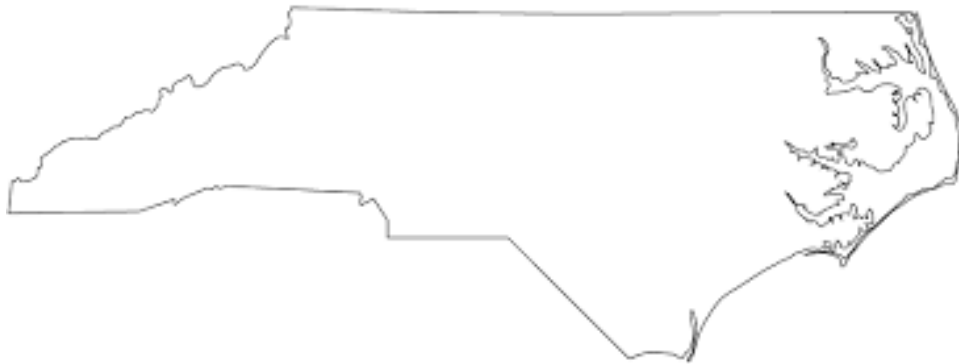


DECISION DOCUMENT
FOR THE
APPROVAL OF THE
NORTH CAROLINA
2020 SECTION 303(d) LIST

SUBMITTED ON JUNE 3, 2021



Prepared by the
Environmental Protection Agency, Region 4
Water Division

June 23, 2021

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I. Executive Summary

The purpose of this document is to describe the rationale for the U.S. Environmental Protection Agency's approval of the state of North Carolina's 2020 section 303(d) List submitted on June 3, 2021 by the North Carolina Department of Environmental Quality (NCDEQ). The EPA has conducted a complete review of the State's List and supporting documentation and information, including changes to the previous List. Specific additions and delistings are identified in Appendices A and B of this document. Based on this review, the EPA has determined that the State's List of water quality limited segments (WQLS) still requiring total daily maximum loads (TMDLs) meets the requirements of section 303(d) of the Clean Water Act and the EPA's implementing regulations. This document summarizes the EPA's review and the basis for the approval.

II. Statutory and Regulatory Background

Section 303(d) of the Clean Water Act (CWA, or the Act) and the EPA's implementing regulations in the Code of Federal Regulations at 40 C.F.R. section 130.7 require states to identify WQLS still requiring TMDLs within their jurisdictions. The section 303(d) List submission must include a description of the methodology used to develop the List and must show that the state has considered all appropriate information, including a rationale for any decision to not use any existing and readily available data and information. States are also required to provide any other reasonable information requested by the EPA to demonstrate good cause for not including a WQLS on the List. The List submission must include a priority ranking to put plans in place for establishing a total pollutant load and must involve the public and other stakeholders in the development of the section 303(d) List. State section 303(d) Lists are submitted to the EPA for approval or disapproval. Further statutory and regulatory information is given in italics at the beginning of each section below.

III. Analysis of State's Submission

Section 303(d) of the CWA and the EPA's implementing regulations at 40 C.F.R. section 130.7 require states to identify WQLS still requiring TMDLs within their jurisdictions. State Lists are submitted to the EPA for approval or disapproval.

The EPA received the State's final 2020 section 303(d) List package on June 3, 2021. The submission consisted of an Integrated Report (IR) Category Assignment Procedure, a Listing and Delisting Methodology, the section 303(d) List (including separate lists of newly added impairments and delistings), fact sheets for all newly added impaired waters, and a draft IR providing IR categories on all State-assessed waters. The package also included the State's priority ranking of TMDLs, and the State's response to public comments. Contents of the List package can be found on the State's website.¹

To determine that the State's submission reasonably identified impaired waters, the EPA examined the assessment and listing methodology used to develop the List in light of the State's approved WQS (sections A and B, below). The EPA's review was further based on its analysis of whether the State reasonably considered existing and readily available water quality related data and information (section C), demonstrated good cause for not including WQLSs on the List (section D), assigned a priority

¹ <https://deq.nc.gov/about/divisions/water-resources/planning/modeling-assessment/water-quality-data-assessment/integrated-report-files>

ranking and provided a list of TMDLs to be developed in the next two years (section E), provided adequate public participation and responded to comments (section F). The following sections describe all the factors involved in the EPA's review.

A. Identification of Water Quality Limited Segments for Inclusion on the 303(d) List

The list of WQLSs still requiring TMDLs is the State's section 303(d) List. A WQLS is defined in 40 C.F.R. section 130.2(j) as "[a]ny segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act." The WQLS listing requirement applies to waters impaired by point and/or nonpoint sources, under the EPA's long-standing interpretation of section 303(d). Note: The term WQLS may also be referred to as "waterbody-pollutant combinations," "listed waters," "impaired waters" or "impairments" throughout this decision document.

For purposes of listing waters under 40 C.F.R. section 130.7(b), the terms 'water quality standard applicable to such waters' and 'applicable water quality standards' refer to those water quality standards (WQS) established under section 303 of the Act, including designated uses, water quality criteria (WQC) and antidegradation requirements.

The NCDEQ developed its section 303(d) List in light of the State's EPA-approved WQS. Since the 2018 cycle List review, there were no modifications to North Carolina's WQS that impact this listing cycle. The State reported using all readily available information and assessed this information to determine compliance with the WQS in the manner described in the List submittal. The State used the previous cycle assessment decision factors as the basis for most of its current List decisions. The EPA reviewed the various assessments, focusing on changes to the previous List, and concludes the State's assessments are consistent with federal listing requirements and applicable WQS.

B. Assessment and Listing Methodology

The EPA regulations at 40 C.F.R. section 130.7(b)(6) require states to document decisions to list (or) not list waters, including a description of the methodology used to develop the List. The methodology, often referred to as an assessment methodology or a listing methodology, should describe how a state collects or obtains data and information relevant to applicable WQS, how it evaluates the suitability of the data or information for decision making, and how it analyzes and interprets data to make attainment or impairment decisions. The methodology is not an item for approval under 40 C.F.R. section 130.7(d)(1). The methodology is documentation that supports the assessment decisions. Although the EPA reviews a state's methodology as part of the List submission review, the EPA's approval of a state's section 303(d) List should not be construed as agreement with or approval of the listing methodology.

The State's List submittal provides a methodology used to identify impaired waters and specifies explicit factors for making listing and delisting decisions for different pollutant types based on different kinds of data. The State prepared the List in accordance with this methodology. In general, the State includes a waterbody on the List based on adequate documentation showing that WQS were not being met during the assessment period. The methodology includes quantitative assessment factors including statistical methods for evaluating potential WQS exceedances, minimum data set requirements, and data quality requirements. These decision factors are applied to various types of data, including water chemistry, bacteria, nutrients, and biological integrity. The EPA reviewed the methodology and concludes that North Carolina's assessments are generally consistent with federal listing requirements, with the exception of the assessment of toxic metals.

Assessment of Toxic Metals

The State's WQC for toxic metals do not define a frequency of exceedance. The State continues to assess for toxics by assigning impairment to waters with a greater than ten percent exceedance frequency, with at least 90 percent statistical confidence level. As North Carolina has yet to provide supporting evidence that this exceedance rate is reflective of their WQC, the EPA cannot determine that it is a reasonable method for the NCDEQ to assess toxic pollutants consistent with the State's EPA-approved WQC. An explanation of the EPA's position on this is found in the Decision Document on the North Carolina 2018 section 303(d) List.²

In the 2020 listing cycle there was limited metals data to assess. There were no proposed delistings of metals impairments and, based on new dissolved metals data, the State added one impairment for dissolved copper to the section 303(d) List. The EPA's review of North Carolina's 2020 section 303(d) List included an assessment of the new dissolved metals data using the EPA recommended 1-in-3 method. Based on this review, the EPA concludes that waters impaired by metals have been appropriately included on the State's List.

The NCDEQ added language to the 2020 303(d) Listing and Delisting Methodology to clarify the process for delisting total metals in cases where there is new dissolved metals data available (see below). The EPA will continue to work with the State to reach an agreement on a defensible assessment methodology for metals. Also, to properly identify the condition of all waterbodies impaired or potentially impaired due to metals (i.e., those waters in IR Category 5e as well as IR Category 3), the EPA strongly recommends these waters be given high priority for follow up monitoring.

Changes to North Carolina's Assessment and Listing Methodology

For the 2020 listing cycle, the State made some additions and clarifications to its 2020 303(d) Listing and Delisting Methodology. These are summarized below, including direct quotes from the 2020 303(d) Listing and Delisting Methodology approved by the North Carolina Environmental Management Commission on November 14, 2019.³ These changes had no impact on the State's WQLS identification process.

Delisting Legacy Metals Impairments

The NCDEQ clarified in their 2020 Listing Methodology that the State will only delist waters with "legacy" metal impairments (listings based on total metals monitoring data) when more recent dissolved metals data indicates no impairment. As stated in the Methodology, for "legacy total metals impairments, where total criteria were replaced with dissolved criteria in January 2015, DWR will delist assessments for total metals only when current dissolved metals data are available for assessment."

² The EPA Decision Document for the North Carolina 2018 section 303(d) List can be found in the EPA How's My Waterway website (<https://attains.epa.gov/attains-public/api/documents/cycles/6026/197780>) or the NCDEQ website (<https://files.nc.gov/ncdeq/Water%20Quality/Planning/TMDL/303d/2018/20190522-NC-208-303d-Approval-Package.pdf>)

³ <https://files.nc.gov/ncdeq/Water%20Quality/Planning/TMDL/303d/2020/2020-Listing-Methodology-approved.pdf>

Ten percent exceedance plus statistical confidence for naturally variable parameters

For the 2018 Listing cycle, the NCDEQ developed a new listing methodology for naturally variable parameters that “corrected the imbalance between statistical requirements for listing and delisting decisions, and put more emphasis on more current data for listing decisions rather than older data that might not be reflective of current conditions.” The State refined this methodology for the 2020 Listing cycle to include the same statistical confidence specifically for newer data:

Exceeding Criteria-Category 5

- Sample size is greater than nine.
- Greater than 10% exceedance with greater than or equal to 90% confidence, or
- Greater than 10% exceedance, but less than 90% statistical confidence, and greater than 3 excursions with 90% statistical confidence in exceeding criteria in newer data that have previously not been assessed.

Added Description of Assessment Unit Delineation

The NCDEQ described the process of waterbody segment delineation in their 2020 Listing Methodology:

In North Carolina, WQLS are spatially established by geographically defined assessment units (AUs). The base dataset for assessment units is the USGS 1:100,000 scale hydrography or the map of named streams in NC. NC has augmented this by adding some of the many unnamed streams from the 1:24,000 (more detailed stream map) scale hydrography.

Since the 1950s NC has been classifying streams for various uses. For the most part, AUs are the same as the classified named waters. However, this methodology recognizes that unforeseen environmental settings may complicate the assessment scenario and thereby require adaptability of the assessment scale. Therefore, during the assessment process, an AU may be re-segmented, or split into smaller units, to define a WQLS because of assessment result differences between stations in the same AU for any of the assessed parameters or drainage area characteristics (e.g., major tributaries, land use changes).

In general, assessments are usually applied only to the AU where the data are collected with minimal extrapolation. It is worth noting, that regardless of using a stream segment as the defaulting listing scale, upstream waters must protect downstream uses, and all upstream sources will be considered when addressing the impairment. For implementation purposes all activities in AUs in the entire upstream drainage area could be subject to management measures or TMDLs to address identified criteria exceedances (Category 4 or 5 assessments).

Clarified Fecal Coliform Listing and Delisting

The 2018 Listing Methodology included a provision that seemingly allowed delisting based on fewer samples than is required for listing. To correctly reflect the process used by the State, the NCDEQ removed this language in the 2020 Methodology: “Five samples in a 30-day period are not required to remove the assessment from Category 5.” The State did not apply this provision in previous listing cycles.

Also, the logic flow of the Fecal Coliform method was unclear in the 2018 Methodology. The corrected format, reflected in the 2020 Methodology (shown below), is the same method used by the State in previous listing cycles. That is, the approach to assess Fecal Coliform impairments has not changed. The wording has simply been clarified or removed.

FECAL COLIFORM BACTERIA CRITERIA

The criteria are for fecal coliforms not to exceed a geometric mean of 200/100 ml (MF count) based on at least five consecutive samples examined during any 30-day period and not to exceed 400/100 ml in more than 20 percent of the samples examined during such period. NC uses this standard as the assessment method in freshwaters.

Exceeding Criteria-Category 5

There are at least five samples collected within a 30-day period, and

- Geometric mean is greater than 200 colonies/100ml of water, or
- Greater than 20% of the samples exceed 400 colonies/100ml.

DELISTING WATERS

Assessments for fecal coliform bacteria will be removed from category 5 when meeting criteria as follows:

Meeting Criteria-Category 1

- Geometric mean is less than 200 colonies/100ml of water in monthly samples, and
- Less than 20% of the samples exceed 400 colonies/100ml in monthly samples.

C. Existing and Readily Available Water Quality-Related Data and Information

In developing section 303(d) Lists, states are required to assemble, evaluate and consider all existing and readily available water quality-related data and information about, at a minimum, the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the state’s most recent section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic

institutions; and (4) waters identified as impaired or threatened in any CWA section 319 nonpoint assessment submitted to the EPA. See 40 C.F.R. section 130.7(b)(5).

In addition to these minimum categories, states are required to consider any other water quality-related data and information that is existing and readily available. The EPA's 1991 Guidance for Water Quality-Based Decisions: The TMDL Process⁴ includes a list, provided in Appendix C, of water quality-related data and information that may be considered existing and readily available. States have certain flexibility in deciding which data or information they will use to list waters. The EPA's 2006⁵ and 2010⁶ Integrated Report Guidance encourages states to describe data and information expectations in the assessment and listing methodology. This includes consideration of data representativeness and data quantity and quality and suggests having in place procedures for identifying overwhelming evidence of water quality impairment. For example, older data should not be automatically determined as non-representative, particularly when its inclusion could be used to augment small sets of more current data. Also, minimum sample sizes should not be set as absolute exclusionary rules.

The NCDEQ collects a variety of biological, chemical, and physical data, including benthic macroinvertebrates, fish community, fish tissue, lake assessment, ambient monitoring, and aquatic toxicity monitoring. Sources of data and information include the following: previous section 303(d) Lists; waterbodies where specific fishing or shellfish bans and/or advisories are currently in effect; as well as data, information and water quality problems reported from local, state, or federal agencies, tribal governments, members of the public and academic institutions.

The NCDEQ maintains a standing solicitation for data on their website.⁷ For data to be used for impairment determinations, data must meet specific submission criteria, including quality assurance and quality control of the collection and analysis of the data.

Use support is assessed for all basins statewide. The 2020 List is based on data collected in calendar years 2014 through 2018. According to the State's 2020 Methodology, "assessments based on older data are carried forward if newer data or information were not available to change the previous assessment decision...Older data will not be automatically excluded particularly when its inclusion could be used to augment small sets of more current data. For the 2020 303(d) assessment, the state will augment small sets of current data (i.e. when n<10) with the previous five years of data (2009-2013) where available."

Supporting information for specific waterbody assessment decisions can generally be found in the NCDEQ Basin Assessment Reports⁸ and Basin Water Quality Plan Reports⁹ available online. The EPA recommends that North Carolina ensure that these Reports continue to be updated and relevant to support the State's assessment decisions. Summaries of the State's Basin Reports can be found in the Annual Reports to the General Assembly Environmental Review Commission, found on the NCDEQ Basin Planning Branch website.¹⁰

⁴ Guidance for Water Quality-Based Decisions: The TMDL Process, EPA Office of Water, EPA 440/4-91-001, April 1991.

⁵ Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act, July 29, 2005, at <https://www.epa.gov/sites/production/files/2015-10/documents/2006irg-report.pdf>.

⁶ Guidance for 2010 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act, May 5, 2009, at https://www.epa.gov/sites/production/files/2015-10/documents/2009_05_06_tmdl_guidance_final52009.pdf

⁷ <https://deq.nc.gov/about/divisions/water-resources/planning/modeling-assessment/water-quality-data-assessment>

⁸ <https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/reports-publications-data>

⁹ <https://deq.nc.gov/about/divisions/water-resources/planning/basin-planning>

¹⁰ <https://deq.nc.gov/about/divisions/water-resources/planning/basin-planning>

The State reported using all readily available information and assessed this information to determine compliance with the WQS in the manner described in the 2020 Methodology. The EPA reviewed the information submitted and concluded that the State properly assembled and evaluated all existing and readily available data and information, consistent with federal listing requirements.

D. Demonstration of Good Cause for Delisting

The EPA may request that the state demonstrates good cause for not including individual segments, including previously listed segments, on the section 303(d) List. The EPA may request this demonstration if the state does not develop an adequate record supporting the basis for the decision or does not specifically explain its decision to delist WQLSs previously on the List. Consistent with 40 C.F.R. section 130.7(b)(6)(iv)), good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed; changes in conditions; approval of a TMDL; demonstration that the impairment is being addressed through other pollution control requirements; or documentation that the impairment is not caused by a pollutant.

The EPA reviewed the State's assessment process, focusing on changes to the previous approved List. For each proposed delisting, the NCDEQ provided a rationale to support removal of each impairment. The EPA reviewed these delistings as well as the State's Responsiveness Summary regarding delistings. The EPA fully considered the documentation as part of its review and has determined that the State has demonstrated good cause justification for the delistings.

E. Other Pollution Control Requirements: 4b Demonstration

The EPA's regulations provide that TMDLs are not required for waterbodies where "[o]ther pollution control requirements (e.g., best management practices) required by local, State, or Federal authority are stringent enough to implement any water quality standards [WQS] applicable to such waters." 40 C.F.R. section 130.7(b)(1)(iii). The EPA's 2006 IR Guidance, cited above, acknowledges that the most effective method for achieving WQS for some WQLSs may be through controls developed and implemented without TMDLs (referred to as a "4b demonstration"). The EPA expects that these controls must be specifically applicable to the particular water quality problem and be expected to result in standards attainment in the near future. The EPA evaluates on a case-by-case basis a State's decision to exclude certain segment/pollutant combinations from the section 303(d) list based on the 4b demonstration.

There is one new Category 4b listing in North Carolina's 2020 section 303(d) List. The State identified Hominy Swamp (assessment unit NC27-86-8), as not meeting its aquatic life use in 2001 based on impaired biological integrity (macroinvertebrate rating of Poor). Located in the city of Wilson, North Carolina, and locally known as Hominy Creek given its present stream-like characteristics, the almost 10-mile stretch of Hominy Swamp is classified as Class C (waters protected for uses such as secondary recreation, fishing, wildlife, fish consumption, aquatic life, and agriculture), with supplemental classifications of Swamp and Nutrient Sensitive Water. Stressors to this waterbody include impervious surfaces, loss of riparian buffers and channelization. The City of Wilson is implementing various pollution control strategies expected to reduce sources of pollution, manage runoff to treat pollution prior to entering the water body, and improve the resiliency of the riparian corridor and watershed landscape. These restoration efforts are expected to provide a foundation for macroinvertebrate recovery. The Hominy Swamp watershed restoration plan¹¹ contain schedules, commitments, and monitoring plans.

¹¹ <https://files.nc.gov/ncdeq/Water%20Quality/Planning/TMDL/Alternatives/4b/Hominy-Creek-Category-4b-Plan--003-.pdf>

The Category 4b path is intended for waters where control requirements will lead to attaining water quality standards within a reasonable period of time. For Hominy Swamp, the State does expect that this will be the case. North Carolina has also confirmed that future monitoring will be used to verify standards achievement. The EPA agrees with the State's listing decisions based on the applicability of other pollution control requirements.

F. Priority Ranking and Two Year TMDL Development Schedule

The EPA regulations codify and interpret the requirement in section 303(d)(1)(A) of the CWA that states establish a priority ranking for listed waters. See 40 C.F.R. section 130.7(b)(4). States are required to prioritize waters on their section 303(d) Lists for TMDL development, and to identify those WQLSs targeted for TMDL development in the next two years. In prioritizing and targeting waters, states must, at a minimum, consider the severity of the pollution and the uses to be made of such waters.

On December 5, 2013, the EPA announced a new collaborative framework for implementing the CWA section 303(d) program with states — A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program ("Vision").¹² Under the Vision, states are expected to develop tailored strategies to implement their CWA 303(d) program responsibilities in the context of their overall water quality goals and individual state priorities. Although a state's long-term priorities should be included, or referenced, in the 2020 Integrated Report, the EPA's formal decision on the state's CWA section 303(d) List will not include action on their long-term priorities identified under the Vision.

Consistent with federal regulations, the State's TMDL priority ranking is fully described in its section 303(d) List submission and the State has included a two-year schedule of TMDL development for the waters identified on its section 303(d) List.

G. Public Participation

The EPA regulations require states to describe in their Continuing Planning Processes the process for involving the public and other stakeholders in the development of the section 303(d) List. See 40 C.F.R. Part 25 and 40 C.F.R. section 130.7(a). The EPA encourages the states to provide ample opportunities for public participation in the development of the IR and demonstrate how it considered public comments in its final decisions.

The State published its draft section 303(d) List for public review, accepted written comments and prepared a formal response to the comments received during the public comment period. This responsiveness summary was included in the State's submission to the EPA. The EPA reviewed each of the responses and concluded that the State appropriately considered and responded to all comments, data, and information received during the public comment period.

Several commentors expressed concerns about the statistical tests used for assessment decisions. Many of these concerns duplicated those raised during the public review period of the 2018 303(d) List. The EPA and the State worked together during the 2018 listing cycle to ensure the State's methodology corrected the prior imbalance between statistical requirements for listing and delisting decisions. The NCDEQ developed a rationale for delisting waterbody impairments that considers the representativeness of sample data, putting more emphasis on more current data for listing decisions. The State addressed public concerns at that time in their 2018 Response to Comments.¹³ The EPA's Decision Document on

¹² A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program https://www.epa.gov/sites/production/files/2015-07/documents/vision_303d_program_dec_2013.pdf (December 2013)

¹³ <https://files.nc.gov/ncdeq/Water%20Quality/Planning/TMDL/303d/2018/2018303d-DWR-Response-to-Comments-final.pdf>

the approved 2018 303(d) List¹⁴ affirmed that the State's assessment decisions based on the new methodology were appropriate. In the State's 2020 Response to Comments, the NCDEQ references the 2018 Responses and further clarified the methodology. The EPA remains satisfied that the NCDEQ has provided an appropriate justification for delisting waterbody impairments indicated by naturally variable pollutants.

Based on information provided by the State, the EPA has concluded that public participation was conducted adequately to ensure compliance with federal listing requirements. Again, the EPA reviewed the Responses and concluded that the State appropriately considered and responded to all comments, data, and information received. The EPA is also satisfied that the State made appropriate decisions based on the data and information gathered.

IV. The Integrated Report and ATTAINS

Section 305(b) of the CWA directs states to report on the overall condition of aquatic resources in their jurisdictions at the same time as the section 303(d) List submission (by April 1 of all even numbered years). States are encouraged to merge these reports into a single Integrated Report (IR). While the section 305(b) submission is required, the CWA does not specify Agency approval of the 305(b) report. See 40 C.F.R. section 130.8. The EPA's 2006 IR Guidance¹⁵ recommends the use of five categories to classify the WQS attainment status for individual waterbody segments. Placement of a waterbody in IR category 5 indicates that available data and/or information show that at least one designated use is not being supported or is threatened, and a TMDL is needed. Waterbodies listed in this category are those considered to be on the section 303(d) List.

This categorization scheme is the basis for the national electronic system, the Assessment and TMDL Tracking and Implementation System (ATTAINS). The electronic IR submission via ATTAINS will allow the EPA and states to process information in a timely manner for use in the *National Water Quality Inventory Report to Congress*; the formula used for state grant allocations; water quality listing decisions; and analyses supporting actions to protect and restore waters and track progress toward that goal.¹⁶

V. State's Additions to and Delistings from the Section 303(d) List

The State identified 154 additional waterbody-pollutant combinations in its List submission, as listed in Appendix A of this document. The EPA is approving the addition of those WQLSs to the State's section 303(d) List.

The State proposed to delist 80 waterbody-pollutant combinations in its List submission. The EPA fully considered the State's delisting rationale for each delisting and has determined that the State has demonstrated good cause justification for the delistings. As such, the EPA is approving the delisting of the 80 waterbody-pollutant combinations from the State's section 303(d) List. All WQLSs removed

¹⁴ <https://attains.epa.gov/attains-public/api/documents/cycles/6026/197780>

¹⁵ 2006 IR Guidance. Cited in Footnote 2.

¹⁶ Information Concerning 2018 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions, December 22, 2017, at https://www.epa.gov/sites/production/files/2018-01/documents/final_2018_ir_memo.pdf

from the State's section 303(d) List and the rationales for each delisting are described in Appendix B of this decision document.

VI. Government to Government Consultation

Under its tribal consultation process, the EPA consults with federally recognized tribes on a government-to-government basis where the EPA decisions may impact tribal interests. By letters dated February 21, 2021, the EPA formally offered consultation to the Eastern Band of Cherokee Indians and the Catawba Indian Nation on the available draft North Carolina 303(d) List. The consultation and coordination process were conducted in accordance with the EPA's Policy.¹⁷ Upon receipt of the final State section 303(d) List submission, the EPA contacted the Tribes to inform them of its intention to approve the List. The process began on February 21, 2021 and ended on March 23, 2021. Neither Tribe requested consultation with the EPA on this action.

VII. Final Decision on State's 2020 Section 303(d) List Submission

After careful review of the final submission, the EPA has determined that the state of North Carolina's 2020 section 303(d) List meets the requirements of section 303(d) of the CWA and the EPA's implementing regulations. Therefore, the EPA is approving the State's 2020 section 303(d) List.

¹⁷ <https://www.epa.gov/tribal/epa-policy-consultation-and-coordination-indian-tribes>

Appendix A: Waterbody Impairments Added to the Section 303(d) List

Information in this table is from North Carolina's Section 303(d) List Submission.

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC10-2-20-1	Little Buffalo Creek	FISH BIOASSESSMENTS
NC10-9-(6)b	Little River	BENTHIC BIOASSESSMENTS
NC10-9-10	Brush Creek	BENTHIC BIOASSESSMENTS
NC10-9-12	Crab Creek	TURBIDITY
NC10-9-7	Bledsoe Creek	BENTHIC BIOASSESSMENTS
NC11-(75)	CATAWBA RIVER (Lake Norman below elevation 760)	TURBIDITY
NC11-137-8b	Little Sugar Creek	TURBIDITY
NC11-24-(11.5)	North Fork Catawba River	BENTHIC BIOASSESSMENTS
NC11-32-2	South Muddy Creek	BENTHIC BIOASSESSMENTS
NC11-34-7-(2)	Little Silver Creek	BENTHIC BIOASSESSMENTS
NC11-35-3-(2)b	Irish Creek	FISH BIOASSESSMENTS
NC11-52-(1)	Drowning Creek	FISH BIOASSESSMENTS
NC12-108-21a	Second Creek (North Second Creek)	TURBIDITY
NC12-108-21c	Second Creek (North Second Creek)	TURBIDITY
NC12-110a	Grants Creek	FISH BIOASSESSMENTS

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC12-113	Swearing Creek	TURBIDITY
NC12-115-3	Town Creek	TURBIDITY
NC12-84	Deep Creek	TURBIDITY
NC12-94-12-(4)a	Salem Creek (Middle Fork Muddy Creek)	FISH BIOASSESSMENTS
NC13-(15.5)b	PEE DEE RIVER	PH, LOW
NC13-(15.5)b	PEE DEE RIVER	TURBIDITY
NC13-17-20-1	North Fork Crooked Creek	TURBIDITY
NC13-17-42	Hardy Creek	FISH BIOASSESSMENTS
NC13-17-9-(2)	Irish Buffalo Creek	TURBIDITY
NC13-17a	Rocky River	TURBIDITY
NC13-2-(17.5)	Uwharrie River	PH, LOW
NC13-28-1-3	Nells Branch	PH, LOW
NC13-42-2	South Fork Jones Creek	FISH BIOASSESSMENTS
NC15-25-13	Calabash River	PH, LOW
NC16-11-14-1b	North Buffalo Creek	FISH BIOASSESSMENTS
NC16-11-14-2-3	Ryan Creek	BENTHIC BIOASSESSMENTS
NC16-11-14-2-3ut5	UT to Ryan Creek	BENTHIC BIOASSESSMENTS
NC16-11-14-2c	South Buffalo Creek	FECAL COLIFORM

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC16-19-8-1	North Prong Stinking Quarter Creek	FISH BIOASSESSMENTS
NC16-27-(2.5)a	Cane Creek (Cane Creek Reservoir)	BENTHIC BIOASSESSMENTS
NC16-41-1-(11.5)b	New Hope Creek	TURBIDITY
NC16-41-1-17-(0.7)b1	Northeast Creek	TURBIDITY
NC16-41-1-17-3	Panther Creek	COPPER, DISSOLVED CHRONIC
NC16-7-(2)	Little Troublesome Creek	BENTHIC BIOASSESSMENTS
NC17-23b	Brush Creek	BENTHIC BIOASSESSMENTS
NC17-43-10b2	Loves Creek	FISH BIOASSESSMENTS
NC17-43-13b	Tick Creek	BENTHIC BIOASSESSMENTS
NC17-43-15	Harlands Creek (Hollands Creek)	BENTHIC BIOASSESSMENTS
NC17-43-16c	Bear Creek	BENTHIC BIOASSESSMENTS
NC17-7-(4)	Richland Creek	FISH BIOASSESSMENTS
NC18-(71)a2a	CAPE FEAR RIVER	ARSENIC IN FISH TISSUE
NC18-(71)a2a	CAPE FEAR RIVER	CHROMIUM, HEXAVALENT
NC18-16-1-(2)	Kenneth Creek	FISH BIOASSESSMENTS
NC18-68-17-5-1	Singletery Lake	PH, LOW
NC18-74-23	Limestone Creek	BENTHIC BIOASSESSMENTS
NC18-77-1	Sturgeon Creek	CHROMIUM, HEXAVALENT
NC18-77-1	Sturgeon Creek	ARSENIC IN FISH TISSUE

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC18-77a	Brunswick River	CHROMIUM, HEXAVALENT
NC18-77a	Brunswick River	ARSENIC IN FISH TISSUE
NC19-(15.5)	New River	PH, LOW
NC21-(17)e2	Newport River	ENTEROCOCCUS
NC26-1	Edenton Bay	DIOXIN IN FISH TISSUE
NC27-(118)a1a	NEUSE RIVER Estuary at Camp Don Lee	ENTEROCOCCUS
NC27-33-18	Pigeon House Branch	DISSOLVED OXYGEN
NC28-(24.7)a2	TAR RIVER	TURBIDITY
NC28-(36)a2	TAR RIVER (including lower portion of the City of Rocky Mount Reservoir below highwater elevation 130 feet MSL)	CHLOROPHYLL-A
NC28-55-3	Bear Branch	DISSOLVED OXYGEN
NC28-55-3	Bear Branch	TURBIDITY
NC28-79-(30.5)	Fishing Creek	BENTHIC BIOASSESSMENTS
NC28-91	Johnsons Mill Run	PH, LOW
NC29-(5)b1	PAMLICO RIVER (Pamlico Blounts Bay Segment)	PH, HIGH
NC29-(5)b2	PAMLICO RIVER (Pamlico Bath Segment)	ENTEROCOCCUS
NC29-34-(12)b	Pungo River	ENTEROCOCCUS
NC29-57-1-1	Lake Mattamuskeet	TURBIDITY
NC30-21e2	Roanoke Sound	ENTEROCOCCUS

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC30-9-(2)	Kendrick Creek (Mackeys Creek)	TURBIDITY
NC30d	ALBEMARLE SOUND	ENTEROCOCCUS
NC5-(7)c	PIGEON RIVER (Waterville Lake below elevation 2258)	BENTHIC BIOASSESSMENTS
NC5-16-(11.5)d	Richland Creek (Lake Junaluska)	PH, HIGH
NC6-3-8b	Shoal Creek	BENTHIC BIOASSESSMENTS
NC6-55-11-(5)b	Clear Creek	BENTHIC BIOASSESSMENTS
NC6-55d	Mud Creek	BENTHIC BIOASSESSMENTS
NC6-57-(9)a2	Cane Creek	BENTHIC BIOASSESSMENTS
NC6-78c	Swannanoa River	BENTHIC BIOASSESSMENTS
NC99-(7)b3	Atlantic Ocean	ENTEROCOCCUS
NC18-87-(11.5)b	Intracoastal Waterway	PATHOGENS (mapping refinement)
NC18-87-(25.5)	Intracoastal Waterway	PATHOGENS (mapping refinement)
NC18-87-(30.5)	Intracoastal Waterway	PATHOGENS (mapping refinement)
NC18-87-21c1	Middle Sound	PATHOGENS (mapping refinement)
NC18-87-24-3a	Banks Channel	PATHOGENS (mapping refinement)
NC18-87-25.7a2	Masonboro Sound ORW Area	PATHOGENS (mapping refinement)
NC18-87-25.7c1	Masonboro Sound ORW Area	PATHOGENS (mapping refinement)
NC18-87-31a2	Myrtle Sound Shellfishing Area	PATHOGENS (mapping refinement)

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC19-30a1b	Stones Bay	PATHOGENS (mapping refinement)
NC21-35-(0.5)a2	Back Sound	PATHOGENS (mapping refinement)
NC21-35-1-12-3a2	Westmouth Bay	PATHOGENS (mapping refinement)
NC21-35-1-12-3a3	Westmouth Bay	PATHOGENS (mapping refinement)
NC21-35-1-12-4	Janes Creek	PATHOGENS (mapping refinement)
NC21-35-7-3-2b	Annis Run	PATHOGENS (mapping refinement)
NC21-35-7-3-3b2	Styron Creek	PATHOGENS (mapping refinement)
NC27-(118)a1a	NEUSE RIVER Estuary at Camp Don Lee	PATHOGENS (mapping refinement)
NC27-(118)a1a	NEUSE RIVER Estuary	PATHOGENS (mapping refinement)
NC27-(118)h	NEUSE RIVER Estuary	PATHOGENS (mapping refinement)
NC27-120	King Creek	PATHOGENS (mapping refinement)
NC27-124	Long Creek	PATHOGENS (mapping refinement)
NC27-125-(6)b	Dawson Creek	PATHOGENS (mapping refinement)
NC27-127	Courts Creek (Coaches Creek)	PATHOGENS (mapping refinement)
NC27-128-10a	Godfrey Creek	PATHOGENS (mapping refinement)
NC27-128-5a	Kellum Creek	PATHOGENS (mapping refinement)
NC27-128-6	Cedar Creek	PATHOGENS (mapping refinement)
NC27-128-6-1	Cullie Creek	PATHOGENS (mapping refinement)

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC27-128-6-2	Jonaquin Creek	PATHOGENS (mapping refinement)
NC27-128-9a2	Delamar Creek	PATHOGENS (mapping refinement)
NC27-133b2	Pierce Creek	PATHOGENS (mapping refinement)
NC27-135-13	Coffee Creek	PATHOGENS (mapping refinement)
NC27-141-11	Green Creek	PATHOGENS (mapping refinement)
NC27-141-5	Pasture Creek	PATHOGENS (mapping refinement)
NC27-141-6	Parris Creek	PATHOGENS (mapping refinement)
NC27-141-7	Burton Creek	PATHOGENS (mapping refinement)
NC27-141-8	Pittman Creek	PATHOGENS (mapping refinement)
NC27-149-4b	Cedar Island Bay	PATHOGENS (mapping refinement)
NC27-149-4c	Cedar Island Bay	PATHOGENS (mapping refinement)
NC27-150-20b2b	Ball Creek	PATHOGENS (mapping refinement)
NC27-150-28-3	Plum Creek	PATHOGENS (mapping refinement)
NC27-150-28-4	Riggs Creek	PATHOGENS (mapping refinement)
NC27-150-28b2a	Bear Creek	PATHOGENS (mapping refinement)
NC29-33-1-1	Intracoastal Waterway	PATHOGENS (mapping refinement)
NC29-33-11-1	Pitch Hole Gut	PATHOGENS (mapping refinement)
NC29-33-11-2	Persimmon Tree Landing Gut	PATHOGENS (mapping refinement)
NC29-33-11-3	Tar Landing Gut	PATHOGENS (mapping refinement)

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC29-33-11-4	Gray Gut	PATHOGENS (mapping refinement)
NC29-33-11-5	Mill Creek	PATHOGENS (mapping refinement)
NC29-33-11-6	Betty Creek	PATHOGENS (mapping refinement)
NC29-33-11-7	Overton Creek	PATHOGENS (mapping refinement)
NC29-33-11-8b	Old House Cove	PATHOGENS (mapping refinement)
NC29-33-11b	Lower Spring Creek	PATHOGENS (mapping refinement)
NC29-33-2-(2)	Campbell Creek	PATHOGENS (mapping refinement)
NC29-33-2-12	Lee Creek	PATHOGENS (mapping refinement)
NC29-33-2-13	Carrie Creek	PATHOGENS (mapping refinement)
NC29-33-2-14	Smith Creek	PATHOGENS (mapping refinement)
NC29-33-2-16	Cuff Tarkiln Creek	PATHOGENS (mapping refinement)
NC29-33-2-17	Myrtle March Gut	PATHOGENS (mapping refinement)
NC29-33-2-18	Pasture Gut	PATHOGENS (mapping refinement)
NC29-33-3-3	Slade Landing Creek	PATHOGENS (mapping refinement)
NC29-33-3-4	Mallard Creek	PATHOGENS (mapping refinement)
NC29-33-3-5	Otter Creek	PATHOGENS (mapping refinement)
NC29-33-3b2	Eastham Creek	PATHOGENS (mapping refinement)
NC29-34-(38)b	Pungo River	PATHOGENS (mapping refinement)
NC29-34-46-1	Log Creek	PATHOGENS (mapping refinement)

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAM NAME
NC29-34-46-2	Old Field Creek	PATHOGENS (mapping refinement)
NC29-34-46b	Fortescue Creek	PATHOGENS (mapping refinement)
NC29-34-48b2	Satterthwaite Creek	PATHOGENS (mapping refinement)
NC29-35b2	Oyster Creek	PATHOGENS (mapping refinement)
NC29-44a2b	Rose Bay	PATHOGENS (mapping refinement)
NC29-49-1	Shingle Creek	PATHOGENS (mapping refinement)
NC29-57	Sage Bay	PATHOGENS (mapping refinement)
NC30-20-8a2	Cut Through	PATHOGENS (mapping refinement)
NC30-22-14	North Drain	PATHOGENS (mapping refinement)
NC30-22-21b	Spencer Creek	PATHOGENS (mapping refinement)

Appendix B: Waterbody Impairments Delisted Since the Previous Cycle

Information in this table is from North Carolina's Section 303(d) List Submission.

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER NAME	PARAMETER DELISTING REASON
NC10-1-32b2	Naked Creek	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC10-2-20	Buffalo Creek	TURBIDITY	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC11-137-8b	Little Sugar Creek	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC11-137c	Sugar Creek	BENTHIC BIOASSESSMENTS	Clarification of listing cause
NC11-33-(2)	Canoe Creek	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC11-38-34	Wilson Creek	PH, LOW	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC11810	Fines Creek	FISH BIOASSESSMENTS	Applicable WQS attained; based on new data
NC12-(108.5)b2	YADKIN RIVER (including upper portion of High Rock Lake below normal op.level)	CHLOROPHYLL-A	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(114)b3	YADKIN RIVER (including lower portion of High Rock Lake)	CHLOROPHYLL-A	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(124.5)c2	YADKIN RIVER (including Tuckertown Lake, Badin Lake)	PH, HIGH	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(27.5)a	YADKIN RIVER (W. Kerr Scott Reservoir below Elevation 1030)	CHLOROPHYLL-A	Data and/or information lacking to determine WQ status; original basis for listing was incorrect

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER NAME	PARAMETER DELISTING REASON
NC12-(27.5)a	YADKIN RIVER (W. Kerr Scott Reservoir below Elevation 1030)	TEMPERATURE	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(27.5)b1	YADKIN RIVER (W. Kerr Scott Reservoir below Elevation 1030)	TEMPERATURE	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(27.5)b1	YADKIN RIVER (W. Kerr Scott Reservoir below Elevation 1030)	PH, HIGH	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(27.5)b2	YADKIN RIVER (W. Kerr Scott Reservoir below Elevation 1030)	CHLOROPHYLL-A	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(27.5)b2	YADKIN RIVER (W. Kerr Scott Reservoir below Elevation 1030)	TEMPERATURE	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-(27.5)b2	YADKIN RIVER (W. Kerr Scott Reservoir below Elevation 1030)	PH, HIGH	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC12-108-11-3	Patterson Creek	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC12-94-12-(4)a	Salem Creek (Middle Fork Muddy Creek)	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC13-17-5b	Mallard Creek	COPPER	WQS no longer applicable
NC13-20b	Brown Creek	TURBIDITY	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC13-45-(2)a4	Marks Creek (Boyds Lake, City Lake, Everetts Lake)	DISSOLVED OXYGEN	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC13-5-1-(2)	Little Mountain Creek	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER NAME	PARAMETER DELISTING REASON
NC14-22b	Big Swamp	PH, LOW	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC14-27b	Porter Swamp	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC15-17-1-11	Juniper Swamp	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC15-25d	Intracoastal Waterway	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect
NC15-2-6-3	Friar Swamp (Council Millpond)	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC16-11-(3.5)b1	Reedy Fork(including Lake Brandt and Lake Townsend)	TURBIDITY	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC16-11-4-(1)b	Brush Creek	CHLOROPHYLL-A	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC16-18-(1.5)a1	Back Creek (Graham-Mebane Reservoir)	TURBIDITY	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC16-41-1-(11.5)b	New Hope Creek	BENTHIC BIOASSESSMENTS	Clarification of listing cause
NC16-41-1-12-(1)	Third Fork Creek	DISSOLVED OXYGEN	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC16-6-(3)	Troublesome Creek	DISSOLVED OXYGEN	Applicable WQS attained; based on new data
NC17-(10.5)a	DEEP RIVER	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC18-87-31b	Myrtle Sound Shellfishing Area	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER NAME	PARAMETER DELISTING REASON
NC18-88-9-3-3	Dutchman Creek Outlet Channel	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect
NC18-88-9b	Intracoastal Waterway	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect
NC19-(7)	New River	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect
NC21-35-7-10-4ut1	UT Ditch to Broad Creek	TURBIDITY	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC22-18	Mill Creek	BENTHIC BIOASSESSMENTS	Applicable WQS attained; original basis for listing was incorrect
NC22-27-(7.5)a	Belews Creek (including Belews Lake below elevation 725) (1)	TEMPERATURE	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC23-10-2	Newmans Creek (Little Deep Creek)	BENTHIC BIOASSESSMENTS	Applicable WQS attained; original basis for listing was incorrect
NC23-10a	Smith Creek	BENTHIC BIOASSESSMENTS	Applicable WQS attained; original basis for listing was incorrect
NC2-46	Brush Creek	FISH BIOASSESSMENTS	Applicable WQS attained; based on new data
NC27-33-(3.5)b1	Crabtree Creek (Crabtree Lake)	TURBIDITY	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC27-86-8	Hominy Swamp	BENTHIC BIOASSESSMENTS	Other pollution control requirements (4b)
NC28-(1)	TAR RIVER	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC30-1-15b	Dowdys Bay (Poplar Branch Bay)	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER NAME	PARAMETER DELISTING REASON
NC30-19-1b	Colington Creek	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect
NC30-1c	Currituck Sound	ENTEROCOCCUS	Applicable WQS attained; original basis for listing was incorrect
NC30-5-(1)b	Little River	CHLOROPHYLL-A	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC30-9-4	Main Canal	BENTHIC BIOASSESSMENTS	Applicable WQS attained; based on new data
NC7-3-(13.7)b	Cane River	TURBIDITY	Data and/or information lacking to determine WQ status; original basis for listing was incorrect
NC9-50-(28)	First Broad River	TURBIDITY	Applicable WQS attained; based on new data
NC20-36-(8.5)a8	Bogue Sound (Including Intracoastal Waterway)	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC21-35-(0.5)b1	Back Sound	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC27-(118)e	NEUSE RIVER Estuary	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC27-128c2	Adams Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC27-135-19	Horton Bay	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC27-137-4-1	Pitman Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC27-152-2	Henry Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER NAME	PARAMETER DELISTING REASON
NC27-152a2	Jones Bay	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-(40.5)e1	PAMLICO RIVER AND PAMLICO SOUND	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-29-5a1	East Fork North Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-34-40-6	Wood Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-34-40-7	Spellman Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-34-40-8	Speer Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-34-40-9	Church Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-34-40-9-1	Speer Gut	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-34-40a2	Slade Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-34-49b	Wrights Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-73-(2)a2	Long Shoal River	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC29-74-1b	Pains Creek	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC30-20-(2)c2	Croatan Sound	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement

ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER NAME	PARAMETER DELISTING REASON
NC30-20-(2)f2	Croatan Sound	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC30-21b2	Roanoke Sound	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC30-21d2	Roanoke Sound	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC30-21i	Roanoke Sound	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement
NC30-22f2	Pamlico Sound	PATHOGENS	Applicable WQS attained; based on new data, mapping refinement