



☒ North Carolina Wildlife Resources Commission ☒

M. Kyle Briggs, Executive Director

TO: John R. McCray, LG
NC Department of Transportation, Alternative Delivery

FROM: Dave McHenry, Western NCDOT Coordinator
Habitat Conservation Program, NCWRC 

DATE: April 21, 2026

SUBJECT: Scoping Comments on Replacement of Bridge No 800239 over Catheys Creek on SR 1325 (Nanneytown Rd).

The North Carolina Department of Transportation (NCDOT) invited the North Carolina Wildlife Resources Commission (NCWRC) to the field scoping for the subject project. I will be unable to attend the May 11, 2026 field scoping but wish to offer these comments in advance of that meeting. The NCWRC's comments are offered to conserve wildlife resources affected by the project and to promote wildlife-based recreation in accordance with the applicable provisions of the North Carolina Environmental Policy Act (G.S. 113A-1 through 113-10; 1 NCAC 25) or the federal Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

Specific Project Comments

Catheys Creek supports some rare aquatic species in the project area including Carolina Foothills Crayfish (*Cambarus johnii*) and possibly Broad River Stream Crayfish (*Cambarus lenati*). The NCWRC biologists may want to survey and relocate crayfish from the bridge work shortly before construction. Therefore, the NCWRC would appreciate an email or call when the construction schedule is known so we can coordinate our work, if deemed needed and possible. My contact information can be used for any coordination.

The WRC has no obvious concerns with the project but offers the following standard recommendations for bridge replacement projects for your consideration.

Standard Comments

Mailing Address: Habitat Conservation • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

NCWRC standard recommendations for bridge and culvert replacement projects of this scope include:

1. New bridges or other channel spanning structures are recommended over culverts because they typically require minimal if any stream impacts. The clearances of bridges typically allow for human access and wildlife passage, fish passage, and navigation by boaters. Unlike bridges, culverts can prove difficult to dewater during construction, which can lead to extended periods of channel instability and erosion.
2. Bridge deck drains should not discharge directly into streams.
3. Live concrete should not be allowed to contact water in or discharging to streams.
4. If possible, bridge supports (bents) should not be placed in stream channels.
5. Applicable measures from the current *NCDOT Erosion and Sediment Control Design and Construction Manual* (see [Erosion and Sediment Control Design and Construction Manual_Rev20220519.pdf \(ncdot.gov\)](#)) should be implemented and maintained during construction. Matting used in riparian areas should not contain nylon mesh because it entangles and kills wildlife. Coir matting should be used on unstable stream banks that are steep or susceptible to high water and matting should be securely anchored with wooden stakes according to NCDOT specifications.
6. Temporary detours and access roads should be designed and located to avoid wetland impacts, to minimize clearing, and avoid destabilizing stream banks. Tree stumps and root mats should be left where possible under and along temporary access roads to limit streambank disturbance and promote regrowth of vegetation. Temporary fills should be removed to original ground elevations upon the completion of the project. Disturbed areas should be seeded, or mulched, and native tree species should be planted with a spacing of 10'x10'.
7. The bridge should be designed to accommodate wildlife passage in accordance with *North Carolina Department of Transportation & North Carolina Wildlife Resources Commission Wildlife Passage Guidance* (see [Wildlife Passage Guidance.pdf](#)). This generally involves keeping a clear strip of streambank (rip rap free) of 10 feet in width on each side of the channel underneath bridges. Smaller widths are also beneficial where there are narrow abutment setbacks. Alternatively, a "wildlife path" can be constructed with a top-dressing of finer stone if full bank plating is required. These measures should also incorporate any ditch line plating.
8. NCDOT biologists should be notified about streams that contain threatened or endangered species. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.
9. All work in or adjacent to streams should be conducted in dry work areas. Sandbags, cofferdams, or other clean diversion structures should be used where possible to avoid excavation in flowing water.
10. Heavy equipment should be operated from the banks rather than in stream channels to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.
11. Only clean, sediment-free rock should be used as temporary fill (causeways) and fill material should be removed with minimal disturbance of the natural stream bottom when construction is completed.

12. During geotechnical investigations, equipment and containment measures should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, drilling waste, lubricants, and hydraulic fluids.

The following additional recommendations apply to corrugated pipes, reinforced concrete pipes, or concrete box culvert structures:

1. Culverts and pipes must be designed to allow for aquatic life and wildlife passage in accordance with current *NCDOT Guidelines for Drainage Studies and Hydraulic Design* (see [NCDOT Hydraulic Design Manual](#)) and *North Carolina Department of Transportation & North Carolina Wildlife Resources Commission Wildlife Passage Guidance* (see [Wildlife Passage Guidance.pdf](#)). This typically includes burial of a single low flow barrel at least 1 foot below the natural streambed and backfilling with native material. If multiple barrels are required, then the high flow barrel(s) should be placed on or near a bankfull elevation. These “flood” barrels should be reconnected to benches and include sills on the upstream ends to restrict or divert base flow into the low barrel. Barrels with sills should be filled with sediment to avoid standing water. If rip rap is used for backfilling, then it should also be topped with native or other finer material to facilitate wildlife passage. In accordance with *NCDOT Guidelines for Drainage Studies and Hydraulic Design*, alternating or notched baffles should typically be installed in base flow culverts that are steep or longer than 40-50 linear feet in a manner that mimics the existing stream flow pattern and profile.
2. Riprap should be minimized on banks and vegetation used for stabilization above the ordinary high-water elevation. Rip rap should be avoided on streambeds except where bed scour may be expected. Rip rap placed on the streambed should be embedded or “keyed-in” to prevent or shorten the duration of subsurface streamflow.
3. Culverts or pipes should be aligned with the existing channel alignment whenever possible. Channel widening should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity, disrupts aquatic life passage, and causes sediment deposition that requires increased maintenance.

Replacement of the existing bridge or culvert in the same location with road closure is typically recommended to minimize impacts. If road closure is not feasible, then a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing, and avoid destabilizing stream banks. If the structure will be on a new alignment, then the old structure and the approach fills should be removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. NCDOT should restore the area to wetlands if the area reclaimed was previously wetlands.

Please contact me at david.mchenry@ncwildlife.gov or (828) 476-1966 if you have any questions about these comments. Thank you for the opportunity to review and comment on this project. The NCWRC looks forward to assisting as needed as the project develops further.