinity? \*

Yes  No  Unknown

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? \*

NOAA Essential Fish Habitat mapper

#### 7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? \*

Yes  No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? \*

Coordination with SHPO

#### 8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? \*

Yes  No

8b. If yes, explain how project meets FEMA requirements:

The proposed activity is for temporary impacts.

8c. What source(s) did you use to make the floodplain determination? \*

FRIS

### Miscellaneous



Comments

Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

[Click the upload button or drag and drop files here to attach document](#)

BR-0194\_660029\_2024\_CHANNEY CREEK\_US-17\_BSR - GEOTECH BORINGS.pdf

1.33MB

File must be PDF or KMZ

## Signature



\*

By checking the box and signing below, I certify that:

- The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief; and
- The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

**Full Name:** \*

Jason Dilday

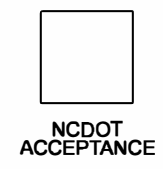
**Signature** \*



**Date**

9/17/2024





# BRIDGE SURVEY & HYDRAULIC DESIGN REPORT

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
HYDRAULICS UNIT  
RALEIGH, NC

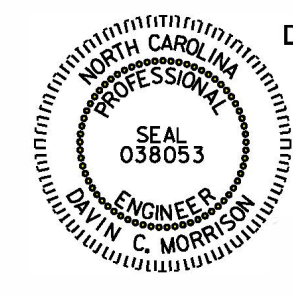
State Proj Reference No. BR-0194 WBS Proj No. 67194.1.1 Proj Station -L- 24+06  
 County Onslow Bridge over Chaney Creek Bridge Inv No. 660029  
 On Highway US 17 Business between Chaney Ave and Phillips Rd  
 Recommended Structure Three Spans: 1@40.5', 1@59', 1@50.5 with 1'-8" Diameter Piers.  
 36" Prestressed Concrete Girders, 4.0' Cap with Spill Through Abutments, and Rip Rap Slope Protection  
 Recommended Width of Roadway Clear Roadway Width 78'-6" (Out to Out Width 86'-7") Skew 90°  
 Recommended Location is (A) Upstream, Downstream of Existing Crossing  
 Latitude 34.7564 Longitude -77.4218  
 Statewide Tier  Regional Tier  Sub-Regional Tier   
 Bench Mark is BM-2  
 Northing 370179.1628 Easting 2474309.0606 Elevation 8.93' ft Datum NAVD 88  
 Temporary Crossing N/A



Designed by Davin Morrison, PE  
 Assisted by Natalia Womack  
 Date 08/30/2024  
 Reviewed by \_\_\_\_\_ Date \_\_\_\_\_



HDR Engineering, Inc. of the Carolinas  
 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601  
 N.C.B.E.L.S. License Number: F-0116



## SITE DATA

Drainage Area 2.38 sq.mi. Source StreamStats, NCDOT Lidar  
 River Basin White Oak Character Urban (City of Jacksonville)  
 Stream Classification (e.g., Trout, High Quality Water) SC: NSW  
 Data on Existing Structure Bridge with Reinforced Concrete Deck Girders on Reinforced Concrete Abutments  
 with Prestressed Concrete Piles. 3 Spans @42.5' Total Waterway Opening 809 ft<sup>2</sup>  
 Debris Potential: Low  Moderate  High  Waterway Opening Below 100-yr WS Elev 602 ft<sup>2</sup>  
 Data on Structures Up and Down Stream Upstream: Rails to Trails Greenway Pedestrian Bridge  
 No structures downstream, Chaney Creek converges with New River  
 Design Control Elev 4.20 (50-yr) ft

Gage Station No N/A Period of Records \_\_\_\_\_  
 Max Discharge \_\_\_\_\_ cfs Date \_\_\_\_\_ Frequency \_\_\_\_\_  
**Historical Flood Information:**  
 Structure has not been Overtopped  
 Date 07/22/2024 Elev 2.8 ft Est Freq \_\_\_\_\_ yr Source High WM Field Observ. Period of Knowledge \_\_\_\_\_ yrs  
 Date \_\_\_\_\_ Elev \_\_\_\_\_ ft Est Freq \_\_\_\_\_ yr Source \_\_\_\_\_ Period of Knowledge \_\_\_\_\_ yrs  
 Historical Scour Info: General N/A ft Contraction 4 ft Local 2 ft  
 Channel Slope 0.0016 ft/ft Source HEC-RAS Model Normal Water Surface Elev 1.8 ft  
 Manning's n: Left OB 0.03-0.12 Channel 0.045 Right OB 0.03-0.12 Source Field Recon 07/22/2024  
 Flood Study / Status FEMA Redelineated Detailed Study Effective Date 06/19/2020  
 Flood Study With \_\_\_\_\_ Without \_\_\_\_\_  
 100-yr Discharge 1850 cfs WS Elev: Floodway 7.90 ft Floodway 7.02 ft River Station 5060

## DESIGN DATA

Hydrological Method USGS SIR 2014-5030 Compared to FEMA FIS Discharges  
 Hydraulic Design Method HEC-RAS V 6.5  

Floods Evaluated	Frequency (year)	Discharge (cfs)	Elevation (ft)	Backwater (ft)	Bridge Opening Velocity (fps)
@ River Station 5062	10	800	3.2	0.1	1.8
	25	950	3.7	0.0	1.8
	50	1100	4.2	0.0	1.9
	100	1200	4.5	0.0	1.9
	500	1400	5.2	0.0	2.0

Waterway Opening Provided Below: Design WS Elev 6.03 sf 100-yr WS Elev 4.5 sf Total 1000 sf  
 Average Channel Velocity (Design) 1.9 fps Average Overbank Velocity (Design) 0.8 fps  
 Computed Scour: General N/A ft Contraction 3.63 ft Local 2.49 ft  
 State Floodway Compliance Type SFC Type B (Max. Decrease is 0.10' @ RS 5062)

## INFORMATION TO BE SHOWN ON PLANS

HYDRAULIC DATA	
DESIGN DISCHARGE	= 1100 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 50 YRS.
DESIGN HIGH WATER ELEVATION	= 4.2
DRAINAGE AREA	= 2.38 SQ. MI.
BASIC DISCHARGE (Q100)	= 1200 C.F.S.
BASIC HIGH WATER ELEVATION	= 4.5
OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	= 5400 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= >500 YRS.
OVERTOPPING FLOOD ELEVATION	= 11.6
*NOTE LOCATION OF OVERTOPPING @ -L- Sta 20+43	
WS EL. Taken @ River Station 5062	

## ADDITIONAL INFORMATION AND COMPUTATIONS

**USGS REGRESSION EQUATIONS** Coastal Plain (Region 4) **FEMA DISCHARGES** S/R 2014-5030

$Q_{10} = 51.8(2.38)^{0.6004} * 10^{(0.0101*30)} * 10^{(0.0666*9.78)} = 800$  CFS  $Q_{10} = 969$   
 $Q_{25} = 67.1(2.38)^{0.6067} * 10^{(0.0075*30)} * 10^{(0.0708*9.78)} = 950$  CFS  $Q_{25} = 1383$   
 $Q_{50} = 78.4(2.38)^{0.6111} * 10^{(0.0058*30)} * 10^{(0.0738*9.78)} = 1100$  CFS  $Q_{50} = 1620$   
 $Q_{100} = 90.5(2.38)^{0.6154} * 10^{(0.0043*30)} * 10^{(0.0762*9.78)} = 1200$  CFS  $Q_{100} = 1850$   
 $Q_{500} = 103(2.38)^{0.6201} * 10^{(0.0029*30)} * 10^{(0.0785*9.78)} = 1400$  CFS  $Q_{500} = 2509$

USGS Qs used for Design, FEMA Q100 used for SFC compliance  
**SCOUR ANALYSIS**  
 Non-Pressure Flow Live Bed Contraction Scour:  $y_s = (y_c / [Q_c / Q_s])^{0.67} [W / W_c]^{0.69} - y_c$  \*Y1, Q1, W1 from XS 5350  
 \*Y0, Q2, W2 from XS 5003.5 BR U  
 100-yr Contraction Scour:  $y_s = (7.90 / [1154 / 872])^{0.67} [98 / 91]^{0.69} - 6.06$  ys=3.63'  
 500-yr Contraction Scour:  $y_s = (8.39 / [1322 / 1007])^{0.67} [98 / 91]^{0.69} - 6.67$  ys=3.55'  
 Pier Scour:  $y_s = 2.0(K_1)(K_2)(K_3)(a) (Y_c) (Fr_c)$  \*Y1 from XS 5062  
 100-yr Pier Scour  $y_s = 2.0(1)(1)(1)(1.6^{0.65})(10.20^{0.35})(0.1048^{0.43})$  ys=2.49'  
 500-yr Pier Scour  $y_s = 2.0(1)(1)(1)(1.6^{0.65})(10.81^{0.35})(0.1018^{0.43})$  ys=2.51'  
 100-yr Total Scour  $y_s = 3.63' + 2.49' = 6.12'$   
 500-yr Total Scour  $y_s = 3.55' + 2.51' = 6.06'$   
 -No significant scour was observed with the existing bridge. The stream appears to be stable with no evidence of channel migration.  
 -No upstream or downstream structures that were in place at the time this report was designed will be adversely impacted by this project.  
 -Bed material consists of sand and gravel.  
 -FEMA 100yr backwater elevation is 6.3'

