



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Thomas A. Reeder
Acting Director

Pat McCrory
Governor

John E. Skvarla, III
Secretary

June 17, 2013

MEMORANDUM

TO: Troy Wilson, Division 13 Bridge Technician, NCDOT
Paul Sprouse, Division 13 Bridge Manager, NCDOT

FROM: Michael R. Parker, NCDWQ, Asheville Regional Office *MRP*

SUBJECT: Division 13 June 2013 Bridge Replacement Program
Scoping Review Comments

In reply to your request, the NCDWQ offers the following comments for the projects listed below:

Project Specific Comments

Bridge No. 12 over Turkey Creek, Buncombe County

1. Turkey Creek is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 26 over South Turkey Creek, Buncombe County

1. South Turkey Creek is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 371 over Willow Creek, Buncombe County

1. Willow Creek is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 676 over Bald Fork, Buncombe County

1. Bald Fork is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 677 over Bald Fork, Buncombe County

1. Bald Fork is class C waters.
2. NCDWQ has no specific comments for this bridge project.

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Division 13
Bridge Office

Bridge No. 14 over Cub Creek, Burke County

1. Cub Creek is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 15 over Cub Creek, Burke County

1. Cub Creek is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 34 over Rock Creek, Burke County

1. Rock Creek is class WS-III waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 35 over an unnamed tributary to Jacobs Fork, Burke County

1. The unnamed tributary to Jacobs Fork is classified as WS-II; High Quality Waters of the State. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H .1006 and 15A NCAC 2B .0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties.

Bridge No. 1 over Little Ivy Creek, Madison County

1. Little Ivy Creek is classified as WS-II; High Quality Waters of the State. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H .1006 and 15A NCAC 2B .0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties.

Bridge No. 76 over Big Laurel Creek, Madison County

1. Big Laurel Creek is classified as C-trout-Outstanding Resource Waters of the State. The water quality classification of C-ORW is one of the highest classifications in the State. NCDWQ is extremely concerned with any impacts that may occur to streams with this classification. It is preferred that these resources be avoided if at all possible. If it is not possible to avoid these resources, the impacts should be minimized to the greatest extent possible. Given the potential for impacts to these resources during the project implementation, NCDWQ requests that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" (15A NCAC 04B .0124) throughout design and construction of the project. Pursuant to 15A NCAC 2H .1006 and 15A NCAC 2B .0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties. NCDOT will also need to adhere to the Quality Standards listed in 15A NCAC 2B .0225.
2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout.
3. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.

Bridge No. 100 over Casey Bow Branch, Madison County

1. Casey Bow Branch is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 231 over California Creek, Madison County

1. California Creek is classified as WS-II; High Quality Waters of the State. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H .1006 and 15A NCAC 2B .0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties.

Bridge No. 281 over Sprinkle Creek, Madison County

1. Sprinkle Creek is classified as WS-II; High Quality Waters of the State. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H .1006 and 15A NCAC 2B .0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties.

Bridge No. 5 over Shoal Creek, McDowell County

1. Shoal Creek is class WS-V waters.
2. NCDWQ has no specific comments for this project.

Bridge No. 10 over Katy Creek, McDowell County

1. Katy Creek is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 11 over Katy Creek, McDowell County

1. Katy Creek is class C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 21 over Harris Creek, McDowell County

1. Harris Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.
2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout. In addition, NCDWQ will require that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124] throughout design and construction of the project.

Bridge No. 22 over Second Broad River, McDowell County

1. Second Broad River is class WS-V waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 5 over Pigeonroost Creek, Mitchell County

1. Pigeonroost Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.
2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout. In addition, NCDWQ will require that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124] throughout design and construction of the project.

Bridge No. 31 over Spring Creek, Mitchell County

1. Spring Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.
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Bridge No. 42 over Bear Creek, Mitchell County

1. Bear Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.
2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout. In addition, NCDWQ will require that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124] throughout design and construction of the project.

Bridge No. 61 over Snow Creek, Mitchell County

1. Snow Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.
2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout. In addition, NCDWQ will require that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124] throughout design and construction of the project.

Bridge No. 213 over Bear Creek, Mitchell County

1. Bear Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.
2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout. In addition, NCDWQ will require that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124] throughout design and construction of the project.

Bridge No. 163 over Little Rock Creek, Mitchell County

1. Little Rock Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.
2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout. In addition, NCDWQ will require that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124] throughout design and construction of the project.

Bridge No. 94 over Hinton Creek, Rutherford County

1. Hinton Creek is classified C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 172 over Hunting Creek, Rutherford County

1. Hunting Creek is classified WS-V waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 174 over Hunting Creek, Rutherford County

1. Hunting Creek is classified C waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 195 over Cane Creek, Rutherford County

1. Cane Creek is classified WS-IV waters.
2. NCDWQ has no specific comments for this bridge project.

Bridge No. 26 over Shoal Creek, Yancey County

1. Shoal Creek is class C-Trout waters. NCDWQ recommends that the most protective sediment and erosion control BMP's be implemented to reduce the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.

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General Comments Regarding Bridge Replacement Projects

1. NCDWQ is very concerned with sediment and erosion impacts that could result from these projects. NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
2. If foundation test borings are necessary; it shall be noted in the document Geotechnical work is approved under General 401 Certification Number 3687/Nationwide Permit No. 6 for Survey Activities.
3. Any Low Impact Bridge Projects must fall under Nationwide Permit No. 3 to qualify for Low Impact; otherwise, standard permitting procedures will be required. Example (Regional General Permit No. 31, Nationwide Permit No. 23, Nationwide Permit No. 13, etc.)
4. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the stream banks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) should not be placed in the stream when possible.
5. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWQ's *Stormwater Best Management Practices*.
6. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.
7. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from NCDWQ first.
8. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly.
9. All pile driving or drilling activities shall be enclosed in turbidity curtains unless otherwise approved by NCDWQ in this certification.
10. All bridge construction shall be performed from the existing bridge, temporary work bridges, temporary causeways, or floating or sunken barges. If work conditions require barges, they shall be floated into position and then sunk. The barges shall not be sunk and then dragged into position. Under no circumstances should barges be dragged along the bottom of the surface water.

2. Should NC Wildlife Resources Commission (NCWRC) identify these waters as naturally reproducing trout waters, NCDOT will be required to observe the NCWRC recommended moratoria for trout. In addition, NCDWQ will require that NCDOT strictly adhere to North Carolina regulations entitled "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124] throughout design and construction of the project.

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11. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
12. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
13. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
14. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
15. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
16. In most cases, the NCDWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour shall be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills shall be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.

Thank you for the opportunity to provide comments at this time. NCDOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Mike Parker at 828-296-4500.

cc: Lori Beckwith, USACE, Asheville Field Office
Roger Bryan, NCDOT, Division 13 Environmental Officer
Jason Mays, USFWS
Marla Chambers, NCWRC
Transportation Permitting Unit