STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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June 4, 2025

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NC Division of Water Resources
Transportation Permitting Branch
1617 Mail Service Center
Raleigh NC 27699-1617

ATTN: Ms. Crystal Amschler
NCDOT Coordinator

Ms. Amy Annino
NCDOT Coordinator

Subject: **Application for Section 404 Permit and Section 401 Water Quality Certification** for the Hurricane Helene I-40 Pigeon River Gorge (I-40 PRG) Emergency Relief (ER) Project that will provide emergency and permanent repairs to I-40 from the NC/TN state line to approximately mile marker 5.0, Haywood County, North Carolina. Federal-Aid Project ER-24(381)

Reference: 404 Permit SAW-2025-00194 dated 2/27/2025 and 5/1/2025
401 Water Quality Certification 2025-0109 dated 2/24/2025 & 4/24/2025

Dear Madams:

The North Carolina Department of Transportation (NCDOT) proposes to permanently repair damage to Interstate-40 (I-40) in the Pigeon River Gorge in Haywood County, from Mile Marker (MM) 0 at the North Carolina/Tennessee state line to approximately MM 7, Exit 7 for Cold Springs Creek Road (SR 1397) caused by Hurricane Helene.

Previous application was made, and subsequent Nationwide Permits were issued in January and April for geotechnical investigations and temporary impacts required to develop the permanent solution for the project.

Now that the project development has advanced, an Individual Permit is requested for the items described below, as well as the previously permitted activities.

Purpose and Need:

Need: On September 27, 2024, Hurricane Helene struck western North Carolina and eastern Tennessee. The Pigeon River transported water through the gorge at a rate of approximately

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62,000 cubic feet per second (CFS). The normal flow is around 904 CFS. This resulted in severe damage to I-40.

In North Carolina, the damage to I-40 occurred from approximately mile marker (MM) 5 to the Tennessee state line in Haywood County (MM 1). The Pigeon River scoured out approximately 3 million cubic yards of embankment material causing the collapse of portions of the eastbound lanes. The Hurricane Helene I-40 Pigeon River Gorge (I-40 PRG) Emergency Relief (ER) Project provides emergency and permanent repairs to this section of I-40.

To facilitate this repair project, NCDOT is working with our lead federal agency (FHWA) to establish an ample, stable, and efficient source of borrow material for the permanent and emergency repairs to this section of the I-40 corridor. Hauling materials from off-site quarries would result in substantially reduced production rates, that would hinder reconstruction efforts. These trucks would also be subject to live traffic interference and delays. By using a local site and off-road trucks, capacity is doubled, and haul distance is substantially reduced (1-3 miles vs 20-50 miles).

It is estimated that hauling the 3 million cubic yards of required material to rebuild I-40 from on-site borrow locations within the Pisgah National Forest would only require 500 daily trips using off-road trucks whereas acquiring the same quantities from off-site quarries would require 1,200 daily trips. Without the availability of the on-site USDA Forest Service (USFS) material sourcing, the project duration is estimated to be three times longer at three times the cost to respond to this emergency event.

Purpose: The purpose of the proposed project is to implement the emergency and permanent repairs to the slopes, pavement, and other infrastructure associated with this section of the I-40 corridor to reestablish connectivity and provide for the safe and efficient transport of people, goods, and services.

ADDITIONAL PROJECT DETAILS

There are two primary components to this project:

- The stabilization, repair and re-establishment of the eastbound travel lanes from the NC/TN state line to MM 5.
- Borrow for the material needed for I-40 re-establishment.

These components are shown in Figure 1.

I-40 Re-establishment

Permanent repairs to damage on the facility will include re-establishment of the embankment with roller compacted concrete, retaining walls and/or other geotechnical solutions to keep the roadway footprint within the existing I-40 right-of-way. It will also include grading and paving to re-establish damaged elements of the eastbound roadway. Finally, permanent repairs will also include removal of the temporary traffic pattern and work to re-establish the westbound roadway elements modified for the temporary traffic pattern.

Due to the magnitude of damage along the five miles of I-40 and the varying nature of the repairs to the damage, it will not be practical to complete final design for the entire project prior to beginning construction.

Efforts to accelerate the permanent repairs for the I-40 PRG project necessitate advancing certain activities prior to completion of final design of the entire project. Such activities include building a construction causeway along the embankment failure for both geotechnical borings and a construction platform; constructing a haul road from the "Cotton Patch" (a site where NCDOT stored material wasted from the 2009 ER rock fall event that closed I-40) to the beginning of the causeway near MM5; reclaiming embankment material from the river for use in the causeway construction and construction office site development; and developing a borrow site adjacent to the project, since the event eroded about 3 million cubic yards of embankment material, saving money and time to construct the project. Advancing these work activities prior to completion of final design will significantly advance completion of the I-40 PRG project.

Establishment of Borrow Sites

The biggest challenge to rebuilding I-40 is sourcing aggregate materials in this remote area surrounded by the US Forest Service (USFS) Pisgah National Forest and Great Smoky Mountains National Park. Since October, the contractor tasked with rebuilding I-40 has been investigating available borrow sites but has been unable to locate acceptable sources outside of the National Forest that are within a reasonable distance.

NCDOT, its contractor, Ames Construction, and FHWA coordinated with the USFS for locations within the Pisgah National Forest to potentially obtain borrow material. The USFS conveyed a temporary federal land transfer to FHWA on March 26, 2025, with accompanying stipulations. On March 28, 2025, the FHWA conveyed a Temporary Construction Easement (TCE) in the Forest to the NCDOT for borrow material.

The federal land transfer and a USFS special use permit applied to seven borrow sites (Figure 2) for geotechnical investigations to determine if materials were suitable for extraction. Following investigation of these seven sites it was determined that Site 1 was the most suitable for extracting borrow material and will provide enough aggregate for the project. A portion of Site 3, adjacent to Site 1, will be used for overburden (e.g. topsoil) that will be used to reestablish Site 1 once work is complete. The chosen sites and the haul road area are shown in Figure 3. The other sites were eliminated from consideration for the following reasons:

Sites 2, 6, and 7 – Determined to be too close to the Duke Energy hydroelectric penstock, a concrete conveyance running from Waterville Lake to the Waterville Hydroelectric Plant, and therefore eliminated. These sites are also located in proximity to Mount Sterling and Mount Sterling Creek and elimination from consideration avoids impact to these two resource areas.

Site 3 – One site was geo-bored, however the entire site included a USFS designated timber sale that would have been difficult to re-negotiate. It was later determined that the portion of Site 3 not associated with the sale would be appropriate for storing overburden from Site 1.

Site 4 – Eliminated due to the difficulty in access and cost to get to the site, length of the needed haul road, as well as additional natural resource costs of tree clearing and blasting.

Site 5 – Was considered potentially viable but required a 1.5-mile haul road and had additional potential natural resource concerns to old-growth forest and the peregrine falcon and therefore avoided when Site 1 was determined to provide enough material.

Workplan

NCDOT and its contractor have determined that work will progress by first establishing the temporary bridge and haul road from the Cotton Patch, over the Pigeon River, and into Site 1. Other access options to Site 1 were reviewed and included use of existing USFS roads that would access the site from the top of the ridge, down. This option was determined unfeasible because the flattest area is at the bottom of the site (south of the confluence of SA1-SAA and SA1-SAB) and this is where the work pad will be more safely established for a rock crusher and other equipment. Setting this work pad is a crucial step in creating the borrow site overall. In addition, the USFS roads are used by the public, local landowners, Duke Energy, and timber logging operations and must remain open. USFS, NCDOT, and Ames expressed concerns regarding proximity of the roads to blasting and therefore safety.

The proposed haul road will use the flattest area available to limit the amount of blasting that needs to occur to the surrounding slopes. As shown in Permit Drawing Sheet 50 of 62, the grade increases steeply on both sides of the stream (SA1-SAA), which is the flattest location. To locate the haul road on either side of this stream with a riparian buffer, steep cuts would be required further denuding the landscape of trees and habitat and likely leading to additional siltation of the stream despite prevention efforts. It was determined that the best solution is to pipe SA1-SAA and SA1-SAB to the Pigeon River for the duration of the construction. Following the use of the borrow site, SA1-SAA and SA1-SAB will be restored and monitored for a period of 5 years.

Construction of the haul road will require temporary disturbance of SA1-SAA and SA1-SAB including vegetation removal, installation of a synthetic membrane over the streambed, temporary piping to convey baseflow and construction of lateral drainage ditches to convey storm runoff in a stable manner. The jurisdictional waters are located within high-gradient, confined, north facing valleys. The stream channels contain variable bed features dependent on local scour conditions and depth to bedrock, including intermittent exposed bedrock cascades followed by long areas of colluvial step-pool complexes. Channel grades range from 5 to 25 percent and the overall valley grades are approximately 16 percent. Near bank vegetation is dominated by rhododendron with typical overstory of eastern hemlock and other associated north facing cove habitat species.

The proposed haul road will be constructed to maximize long-term preservation of in-stream habitat and accelerate vegetation recovery after the borrow site has been returned. A protective membrane will be placed over the channel bed and banks to help preserve existing bed material and form, and to serve as a visual indicator when removing fill and closing out the reclamation area. Placement of the synthetic membrane will be accomplished by removing the vegetation in a manner conducive to forest regeneration and stability, leaving as much stump and root matter as practicable while still creating areas sufficient for membrane installation. Additionally, grades will largely be accomplished by fill placement, rather than cut, to minimize permanent impacts. After membrane installation, a 54-inch pipe will be installed in the streambeds of SA1-SAA and

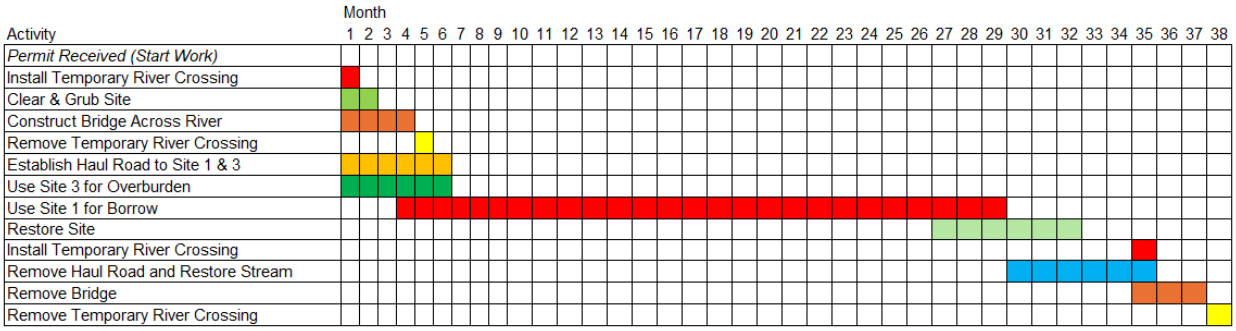
SA1-SAB. The dual 54-inch pipes will convey a storm event greater than 50 years, whereas one individual 54-inch pipe will convey a 25-year storm event. Lateral ditches (15 percent grade) will be constructed to route stormwater away from the piped baseflow and from the haul road. Check flow catch basins are also included to slow water velocity in the proposed ditches.

Construction of the haul road will initiate at the Pigeon River confluence with SA1-SAA and the temporary bridge crossing, moving up-gradient. Natural rock, if available, or rip rap will be used at the confluence to act as an energy dissipator. The gravel haul road is anticipated to be approximately 50 to 60 feet wide, including shoulders for drainage. Where elevation differentials are present due to valley knickpoints, fill will be placed to maintain grade. The membrane will be tied into the stream beds at the upstream extent to help prevent piping of the fill. Baseflows will be routed into the pipes at the designated locations on the plans. Drainage from the borrow site and the haul road will be routed to the ditches above the piped streams and various stormwater control measures will be installed including stilling basins, plunge pools and pipes to help control sedimentation, dissipate energy and convey storm flows in a stable manner away from the work areas.

Establishment of the borrow pit area at Site 1 will occur in phases. Phase 1 is anticipated to include the area just below FS 288 (Buzzard Roost Road). If needed, Phase 2 would continue up slope to the proposed limits of disturbance.

Due to the aforementioned concerns for safety, USFS and NCDOT are proposing to reroute traffic from FS 288 onto FS 453 (Hicks Branch Road) using an old roadbed adjacent to Hicks Branch stream and tying back to FS 288. NCDOT and USFS anticipate improving the roadbed and potentially rerouting the old roadbed location in some areas to allow for large vehicles (WB 62) turning radii. Design and other investigations for this road are underway. Figure 4 shows the potential road improvement location.

Once the location of Sites 1 and 3, including haul road, and the improved roadbed along Hicks Branch are established, USFS and FHWA will modify the federal land transfer to include only these areas. This federal land transfer will expire in 10 years. Construction and restoration of the land are expected to be completed in this timeframe. The approximate amount of time (shown in months) for each activity following issuance of the requested permit is shown in the graphic.



NEPA DOCUMENT STATUS

The environmental planning and preliminary design phase for the permanent repairs of the I-40 PRG Project began in October 2024. The scope of the project consists of rebuilding the road along its alignment. Due to the speed and timing of the design and construction the environmental documentation will be provided for each proposed action, often by work package. FHWA has agreed that the efforts to make the repairs are Categorically Excluded (CE) under the National Environmental Policy Act of 1970, as amended. To date, two CEs have been documented - one for emergency repairs, geotechnical investigations, and environmental restoration (Type IA CE, Approved Feb 2025), and the second CE documented the proposed geotechnical borings in and impacts to the Pisgah National Forest on the opposite side of the Pigeon River from I-40 (Type III CE, Certified March 2025). Additional CEs are anticipated as designs are finalized.

IMPACTS TO WATERS OF THE U.S.
and
AVOIDANCE, MIMIZATION, AND MITIGATION

The following tables display avoidance and minimization measures in preliminary design, actual project impacts to jurisdictional wetlands and streams, and then specific avoidance and minimization measures at each impact site.

Wetland Impacts HUC 06010106 (French Broad)

Permit Site	Wetland Size (ac)	Perm. Fill in Wetlands (ac)	Impact Description/ Avoidance and Minimization	
31 WA	0.038	0.038	This wetland will be impacted to construct the temporary haul road, and associated bridge within the Cotton Patch laydown yard.	
32 WA2	0.007	0.007	This wetland will be impacted for the temporary haul road to access the borrow site.	
Total Permanent Wetland Impacts:		**0.045**	**Total Required Mitigation:**	**0.045 @ 2:1 = 0.09**

Stream Impacts in French Broad River Basin 06010106

Permit Site / Plan sheet Page	Stream Name/Status	Status/Class	Perm Fill (loss)	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
1 Plan Sheet 4	Pigeon River	Perennial	--	542 (0.067)	458 (0.357)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(2.773)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP)
1 Plan Sheet 5	Pigeon River	Perennial	--	916 (0.125)	430 (1.587)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(2.183)	0	0	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP)
1 Plan Sheet 6	Pigeon River	Perennial	--	856 (0.064)	578 (1.554)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(2.286)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP)
2	SAA	Perennial	--	--	11 (0.001)	--	--	UT on south side of Pigeon River (opposite I-40) Temporary impacts for material removal and accommodation of causeway.
3	Painter Branch	Perennial	--	--	51 (0.004)	--	--	Painter Branch is carried by a 84" CMP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Painter Branch does not discharge from the outlet end of the pipe. Tributary A, an ephemeral feature, runs from the pipe to the Pigeon River.
4	TA	Ephemeral	*0.006*	--	--	0	0	
5	TAA	Ephemeral	--	--	(0.001)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP)
1 Plan Sheet 7	Pigeon River	Perennial	--	854 (0.509)	551 (1.064)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(2.367)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP)
6	Snowbird Creek	Perennial	--	--	50 (0.007)	--	--	Snowbird Creek is carried by two 84" CMP under I-40. This pipe will be extended to/ through proposed the wall. Additionally, these pipes may be rehabilitated while construction equipment is accessible. However, Snowbird Creek does not discharge from the outlet end of the pipe. Tributary B, an ephemeral feature, runs from the pipe to the Pigeon River.
7	TB	Ephemeral	*0.006*	--	--	0	0	
Sheet Totals:			***0.012***	**3,168 lf 0.765**	**2,129 lf 14.184 acre**	**0**	**0**	*Tables/ Pages Break with Impact Summary Tables in Permit Drawings*
			3,168 lf 0.777 acre					

Permit Site / Plan sheet Page	Stream Name/Status	Status/Class	Perm Fill (loss)	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
1 Plan Sheet 8	Pigeon River	Perennial	--	639 (0.301)	544 (0.556)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(2.633)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
1 Plan Sheet 9	Pigeon River	Perennial	--	1,050 (0.531)	646 (1.061)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(3.725)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
1 Plan Sheet 10	Pigeon River	Perennial	--	444 (0.068)	717 (1.665)	--	--	Causeway construction (previously permitted under NWP).
			--	--	(2.156)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
8	SC	Intermittent	--	--	50 (0.002)	--	--	Stream SC, UT to Pigeon River, is carried by an 81" x 59" CMAP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Stream SC does not discharge from the outlet end of the pipe. Tributary C runs from the outlet end of the pipe to the Pigeon River.
9	TC	Ephemeral	*(0.013)*	--	--	0	0	
10	TD	Ephemeral	--	--	(0.003)	--	--	Tributary D, and ephemeral tributary to Pigeon River, is carried by a 24" CMP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible.
1 Plan Sheet 11	Pigeon River	Perennial	--	891 (0.434)	481 (1.860)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(1.915)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
11	TE	Ephemeral	--	--	(0.002)	--	--	Tributary E, and ephemeral tributary to Pigeon River, is carried by a 42" CMP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible.
1 Plan Sheet 12	Pigeon River	Perennial	--	838 (0.519)	653 (0.449)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(2.030)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
Sheet Totals:			**0.013 ac**	**3,862 lf 1.853 ac**	**3,091 lf 18.057 ac**	**0**	**0**	*Tables/ Pages Break with Impact Summary Tables in Permit Drawings*
			3,862 lf 1.866 ac					

Permit Site / Plan sheet Page	Stream Name/Status	Status/Class	Perm Fill (loss)	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
1 Plan Sheet 13	Pigeon River	Perennial	--	1,322 (0.733)	97 (2.113)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(2.772)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
12	Mount Sterling Creek	Perennial	--	--	13 (0.008)	--	--	Mount Sterling Creek is on the south side of Pigeon River (opposite I-40). Temporary impacts for material removal and accommodation of causeway.
13	Runyon Creek	Perennial	55 (0.005)	--	49 (0.005)	0	0	Runyon Creek is carried by a 112” x 75” CMAP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
1 Plan Sheet 14	Pigeon River	Perennial	--	275 (0.038)	1,229 (0.714)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(3.085)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
14	Counterfeit Branch	Perennial	79 (0.007)	--	50 (0.005)	0	0	Counterfeit Branch an 84” x 61” CMAP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
1 Plan Sheet 15	Pigeon River	Perennial	--	126 (0.013)	1,419 (1.310)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(2.220)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
1 Plan Sheet 16	Pigeon River	Perennial	--	418 (0.195)	1,044 (1.180)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(2.461)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
15	SAC	Perennial	--	--	10 (0.001)	--	--	SAC is on the south side of Pigeon River (opposite I-40). Temporary impacts for material removal and accommodation of causeway.
1 Plan Sheet 17	Pigeon River	Perennial	--	193 (0.113)	1,176 (1.278)	0	0	Causeway construction (previously permitted under NWP)
			--	--	(2.277)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
16	Puncheon Camp Branch	Perennial	--	--	10 (0.001)	--	--	Puncheon Camp Branch is on the south side of Pigeon River (opposite I-40). Temporary impacts for material removal and accommodation of causeway.
Sheet Totals:			**134 lf 0.012 ac**	**2,334 lf 1.092 ac**	**5,097 lf 19.43 ac**	**0**	**0**	*Tables/ Pages Break with Impact Summary Tables in Permit Drawings*
			2,468 lf 1.104 ac					

Permit Site / Plan sheet Page	Stream Name/Status	Status/Class	Perm Fill	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
17	TF	Ephemeral	--	--	(0.002)	--	--	Tributary F, and ephemeral tributary to Pigeon River, is carried by a 18" CMP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible.
1 Plan Sheet 18 12	Pigeon River	Perennial	--	723 (0.853)	491 (1.668)	--	--	Causeway construction (previously permitted under NWP).
			--	--	(1.572)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
18	SG	Perennial	30 (0.007)	--	55 (0.013)	0	0	Stream SG, UT to Pigeon River, is carried by a 72" x 44" CMAP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
1 Plan Sheet 19	Pigeon River	Perennial	--	448 (0.271)	756 (0.581)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(2.088)	--	---	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
19	SH	Perennial	62 (0.006)	--	50 (0.005)	0	0	Stream SH, UT to Pigeon River, is carried by a 72" CMP under I-40. This pipe will be extended to/ through the proposed wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
1 Plan Sheet 20	Pigeon River	Perennial	--	484 (0.242)	1,648 (1.043)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(4.157)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
20	SAE	Perennial	--	--	11 (0.002)	--	--	Stream AE is on the south side of Pigeon River (opposite I-40). Temporary impacts for material removal and accommodation of causeway.
21	SAF	Perennial	--	--	10 (0.001)	--	--	Stream AF is on the south side of Pigeon River (opposite I-40). Temporary impacts for material removal and accommodation of causeway.
1 Plan Sheet 21	Pigeon River	Perennial	--	208 (0.040)	1,142 (0.821)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(2.484)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
1 Plan Sheet 22	Pigeon River	Perennial	--	353 (0.081)	849 (1.047)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(2.523)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
Sheet Totals:			**92 lf 0.013 ac**	**2,216 lf 1.487 ac**	**5,012 lf 18.007 ac**	**0**	**0**	*Tables/ Pages Break with Impact Summary Tables in Permit Drawings*
			2,308 lf 1.50 ac					

Permit Site / Plan sheet Page	Stream Name/Status	Status/Class	Perm Fill	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
22	Skiffey Creek	Perennial	109 (0.020)	--	51 (0.009)	0	0	Skiffey Creek is carried by a 96" CMP under I-40. This pipe will be extended to/ through the wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
23	Groundhog Creek	Perennial	--	--	67 (0.050)	--	--	Groundhog Creek is carried by three 84" CMPs under I-40. These pipes will be extended to/ through the wall. Additionally, these pipes may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipes directly outlet into the Pigeon River.
1 Plan Sheet 23	Pigeon River	Perennial	--	134 (0.022)	1,117 (0.231)	0	0	Causeway construction (previously permitted under NWP).
			--	--	(3.491)	--	--	Temporary impacts to Pigeon River for material removal and accommodation of causeway (previously permitted under NWP).
24	Rube Rock Branch	Perennial	67 (0.009)	--	67 (0.016)	0	0	Rube Rock Branch and SKA are carried by an 84" CMP under I-40. This pipe will be extended to/ through the wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
25	SKA	Perennial	--	--	66 (0.009)	--	--	Stream SKA is a tributary to Rube Rock Branch just before it enters the above described 84" CMP.
26	TG	Ephemeral	(0.005)	--	--	0	0	Tributary G, an ephemeral UT to Pigeon River, is carried by a 24" CMP under I-40. This pipe will be extended to/ through the wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Note: Tributary G is an ephemeral channel at the exit end of the pipe. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
27	Tom Hall Branch	Perennial	--	--	38 (0.007)	--	--	Tom Hall Branch and SLB and SLC join just before the inlet of a 72" CMP under I-40. These temporary impacts are needed to extend the other end of the pipe to/through the wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Stream SLC
28	SLB	Perennial	--	--	45 (0.007)	--	--	
29	SLC	Perennial	--	--	63 (0.009)	--	--	
30	TH	Ephemeral	--	--	(0.014)	--	--	Tributary G, an ephemeral UT to Pigeon River, is carried by a 24" CMP under I-40. This pipe will be extended to/ through the wall. Additionally, this pipe may be rehabilitated while construction equipment is accessible. Mitigation is not proposed as the existing pipe discharges down the rocks on the fill slope directly to the adjacent Pigeon River.
Borrow Related Impacts								
1A	Pigeon River	Perennial	--	--	268 (0.607)	--	--	A bridge will be constructed over the Pigeon River for access to the borrow site. This impact is for the construction of a temporary work pad to construct the interior bents.
Sheet Totals:			**176 0.034 ac**	**134 0.022 ac**	**1,782 lf 4.450 ac**	**0**	**0**	*Tables/ Pages Break with Impact Summary Tables in Permit Drawings*
			310 0.056 ac					

Permit Site / Plan sheet Page	Stream Name/Status	Status/Class	Perm Fill	Bank Stabilization	Temporary Impact	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
32	S1-SAA	Perennial	--	--	960 (0.326)	960 (1:1)	960 (1:1)	This impact is for the temporary haul road from the Cotton Patch construction yard to the borrow site. NCDOT Proposes 1:1 mitigation for this activity for the temporal loss of stream function during the construction period, potentially lasting 4 years. NCDOT commits to pre-impact stream data collection, including photographs and cross-sections, for reference for stream restoration, and for use to assist in the determination of a successful restoration.
33	SAB	Perennial	--	--	121 (0.021)	121 (1:1)	0	
34	S1-SAD	Perennial	244 (0.006)	--	--	244 (2:1)	0	This stream is located inside the borrow pit. It is considered a total loss of waters.
35	S-SAE/S1-SAE-INT	Perennial/ Intermittent	517 (0.012)	--	--	517 (2:1)	517 (1:1)	This stream is located inside the borrow pit. It is considered a total loss of waters.
36	S1-SAE2 INT	Intermittent	48 (0.001)	--	--	48 (2:1)	0	This stream is located inside the borrow pit. It is considered a total loss of waters.
37	S1-SAD	Perennial	170 (0.004)	--	--	170 (2:1)	0	This stream is located inside the borrow pit. It is considered a total loss of waters.
Sheet Totals:			**979 (0.23)**	--	**1,081 lf 0.347 ac**	**1,081 (1:1) 979 (2:1)**	**1,477 (1:1)**	*Tables/ Pages Break with Impact Summary Tables in Permit Drawings*
			979 lf 0.23 ac					

PRELIMINARY/ POTENTIAL IMPACTS

Streams Surrounding Borrow Pit
NCDOT does not anticipate direct impacts to the following streams, but they will be impacted by a reduction in drainage area.

Stream	Length of stream adjacent to pit (lf)	Anticipated drainage area reduction (acres)			
		Pre	Post	Reduction (lf)	Reduction %
SA1-SAB	1,034	58.55	36.28	22.27	38 %
SA1-SAC	164	8.20	5.49	2.71	33 %
SA1-SAH	462	72.52	70.12	2.4	3 %
SA1-SAA	1,356	150.47	142.98	7.49	11 %
	3,016				

Furthermore, NCDOT commits to pre-impact stream assessments, data collection and monitoring throughout the project to document impacts from the adjacent work.

Additional information will be provided as development of the Stream Assessment and Monitoring Plan is underway. NCDOT will work with the USFS and other regulatory agencies to develop this plan.

US Forest Service Road 288 (Buzzard Roost Road)
The borrow pit required for this project will also necessitate a relocation of a section of US Forest Service Road 288 (Buzzard Roost Road).
The USFS is currently evaluating options for this relocation which have the least impact on Forest resources. At this time, it is proposed that existing Forest Service Roads (FS 453, and Hicks Branch Road) will be used to handle this relocation. However, these roads do not have pipes that carry the water under the road, and instead, water flows over the road requiring vehicles to ford the streams. Should these roads be selected as the route for FS 288, the USFS will request these roads be improved to the same standard as the existing FS Road 288, which will include piping the streams currently flowing over the road.

NCDOT preliminarily discloses the improvements of these roads may result in an estimated **2,540** linear feet of permanent impact.

As final decisions are made by the USFS, and design is refined, NCDOT will submit a permit modification request to authorize these impacts.

Haul Road Stream – Stream SA1- SAA
NCDOT is currently developing an assessment and monitoring plan to ensure the impacts to this stream and valley are restored to pre-impact conditions as much as practicable, and for use to assist in the determination of a successful restoration.

Stream Impact Totals

	Perm Fill (loss)	Bank Stabilization	Temporary Impact	Other Impact	ACOE Mitigation Required	DWR Mitigation Required
Final Design Impact Totals						
Final Design Totals:	1,381 lf 0.107 ac	11,714 lf 5.219 ac	18,192 lf 74.475 ac	--	1,081 (1:1) 979 (2:1)	1,477 (1:1)
	13,095 lf 5.326 ac					
Streams Surrounding Borrow Pit						
Watershed Reduction	--	--	--	3,016 lf	TBD	TBD
Preliminary Design Impact Totals						
USFS Road 288 Relocation	2,540 lf		--	Mitigation not proposed until final road relocation determined.		
Grand Total	**15,635 lf**		**18,192 lf 74.475 ac**	3,016 lf	1,081 (1:1) 979 (2:1)	1,477 (1:1)

Mitigation for the unavoidable impacts for this project will be handled by NC Division of Mitigation Services (DMS).

STREAM MONITORING AND RESTORATION

Haul Road Stream – Stream SA1

NCDOT is currently developing an assessment and monitoring plan to ensure the impacts to this stream and valley are restored to pre-impact conditions as much as practicable, and for use to assist in the determination of a successful restoration.

FEDERALLY PROTECTED SPECIES

Plants and animals with Federal classification of Endangered (E) or Threatened (T) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended.

As of the November 27, 2024, the USFWS Information for Planning and Consultation (IPaC) lists the following federally protected species in the project area:

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
Gymnoderma lineare	Rock gnome lichen	Endangered	No	No Effect
Isotria medeoloides	Small whorled pogonia	Threatened	No	No Effect
Myotis grisescens	Gray bat	Endangered	Yes	MALAA
Myotis septentrionalis	Northern long-eared bat	Threatened	Yes	MALAA
Myotis sodalist	Indiana bat	Endangered	Yes	MALAA
Perimyotis subflavus	Tricolored bat	Proposed Endangered	Yes	MALAA
Danaus Plexippus	Monarch butterfly	Proposed Threatened	Yes	MALAA
MALAA - May Affect–Likely to Adversely Affect				

Formal Section 7 Consultation is complete for this project. On February 28, 2025, USFWS issued a Biological and Conference Opinion for the subject project.

INDIRECT CUMULATIVE IMPACT ANALYSIS

The proposed I-40 PRG repair project is not anticipated to impact travel patterns, reduce travel time, affect access to residences, or open areas for development or redevelopment. Due to the lack of these transportation impact causing activities (TICAs), no additional analysis is required.

CULTURAL RESOURCES

To comply with Section 106 of the National Historic Preservation Act (1966) (NHPA), as amended, FHWA and NCDOT must evaluate the project's impact upon any extant architectural and archaeological resources and determine if additional measure(s) will be necessary to mitigate any adverse effects of the project upon any significant properties and sites.

In accordance with Section 106 of the NHPA, NCDOT and FHWA consulted with appropriate parties in the determination of effects to the two known historic properties in the study area: HW0268 Walters Dam and Hydroelectric Plant and associated tunnels (Determined Eligible 1990) and HW0524 Waterville Historic District (Determined Eligible, 2000). Also in the vicinity is NC0007 Appalachian Trail (Determined Eligible, 2009). There are no historic structures in the proposed borrow/waste sites 1 and 3.

The project was reviewed by the NC Historic Preservation Office, FHWA, and NCDOT on May 22, 2025, and a determination of "No Adverse Effect" under Section 106 and *de minimis* use under Section 4(f) of the Department of Transportation Act were made.

Tribal Coordination
Tribal Coordination Letters were sent by NCDOT and FHWA to the following:

Tribe	Letter Sent	Response
Cherokee Nation	12/19/2024, 3/14/2025	No Response
Eastern Band of Cherokee Indians	12/19/2024, 3/14/2025	No Response
Muscogee (Creek) Nation	12/19/2024, 3/14/2025	12/19/2024
United Keetoowah Band of Cherokee Indians	12/19/2024, 3/14/2025	No Response

FEMA COMPLIANCE

The project has been coordinated with appropriate state and local officials and the Federal Emergency Management Agency (FEMA) to assure compliance with FEMA, state, and local floodway regulations.

REGULATORY APPROVALS

Application is hereby made for the following regulatory approvals for the above-described activities:

Section 404: USACE Individual Permit.

Section 401: Individual Water Quality Certification from the N.C. Division of Water Resources. In compliance with Section 143 215.3D(e) of the NCAC, we will provide $570.00 to act as payment for processing the Section 401 permit application previously noted in this application (see Subject line).

Please find enclosed:
Eng. Form 4345, Stormwater Management Plan (SMP), Permit Drawings, Borrow Access Road, Remediation Summary, Mitigation Acceptance Letter(s), US Fish and Wildlife Service ESA Consultation, Historic Archaeology, Historic Architecture and Properties Information, Tribal Coordination, and NEPA documents.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Michael Turchy at maturchy@ncdot.gov. A copy of this application and distribution list will also be posted on the NCDOT website at: http://connect.ncdot.gov/resources/Environmental/Pages.

Sincerely,

Digitally signed by Michael Turchy

Michael Turchy
Environmental Coordination and Permitting Group Leader
Environmental Analysis Unit

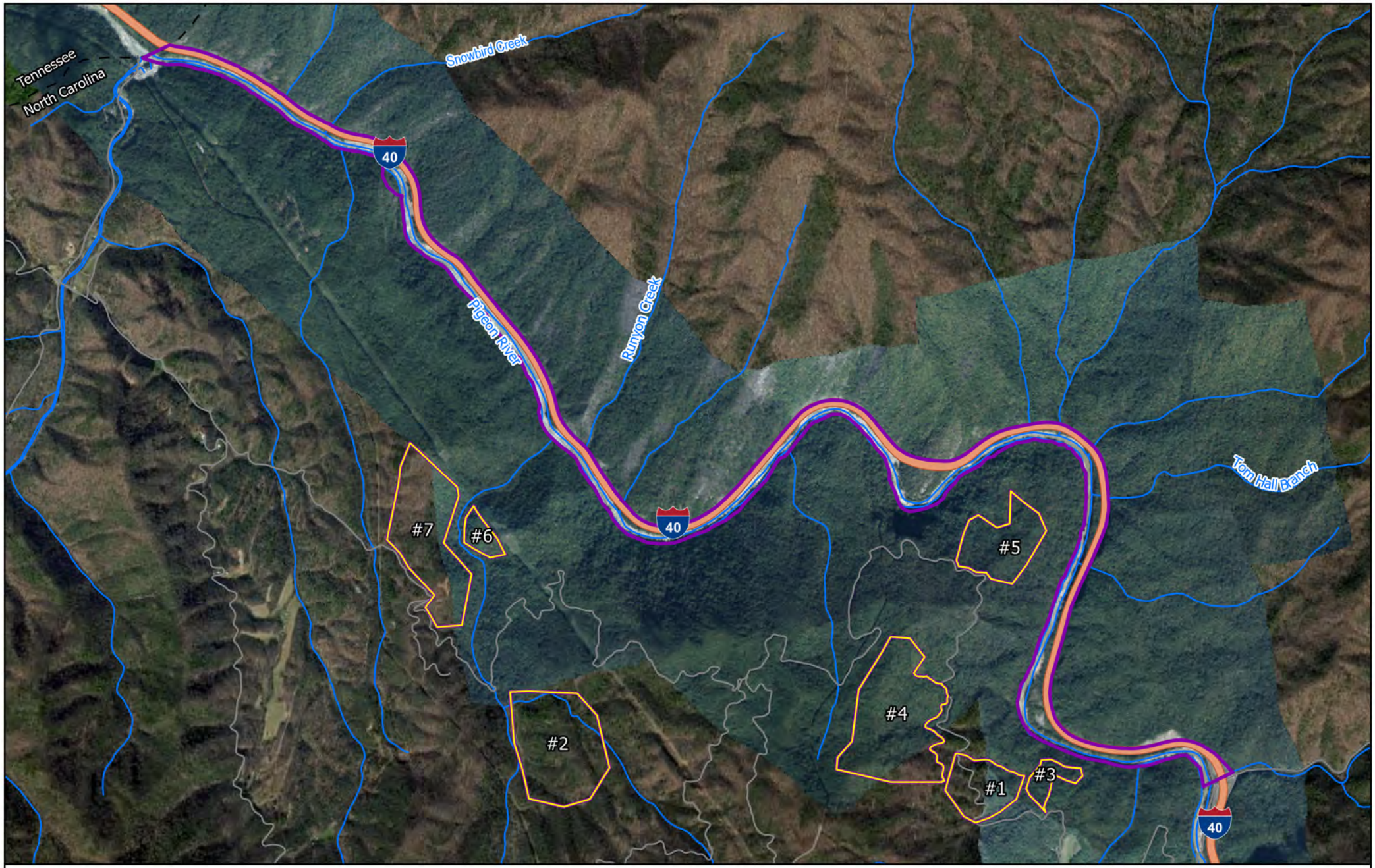
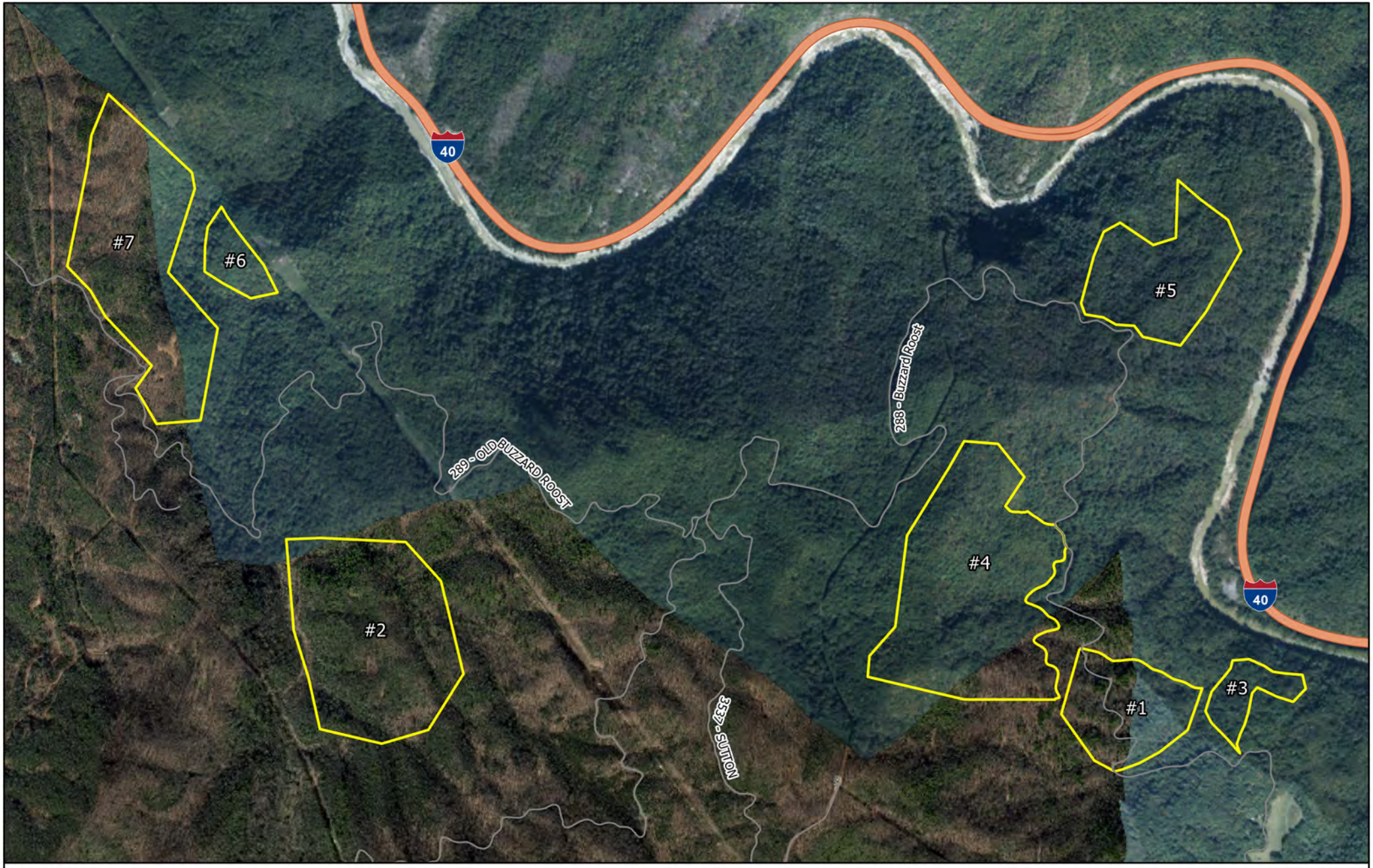


Figure 1.
I-40 Pigeon River Study Area Map With Borrow Sites
in Haywood County, NC

Source: NCDOT, HNTB. 2025



Legend

- Borrow Sites
- I-40
- US Forest Service Roads

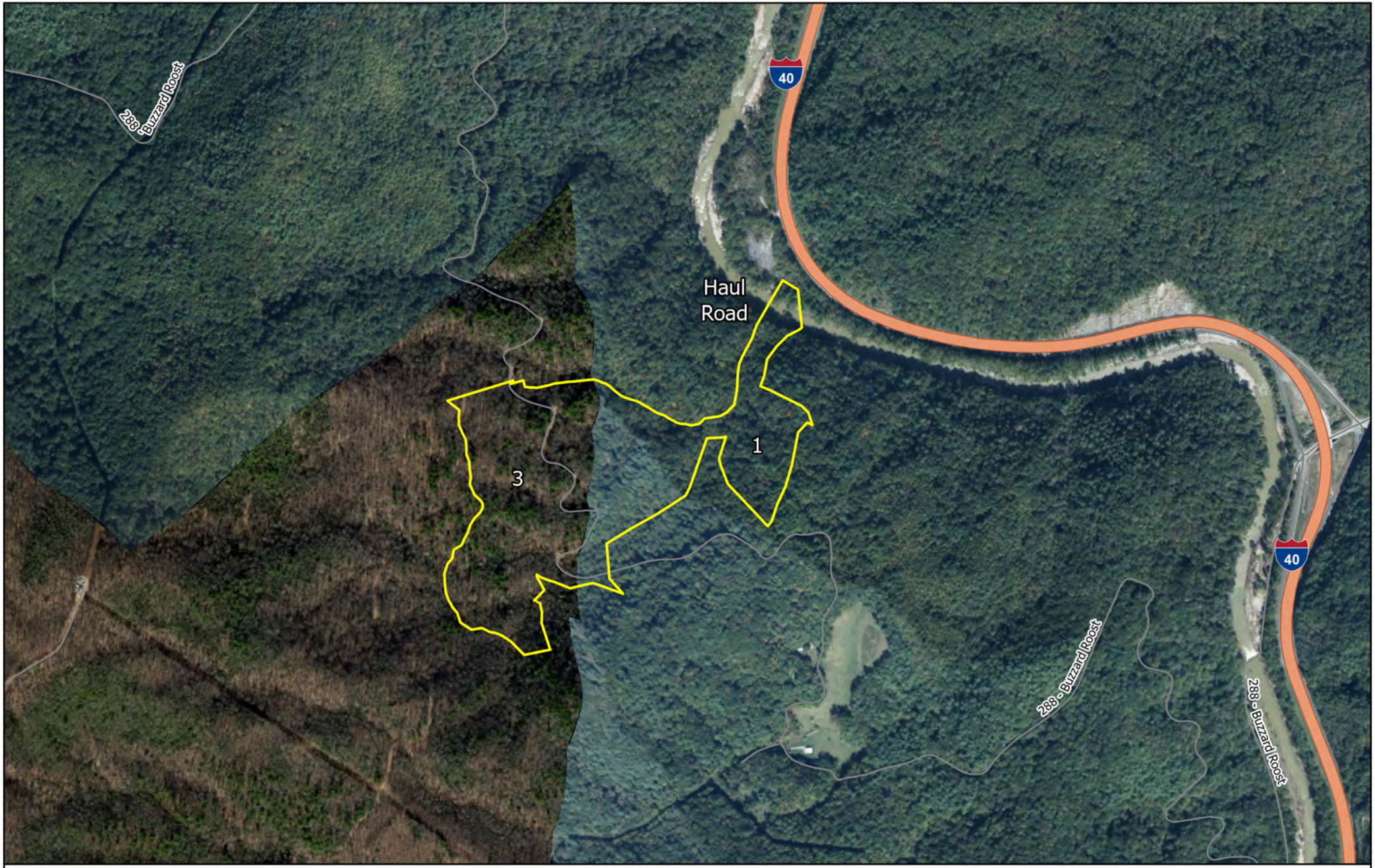
N

0 1,500 3,000

US Feet

Figure 2.
I-40 Pigeon River Borrow Site Map
in Haywood County, NC

Source: NCDOT, HNTB. 2025



Legend

Waste Site #3, Borrow Site #1, and Haul Rd

US Forest Service Roads

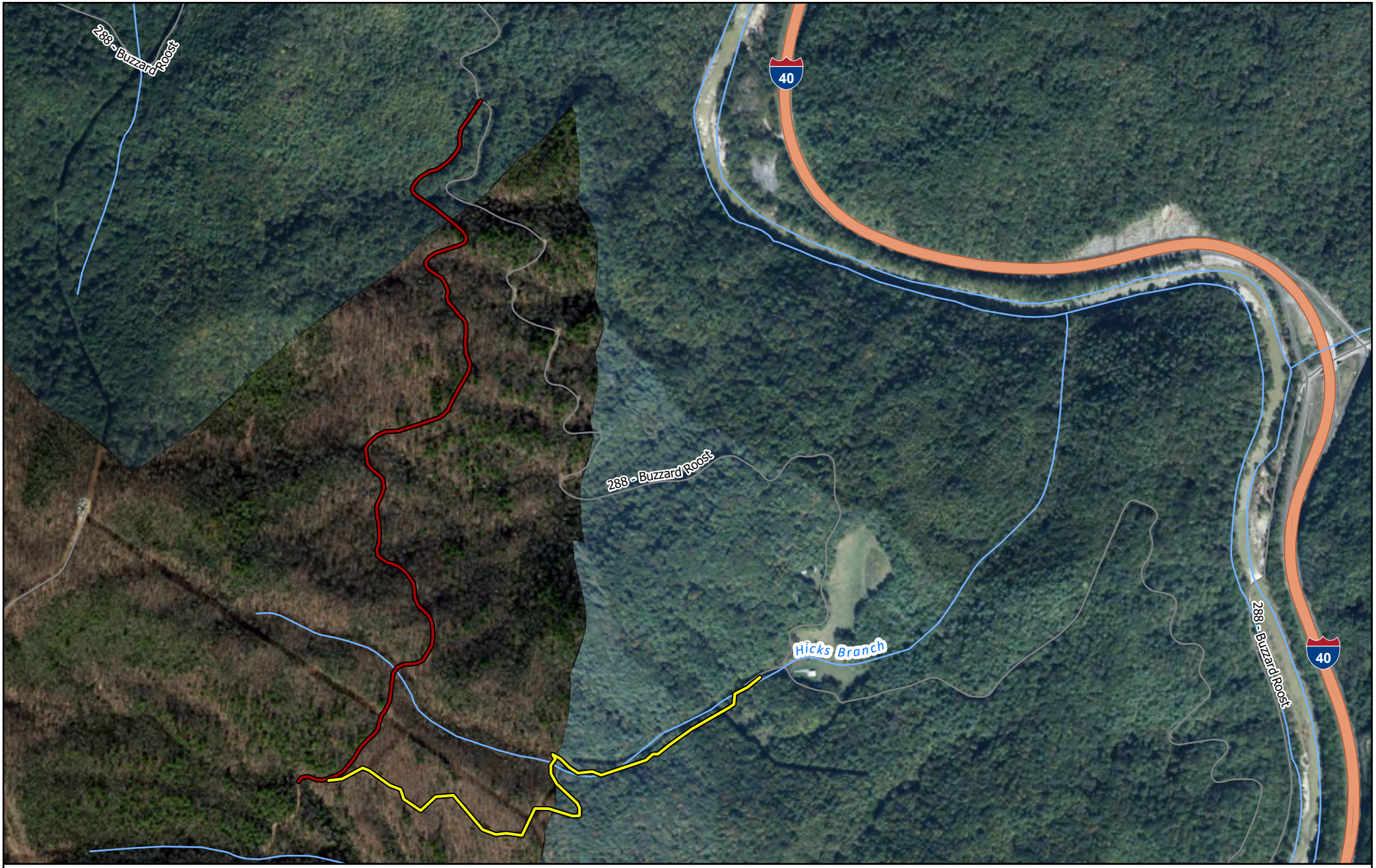
N

0 1,000 2,000

Feet

Figure 3.
I-40 Pigeon River Borrow Sites 1 and 3 With Haul Road
in Haywood County, NC

Source: NCDOT, HNTB. 2025



Legend

- US Forest Service Roads
- Stream
- Hicks Branch Road (FS 453)
- Proposed Hicks Branch Connector

N

0 1,000 2,000

Feet

Figure 4.
I-40 Pigeon River Potential Realignment of FS288
in Haywood County, NC

Source: NCDOT, HNTB. 2025

ENG 4345

U.S. ARMY CORPS OF ENGINEERS

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

OMB APPROVAL NO. 0710-0003
EXPIRES: 28 FEBRUARY 2013

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Michael Middle - A Last - Turchy	First - Middle - Last -
Company - North Carolina Department of Transportation	Company -
E-mail Address - maturchy@ncdot.com	E-mail Address -
6. APPLICANT'S ADDRESS:	**9. AGENT'S ADDRESS:**
Address- 1598 Mail Service Center	Address-
City - Raleigh State - NC Zip - 27699 Country - USA	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	**10. AGENTS PHONE NOs. w/AREA CODE**
a. Residence b. Business 919 707-6000 c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____
SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

I-40 Pigeon River Gorge Emergency Repairs as the result of Hurricane Helene, Haywood County

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Pigeon River	Address I-40, mile maker 0 (TN State Line) to 5.
15. LOCATION OF PROJECT Latitude: ◦N 35.75333 Longitude: ◦W -83.04558	City - Waterville State- NC Zip-

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE

The North Carolina Department of Transportation (NCDOT) proposes to permanently repair damage to Interstate-40 (I-40) in the Pigeon River Gorge in Haywood County, from Mile Marker (MM) 0 at the North Carolina/Tennessee state line to approximately MM 7, Exit 7 for Cold Springs Creek Road (SR 1397) caused by Hurricane Helene.

18. Nature of Activity (Description of project, include all features)

The North Carolina Department of Transportation (NCDOT) proposes to permanently repair damage to Interstate-40 (I-40) in the Pigeon River Gorge in Haywood County, from Mile Marker (MM) 0 at the North Carolina/Tennessee state line to approximately MM 7, Exit 7 for Cold Springs Creek Road (SR 1397) caused by Hurricane Helene.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

On September 27, 2024, Hurricane Helene struck western North Carolina and eastern Tennessee. The Pigeon River transported water through the gorge at a rate of approximately 62,000 cubic feet per second (CFS). This resulted in severe damage to I-40.
The purpose of the proposed project is to implement the emergency and permanent repairs to the slopes, pavement, and other infrastructure associated with this section of the I-40 corridor to reestablish connectivity and provide for the safe and efficient transport of people, goods, and services.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

The Pigeon River scoured out approximately 3 million cubic yards of embankment material causing the collapse of portions of the eastbound lanes. The Hurricane Helene I-40 Pigeon River Gorge (I-40 PRG) Emergency Relief (ER) Project provides emergency and permanent repairs to this section of I-40.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres see attached cover letter
or
Linear Feet see attached cover letter

23. Description of Avoidance, Minimization, and Compensation (see instructions)

See attached page for description of project development avoidance and minimization.

Applicant agrees to supply appropriate compensatory mitigation for unavoidable impacts to JD Wetlands and Stream Channels associated with the construction of the referenced transportation project.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Digitally signed by Michael Turchy

6/4/2025

SIGNATURE OF APPLICANT | DATE | SIGNATURE OF AGENT | DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Project Submittal Interim Form

Updated December 4, 2023

*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.*

Project Type: *

- ( ) For the Record Only (Courtesy Copy)
- ( ) New Project
- (•) Modification/New Project with Existing ID
- ( ) More Information Response
- ( ) Other Agency Comments
- ( ) Pre-Application Submittal
- ( ) Re-Issuance\Renewal Request
- ( ) Stream or Buffer Appeal

Project Contact Information

Name: NCDOT/Michael Turchy

Who is submitting the information?

Email Address: * maturchy@ncdot.gov

Project Information

Existing ID #: *

20250109

20170001 (no dashes)

Existing Version: *

1

1

Project Name: * I-40 Helene Emergency Restoration

Is this a public transportation project? *

- (•) Yes
- ( ) No

Is this a DOT project? *

- (•) Yes
- ( ) No

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

( ) Yes (•) No ( ) Unknown

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

TIP#:

WBS#:

18314.1044057

(Applies to DOT projects only)

County (ies) *

Haywood

Please upload all files that need to be submited.

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

I-40 IP Application June 2025 File 1 of 2.pdf	22.19MB
I-40 IP Application June 2025 File 2 of 2 - Permit Drawings.pdf	74.84MB

Only pdf or kmz files are accepted.

Describe the attachments or add comments:

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

- I, the project proponent, hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.
- I, 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 agree that submission of this online 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 online form.

Signature: *

Michael Turchy

Submittal Date:

Mitigation Acceptance

JOSH STEIN
Governor
D. REID WILSON
Secretary
MARC RECKTENWALD
Director

NORTH CAROLINA
Environmental Quality

June 5, 2025

Mr. Jamie Lancaster, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: Mitigation Acceptance Letter: I-40 Repair – Hurricane Helene Damage, Haywood County, 18314.1044057.PR01

References: USACE Action ID SAW-2025-00194
NCDWR Project ID 2025-0109

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the mitigation for the subject project. Based on the information supplied by you on June 5, 2025, the impacts are located in CU 06010106 of the French Broad River basin as follows:

Stream and Wetlands	Service Area	Stream			Wetlands		
		Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	French Broad 06010106	2,060.000	0	0	0.045	0	0

*Some of the impacts may be proposed to be mitigated at various ratios. See permit application for details. DMS will provide the amount of stream and wetland mitigation included in the environmental permits.

The impacts and associated mitigation needs were not projected by the NCDOT in the 2025 impact data. NCDEQ – DMS will commit to implement sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ – DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

Elizabeth Harmon

Elizabeth A. Harmon
DMS NCDOT ILF Coordinator

cc: Mr. Scott Jones, USACE
Ms. Susan Locklear, NCDWR
Mr. Brad Chilton, NCDOT – EAU
Mr. Michael Turchy, NCDOT – EAU
File: I-40 Repair_Hurricane Helene Damage

ESA Consultation

Biological and Conference Opinion

Repair Portions of Interstate 40 Destroyed by Tropical Storm Helene in Haywood County, North Carolina

Service Log #25-108

Prepared by:

U.S. Fish and Wildlife Service
Asheville Ecological Services Office
160 Zillicoa Street
Asheville, North Carolina 28801

JANET MIZZI Digitally signed by JANET MIZZI
Date: 2025.02.28 15:00:06
-05'00'

Janet Mizzi
Field Supervisor
Asheville Ecological Services Field Office
Asheville, North Carolina

Table of Contents

Consultation History

November 19, 2024: Virtual meeting held by North Carolina Department of Transportation (NCDOT) with U.S. Fish and Wildlife Service (Service) and U.S. Forest Service (USFS) regarding I-40 landslide damage caused by Tropical Storm (TS) Helene and need for expedited response, permitting, and repair.
November – December 2024: Email and phone correspondence between the Service and NCDOT discussing approach for consultation.
January 15, 2025: Federal Highway Administration (FHWA) submitted a Biological Assessment (BA), requesting formal consultation and conference. Service acknowledged receipt of final BA and start of official formal consultation.
January 17, 2025: Representatives from the Service, NCDOT, USFS, U.S. Army Corps of Engineers (USACE), and project contractors attended a site visit through the project area section of I-40.
January – February 2025: Email correspondence between the Service and NCDOT on potential borrow areas and consultation document details.

Background

On September 27, 2024, TS Helene moved across a large swath of Western North Carolina (WNC). Extreme rainfall and high winds resulted in catastrophic damage across much of the region. Record flooding occurred throughout several watersheds, destroying thousands of transportation sites as well as homes and entire communities. Widespread landslides and timber fall contributed to the damage. In the wake of this disastrous event, the North Carolina Department of Transportation (NCDOT) is tasked with responding to, repairing, and [to the extent possible] replacing the transportation infrastructure destroyed by TS Helene. The following formal consultation and conference is presented to expedite review of the subject project, as I-40 is an integral transportation artery for both the traveling public and commerce between North Carolina, Tennessee, and beyond. The format utilized in this consultation is intended for TS Helene-related projects and is tailored to the unique challenges and constraints precipitated by this event. Biological determinations presented below are based on the best available scientific data and project information at the time of this document and incorporate the expertise of WNC's Service and partner resource agency biologists.

The NCDOT assessed the known portion of the action area addressed in this document for the presence of suitable habitat for listed species and for the potential effects of project work on listed species with suitable habitat present. The following outlines "No Effect" (NE) determinations, with supporting biological rationale.

<u>NE Determinations</u>

Rock Gnome Lichen	(*Gymnoderma lineare*)	Endangered
Small Whorled Pogonia	(*Isotria medeoloides)*	Threatened

The NE determinations for rock gnome lichen and small whorled pogonia are based on the absence of suitable habitat within the known portions of the action area. In instances where suitable habitat is absent from the action area, or where project actions would not result in impacts to suitable habitat within the action area, we agree that NE determinations are appropriate. Should chosen borrow sites, which are unknown at the time of this consultation but are considered part of the action area, contain suitable habitat for either species, it is the responsibility of the project proponent and federal action agency to make supported biological determinations and reinitiate consultation, as necessary.

On December 12, 2024, monarch butterfly (*Danaus plexippus*) was proposed for listing as endangered under the Endangered Species Act (ESA). Species proposed for listing are not afforded protection under the ESA; however, as soon as a listing becomes effective, the prohibitions against jeopardizing its continued existence and "take" will apply. Per discussion with the Service, NCDOT chose not to conference on monarch butterfly at this time. Conferencing procedures can be initiated later in the timeline of this project should the need arise.

On December 13, 2024, eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*) was proposed for listing as endangered under the ESA. Occurrence data for eastern hellbender from 1988 is present within the northernmost (approximately 1-mile-long) portion of the action area. Based on the historical status of the occurrence record, conferencing procedures were not pursued.

Biological Opinion and Conference Opinion

1. Introduction

A biological and conference opinion (Opinion) is the document that states the opinion of the Service in accordance with section 7 of the ESA of 1973, as amended (16 U.S.C. 1531-1543) , as to whether a Federal action is likely to jeopardize the continued existence of species listed as endangered or threatened; or result in the destruction or adverse modification of designated critical habitat.

This document transmits the Service's biological and conference opinions and is based on our review of the proposal to repair the extensive damage caused during TS Helene to the eastbound lanes of I-40, which include massive roadbed slides and loss of lanes into the Pigeon River Gorge during the high flood and rain event; and the effects on the federally endangered gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and federally proposed endangered tricolored bat (*Perimyotis subflavus*). This Opinion is based on information provided in the assessment submitted to the Service by the FHWA, field investigations, correspondence between NCDOT and the Service, and other sources of information as cited. The FHWA is the lead Federal action agency for this project, with consultation authority delegated to the NCDOT.

2. 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 action 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.

2.1 Action Area

The project action area is comprised of:

1.) The 7-mile-long portion of the I-40 corridor, starting at mile post (MP) 0 at the North Carolina/Tennessee border and extending to the southeast at MP 7; including project construction limits and all project related work such as tree-clearing and grading throughout the approximate 390-acre corridor.
2.) Off-site borrow and/or waste areas comprising approximately 150 acres and related work such as tree-clearing, grading, and excavation.

2.2 Project Description

The NCDOT and FHWA propose to repair the damage caused during TS Helene to the eastbound lanes of I-40 by rebuilding and replacing portions of the two lanes (each 12 feet), shoulders (inside shoulder 2 feet, outside shoulder 10 feet), and median concrete barrier. The project is within the USFS's Pisgah National Forest and meetings between NCDOT and USFS have addressed the scope of the work and the anticipated action area. NCDOT commits to working as much as possible within its existing USFS easement; however, because work in the Pigeon River will be required to rebuild the slope scoured during TS Helene, USFS has ceded authority for any work in the Pigeon River to the USACE.

The project is expected to occur over the next three years. Certain elements of project design are not yet known, given the expedited nature of the response and repair necessitated by the massive volume and scale of TS Helene destruction. However, project activities and estimated impacts, based on the "knowns" associated with this type of project work, are available. At the time of this consultation, due to the exceptional circumstances and accelerated pace of this project, the expectation is that certain elements of the project, such as borrow site locations and sizes, may change as project actions move forward. That constraint is acknowledged and the reinitiation process for consultation modification will be followed as necessary. The general and expected elements of this large-scale repair project are described below. Construction and associated work is expected to include the following: installation of retaining walls of varying types along the eastbound lanes within the Pigeon River Gorge, tree clearing, excavation of fill material from borrow sites, new and/or upgraded storm drainage systems, culvert and pipe alterations, river realignments and reconstruction, signing, night work, blasting and high-decibel percussive activities, and asphalt overlay of the westbound lanes. A construction causeway will be required throughout the 7-mile length of the project along the river scour zone, portions of which will extend into the river channel. This will include access roads and a haul road parallel to the eastbound lanes east of the tunnels. Borrow sites near the project corridor will be utilized, though are not known at the time of this consultation, which is addressed further below. This work will occur from MP 0.0 (35.775713, -83.098014) to approximately MP 7.0 (35.733483, -83.024440), designated as the action area in Figure 1.

The action area contains 16 culverts with dimensions suitable for bat roosting (per the NCDOT Standard Operating Procedures for Preliminary Bat Habitat Assessments (SOP)), two of which are concrete and the rest are metal. Pipe lining and potential expansion is planned for 10 metal culverts while 6 of the culverts (metal and concrete) are not slated for alteration at the time of this consultation. Work impacting culverts may occur during any time of year.

Approximately 3 million cubic yards (cy) of fill material will be needed for the project. This material will be necessary primarily for causeway placement within the Pigeon River Gorge, for retaining wall backfill, and for roadbed material in areas that were washed out. Sourcing the materials from an off-site quarry is impracticable because of difficulty in retaining consistent production rates which would be dependent upon on-road trucking coming from both Tennessee and North Carolina; introduction of live traffic to the roadway with approximately 500 truckloads a day in this section of I-40; and, assuming an amount of ~3 million cy to import, a period of approximately 1,200 days would be allocated for material transport alone. Given these limiting factors, the utilization of on- and near-site borrow areas on USFS property will be pursued for supplying the needed material.

The majority of tree clearing associated with the project is for borrow areas, estimated at 150 acres, though approximately 37 acres of clearing will occur within the roadway corridor. For areas of tree clearing within the road corridor that were previously vegetated and where slope allows, replanting will occur. The estimated total amount of clearing at the time of this consultation is 187 acres. Minor amounts of clearing are expected to occur early in the life of the project to accommodate geotechnical exploration and access at potential borrow sites. Larger areas of clearing will occur throughout the roadway corridor and at off-site borrow locations once borrow sites are established and must be cleared to allow for material excavation. Borrow sites are expected to be located in the landscape surrounding this section of the I-40 corridor (Figure 3). Clearing for geotechnical exploration is expected to occur prior to April 1, 2025, while the majority of project-associated tree clearing may occur during any time of year. At the time of this consultation, the 187-acre tree clearing amount is an overestimate, as borrow areas are still being investigated and considered by the USFS, NCDOT, and contractor. An accurate acreage amount of tree clearing will be reported at the end of project construction and a payment will be calculated based on the tree clearing mitigation equation as addressed in 2.3 below. Borrow areas will be stabilized and

rehabilitated (i.e. replanted with native vegetation where feasible) upon project completion.

2.3 Conservation Measures

NCDOT will employ the following agency Standards, Guides, and Best Practices to avoid and minimize project mediated activities that could negatively impact listed/proposed species or their habitat. Conservation Measures (CMs) represent actions, pledged in the project description, that the action agency will implement to further the recovery of the species under review. The beneficial effects of CMs are considered in making determinations of whether the projects will jeopardize the species under consideration in this document.

The following measures will be implemented to minimize impacts to listed/proposed species and habitat:

General 1. NCDOT will ensure that all operators, employees, and contractors working in areas of suitable habitat for federally listed/proposed species are aware of all NCDOT environmental commitments, including all applicable CMs and all associated NCDOT guidance documents.

General 2. Best management practices (BMP) and sediment and erosion control (SEC) measures will be utilized to prevent non-point source pollution, control storm water runoff, and minimize sediment damage to avoid and reduce overall water quality degradation.

General 3. Areas of disturbance, such as tree clearing, grubbing, and grading, will be limited to the maximum extent possible.

General 4. Borrow pits and waste sites should only be created when needed and be no larger than necessary to minimize noise and tree clearing impacts. Sites closer to the project are recommended to reduce the effects of hauling in the region.

Bat - Noise - To maximum extent possible, NCDOT will avoid blasting, night work, and tree clearing during the bat active season (March 15 and November 15, with priority on avoidance of the May 15 – July 31 pup season); however, given constraints with the project timeline, portions of those activities may occur when listed/proposed bats are within the action area. Section 220 of the NCDOT Standard Specifications for all blasting activities, which includes use of blast mats or soil cover, will be adhered to.

Bat - Lighting - No new lighting will be added to the action area. For temporary construction lighting between March 15 and November 15: Limit all construction-related lighting to whatever is necessary to maintain safety in *active* work areas. Where possible, direct lighting at the active work area and away from the surrounding landscape and river corridor. Use shielding when possible. Turn lights off when not needed.

Bat - Tree Clearing Bat Fund Contribution: For any clearing that occurs from April 1 - November 15, the NCDOT will contribute a payment* to the N.C. Nongame Terrestrial Species Fund (or other Service-approved Fund) in support of the recovery of federally protected bat species.

Bat - Culvert Alteration Bat Fund Contribution: For individual culverts that are LAA bat species during culvert work, that is, through direct culvert alterations or close proximity to high decibel/percussive activities, the NCDOT will contribute a payment** to the N.C. Nongame Terrestrial Species Fund (or other Service-approved Fund) in support of the recovery of federally protected bat species.

*Contributions made will be based on a 2:1 ratio multiplier. This ratio offers the most protective coverage based on the current unknowns surrounding time-of-year clearing. The amount will be determined using the United States Department of Agriculture Farm Real Estate Value for North Carolina for 2024 ($5,190/acre). https://www.nass.usda.gov/Publications/Todays_Reports/reports/land0824.pdf
Example calculation: $5,190 x 20 ac = $103,800 x 2 (critical life stage multiplier) = $207,600 contribution.

**Culverts with documented bat use are generally larger than the average bridge, with a median size of 0.10 acre (length x width) (Service 2019). Therefore 0.10 acre per culvert is used to calculate the amount of suitable bat habitat lost for projects involving culvert impacts. However, the impacts to bats that may be displaced during culvert work are considered temporary in nature because the post-work culvert will provide adequate roosting habitat. Therefore, the 1.5:1 ratio multiplier was determined to be appropriate. The formula is calculated as follows: $5,190 x 0.1 ac = 519 x 1.5 (temporary impact multiplier) = $779 contribution/culvert.

3. Status of the Species

This section summarizes best available data about the biology and current condition of the gray bat, Indiana bat, northern long-eared bat, and tricolored bat throughout their ranges that are relevant to formulating an opinion about the action. More in-depth species information such as species status assessments can be found at the species-specific pages at the Service's Environmental Conservation Online System (ECOS): ecos.fws.gov/ecp/

3.1 Gray Bat

Scientific Name: *Myotis grisescens*
Status: Endangered
Date of Listing: April 28, 1976
Critical Habitat: None designated

3.1.1 Description and Life History

The gray bat is a medium-sized insectivorous bat with an overall length of about 3.5 inches and a wingspan of 10 to 11 inches. As the name implies, gray bats have gray fur, but the hair often bleaches to reddish-brown by early summer. The gray bat largely occurs in limestone karst areas, meaning a landscape marked by caves, sinkholes, springs and other features, of the southeastern and midwestern United States.

Gray bats use caves year-round for roosting and hibernating. Seasonal occupancy of caves differs between summer roost and winter hibernacula, and gray bats are known to migrate more than 300 miles between the two. While gray bats are predominantly found roosting in caves, they are known to roost in structures including buildings, bridges and culverts. Bats emerge from summer roosts early in the evening and forage along waterbodies adjacent to forested areas. The species has been documented traveling from a few miles to 20 or more miles between their day roosts and nightly foraging areas.

Adult bats mate upon arrival at the wintering caves in September or early October. Hibernation occurs in deep vertical caves in the winter, where colder temperatures are preferable. Gray bats require consistently cold temperatures to maintain hibernation and conserve energy in the winter months. The adult females will emerge from hibernation in late March or early April. At that time, the females who have mated will begin their pregnancy, while dispersing to maternity caves. Males and juveniles emerge shortly after the females and disperse to bachelor caves. Gray bats are documented using bridges and culverts as roosting

habitat during the spring, summer, and fall and show strong philopatry to their summer ranges and typically use the same roost sites year after year (Tuttle 1976; Martin 2007). Gray bats are most commonly observed in bridges of concrete material and their preferred roosting location is in the vertical expansion joints of a bridge deck above piers (NCDOT 2023a), though they can also roost in clogged deck drains and other sheltered areas on crossing structures. According to approximately 2,000 bridge surveys conducted throughout WNC from 2000 - 2023, gray bats have been recorded roosting in bridges at a usage rate of 3% (NCDOT 2023a), with bridge use observed in the covered area from March – November. Up to 1,000 individuals, including males and females, have been observed day-roosting throughout the summer in expansion joints between box beams at two separate bridges (Weber et al. 2020). Sporadic summer use of other concrete type bridges has also been noted for smaller numbers of day-roosting gray bats (NCDOT, 2023a). Gray bats have also been observed within culverts, most commonly of concrete material.

Gray bats primarily forage over open water bodies, such as rivers, streams, lakes, and reservoirs, and associated riparian areas (Tuttle 1976; LaVal et al. 1977; Weber et al. 2020). While foraging, the gray bat consumes a variety of insects, most of which are aquatic (Brack and LaVal 2006). Bats typically travel individually or in small groups that forage in an area for a short period before moving to another area. Studies suggest that gray bats visit multiple foraging areas during the night and travel frequently between these areas.

3.1.2 Status and Distribution

The primary range of gray bats is concentrated in the cave regions of Alabama, Arkansas, Kentucky, Missouri and Tennessee, though its overall range stretches from Virginia to Oklahoma, and Missouri to Alabama and comprises approximately 174,581 square miles. WNC is on the eastern edge of the bat's range. In North Carolina, the gray bat is currently documented from 14 western counties and is possible in an additional 10 counties. Most gray bat occurrences in WNC are centered on the French Broad and Pigeon River watersheds. Gray bats are generally present in North Carolina from March 15 to November 15, when they leave for winter hibernacula. It is believed that many of the gray bats in North Carolina migrate to hibernacula in Tennessee, using the French Broad River as a commuting pathway. The closest active hibernaculum is near Newport, Tennessee (Weber et al. 2020), approximately 20 miles from the border with Haywood and Madison Counties in North Carolina.

Ellison et al. (2003) of the U.S. Geological Survey (USGS) statistically analyzed 1,879 observations of gray bats obtained from 334 roost locations in 14 south-central and southeastern states. They determined that 94.4% of the populations showed stable or increasing populations while 6% revealed a decreasing population. For populations where there was a downward population trend, decreases in population numbers were mostly attributed to continued problems with human disturbance. This increasing population trend has been reflected in the work of Sasse et al. (2007), Martin (2007), and again by Elliott in 2008 in looking at high-priority caves. It is estimated that more than 95% of the species range-wide population hibernate in only 9 caves.

Emergence counts conducted by Indiana State University researchers at known roosts in WNC from 2018-2019 suggested there were at least 2,820 gray bats in the French Broad River basin (Weber et al. 2020). The impacts from TS Helene on imperiled species numbers are still unknown. Throughout WNC, there are 58 current element occurrences of the gray bat based on N.C. Natural Heritage Program (NCNHP), NC Wildlife Resources Commission (WRC), and NCDOT records; most are from built structures (largely bridges). The number of gray bats found at each occurrence range from 1 to about 1,500 bats, with some roosts surveyed in the Weber et al. (2020) study hosting >1,000 gray bats during

certain times of the season. The most recent winter population estimate of gray bats in the closest hibernaculum to the action area (Rattling Cave, near Newport TN) was 250,689 bats (TWRA 2019).

3.1.3 Threats

Cave disturbance and alteration, loss of forested habitat, pollution of waterways, and significant natural factors including those caused by extreme weather events (flooding, freezing, and forest destruction) are threats to gray bats. Gray bats have been infected by the invasive fungus *Pseudogymnoascus destructans,* the causative agent of white-nose syndrome (WNS), a fungal disease contributing to the declines of several bat species in the U.S.; however, WNS is not considered a major threat to the species.

3.2 Indiana Bat

Scientific Name: *Myotis sodalis*
Status: Endangered
Date of Listing: March 11, 1967
Critical Habitat: Established in 1976

3.2.1 Description and Life History

The Indiana bat is a temperate, insectivorous, migratory bat that hibernates colonially in caves and mines in the winter. The species is widely distributed in a variety of wooded habitats, ranging from highly fragmented woodlands in agricultural landscapes to extensively forested areas. Roosting areas are preferred in forest stands with uneven-aged trees that can supply the canopy with large, dead trees in more direct sunlight and are near foraging areas and water sources. Some roosts do occur in living trees (primarily shagbark hickory) or damaged trees from several species. During winter, Indiana bats are restricted to suitable underground hibernacula. Most of these sites are caves located in karst areas of the east-central United States; however, Indiana bats also hibernate in other cave-like locations, including abandoned mines.

Maternity colonies form in early May and remain together until August. Females will rear a single pup from May into July. Temperatures and weather will alter the length of the time a pup will stay in the primary roost and females will relocate the pup to another snag to manage temperatures and environmental conditions. In summer, most reproductive females occupy roost sites under the exfoliating bark of dead trees that retain large, thick slabs of peeling bark. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands, and upland communities. Indiana bats typically forage in semi-open to closed (open understory) forested habitats, forest edges, and riparian areas.

Fall swarming and mating takes place between August and November and are at different sites from the actual hibernaculum. Typically, hibernation begins in November and lasts through March. Several variables influence hibernacula selection, but generally Indiana bats prefer caves with stable temperatures that remain below 50°F with humidity greater than 74 percent. Indiana bats emerge from hibernation in March or April and remain near the hibernacula to refuel before migrating to summer ranges. Migration distances vary but have been observed greater than 300 miles. Bats may be concentrated near hibernacula and often roost in trees during fall swarming and spring staging.

Indiana bats primarily feed on flying insects, including some from orders with both an aquatic and terrestrial stage. Numerous foraging habitat studies have found that Indiana bats often forage in closed to semi-open forested habitats and forest edges located in floodplains, riparian areas, lowlands, and uplands; however, old fields and agricultural fields are also used (Service 2007). Drinking water is essential,

especially when bats actively forage. Indiana bats obtain water from streams, ponds, and water-filled road ruts in forest uplands. Consistent use of moths, flies, beetles, and caddisflies throughout the year at various colonies suggests that Indiana bats are selective predators to a certain degree, but incorporation of other insects into the diet also indicates that these bats can be opportunistic (Murray and Kurta 2002).

3.2.2 Status and Distribution

Indiana bats can be found primarily in the midwestern and eastern part of the United States, with a range stretching east to west from Vermont to Oklahoma, and north to south from Michigan to Alabama, and comprising approximately 403,883 square miles. WNC falls on the southeast edge of their range. No known active hibernacula are present in WNC and summer maternity colonies are widely dispersed, with most locations unknown (Service 2019a).

According to the 2024 population status updated (Service 2024), range-wide there are approximately 631,786 Indiana bats, using 194 hibernacula across 15 states. The nine most populous hibernacula are home to 91% of Indiana bats, though none are in North Carolina or adjacent states. The Service divides the Indiana bat range into four recovery units, delineating evidence of population discreteness and genetic differentiation, differences in population trends, and broad-level differences in macrohabitats and land use. North Carolina is part of the Appalachia Recovery Unit, which includes all of West Virginia, as well as portions of Pennsylvania, Virginia, and Tennessee. The Appalachian recovery unit represents 0.2% of the overall Indiana bat population.

There are 20 element occurrences of the Indiana bat in WNC based on NCNHP records, five of these are considered historical. There are several records of Indiana bats roosting in concerte-material bridges associated with a water crossing (NCDOT 2023a). According to approximately 2,000 bridge surveys conducted throughout WNC from 2000 - 2023, Indiana bats have been recorded roosting in WNC bridges at a usage rate of 0.2%, with use documented to occur from March - July (NCDOT 2023a). There are currently no records in North Carolina of Indiana bats roosting in culverts, though they have been found in culverts in other states. White Oak Blowhole cave in Tennessee (Great Smoky Mountains National Park) is located within five miles of the North Carolina border. Therefore, part of the designated spring staging and fall swarming habitat associated with this hibernaculum extends into Swain County, NC.

3.2.3 Threats

Threats to the Indiana bat include modifications to caves, mines, and surrounding areas that change airflow and alter microclimate in the hibernacula. Human disturbance and vandalism pose significant threats during hibernation through direct mortality and by inducing arousal and consequent depletion of fat reserves. Natural catastrophes can also have a significant effect during winter because of the concentration of individuals in a relatively few sites. During summer months, possible threats relate to the loss and degradation of forested habitat. Migration pathways and swarming sites may also be affected by habitat loss and degradation. Although populations have increased in recent years, WNS poses an additional threat that has caused and may continue to cause population declines.

3.3 Northern long-eared Bat

Scientific Name: *Myotis septentrionalis*
Status: Endangered
Date of Listing: April 1, 2015 as Threatened; November 30, 2022 as Endangered
Critical Habitat: None designated

3.3.1 Description and Life History

The northern long-eared bat is a wide-ranging species, found in 37 states and eight provinces in North America. The species typically overwinters in caves and mines and spends the remainder of the year in forested habitats. As its name suggests, the northern long-eared bat is distinguished by its long ears, particularly as compared to other bats in the genus *Myotis*.

Northern long-eared bats are a forest bat species that roosts in a variety of forest types and structures. They are known to roost in trees and have also been documented using roost sites such as buildings, artificial roosts, and bridges. During the active season, northern long-eared bats typically roost singly or in maternity colonies underneath bark or more often in cavities or crevices of both live trees and snags (Service 2023). Males' and non-reproductive females' summer roost sites may also include cooler locations, such as caves and mines (Service 2023). With one exception, all bridge roost records in North Carolina are associated with a water crossing (NCDOT 2023a). Northern long eared bats have been recorded roosting in western NC bridges at a usage rate of 0.2%, with use documented to occur from May - October (NCDOT 2023a). There are no records of northern long-eared bats roosting in culverts in North Carolina (NCDOT 2023b), though they have been documented using culverts in other states. Northern long-eared bats will overwinter in caves or mines and have been documented using railroad tunnels, storm sewers, and bunkers. Length of hibernation varies depending on location. They may hibernate singly or in small groups and can be found hibernating in open areas but typically prefer caves with deep crevices, cracks, and bore holes that protect from drafts. They typically hibernate from September or October to March or April. More than 780 hibernacula have been documented within the northern long-eared bat range.

Prior to hibernation between mid-August and mid-November, bat activity will increase during the evenings at the entrance of a hibernaculum (fall swarming). Suitable fall swarming habitat is similar to roosting, foraging, and commuting habitat selected during the summer and is most typically within 4-5 miles of a hibernaculum (Service 2023). Likewise, in the spring they emerge from and stage near hibernacula before moving to maternity areas typically in early April to mid-May; however, they may leave as early as March. Northern long-eared bats also roost in trees near hibernacula during spring staging, and Thalken et al. (2018) found that roost trees were situated within 1.2 miles (2km) of hibernacula during spring staging and the early maternity season. The species migrates relatively short distances between maternity areas and hibernacula.

Northern long-eared bats are more likely to forage under the canopy on forested hillsides and ridges (Nagorsen and Brigham 1993) rather than along riparian areas (Brack and Whitaker 2001; LaVal et al. 1977). Because of this, alternative water sources like seasonal woodland pools may be an important source of drinking water for these bats (rather than just streams and ponds; Francl 2008). Mature forests may be an important habitat type for foraging (Service 2015). Northern long-eared bats have a diverse diet including moths, beetles, flies, leafhoppers, caddisflies, and arachnids (Service 2020a), which they catch while in flight or by gleaning insects off vegetation (Ratcliffe and Dawson 2003).

3.3.2 Status and Distribution

The species' range includes all or portions of 37 eastern and mid-western states and the District of Columbia in the U.S and includes eight Canadian provinces, totaling approximately 582,058 square miles. In WNC, the species range includes all or portions of 26 counties in the western portion of the state.

Prior to the emergence of WNS, northern long-eared bat was abundant and widespread throughout much of its range with 737 occupied hibernacula, a maximum count of 38,181 individuals and its range being spread across >1.2 billion acres in 29 states and 3 Canadian provinces. Numbers vary temporally and spatially, but abundance and occurrence on the landscape were stable (Cheng et al. 2022, p. 204; Wiens et al. 2022, p. 233). Currently, declining trends in abundance and occurrence are evident across much of northern long-eared bat's summer range. Range-wide summer occupancy declined by 80% from 2010–2019. Data collected from mobile acoustic transects found a 79% decline in range-wide relative abundance from 2009–2019 and summer mist-net captures declined by 43–77% compared to pre-WNS capture rates.

There are approximately 169 element occurrences for northern long-eared bat in NC, based on NCNHP records, 19 of which are considered historical. The number of bats found at each occurrence ranges from one to more than 80. There have been 22 documented hibernacula, all in caves or mines; however, northern long-eared bats have not been observed using hibernacula in North Carolina since 2014 (NCWRC personal communication September 2022). The Service estimates that there has been an occupancy drop of 85% and a 24% loss of winter colony sites across the Southeast Representation Unit (RPU) overall since 2006 when WNS was first documented (Service 2022a).

3.3.3 Threats

The primary factor influencing the viability of the northern long-eared bat range-wide population is WNS. Other primary factors that influence the decline in northern long-eared bat numbers include wind energy mortality, effects from extreme weather events, and habitat loss.

3.4 Tricolored Bat

Scientific Name: *Perimyotis subflavus*
Status: Proposed Endangered
Date of Proposed Listing: September 14, 2022
Critical Habitat: None proposed

3.4.1 Description and Life History

The tricolored bat is one of the smallest bats in North America. The once common species is wide-ranging across the eastern and central US and portions of southern Canada, Mexico and Central America. As its name suggests, the tricolored bat is distinguished by its unique tricolored fur that appears dark at the base, lighter in the middle and dark at the tip.

During the winter, tricolored bats are found in caves and mines, although in the southern US, where caves are sparse, tricolored bats are often found roosting in culverts. During the spring, summer and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leave. Additionally, tricolored bats have been observed roosting among pine needles, eastern red cedar (*Juniperus virginiana*), within artificial roost structures, beneath porch roofs, bridges, culverts, concrete bunkers, and rarely within caves. Female tricolored bats form maternity colonies and switch roost trees regularly. Maternity colonies typically consist of 1 to several females and pups. They usually have twins in late spring or early summer, which are capable of flight in four weeks.

During the winter, across much of their range tricolored bats hibernate in caves and mines; although, in the southern United States, where caves are sparse, they often hibernate in culverts, as well as sometimes in tree cavities and abandoned water wells. In the southern US, hibernation length is shorter compared to northern portions of the range. Hibernating tricolored bats do not typically form large clusters; most

commonly roost singly, but sometimes in pairs, or in small clusters of both sexes away from other bats (Service 2021). Tricolored bat hibernacula following population crashes from WNS generally host <100 individuals (Service 2021), though solitary hibernation can often occur with this species (Whitaker and Hamilton 1998).

Before entering hibernacula for the winter, tricolored bats demonstrate 'swarming' behavior. The peak swarming period for tricolored bats in much of WNC/eastern Tennessee generally starts in mid to late August and extends into November and is a sensitive period for bats. Suitable fall swarming habitat is similar to roosting, foraging, and commuting habitat selected during the summer. Spring staging is the time period between winter hibernation and spring migration to summer habitat (Service 2023). During this time, bats begin to gradually emerge from hibernation, exit the hibernacula to feed, but re-enter the same or alternative hibernacula to resume daily bouts of torpor (state of mental or physical inactivity). Tricolored bats also roost in trees near hibernacula during spring staging.

Tricolored bats are opportunistic feeders and consume small insects including caddisflies, moths, beetles, wasps, flying ants and flies. The species most commonly forages over waterways and along forest edges

3.4.2 Status and Distribution

Tricolored bats have a very wide range that encompasses most of the eastern US from Canada to Florida and west to New Mexico (39 states), comprising approximately 686,152 square miles. They can be found throughout North Carolina and are one of the most commonly encountered cave-dwelling species seen in winter, albeit at much lower densities than prior to the arrival of WNS in the state.

There are 147 NC element occurrences of the tricolored bat in WNC based on N.C. Natural Heritage Program records to date, seven of which are considered historical. The number of bats found at each occurrence range from 1 to 3,000 bats. There have been 80 tricolored bat hibernacula documented, including caves (51), mines (22), root cellars (4), and culverts (3). According to approximately 2,000 bridge surveys conducted throughout WNC from 2000 - 2023, tricolored bats have been recorded roosting in bridges at a usage rate of 1.5% (NCDOT 2023a). Tricolored bat bridge use has been documented to occur from April – October (with one record from 2013 citing February use). Tricolored bats have been found using culverts in WNC at a rate of 0.8% observed use. Approximately 900 surveys have been conducted in western North Carolina from 2010 – 2023 (NCDOT 2023b) with year-round data coverage. Culvert use has been observed in WNC from January – April. Tricolored bat use of culverts as hibernacula is well documented (e.g., Katzenmeyer 2016, Newman et al. 2021) and use may be more widespread than previously known.

For tricolored bats, the Service split the bat's range into three Representation Units (RPUs), two of which, the Northern and Southern RPUs, include the western and eastern halves of WNC, respectively. The Service estimates that, since 2006, the Northern RPU has experienced a 17% decline in summer occupancy and a 57% decline in the number of winter colonies, while the Southern RPU has experienced a 37% decline in summer occupancy and a 24% decline in the number of winter colonies (Service 2021).

3.4.3 Threats

WNS is the primary driver of the species' decline and is predicted to continue to be the primary influence into the future. Wind energy-related mortality is also considered a consequential driver to the bat's viability. Although habitat loss is considered pervasive across the species' range, severity has likely been low given historical abundance and spatial extent; however, as tricolored bat's spatial extent is projected

to decline in the future (i.e., consolidation into fewer winter and summer colonies) negative impacts (e.g., loss of a hibernaculum or maternity colony) may be significant.

4. Environmental Baseline

The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process [50 CFR §402.02].

The project is located in the Environmental Protection Agency Blue Ridge Ecoregion in WNC, specifically in the Pigeon River Gorge. I-40 is a major east-west facility, a four lane, median barrier divided interstate, providing connections for commuters, tourists, and commercial vehicles. In 1958, the first section of I-40 was constructed through the Pigeon River Gorge running from the Tennessee border southeast to near Waynesville, North Carolina. This section of I-40 bisects the Pisgah National Forest and carries between 26,000 and 27,000 vehicles per day. Because I-40 serves as a primary east-west shipping interstate, the volume of tractor trailer trucks ranges from 6,410 to 6,690 per day. The action area contains the existing 7-mile-long corridor of I-40, starting at MP 0 at the North Carolina/Tennessee border and extending to the southeast at MP 7; as well as off-site borrow and/or waste areas and related work such as tree-clearing, grading, and excavation. Past impacts include the original construction of I-40, the construction of the hydroelectric Walters Dam and associated downstream Waterville Power Station, and several USFS-owned roads on the east and west sides of the gorge. The surrounding landscape is comprised primarily of contiguous deciduous, evergreen, and mixed forest types owned and managed by the USFS.

4.1 Listed and Proposed Bats Within the Action Area

Indiana bats, northern long-eared bats, and tricolored bats roost in trees during the warmer months. All three species are assumed to be present within the action area and have NCNHP element occurrence data in the surrounding landscape. Capture locations exist for Indiana bat approximately 9 miles west of the action area and roosting observation exists 10.5 miles south in the Jonathan Creek bridge. Mist net records of northern long-eared bat from 2011 occur within the southern portion of the action area and from 2015 along Hurricane Creek Road approximately 2 miles southeast of the project's southern end. The closest tricolored bat record is from a 2018 mist net capture 0.3 miles from the southern end of the project. Additionally, tricolored bat hibernacula exist within approximately 1.5 miles south of the project location which is noteworthy given that tree-roosting during spring staging (April 1 – mid May) and fall swarming (mid August – mid November) is common within 3 miles of a hibernaculum.

Gray bats are not considered "tree-roosting" species. While individuals have been observed utilizing trees on rare occasions, they are generally considered a cave/structure-specific roosting species; therefore, no gray bats are expected to be roosting in trees within the action area. That said, this portion of the Pigeon River Gorge is a known important foraging and commuting corridor for the species. For example, 2018 NHP data includes one night of 27 gray bat captures approximately 0.3 miles south of the project location. Therefore, gray bat is assumed to be present within the action area.

Sixteen culverts with dimensions suitable for bat roosting (in accordance with NCDOT SOP) occur within the action area, 10 of which have lining and extension work planned. Additionally, high-decibel work from project construction activities may occur near any of the culverts during any time of year during project construction. For gray bats, primary roost culverts can support several hundred to over 1,000 individuals, while most culverts with observed roosting gray bats in WNC contain 1 to 10

individuals. The culverts supporting those higher numbers of gray bats, whether culvert or bridge, are larger than average. There are currently no culvert roosting records for northern long-eared bat or Indiana bat in WNC, though culvert records for both species occur in other states within their ranges. Records of tricolored bat roosting in bridges and culverts in WNC consist mainly of 1-2 individual per culvert. The pipe culvert within the action area have not been surveyed for roosting bats, but their dimensions suggest that any of the covered species could be present; therefore, presence is assumed.

5. Effects of the Action on Gray Bat, Indiana Bat, Northern Long-eared Bat, and Tricolored Bat

Under section 7(a)(2) of the ESA, "effects of the action" refers to the consequences, both direct and indirect, of an action on the species or critical habitat. The effects of the proposed action are added to the environmental baseline and the cumulative effects 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).

5.1 Proximity of the Action, Nature of the Effect, and Disturbance Duration

Based on the description of the action and the species' biology, stressors to gray bat, Indiana bat, northern long-eared bat, and tricolored bat have been identified and are described below. The proximity of these actions will be within the entire action area, including the forested areas, culverts, waterways, and riparian zone. Duration of disturbance is expected primarily during the construction phase of project work, expected to be three years, as impacts from the existing I-40 corridor such as noise and collision are not expected to deviate from previous baseline conditions.

Direct Impacts – Direct effects are caused by the action and occur at the same time and place (50 CFR 402.02).

Tree Removal

The removal of suitable roost trees, if conducted while Indiana bats, northern long-eared bats, or tricolored bats are present, could cause bats to flush, which would expose them to risk of predation, cause increased energy expenditure, and create the need for bats to find alternative roost locations. It could also result in physical wounding or death. Given the presence of alternative forested habitat surrounding the action areas, bats could likely find trees for roosting. Harm would be expected in the increased exposure to predation from flushing and from the potential for wounding or killing when trees are felled. Additionally, if non-volant pups are present, while adults may be able to flush, pups would be left behind with mortality as the likely outcome. In summary, these activities, should they occur while bats are present, are expected to result in harm to Indiana bat, northern long-eared bat and tricolored bat.

Culvert Work

The demolition of remaining portions of culverts, if conducted while bats are present, could cause bats to flush, which would expose them to risk of predation, cause increased energy expenditure, and create the need for bats to find alternative roost locations. It could also result in physical wounding or death. High-decibel percussive noises associated with demolition or construction may cause nearby roosting bats to flush, exposing them to harm and increased energy expenditure. Additionally, if non-volant pups are present, while adults may be able to flush, pups would be left behind with mortality as the likely outcome. In summary, these activities, should they occur while bats are present, are expected to result in harm or harassment to gray bat, Indiana bat, northern long-eared bat, and tricolored bat.

Blasting

The decibels (dBA) associated with rock blasting at 50 feet from source is 112, which is considered "extreme" (CalTrans 2016). The CalTrans 2016 noise attenuation formula predicts that rock blasting noise will attenuate to approximately 89 dBA, a level considered 'high,' at a distance of 400 feet. For the purposes of this effects analysis, close-proximity rock blasting (that is, blasting ≤ 400 feet from a suitable roosting area) is considered likely to result in adverse effects on any bats that could be roosting. The "very high" and "extreme" range of dBA that would be expected to reach roosting bats that are within the 400-foot radius of rock blasting could cause bats to flush. Bats flushed from roosting are likely to experience harm in the form of increased exposure to predators and reduced fitness due to energy expenditure. Additionally, should flushing occur during the pup season, adults may flush and leave behind non-volant pups, which could result in harm or mortality for the abandoned pup. The measures to incorporate Section 220 of the NCDOT Standard Specifications for all blasting activities, which includes use of blast mats or soil cover, and to avoid blasting as much as possible within the sensitive bat activity periods, are expected to minimize but not wholly avoid adverse impacts from this activity. In summary, blasting, should it occur while bats are present, is expected to result in harassment or harm to gray bat, Indiana bat, northern long-eared bat, and tricolored bat.

Lighting and Night Work

Permanent lighting exists at the I-40 tunnel within the action area and no additional permanent lighting will be added. Night work and associated temporary lighting will take place. Lighting from vehicle headlights that were previously blocked by a vegetated buffer between the roadway and the river may result in increased illumination within portions of the river gorge in excess of baseline conditions. Bat behavior may be affected by lights when traveling between roosting and foraging areas. Foraging in lighted areas may increase risk of predation or it may deter bats from flying in those areas. Bats that significantly alter their foraging patterns may increase their energy expenditures resulting in reduced reproductive rates. This depends on the context (e.g., duration, location, extent, type) of the lighting. Given the measure to avoid lighting the river corridor as much as possible with temporary night-lighting; the post-construction tree planting in feasible areas of the road corridor between the roadway and the river; the roadway height above the river that allows for headlight attenuation within the gorge; and given that lighting, even when on, will not illuminate the entirety of the riparian corridor throughout the action area, impacts from temporary night lighting and vehicle headlights will be minimized but not completely avoided and therefore may result in take of the covered species in the form of harassment.

Aquatic Resource Loss and Degradation

Water quality may be affected by increased sedimentation due to ground disturbance, placement of fill material for causeway construction, runoff, and through the introduction of environmental contaminants. The introduction of environmental contaminants to waterways may negatively affect bats by exposing them or their prey to toxic substances. Hazardous materials used during construction or maintenance may include diesel fuel, gasoline, hydraulic fluids, oils, lubricants, etc. Chemical pollutants can reduce diversity of prey items, as less tolerant species are lost, and overall macroinvertebrate abundance may be negatively affected depending on pollutant levels and frequency of application. The negative impacts of sedimentation on aquatic insect larvae are well-documented. In a literature review, Henley et. al (2000) summarized how stream sedimentation impacts these communities. Sediment suspended in the water column affects aquatic insect food sources by physically removing periphyton from substrate and reducing light available for primary production of phytoplankton. Sediment that settles out of the water column onto the substrate fills interstitial spaces occupied by certain aquatic insect larvae, displacing that biota. Increases in sedimentation can also change the composition of the insect community in a stream, reducing diversity and possibly reducing the prey base for foraging bats. While project activities, notably

the placement of causeway fill material in the Pigeon River, any excavation of river materials (for ensuring proper hydraulic capacity – not for "dredging", which will not occur), and use of heavy equipment adjacent to and in the river, are expected to temporarily reduce water quality within the action area, the impacts are not expected to result in take of the covered species. This determination is based on the implementation of sediment and erosion control measures, the temporary nature of the impacts, the alternative availability of foraging habitat within the free-flowing portion of the Pigeon River within the action area, and the availability of alternative foraging habitat provided by tributaries to the Pigeon River directly outside of the action area.

Indirect Impacts – Indirect effects are defined as those that are caused by the proposed action and are later in time but are still reasonably certain to occur (50 CFR 402.02).

If bats were utilizing culverts or trees (when considering Indiana bat, northern long-eared bat, and tricolored bat) within the action areas as roost sites prior to clearing/construction and return to those roost sites to find the habitat gone or altered, the bats may then have to expend extra energy in finding alternative roosting areas. While this could occur, it is considered unlikely given that altered culverts will provide suitable roosting features and alternative forested habitat is available throughout the adjacent landscape.

Operational Effects
Because this project is limited to the replacement of damaged or destroyed sections of roadway, which will not result in changes to traffic volumes, any operational effects above the existing baseline conditions are not expected to occur; or, if they do occur, are expected to be minimal.

5.2 Cumulative Effects
Cumulative effects are defined as "those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation" (50 CFR 402.02). Future federal actions unrelated to the proposed action are not considered because they require separate consultation pursuant to Section 7 of the ESA.

This interstate roadway repair is not expected to induce land development or substantially change the function of the roadway from its pre-TS Helene status. Any potential effects are anticipated to be localized and consistent with baseline land use patterns. The WNC landscape surrounding and outside of the action area is experiencing increased levels of private or non-federal work-associated impacts from TS Helene response, such as waterway recovery, downed timber removal, and rebuilding. Such actions are above normal background levels and may disrupt listed and proposed bats throughout the region.

6. Conclusion and Jeopardy Determination for Gray Bat, Indiana Bat, Northern Long-eared Bat, and Tricolored Bat
After reviewing the status of gray bat, Indiana bat, northern long-eared bat, and tricolored bat, the environmental baseline for the action area, the effects analyses and cumulative effects, the Service's biological and conference opinions are shared below.

It is the Service's biological and conference opinion that the proposed actions are not likely to jeopardize the continued existence of gray bat, Indiana bat, northern long-eared bat, or tricolored bat. This opinion is based on the following factors: This action area, including the borrow sites, comprises only a small amount of active season habitat within the recovery units and overall ranges of these species. No changes

in the long-term viability of gray bat, Indiana bat, northern long-eared bat, or tricolored bat are expected given the low percentage of each species' range that will be impacted by project actions. That is, of the 187 acres (0.3 square mile) of clearing and road corridor impacts, that equates to less than 0.0001% impact on each species' range, meaning only a miniscule percentage of those overall populations may be affected. Tree clearing, culvert modification, percussive and blasting activities, and increased illumination of the river gorge are likely to negatively affect gray bat, Indiana bat, northern long-eared bat, and tricolored bat within the action area, but the incorporated conservation measures are expected to reduce and offset some impacts.

7. Incidental Take Statement

Section 9 of the Endangered Species ESA and Federal regulations pursuant to section 4(d) of the Endangered Species Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take "*means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct*" (16 U.S.C §1532). Harm is further defined by the Service as "*an act which actually kills or injures wildlife. Such 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*" (50 CFR 17.3). Incidental taking "*means any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity*" (50 CFR 17.3). Harass is defined by the Service as "*an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering*" (50 CFR 17.3). Incidental take is defined as take that is incidental to, and not 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 Endangered Species Act, provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

7.1 Amount of Take for Gray Bat, Northern Long-eared Bat, and Tricolored Bat

The Service anticipates incidental take of the Indiana bat, northern long-eared bat, and tricolored bat may occur as a result of the tree clearing; and take of gray bat, Indiana bat, northern long-eared bat, and tricolored bat may occur as a result of culvert work, construction/operational lighting, and noise/blasting associated with the subject project. Specifically, take of Indiana, northern long-eared, and tricolored bats may occur as a result of flushing, wounding, or direct mortality during tree clearing activities during sensitive seasonal periods; or, take may occur for those species and gray bat as a result of illuminated habitat resulting in reduced fitness; or as a result of the modification/replacement of or blasting within close proximity to suitable culvert roosts during sensitive seasonal periods, which may similarly result in flushing, wounding, or direct mortality during culvert and borrow work activities.

Incidental take of bats is difficult to measure or detect given that 1) the animals are small, cryptic, and generally difficult to observe, 2) finding dead or injured bats during or following project implementation is unlikely, and 3) some incidental take is in the form of non-lethal harm or harassment and not directly observable. Given this, the 1) maximum estimated tree clearing (except for gray bat) and 2) number of culverts replaced/modified/impacted by close-proximity blasting, are used as surrogate measures of take for this Opinion.

Therefore, the incidental take permitted by the Opinion would be exceeded if:

1. Tree clearing amount exceeds 187 acres.
2. Any more than 16 culverts [with dimensions suitable for bat roosting per NCDOT SOP] are

modified, replaced, or impacted by nearby blasting.
3. Project construction extends beyond the 3-year projected timeline, that is, beyond March 15 2028.

Exceedance of take as defined above will represent new information that was not considered in this Opinion and shall result in reinitiation of this consultation. The incidental take of gray bat, Indiana bat, northern long-eared bat, and tricolored bat is expected to be in the form of harm, harassment, wounding, or death.

7.2 Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize take of gray bat, Indiana bat, northern long-eared bat, and tricolored bat. These non-discretionary measures reduce the level of take associated with project activities.

1. NCDOT shall ensure that the contractor(s) understands and follows the measures listed in the "Conservation Measures", "Reasonable and Prudent Measures," and "Terms and Conditions" sections of this Opinion.
2. NCDOT shall minimize the area of disturbance within the action area to only the area necessary for the safe and successful implementation of the proposed actions.
3. NCDOT shall monitor and document the surrogate measures of take and report those to the Service. Any observed covered bat species, regardless of condition, shall be included in monitoring and documentation.

7.3 Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the Applicant must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting and/or monitoring requirements. When incidental take is anticipated, the terms and conditions must include provisions for monitoring project activities to determine the actual project effects on listed fish or wildlife species (50 CFR §402.14(i)(3)). These terms and conditions are nondiscretionary for the listed bats. If this conference opinion for tricolored bat is adopted as a biological opinion following a listing or critical habitat designation, these terms and conditions would be non-discretionary for tricolored bat.

1. NCDOT shall adhere to all measures as listed in the Conservation Measures section as summarized in this Opinion.
2. The NCDOT will immediately inform the Service if the amount or extent of incidental take in the incidental take statement is exceeded.
3. The NCDOT will submit location information, acreage, anticipated clearing acreage, and visual figures/maps of the chosen borrow locations once known.
4. When incidental take is anticipated, the Terms and Conditions must include provisions for monitoring project activities to determine the actual project effects on listed fish or wildlife species (50 CFR §402.14(i)(3)). In order to monitor the impact of incidental take, the NCDOT must report the action impacts on the species to the Service according to the following:
    a. The NCDOT will submit a report each year not later than September 30 identifying the following for the preceding calendar year ending December 31:
        i. Acreage and dates of tree removal.
        ii. Dates of culvert modification/replacement/or impacts from close-proximity blasting (if any).
        iii. Dates of night work during which associated lighting illuminated the Pigeon River Gorge.

8. Conservation Recommendations

Section 7(a)(l) of the Endangered Species ESA directs Federal agencies to use their authorities to further the purposes of the Endangered Species ESA by carrying out conservation programs for the benefit of endangered and threatened species. 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.

- **Replanting**: Once construction activities are complete within portions of the action area, including the road corridor and borrow sites, incorporate native herbaceous, shrub, and tree species for replanting. For the road corridor, using containerized fast-growing tree species will help to shield the river gorge from headlight illumination as the trees mature. Utilizing native vegetation can help to stabilize the soil and provide ecological value to wildlife in the area.
- **Implement NCWRC Recommendations**: Letters submitted from the NCWRC on January 6, 2025 and February 3, 2025 provided several recommendations that should be incorporated into project work. Notably, we encourage NCDOT to adhere to NCWRC's recommendations to:
    - Include a river channel restoration plan in the I-40 repair design.
    - Incorporate the list addressing stream channel work following storms.
    - Incorporate the list addressing wildlife connectivity.

For the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

9. Reinitiation Notice

This concludes formal consultation on the action(s) outlined in the consultation request dated December 12, 2024. 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 designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

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Appendix A – Figures

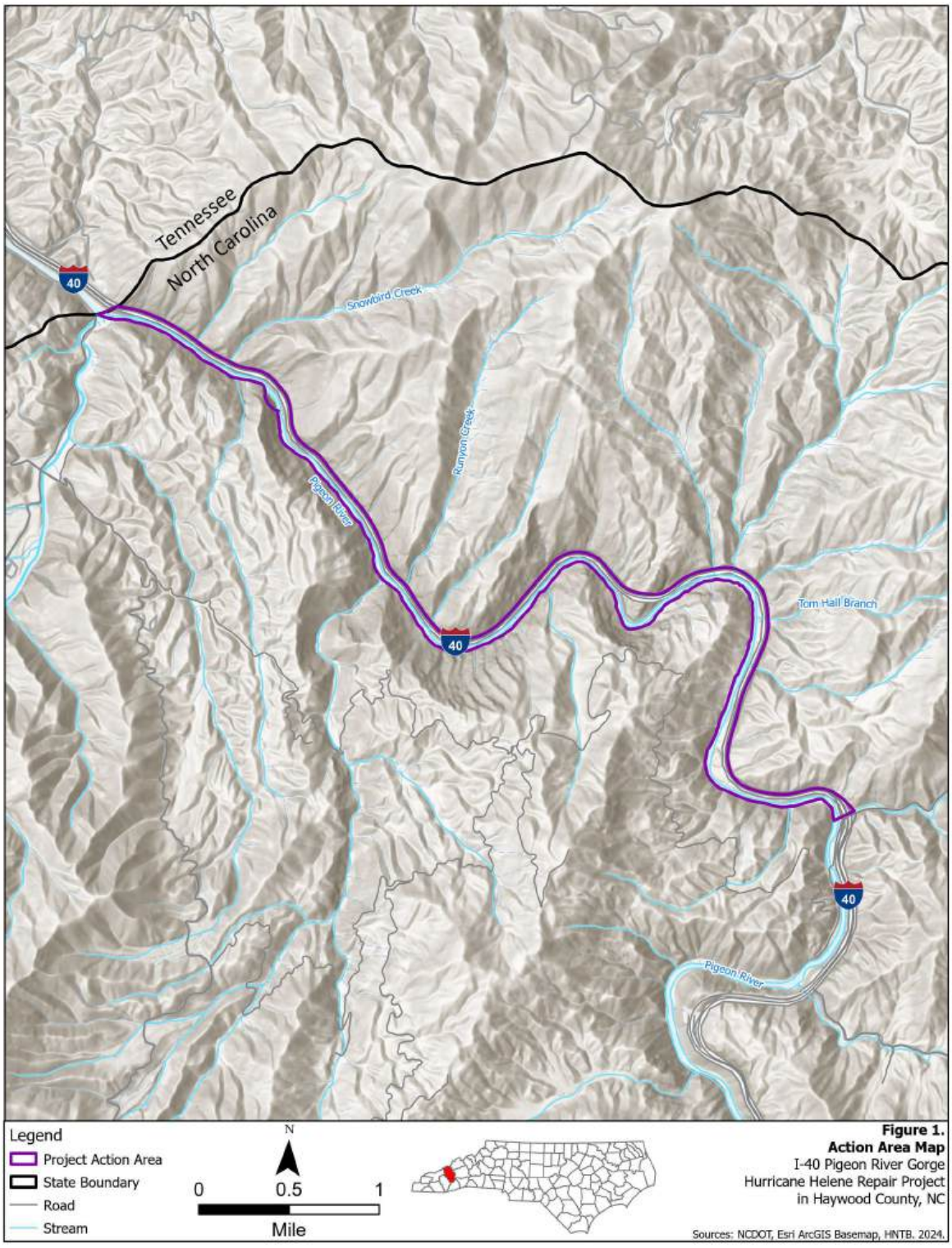

Figure 1.
Action Area Map
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

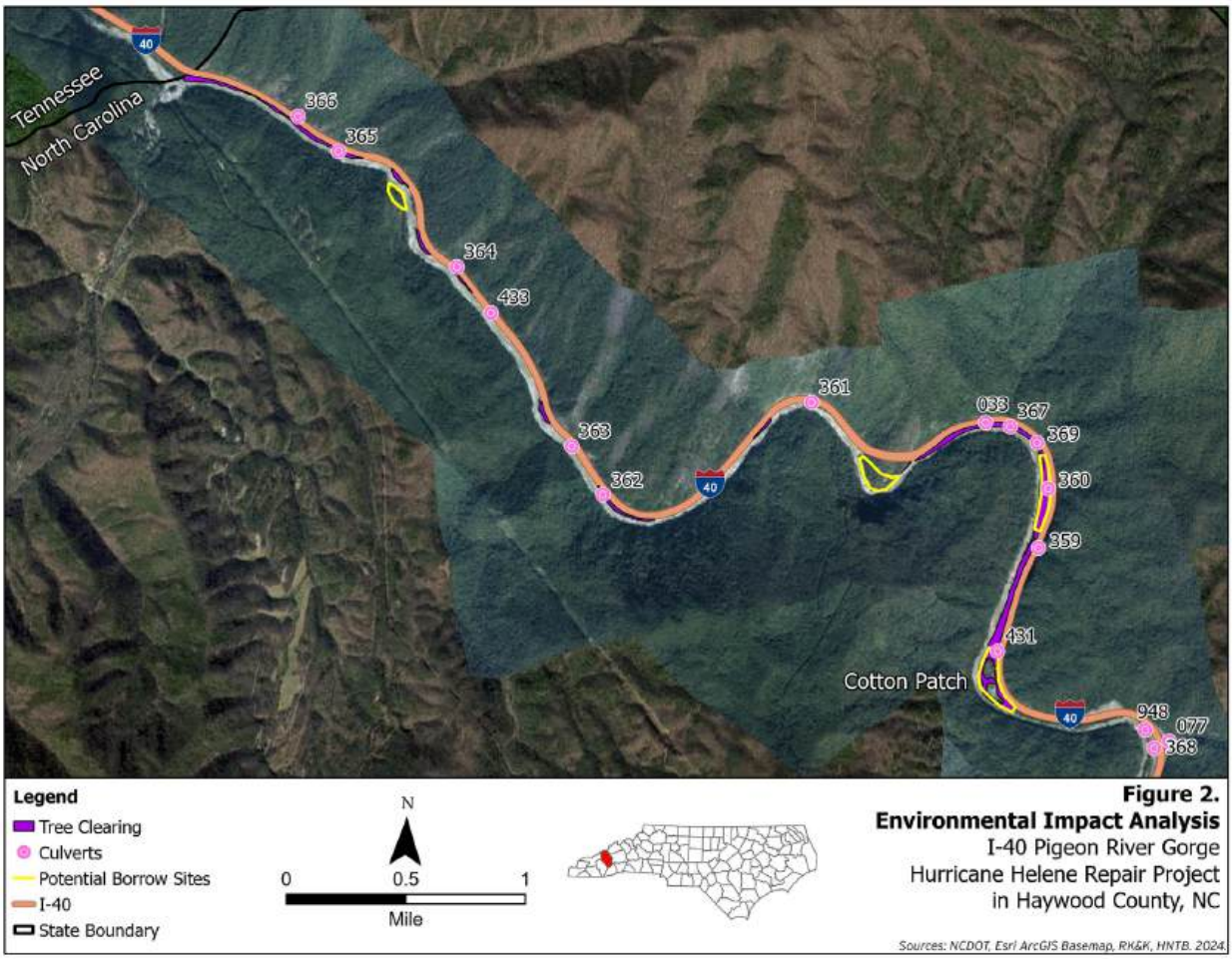

Figure 2.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Figure 2-1.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Sources: NCDOT, Esri ArcGIS Basemap, RK&K, HNTB, 2024.

Figure 2-2.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Sources: NCDOT, Esri ArcGIS Basemap, RK&K, HNTB, 2024.

Figure 2-3.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Figure 2-4.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Sources: NCDOT, Esri ArcGIS Basemap, RK&K, HNTB, 2024.

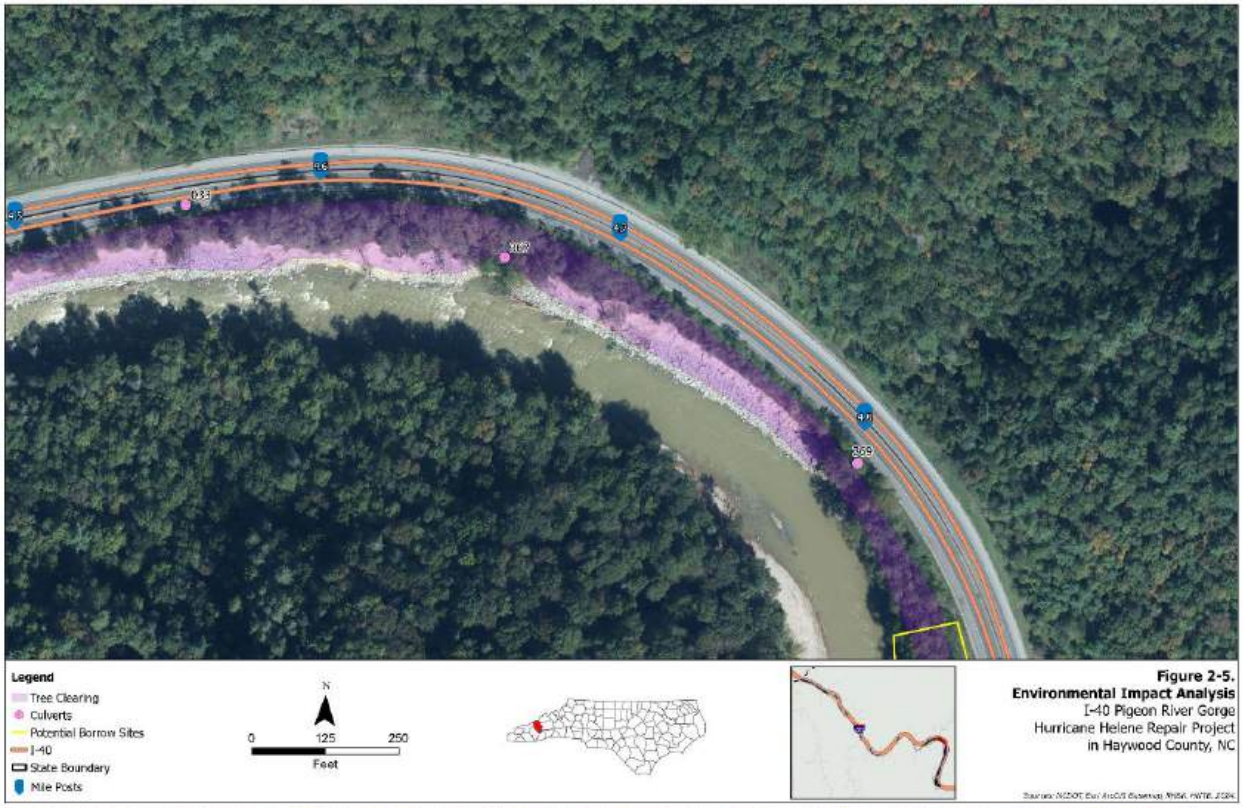

Figure 2-5.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

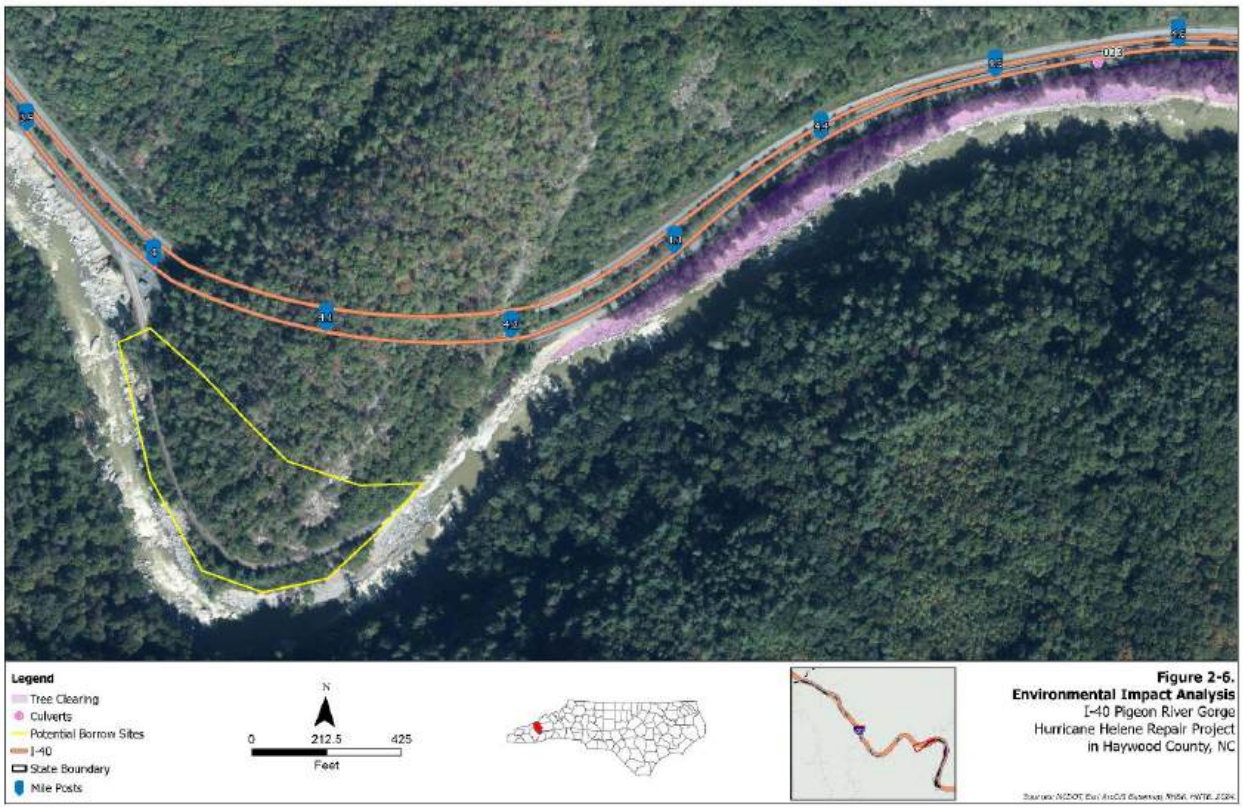

Figure 2-6.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Figure 2-7.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Figure 2-8.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

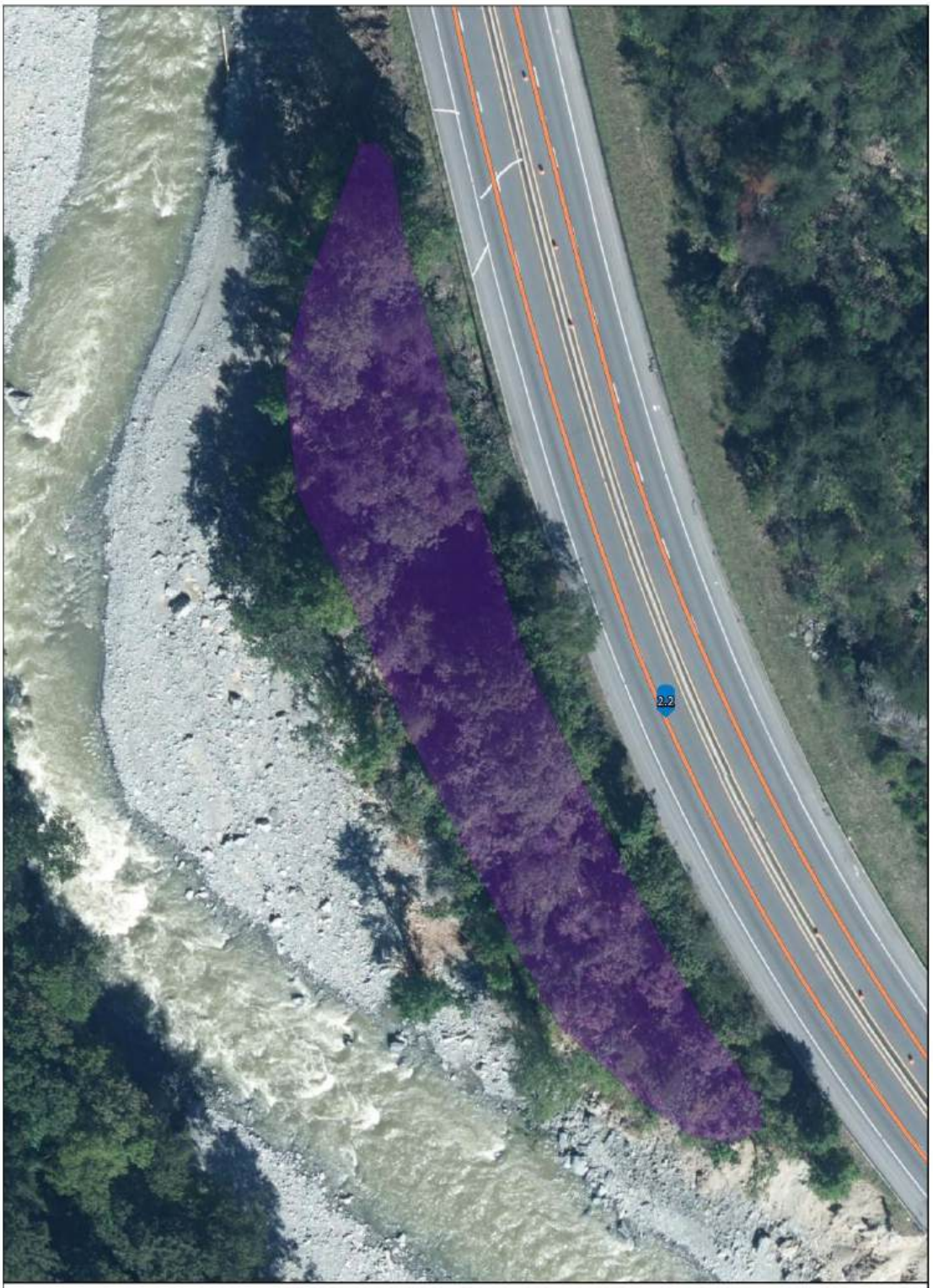

Figure 2-9.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Figure 2-10.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Sources: NCDOT, Esri ArcGIS Basemap, RK&K, HNTB, 2024.

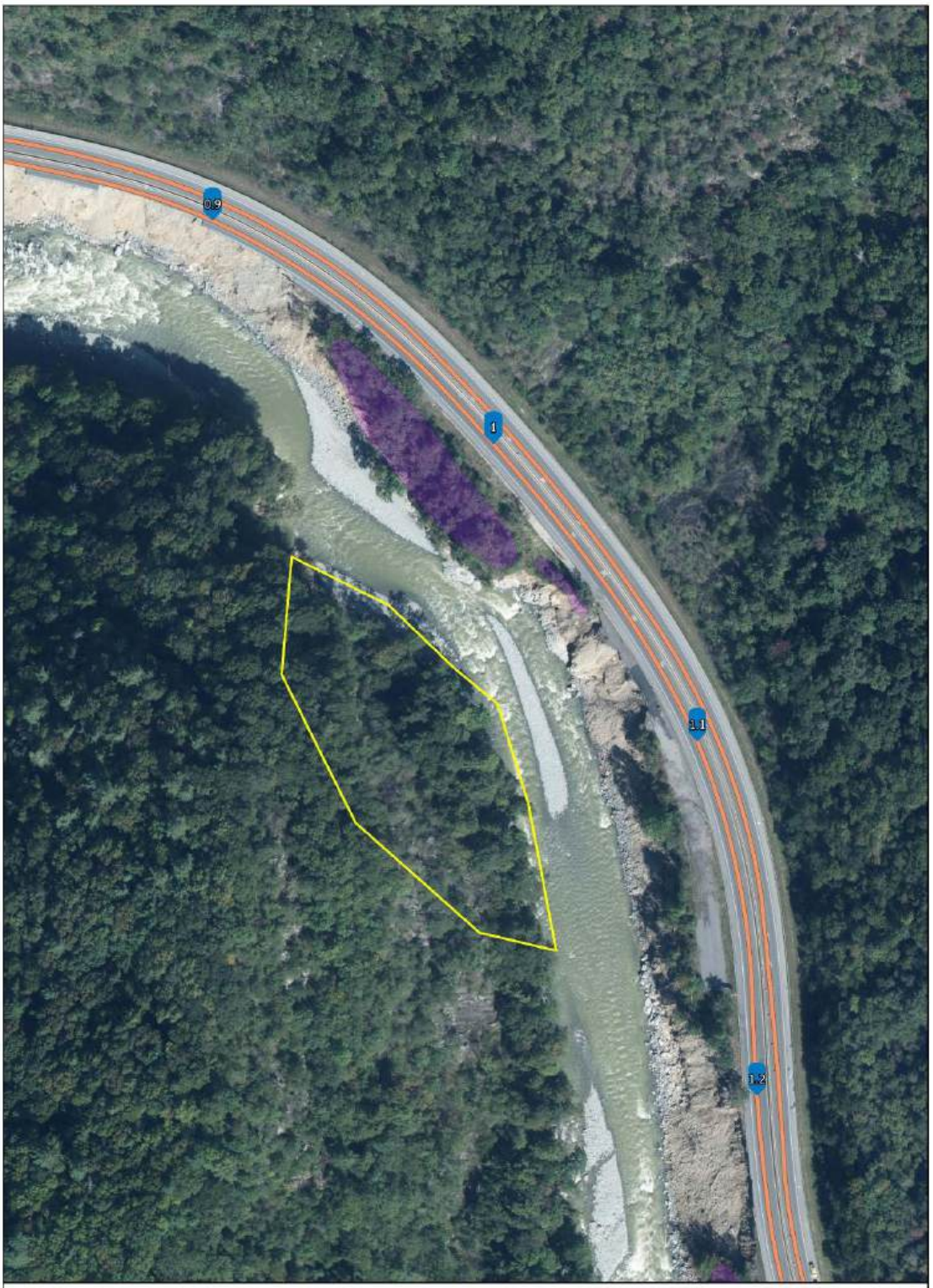

Figure 2-11.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Sources: NCDOT, Esri ArcGIS Basemap, RK&K, HNTB, 2024.

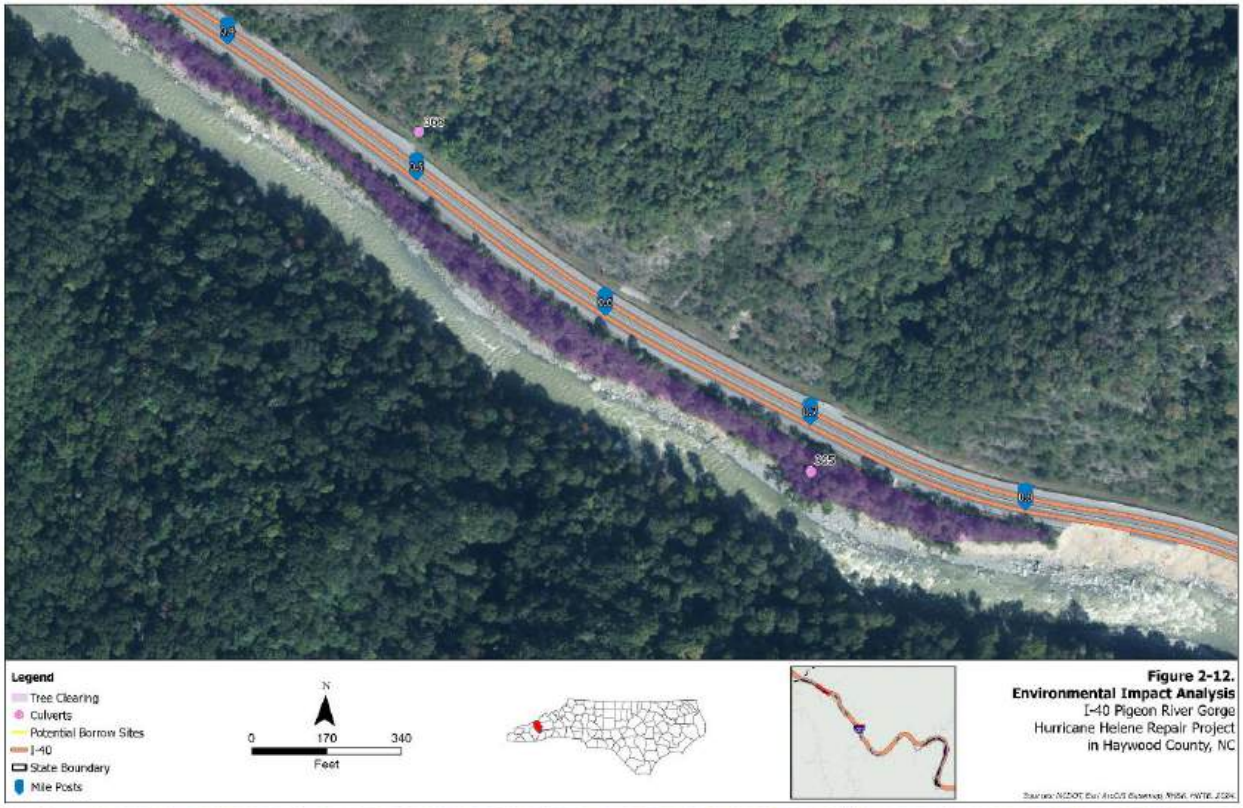

Figure 2-12.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

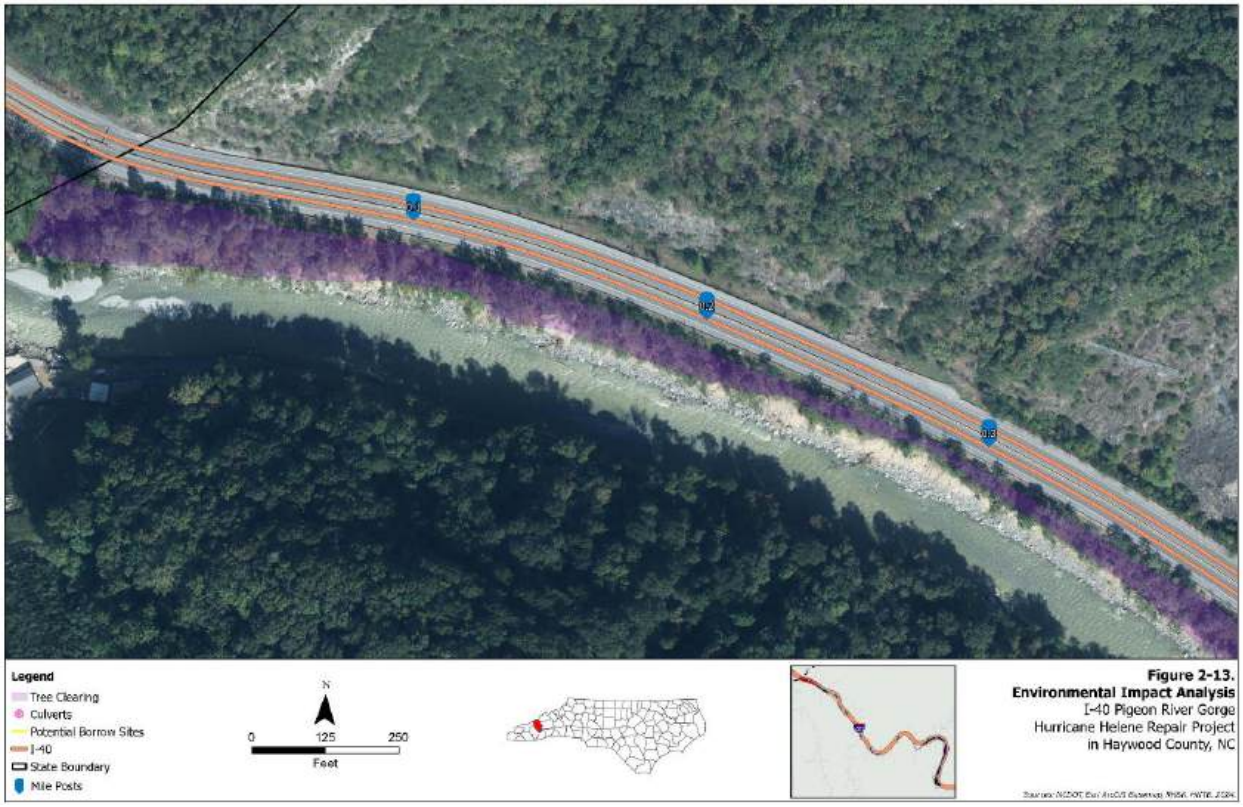

Figure 2-13.
Environmental Impact Analysis
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

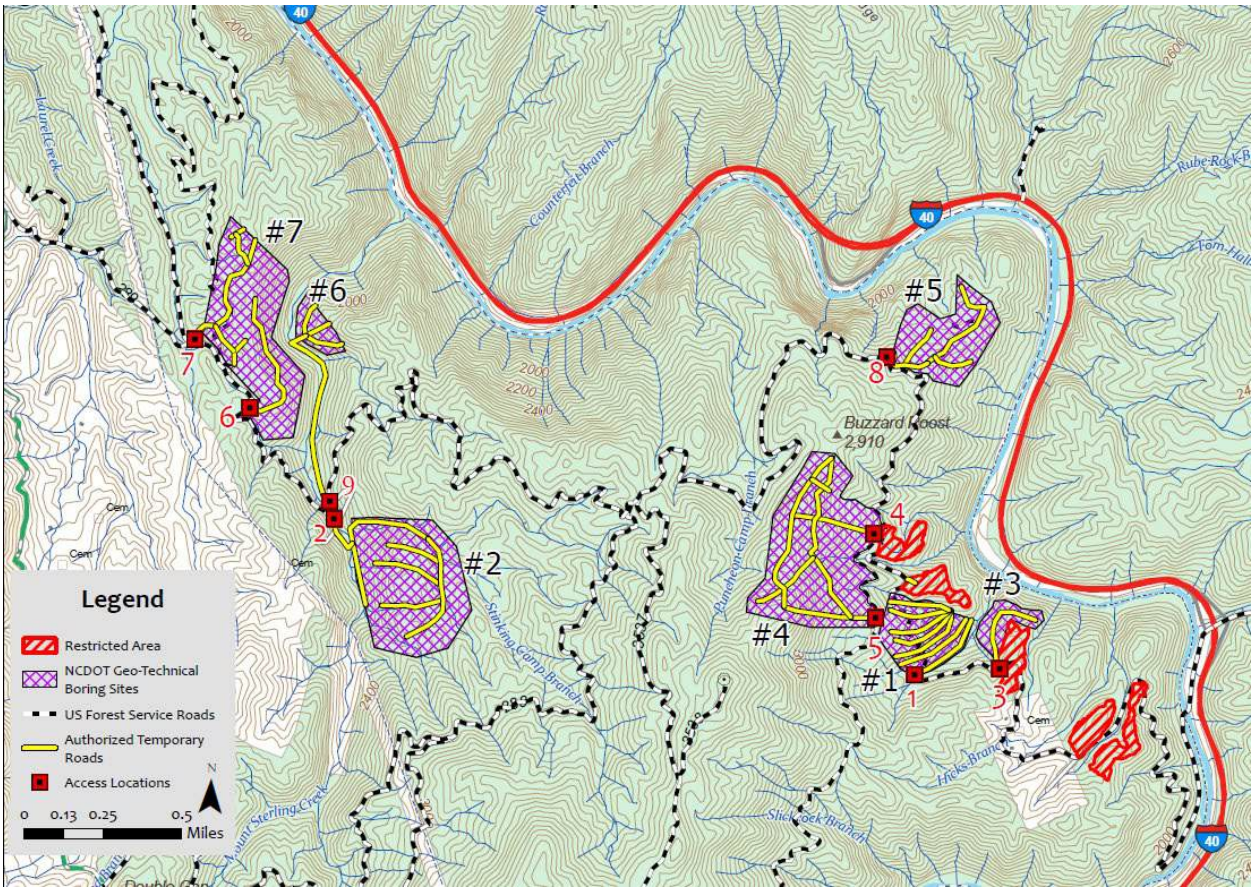

Figure 3. Potential Borrow Areas as of 02.25.2025

Archaeology

1/3/2025

Project Tracking No.

24-12-0019

NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Team.

PROJECT INFORMATION

Project No:	**I-40/Pigeon River Recovery**	*County:*	**Haywood**
WBS No:	**18314.1044057**	*Document:*	**Federal CE**
Federal Aid No:	**Not Known**	*Funding:*	☐ State ☒ Federal
Federal Permit Required?	☒ Yes ☐ No	*Permit Type:*	**FHWA and USACE**

Project Description:

The project calls for repairs along I-40 in Haywood County, which was damaged during Hurricane Helene. The archaeological Area of Potential Effects (APE) for the project is defined as a 6.66 mile (10.72 km) long corridor on I-40 running east from the Tennessee state line to Exit 7 (Bridge 57 over Cold Spring Road and Creek in Haywood County). The APE width varies from approximately 300 feet (91.44 m) to 1,100 feet (335.28 m) wide extending from the edge of right-of-way on the northside of the road to the southern bank of the Pigeon River. Only a proposed waste site, located one mile southeast of the state line, extends past the southern bank. This area measures approximately 250 feet (76.20 m) east-west from the river and 660 feet (201.17 m) north-south. Overall, there are at least four potential waste sites within the APE on the North Caolina section. Those sections of the project area in Tennessee including another proposed waste sites are not covered by this PA and will need to be reviewed by agencies in Tennessee. The APE within North Carolina encompasses approximately 313 acres.

This project is federally funded. As a result, this archaeological review was conducted in accordance with Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

The I-40/Pigeon River Recovery project is located in Haywood County, North Carolina, at the Tennessee state line and plotted in the southern half of the Waterville and northern half of the Cove Creek Gap USGS 7.5' topographic quadrangles (Figure 1). The project includes US Forest Service properties.

A site file search was conducted using data from the Office of State Archaeology (OSA) on December 30, 2024. No sites are reported within the project's APE, but 45 known sites (31HW230, 31HW253–31HW265, 31HW268, 31HW411–31HW415, 31HW420, 31HW429, 31HW465, 31HW467, 31HW470, 31HW471, 31HW493–31HW495, 31HW592, 31HW594–31HW602, 31HW605, 31HW613, 31HW615, 31HW623, 31HW654, and 31HW655) in North Carolina are within a mile. Known sites in Tennessee were not included in this review. According to the North Carolina State Historic Preservation Office (SHPO) online database (HPOWEB 2024), the APE falls along the edge of the determined eligible Waterville Historic District (HW0524) and the Walters Dam and Hydroelectric Plant (HW0628) at the northern end. Contributing and intact archaeological deposits to these two resources will not be encountered by the project as they are outside of the archaeological limits. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), historic maps (North Carolina maps website), Google Street View application, and damage inspection photos were further examined for information on environmental and cultural variables that may have contributed to precontact or historic settlement within the project limits and to assess the level of ground disturbance.

The I-40/Pigeon River Recovery project run roughly northwest to southeast along the base of hillside slopes on the northside of the Pigeon River (Figures 2a–f). The river flows northwest and is a tributary to the French Broad River. The APE is almost entirely disturbed consisting of fill material from the construction of I-40. This material comes from the adjacent cut and/or blasted hillside. The few areas not made of fill are steeply sloped hillsides such as at a tunnel and a potential waste site south of the river about a mile from the state line (see Figures 2b, d, and e). A review of historic aerial photographs prior to the construction of I-40 show an improved road following an alignment similar to I-40. The properties have often been subjected to clear cut activities and the slopes appear to extend to the Pigeon River. In photographs from the 1970s after the construction of I-40, exposed rock from blasting and hillside cutting is visible. Intact and significant archaeological resources are not expected due to severe ground disturbance.

The USDA soil survey map for Haywood County identifies most of the project area as belonging to the Udorthents-Urban land complex (5) and Urban land (Ur) (USDA NRCS 2024). These are disturbed soils in which the natural characteristics have been altered by earth moving activities. Archaeological surveys are not usually required for these soils due to disturbance. Also found to a lesser extent on the hillsides are the Brassown-Junaluska complex (BaD), the Rock outcrop-Cataska complex (RgF), the Soco-Cataska-Rock outcrop complex (SmF), and the Soco-Stecosh complex (SoF). While well drained, these soil types have a slope of 15 percent or more. Subsurface testing is not usually required on these soil types since intact archaeological deposits are unlikely to be found.

A review of the archaeological site files shows that site density is high with 45 known sites being reported in the vicinity. However, these sites are in areas of minimal disturbance well away from I-40 and the impact its construction has had. The sites are situated mostly on ridge tops and finger ridges, while a smaller number are located along terraces. Based upon the disturbed landforms within the current project area, no sites are expected to be present. Furthermore, a portion of the project area was also previously reviewed for the replacement of Bridge No. 57 over Cold Spring Creek and Road (PA 19-04-0018; Jones 2019) at the southern end of the APE in 2019. The project included one of the four potential waste sites known as the Cotton Patch (see Figure 2f). A field inspection was carried out on May 21, 2019, as part of the review and confirmed that the project area is covered in fill material and/or steeply sloped with no usual features such as rock shelters observed.

A map review also failed to provide any significant historical information. Most early maps prior to the 20th century show few details concerning the project area. The 1893 USGS Mt Guyot topographic map is one of the first to display a reliable location for the project (Figure 3). This map depicts no roads running parallel with the Pigeon River and no structures in the area. The later 1925 *Soil Map for Haywood County* provides the same picture (Jurney et al. 1925) (Figure 4). However, the 1935 Newport and the1936 USGS Cove Creek Gap map illustrates a road or trial along the alignment of I-40. It also depicts the Big Bend School at a potential waste site location in an area known as the Cotton Patch near the southern end (Figure 5). The school was in operation for three years and closed in 1937 due to funding (Waynesville Mountaineer 1937). It was built under the Emergency Relief Administration (ERA) for North Carolina from material removed from a lumber company office building (Kirk et al. 1936:177) (Figure 6). The ERA report states:

> The Big Bend community is made up of twelve families marooned in an inaccessible part of the county. To reach this community, it is necessary to walk twelve miles after going as far as possible in a car. Not even a mule can go up the trail. Since the trestle of the old lumber railroad washed out the pedestrian has to let himself down from rock to rock by hanging on to roots and shrubs until he reaches the stream, then cross by rocks, if the stream is low, and pull himself up the other side by roots and shrubs. This is the only way ERA case workers could reach these families.
>
> There is no other school within a radius of nine miles and this building is the first school in this section in eighteen or twenty years. There is now a full time school teacher and approximately twenty-five children in attendance at the school.

The school building was likely salvaged as by 1941 it is no longer depicted on any map. No evidence of former structures was observed during the field inspection of the Cotton Patch in 2019. Finally, I-40 appears on various maps during the 1960s. Although the school was established as a high priority for the community, it did not function for long due to a lack of resources. It along with any other possible early 20th century structures are typically for the time period and will not provide any new information towards the region's history. It is not likely from this review that any significant historic resources are present

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The defined archaeological APE for the I-40/Pigeon River Recovery project in Haywood County will not impact intact and significant archaeological resources. This is due to previous disturbance caused during the construction of I-40 with cut/blasted slopes and the deposition of fill. Those few areas with minimal disturbance are steeply slope will not yield significant deposits. As long as repair work occurs within the defined APE, no further archaeological investigations are recommended. If repairs affect undisturbed subsurface areas beyond the defined APE, further archaeological consultation will be necessary.

This project falls within North Carolina Counties in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

In addition, the project contains property belonging to the US Forest Service. Their review of the PA document is required.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☐ Photos ☐ Correspondence
Other:

FINDING BY NCDOT ARCHAEOLOGIST: *NO ARCHAEOLOGY SURVEY REQUIRED*

C. Damon Jones — January 3, 2025

C. Damon Jones — Date
NCDOT ARCHAEOLOGIST II

REFERENCES CITED

Jones, C. Damon

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1925 *Soil Map for Haywood County, North Carolina*. U.S. Department of Agriculture, Government Printing Office, Washington D.C. On file at North Carolina Collections, University of North Carolina, Chapel Hill.

HPOWEB

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Kirk, Jacob, Alter Cutter, and Thomas Morse (editors)

1936 *Emergency Relief in North Carolina. A Record of the Development of the Activities of the North Carolina Emergency Relief Administration, 1932-1935*. North Carolina Emergency Relief Commission, Raleigh, NC.

United States Department of Agriculture Natural Resources Conservation Services (USDA NRCS)

2024 Haywood County Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/app/. Accessed December 30, 2024.

United States Geological Survey (USGS)

1893 Mt Guyot, Tennessee-North Carolina 30 minute quadrangle map. Reprinted in 1906.
1935 Newport, Tennessee-North Carolina 7.5 minute planimetric map.
1936 Cove Creek Gap, North Carolina 7.5 minute planimetric map.
2016a Cove Creek Gap, North Carolina 7.5 minute quadrangle map.
2016b Waterville, Tennessee-North Carolina 7.5 minute quadrangle map.

Waynesville Mountaineer

1937 County Makes Net Gain of 3 Teachers for Coming Term. Fifty-Third Year, No. 26, Waynesville, NC. Thursday, July 8, 1937.

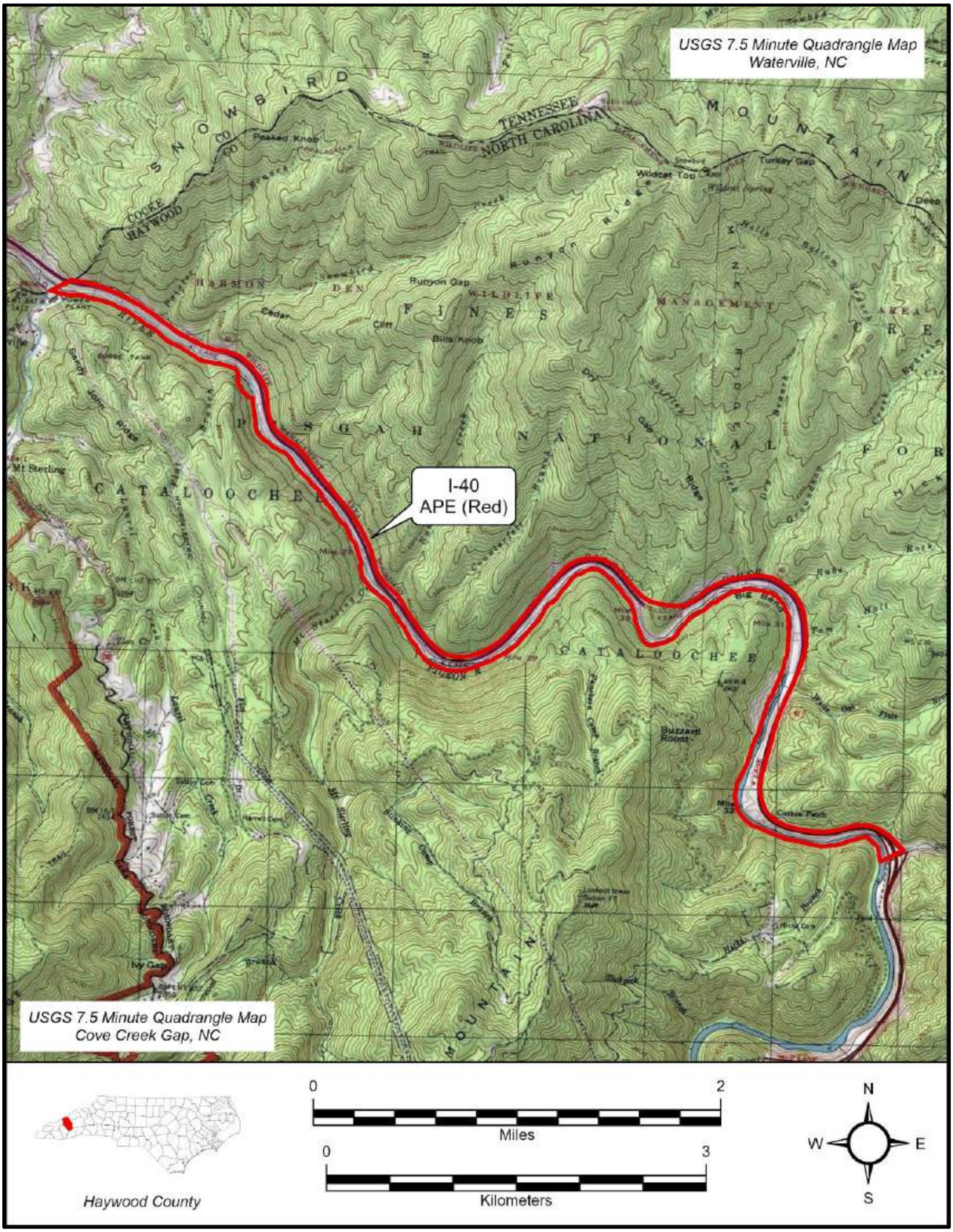


Figure 1. Topographic Setting of the Project Area, Waterville (2016b), TN-NC and Cove Creek Gap (2016a) NC USGS 7′5 Topographic Quadrangles.

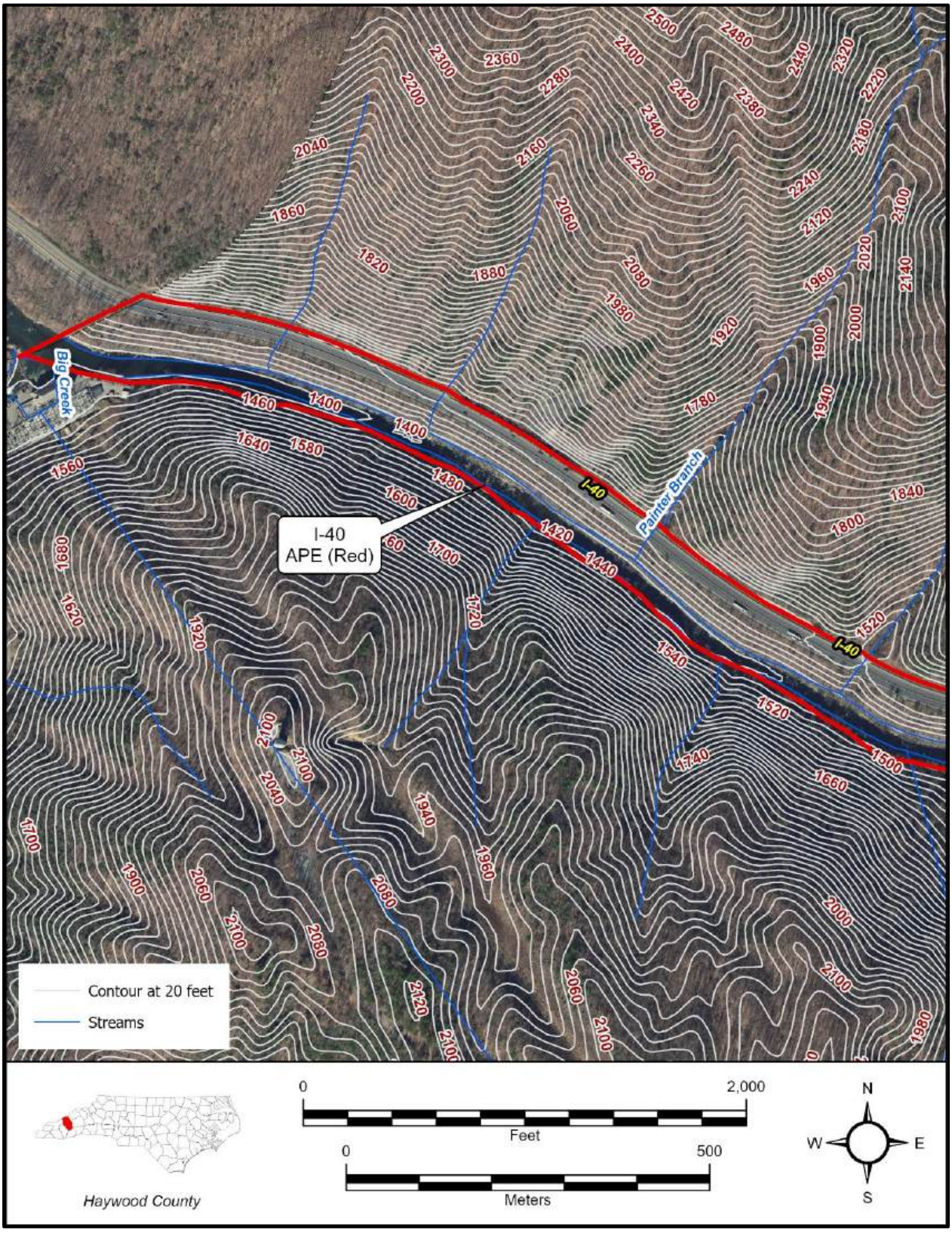


Figure 2a. Aerial photograph of the APE starting at the Tennessee state line showing contours.

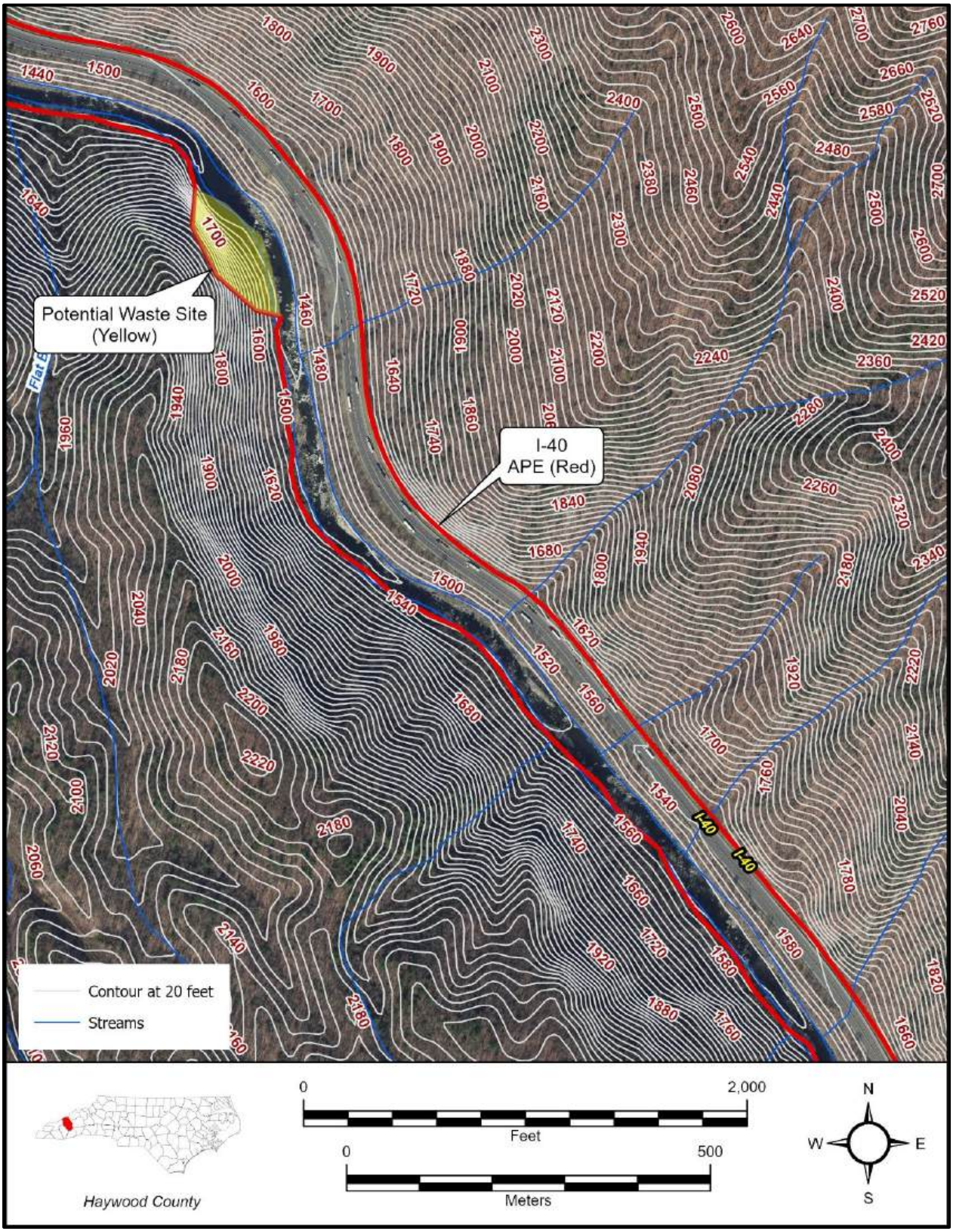


Figure 2b. Aerial photograph of the APE showing contours and one of the potential waste sites.

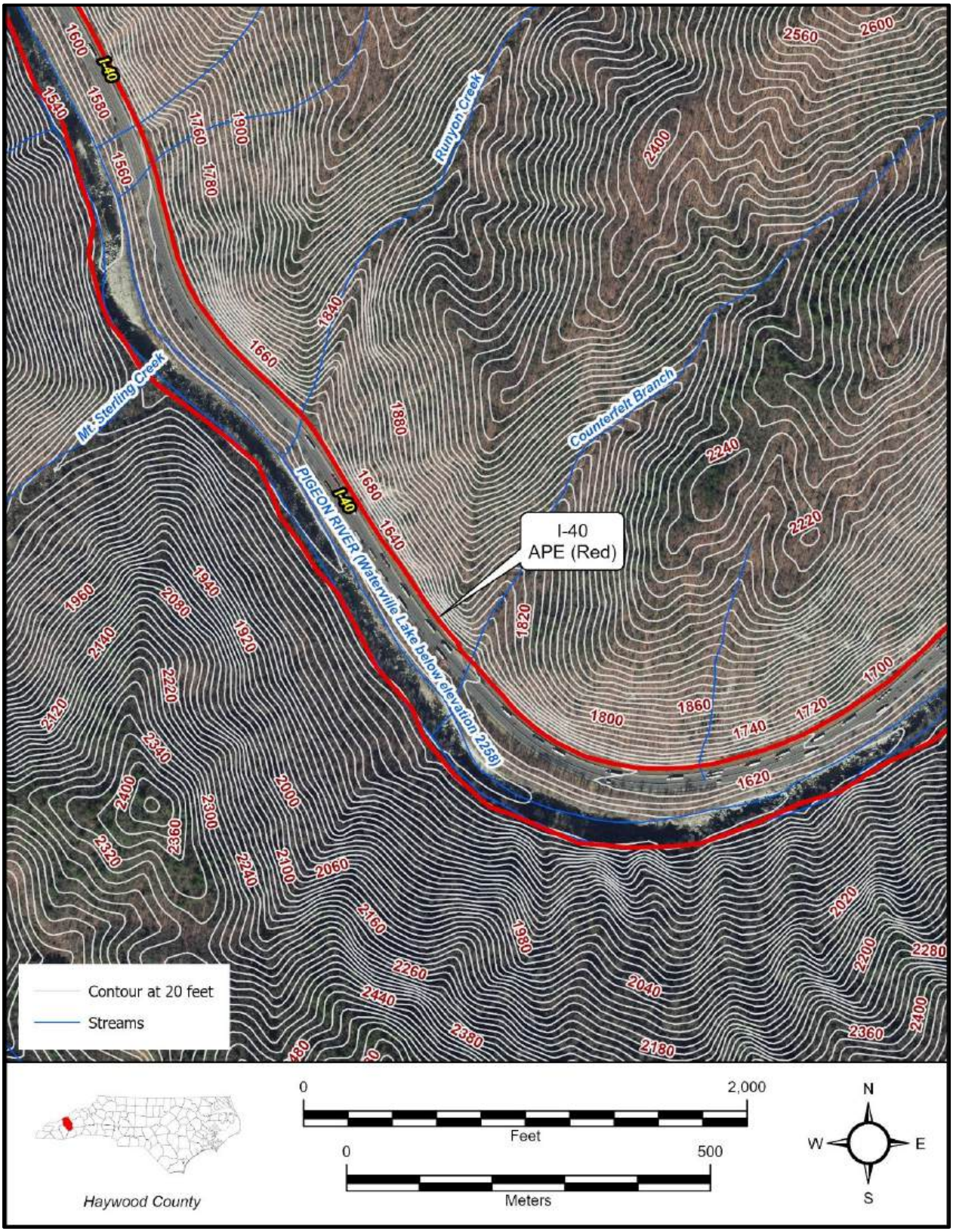


Figure 2c. Aerial photograph of the APE showing contours.

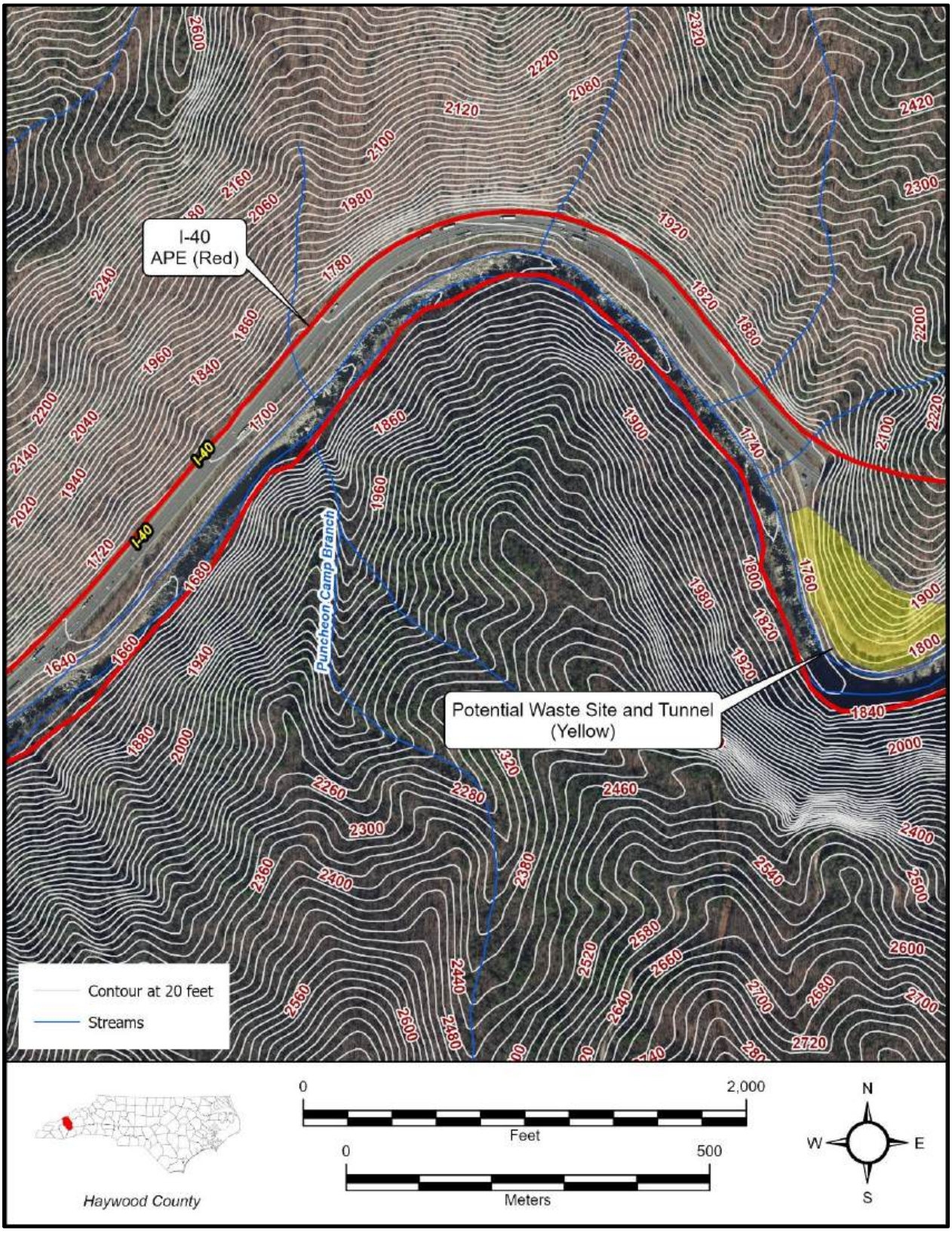


Figure 2d. Aerial photograph of the APE showing contours and one of the potential waste sites and the tunnel location.

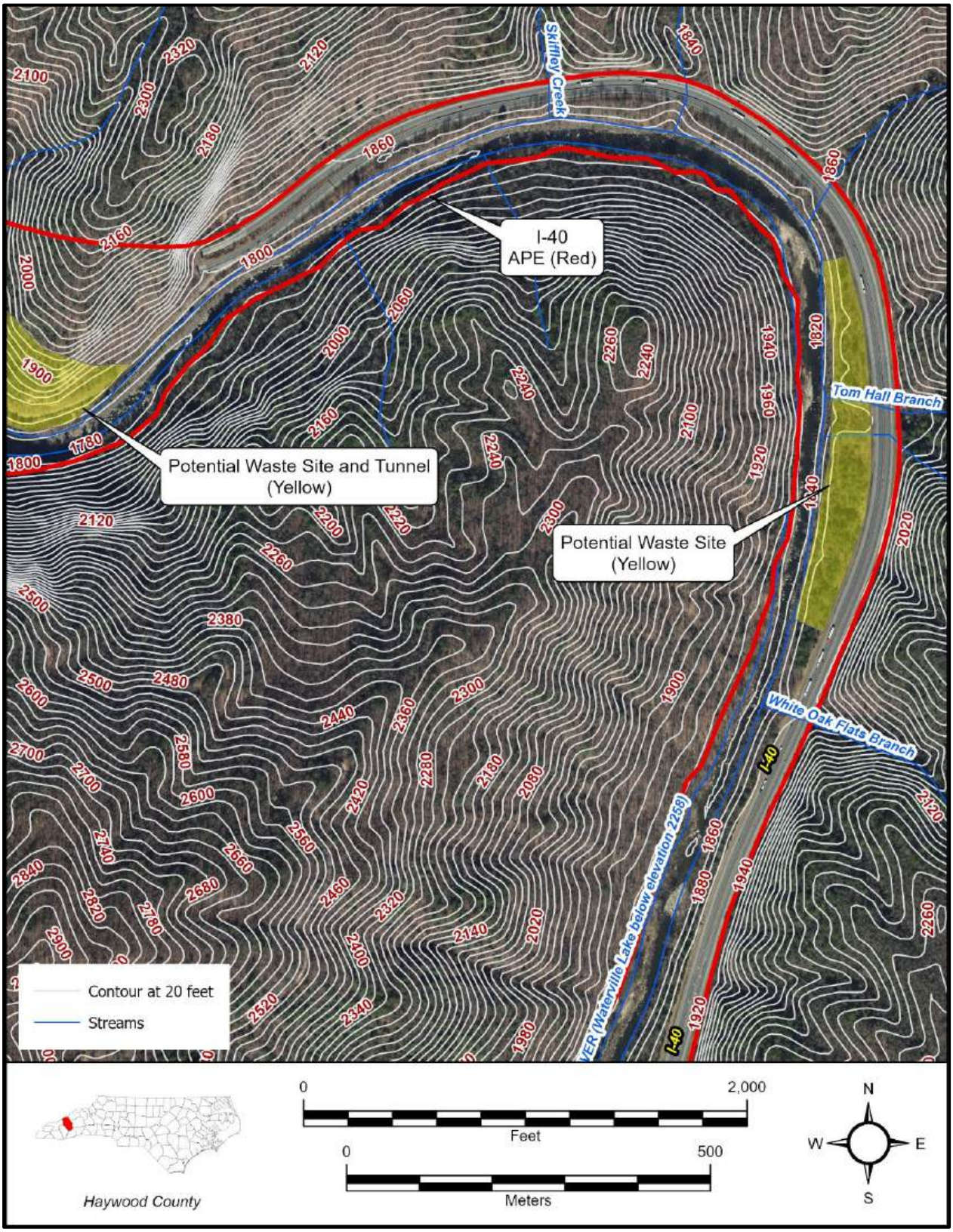


Figure 2e. Aerial photograph of the APE showing contours and two of the potential waste sites and the tunnel location.

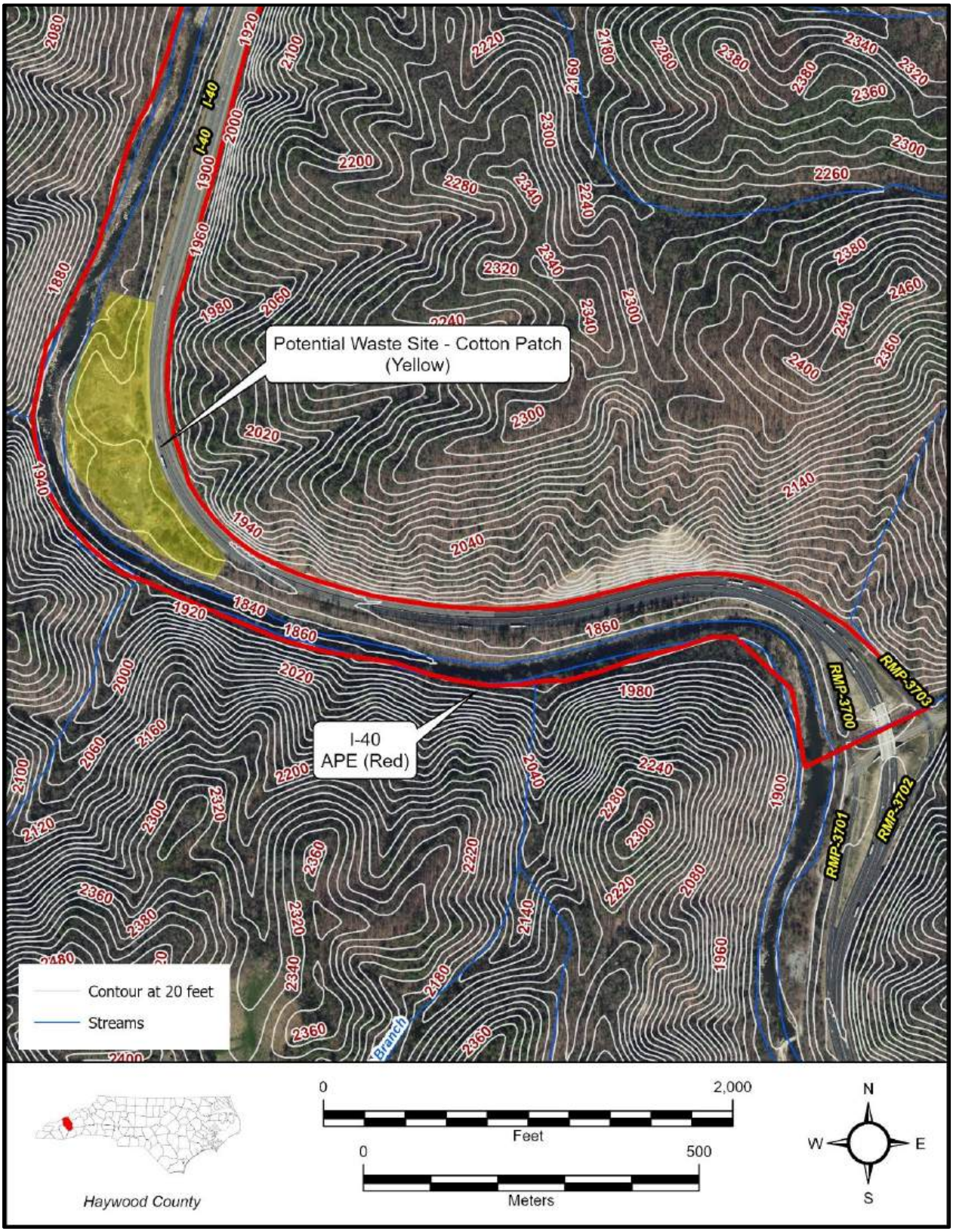


Figure 2f. Aerial photograph of the APE at the southern end showing contours and one of the potential waste sites (Cotton Patch).

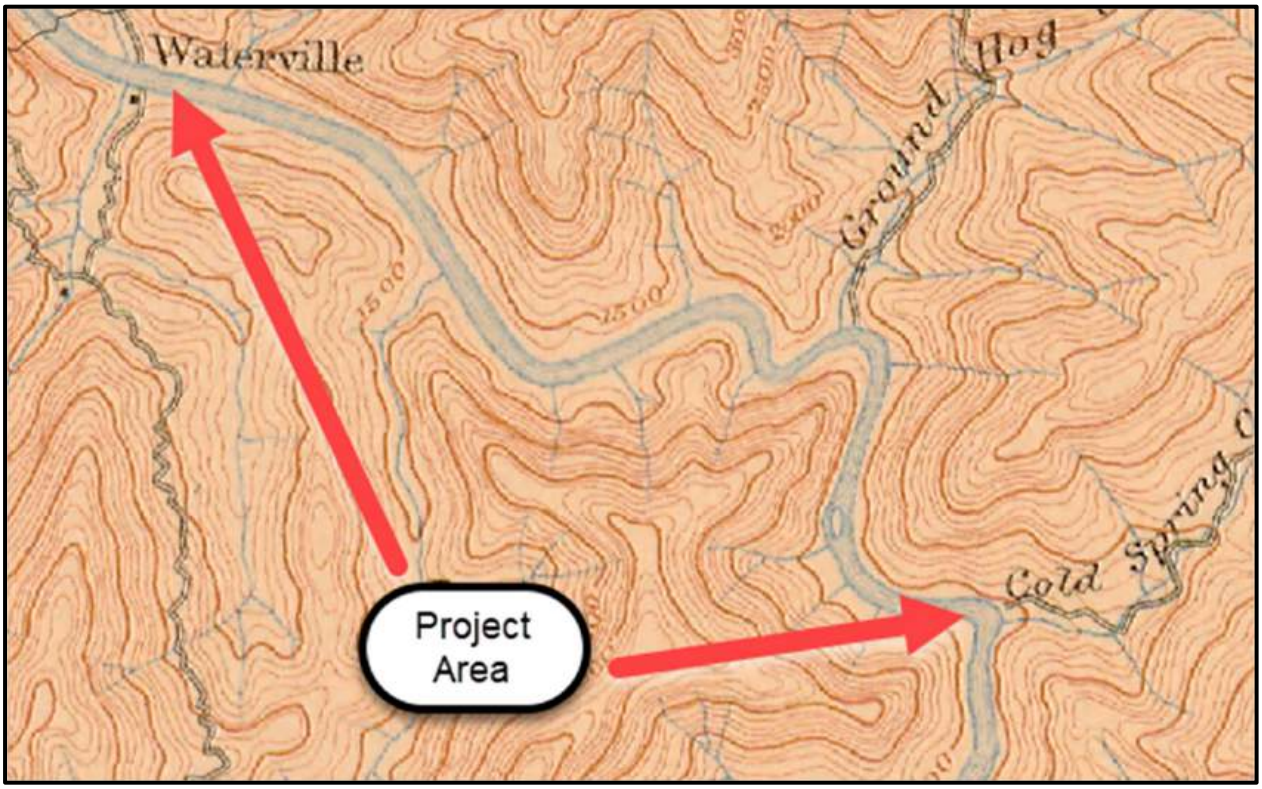


Figure 3. The 1893 USGS Mt Guyot topographic map showing the location of the project area.

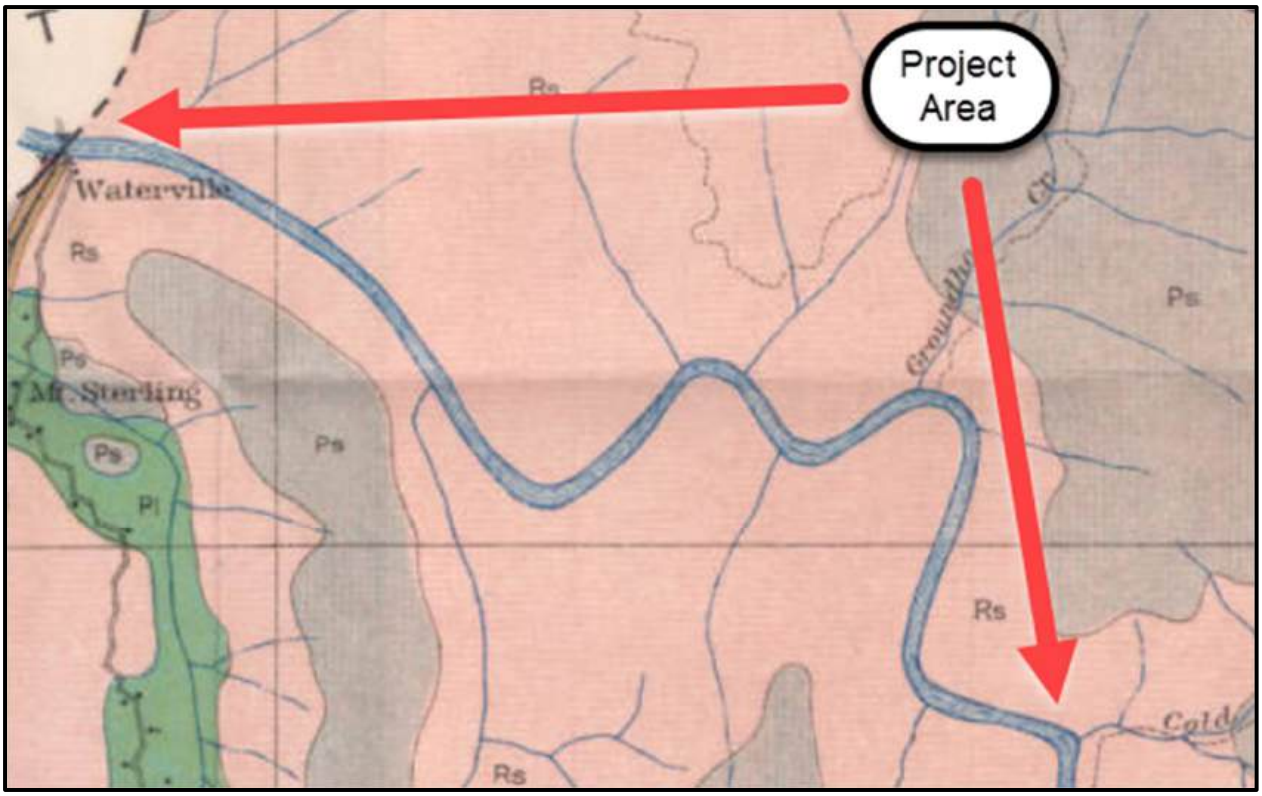


Figure 4. The 1925 *Soil Map for Haywood County* showing the location of the project area.

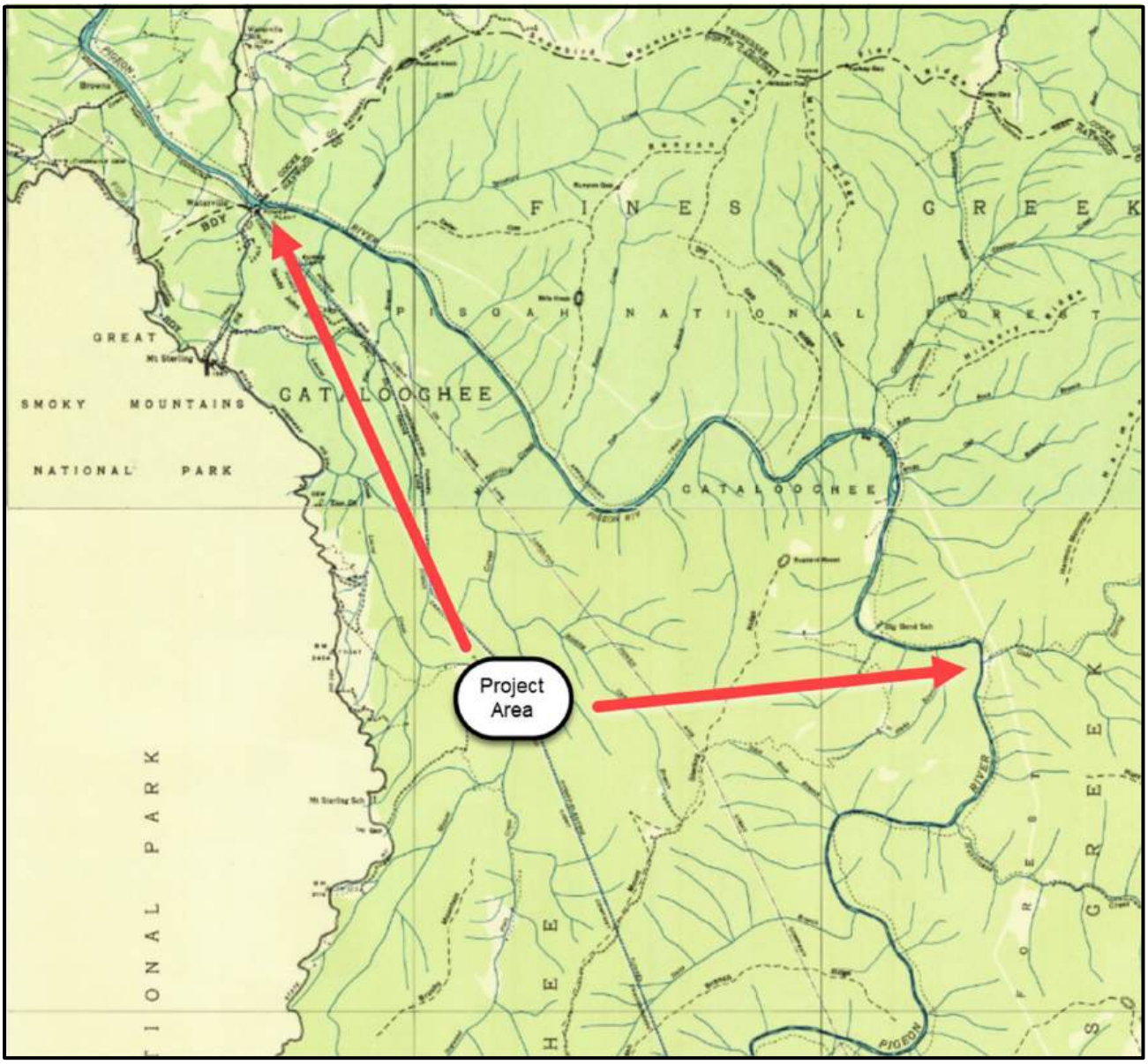


Figure 5. The 1935 Newport and 1936 Cove Creek Gap USGS planimetric maps showing the location of the project area.

Figure 6. Big Bend Schoolhouse from the 1936 from *Emergency Relief in North Carolina* report.

Archaeology

3/11/2025

Project Tracking No.

24-12-0019 Addendum

NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Team.

PROJECT INFORMATION

Project No:	**I-40/Pigeon River Recovery**	*County:*	**Haywood**
WBS No:	**18314.1044057**	*Document:*	**Federal CE**
Federal Aid No:	**Not Known**	*Funding:*	☐ State ☒ Federal
Federal Permit Required?	☒ Yes ☐ No	*Permit Type:*	**FHWA and USACE**

Project Description:

*The project calls for repairs along I-40 in Haywood County, which was damaged during Hurricane Helene. A **No Archaeological Survey Required** form was first submitted on January 3, 2025. This PA form covered the 6.66 mile (10.72 km) long corridor on I-40 running east from the Tennessee state line to Exit 7 (Bridge 57 over Cold Spring Road and Creek) in Haywood County. The addendum is for the seven newly proposed borrow sites (1, 2, 5, 7, 11, 14, and 15), which are located south of the Pigeon River on Forest Service property (Figures 1 and 2a–e). The archaeological APE for each proposed borrow site varies:*

- *Proposed Site 1 encompasses approximately 33 acres*
- *Proposed Site 2 encompasses approximately 84 acres*
- *Proposed Site 5 encompasses approximately 12 acres*
- *Proposed Site 7 encompasses approximately 99 acres*
- *Proposed Site 11 encompasses approximately 80 acres*
- *Proposed Site 14 encompasses approximately 43 acres*
- *Proposed Site 15 encompasses approximately 10 acres*

Not all of the proposed sites will be utilized, but all were reviewed for this project.

This project is federally funded with permits. As a result, this archaeological review was conducted in accordance with Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

The proposed borrow sites for the I-40/Pigeon River Recovery project are located in Haywood County, North Carolina, and plotted in the southern half of the Waterville and northern half of the Cove Creek Gap USGS 7.5' topographic quadrangles (Figure 1). All seven of the borrow sites are on US Forest Service properties. Terrain within the proposed sites consist primarily of ridges and hillsides (Figures 2a–e). Waterways drain north into the Pigeon River and are part of the French Broad drainage basin.

A site file search was conducted using data from the Office of State Archaeology (OSA) on March 10, 2025. Several past archaeological investigations have been carried out over high probability landforms within the proposed limits of the borrow sites (Burchett and Ashcraft 1994; Crotts 1979; Snedeker et al. 1989; Stewart 2018; Webb 1990). This has resulted in the identification of four known archaeological sites (31HW255, 31HW264, 31HW592, and 31HW601) in the APE.

Archaeological site 31HW255 is located in the southern portion of Proposed Site 11. This site consists of lithic material from an unknown precontact period and historic material from the late 19th to early 20th centuries (Webb 1990). The site is heavily disturbed from ground moving activities associated with timber

harvesting. It has been determined not eligible for the National Register of Historic Places (NRHP). Site 31HW264 is in the northeast corner of Proposed Site 14 (Figure 2e). The site was identified as a surface scatter of quartz and quartzite debitage from precontact periods (Snedeker et al. 1989). Its National Register eligibility has yet to be assessed with further work needed. Site 31HW592 is near the southeastern edge of Proposed Site 2. It is made up of a small scatter of lithic debitage from an unknown precontact period similar to the other sites (Stewart 2018). Most of the artifacts were found along the surface with the subsurface described as degrading. The site has been determined not eligible for the NRHP. Finally, site 31HW601 is at the mid-section of Proposed Site 11. This site too is a precontact lithic scatter with poor soil integrity (Stewart 2018). It has been recommended as not eligible for the NRHP.

Forest Service archaeologist Casy Kirby provided a heritage review to John Thompson and Allyson Conner with Forest Service on February 14, 2025, and this information was shared with NCDOT Archaeology Group on March 10, 2025, by email. Her review of each proposed borrow site states the following:

> **NC DOT Proposed Site 01:** There are no known or previously recorded significant archaeological sites within this unit. NC DOT Proposed Site 01 is not within an established Tribal Interest Area or Tribal Landscape. Some of the high probability landforms within the APE have been subjected to previous cultural resource survey. To the extent possible, access to NC DOT Proposed Site 01 should utilize extant transportation corridors and old logging roads within this APE. Direction from NFsNC Heritage is to follow NC DOT Heritage PA process for streamlined NHPA Section 106 compliance.
>
> **NC DOT Proposed Site 02:** There are no known or previously recorded significant archaeological sites within this unit. NC DOT Proposed Site 02 is not within an established Tribal Interest Area or Tribal Landscape. A significant portion of high probability landforms within the APE have been subjected to previous cultural resource survey. To the extent possible, access to NC DOT Proposed Site 02 should utilize extant transportation corridors and old logging roads within this APE. Direction from NFsNC Heritage is to follow NC DOT Heritage PA process for streamlined NHPA Section 106 compliance.
>
> **USFS Proposed Site 05:** There are no known or previously recorded significant archaeological sites within this unit. USFS Proposed Site 05 is not within an established Tribal Interest Area or Tribal Landscape. This unit has the potential for resource concerns like rock shelters or rock overhangs. A significant portion of high probability landforms within the APE have been subjected to previous cultural resource survey. To the extent possible, access to USFS Proposed Site 05 should utilize extant transportation corridors and old logging roads within this APE. Direction from NFsNC Heritage is to follow NC DOT Heritage PA process for streamlined NHPA Section 106 compliance.
>
> **USFS Proposed Site 07:** There are no known or previously recorded significant archaeological sites within this unit. USFS Proposed Site 07 is not within an established Tribal Interest Area or Tribal Landscape. This unit has the potential for resource concerns like rock shelters or rock overhangs. A significant portion of high probability landforms within the APE have been subjected to previous cultural resource survey. To the extent possible, access to USFS Proposed Site 07 should utilize extant transportation corridors and old logging roads within this APE. Direction from NFsNC Heritage is to follow NC DOT Heritage PA process for streamlined NHPA Section 106 compliance.
>
> **USFS Proposed Site 11:** There are no known or previously recorded significant archaeological sites within this unit. USFS Proposed Site 11 is not within an established Tribal Interest Area or Tribal Landscape. This unit has the potential for resource concerns like rock shelters or rock overhangs. A significant portion of high probability landforms within the APE have been subjected to previous cultural resource survey. To the extent

possible, access to USFS Proposed Site 11 should utilize extant transportation corridors and old logging roads within this APE. Direction from NFsNC Heritage is to follow NC DOT Heritage PA process for streamlined NHPA Section 106 compliance.

USFS Proposed Site 14: Unassessed site 31HW264 is within this unit and will need to be avoided or subjected to accepted mitigation measures. USFS Proposed Site 14 is not within an established Tribal Interest Area or Tribal Landscape. This unit has the potential for resource concerns like rock shelters or rock overhangs. Some of the high probability landforms within the APE have been subjected to previous cultural resource survey. To the extent possible, access to USFS Proposed Site 14 should utilize extant transportation corridors and old logging roads within this APE. Direction from NFsNC Heritage is to follow NC DOT Heritage PA process for streamlined NHPA Section 106 compliance.

USFS Proposed Site 15: There are no known or previously recorded significant archaeological sites within this unit. USFS Proposed Site 15 is not within an established Tribal Interest Area or Tribal Landscape. This unit has the potential for resource concerns like rock shelters or rock overhangs. None of this APE has been subjected to previous cultural resource survey. To the extent possible, access to USFS Proposed Site 15 should utilize extant transportation corridors and old logging roads within this APE. Direction from NFsNC Heritage is to follow NC DOT Heritage PA process for streamlined NHPA Section 106 compliance.

This was followed by a meeting held on March 10, 2025, with representatives from NCDOT, Federal Highway Administration (FHWA), the North Carolina State Historic Preservation Office (SHPO), and Forest Service to discuss impacts to the proposed borrow sites. Forest Service has rated them as low for significant and intact cultural resources. Many of the high probable landforms have been previously tested with no significant results. Ground disturbance is also considered high from past logging activities with the subsurface having little integrity. It was determined that no further archaeological work is necessary within the limits of the proposed borrow sites. However, if Proposed Site 14 is selected, further work may be needed at site 31HW264. This would include an assessment of the sites' eligibility for the National Register followed by an appropriate mitigation strategy if eligible. The site may also be avoided by ground disturbing activities by being excluded from Borrow Site 14's project area.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The proposed borrow sites for the I-40/Pigeon River Recovery project in Haywood County do not require an archaeological survey. Sections of the borrow sites have been previously tested with insignificant results. Soil integrity is poor for intact cultural deposits. As a result, the probability is low for significant archaeological resources to be encountered. No further actions are required.

However, site 31HW264 will need to be evaluated for the National Register or avoided if Proposed Site 14 is selected. In the event of an unanticipated discovery, all work in the vicinity of the find will stop. Archaeologists with NCDOT and Forest Service will be contacted immediately to assess the discovery and report the findings to SHPO.

This PA form should be included in the environmental document with the previous No Survey Required PA form dated January 3,2025.

Finally, the project falls within North Carolina Counties in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☐ Photos ☐ Correspondence
Other:

FINDING BY NCDOT ARCHAEOLOGIST: *NO ARCHAEOLOGY SURVEY REQUIRED*

March 11, 2025

C. Damon Jones — Date
NCDOT ARCHAEOLOGIST II

REFERENCES CITED

Burchett, A. Hunter, and A. Scott Ashecraft

1994 *Heritage Resource Survey for the Proposed Buzzard Roost Daylighting, Compartment 62, 68, 69, and 77, French Broad Ranger District, Pisgah National Forest, Haywood County, North Carolina*. National Forests in North Carolina, Asheville.

Crotts, Anita L.

1979 *Cultural Resource Survey of the Proposed Flat Branch Timber Road, French Broad Ranger District, Pisgah National Forest*. US Forest Service, Asheville, North Carolina.

Snedeker, Rodney J., Robert O. Noel, William H. Radisch, and Michael A. Harmon

1980 *Cultural Resource Survey for the Proposed Hicks Branch II Timber Sale, Compartment 62, French Broad Ranger District, Pisgah National Forest, Haywood County, North Carolina*. National Forests in North Carolina, Asheville.

Stewart, James

2018 *Phase I Archaeological Survey of the Twelve Mile Analysis Area, Part Two, Haywood County, North Carolina*. New South Associates, Stone Mountain, Georgia. For the National Forests in North Carolina, Asheville.

United States Geological Survey (USGS)

2016a Cove Creek Gap, North Carolina 7.5 minute quadrangle map.

2016b Waterville, Tennessee-North Carolina 7.5 minute quadrangle map.

Webb, Robert S.

1990 *Cultural Resource Survey, Mt Sterling Timber Sale, Compartment 69, French Broad Ranger District, Pisgah National Forest, Haywood County, North Carolina*. Webb Diversified Consulting, Jasper, Georgia. For the National Forests in North Carolina, Asheville.

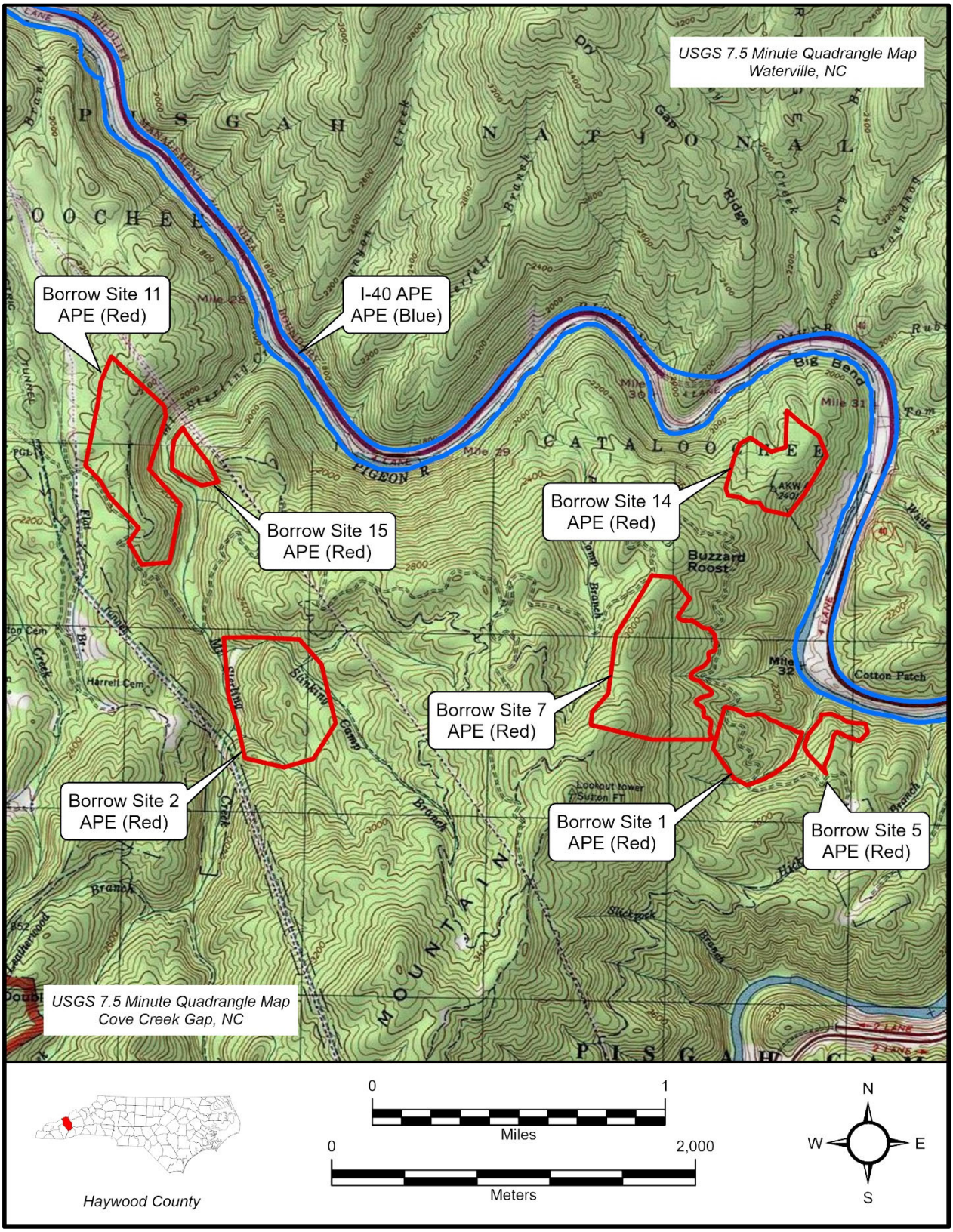


Figure 1. Topographic Setting of the Seven Potential Borrow Sites, Waterville (2016b), TN-NC and Cove Creek Gap (2016a) NC USGS 7′5 Topographic Quadrangles.

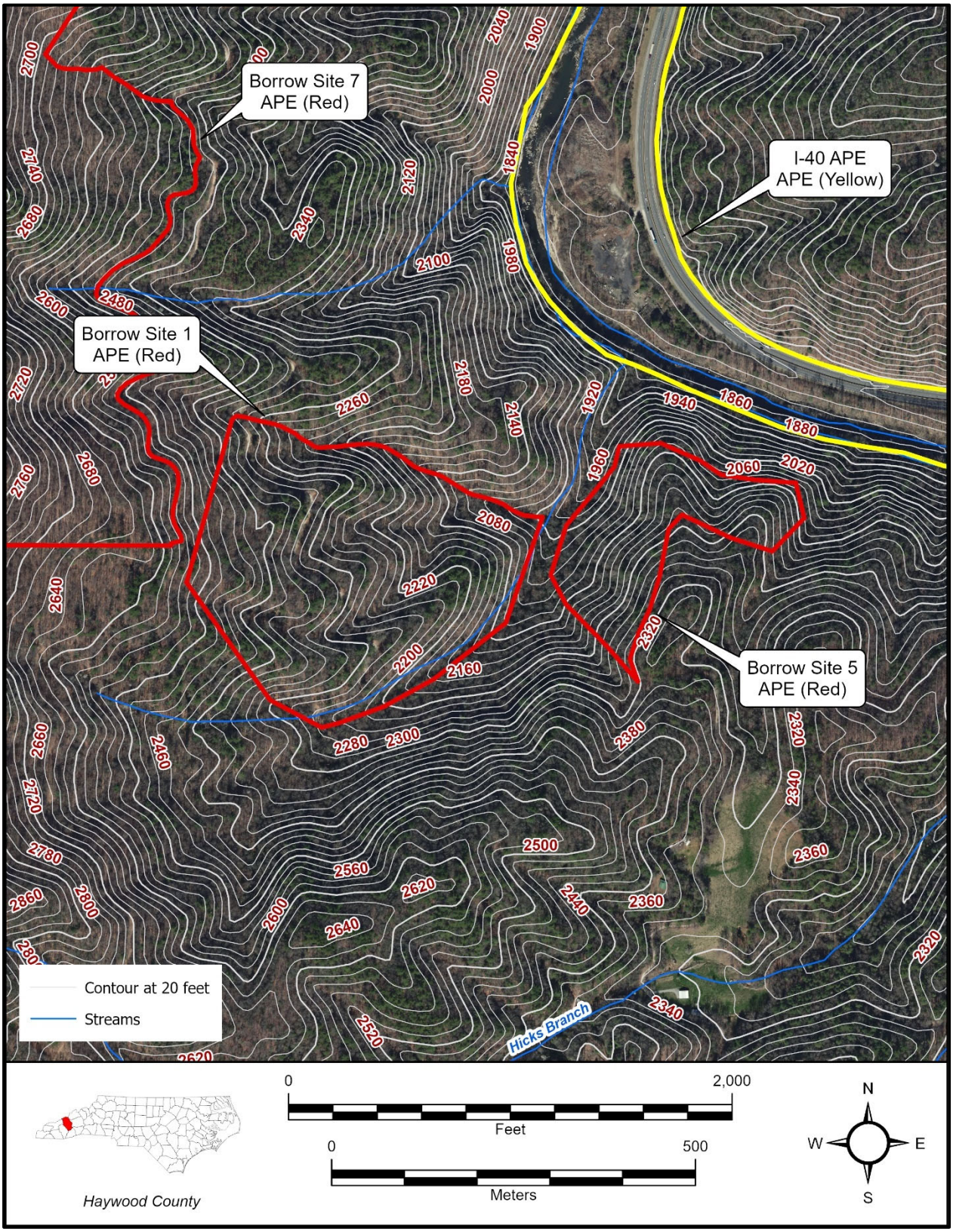


Figure 2a. Aerial View of Borrow Sites 1 and 5 showing landforms.

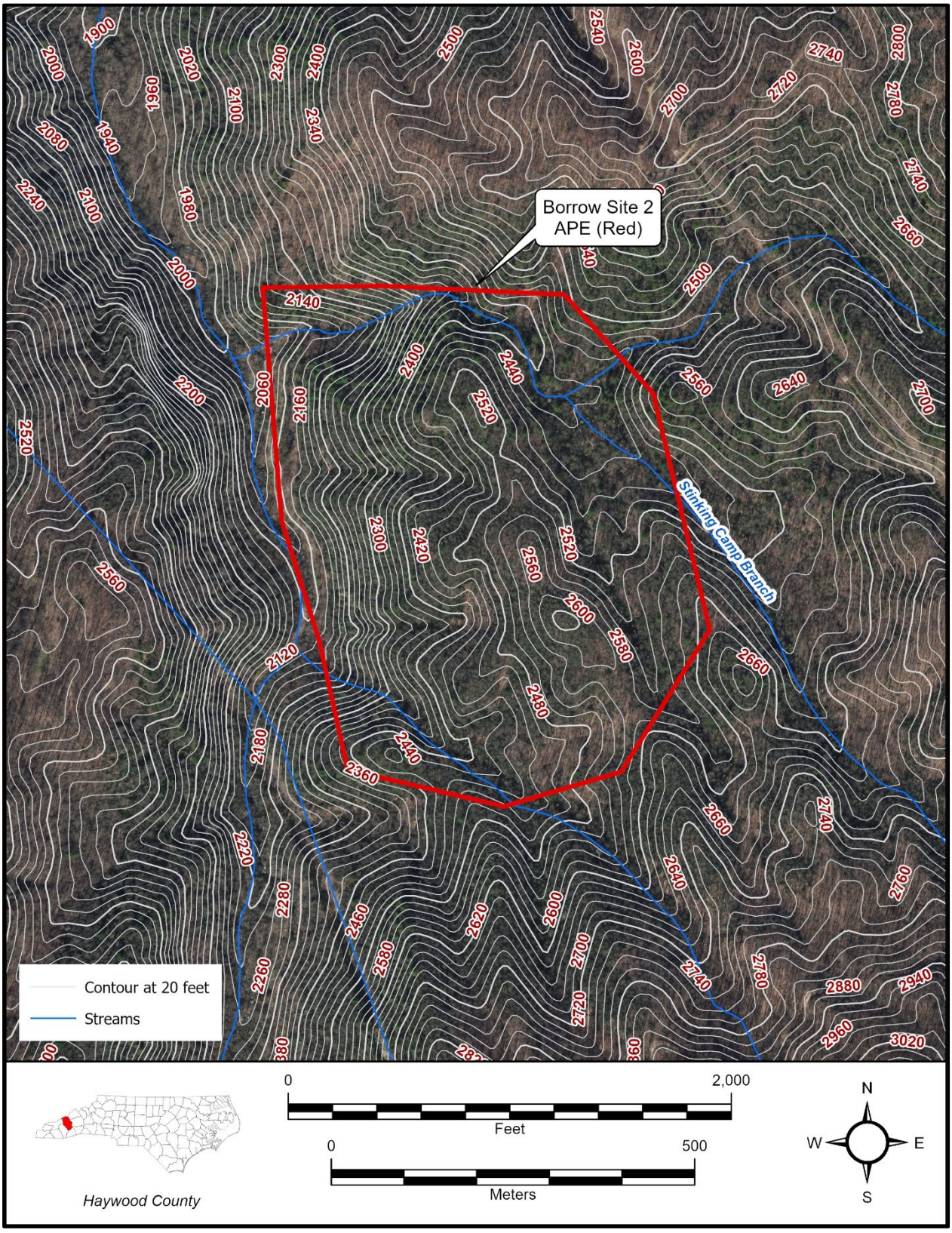


Figure 2b. Aerial View of Borrow Site 2 showing landforms.

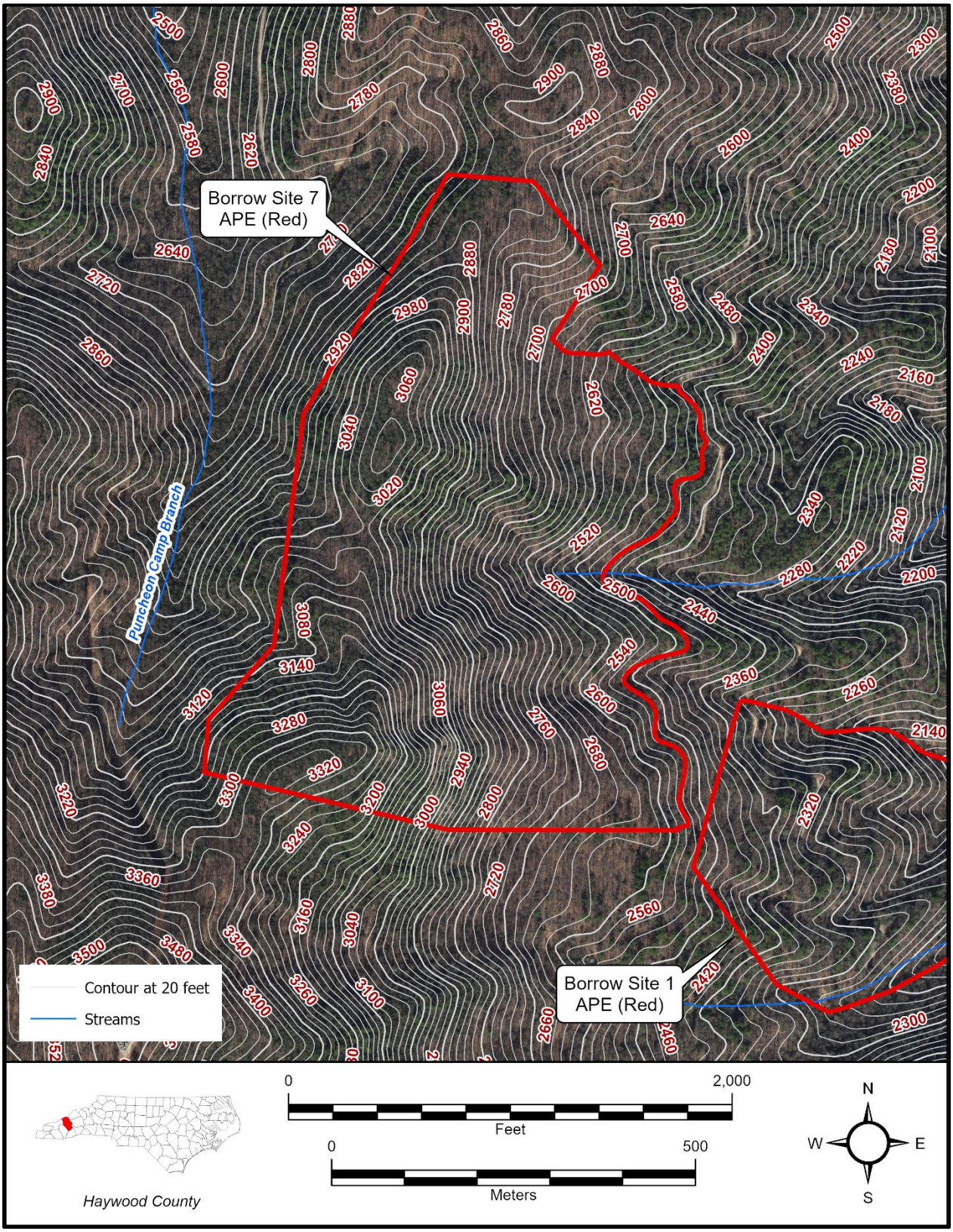


Figure 2c. Aerial View of Borrow Site 7 showing landforms.

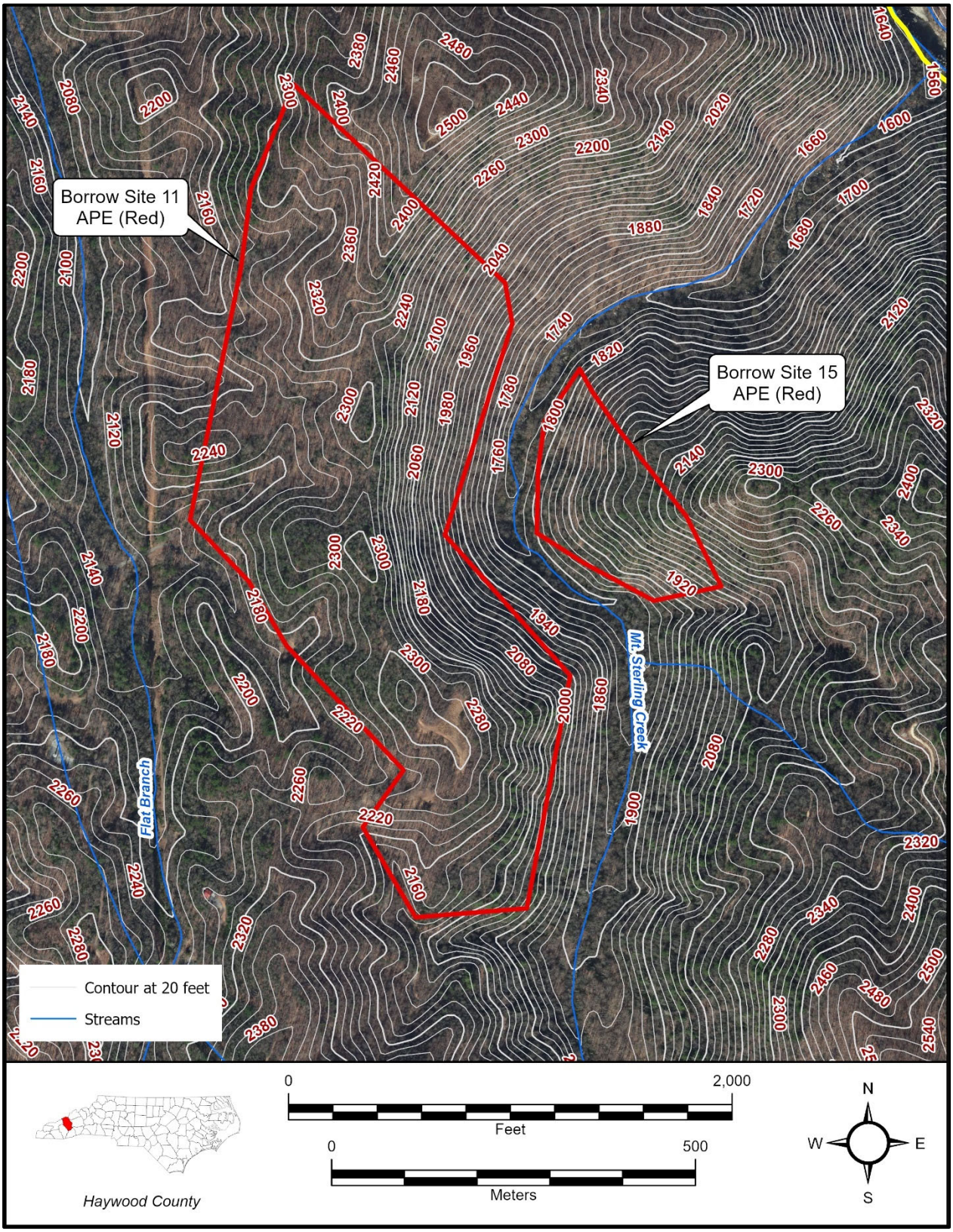


Figure 2d. Aerial View of Borrow Sites 11 and 15 showing landforms.

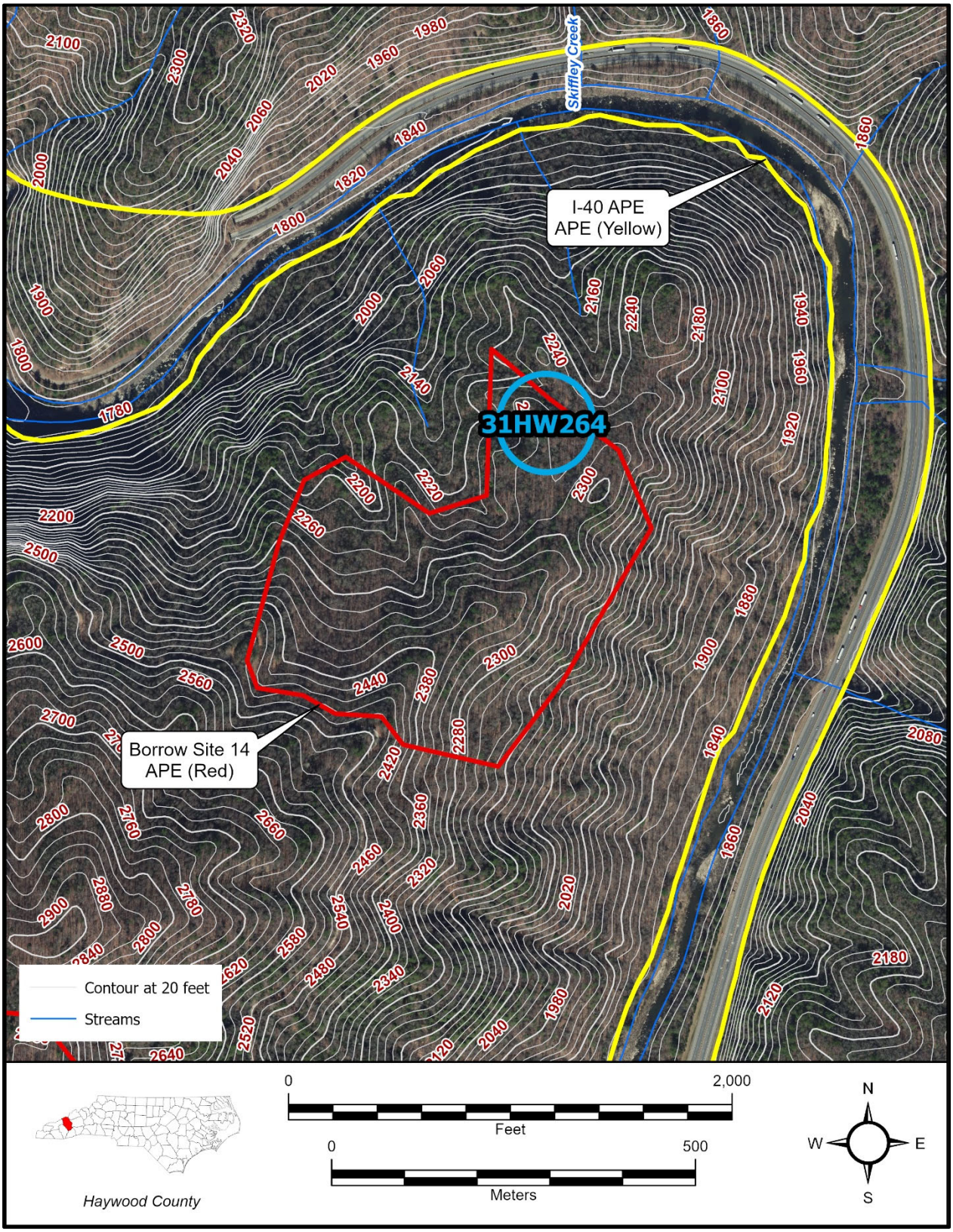


Figure 2e. Aerial View of Borrow Sites 14 showing landforms and the approximate location of Site 31HW264.

Archaeology

4/11/2025

Project Tracking No.

24-12-0019 Update

NO NATIONAL REGISTER OF HISTORIC PLACES ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Team.

PROJECT INFORMATION

Project No:	**I-40/Pigeon River Recovery**	*County:*	Haywood
WBS No:	18314.1044057	*Document:*	Federal CE
F.A. No:	na	*Funding:*	☐ State ☒ Federal
Federal Permit Required?	☒ Yes ☐ No	*Permit Type:*	FHWA & USACE

Project Description:

*The project calls for repairs along I-40 in Haywood County, which was damaged during Hurricane Helene. A **No Archaeological Survey Required** form was first submitted on January 3, 2025. This was followed by an addendum **No Archaeological Survey Required** form for proposed borrow sites on March 11, 2025. With the submission of the addendum, NCDOT made a commitment to attempt to relocate and evaluate site 31HW264 if Proposed Site 14 (hereafter referred to as Site 02) was selected as a borrow site. Proposed Site 02 is located south of Pigeon River on Forest Service property and encompasses approximately 43 acres (Figure 1). Only the vicinity of the reported location of 31HW264 was tested during the current investigations as a No Archaeological Survey was determined for the remaining property.*

This project is federally funded with permits. As a result, this archaeological review was conducted in accordance with Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

SUMMARY OF ARCHAEOLOGICAL FINDINGS

***The North Carolina Department of Transportation (NCDOT) Archaeology Team has reviewed the subject project and determined**:*

☒ There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed.)

☐ No subsurface archaeological investigations were required for this project.

☒ Subsurface investigations did not reveal the presence of any archaeological resources.

☒ Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.

☒ All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

Brief description of review activities, results of review, and conclusions:

Proposed Borrow Site 02 is located in Haywood County, North Carolina, and plotted on the Waterville USGS 7.5′ topographic quadrangle (Figure 1).

The archaeological field reconnaissance and survey for the relocation of site 31HW264 was conducted on April 8, 2025, by Archaeologists Casey Kirby with the Forest Service and Rachel Denton with the Office of State Archaeology. This included a visual inspection and the excavation of five shovel test placements (STPs) along the ridge at the reported location of the site (Figure 2). No STPs were placed in areas where ground disturbance was obvious or along the steep hillside.

Site 31HW264 is reported to be located in the northeast corner of Proposed Site 02. It was identified as a surface scatter of precontact quartz and quartzite debitage observed around the base of trees (Snedeker et al. 1989). Some of this debitage may have been non-cultural fragments of broken rock. None of the material was collected at the time. The site was given a Heritage Rating of II for preservation by avoidance and recommended for further work to determine its limits and subsurface integrity.

Testing to relocated site 31HW264 consisted of one transect along the crest of the ridge where Forest Service conducted their 1989 investigations. A total of 5 STPs were excavated at approximately 6-meter (ca. 20 ft) intervals. Shovel tests were shallow resulting from soil erosion caused by past logging. The surface layer is between 15 and 20 cm (ca 6 to 8 in) thick and is a very dark grayish brown (10YR 3/2) clay loam. This is followed by a brownish yellow (10YR 6/6) or yellowish brown (10YR 5/6) clay occasionally mixed with sand. This layer extends at least 40 cm (ca. 16 in) below the surface in most tests. A subsequent yellowish red (5YR 5/6) clay soil layer appears to be subsoil. Quartz and quartzite rock fragments were only seen in STP #2, which closely corresponds with the 1989 location of 31HW264. However, none of these fragments were cultural.

As a result, it is likely that site 31HW264 represents a light density of quartz and quartzite raw material. Any cultural resources observed in 1989 were discreet and not widespread. They do not represent a significant deposit of material that would be considered significant and/or provide new information on early occupations in the region. Site 31HW264 is recommended as not eligible for the National Register under any of the four criteria.

Recommendations

The archeological investigations into site 31HW264 for Proposed Borrow Site 02 in Henderson County failed to identify its location. Although raw quartz and quartzite were seen, the surface inspection and STPs yielded negative results for cultural material. The site is a minor isolated occurrence that will not provide any significant or new information. The possibility of intact archaeological deposits within the project area is very unlikely as the subsurface appears to not retain any integrity. Site 31HW264 is recommended not eligible for the National Register. No further archaeological work is required.

This project falls within a North Carolina County in which the Catawba Indian Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

Project Tracking No.

24-12-0019 Update

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☐ Photos ☐ Correspondence

Other: historic map images

Signed:

APRIL 11, 2025

C. Damon Jones
NCDOT ARCHAEOLOGIST

Date

REFERENCES CITED

Snedeker, Rodney J., Robert O. Noel, William H. Radisch, and Michael A. Harmon
1989 *Cultural Resource Survey for the Proposed Hicks Branch II Timber Sale, Compartment 62, French Broad Ranger District, Pisgah National Forest, Haywood County, North Carolina*. National Forests in North Carolina, Asheville.

United States Geological Survey (USGS)
2016 Waterville, Tennessee-North Carolina 7.5 minute quadrangle map.

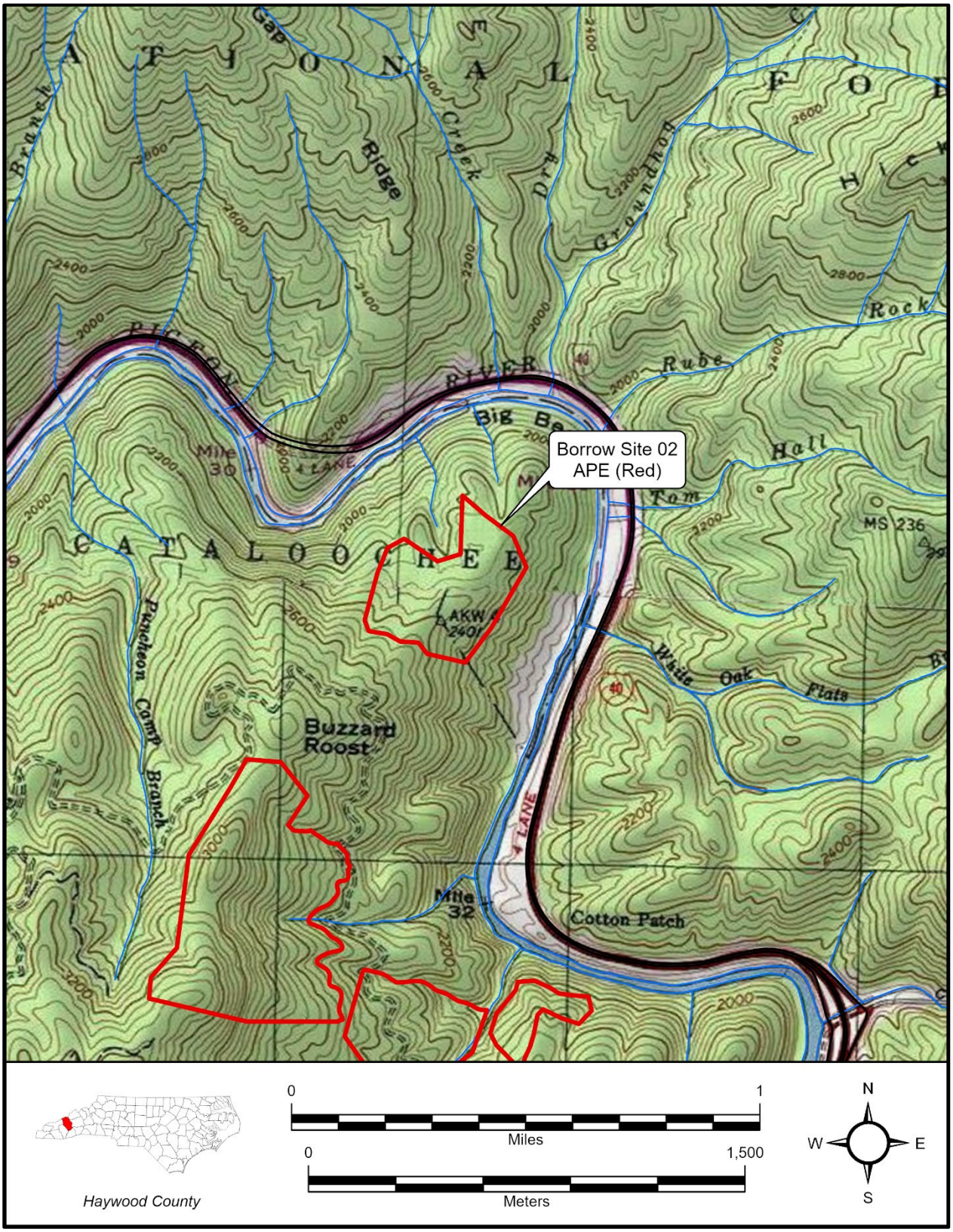


Figure 1. Topographic Setting of Borrow Site 02 for the I-40 Recovery, Waterville (2016) TN-NC USGS 7.5′ Topographic Quadrangle.

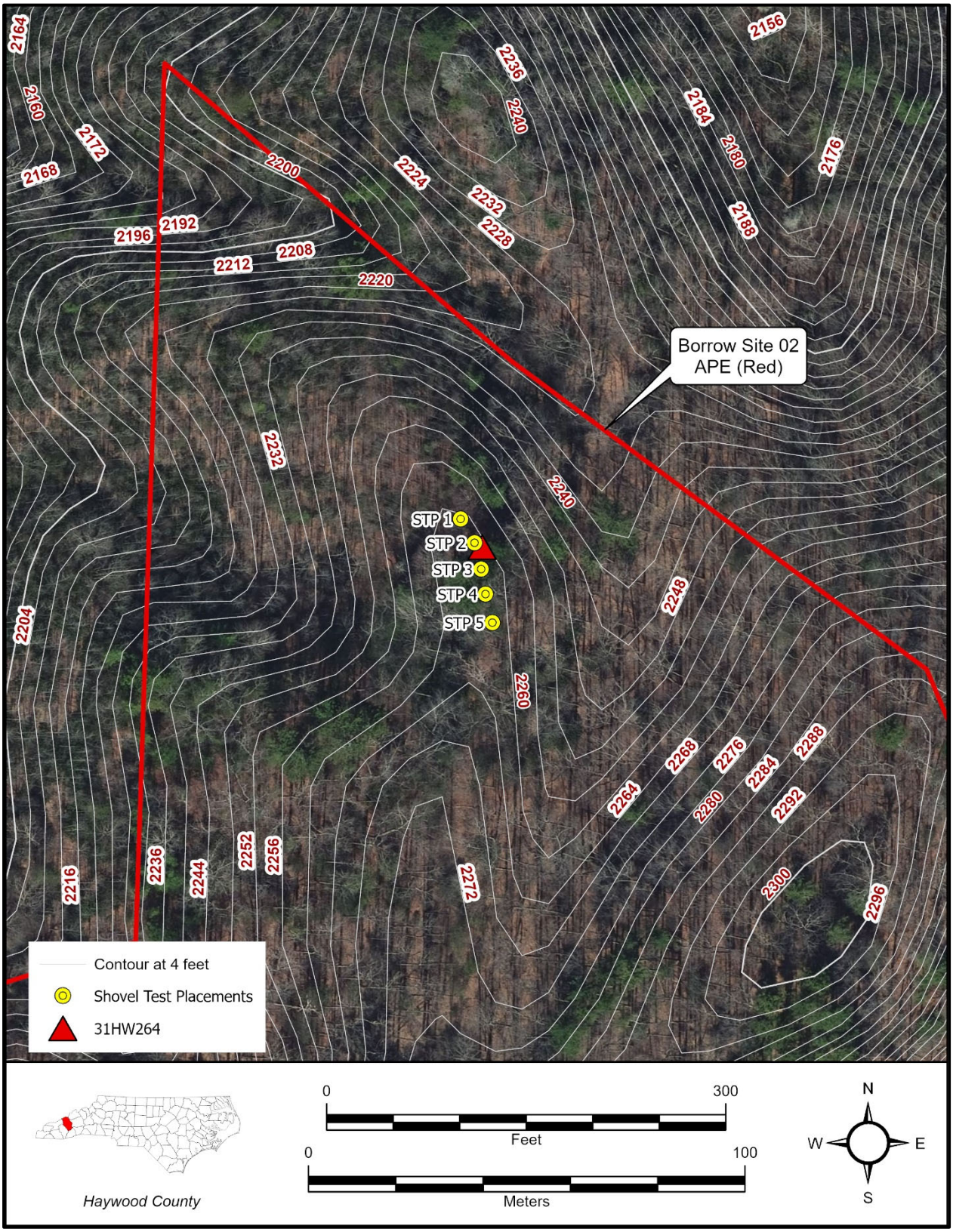


Figure 5. Aerial view of Borrow Site 02 showing STPs along the ridge and the reported location of site 31HW264.

Historic Architecture & Landscapes

24-12-0019

HISTORIC ARCHICTECTURE AND LANDSCAPES
EFFECTS REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	No TIP	***County***:	Haywood
WBS No.:	49082.2.14	***Document Type***:	CE
Fed. Aid No:	To Be Assigned	***Funding***:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	***Permit Type(s)***:	USACE

Project Description:
In response to the aftermath of Hurricane Helene, NCDOT's Division 14 proposes to repair/restore I-40 along the Pigeon River Gorge near the NC/TN state line. The project is approximately 4.5 miles of interstate with travel lanes that have been destroyed, damaged, or compromised by flooding. Repair, temporary roadway shoring, and permanent road reconstruction are required throughout the project's length. Geotechnical investigations are underway to determine the height and extent of retaining walls needed between the river and I-40 from east of the double tunnels downstream to Snowbird Creek, and possibly to the state line.

No formal design was available at the time of this review; therefore the Area of Potential Effects (APE) width was created to allow flexibility to study a range of potential, successful roadway solutions. The width is 1000 feet which allows 500 feet to either side of the recent centerline and includes Pigeon River in areas.

SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

An NCDOT architectural historian reviewed the known historic properties in proximity to the APE using HPOWeb, Haywood County GIS, and survey site files from the HPO Western Office. The intent was to "flag" specific properties that should be avoided or will require plan review with NCDOT and HPO to determine if they will have an effect on the property. The three (3) known historic properties are listed below and marked on the HPOWeb maps included in this form.

1. HW0268 Walters Dam and Hydroelectric Plant and associated tunnels (Determined Eligible 1990)
2. HW0524 Waterville Historic District (Determined Eligible, 2000)
3. NC0007 Appalachian Trail (Determined Eligible, 2009)

It is recommended to coordinate with the National Park Service's superintendent of the Appalachian National Scenic Trail and the Appalachian Trail Conservancy with regard to potential viewshed impacts to the trail.

SUPPORT DOCUMENTATION

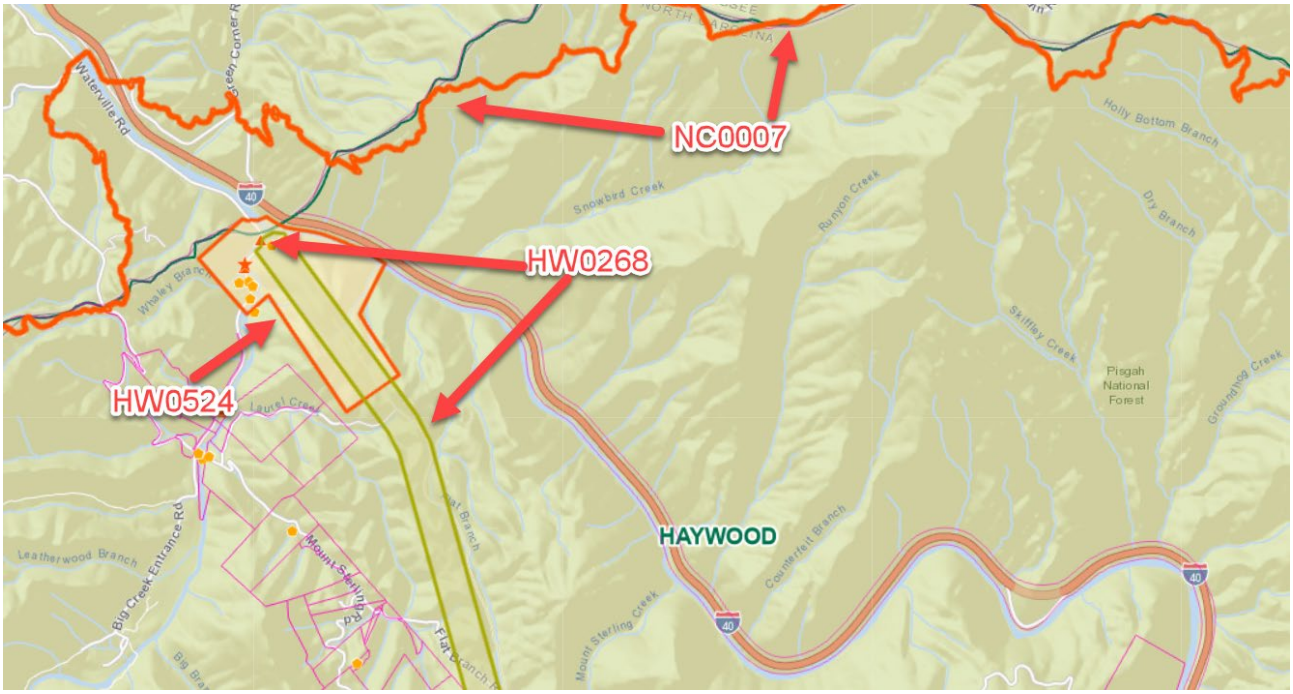
☒Map(s) ☐Previous Survey Info. ☐Photos ☐Correspondence ☐Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- **EFFECTS REQUIRED**

Mary Pope Furr **1/6/2025**

NCDOT Architectural Historian Date



Known Historic Resources- source HPOWeb

Project Tracking No. (Internal Use)

24-12-0019

HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:		***County***:	Haywood
WBS No.:	40982.2.14	***Document Type:***	Federal CE
Fed. Aid No:		***Funding***:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	***Permit Type(s)***:	USACE

Project Description:
In response to the aftermath of Hurricane Helene, NCDOT's Division 14 proposes to repair/ reconstruct I-40 at the Pigeon River Gorge. repair/restore I-40 along the Pigeon River Gorge near the NC/TN state line. The project is approximately 4.5 miles of interstate with travel lanes that have been destroyed, damaged, or compromised by flooding. Repair, temporary roadway shoring, and permanent road reconstruction are required throughout the project's length. Geotechnical investigations are underway to determine the height and extent of retaining walls needed between the river and I-40 from east of the double tunnels downstream to the state line.

No formal design was available at the time of this review; therefore the Area of Potential Effects (APE) width is the study area submitted by the project manager.

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusion
A North Carolina Department of Transportation (NCDOT) architectural historian reviewed the known historic properties in proximity to the APE using HPOWeb, Haywood County GIS, and survey site files from the HPO Western Office. There are two known historic properties in the study area: HW0268 Walters Dam and Hydroelectric Plant and associated tunnels (Determined Eligible 1990) and HW0524 Waterville Historic District (Determined Eligible, 2000). Also in the vicinity is NC0007 Appalachian Trail (Determined Eligible, 2009).

Seven borrow sites in the vicinity of the project have also been reviewed and there are no historic structures in any of the proposed borrow sites.

Outside the borrow sites, the repair work is contained within the area defined by the USFS Special Use Permit between NCDOT, which includes work in the scour zone/river.

ASSESSMENT OF EFFECTS

Property Name:	Walters Dam and Hydroelectric Plant and associated tunnels	***Status***:	Eligible
Survey Site No.:	HW0268	***PIN***:	

Effects

☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect

Explanation of Effects Determination:
The industrial setting of the dam and power plant will not be impacted by the construction of the retaining wall along I-40. The wall will be constructed of roller compacted concrete (RCC), which looks like a stair-stepped wall of concrete, and the top will be vegetated. No ROW will be required for construction of the wall. Temporary construction easements may be required for access to the site but will largely impact the scour zone.

List of Environmental Commitments:
none

Property Name:	Waterville Historic District	***Status***:	Eligible
Survey Site No.:	HW0524	***PIN***:	

Effects

☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect

Explanation of Effects Determination:
The industrial setting of the historic district will not be impacted by the construction of the retaining wall along I-40. The wall will be constructed of roller compacted concrete (RCC), which looks like a stair-stepped wall of concrete, and the top will be vegetated. No ROW will be required for the construction of the wall. Temporary construction easements may be required for access to the site but will largely impact the scour zone.

List of Environmental Commitments:
none

Property Name:	Appalachian Trail	***Status***:	Eligible
Survey Site No.:	NC0007	***PIN***:	

Effects

☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect

Explanation of Effects Determination:
The superintendent of the trail was notified of the proposed repairs to I-40 near the AT crossing of I-40 in December 2024. In January 2025 Mr. Clark expressed no concerns and requested to be kept informed about the repairs but deferred to USFS, as the land holding agency. NCDOT also

notified the AT Conservancy and received no comments. There are no physical or visual impacts to the trail.
List of Environmental Commitments: none

SUPPORT DOCUMENTATION

FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

☒Map(s) ☐Previous Survey Info. ☒Photos ☐Correspondence ☒Design Plans

FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

Mary Pope Furr 5/22/2025

NCDOT Architectural Historian Date

Renee Gledhill-Earley 5/22/2025

State Historic Preservation Office Representative Date

5/22/2025

Federal Agency Representative Date


30 ft.
Roller compacted concrete slope with vegetated top.

Tribal Coordination

Turchy, Michael A

From: Section106 <Section106@muscogeenation.com>
Sent: Thursday, December 19, 2024 10:02 AM
To: Turchy, Michael A
Subject: [External] Re: Project Notification and Comment Request | NCDOT | Permanent Repairs for Hurricane Helene Damaged I-40.

Good morning Michael,

Thank you for consulting us regarding this project. Cocke and Haywood Counties are within Muscogee Nation's area of historic interest and is of importance to us. After review, the Muscogee Nation is unaware of any Muscogee sacred sites, burial grounds, or significant cultural resources located within the immediate project area. However, as the project is located in an area that is of general historic interest to the Tribe, we request that work be stopped and our office contacted immediately if any Native American cultural materials are encountered. This stipulation should be placed on the construction plans to ensure contractors are aware of it. Please feel free to contact me with any further questions or concerns.

Mvto,

Logan Guthrie
Cultural Technician
Historic and Cultural Preservation Department
The Muscogee (Creek) Nation
P.O. Box 580 | Okmulgee, OK 74447
T (918) 732-7759 | F (918) 758-0649
lguthrie@mucogeenation.com
www.MuscogeeNation.com

From: Turchy, Michael A <maturchy@ncdot.gov>
Sent: Wednesday, December 18, 2024 11:36 PM
To: Section106 <section106@muscogeenation.com>
Subject: Project Notification and Comment Request | NCDOT | Permanent Repairs for Hurricane Helene Damaged I-40.

Please find attached project notification and comment request for the permanent repairs to Interstate 40 in Haywood County, North Carolina in response to damage caused by Hurricane Helene.
Thank you for your time in reviewing and commenting on the information.
-Michael

Michael Turchy
Environmental Coordination and Permitting [ECAP] Group Leader

Environmental Analysis Unit
North Carolina Department of Transportation

919 707 6157 office
919 818 7427 mobile
maturchy@ncdot.gov

1598 Mail Service Center (Mail)
Raleigh, NC 27699-1598

1000 Birch Ridge Drive (Delivery)
Raleigh, NC 27610

NEPA Document

2/2/2025 CE

Type I or II Categorical Exclusion Action Classification Form

STIP Project No.	**Hurricane Helene Repairs to I-40**
WBS Element	18314.1044057.PR01
Federal Project No.	Federal Aid Number

A. Project Description:

The project activities include the initial emergency repairs to aid with reopening two lanes of traffic (one lane in each direction) on the former westbound lanes of I-40 from Mile Marker (MM) 0 at the North Carolina/Tennessee state line to approximately MM 7, Exit 7 for Cold Springs Creek Road (SR 1397). Also included are the geotechnical investigations, other engineering investigations, and all associated access needs for the initial emergency construction activities. Safely reopening two lanes of I-40 requires NCDOT to shore up the eroding and failing slopes that were scoured out by the Hurricane Helene-associated flows of the Pigeon River.

B. Description of Need and Purpose:

NCDOT's needs include emergency repairs to the slopes, pavement, and other infrastructure associated with this section of the I-40 corridor as well as substantial geotechnical investigations to develop designs for the permanent repairs of this section of the I-40 corridor. Due to the nature of the landscape and instability, a construction access road parallelling the river and the Interstate will need to be constructed. This access road will facilitate the geotechnical borings to be conducted in the dry – bored through the access road itself, or adjacent uplands – and not within the Pigeon River.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

D. Proposed Improvements:

9. Facilities damaged by an incident resulting in an emergency…
24. Localized geotechnical and other investigation…
25. Environmental restoration…

E. Special Project Information:

Due to the wide scour- zone that was created during Hurricane Helene, NCDOT has calculated impacts to include the entire width of the scour zone, as the river is frequently changing course within this zone. Impacts are anticipated to be substantially lower than shown in the figures. NCDOT anticipates that it is likely this access road will be retained for the construction of the permanent repair solution.

This access road will facilitate the geotechnical borings to be conducted in the dry – bored through the access road itself, or adjacent uplands – and not within the Pigeon River. The height of the access road has been minimized to be tall enough to maintain a dry work area for a 2-year flood event, placing the height of this causeway at approximately 10 feet. The width of the access road has been minimized to be just wide enough to accommodate two haulers safely passing one another.

F. Project Impact Criteria Checklists:

F2. Ground Disturbing Actions – Type I (Appendix A) & Type II (Appendix B)

For proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22, 23, 24, 25, 26, 27, 28, &/or 30; &/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B), answer the project impact threshold questions (below) and questions 8–31.

- If any question 1-7 is checked "Yes" then NCDOT certification for FHWA approval is required.
- If any question 1-30 is checked "Yes" then additional information will be required for those questions in Section G.

Source documents should be cited for each question as appropriate. If no source is needed or available, denote as "n/a". Please note that some "no" answers should have a corresponding email/memo/report cited for that NCDOT discipline. Project reports or memos/emails should be linked to their location on the project's Precon site; other publications (e.g. the STIP) can be linked directly. Example: (Source: NCDOT HE-0001 NRTR [HE-0001_NRTR.pdf, 2022])

PROJECT IMPACT THRESHOLDS (FHWA signature required if any of the questions 1-7 are marked "Yes.")		Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) in which a "likely to adversely affect determination" has been made? (Source: Coordination with USFWS and IPaC Review, 2025)	☐	☒
2	Does the project result in effects subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)? (Source: Coordination with USFWS and IPaC Review, 2025)	☐	☒
3	Does the project generate substantial controversy or public opposition, regarding human and/or natural environment concerns, following appropriate public involvement? (Source: N/A)	☐	☒
4	Does the project cause disproportionately high and adverse effects relative to low-income and/or minority populations? (Source: NCDOT [DIST Memo, 2025])	☐	☒
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition? (Source: N/A)	☐	☒
6	Does the project require an Individual Section 4(f) approval? (Source: USFS Coordination, 2025)	☐	☒
7	Does the project result in adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or result in an adverse effect on a National Historic Landmark (NHL)? (Source: Ongoing SHPO Coordination, 2025)	☐	☒
8	Is an Endangered Species Act (ESA) determination unresolved or resolved utilizing a Section 7 programmatic agreement? Include in Section G any utilization of a Section 7 Programmatic Agreement. (Source: Coordination with USFWS and IPaC Review, 2025)	☐	☒
9	Is the project located in anadromous fish spawning waters? (Source: N/A)	☐	☒
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)? (Source: ATLAS Screening, 2025)	☐	☒
11	Does the project impact waters of the United States in any of the designated mountain trout streams? (Source: ATLAS Screening, 2025)	☐	☒
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit? (Source: USACE Coordination, 2025)	☐	☒
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility? (Source: Duke Energy Coordination, 2025)	☐	☒

14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects findings other than a No Effect, including archaeological remains? No matter the effect finding, list any commitments (conditions) in Section I made in association with the effect finding detailed in Section G. (Source: xxx [report, year])	☒	☐
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.? (Source: ATLAS Screening, 2025)	☐	☒
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A? (Source: Internal coordination with NCDOT Hydraulics, 2025)	☒	☐
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)? (Source: ATLAS Screening, 2025)	☐	☒
18	Does the project require a U.S. Coast Guard (USCG) permit? (Source: ATLAS Screening, 2025)	☐	☒
19	Does the project involve Coastal Barrier Resources Act (CBRA) resources? (Source: ATLAS Screening, 2025)	☐	☒
20	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River? (Source: ATLAS Screening, 2025)	☐	☒
21	Does the project impact federal lands (e.g., U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands? (Source: USFS Coordination, 2025)	☒	☐
22	Does the project involve any changes in access control to the interstate (modification or construction of an interchange)? (Source: N/A)	☐	☒
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness? (Source: N/A)	☐	☒
24	Will maintenance of traffic or detours cause substantial disruption? (Source: N/A)	☐	☒
25	Is the project inconsistent with the NCDOT's federally approved 4-year STIP or NCDOT's BMIP, and where applicable, the Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP)? (Source: N/A)	☐	☒
26	Does the project require the acquisition of lands under the protection of the Land and Water Conservation Fund, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, Dedicated Nature Preserves, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property? (Source: USFS Coordination, 2025)	☒	☐
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)? (Source: ATLAS Screening, 2025)	☐	☒
28	Does the project "use" Section 4(f) property, and/or result in a *de minimis* determination? (Source: USFS Coordination, 2025)	☐	☒
29	Is the project considered a Type I under the NCDOT Noise Policy? (Source: N/A)	☐	☒
30	Does the project impact VAD-enrolled property, or prime or important farmland soil, as defined by the Farmland Protection Policy Act (FPPA)? (Source: ATLAS Screening, 2025)	☐	☒

G. Additional documentation as required from Section F; documentation should address the context and intensity (or severity) of the impact. (Required for all questions marked 'Yes.')

8. Section 7 coordination between NCDOT, FHWA and USFWS is ongoing. These initial activities are considered to be No Effect; future activities for the permanent repairs are currently being considered under formal consultation with USFWS and are anticipated to be resolved soon.

14. *awaiting 106 effects discussion tomorrow*

16. The activities proposed herein are primarily temporary; any permanent floodplain alterations will be documented at a later date to support the permanent repairs to the facility.

21. & 26. Interstate 40 exists within a highway easement in the federally-owned Pisgah National Forest. NCDOT is working closely with the US Forest Service and FHWA to document any potential effects to the National Forest. These initial activities are not anticipated to affect the Forest; NCDOT will request necessary permitting from the USFS if any are identified. No federal land transfers are known at this time.

H. Categorical Exclusion Approval:

STIP Project No.	**Hurricane Helene Repairs to I-40**
WBS Element	18314.1044057.PR01
Federal Project No.	Federal Aid Number

Prepared By:

2/1/2025
Date

DocuSigned by:
Kat Bukowy
03145D025F1A4AD...
Kat Bukowy, Environmental Planner
HNTB North Carolina, PC

Prepared For: Josh Deyton, PE, Division 14 Construction Engineer

Reviewed By:

2/1/2025
Date

DocuSigned by:
Marissa Cox
A47BC39EA6B347F...
Marissa Cox, Western Regional Team Lead
North Carolina Department of Transportation

☑ **Approved**

- If NO grey boxes are checked in Section F, NCDOT approves the Type I or Type II Categorical Exclusion.

☐ **Certified**

- If ANY grey boxes are checked in Section F, NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.

2/2/2025
Date

DocuSigned by:
CA084B4AC412432...
John Jamison, PWS Environmental Policy Unit Head
North Carolina Department of Transportation

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

Date *for* Yolonda K. Jordan, Division Administrator
Federal Highway Administration

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VIII of the NCDOT-FHWA CE Programmatic Agreement for more details). Upload final documentation to ATLAS workbench and add commitments to the green sheet and Commitments dashboard.

Type III Categorical Exclusion Action Classification Form

STIP Project No.	**Hurricane Helene Emergency Repairs to I-40 in Haywood County**
WBS Element	18314.1044057.PR01
Federal Project No.	ER24381

A. Project Description:

The project includes activities necessary for the permanent repair of Interstate-40 (I-40) in the Pigeon River Gorge in Haywood County, from Mile Marker (MM) 0 at the North Carolina/Tennessee state line to approximately MM 7, Exit 7 for Cold Springs Creek Road (SR 1397) caused by Hurricane Helene. The activities include the establishment of borrow sites and access routes including both existing roads and temporary haul roads, staging areas, and parking. The approved borrow sites will be in areas of land that will have vegetation and soil removed and rock extracted. The potential borrow sites are at locations previously approved for geotechnical borings by the U. S. Forest Service (USFS) within the Pisgah National Forest, southwest of the Pigeon River and I-40. Temporary haul roads will be constructed to access approved borrow sites.

B. Description of Need and Purpose:

NCDOT needs to establish an ample, stable, and efficient source of borrow material for the permanent emergency repairs to this section of the I-40 corridor. Additional material will also be required to stabilize the slopes associated with the new retaining walls during construction. Hauling materials from off-site quarries will result in substantially reduced production rates. Off-road trucks could be used from USFS sites with more than double the capacity per haul of on-road trucks, and with a much-reduced haul distance (1-3 miles vs 20-50 miles) without live traffic interference and delays. It is estimated that hauling the 3 million cubic yards of required material to rebuild I-40 from on-site borrow locations within the Forest would only require 500 trips using off-road trucks whereas acquiring the same quantities from off-site quarries would require 1200 trips. Without the availability of the on-site USFS material sourcing, the project duration is estimated to be three times longer at three times the cost to respond to this emergency event.

C. Categorical Exclusion Action Classification:

Type III

D. Proposed Improvements:

I-40 emergency permanent repair – establishment of borrow locations on Pisgah National Forest.

E. Special Project Information:

The biggest challenge to rebuilding I-40 is sourcing aggregate materials in this remote area surrounded by the US Forest Service (USFS) Pisgah National Forest and Great Smoky Mountains National Park. Since October, the contractor tasked with rebuilding I-40 has been investigating available borrow sites but has been unable to locate acceptable sources outside of the National Forest that are within a reasonable distance. FHWA and NCDOT have obtained a special use permit from USFS to conduct geotechnical borings within seven specified locations to determine availability and quantities of appropriate aggregate. Following results from the geotechnical boring, one or more sites will be identified as a borrow site location(s), as all potential sites are not anticipated to be needed. NCDOT and FHWA will work with the USFS on avoidance, minimization, and mitigation measures to restore borrow sites, access routes, parking, and staging areas upon project completion. Sourcing aggregate materials near the project will:

1. *Reduce Project Duration and Cost* – An estimated 3 million cubic yards of material is need for the restoration of I-40. Hauling materials from off-site quarries will result in substantially reduced production rates. Off-road trucks could be used from USFS sites with more than double the capacity per haul of on-road trucks, and with a much-reduced haul distance (1-3 miles vs 20-50 miles) without live traffic interference and delays. It is estimated that hauling the required material to rebuild I-40 from on-site borrow locations within the Forest would only require 500 trips using off-road trucks whereas acquiring the same quantities from off-site quarries would require 1200 trips. Without the availability of the on-site USFS material sourcing, the project duration is estimated to be three times longer at three times the cost to the FHWA Emergency Relief Program funding.

2. *Safety* – I-40 was reopened to traffic in a one lane in each direction pattern with a reduced speed limit of 35 mph along 15 miles in North Carolina and Tennessee. If on-road trucking were required, it will introduce over 300,000 dump trucks into this traffic pattern as they travel to and from the site along open highways for an estimated project duration of 2-3 years.

3. *Mitigation Measures* – NCDOT and FHWA are confident they can meet the interests of the USFS in mitigating the effects of on-site Forest borrow sources. As the permanent steward of the Forest Lands, the USFS has reasonable concerns regarding natural resource impacts, restoration of any affected sites, and public safety. The USFS will provide access to approved borrow locations in the Pisgah National Forest for NCDOT to utilize for the permanent repair of I-40 from Mile Marker (MM) 0 at the North Carolina/Tennessee state line to approximately MM 7, Exit 7 for Cold Springs Creek Road (SR 1397) by issuing a Temporary Construction Easement (TCE) to FHWA. The Letter of Consent will include required stipulations for managing forest resources.

F. Project Impact Criteria Checklists:

F3. Type III Actions

For proposed improvement(s) that fit Type III Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix C), answer the questions below.

- Qualified NCDOT staff will certify the Categorical Exclusion for FHWA review/approval.
- If any questions are marked "Yes" then additional information will be required for those questions in Section G.

Source documents should be cited for each question as appropriate. If no source is needed or available, denote as "n/a". Please note that some "no" answers should have a corresponding email/memo/report cited for that NCDOT discipline. Project reports or memos/emails should be linked to their location on the project's Precon site; other publications (e.g. the STIP) can be linked directly. Example: (Source: NCDOT HE-0001 NRTR [HE-0001_NRTR.pdf, 2022])

		Yes	No
1	Does the project involve potential effects to Threatened or Endangered species listed by the US Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)? (Source: USFWS Biological and Conference Opinion, 2/28/25)	☒	☐
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)? (Source: Internal Coordination w/EAU-ECAP, Surveys completed Jan 27-28, 2025)	☐	☒
3	Does the project generate substantial controversy or public opposition regarding human or natural environment impacts, on environmental grounds, following appropriate public involvement? (Source: N/A)	☐	☒
4	Does the project involve substantial residential or commercial displacements, or substantial right of way acquisition? (Source: DIST Memo, USFS Coordination, 2025)	☐	☒
5	Does the project "use" Section 4(f) property, and/or result in a *de minimis* determination? (Source: USFS 4f determination letter, 2025)	☐	☒
6	Does the proposed project require a Land Use Scenario Assessment (LUSA) based on the NCDOT community studies screening tool? (Source: N/A)	☐	☒
7	Does the project impact anadromous fish spawning waters? (Source: ATLAS Screening , 2025)	☐	☒
8	Does the project impact waters classified as Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply Watershed Critical Areas, 303(d)-listed impaired water bodies, buffer rules, or submerged aquatic vegetation (SAV)? (Source: ATLAS Screening , 2025)	☒	☐
9	Does the project impact waters of the United States in any of the designated mountain trout streams? (Source: ATLAS Screening, 2025)	☒	☐
10	Does the project require a US Army Corps of Engineers (USACE) Individual Section 404 Permit? (Source: USACE Coordination, 2025)	☐	☒
11	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility? (Source: Duke Energy Coordination, 2025)	☐	☒
12	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains? No matter the effects determination detailed in Appendix G, list commitments (conditions) for the determination in Appendix I. (Source: USFS and NCHPO coordination, January 31, 2025, No survey required forms)	☒	☐
13	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.? (Source: GeoEnvironmental Impact Evaluation, 2025)	☐	☒
14	Does the project require work encroaching and adversely effecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A? (Source: Internal coordination with NCDOT Hydraulics, 2025)	☐	☒

15	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Areas of Environmental Concern (AEC)? (Source: ATLAS Screening, 2025])	☐	☒
16	Does the project require a US Coast Guard (USCG) permit? (Source: ATLAS Screening, 2025)	☐	☒
17	Does the project involve Coastal Barrier Resource Act (CBRA) resources? (Source: ATLAS Screening, 2025)	☐	☒
18	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River? (Source: ATLAS Screening, 2025)	☐	☒
19	Does the project impact federal lands (e.g., US Forest Service (USFS), US Fish and Wildlife Service (USFWS), etc.) or Tribal Lands? (Source: USFS Coordination, USFS Special Use Permit, 2025)	☒	☐
20	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate? (Source: N/A)	☐	☒
21	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness? (Source: N/A)	☐	☒
22	Will maintenance of traffic or detours cause substantial disruption? (Source: N/A)	☐	☒
23	Is the project inconsistent with the NCDOT's federally approved 4-year STIP or NCDOT's BMIP, and where applicable, the Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP)? (Source: NCDOT Noise Policy)	☐	☒
24	Does the project require the acquisition of lands under the protection of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, TVA, Tribal Lands, or other unique areas or special lands that were acquired in fee or assessment with public-use money and have deed restrictions or covenants on the property? (Source: USFS Coordination, 2025)	☐	☒
25	Does the project involve Federal Emergency Management Act (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)? (Source: ATLAS Screening, 2025)	☐	☒
26	Is the project considered a Type I under the NCDOT's Noise Policy? (Source: NCDOT Noise Policy)	☐	☒
27	Does the project impact VAD-enrolled property, or prime or important farmland soil, as defined by the Farmland Protection Policy Act (FPPA)? (Source: ATLAS Screening, 2025)	☐	☒

G. Additional documentation as required from Section F; documentation should address the context and intensity (or severity) of the impact. (Required for all questions marked 'Yes.')

1) USFWS issued a Combined Biological Opinion and Consultation on February 28, 2025. NCDOT has included the necessary Terms & Conditions to the Project Commitments.

2) A desktop-GIS assessment of the project study area, as well as the area within a 1.13-mile radius of the project limits, was performed on January 7, 2025, using color aerials. One water body large enough or sufficiently open to be considered a potential feeding source was identified at the western project terminus. As a result, a survey of the project study area from the western project termini (Tennessee state line) extending 1.0 mile southeast into North Carolina as well as the area within 660 feet of the project limits in this portion was conducted on January 27 & 28, 2025. No nests or bald eagles were observed within the survey extent; however multiple bald eagles were observed near the eastern terminus of the project study area during the field visit. Additionally, a review of the NHP database updated January 3, 2025, revealed no known occurrences of this species within 1.13 miles of the project study area.

5) In a letter to FHWA dated March 4, 2025, the USFS stated it does not consider the subject portions of the Forest to be a 4(f) resource.

8) ATLAS Screening was performed on 1/17/2025 and the Project Development Hydro Report identified Big Creek as a High Quality Water. Any impacts to Big Creek, will be reviewed during project permitting.

9) ATLAS Screening was performed on 1/17/2025 and the Project Development Hydro Report identified Big Creek as a Trout Waters. Any impacts to Big Creek, will be reviewed during project permitting.

13) There are no known historic properties within the borrow site areas. NCDOT Archaeology staff have completed a No Effect (No Survey Required) finding for the seven borrow sites based on close coordination with U. S. Forest Service (USFS), North Carolina Historic Preservation Office (HPO), and Office of State Archaeology (OSA) staff. These agencies concluded that no further archaeological work is needed at this time.

However, Site 31HW264 has been previously identified within Proposed Site 14 but is unevaluated for NRHP eligibility. NCDOT has committed to evaluating 31HW264 for the NRHP if Proposed Site 14 is selected and 31HW264 cannot be avoided. If the site cannot be avoided and is subsequently evaluated and determined eligible, a plan for mitigation will be developed in coordination with FHWA, the USFS, and OSA.

Tribal consultation letters were sent in association with the I-40 permanent repairs in December 2024. Of the five tribes with interest in the geographic area that were contacted, only one responded (Muscogee Creek Nation), which shared no concerns. Additional tribal consultation letters were sent in March 2025 describing the addition of seven potential borrow sites to the proposed undertaking. Should any responses received within the 30-day comment period warrant modification to the conclusions reached in this CE, it will be revised accordingly at that time.

In the event of an unanticipated discovery during construction activities, all work in the vicinity of the find will stop. Archaeologists with NCDOT and Forest Service will be contacted immediately to assess the discovery and report the findings to SHPO and other agencies.

20) The USFS authorized NCDOT to conduct geotechnical borings at seven potential borrow locations in the Pisgah National Forest subject to the terms of a special use permit (the permit) issued on February 22, 2025.

FHWA and NCDOT will coordinate with the USFS to obtain approval to access and utilize borrow sites via a Temporary Construction Easement (TCE). The Letter of Consent will include required stipulations for managing forest resources during borrow operations. Additionally, NCDOT and FHWA will work with the USFS on avoidance, minimization, and mitigation measures to restore

borrow sites, access routes, parking, and staging areas upon project completion, and on long-term compensatory mitigation, as highlighted in the green sheet commitments.

Following the results of the geotechnical borings, NCDOT will submit location information, acreage, anticipated clearing acreage, and visual figures/maps of the chosen borrow locations to USFS. FHWA and NCDOT will coordinate with the USFS on any updated analysis or resource stipulations that are needed following the finalization of borrow areas.

NCDOT will conduct an analysis of wildlife Species of Conservation Concern for the borrow site locations and will coordinate with the USFS if additional species protections are needed to maintain habitat characteristics required for species persistence.

H. Categorical Exclusion Approval:

STIP Project No.	**Hurricane Helene Emergency Repairs to I-40 in Haywood County**
WBS Element	18314.1044057.PR01
Federal Project No.	ER24381

Prepared By:

3/14/2025

Marissa Cox, Environmental Policy Unit
North Carolina Department of Transportation

Prepared For: Josh Deyton, PE, Division 14 Construction Engineer

Reviewed By:

3/14/2025

Morgan Weatherford, Environmental Policy Unit
North Carolina Department of Transportation

☐ **Approved**

☑ **Certified**

- If classified as Type III Categorical Exclusion.

3/14/2025
Date

John Jamison, PWS Environmental Policy Unit Head
North Carolina Department of Transportation

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

3/14/2025
Date

for Yolonda K. Jordan, Division Administrator
Federal Highway Administration

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VIII of the NCDOT-FHWA CE Programmatic Agreement for more details). Upload final documentation to ATLAS workbench and add commitments to the green sheet and Commitments dashboard.

PROJECT COMMITMENTS

I-40 Helene Repairs near the TN State Line
Haywood County
Federal Aid Number: ER24381

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

FHWA/NC Division - Access to Borrow Sites Pisgah National Forest via Temporary Construction Easement (TCE) from U. S. Forest Service

FHWA and NCDOT will coordinate with the U. S. Forest Service (USFS) to obtain approval to access and utilize borrow sites via a Temporary Construction Easement (TCE). The Letter Consent will include stipulations for the creation, operation, and restoration of the borrow areas, access routes, parking and staging areas. FHWA and NCDOT will coordinate with the USFS on any updated analysis or resource stipulations that are needed following the finalization of borrow areas.

Division 14 Environmental Staff - Archaeological Resources and Borrow Site Selection

The NRHP eligible 31HW596 is located outside the limits of the proposed borrow site; however, it is adjacent to an access road that may be used. If the road is to be improved to allow for heavy machinery and vehicles, site 31HW596 will need to be avoided. Orange construction fencing will be placed between the site and the access road with signs restricting access. Signs will not refer to the restrictive area as an archaeological site, but as a sensitive area. No construction activities or impacts are to occur at site 31HW596. A U. S. Forest Service or NCDOT archaeologist will inspect the fence after it is established.

Division 14 Environmental Staff - Archaeological Resources and Borrow Site Selection

Site 31HW264 is located within a portion of the northeastern corner of Proposed Borrow Site 14. If Proposed Borrow Site 14 is selected, Site 31HW264 will either be avoided or evaluated for the National Register of Historic Places (NRHP) before work proceeds within its boundaries. If the site cannot be avoided and is subsequently determined eligible for the NRHP, NCDOT will coordinate with FHWA, the North Carolina State Historic Preservation Office (SHPO), and any interested federally-recognized tribes as appropriate to develop appropriate mitigation before work commences within its boundaries.

Division 14 Environmental Staff - Bat Avoidance and Minimization Measures

NCDOT commits to the following measures:

- To maximum extent possible, NCDOT will avoid blasting, night work, and tree clearing during the bat active season (March 15 and November 15, with priority on avoidance of the May 15 – July 31 pup season); however, given constraints with the project timeline, portions of those activities may occur when listed/proposed bats are within the action area.
- No new lighting will be added to the action area. For temporary construction lighting between March 15 and November 15: Limit all construction-related lighting to whatever is necessary to maintain safety in active work areas.
-Where possible, direct lighting at the active work area and away from the surrounding landscape and river corridor. Use shielding when possible. Turn lights off when not needed.

Division 14 Environmental Staff - Bat Fund Contribution

Bat - Tree Clearing Bat Fund Contribution: For any clearing that occurs from April 1 - November 15, the
NCDOT will contribute a payment to the N.C. Nongame Terrestrial Species Fund (or other Service-approved Fund) in support of the recovery of federally protected bat species.
Bat - Culvert Alteration Bat Fund Contribution: For individual culverts that are LAA bat species during culvert work, that is, through direct culvert alterations or close proximity to high decibel/percussive activities, the NCDOT will contribute a payment to the N.C. Nongame Terrestrial Species Fund (or other Service-approved Fund) in support of the recovery of federally protected bat species.

Environmental Policy Unit - Develop a Memorandum of Agreement

FHWA, NCDOT, and U. S. Forest Service will coordinate to develop of a Memorandum of Agreement/Understanding for compensatory mitigation to formalize large scale mitigations due to impacts to USFS lands.

Division 14 Environmental Staff - Endangered Species General Avoidance and Minimization Measures

NCDOT will:
- Ensure all operators, employees, and contractors working in areas of suitable habitat for federally listed/proposed species are aware of all NCDOT environmental commitments, including all applicable AMMs and all associated NCDOT guidance documents.
- Best management practices (BMP) and sediment and erosion control (SEC) measures will be utilized to prevent non-point source pollution, control storm water runoff, and minimize sediment damage to avoid and reduce overall water quality degradation.
- Areas of disturbance, such as tree clearing, grubbing, and grading, will be limited to the maximum extent possible.
- Borrow pits and waste sites should only be created when needed and be no larger than necessary to minimize noise and tree clearing impacts.

Division 14 Environmental Staff - Incidental Take for Endangered Species

Total project tree clearing will be limited to 187 acres. If exceeded Sec. 7 consultation will need to be reinitiated.

EAU – Cultural Resources - Section 106 Tribal Coordination

Construction authorization will not be requested until Section 106 consultation requirements have been satisfied for the federally-recognized tribes that have expressed an interest in the geographic area (Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee [Creek] Nation).

Division 14 Environmental Staff - Unanticipated discovery of an archaeological resource during construction

In the event of an unanticipated discovery of an archaeological resource during construction activities, all work in the vicinity of the find will stop. Archaeologists with NCDOT and U.S. Forest Service will be contacted immediately to assess the discovery and report the findings to SHPO and other agencies.

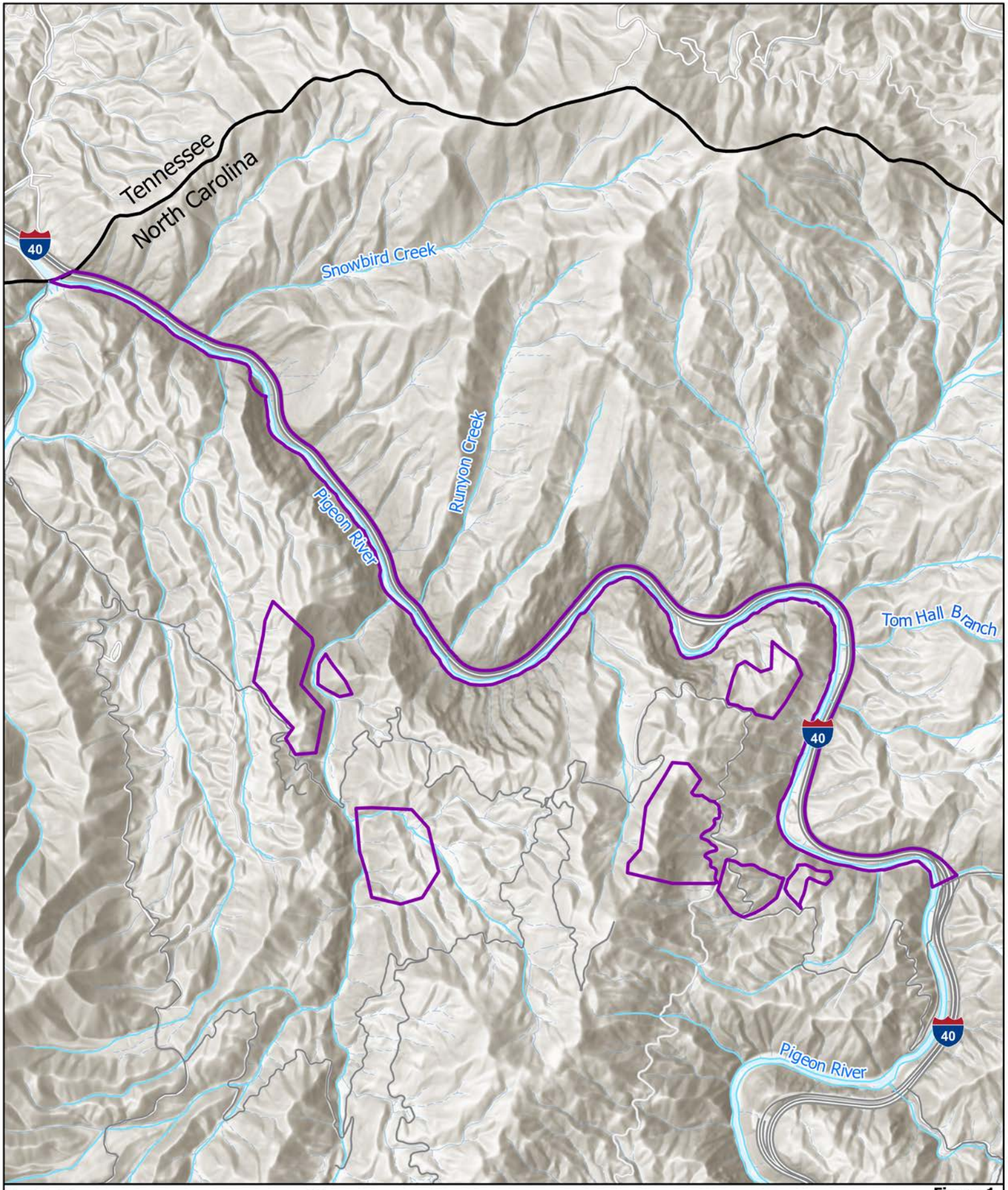


Figure 1.
Study Area Map
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Sources: NCDOT, Esri ArcGIS Basemap, HNTB. 2025.

Authorization ID: APP123601
Contact Name: NCDOT
Expiration Date: 12/31/2025
Use Code: 561

FS-2700-4 (09/2020)
OMB 0596-0082

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

SPECIAL USE PERMIT

Authority: ORGANIC ADMINISTRATION ACT June 4, 1897

NCDOT of 1000 Birch Ridge Drive Raleigh,NC 27610 (hereinafter "the holder") is authorized to use or occupy National Forest System lands in the National Forests in North Carolina or Appalachian Ranger District unit of the National Forest System, subject to the terms of this special use permit (the permit).

The permit area is shown on the map attached as Appendix A. This and any other appendices to this permit are hereby incorporated into this permit.

This permit issued for the purpose of:

Geo-technical boring at up to 7 locations southwest of the Pigeon River, along or adjacent to Buzzard's Roost Rd (NFR 288) and Old Buzzard Roost Rd (NFR 289). Each site will consist of 16-foot-wide roadways for equipment access and approximately 30 drill locations (per site) to a depth of 50 feet.

Appendix A: Map
Appendix B: Operations and Restoration Plan
Appendix C: Boring Site Access Summary and Site-Specific Stipulations

I. GENERAL TERMS

A. AUTHORITY. This permit is issued pursuant to the ORGANIC ADMINISTRATION ACT June 4, 1897, and 36 CFR Part 251, Subpart B, as amended, and is subject to their provisions.

B. AUTHORIZED OFFICER. The authorized officer is the Forest or Grassland Supervisor, a District Ranger, or the Station, Institute, or Area Director with delegated authority pursuant to Forest Service Manual 2700.

C. TERM. This permit shall expire at midnight on **12/31/2025**. Expiration of this permit shall not require notice, a decision document, or any environmental analysis or other documentation from the date of issuance.

D. CONTINUATION OF USE AND OCCUPANCY. This permit is not renewable. Prior to expiration of this permit, the holder may apply for a new permit for the use and occupancy authorized by this permit. Applications for a new permit must be submitted at least 6 months prior to expiration of this permit. Issuance of a new permit is at the sole discretion of the authorized officer. At a minimum, before issuing a new permit, the authorized officer shall ensure that (1) the use and occupancy to be authorized by the new permit is consistent with the standards and guidelines in the applicable land management plan; (2) the type of use and occupancy to be authorized by the new permit is the same as the type of use and occupancy authorized by this permit; and (3) the holder is in compliance with all the terms of this permit. The authorized officer may prescribe new terms when a new permit is issued.

E. AMENDMENT. This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms that may be required by law, regulation, directive, the applicable forest land and resource management plan, or projects and activities implementing the land management plan pursuant to 36 CFR Part 218.

F. COMPLIANCE WITH LAWS, REGULATIONS, AND OTHER LEGAL REQUIREMENTS. In exercising the rights and privileges granted by this permit, the holder shall comply with all present and future federal laws and regulations and all present and future state, county, and municipal laws, regulations, and other legal requirements that apply to the permit area, to the extent they do not conflict with federal law, regulation, or policy. The Forest Service assumes no responsibility for enforcing laws, regulations, and other legal requirements that fall under the jurisdiction of other governmental entities.

G. NON-EXCLUSIVE USE. The use or occupancy authorized by this permit is not exclusive. The Forest Service reserves the right of access to the permit area, including a continuing right of physical entry to the permit area and the authorized facilities and improvements for inspection, monitoring, or any other purpose consistent with any right or obligation of the United States under any law or regulation. The Forest Service reserves the right to allow others to use the permit area in any way that is not inconsistent with the holder's rights and privileges under this permit, after consultation with all parties involved. Except for any restrictions that the holder and the authorized officer agree are necessary to protect the installation and operation of authorized temporary improvements, the lands and waters covered by this permit shall remain open to the public for all lawful purposes.

H. ASSIGNABILITY. This permit is not assignable or transferable.

II. IMPROVEMENTS

A. LIMITATIONS ON USE. Nothing in this permit gives or implies permission to build or maintain any structure or facility or to conduct any activity, unless specifically authorized by this permit. Any use not specifically authorized by this permit must be proposed in accordance with 36 CFR 251.54 or 251.61. Approval of such a proposed use through issuance of a new permit or permit amendment is at the sole discretion of the authorized officer.

B. DRAWINGS. All drawings for development, layout, construction, reconstruction, or alteration of improvements in the permit area, as well as revisions to those drawings, must be prepared by a professional engineer, architect, landscape architect, or other qualified professional acceptable to the authorized officer. These drawings and drawing revisions must have written approval from the authorized officer before they are implemented. The authorized officer may require the holder to furnish as-built drawings, maps, or surveys upon completion of the work.

C. CONSTRUCTION. Any construction authorized by this permit shall commence by February 24, 2025, and shall be completed by December 31, 2025.

III. OPERATIONS.

A. PERIOD OF USE. Use or occupancy of the permit area shall be exercised at least 90 days each year.

B. CONDITION OF OPERATIONS. The holder shall maintain the authorized improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this permit. Standards are subject to periodic change by the authorized officer when deemed necessary to meet statutory, regulatory, or policy requirements or to protect national forest resources.

C. USE OF NATIONAL FOREST SYSTEM ROADS AND NATIONAL FOREST SYSTEM TRAILS. The holder's use of National Forest System roads and National Forest System trails shall comply with applicable requirements in 36 CFR Part 212, Subpart A; 36 CFR Part 261, Subpart A; and orders issued under 36 CFR Part 261, Subpart B. Motor vehicle use shall be consistent with designations made under 36 CFR Part 212, Subpart B, unless specifically provided otherwise in the operating plan. Over-snow vehicle use shall be consistent with designations made under 36 CFR Part 212, Subpart C, unless specifically provided otherwise in the operating plan.

D. MONITORING BY THE FOREST SERVICE. The Forest Service shall monitor the holder's operations and reserves the right to inspect the permit area and authorized facilities and improvements at any time for compliance with the terms of this permit. The holder shall comply with inspection requirements deemed appropriate by the authorized officer. The holder's obligations under this permit are not contingent upon any duty of the Forest Service to inspect the permit area or authorized facilities or improvements. A failure by the Forest Service or other governmental officials to inspect is not a justification for noncompliance with any of the terms of this permit.

F. CUTTING, DISPOSAL, AND PLANTING OF VEGETATION. This permit does not authorize the cutting of trees, brush, shrubs, and other plants ("vegetation"). Vegetation may be cut, destroyed, or trimmed only after the authorized officer or the authorized officer's designated representative has approved in writing and marked or otherwise identified what may be cut, destroyed, or trimmed. The holder shall notify the authorized officer when approved cutting, destruction, or trimming of vegetation has been completed. The Forest Service shall determine in advance of felling the method of disposal of trees felled in the permit area that meet utilization standards. Disposal may be by sale or without charge per 36 CFR Part 223, as may be most advantageous to the United States. Debris from felling that does not meet utilization standards shall also be disposed of according to methods determined by the Forest Service. Planting of vegetation in the permit area must have prior written approval from the authorized officer.

IV. RIGHTS AND LIABILITIES

A. LEGAL EFFECT OF THE PERMIT. This permit, which is revocable and terminable, is not a contract or a lease, but rather a federal license. The benefits and requirements conferred by this authorization are reviewable solely under the procedures set forth in 36 CFR 214 and 5 U.S.C. 704. This permit does not constitute a contract for purposes of the Contract Disputes Act, 41 U.S.C. 601. The permit is not real property, does not convey any interest in real property, and may not be used as collateral for a loan.

B. VALID EXISTING RIGHTS. This permit is subject to all valid existing rights. Valid existing rights include those derived under mining and mineral leasing laws of the United States. The United States is not liable to the holder for the exercise of any such right.

C. ABSENCE OF THIRD-PARTY BENEFICIARY RIGHTS. The parties to this permit do not intend to confer any rights on any third party as a beneficiary under this permit.

D. NO WARRANTY OF ACCESS, SITE SUITABILITY, OR SERVICES. This permit authorizes the use and occupancy of National Forest System lands by the holder for the purposes identified in this permit. The Forest Service does not make any express or implied warranty of access to the permit area, of the suitability of the permit area for the authorized uses, or for the furnishing of road or trail maintenance, water, fire protection services, search and rescue services, or any other services by a government agency, utility, association, or individual.

E. RISK OF LOSS. The holder assumes all risk of loss to the authorized improvements and all risk of loss of use and occupancy of the permit area, in whole or in part, due to public health and safety or environmental hazards. Loss to the authorized improvements and of use and occupancy of the permit area may result from but is not limited to theft, vandalism, fire and any fire-fighting activities (including prescribed burns), environmental contamination, avalanches, rising waters, winds, falling limbs or trees, and other forces of nature. If any authorized improvements are destroyed or substantially damaged, the authorized officer shall conduct an analysis to determine whether the improvements can be safely occupied in the future and whether rebuilding should be allowed. If rebuilding is not allowed, this permit shall terminate. If the authorized officer determines that the permit area cannot be safely occupied due to a public health or safety or environmental hazard, this permit shall terminate. Termination under this clause shall not give rise to any claim for damages, including lost profits and the value of the improvements, by the holder against the Forest Service.

F. DAMAGE TO UNITED STATES PROPERTY. The holder has an affirmative duty to protect from damage the land, property, and other interests of the United States that are associated with the use and occupancy authorized by this permit. Damage includes but is not limited to destruction of or damage to National Forest System lands, fire suppression costs and destruction of or damage to federally owned improvements.

1. Subject only to the limits on the holder′s liability under the North Carolina tort claims act for tort liability for third-party claims, the holder shall be liable for all injury, loss, or damage, including fire suppression costs, prevention and control of the spread of invasive species, and the costs of rehabilitation or restoration of natural resources, resulting from the holder′s use and occupancy of the permit area. Compensation shall include but not be limited to the value of resources damaged or destroyed, the costs of restoration, cleanup, or other mitigation, fire suppression or other types of abatement costs, and all administrative, legal (including attorney's fees), and other costs. Such costs may be deducted from a performance bond required under the Bonding clause, clause IV.K.

2. The holder shall be liable for damage to all roads and trails of the United States caused by use of the holder or the holder′s heirs, assignees, agents, employees, or contractors to the same extent as provided under paragraph 1 of the Damage to United States Property clause, clause IV.F.1, except that liability shall not include reasonable and ordinary wear and tear.

G. HEALTH AND SAFETY. The holder shall take all measures necessary to protect the health and safety of all persons affected by the use and occupancy authorized by this permit. The holder shall promptly abate as completely as possible and in compliance with all applicable laws and regulations any physical or mechanical procedure, activity, event, or condition existing or occurring in connection with the authorized use and occupancy during the term of this permit that causes or threatens to cause a hazard to the health or safety of the public or the holder's employees, agents, or contractors. The holder shall as soon as practicable notify the authorized officer of all serious accidents that occur in connection with these procedures, activities, events, or conditions. The Forest Service has no duty under the terms of this permit to inspect the permit area or operations of the holder for hazardous conditions or compliance with health and safety standards.

H. ENVIRONMENTAL PROTECTION.

1. Compliance with Environmental Laws. The holder shall in connection with the use and occupancy authorized by this permit comply with all applicable federal, state, and local environmental laws and regulations, including but not limited to those established pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, 42 U.S.C. 9601 et seq., the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq., the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq., the Oil Pollution Act, as amended, 33 U.S.C. 2701 et seq., the Clean Air Act, as amended, 42 U.S.C. 7401 et seq., the Toxic Substances Control Act, as amended, 15 U.S.C. 2601 et seq., the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, 7 U.S.C. 136 et seq., and the Safe Drinking Water Act, as amended, 42 U.S.C. 300f et seq.

2. Definition of Hazardous Material. For purposes of clause IV.H and section V, "hazardous material" shall mean (a) any hazardous substance under section 101(14) of CERCLA, 42 U.S.C. 9601(14); (b) any pollutant or contaminant under section 101(33) of CERCLA, 42 U.S.C. 9601(33); (c) any petroleum product or its derivative, including fuel oil, and waste oils; and (d) any hazardous substance, extremely hazardous substance, toxic substance, hazardous waste, ignitable, reactive or corrosive materials, pollutant, contaminant, element, compound, mixture, solution or substance that may pose a present or potential hazard to human health or the environment under any applicable environmental laws.

3. Oil Discharges and Release of Hazardous Materials. The holder shall immediately notify all appropriate response authorities, including the National Response Center and the authorized officer or the authorized officer's designated representative, of any oil discharge or of the release of a hazardous material in the permit area in an amount greater than or equal to its reportable quantity, in accordance with 33 CFR Part 153 and 40 CFR Part 302. For the purposes of this requirement, "oil" is as defined by section 311(a)(1) of the Clean Water Act, 33 U.S.C. 1321(a)(1). The holder shall immediately notify the authorized officer or the authorized officer's designated representative of any release or threatened release of any hazardous material in or near the permit area which may be harmful to public health or welfare or which may adversely affect natural resources on federal lands.

4. Remediation of Release of Hazardous Materials. The holder shall remediate any release, threat of release, or discharge of hazardous materials that occurs in connection with the holder's activities in the permit area, including activities conducted by the holder's agents, employees, or contractors and regardless of whether those activities are authorized under this permit. The holder shall perform remediation in accordance with applicable law immediately upon discovery of the release, threat of release, or discharge of hazardous materials. The holder shall perform the remediation to the satisfaction of the authorized officer and at no expense to the United States. Upon revocation or termination of this permit, the holder shall deliver the site to the Forest Service in compliance with all applicable laws and regulations and free and clear of contamination.

I. INDEMNIFICATION OF THE UNITED STATES. Subject only to the limits on the holder's liability under the NCTCA, N.C.G.S. §143-291 et seq, the holder shall indemnify, defend, and hold harmless the United States for any costs, damages, claims, liabilities, and judgments arising from past, present, and future acts or omissions of the holder in connection with the use and occupancy authorized by this permit. This indemnification and hold harmless provision includes but is not limited to acts and omissions of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees in connection with the use and occupancy authorized by this permit which result in (1) violations of any laws and regulations which are now or which may in the future become applicable, including but not limited to those environmental laws listed in this permit; (2) judgments, claims, demands, penalties, or fees assessed against the United States; (3) costs, expenses, and damages incurred by the United States; or (4) the release or threatened release of any solid waste, hazardous waste, hazardous substance, pollutant, contaminant, oil in any form, or petroleum product into the environment.

J. ENVIRONMENTAL AND OTHER LIABILITY. The Damage to United States Property and Indemnification clauses, clauses IV.F and IV.I, shall not be interpreted to limit any of the holder's liability for, or prevent the United States from taking any action to address, injury, loss, damages, or costs associated with environmental contamination, injury to natural resources, or other cause of action that arises under other law, including the Resource Conservation and Recovery Act, as amended, Title 42 United States Code, section 6901 et seq., (42 U.S.C. 6901), CERCLA, Title 42 United States Code, section 9601 et seq. (42 U.S.C. 9601), and the Clean Water Act, as amended, Title 33 United States Code, section 1251 et seq.(33 U.S.C. 1251), in connection with the holder's use and occupancy of federal lands, or to diminish any independent obligation of the holder to indemnify the United States with respect to the same.

K. BONDING. The authorized officer may require the holder to furnish a surety bond or other security for any of the obligations imposed by the terms of this permit or any applicable law, regulation, or order.

L. STRICT LIABILITY. Subject only to the limits of liability under the NCTCA, N.C.G.S. §143-291 et seq, the holder shall be strictly liable (liable without proof of negligence) to the United States for up to the limit specified in 36 CFR 251.56(d)(2), as amended, per occurrence for any injury, loss, or damage arising in tort under this permit. Liability in tort for injury, loss, or damage to the United States exceeding the prescribed amount of strict liability in tort shall be determined under the law of negligence.

M. INSURANCE. The Authorized Officer has determined through a risk assessment that the potential liability of the United States for property damage and personal injury or death arising from the holder's use and occupancy authorized by this permit is $1,000,000.00 or less per incident. Pursuant to the §143-299.2 the holder shall provide self-insurance covering claims for personal injury or death up to $1,000,000.00. The self-insurance documentation shall name the United States as an additional insured. The coverage under the holder's self-insurance shall extend to property damage and personal injury or death arising from the holder's activities under the permit, including use and occupancy of National Forest System lands and the construction, maintenance, and operation of the structures, facilities, or equipment authorized by the permit.

1. The Forest Service reserves the right to review and approve the self-insurance documentation. The holder shall send a copy of the approved self-insurance documentation to the Forest Service immediately upon approval or issuance. The self-insurance documentation shall specify that the Forest Service shall be given 30 days prior written notice of cancellation or any modification of the self-insurance documentation.

2. If there is a conflict between this permit, the certificate of insurance provided by the North Carolina Office of State Fire Marshall (OFSM), and/or NC OFSM self-insurance policy manuals, the order of precedence among those documents shall be (1) this permit; (2) the certificate; and (3) the self-insurance policy manuals.

3. If a claim is submitted to the United States for property damage and personal injury or death arising from the holder's use and occupancy authorized by this permit, the Forest Service shall tender the defense of the claim to the respective representatives of the self-insurance provider. The holder understands that tort claims against the United States are governed by the Federal Tort Claims Act, which may result in the administrative denial of a claim. The holder further understands that in litigation the United States is represented by the United States Department of Justice (DOJ) and agrees that representatives of the self-insurance provider will coordinate the defense with DOJ, if a claim is litigated.

V. RESOURCE PROTECTION

A. WATER POLLUTION. No waste or by-product shall be discharged into water in connection with the use and occupancy authorized by this permit except in full compliance with all applicable federal, state, and local environmental and other laws. Storage facilities for materials capable of causing water pollution, if accidentally discharged, shall be located so as to prevent any spillage into waters or channels leading into water except in full compliance with all applicable federal, state, and local environmental and other laws.

B. SCENIC VALUES. The holder shall protect the scenic values of the permit area and the adjacent land to the greatest extent possible during construction, operation, and maintenance of the authorized improvements.

C. VANDALISM. The holder shall take reasonable measures to prevent and discourage vandalism and disorderly conduct and when necessary, shall contact the appropriate law enforcement officer.

D. PESTICIDE USE.

1. Authorized Officer Concurrence. Pesticides may not be used outside of buildings in the permit area to control pests, including undesirable woody and herbaceous vegetation (including aquatic plants), insects, birds, rodents, or fish without prior written concurrence of the authorized officer. Only those products registered or otherwise authorized by the U.S. Environmental Protection Agency and appropriate State authority for the specific purpose planned shall be authorized for use within areas on National Forest System lands.

2. Pesticide-Use Proposal. Requests for concurrence of any planned uses of pesticides shall be provided in advance using the Pesticide-Use Proposal (form FS-2100-2). Annually the holder shall, on the due date established by the authorized officer, submit requests for any new, or continued, pesticide usage. The Pesticide-Use Proposal shall cover a 12-month period of planned use. The Pesticide-Use Proposal shall be submitted at least 60 days in advance of pesticide application. Information essential for review shall be provided in the form specified. Exceptions to this schedule may be allowed, subject to emergency request and approval, only when unexpected outbreaks of pests require control measures which were not anticipated at the time a Pesticide-Use Proposal was submitted.

3. Safety Plan. Before applying pesticides in the permit area, the holder shall submit to the authorized officer a safety plan that includes, at a minimum, a precise statement of the treatment objectives; a description of the equipment, materials, and supplies to be used, including pesticide formulation, quantities, and application methods; a description of the lines of responsibility for project planning, project monitoring, and after-action review; a description of any necessary interagency coordination; a copy of the current Pesticide-Use Proposal for the permit; a description of the process by which treatment effectiveness will be determined; and a spill plan, communications plan, security plan, and when required by applicable local requirements, a provision for prior notification to sensitive individuals.

4. Reporting. By September 30th annually, the holder shall submit to the authorized officer a written report of each pesticide application project completed during the previous 12-month period. The report shall contain information pertaining to the pesticide application projects as requested by the authorized officer.

5. Labeling, Laws, and Regulations. Label instructions and all applicable laws and regulations shall be strictly followed in the application of pesticides and disposal of excess materials and containers. No pesticide waste, excess materials, or containers shall be disposed of in any area administered by the Forest Service.

E. ARCHAEOLOGICAL AND PALEONTOLOGICAL DISCOVERIES. The holder shall immediately notify the authorized officer of all antiquities or other objects of historic or scientific interest, including but not limited to historic or prehistoric ruins, fossils, or artifacts discovered in connection with the use and occupancy authorized by this permit. The holder shall leave these discoveries intact and in place until otherwise directed by the authorized officer.

F. NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT (NAGPRA). In accordance with 25 U.S.C. 3002(d) and 43 CFR 10.4, if the holder inadvertently discovers human remains, funerary objects, sacred objects, or objects of cultural patrimony on National Forest System lands, the holder shall immediately cease work in the area of the discovery and shall leave the discoveries intact and in place. The holder shall follow the applicable NAGPRA protocols for the undertaking provided in the NAGPRA plan of action or the NAGPRA comprehensive agreement; if there are no such agreed-upon protocols, the holder shall as soon as practicable notify the authorized officer of the discovery and shall follow up with written confirmation of the discovery. The activity that resulted in the inadvertent discovery may not resume until 30 days after the authorized officer certifies receipt of the written confirmation, if resumption of the activity is otherwise lawful, or at any time if a NAGPRA plan of action has been executed by the Forest Service following tribal consultation and any preconditions have been met.

G. PROTECTION OF THREATENED AND ENDANGERED SPECIES, SENSITIVE SPECIES, AND SPECIES OF CONSERVATION CONCERN AND THEIR HABITAT.

1. Threatened and Endangered Species and Their Habitat. The location of sites within the permit area needing special measures for protection of plants or animals listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, 16 U.S.C. 1531 et seq., as amended, or within designated critical habitat shall be shown on a map in an appendix to this permit and may be shown on the ground. The holder shall take any protective and mitigation measures specified by the authorized officer as necessary and appropriate to avoid or reduce effects on listed species or designated critical habitat affected by the authorized use and occupancy. Discovery by the holder or the Forest Service of other sites within the permit area containing threatened or endangered species or designated critical habitat not shown on the map in the appendix shall be promptly reported to the other party and shall be added to the map.

2. Sensitive Species and Species of Conservation Concern and Their Habitat. The location of sites within the permit area needing special measures for protection of plants or animals designated by the Regional Forester as sensitive species or as species of conservation concern pursuant to FSM 2670 shall be shown on a map in an appendix to this permit and may be shown on the ground. The holder shall take any protective and mitigation measures specified by the authorized officer as necessary and appropriate to avoid or reduce effects on sensitive species or species of conservation concern or their habitat affected by the authorized use and occupancy. Discovery by the holder or the Forest Service of other sites within the permit area containing sensitive species or species of conservation concern or their habitat not shown on the map in the appendix shall be promptly reported to the other party and shall be added to the map.

H. CONSENT TO STORE HAZARDOUS MATERIALS. The holder shall not store any hazardous materials at the site without prior written approval from the authorized officer. This approval shall not be unreasonably withheld. If the authorized officer provides approval, this permit shall include, or in the case of approval provided after this permit is issued, shall be amended to include specific terms addressing the storage of hazardous materials, including the specific type of materials to be stored, the volume, the type of storage, and a spill or release prevention and control plan. Such terms shall be proposed by the holder and are subject to approval by the authorized officer.

1. If the holder receives consent to store hazardous material, the holder shall identify to the Forest Service any hazardous material to be stored at the site. This identifying information shall be consistent with column (1) of the table of hazardous materials and special provisions enumerated at 49 CFR 172.101 whenever the hazardous material appears in that table. For hazard communication purposes, the holder shall maintain Material Safety Data Sheets for any stored hazardous chemicals, consistent with 29 CFR 1910.1200(c) and (g). In addition, all hazardous materials stored by the holder shall be used, labeled, stored, transported, and disposed of in accordance with all applicable federal, state, and local laws and regulations. Any hazardous material transportation and disposal manifests shall clearly identify the holder as the generator of the hazardous waste.

2. If hazardous materials are used or stored at the site, the authorized officer may require the holder to deliver and maintain a surety bond in accordance with clause IV.J.

3. The holder shall not release any hazardous material onto land or into rivers, streams, impoundments, or natural or man-made channels leading to them. All prudent and safe attempts must be made to contain any release of these materials. The authorized officer in charge may specify specific conditions that must be met, including conditions more stringent than federal, state, and local regulations, to prevent releases and protect natural resources.

4. If the holder uses or stores hazardous materials at the site, upon revocation or termination of this permit the holder shall provide the Forest Service with a report certified by a professional or professionals acceptable to the Forest Service that the permit area is uncontaminated by the presence of hazardous materials and that there has not been a release or discharge of hazardous materials upon the permit area, into surface water at or near the permit area, or into groundwater below the permit area during the term of the permit. If a release or discharge has occurred, the professional or professionals shall document and certify that the release or discharge has been fully remediated and that the permit area is in compliance with all applicable federal, state, and local laws and regulations.

VI. LAND USE FEE AND DEBT COLLECTION

A. LAND USE FEES. The holder's land use fee has been waived pursuant to 36 CFR 251.57 and Forest Service Handbook 2709.11, Chapter 30. The authorized officer reserves the right to review the land use fee waiver determination periodically and to charge all or part of the land use fee if the waiver is no longer appropriate.

VII. REVOCATION, SUSPENSION, AND TERMINATION

A. REVOCATION AND SUSPENSION.

1. The authorized officer may revoke or suspend this permit in whole or in part:

(a) For noncompliance with federal, state, or local law;

(b) For noncompliance with the terms of this permit;

(c) For abandonment or other failure of the holder to exercise the privileges granted; or

(d) At the discretion of the authorized officer, for specific and compelling reasons in the public interest.

2. The authorized officer may revoke this permit at the request of the holder. Revocation at the request of the holder must be agreed to in writing by the authorized officer. As a condition of revocation of this permit at the request of the holder, the authorized officer has discretion to impose any terms deemed appropriate as provided for in this permit.

3. Prior to revocation or suspension, other than revocation at the request of the holder under clause VII.A.2 and immediate suspension under clause VII.B, the authorized officer shall give the holder written notice of the grounds for revocation or suspension and a reasonable period, typically not to exceed 90 days, to cure any noncompliance.

B. IMMEDIATE SUSPENSION. The authorized officer may immediately suspend this permit in whole or in part when necessary to protect public health or safety or the environment. The suspension decision shall be in writing. The holder may request an on-site review with the authorized officer's supervisor of the adverse conditions prompting the suspension. The authorized officer's supervisor shall grant this request within 48 hours. Following the on-site review, the authorized officer's superior shall promptly affirm, modify, or cancel the suspension.

C. APPEALS AND REMEDIES. Written decisions by the authorized officer relating to administration of this permit are subject to administrative appeal pursuant to 36 CFR Part 214, as amended. Revocation or suspension of this permit shall not give rise to any claim for damages by the holder against the Forest Service.

D. TERMINATION. This permit shall terminate when by its terms a fixed or agreed upon condition, event, or time occurs without any action by the authorized officer. Examples include but are not limited to expiration of the permit by its terms on a specified date and, in the case of a permit issued to a business entity, termination upon change of control of the business entity. Termination of this permit shall not require notice, a decision document, or any environmental analysis or other documentation. Termination of this permit is not subject to administrative appeal and shall not give rise to any claim for damages by the holder against the Forest Service.

E. RIGHTS AND RESPONSIBILITIES UPON REVOCATION OR TERMINATION WITHOUT ISSUANCE OF A NEW PERMIT. Upon revocation or termination of this permit without issuance of a new permit, the holder shall remove all structures and improvements, except those owned by the United States, within a reasonable period prescribed by the authorized officer and shall restore the site to the satisfaction of the authorized officer. If the holder fails to remove all structures and improvements within the prescribed period, they shall become the property of the United States and may be sold, destroyed, or otherwise disposed of without any liability to the United States. However, the holder shall remain liable for all costs associated with their removal, including costs of sale and impoundment, cleanup, and restoration of the site.

F. CONTINUATION OF OBLIGATIONS AND LIABILITIES BEYOND TERMINATION OR REVOCATION. Notwithstanding the termination or revocation of this permit, its terms shall remain in effect and shall be binding on the holder and the holder's personal representative, successors, and assignees until all the holder's obligations and liabilities accruing before or as a result of termination or revocation of this permit have been satisfied.

VIII. MISCELLANEOUS PROVISIONS

A. MEMBERS OF CONGRESS. No member of or delegate to Congress or resident commissioner shall benefit from this permit either directly or indirectly, except to the extent the authorized use provides a general benefit to a corporation.

B. CURRENT ADDRESSES. The holder and the Forest Service shall keep each other informed of current mailing addresses, including those necessary for billing and payment of land use fees.

C. SUPERSEDED AUTHORIZATION. This permit supersedes a special use authorization designated N/A dated N/A.

D. SUPERIOR CLAUSES. If there is a conflict between any of the preceding printed clauses and any of the following clauses, the preceding printed clauses shall control.

THIS PERMIT IS ACCEPTED SUBJECT TO ALL ITS TERMS.

BEFORE THIS PERMIT IS ISSUED TO AN ENTITY, DOCUMENTATION MUST BE PROVIDED TO THE AUTHORIZED OFFICER OF THE AUTHORITY OF THE SIGNATORY FOR THE ENTITY TO BIND IT TO THE TERMS OF THIS PERMIT.

ACCEPTED:

2/21/2025

JOHN JAMISON SIGNATURE DATE
Environmental Policy Unit Manager
NCDOT

APPROVED:

2/24/2025

JENNIFER BARNHART DATE
Appalachian District Ranger
National Forests in North Carolina
USDA Forest Service

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond, to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. Response to this collection of information is mandatory. The authority to collect the information is the Organic Administration Act, 16 U.S.C. 551. The time required to complete this information collection is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible agency or USDA's TARGET Center at (202) 720-2600 (voice and TYY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

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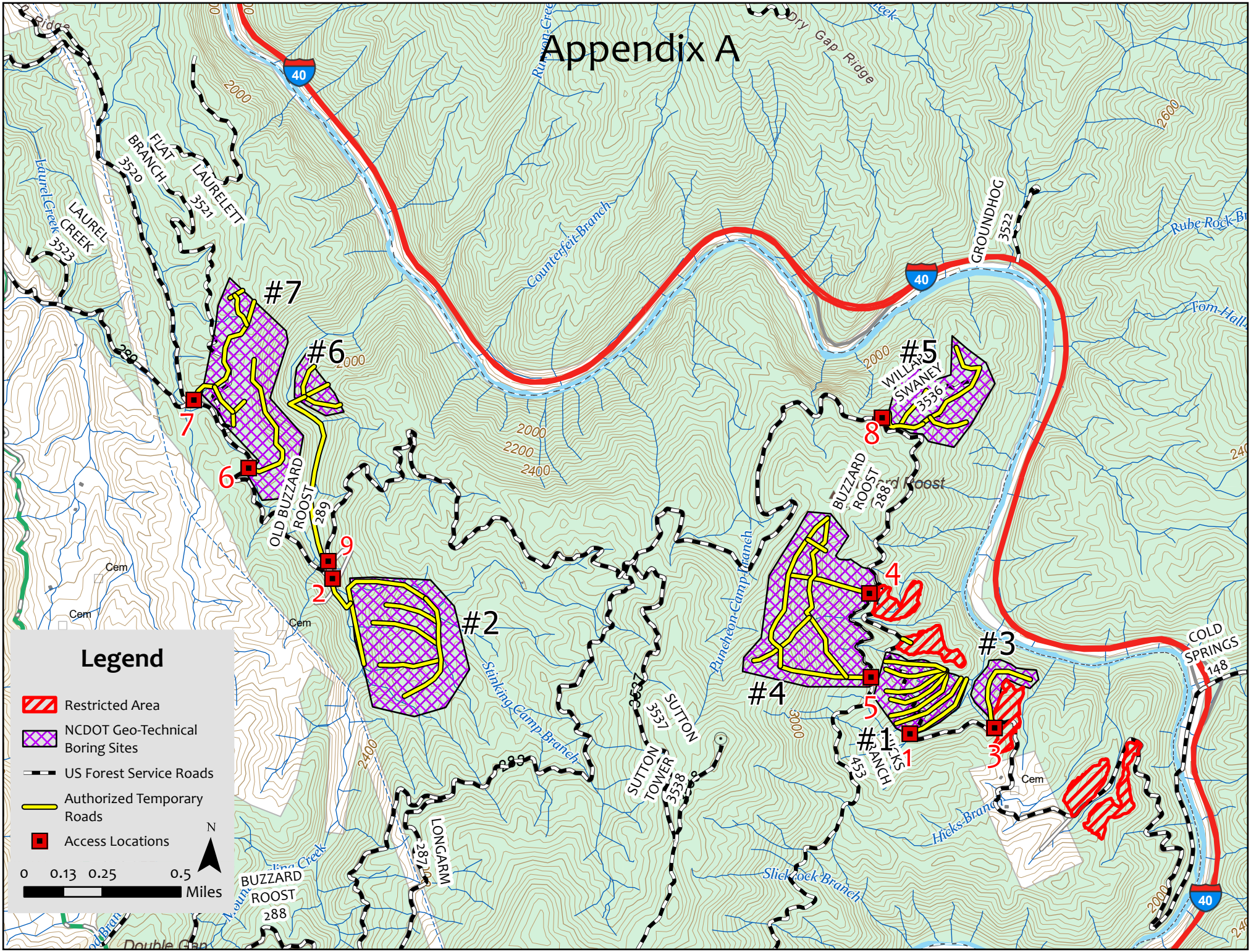
The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service


Appendix A
#7
#6
#5
#4
#3
#2
#1
7
6
8
9
2
4
5
3
1
Legend
Restricted Area
NCDOT Geo-Technical Boring Sites
US Forest Service Roads
Authorized Temporary Roads
Access Locations
N
0 0.13 0.25 0.5
Miles
LAUREL CREEK
3523
FLAT BRANCH
3520
LAURELETT
3521
GROUNDHOG
3522
WILLARD SWANEY
3536
OLD BUZZARD ROOST
289
BUZZARD ROOST
288
SUTTON
3537
SUTTON TOWER
3538
LONGARM
287
HICKS BRANCH
453
COLD SPRINGS
148
Counterfeit Branch
Stinking Camp Branch
Puncheon Camp Branch
Hicks Branch
Slickrock Branch
Cem
Double Gap
40

Appendix B

Operations and Restoration Plan

NCDOT - Geotechnical Boring

Appalachian Ranger District

Holder: North Carolina DOT

The holder incorporates this Operation and Restoration Plan and any attachments thereto, into the Special Use Permit **APP123601**. The Holder agrees to operate and maintain the authorized forest roads and use the occupied National Forest System (NFS) lands in accordance with the following stipulations:

General:

- The Holder agrees to use only the approved access routes described in Appendix C and to repair all damage resulting from said use. Any damage to Forest system roads, culverts, low water crossings, etc, shall be repaired to Forest Service standards.
- Holder agrees to rehabilitate all disturbed areas to Forest Service standards outlined below. After rehabilitation and prior to termination of the permit, the Holder and Forest Service shall inspect the sites together to ensure restoration is to standard. All repairs shall be acceptable to and completed by the date agreed to by the Holder and the Permit Administrator.
- Holder is subject to federal and state laws regulating travel on State, County, and Federal lands. These include Code of Federal Regulations 36 (CFR) 261.13 prohibiting travel in a manner, outside of which is otherwise authorized, which damages or unreasonably disturbs the land, wildlife and vegetative resources.
- For geotechnical boring operations, the Holder must avoid all active timber sale units. These units are shown on the map as restricted areas, Appendix A. Each timber unit boundary is flagged.
- All equipment (including bulldozers, excavators, drill machines, other vehicles, boring bits, etc.) must be effectively cleaned prior to entry onto NFS lands for construction and maintenance. This cleaning must effectively eliminate the potential for transmittal of noxious weed seeds or plant parts; thereby reducing the chance of new noxious weed infestations into the area.
- Perform work in a manner to preserve and protect roads and appurtenances, and prevent erosion damage to roads, streams, and other Forest values.
- The holder shall implement vegetative and/or other erosion control measures to prevent accelerated soil erosion and noxious weed establishment (see *Water* section below).
- Roads used during geotechnical boring must adhere to the current Motor Vehicle Use Map designation. All open system roads must always remain passable to public traffic without long delays. All gates used to access boring locations must be kept closed unless there is a compelling need for the gate to remain open for extended periods of time. If that is the

case, the Holder must notify the Authorized Officer and ensure additional measures are not needed. The gates will be closed and locked at night, or when no operations are occurring.
- Utilize existing road prisms or rights-of-ways as much as possible to reduce new disturbance.

Boring:

- To minimize overall impacts, when possible and practical, boring locations adjacent to existing Forest Roads will be prioritized and drilled first. If core samples are positive, the Holder is authorized to continue boring core samples in that approved area.
- Post placards or traffic control signs along entire route and post flaggers if necessary.
- The Holder shall immediately report any fuel or oil spills to the Authorized Officer.

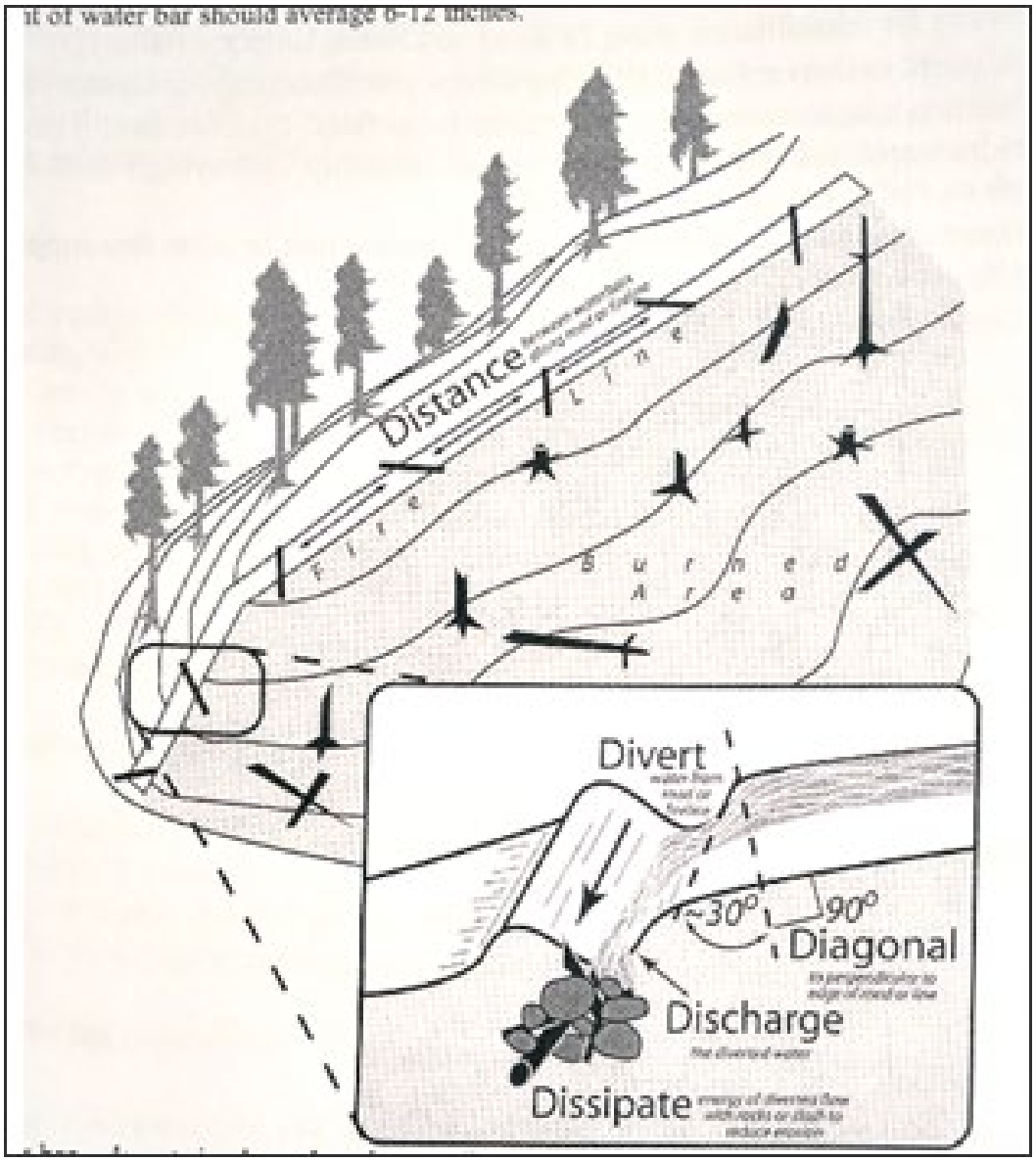
Timber:

- The Holder is authorized to remove trees and vegetation as a result of this activity. To the extent possible, the Holder will avoid larger diameter trees (12 inches in diameter at chest height) and minimize ancillary impacts to National Forest System lands to the extent possible.
- The Holder is required to avoid activity within active timber units for the geotechnical boring. Geo-spatial data can be provided to the Holder. If activity is necessary, the Holder will request that activity from the Authorized Officer in advance.
- All cut vegetation should be moved to the side of the project area to provide downed wood habitat erosion control and soil abatement. See *Site Restoration* section of plan below for standards if site is not viable.
- All slash shall be removed immediately from or adjacent to roads open to the public.

Water:

- The Holder shall avoid any ground disturbing activities, such as geotechnical boring or temporary road building, within streamside zones (100 feet from perennial streams and 50 feet from intermittent streams).
- The Holder shall avoid, to the extent possible, the effects of sedimentation or chemical pollution in nearby adjacent creeks or streams, in order to maintain water quality.
- The Holder is authorized to create temporary 16-foot-wide roads to the boring sites. Where stream crossings are unavoidable, construct crossings using NC Best Management Practice for stream crossings. Install certified weed-free straw on streambanks from water's edge to break in bank slope or first uphill waterbar.

- On temporary roads, utilize natural rolls and dips whenever possible. Waterbars or rolling dips are to be built on slopes greater than 5% and the outlet should drain into vegetated areas whenever possible. Waterbars will be constructed diagonally across, skewed horizontally from the fall line of the slope (not the road) approximately 30-45 degrees from horizontal and drained away from the road or construction area if possible. Space waterbars by using the "level-eye" method, implemented by standing on a lower waterbar looking upslope, level to the next. Scatter wood debris/slash at the toe of the constructed road to create a filter strip or windrow to further retard soil erosion. See below for diagram of waterbar construction.



- Prevent visible sediment from reaching perennial and intermittent stream channel and perennial water bodies in accordance with North Carolina Forest Practice Guidelines Related to Water Quality (NC FPGs or latest).
- To avoid erosion and sedimentation problems, the holder shall temporarily suspend operations during times of heavy rain and insure that BMP's are implemented to protect water quality during such events.
- Damage to streams shall be reported to the Authorized Officer and will be evaluated for site specific recommendations.

Botany:

- Avoid any widening, scraping, or modification of FSR 288 and FSR 289.
- Do not use non-native invasive plant species in revegetation or planting efforts (FHL-S-03).

Site Restoration and Mitigation:

- The Holder shall notify the Authorized Officer when site restoration is planned, so that Forest Service staff can be present to ensure Forest Service standards and requirements are met.
- All temporary roads, compacted areas, and stream crossings will be obliterated/recontoured to near original slopes. Redistribute and smooth berms and slash piles created by temporary road construction, to restore slope to its original contours as much as possible. Cut trees and slash shall be distributed on any created roads surfaces to camouflage path and discourage unauthorized motorized use on the routes. Limit logs and coarse woody debris to approximately one log every 30 feet. Block temporary paths at intersections with roads by placing logs, root wads or large rocks to prevent motorized access and camouflage line of site for a minimum of 100'.
- Lop and scatter all slash. Slash shall not be stacked higher than 2 feet off the ground and shall not be stacked within 4 feet of any standing trees. Excess slash shall be dispersed on the forest floor using these same standards. Do not scatter slash outside of the approved areas for geotechnical boring.
- Mitigations efforts should prevent erosion and siltation into any adjacent water bodies.
- Remove all trash, equipment, flagging, and fuel associated with equipment maintenance.
- All existing Forest Service Roads, and associated drainage structures, shall be restored to Forest Service standards.
- All disturbed areas, such as temporary roads, will be reseeded with a Forest Service approved native seed mix, upon the completion of the project. The Forest Service can provide suggestions for weed-free seed mixes.
- Repair stream crossings back to original contour and condition.

Appendix C: Boring Access Summary and Site Specific Stipulations

Boring Site Location Number	Access Location number (on map)	Lat/Long of Approved Temporary Rd	Road Designation	Geo-boring Access Description	Site Specific Stipulations
1	1	35.734447, -83.040666	NFR 288 (Buzzards Roost Rd)- Open Public Rd	Equipment unloaded at low-water crossing (Exit 7- Harmon Den) and will drive up to site on Buzzards Roost Rd (NFR 288)	Boring locations closest to Buzzards Roost Rd should be prioritized. If promising samples are shown, permission is granted to test entire site. If additional access points are needed, prior Forest Service approval is needed.
2	2	35.741044, -83.074139	NFR 288 (Buzzards Roost Rd)- Open Public Rd NFR 289 (Old Buzzards Roost Rd) - Open Public Rd	Equipment unloaded at low-water crossing (Exit 7- Harmon Den) and will drive up to site on Buzzards Roost Rd (NFR 288), then on Old Buzzards Roost Rd (NFR 289) to unnamed Forest Service Road.	Holder must coordinate with the FS to obtain access behind gate.
3	3	35.735059, -83.035558	NFR 288 (Buzzards Roost Rd)- Open Public Rd	Equipment unloaded at low-water crossing (Exit 7- Harmon Den) and will drive up to site on Buzzards Roost Rd (NFR 288)	
4	4 5	35.740654, -83.042817 35.736996, -83.043024	NFR 288 (Buzzards Roost Rd)- Open Public Rd NFR 453 (Hicks Branch Rd)- Closed Rd	Equipment unloaded at low-water crossing (Exit 7- Harmon Den) and will drive up to site on Buzzards Roost Rd (NFR 288) then on closed NFR 3536 to site. There are two approved access points to this site.	Holder must coordinate with the FS to obtain access behind gate.
5	8	35.748941, -83.043114	NFR 288 (Buzzards Roost Rd)- Open Public Rd NFR 3536 (Willard Swaney Rd)- Closed Rd	Equipment unloaded at low-water crossing (Exit 7- Harmon Den) and will drive up to site on Buzzards Roost Rd (NFR 288) then on closed NFR 3536 to site.	If additional access points are needed, prior Forest Service approval is needed. The Holder must coordinate with the FS to obtain access behind gate.

6	9	35.741177, -83.074123	NFR 288 (Buzzards Roost Rd)- Open Public Rd NFR 289 (Old Buzzards Roost Rd) - Open Public Rd	Equipment unloaded at low-water crossing (Exit 7- Harmon Den) and will drive up to site on Buzzards Roost Rd (NFR 288), then on Old Buzzards Roost Rd (NFR 289) to access point. Holder will then construct a temporary road to the site from Flat Branch Rd to site.	If additional access points are needed, prior Forest Service approval is needed.
7	6 7	35.745505, -83.078824 35.748574, -83.082115	NFR 288 (Buzzards Roost Rd)- Open Public Rd NFR 289 (Old Buzzards Roost Rd) - Open Public Rd NFR 3521 (Laurelett Rd)- Closed Rd	Equipment unloaded at low-water crossing (Exit 7- Harmon Den) and will drive up to site on Buzzards Roost Rd (NFR 288), then onto NFR 289 (Old Buzzards Roost Rd). There are two access points to this site. One is directly off Old Buzzards Roosth Rd. The other is accessed by taking NFR 3521 to site.	If additional access points are needed, prior Forest Service approval is needed. The Holder must coordinate with the FS to obtain access behind gate.

ATLAS
Screening Reports

Project Development Hydro Report

Stream Summary

Stream Type	Feature Count	Total Length
Named Streams	102	27943.6 feet
Unnamed Tributaries	88	21618.4 feet

Named Streams

Stream Name	Assessment Unit Number	Feature Count	Length
Big Creek	5-59	3	55.0 feet
Cold Springs Creek	5-45	2	555.4 feet
Counterfelt Branch	5-53	2	1024.8 feet
Flat Branch	5-56	1	34.5 feet
Groundhog Creek	5-50	1	287.5 feet
Hicks Branch	5-46	1	70.6 feet
Mt. Sterling Creek	5-55	1	76.6 feet
Painter Branch	5-58	1	268.9 feet
PIGEON RIVER (Waterville Lake below elevation 2258)	5-(7)f	83	23885.3 feet
Puncheon Camp Branch	5-52	1	56.5 feet
Rube Rock Branch	5-49	1	250.2 feet
Runyon Creek	5-54	1	220.0 feet
Skiffley Creek	5-51	1	249.4 feet
Snowbird Creek	5-57	1	262.2 feet
Tom Hall Branch	5-48	1	375.6 feet
White Oak Flats Branch	5-47	1	271.1 feet

Unnamed Tributaries

Receiving Water	Feature Count	Length
Big Creek	2	78.6 feet
Cold Springs Creek	1	3.8 feet
Counterfelt Branch	5	4868.7 feet
Painter Branch	1	256.5 feet
PIGEON RIVER (Waterville Lake below elevation 2258)	78	16101.5 feet
White Oak Flats Branch	1	309.3 feet

Feature Presence Summary	
Feature Type	**Presence (see below if Yes)**
HQWs, ORWs, WS-I, WS-II, and CAs	Yes
Impaired Waters	Yes
Trout Waters	Yes
Anadromous Fish Spawning Areas	No

HQWs, ORWs, WS-I, WS-II, and CAs (named streams)			
Stream Name	**Assessment Unit Number**	**Best Usage Classification**	**Length**
Big Creek	5-59	C;Tr,HQW	3.3 feet

HQWs, ORWs, WS-I, WS-II, and CAs (unnamed tributaries)		
Receiving Water	**Feature Count**	**Length**

Impaired Waters (named streams)				
Stream Name	**Assessment Unit Number**	**Reason for Impairment**	**Length**	**303(d)**
Big Creek	5-59	Benthos (Nar, AL, FW)	3.3 feet	Impaired, not 303(d)
PIGEON RIVER (Waterville Lake below elevation 2258)	5-(7)f		144.1 feet	Impaired, maybe 303(d). Contains multiple records. Please download and view the full 2018 Integrated Report data pertaining to this AU

Unnamed tributaries draining to impaired waters			
Receiving Water	**Feature Count**	**Length**	**Receiving Status**
Big Creek	2	78.6 feet	Impaired, not 303(d)
PIGEON RIVER (Waterville Lake below elevation 2258)	78	16101.5 feet	Impaired, maybe 303 (d). Contains multiple records. Please download and view the full 2018 Integrated Report data pertaining to this AU

Trout Waters (named streams)			
Trout Species Present	**Assessment Unit Number**	**Fish Type**	**Length**

Trout Waters (unnamed tributaries)		
Receiving Water	**Feature Count**	**Length**
Big Creek	2	78.6 feet
Cold Springs Creek	1	3.8 feet
Counterfelt Branch	5	4868.7 feet
Painter Branch	1	256.5 feet
PIGEON RIVER (Waterville Lake below elevation 2258)	71	15185.2 feet
White Oak Flats Branch	1	309.3 feet

Anadromous Fish Spawning Areas (named streams)			
Stream Name	**Assessment Unit Number**	**Type**	**Length**

Anadromous Fish Spawning Areas (unnamed tributaries)		
Receiving Water	**Feature Count**	**Length**

Cold, Cool, and Warm Habitat Temperature (named streams)			
Temperature	**Stream Name**	**Feature Count**	**Length**
Cold	Big Creek	3	55 feet
Cold	Cold Springs Creek	2	555.4 feet
Cold	Counterfelt Branch	2	1024.8 feet
Cold	Flat Branch	1	34.5 feet
Cold	Groundhog Creek	1	287.5 feet
Cold	Hicks Branch	1	70.6 feet
Cold	Mt. Sterling Creek	1	76.6 feet
Cold	Painter Branch	1	268.9 feet
Cold	Puncheon Camp Branch	1	56.5 feet
Cold	Rube Rock Branch	1	250.2 feet
Cold	Runyon Creek	1	220 feet
Cold	Skiffley Creek	1	249.4 feet
Cold	Snowbird Creek	1	262.2 feet
Cold	Tom Hall Branch	1	375.6 feet
Cold	White Oak Flats Branch	1	271.1 feet
Cool	PIGEON RIVER (Waterville Lake below elevation 2258)	83	23885.3 feet

Cold, Cool, and Warm Habitat Temperature (unnamed tributaries)

Receiving Water	Receiving Water	Feature Count	Length
Cold	Big Creek	2	78.6 feet
Cold	Cold Springs Creek	1	3.8 feet
Cold	Counterfelt Branch	5	4868.7 feet
Cold	Painter Branch	1	256.5 feet
Cold	PIGEON RIVER (Waterville Lake below elevation 2258)	78	16101.5 feet
Cold	White Oak Flats Branch	1	309.3 feet

Report Metadata

Created by: mdweatherford **Date/Time Executed:** 01/17/2025 2:15 PM

Application version: 1.24.0.0

Project Development Screening Report

This report is for high-level screening purposes only. Staff and consultants must continue to adhere to NCDOT standard operating procedures including, but not limited to, ETRACS requests and field validations.

Report Date: 01/17/2025

Hurricane Helene Site Assessment - Pigeon River

This is a temporary screening template to assist with site assessments associated with Hurricane Helene damage in Western NC.

County: Haywood

Division: 14

Study Area Size: 313.1 Acres

Buffer Size: 0 Feet

User Customized Screening

EPA Level III Ecoregion: Blue Ridge

EPA Level IV Ecoregion: Southern Metasedimentary Mountains

HUC8: 06010106

Riparian Buffer: No

CAMA: No

Airport within 4 miles: No

Human Environment

Cultural Resources	Feature Count	Total Coverage	Nearest Feature
NC Historic Preservation Office NR DOE Site Boundaries Poly	2	6.3 ac	923.8 ft
NC Historic Preservation Office NR SL Site Boundaries Poly	1	0.2 ac	N/A
American Indian Reservations-Federally Recognized Tribal Entities	0	0 ac	0
NC Historic Preservation NR Points	0	0	0
NC Historic Preservation Office Local District Boundaries	0	0	0
NC Historic Preservation Office Local Points	0	0	0
NC Historic Preservation Office NR Boundaries	0	0	0
NC Historic Preservation Office NR DOE Site Points	0	0	221.0 ft
NC Historic Preservation Office SL Points	0	0	0
NC Historic Preservation Office Surveyed Only Points	0	0	86.7 ft
NCDOT ATLAS NC Cemeteries	0	0	2274.3 ft
Geo Environmental	**Feature Count**	**Total Coverage**	**Nearest Feature**
NC DEQ Hazardous Waste Sites	0	0	0
UST Active Facilities	0	0	4900.6 ft
Public Property	**Feature Count**	**Total Coverage**	**Nearest Feature**
Federal Lands	3	149.5 ac	335.3 ft
Agency			
Forest Service	3	149.5 ac	
USA Parks (Esri)	2	324.5 ac	2825.3 ft
North Carolina State Owned Lands	0	0 ac	0
USGS Tennessee Valley Authority Land	0	0 ac	0
Transportation	**Feature Count**	**Total Coverage**	**Nearest Feature**
2024 NCDOT SMU Post Helene Structure Inspection Status	4	N/A	79.8 ft
USACE Corps Projects Area	0	0	0
USACE Corps Projects Point	0	0	0
Utilities	**Feature Count**	**Total Coverage**	**Nearest Feature**
NCDOT ATLAS FERC Data - Boundaries	1	37.4 ac	N/A

Natural Environment

Conservation Area	Feature Count	Total Coverage	Nearest Feature
USGS Wildlife Reserve	3	149.5 ac	335.3 ft
NC Natural Heritage Program Managed Areas	2	111.7 ac	3554.6 ft
Protected Areas Database of the United States (PADUS)	2	149.5 ac	26.2 ft
Connect NC Projects (points)	0	0	0

LWCF 6(f) Project Boundary	0	0 ac	0
PARTF Awards (points)	0	0	0
USFWS National Wildlife Refuges	0	0	0
Fish and Aquatics	**Feature Count**	**Total Coverage**	**Nearest Feature**
NC WRC Public Mountain Trout Waters	9	8310.5 ft	770.4 ft
USACE Western NC Waters	0	0 ft	0
Flood Data	**Feature Count**	**Total Coverage**	**Nearest Feature**
NC FEMA Effective Flood Zones	11	312.7 ac	28.4 ft
FEMA Hazard Mitigation Properties	0	0	0
Hydrography	**Feature Count**	**Total Coverage**	**Nearest Feature**
NCDOT ATLAS NC Hydrography	254	73239.2 ft	32.0 ft
NC Wild and Scenic Rivers (CGIA)	0	0	0
Mitigation	**Feature Count**	**Total Coverage**	**Nearest Feature**
NCDOT Mitigation Site Polygons	0	0 ac	0
Threatened and Endangered	**Feature Count**	**Total Coverage**	**Nearest Feature**
NC Natural Heritage Element Occurrences	10	312.8 ac	499.2 ft
ATLAS USFWS Critical Habitat (line)	0	0 ft	0
ATLAS USFWS Critical Habitat (polygon)	0	0 ac	0

Report Metadata

Created by: mdweatherford **Date/Time Executed:** 01/17/2025 2:15 PM

Application version: 1.24.0.0

Report Disclaimer:

While the N.C. Department of Transportation strives to provide complete and accurate information, the data provided in this screening report are reported “as is.” This report does not replace field data collection and data verification conducted by licensed professionals. No warranty is expressed or implied regarding the accuracy of available data for general or scientific purposes. NCDOT shall under no circumstances be responsible for any errors or omissions which may occur in these records, nor liable for any actions taken as a result of reliance upon any information contained within this web site from whatever source, or any consequences from such reliance.

How to read this report:

User-defined Project Study Area = The final polygon that the user created in the Screening Tool. This study area includes any buffers the user added within the application.

Layer Name = Layer selected for Screening. You may click the hyperlink to access additional layer details.

Field Name = Calculated result for a specific field within a layer that was selected for Screening (using Set Field).

Feature Count = Number of unique features (points, lines, and/or polygons) from a particular GIS layer that are within or intersecting the user-defined project study area.

Values displayed the Output Report: (N/A vs 0)
N/A: When this value is displayed it indicates that the calculation requested cannot be completed do to a limitation of the geometry. For example, you cannot calculate the area of a point.

0: When this value is displayed it means that the calculation was able to be performed with no limitations due to the input geometry, however the result was 0. For example, your study area did not overlap a hydrography feature, therefore the resulting overlap length is 0.

Total Coverage = Total number of linear feet (lines) or area (polygons) from a particular GIS layer that are contained within the user-defined project study area. N/A under Total Coverage refers to point layers as point layers cannot have coverage.

Nearest Feature = Distance from the boundary of the user-defined project study area to next closest feature (point, line, or polygon) for a particular GIS layer within the vicinity (1 mile) of the project study area boundary. Zero (0) under Nearest means there are no features in the project vicinity (1 mile buffer).

Availability of Web Services:

The layers referenced in this report utilize web services. If any web services were unavailable at the time of the report execution, related errors are noted in the following table:

Service Name	Service Url	Error Thrown
National Park Service Park Boundaries	https://services1.arcgis.com/fBc8EJBxQRMcHlei/ArcGIS/rest/services/NPSParkBoundaries/FeatureServer/0	Connection Error: HTTPSConnectionPool (host='services1.arcgis.com', port=443): Max retries exceeded with url: /fBc8EJBxQRMcHlei/ArcGIS/rest/services/NPSParkBoundaries/FeatureServer/0/query (Caused by ReadTimeoutError ("HTTPSConnectionPool (host='services1.arcgis.com', port=443): Read timed out. (read timeout=3)",))

Project ATLAS Natural Heritage Data Report

This report is not an official correspondence from the North Carolina Natural Heritage Program

Hurricane Helene Site Assessment - Pigeon River

Species Element Occurrences with federal status in study area

Scientific Name	Common Name	Federal Status	EO Status	Sensitive Record
Adlumia fungosa	Climbing Fumitory		Current	N
Buckleya distichophylla	Piratebush		Current	N
Cottus carolinae	Banded Sculpin		Current	N
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender		Historical	Y
Falco peregrinus anatum	American Peregrine Falcon		Current	N
Myotis lucifugus	Little Brown Bat		Current	N
Myotis septentrionalis	Northern Long-eared Bat	E	Current	N
Orbexilum onobrychis	Lanceleaf Scurfpea		Historical	N
Percina caprodes	Logperch		Historical	N

Species Element Occurrences with federal status within 1 mile of study area

Scientific Name	Common Name	Federal Status	EO Status	Sensitive Record
Adlumia fungosa	Climbing Fumitory		Current	N
Buckleya distichophylla	Piratebush		Current	N
Cottus carolinae	Banded Sculpin		Current	N
Crocanthemum propinquum	Creeping Sunrose		Current	N
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender		Historical	Y
Eurycea longicauda longicauda	Eastern Long-tailed Salamander		Current	N
Falco peregrinus anatum	American Peregrine Falcon		Current	N
Myotis grisescens	Gray Bat	E	Current	N
Myotis leibii	Eastern Small-footed Bat		Current	N
Myotis lucifugus	Little Brown Bat		Current	N
Myotis septentrionalis	Northern Long-eared Bat	E	Current	N
Orbexilum onobrychis	Lanceleaf Scurfpea		Historical	N
Palustricodon aparinoides var. aparinoides	Marsh Bellflower		Current	N
Percina caprodes	Logperch		Historical	N
Perimyotis subflavus	Tricolored Bat	PE	Current	N
Poa saltuensis	A Bluegrass		Historical	N

Silene ovata	Mountain Catchfly	Current	N
Trillium simile	Sweet White Trillium	Current	N

Report Metadata

Created by: mdweatherford **Date/Time Executed:** 01/17/2025 2:15 PM

For definitions of terms and values please refer to the North Carolina Natural Heritage Program's documentation found at: **https://ncnhde.natureserve.org/help**. To obtain or request an official correspondence from the North Carolina Natural Heritage Program, please visit **https://ncnhde.natureserve.org/**.

This report is not an official correspondence from the North Carolina Natural Heritage Program.

Direct and Indirect Screening Tool

Direct and Indirect Screening Tool

Project M-0572A
I-40 Pigeon River Gorge Emergency Repair
Document Type: ☒ NEPA ☐ SEPA
Prepared by: Robin Pugh, AICP, RK&K
NCDOT Project Manager: Josh Deyton, PE CS Reviewer: Herman Huang

In September 2024, Hurricane Helene devastated areas of western North Carolina, including portions of I-40 along the Pigeon River in Haywood County. The excessive velocities and shear stresses exhibited by the river during the storm resulted in catastrophic erosion, and failure of the riverbanks and highway facility occurred, with eastbound lanes washed away. I-40 became impassable causing disruption to this area of the state and entire region. Westbound lanes will be open to two-way traffic after a short-term stabilization project is completed, anticipated in early 2025.

The project will repair damage to the four-lane median-divided interstate stretching from the river to the existing median barrier of I-40. The repair work begins at the Tennessee state line and extends to the pair of tunnels approximately 4 miles east of the state line. Several potential borrow sites adjacent to I-40 within the study area are being evaluated, including one site on the south side of the river.

The project area is within the Pisgah National Forest and most adjacent property is undeveloped/uninhabited and under the ownership of the US Forest Service. The exception is a parcel at the western project terminus owned by Duke Energy, where the Walters Hydroelectric Plant is located on the south side of the Pigeon River. Approximately 1 mile west of the state line, the Appalachian Trail crosses under I-40 along Green Corner Road and crosses the Pigeon River along Tobes Creek Road.

Census data does not indicate a notable presence of populations meeting the criteria for Environmental Justice within the Demographic Study Area (DSA), nor were minority, low-income, or non-EJ Title VI communities observed within the Direct Community Impact Area (DCIA) during the field visit.

Census data does not indicate Limited English Proficiency (LEP) populations meeting the US Department of Justice LEP Safe Harbor threshold or a notable presence within the Demographic Study Area.

Direct Impacts

1. Are notable right-of-way impacts possible?

Notable right-of-way impacts include residential, institutional and/or business relocations, loss of one or more required parking spaces, major changes to property access, and similar direct property effects.

☐ No right-of-way needed for this project.
☒ No
☐ Yes

2. Are negative impacts to pedestrian or bicycle facilities possible?

Pedestrian and bicycle impacts include facilities that currently do not or that after completion will not meet ADA or comply with Complete Streets policies, blocked or notably delayed crossings (temporary or permanent), notably longer or indirect routes, insufficient space to share or to separate lanes, a notable increase in conflict points, and similar barrier effects or inadequate accommodations.

☒ Not present/Not applicable
☐ No
☐ Yes

3. Are negative impacts to transit possible?

Transit is considered to be present if a fixed route bus travels along the project corridor or if it travels along an intersecting street and crosses the project corridor. There does not need to be a stop within the project footprint. Impacts include notable delays, stop relocations, and/or increased difficulty for bus riders to reach a stop.

☒ Not present/Not applicable
☐ No
☐ Yes

4. Are negative impacts to local traffic on intersecting routes possible?

Local traffic impacts include closed intersections, notably longer routes to reach destinations on the other side of the project corridor, notable delays or difficulties for emergency vehicles, school buses, garbage trucks, farm equipment, etc. to cross the corridor, inadequate accommodation of vehicles making left or U turns to access local streets, and similar concerns. Adding signals, roundabouts, superstreets or medians do not, in and of themselves, notably

impact local traffic, but the spacing of median openings and distances needed to make U turns may have negative impacts.

☒ Not present/Not applicable
☐ No
☐ Yes

5. Are negative impacts to parks and recreational facilities possible?

Right-of-way impacts may be permanent or temporary, including temporary construction easements. Access impacts must substantially impair access to and use of a facility, such as during construction should lane narrowing or detours notably hinder vehicles with trailers from reaching a boat ramp. Parks and recreation facilities must be publicly owned or leased and open to the public.

☐ Not present/Not applicable
☒ No
☐ Yes

6. Are negative impacts to farmland soils, agricultural operations or voluntary agriculture districts possible?

Right-of-way impacts may be permanent or temporary, including temporary construction easements, which convert farmland to non-farm use. Access impacts must substantially impair access to and use of an operation, such as during construction should lane narrowing, detour routes or detour bridge weight limits prevent farm vehicles from accessing fields or require low speed vehicles to use high speed roads. VADs and EVADs are not impact categories but may affect right-of-way acquisition and are noted to avoid project delay.

☐ Not present/Not applicable
☒ No
☐ Yes

7. Is the project potentially inconsistent with local area land development plans, health or active transport goals, or economic development needs? Is it possible for the project to negatively impact businesses and economic resources through loss of parking, reduced visibility, notable changes in access or travel patterns, disruption of district or corridor stability and cohesion through relocations or barrier effects, or similar impacts?

☐ Not present/Not applicable
☒ No
☐ Yes

8. Is it possible that the project may negatively impact community resources, or to alter the overall functioning of a district, community or neighborhood, or disrupt connections between residential and commercial, institutional, recreational and employment areas? Is it possible for the project to negatively affect emergency services access or pedestrian safety, including perceived crime concerns? Are there any known or anticipated concerns or controversies relative to the project?

☐ Not present/Not applicable
☒ No
☐ Yes

9. Is it possible for the project to add to recurring effects on any populations, neighborhoods or communities? Recurring effects include past, current and anticipated near term actions that may have minor impacts individually but when taken as a whole may have notable effects.

☐ Not present/Not applicable
☒ No
☐ Yes

10. Is it possible for the project to have a disproportionately high and adverse impact, including delay or denial of benefit, on low income, young, old, disabled or minority persons?

☒ Not present/Not applicable
☐ No
☐ Yes

Indirect Impacts

11. Is it likely that the project may result in travel time savings of more than one minute?

☒ No
☐ Yes

12. Will the project permanently add new connections to the existing road network (i.e. new intersections, intersection-to-interchange conversions[1] or new service roads[2])?

[1] This refers to a replacement as an individual project. Converting intersections to interchanges as part of corridor upgrade projects should be considered within the context of the larger project.
[2] This refers to construction of new roads along an existing highway frontage to provide access where none has existed previously. Generally this does not apply to constructing service roads to replace driveways due to a change in access or other access management considerations.

☒ No
☐ Yes

13. Will the project provide new or expanded access to properties?

☒ No
☐ Yes

14. Will the project encourage the development of activity centers or similar areas of concentrated, moderate to high intensity land development or redevelopment?

☒ No
☐ Yes

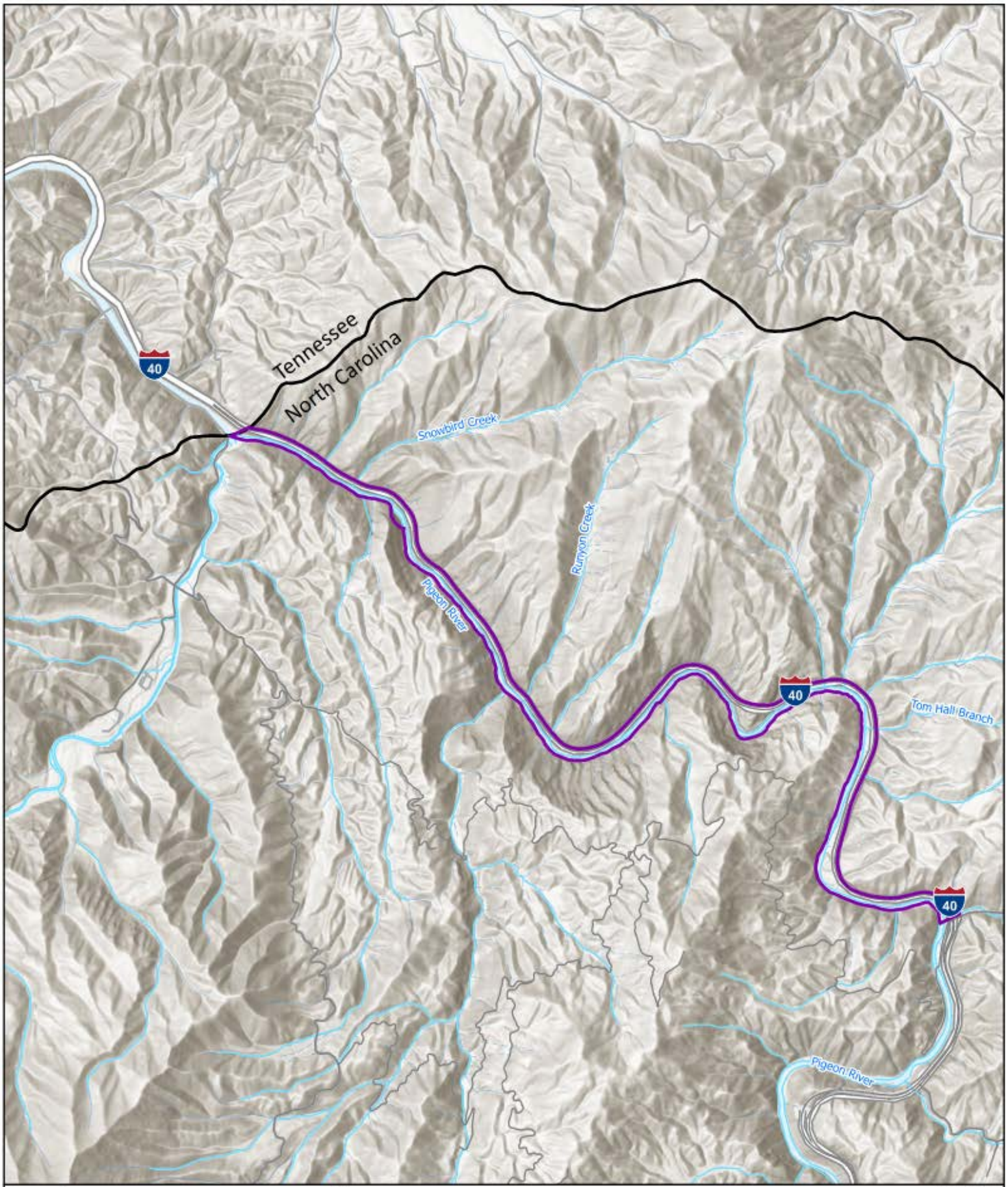


Figure 1.
Study Area Map
I-40 Pigeon River Gorge
Hurricane Helene Repair Project
in Haywood County, NC

Sources: NCDOT, Esri ArcGIS Basemap, HNTB. 2024.

GeoEnvironmental Investigation

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

January 28, 2025

MEMORANDUM TO: Brian Burch
Project Manager
HNTB

FROM: Ashley B Cox, Jr, LG
Signed by: Ashley B Cox, Jr
GeoEnvironmental Project Manager
GeoEnvironmental Section
Geotechnical Engineering Unit

WBS: 18314.1044057.PR01
COUNTY: HAYWOOD
DIVISION 14
DESCRIPTION: Emergency Repair to Restore I-40 from the North Carolina/Tennessee State Line

SUBJECT: **GeoEnvironmental Phase I**

The GeoEnvironmental Section of the Geotechnical Engineering Unit performed a Phase I field investigation on January 22, 2025 for the above referenced project to identify geoenvironmental sites of concern. The purpose of this report is to document sites of concern within the project study area that are or may be contaminated. These sites of concern should be included in the environmental planning document in an effort to assist the project stakeholders in reducing or avoiding impacts to these sites. Sites of concern may include, but are not limited to, underground storage tank (UST) sites, dry cleaning facilities, hazardous waste sites, regulated landfills and unregulated dumpsites.

Findings

No Sites of concern were identified within the proposed study area as shown in the figure below. We don't anticipate any monetary or scheduling impacts resulting from geoenvironmental sites of concern.

Please note that discovery of sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur. The GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

Sites of concern identified in this report should be reviewed by the GeoEnvironmental Section once the Final Right of Way plans are complete to determine if Phase II Investigations and Right of Way Recommendations are necessary prior to right of way being acquired.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING UNIT
1589 MAIL SERVICE CENTER
RALEIGH NC 27699-1589

Telephone: 919-707-6850
Fax: 919-250-4237
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

If there are questions regarding the geoenvironmental issues, please contact me, at (919) 707-6872.

cc:
Matthew J. Alexander, PE, State Geotechnical Engineer
Josh Deyton, PE, Division Construction Engineer
John Jamison, EPU Unit Head
Kat Bukowy, HNTB
David Flowers, RK&K, CMGC Project Manager
Gregory Goins, RK&K, Senior Project Delivery
Chris Ramsey, Schnabel, Geotechnical Consultant

Figure 1
Location of GeoEnvironmental Sites of Concern

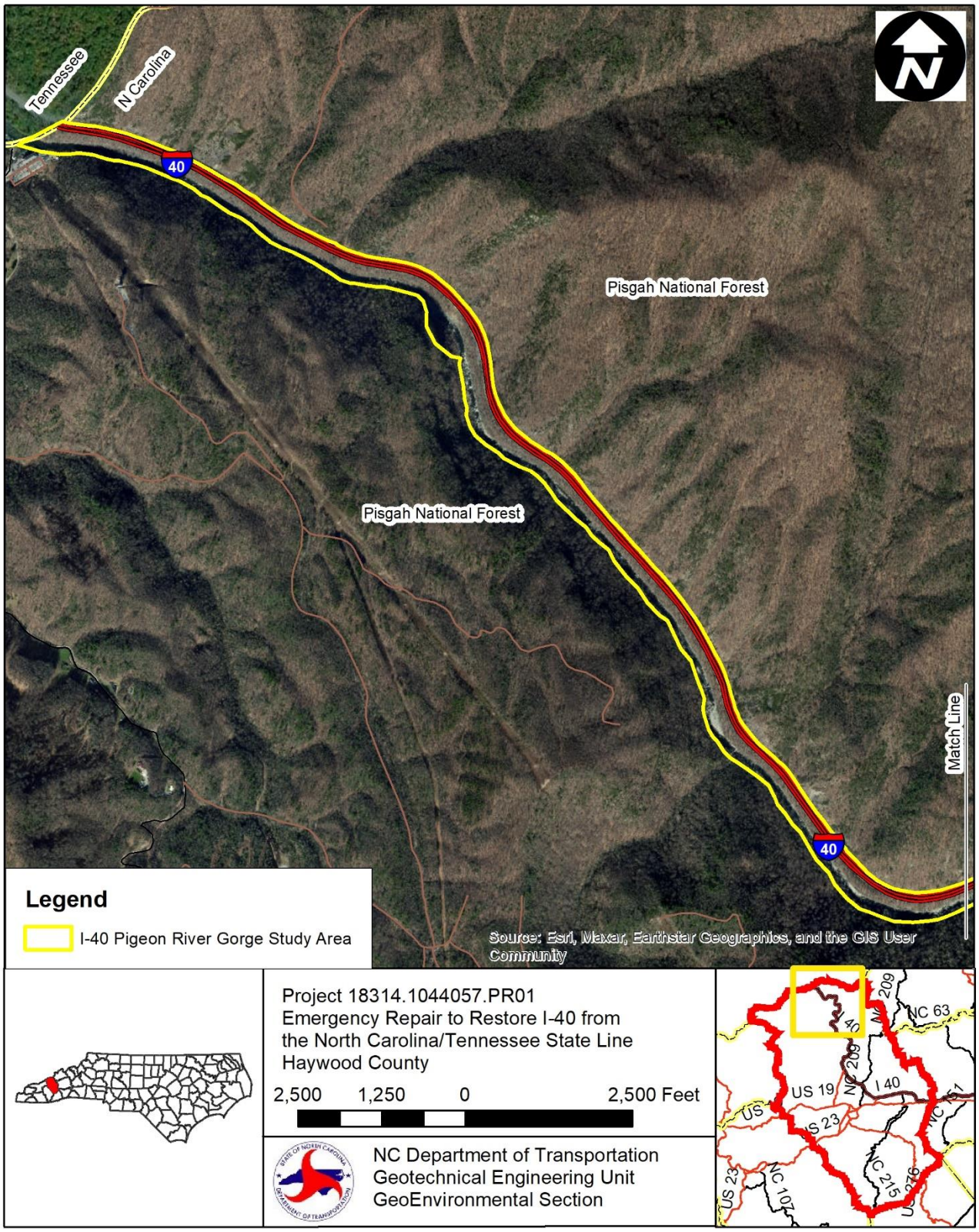
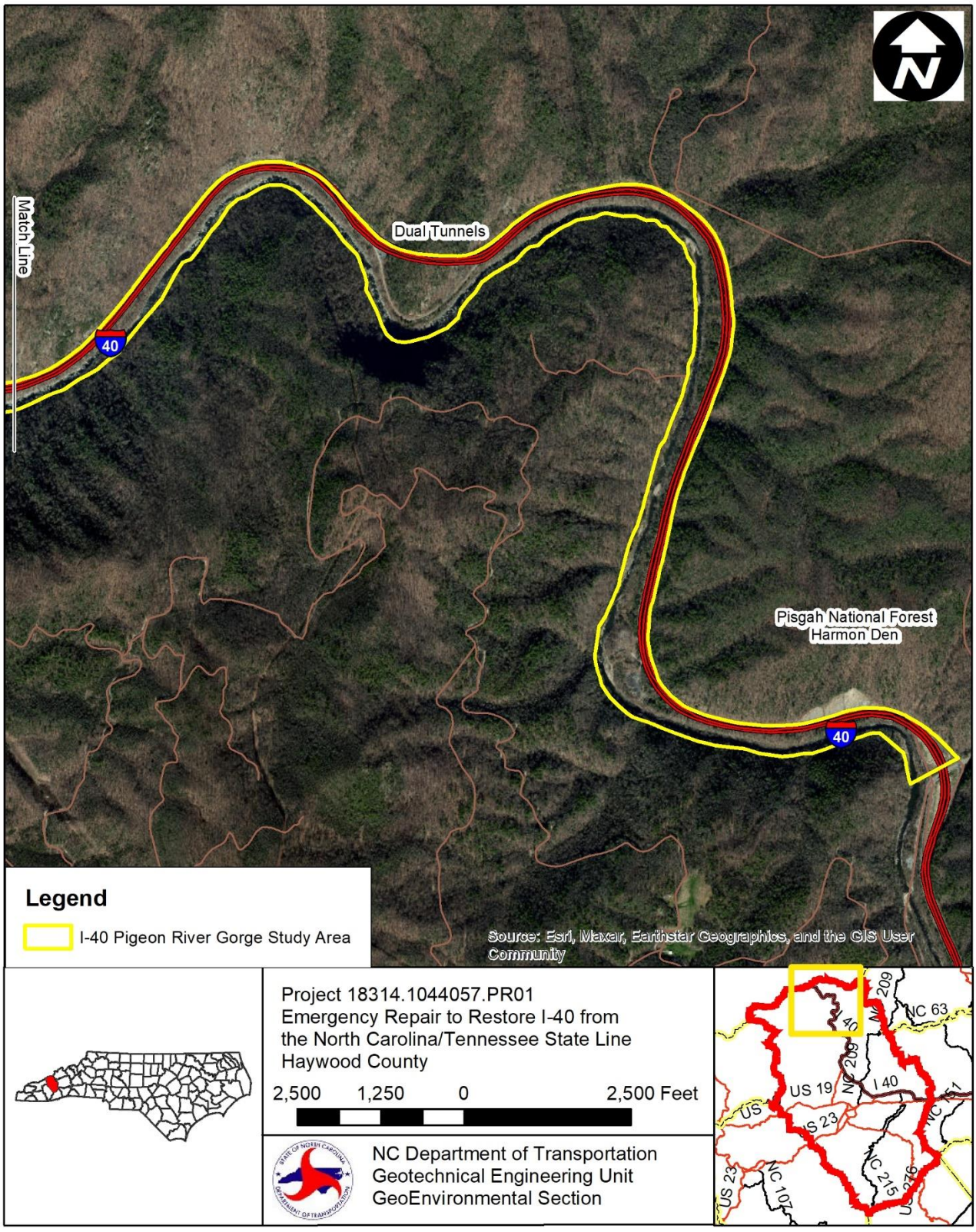


Figure 2
Location of GeoEnvironmental Sites of Concern



Section 4(f)
Coordination

USDA United States Department of Agriculture
Forest Service
National Forests in North Carolina
160A Zillicoa Street
Asheville, NC 28801
828-257-4200
Fax: 828-257-4263

File Code: 1950
Date: March 4, 2025

Yolonda Jordan
Division Administrator
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

Dear Ms. Jordan:

Thank you for your letter dated February 10, 2025, confirming the U.S. Forest Service (USFS) as a cooperating agency on the Interstate 40 Repair Activities project. We appreciate the opportunity to work with Federal Highways Administration (FHWA), the lead federal agency pursuant to 40 CFR 1508.1(g), on this critical initiative for the American public.

Based on our recent coordination with North Carolina Department of Transportation (NCDOT) and FHWA on the potential effects within the Appalachian Ranger District of the Pisgah National Forest to aid in repairs to Interstate 40, FHWA and NCDOT have requested a determination of whether the proposed activities are subject to Section 4(f) of the Department of Transportation Act of 1966 (23 USC 138) and FHWA's implementing regulations at 23 CFR 774.3(b).

As the Official with Jurisdiction over the National Forest, the USFS does not consider the subject portions of the Forest to be a Section 4(f) resource. There are no nationally significant recreation sites within the proposed project area on the Pisgah National Forest. My determination confirms that the Interstate 40 repair will not impact protected public lands, parks, recreation areas, or wildlife and waterfowl refuges as outlined under Section 4(f).

Sincerely,

JAMES E. MELONAS
Forest Supervisor

cc: Clarence Coleman, Allyson Conner