

Modified Biological Opinion

Conservation Measure Updates for Aquatic Impact Monitoring and Habitat Improvement I-26 Connector from I-40 to US 19/23/70 North of Asheville in Buncombe County, North Carolina

Service Log #02-252

NCDOT #I-2513

Original Biological Opinion Issued June 19, 2020



Prepared by:

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INTRODUCTION

This constitutes a modification to the June 19, 2020 Biological Opinion (Opinion), subsequent addendum December 14, 2023 Opinion, and modifications dated May 12, 2025 and February 11, 2026 for the I-26 Connector from I-40 to US 19/23/70 North of Asheville in Buncombe County, North Carolina. The U.S. Fish and Wildlife Service (Service) received a request for modification to the 2020 Opinion from the North Carolina Department of Transportation (NCDOT) Biological Surveys Group on June 4, 2026, with updates and a completed request provided on June 10, 2026. The modification request addresses needed changes to a section of the Conservation Measures (CMs) within the project description (Section 2.3.8.2 in the 2020 Opinion). As provided in 50 CFR §402.16, reinitiation of formal consultation is required when 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 the 2020 Opinion. We have reviewed the request and provide the following in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 - 1543) (Act).

CONSULTATION HISTORY

No changes to the 2020 or subsequent Opinions. Additions follow:

- June 19, 2020 – Original Opinion issued by the Service.
- December 14, 2023 – Addendum Biological and Conference Opinion issued by the Service.
- May 12, 2025 – Modified Opinion issued by the Service.
- February 11, 2026 – Modified Opinion issued by the Service.
- March 23, 2026 through May, 2026 – Email correspondences and meeting occurred per NCDOT request between the Service, NCDOT, U.S. Geological Survey, U.S. Army Corps of Engineers (USACE), North Carolina Wildlife Resources Commission (NCWRC), and North Carolina Department of Water Resources (NCDWR) regarding needed updates to the CM on geomorphology monitoring.
- May 7, 2026 – Service and NCDOT discussion on potential modification language.
- May 7, 2026 – Service and NCWRC discussion on potential aquatic habitat improvement options in the French Broad River.
- June 4, 2026 – NCDOT submitted a draft modification request to for the needed CM updates.
- June 4, 2026 through June 10, 2026 – Correspondence occurred between the Service, NCDOT, USACE, NCWRC, and NCDWR regarding the draft language for the updated CM.
- June 10, 2026 – NCDOT provided completed information for initiation of the formal modification.

DESCRIPTION OF THE PROPOSED ACTION

This section describes the portion of the proposed project action that differs from that described in the 2020 Opinion and subsequent modifications. Outside of the changes discussed here, there are no changes to the 2020 Opinion or subsequent modifications for this section.

According to the information submitted by NCDOT, the need for the modified CM language is as follows:

“At the time of the original Biological Opinion (BO), NCDOT was working with the U.S. Geological Survey (USGS) to evaluate the impacts of construction and temporary causeways on river habitat. This section of river contains habitat for the endangered Appalachian elktoe (*Alasmidonta raveneliana*). As part of conservation measures to protect aquatic resources in the original BO, a geomorphology monitoring plan was developed that would incorporate a combination of bathymetric surveys and Terrestrial Light Detection and Ranging (T-LiDAR) technology to produce a laser scan of riverbanks. Data would be used to evaluate stream bank and bed position and condition between successive surveys and ensure the I-26 Connector (I-2513) project would not result in substantial changes to channel

stability. In April 2026, USGS advised NCDOT that they must discontinue the bathymetry/LiDAR component of the river monitoring due to staffing and expertise losses within their agency. After discussing with wildlife and water resource agency regulatory staff, commitment has been made to develop a new monitoring plan for collecting streambank stability data with more simplified but effective techniques.

In addition, to further recovery efforts for the Appalachian elktoe, NCDOT offers a conservation measure that focuses on habitat improvement for the species.”

Updated Measures Section 2.3.8.2 French Broad River Geomorphology Monitoring

Original Language:

NCDOT is working with the U.S. Geological Survey (USGS) to evaluate the impacts of construction and temporary causeways on river habitat. This monitoring project encompasses several Transportation Improvement Projects (I-2513, I-4400 and I-4700). Therefore, the monitoring project will span several years to accommodate the varying construction schedules.

- Terrestrial Light Detection and Ranging (T-LiDAR) technology will be used annually to produce a laser scan of river banks. Bathymetric surveys will be conducted concurrently one to two times a year. Bathymetric data will be used to generate a gridded surface representation (digital elevation model, or DEM) of the channel bed for each survey. A similar approach will be applied to T-LiDAR data to evaluate stream bank position between successive surveys.
- Water quality monitoring will include real-time (continuous) data collection of temperature, turbidity, and specific conductance. Discrete water-quality samples will be collected during a variety of flow conditions to measure total suspended sediment (TSS) and suspended sediment concentration (SSC).
- Continuous streamflow, precipitation, and water-quality (temperature, conductance, and turbidity) data will be available online at <http://waterdata.usgs.gov/nc/nwis/rt/> and via text and email alerts. Yearly summaries for each monitoring site will be available on demand from the USGS National Water Information System web interface (NWISWeb). Real-time alerts will be available to NCDOT via the NWISWeb when temperature or turbidity concentrations spike or exceed a predetermined threshold.
- If monitoring at the French Broad River reveals excessive bank erosion, bank instability, or sedimentation associated with the bridge replacement, NCDOT will work to identify the cause and will make improvements to address the problems in a timely manner.

Updated language:

**Note removal of the LiDAR measure from the original language and addition of new measures.*

NCDOT will evaluate the impacts of construction and temporary causeways on river habitat. This monitoring project encompasses several Transportation Improvement Projects (I-2513, I-4400 and I-4700). Therefore, the monitoring project will span several years to accommodate the varying construction schedules.

- Water quality monitoring will include real-time (continuous) data collection of temperature, turbidity, and specific conductance. Discrete water-quality samples will be collected during a variety of flow conditions to measure total suspended sediment (TSS) and suspended sediment concentration (SSC).
- Continuous streamflow, precipitation, and water-quality (temperature, conductance, and turbidity) data will be available online at <http://waterdata.usgs.gov/nc/nwis/rt/> and via text and email alerts. Yearly summaries for each monitoring site will be available on demand from the USGS National Water Information System web interface (NWISWeb). Real-time alerts will be available to

NCDOT via the NWISWeb when temperature or turbidity concentrations spike or exceed a predetermined threshold.

- Prior to commencing project activities to construct temporary impacts at the temporary bridge and temporary causeway in the French Broad River, NCDOT will develop a Riverbank Monitoring Plan (Plan). The Plan will include the following components: (1) establishing the reach(es) along the French Broad River in which to monitor riverbanks for stability, (2) monitoring methods, (3) monitoring frequency, (4) monitoring duration, and (5) a plan of action should monitoring identify bank erosion. No work to begin construction of the temporary impacts (Station 73+39 to Station 77+07) shall commence until an acceptable Plan has been submitted to and approved by the NC Division of Water Resources (NCDWR), US Army Corps of Engineers (USACE) and the Service.
- If monitoring at the French Broad River reveals excessive bank erosion, bank instability, or sedimentation associated with the bridge replacement, NCDOT will work to identify the cause and will make improvements to address the problems in a timely manner.

In lieu of the prior geomorphology monitoring component, NCDOT shall work with aquatic biologists from the Service's Asheville Field Office and the North Carolina Wildlife Resources Commission (NCWRC) to create a habitat improvement plan on behalf of Appalachian elktoe. The goal of the plan is to improve habitat quality and stability for mussel (re)establishment and recruitment. The plan will be a collaborative effort between agencies and will require approval from NCDOT, the Service, and NCWRC prior to implementation, not to exceed \$500,000. The plan approval and any needed permitting/approvals from USACE and NCDWR shall be obtained prior to completion of the construction phase. Implementation of the plan will begin within one year after construction is completed.

STATUS OF THE SPECIES

No changes from the 2020 Opinion or subsequent modifications.

ENVIRONMENTAL BASELINE

No changes from the 2020 Opinion or subsequent modifications.

EFFECTS OF THE ACTION

No changes from the 2020 Opinion or subsequent modifications.

CONCLUSION

No changes from the 2020 Opinion or subsequent modifications.

INCIDENTAL TAKE STATEMENT

No changes from the 2020 Opinion or subsequent modifications.

REASONABLE AND PRUDENT MEASURES

No changes from the 2020 Opinion or subsequent modifications.

TERMS AND CONDITIONS

No changes from the 2020 Opinion or subsequent modifications.

CONSERVATION RECOMMENDATIONS

No changes from the 2020 Opinion or subsequent modifications.

REINITIATION AND CLOSING STATEMENT

This concludes reinitiation of formal consultation on the actions outlined in your project description last updated June 10, 2026. 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 BO, (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 BO, or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operation causing such take must cease, pending reinitiation.