



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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August 31, 2026

U.S. Army Corps of Engineers
Water Resources Development Act
(WRDA) Transportation Permitting Branch

NC Division of Water Resources
Transportation Permitting Branch

ATTN: Ms. Crystal Amschler,
NCDOT Coordinator

Ms. Amy Annino,
NCDOT Coordinator

Subject: **Mitigation Proposal for the Section 404 Permit & 401 Water Quality Certification** for permanent repairs to US 74 A (Gerton Highway) from Bearwallow Mountain Road to Grant Mountain Road. Henderson County, Division 14, WBS 18314.1045039.

Dear NCDOT Coordinators:

Pursuant to the application submitted on April 29, 2026, and the subsequent field meeting on June 12, 2026, and additional correspondence, the North Carolina Department of Transportation (NCDOT) proposes the following mitigation plan for US 74A from Bearwallow Mountain Road to Grant Mountain Road.

The following table is excerpted from the permit application and impact summary table and provides a focus on the mitigation components of the project. It contains a description of the proposed activity as well as reduced mitigation justifications.

Highlighted values have been adjusted from the original April 29, 2026, permit application based on revisions requested at the June 12, 2026, field meeting.

Streams in the Project Area										
Permit Site	Stream Name	Status	Stream Re-Establishment to Pre-Helene Location	Perm Fill (loss)	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Proposed Mitigation Ratio	Impact Description (black text) Stream Relocation/ Reduced Mitigation Justification (blue text)
1	Hickory Creek & UT	Perennial	--	--	95 lf 0.03 ac	35 lf < 0.01 ac	--	--	--	Permanent bank stabilization is necessary to stabilize and reduce water velocity at the tributary and Hickory Creek confluence. Temporary impacts upstream and downstream of bridge are shown for construction methods and access.
2	UT Hickory Creek	Perennial	--	--	--	3 lf < 0.01 ac	--	--	--	The existing 18” CSP requires removal of debris material and a section to be replaced. The temporary impact is due to outlet protection tying to the jurisdictional stream. Jurisdiction of the stream begins beyond the outlet of the 18” CSP.
3	Hickory Creek	Perennial	157 lf 0.05 ac	276 lf 0.07 ac	65 lf 0.04 ac	75 lf 0.03	276 lf (138 lf)	276 lf	0.5:1	Stream realignment is necessary due to the roadway repair and moving the channel away from the roadway for future hazard mitigation. The stream relocation is 276 linear feet and the portion of the stream that will be reestablished to pre-Helene alignment is 157 linear feet. This stretch of Hickory Creek runs at the toe of the existing roadway slope of US 74A. Moving the stream away from US 74A will provide a long-term separation from the river and the road and establish a buffer from the roadway. This will allow the stream to experience a typical flood event and not jeopardize the integrity of the US 74A roadway fill slope. NCDOT will minimize tree clearing within the relocated area to provide as much canopy and stabilization benefits as practicable. Due to the above, NCDOT proposes a reduction in mitigation ratios for this system, as stabilization and increased buffer will result in uplift from the current stream condition.
4	UT Hickory Creek	Intermittent	--	--	--	86 lf < 0.01 ac	--	--	--	Temporary stream impacts are due to being located within the Temporary Construction Easement. The stream will be repaired if there are any impacts during construction.
5	UT Hickory Creek	Perennial	--	--	--	27 lf < 0.01 ac	--	--	--	The existing 6’x4’ RCBC requires removal of debris material. Temporary impacts to the stream are required for equipment to access the pipe and for temporary dewatering (pump around) as well as tie in of the ditches at the pipe RCBC inlet. Pipe Removal/Stream daylighting. Permanent stream impacts for outlet protection is needed at the downstream end of the RCBC. The existing 36” RCP will be removed and 60 linear feet of this stream will be daylighted in a 4’ base ditch. Due to severe erosion at the outlet of the pipe, there will 9 lf of permeant impact to repair this outlet. Although this impact is greater than bank stabilization, NCDOT does not propose mitigation for this activity as stream stability and continuity will be improved.
6	Hickory Creek	Perennial	--	--	135 lf 0.05 ac	39 lf 0.01 ac	--	--	--	Remove Pipe and Replace with Base Ditch/Stream Daylighting. Temporary impacts are illustrated at Hickory Creek due to replacing the existing pipe with a 4’ base ditch and tying in the daylighted section of stream to Hickory Creek. This includes impacts to the extent of the construction easement.
7	UT Hickory Creek	Perennial	--	--	52 lf < 0.01 ac	15 lf < 0.01 ac	--	--	--	Bank Stabilization. Existing banks along the stream channel adjacent to the road require permanent bank stabilization. Temporary impacts shown upstream are for dewatering and access, if necessary, during construction.
8	UT Hickory Creek	Perennial	--	--	7 lf < 0.01 ac	28 lf < 0.01 ac	--	--	--	Bank Stabilization. Existing banks along the stream channel and adjacent Site 7 require permanent bank stabilization. Temporary impacts shown upstream are for dewatering and access, if necessary, during construction.
9	Hickory Creek	Perennial	--	--	97 lf 0.03 ac	31 lf 0.03 ac	--	--	--	The existing double barrel culvert requires removal of debris material. Temporary impacts upstream and downstream are for dewatering and access, if necessary, during construction. Bank Stabilization. Existing banks along the stream channel adjacent to the road require permanent bank stabilization upstream and downstream of the double barrel crossing of Hickory Creek.
10	Hickory Creek	Perennial	--	--	--	28 lf <0.01 ac	--	--	--	24” RCP-IV installation. An energy dissipator pad is being installed at the outlet of the 24” RCP. The 24” RCP is part of the roadway drainage system and is not associated with a jurisdictional stream. The rip rap pad does not tie to Hickory Creek. Temporary impacts are shown at Hickory Creek within the easement for construction access if needed.
11	UT Hickory Creek	Perennial	--	87 lf 0.01 ac	17 lf <0.01 ac	8 lf <0.01 ac	87 lf	0 lf	2:1	Replace existing 7’x 8’ RCBC with an 8’x 8’RCBC. Permanent stream impacts are included for bank stabilization necessary at the inlet of the RCBC. Permanent impacts downstream of the RCBC are to tie the unnamed tributary back to the relocated Hickory Creek (Site 12). Temporary impacts shown upstream of the RCBC are for dewatering and construction access.

Permit Site	Stream Name	Status/Class	Stream Re-Establishment to Pre-Helene Location	Perm Fill (loss)	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Proposed Mitigation Ratio	Impact Description (black text) Stream Relocation/ Reduced Mitigation Justification (blue text)
12	Hickory Creek	Perennial	310 lf 0.12 ac	221 lf 0.08 ac	--	14 lf < 0.01 ac	221 lf (111 lf)	221 lf	0.5:1	Stream realignment is necessary due to the roadway repair and moving the channel away from the roadway for future hazard mitigation. The stream relocation is 221 linear feet and the portion of the stream that will be reestablished to pre-Helene alignment is 310 linear feet. Moving the stream away from US 74A will provide a long-term separation from the river and the road and establish a buffer from the roadway. This will allow the stream to experience a typical flood event and not jeopardize the integrity of the US 74A roadway fill slope. Due to the bend in the river and road, additional roadway scouring is likely if the stream is not moved farther away from the road. NCDOT will minimize tree clearing within the relocated area to provide as much canopy and stabilization benefits as practicable. Due to the above, NCDOT proposes a reduction in mitigation ratios for this system, as stabilization and increased buffer will result in uplift from the current degraded damaged stream condition.
13	Hickory Creek	Perennial	--	--	--	320 lf 0.08 ac	--	--		Temporary Construction Access. Access is required to build a wall along the roadway from approximately Sta. 107 to 109.
14	Hickory Creek	Perennial	--	--	93 0.01 ac	--	--	--		Slope Repair / Construction Easement. Temporary impacts are illustrated at this location due to the construction easement. Permanent impacts along Hickory Creek are for installation of the rip rap at embankment at the base of the grouted base ditch necessary for the slope repair.
15	UT Hickory Creek	Intermittent	--	99 lf 0.01 ac	--	15 lf 0.01 ac	99 lf (198 lf)	0 lf	2:1	New pipe system/ loss of water
16	UT Hickory Creek	Intermittent	--	78 lf < 0.01 ac	--	3 lf < 0.01 ac	78 lf 9156 lf)	0 lf	2:1	Install New 36" RCP-IV This location requires changes to the drainage system with installation of a new 36" RCP, stabilization of the existing channel with a 3' base ditch at the inlet of the pipe, and backfill of the stream channel which is directly adjacent to the roadway. Temporary impacts to the stream are required for equipment to access the pipe and for temporary dewatering (pump around).
17	UT Hickory Creek	Intermittent	--	40 lf < 0.01 ac	--	42 lf < 0.01 ac	40 lf (80 lf)	0 lf	2:1	Remove existing 18" RCP and replace with 48" RCP-IV This location requires changes to the drainage system associated with Site 15. An existing 18" RCP under the road will be replaced with a new 48" RCP with inlet and outlet protection. Temporary impacts to the stream are required for equipment to access the pipe and for temporary dewatering (pump around).
18	UT Hickory Creek	Perennial	17 < 0.01 ac	--	--	18 lf < 0.01 ac	--	--	--	Channel realignment and 2' x 4' RCBC debris removal. Stream impacts are due to storm debris blocking the existing 2'x4' RCBC at the inlet which caused a secondary channel to form along the roadway. The existing RCBC will be cleaned and retained. The stream will then be reestablished to a single channel and reconnected to the 2'x4' RCBC crossing.
19	UT Hickory Creek	Intermittent	--	99 lf 0.02 ac	--	14 lf < 0.01 ac	99 lf	0 lf	2:1	Removal of existing 24" CMP and installation of new 30" RCP-IV/30" CSP/30" RPC-III. Permanent impacts are a result of stabilization of the existing channel with 3' base ditch at the inlet and outlet protection. Temporary impacts to the stream are required for equipment to access the pipe and for temporary dewatering (pump around).
20	Hickory Creek	Perennial	524 lf 0.2 ac	250 lf 0.09 ac	--	59 lf 0.02 ac	250 lf (63 lf)	250 lf	0.25:1	Stream realignment. Damage to the roadway structure from Hurricane Helene requires permanent realignment of the channel at this location. The stream relocation is 250 linear feet and the portion of the stream that will be reestablished to pre-Helene alignment is 524 linear feet. This relocation reach makes smaller shifts of Hickory Creek away from the road in predominately pre-Helene stream locations. This stretch of stream was scoured and deforested and remains vulnerable to additional destabilization during high flow events. Due to this, NCDOT requests a reduction in mitigation ratios for this system, as stabilization and increased buffer will result in uplift from the current degraded damaged stream condition.

Permit Site	Stream Name	Status/Class	Stream Re-Establishment to Pre-Helene Location	Perm Fill (loss)	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Proposed Mitigation Ratio	Impact Description (black text) Stream Relocation/ Reduced Mitigation Justification (blue text)
21	Hickory Creek & UT to Hickory Creek	Perennial	92 lf 0.03 ac	106 lf 0.04 ac	--	47 lf 0.01 ac 50 lf <0.01 ac	106 lf (53 lf)	106 lf	0.5:1	Stream realignment. Damage to the roadway structure from Hurricane Helene requires permanent realignment of the channel at this location. The stream relocation is 106 linear feet and the portion of the stream that will be reestablished to pre-Helene alignment is 92 linear feet This is a short reach of relocation that will adjust the stream from bending into the fill slope of US 74A. This relocation will allow for the construction of a small floodplain bench and increase the buffer between the road and the river. Due to this, NCDOT requests a reduction in mitigation ratios for this system, as stabilization and increased buffer will result in uplift from the current degraded damaged stream condition.
22	Hickory Creek	Perennial	434 lf 0.15 ac	492 lf 0.16 ac	--	76 lf 0.02 ac	492 lf (123 lf)	492 lf	0.25:1	Stream realignment. Damage to the roadway structure from Hurricane Helene requires permanent realignment of the channel at this location. The stream relocation is 492 linear feet and the portion of the stream that will be reestablished to pre-Helene alignment is 434 linear feet . This is a long reach of relocation that pulls the stream away from the toe of slope of US 74A. This relocation will significantly increase the distance and buffer between US 74A and the stream. This reach has also been in a braded condition since Hurricane Helene. This work will restore the stream to a more natural, pre-Helene profile and dimension. NCDOT requests a reduction in mitigation ratios for this system, as stabilization and increased buffer will result in uplift from the current degraded damaged stream condition.
23	UT Hickory Creek	Intermittent	--	23 lf < 0.01 ac	--	31 lf < 0.01 ac	0	0	--	Removal of existing concrete box culvert (size unknown) and installation of new 48” RCP-IV. Stream realignment. Inlet stabilization at the 48” RCP inlet at the special “V” ditch tie-in and stream realignment at the outlet to tie into the relocated Hickory Creek. Temporary impacts to the stream are required for equipment to access the pipe and for temporary dewatering (pump around). Pre-Helene, this stream had a sharp 90-degree bend at the road, and then a second 90-degree bend to enter the pipe under US 74A. The location of the new structure will eliminate these bends, as well as the parallel run beside US 74A. Due to the establishment of a more natural transition, as well as the benefit of removing this parallel to US 74 run, NCDOT does not propose mitigation for this 23feet.
Totals			Stream Re-Establishment to Pre-Helene Location	Permanent Fill (loss)	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required		
			1,534 lf 1.12 acre	1,771 lf 0.49 ac	561 lf 0.17 ac	1,065 lf 0.3 ac	1,748 lf 1,294 lf (with ratio)	1,345	--	--

Mitigation Plan
Relocation of Hickory Creek

Henderson County
WBS# 18314.1045039
8/5/2026

1.0 Baseline:

The North Carolina Department of Transportation (NCDOT) will perform stream relocation efforts along Hickory Creek that parallels US-74A in Henderson County NC. The relocation project will take place along US-74A between Bearwallow Mountain Road and Grant Mountain Road, southeast of Asheville NC. This area along US-74 was heavily impacted during the Helene Hurricane in the fall of 2024. Hickory Creek is located within the USGS HUC 03050105 Broad River Basin. These 5 relocation sites along Hickory Creek will improve stream stability, reduce hazard mitigation to the roadway structure and create a functional uplift to the currently failed stream.

2.0 Site Selection:

Hickory Creek runs at the toe of the existing roadway section of US-74A. Moving the stream away from US-74A will provide a long-term separation from the river and the established buffer from the existing roadway. These relocation efforts will facilitate a “jump start” to stream stability as well as prevent future destabilization of US-74A during high flow events such as Helene.

3.0 Site Protection Instrument:

Due to the unique nature of this recovery project, including the presence of adjacent private property requiring access to US 74A, NCDOT will be unable to manage the proposed relocation site or prohibit any use inconsistent with its use as mitigation property.

At this time, NCDOT is aware of the need for potential driveway crossings throughout the project corridor, either by ford or by bridge. NCDOT has no involvement with these private undertakings with the exception of its legal responsibilities to grant driveway permits.

4.0 Objectives:

The goal of these relocation efforts is to relocate 1,345 ln ft of Hickory Creek to new location along the southeast side of US-74A. The functional relocation of these sections of stream will be accomplished through the engineered natural stream design, by Grant Ginn Consulting.

5.0 Mitigation Work Plan:

Due to the unique nature of this recovery project, the relocation sites will be constructed at the same time as the US-74A roadway reconstruction. Construction activities along US-74A will involve the permanent re-establishment of US 74A to modern highway standards, site grading, site planting, and natural stream design. Attached are the design plans of the areas that will be relocated.

6.0 Performance Standards:

Not applicable.

7.0 Monitoring Requirements:

The permittee shall monitor the restored channel for three years. To do this, the permittee shall establish three points along the restored reach (two within 50' on each end), take photographs at these points:

- (1) immediately after restoration and stabilization activities have been completed, and
- (2) every year after that for three years.

The permittee shall submit these photographs and a text description of observed channel stability within 60 days of completion of the project, then once a year for the next 3 years. If the restored channel is unstable for any reason during this three-year monitoring period (e.g., bank erosion, downcutting, etc.), or causes upstream or downstream bank erosion, the permittee shall immediately contact the USACE suggest corrective actions. Note that the required monitoring period may be extended if corrective actions are necessary.

8.0 Other Information:

Not applicable.

9.0 Determination of Credits:

The success of the relocation area and determination of final credits will be based upon successful completion of the relocation and closeout of the monitoring period to determine the use of this site to offset impacts associated with US-74A.

9.1 Credit Release Schedule:

NCDOT proposes to offset the impacts to the relocated portion of stream at varying stream ratios as noted in the Mitigation Summary document.

10.0 Geographic Service Area:

The proposed Geographic Service Area (GSA) for the relocations is composed of the Hydrologic Cataloging Unit (HUC) (03050105). All stream credits generated during these relocations will be used to offset impacts associated with US-74A (WBS# 18314.1045039)

11.0 Maintenance Plan:

Once monitoring is completed and the site is closed out, the need for long-term maintenance is not anticipated for the relocated sections of stream. Should destabilization or repair be required, NCDOT, in consultation with the appropriate environmental agencies, will propose a plan to re-stabilize an area of stream, if necessary.

12.0 Long Term Adaptive Management Plan

The site will be monitored by NCDOT according to the relocation plan. In the event that unforeseen issues arise that affect the management of the site, any remediation will be addressed by NCDOT, in consultation with the environmental agencies.