**2024 North Carolina Draft Integrated Report/303(d) List Public Review Comments Received**

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PUBLIC WORKS
CITY OF DURHAM

April 24, 2024

NC Division of Water Resources
512 North Salisbury Street
1617 Mail Service Center
Raleigh, N.C. 27699-1617

To whom it may concern:

The City of Durham Public Works Department is pleased to provide comments on the draft 2024 303(d) List. This list was provided for public comment on March 15, 2024. As a National Pollutant Discharge Elimination System (NPDES) Phase I municipality, the City of Durham is required to develop plans for each surface water with a USEPA approved Total Maximum Daily Load (TMDL). Therefore, the Public Works Department reviews the 303(d) List decisions carefully to ensure that precious resources are expended appropriately.

The Public Works Department appreciates the effort by the state to provide not only the 303(d) List, but also the entire Integrated Report for public review. This enables the public, including regulated communities, to track movement of waterbody segments. This transparency is particularly important when TMDLs have been developed and waterbody segments are moved to Category 4. It is common for members of the public and the development community to believe a waterbody is "fixed" when the waterbody no longer appears on the 303(d) list. By publishing both the Integrated Report and the 303(d) List concurrently, the status of a waterbody is easier to determine.

The City of Durham Public Works Department continues to be engaged in water quality issues raised at the state level. We appreciate the opportunity to provide comments to the NC Division of Water Resources (DWR) and the ability to review the Integrated Report in conjunction with the 303(d) List. If you have any questions about these comments, please contact me at (919) 560-4326, ext. 30311.

Sincerely,

John V. Loperfido

John V. Loperfido
Assistant Water Quality Manager

Enclosure

C: Michelle Woolfolk, Water Quality Manager
Marvin Williams, Director of Public Works

## Comments related to Durham streams:

**Northeast Creek**

Northeast Creek has listings for copper that are based on legacy total metals assessments. This includes AUs 16-41-1-17-(0.7)a [From N.C. Hwy. 55 to Durham Triangle WWTP] and 16-41-1-17-(0.7)b2 [From Kit Creek to a point 0.5 mile downstream of Panther Creek] that are listed for total copper. Both of these AUs are downstream of an industrial facility that processes copper. From the EPA TRI 2022 dataset, this facility reported annual air emissions of copper compounds totaling 10,607 pounds in 2022 which is below the annual average 12,476 pounds reported between 2014-2021. Copper discharged in surface water from this facility to Northeast Creek was 44 pounds in 2022 which is below the annual average 52 pounds reported between 2014-2021.

**Lick Creek**

Lick Creek, 27-11-(0.5) [From source to Wake County SR 1809] is listed for Benthos, category 5. This AU is located in the Triassic Basic and thus, should not receive a bioclassification since Triassic Basin Criteria for benthic macroinvertebrates do not exist. Monitoring data collected by the Public Works Department in 2022 and 2023 indicated bioclassifications of Good-Fair and Fair, respectively. Despite the application of an unsuitable classification system to Lick Creek, data from 2022 supports the delisting of Lick Creek from the 303(d) list. The Public Works Department supports the development of Triassic Basin Criteria

**Little River Reservoir**

Little River (Little River Reservoir), 27-2-21-(3.5) [From a point 0.1 mile upstream of Durham Co SR 1461 to dam at Little River Reservoir (32.4 FW acres)] is listed for Chlorophyll *a*, category 5. A new management strategy is not needed for chlorophyll *a* in the Little River Reservoir because it is located within the scope of the existing Falls Lake Nutrient Management Strategy and the Neuse River TMDL. The City of Durham is a member of the Upper Neuse River Basin Association (UNRBA) and is actively engaged in the rules readoption process for the Falls Lake nutrient rules. The UNRBA recently approved a set of concepts and principles for the readoption of the Falls Lake nutrient rules. These concepts and principles recommend ways to address non-point source nutrient pollution transported in the watershed and to the Little River Reservoir. They also recommend against the development of a separate, State-required nutrient management strategy applied to managed lands, including those draining to the Little River Reservoir. The readopted Falls Lake nutrient rules will address non-point sources in the Falls Lake watershed which will impact chlorophyll *a* in the Little River Reservoir.

**From:** John Calhoun
**To:** TMDL303dComments
**Subject:** [External] 303(d) Listings
**Date:** Wednesday, April 10, 2024 11:37:14 AM



I would like to express my support for the listing of sections of the Yadkin/ PeeDee River basin as impaired waters. Here in Winston-Salem and Forsyth County, I am particularly concerned about the effects of recent development and deforestation near the Yadkin. In addition, streams that feed into the Yadkin are being increasingly polluted by sedimentation and chemical pollution, due to rapid development and deforestation, inadequate agricultural practices allowing run-off, and stormwater runoff from impervious surfaces in cities like Winston-Salem.

Much the same can be said for the Pee Dee River, Cape Fear, and Lumber River basins in southern North Carolina, especially as it relates to agricultural run-off from widespread use of agriculatural chemicals, and the placing of industrial plants along rivers, which have been releasing chemicals such as PFAS and Gen X (particularly in Cape Fear areas). An additional threat to water quality in eastern N.C. basins are industrial livestock operations, especially threatening the Cape Fear and Neuse Rivers.

As a separate issue, we are also faced with the need to monitor private wells in the vicinity of chemical plants, and downwind from them, to understand their effects on wells and aquifers.

Thank you for considering my opinion.

John Calhoun
1416 Brookstown Avenue
Winston-Salem, N.C. 27101

**From:** Lisa Warren
**To:** TMDL303dComments
**Subject:** [External] Thank you for the important work you do!
**Date:** Wednesday, April 10, 2024 8:08:31 AM



Please update the list of streams, rivers, reservoirs and other water bodies in North Carolina considered to be “impaired,” or that do not meet water quality standards, in 2024.

This work by The North Carolina Department of Environmental Quality Division of Water Resources is vital in order to have up-to-date, accurate information to insure all North Carolinians have access to safe water.

Thank you.

Sincerely,

Lisa Warren
Yadkin County, NC

Delivered via electronic mail to: TMDL303dComments@deq.nc.gov

Cam McNutt
N.C. Department of Environmental Quality
Division of Water Resources
1617 Mail Service Center
Raleigh, NC 27699-1167

Re: North Carolina's Draft 2024 Section 303(d) List

Mr. McNutt,

Please accept these comments from Sound Rivers regarding North Carolina's draft 303(d) list as part of the State's obligations to protect water quality under the Clean Water Act (CWA). Sound Rivers is a nonprofit organization representing over 3,000 members with a mission to monitor and protect the Neuse and Tar-Pamlico River watersheds covering nearly one quarter of North Carolina, and to preserve the health and beauty of the river basin through environmental justice. These comments are formatted to state objections to the current listing methodology, identify concrete examples of objectionable listing decisions, and suggest revisions to the draft 2024 §303(d) list.

**Pamlico River**

Within the middle segment of the Pamlico River, from Durham Creek to Saint Claire Creek, 10,194.8 acres are proposed to be delisted for Chlorophyll a on this year's draft list. Sound Rivers strongly recommends that this section of the Pamlico not be delisted for the reasons explained throughout this comment letter.

Chlorophyll a is an indicator for nutrients like nitrogen and phosphorus which enter waterways from sources including fertilizers from agricultural lands, animal waste, human wastewater treatment plants, and air pollution. An excess of these nutrients in waterways cause harmful algal blooms that often lead to anoxic conditions and fish kills. The Pamlico River has seen recurring nutrient-related problems since the latter half of the 20th century, leading to its classification as a nutrient sensitive water (NSW)[1]. Despite the development of a nutrient reduction strategy and the Tar-Pamlico Basin Association, the Pamlico River Estuary is still seeing the effects of high nutrient levels. Since September of 2020, the Pamlico River and its tributaries had twenty-four reports of fish kills and algal blooms[2]. Multiple of these reports were within the limits of the section that is being delisted from the 303(d) list for Chlorophyll a. This evidence alone shows that the methodology for delisting waters is flawed and it is recommended

[1] NCDEQ, "Nutrient Sensitive Water Strategy" 2015, p.1
[2] North Carolina Department of Water Resources, "Fish and Algal Bloom Report Dashboard", https://www.google.com/url?q=https://www.arcgis.com/apps/dashboards/7543be4dc8194e6e9c215079d976e716&sa=D&source=docs&ust=1714052809524123&usg=AOvVaw2-wLJ92RJn1gBJLdyKa91o

that the methodology be updated to reflect the true state of water quality in North Carolina waters.

**History of Listing Methodology for Context**

The current methodology for listing and delisting waters is flawed and does not properly reflect the actual state of water quality in North Carolina waterways. In 2014, the criteria of the data set having to be greater than or equal to 90% statistical confidence was added to the original criteria of the 10% rule with the null hypothesis that "the overall exceedance probability is less than or equal to the 10% exceedance allowance"[3]. This was problematic for many reasons. First, the addition of statistical confidence with the binomial approach was introduced in order to eliminate uncertainty in listing and delisting, but this is unnecessary because the 10% rule already eliminated uncertainty. According to the Environmental Protection Agency (EPA), the 10% rule was already "intended to account for measurement error and the potential that small data sets may not be fully representative of receiving water conditions"[4]. The other major issue with this methodology implemented in 2014 was that the Department of Environmental Quality (DEQ) failed to reverse the null hypothesis when considering delisting waterways. The same test should not be applied to the listing and delisting process. For the listing process, the null hypothesis is essentially that the waterbody is not impaired, so for the delisting process, the null hypothesis should be that the waterbody *is* impaired in order to maintain consistency and get accurate results.

**Current Methodology**

Rather than adjusting the 2014 methodology accordingly to many scientific experts' suggestion to simply reverse the null hypothesis for the delisting process, in 2018, the methodology was instead updated to include a different process for delisting currently impaired waters, creating even more of a disparity in the ability of waters to remain listed. The current methodology for delisting is as follows:

> *"...if the [assessment] results in greater than 10% exceedance rate with less than 90% statistical confidence and the water was on the 2016 303(d) list, the water will be delisted if there are less than 2 excursions of the criterion in newer data that have not been previously assessed. If the 2018 assessment results in less than 10% exceedance rate and the water was on the 2016 303(d) list, the water will be delisted if there is greater than 40% statistical confidence that there is less than a 10% exceedance of the criterion or if there are less than 3 excursions of the criterion in newer data that have not been previously assessed".*[5]

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[3] NCDEQ, "2014 North Carolina 303(d) Listing Methodology", 2014, p.4

[4] See 2006 Guidance, supra note 6, at 25 ("EPA encourages the state to provide opportunities for public participation in the development of the Integrated Report and demonstrate how it considered public comments in its final decisions.")

[5] NCDEQ, "2024 303d Listing Methodology_Final_1" 2024, p.4

DEQ also includes within its appended flowchart an added criteria that is not listed or explained elsewhere in the methodology. If the data set being analyzed shows less than 10% exceedance *and* there is greater than 70% statistical confidence that there is less than a 10% exceedance rate, then it is automatically delisted without considering any other factors. Without an explanation of where this 70% is coming from, this seems to be an arbitrary number and another unnecessary step in an already convoluted methodology.

Additionally, only requiring 40% statistical confidence that the true exceedance rate is less than 10% is an unjustifiably low confidence interval, which makes it much easier for a water to be delisted (even if more than 10% of the samples are exceedances).

The middle Pamlico segment is being unjustly delisted due to this methodology. Over the four year time period, 39 total samples included 6 exceedances for the water quality standard for Chlorophyll a. This is over a 15% exceedance rate, so it *should* remain listed, but since it does not meet the arbitrary statistical confidence level, it is being delisted.

Scientific experts have repeatedly suggested simply to reverse the null hypothesis to make the process more statistically sound and the state's refusal to do this reflects on their priority to keep more impaired waters off the list rather than accurately depict the impairment of North Carolina waterways.

**Nutrient Concentration**

While we understand that most water bodies are divided into subsections for analysis of each segment's qualification for the list, it is important to note that these subsections do not act independently of each other. Especially in estuarine ecosystems like the Pamlico River, each subsection of the river interacts with each other on a daily basis, being impacted by tides and changing flow rates due to precipitation. For that reason, sampling each section a few times per year at different times can not possibly tell the whole story of the true water quality of the river. This is not to say that we would recommend only one sample site for the entire river, but rather sampling more frequently at each already established site to allow for a more accurate representation.

The current methodology also does not take into context the changing weather conditions that affect concentration of nutrients over time. In the Pamlico River and Estuary, precipitation amounts impact the movement of nutrient concentration. For example, in drought conditions, the concentration of nutrients will remain in the upstream segment of the River. This is because with less precipitation, there is not a high enough flow rate to push the nutrients further downstream. The opposite is true as well, as periods of increased rainfall locally are associated with higher rates of flow, meaning that the nutrient concentration would travel downstream towards the estuary.[6] This process explains why Chlorophyll a levels are higher in upper Pamlico, which is being newly listed for 2024. According to drought data, Beaufort county, which surrounds the

[6] Panton, et.al."The Impact of Rainfall Events, Catchment Characteristics and Estuarine Processes on the Export of Dissolved Organic Matter from Two Lowland Rivers and Their Shared Estuary." Science of The Total Environment, May 16, 2020. https://www.sciencedirect.com/science/article/pii/S0048969720329983.

Pamlico River, experienced significantly more periods of drought in the 2018-2024 timeframe than it did in the previous sampling cycle (2016-2020). Data is collected each week by the National Oceanic and Atmospheric Administration (NOAA) which shows the percentage of the county that is experiencing drought conditions. Their data for Beaufort County, NC, between 2018 and 2022 shows that over 50% of the county experienced abnormally dry conditions for 60 weeks, moderate drought conditions for 23 weeks, and severe drought for 4 weeks–compared to the 2016-2020 timeframe where over 50% of the County experienced abnormally dry conditions for 28 weeks, moderate drought for 0 weeks, and severe drought for 0 weeks[7].

The Pamlico Middle segment was listed in 2016 and remained listed in 2018 when there was more flow transporting nutrients down river and is now being delisted (even though it has over a 15% exceedance rate for Chlorophyll a) as the nutrients stay more concentrated at the top of the river due to drought conditions. Other segments of the Pamlico have been listed and delisted for this same reason. While the current testing methods generally show where the nutrients are concentrated in that given time period, it does not accurately represent the sheer amount of nutrient pollution in the Pamlico River, because the concentration is constantly moving around. In truth, the entirety of the Pamlico River is impaired for nutrients and chlorophyll a as it has been since it was declared an NSW in 1989, and should be listed as such in order to reinstill priority to limit the amount of nutrients permitted to enter the River.

**Conclusion**

To summarize suggestions for updating the 2024 Draft 303(d) list and methodology: please consider simplifying the methodology by preferably returning to the 10% rule or maintaining statistical integrity by reversing the null hypothesis when considering the delisting of waters. Additionally, please reconsider delisting the Pamlico Middle segment for Chlorophyll a. It would be unjustifiable to delist this segment with the data showing its continued impairment. And lastly, in cases such as the Pamlico River, we recommend considering listing the entirety of the river when long-term data shows its overall consistent impairment. Sound Rivers has signed on to the Southern Environmental Law Center's (SELC) comment and strongly agrees with their suggestions and recommendations as well.

We appreciate the opportunity to provide site-specific recommendations regarding categorization focused on evaluating, and improving the water quality in North Carolina. Thank you for considering these issues.

Sincerely,

Katey Zimmerman
Pamlico Tar Riverkeeper
Sound Rivers, Inc.

[7] Data downloaded from: NOAA, "National Integrated Drought Information System: Historical Data and Conditions" https://www.drought.gov/historical-information

**From:** Mariah Hughes
**To:** TMDL303dComments
**Subject:** [External] Ivy River Watershed
**Date:** Tuesday, April 2, 2024 1:30:10 PM



Hi there,

I'd like to suggest that the Ivy River be prioritized for the development of a TMDL or management plan. The Madison and Buncombe Soil and Water Conservation Districts have been prioritizing this watershed for decades. In 2014, the Ivy River Partners was formed by a group of stakeholders invested in addressing the issues. Mountain Valleys RC&D runs the Ivy River Partners and has secured $1.5 million in funding over the last 10 years for on the ground projects, water quality monitoring, and outreach/education. We have a Source Water Protection Plan that is 11 years old. We are hoping to update this plan and could use extra help/guidance. Several sections of the Ivy are listed for fecal coliform. These numbers are improving according to our data and that of the water treatment plant. We know the issues are septic and agricultural and lack of riparian buffers. We would like to dial in to the remaining problem areas and hope to see the sections removed from the 303d list in the near future.

Thanks for your consideration,

--
Mariah Hughes
Executive Director
Mountain Valleys RC&D
mountainvalleysrcd.org
w. 828-206-6159

**From:** Beau McCaffray
**To:** TMDL303dComments
**Subject:** [External] Impaired waters: Pages Creek
**Date:** Tuesday, March 26, 2024 10:47:00 AM



Pages Creek (both 18-87-22a and b) is identified as SA;HQW and have been on the 303D list since 2002 (b) and 2006 (a). While a Pages Creek Watershed Restoration Plan has recently been issued, this estuary should be a priority until it can reopen for shellfishing.

Thank you,
Ed McCaffray
7512 Dunbar Rd, Wilmington, NC 28411

**From:** Greg hamby
**To:** TMDL303dComments
**Subject:** [External] Rivers classification
**Date:** Saturday, March 23, 2024 3:15:17 PM

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Hello, All impaired rivers need cleaning up
Sent from my iPhone

**From:** Patrick Darden
**To:** TMDL303dComments
**Subject:** [External] Black Creek
**Date:** Monday, March 18, 2024 7:59:20 PM



Hello,

I was curious about the Black Creek - Neuse River entry. Maybe there are two, but the one in Johnston county is the only one I know of. The one from Johnston seems to be left off the document if that's the case. The other creeks surrounding it are mentioned, that's why it's strange to not see it listed.

Just wanted to mention it. Thanks,
Patrick

SOUTHERN ENVIRONMENTAL LAW CENTER

48 Patton Avenue, Suite 304
Asheville, NC 28801

Telephone 828-258-2023
Facsimile 828-258-2024

April 26, 2024

***Via Electronic Mail***

Cam McNutt
N.C. Department of Environmental Quality
Division of Water Resources
1617 Mail Service Center
Raleigh, NC 27699-1617
cam.mcnutt@deq.nc.gov
TMDL303dComments@deq.nc.gov

**Re: Comments on North Carolina's Draft 2024 § 303(d) List**

Dear Mr. McNutt:

Thank you for providing the opportunity to comment on North Carolina's draft 2024 § 303(d) list of impaired waters as well as the prioritization of waters for management and restoration. We submit these comments on behalf of Sound Rivers, the Center for Biological Diversity, the Pamlico-Tar Riverkeeper, the North Carolina Chapter of the Sierra Club, and MountainTrue including the French Broad, Green, Broad, and Watauga Riverkeepers.

The proper identification of impaired waters is essential to improving the quality and preserving the best use of the State's waters. This is critical for people who rely on these waters for their economic livelihoods, for recreation, and for spiritual renewal. Properly identifying impaired waters is also critical for species that depend on clean water, like Southern Appalachian brook trout. However, the Department of Environmental Quality's (DEQ's) procedures for listing and delisting impaired waters remain statistically and scientifically unsound, and it continues to ignore exceedances of the temperature standard for trout streams when preparing its § 303(d) list. Unless DEQ makes changes to ensure it is accurately identifying all impaired waters, it will continue to overlook persistent and pernicious water-quality impairments.

Accurately identifying impaired waters is only half the battle, however. Once impairments have been identified, it is also crucial that DEQ remediate those impairments through development of a Total Maximum Daily Load (TMDL) or a management and restoration plan. For far too long, waters across the state have suffered because these tools have not been implemented. DEQ must make strides to develop a comprehensive system for prioritizing TMDLs and other restoration efforts—one that accounts for environmental justice considerations, in keeping with Executive Order 292.

The failure to timely promulgate TMDLs is also affecting DEQ's ability to fulfill other obligations and facilitate environmentally protective economic growth in North Carolina. The Clean Water Act makes it much more difficult to issue National Pollutant Discharge Elimination

System permits for new discharges on impaired streams which lack TMDLs.[1] This has recently posed problems for draft permit Nos. NC0090247 (Clear Creek Wastewater Treatment Plant) and NC0090212 (Albemarle Lithium Mine). These problems will grow in the future if DEQ does not make meaningful progress addressing its TMDL backlog.

The concerns raised in this letter will not be new to DEQ—for the most part, we have raised them all previously. In the past, DEQ has sometimes suggested that our concerns would be better addressed through the State's triennial review process. The triennial review process does not excuse shortcomings in the State's exercise of its obligations under § 303(d) but we note that this year the two processes are happening in parallel, giving the State multiple vehicles to address these longstanding problems.

## I. Clean Water Act § 303(d) is a critical tool for protecting the State's waters.

Congress passed the Clean Water Act (CWA) in 1972 to "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[2] To that end, Congress charged states with identifying "designated uses" for each jurisdictional waterbody within their boundaries.[3] States then set "criteria necessary to protect the uses" as water-quality standards.[4] Water-quality standards "should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value for public water supplies."[5] "Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serving as the regulatory basis for establishment of water quality-based treatment controls and strategies beyond the technology-based level of treatment required by sections 301(b) and 306 of the [CWA]."[6] States "are required to set water quality standards for all waters within their boundaries regardless of the sources of the pollution entering the waters."[7] In other words, water-quality standards are set without regard to existing or future sources of pollution.

Water-quality standards must be approved by the Environmental Protection Agency (EPA) and are reviewed at least every three years.[8] If a new or revised state-promulgated water-quality standard is insufficient to meet the purposes of the CWA, EPA must promulgate a sufficient water-quality standard in its stead.[9]

Every two years, states must identify "water quality limited segments" of jurisdictional waters within their borders and list them on their CWA § 303(d) list.[10] A "water quality limited segment" is any "segment where it is known that water quality does not meet applicable water

[1] *See generally* 40 C.F.R. § 122.4(i).
[2] 33 U.S.C. § 1251(a).
[3] *Id.* § 1313(d); 40 C.F.R. § 131.10.
[4] 40 C.F.R. § 130.3.2. North Carolina implements this procedure by classifying waterbodies and assigning water-quality standards for each classification. *See* N.C. Gen. Stat. § 143-214.1; 15A N.C. Admin. Code 2B.0101, .0301.
[5] *Id.*
[6] *Id.*
[7] *Pronsolino v. Nastri*, 291 F.3d 1123, 1127 (9th Cir. 2002).
[8] *See* 33 U.S.C. § 1313(a)–(c).
[9] *Id.* § 1313(c)(3).
[10] *See generally* 33 U.S.C. § 1313(d).

quality standards, and/or is not expected to meet applicable water quality standards."[11] More specifically, states must identify water-quality-limited segments for which:

> (i) Technology-based effluent limitations required by [the CWA];
> (ii) More stringent effluent limitations (including prohibitions) required by either State or local authority preserved by section 510 of the Act, or Federal authority (law, regulation, or treaty); *and*
> (iii) Other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority *are not stringent enough to implement any water quality standards applicable to such waters*.[12]

"Water quality standard," as used here, includes "numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements."[13] States must also list water-quality-limited segments "for which controls on thermal discharges under section 301 [of the CWA] or State or local requirements are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish and wildlife."[14]

Once prepared, states submit draft § 303(d) lists to EPA for approval.[15] EPA may not approve a list that does not meet "the requirements of [40 C.F.R.] § 130.7(b)."[16] If EPA disapproves a list, it must add wrongfully omitted water-quality-limited segments back to the state's 303(d) list.[17]

States are obligated to "establish TMDLs for the water quality limited segments identified" on that state's final § 303(d) list.[18] TMDLs are developed based on a waterbody's "loading capacity" which is the "greatest amount of loading that a water can receive without violating water-quality standards."[19] A "load" is an "amount of matter or thermal energy that is introduced into a receiving water" and "loading" is the act of introducing that matter or thermal energy into a receiving water.[20] "Loading may be either man-caused (pollutant loading) or natural (natural background loading)."[21]

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[11] 40 C.F.R. § 130.2(j).
[12] 40 C.F.R. § 130.7(b) (emphasis added).
[13] *Id.* § 130.7(b)(3).
[14] *Id.* § 130.7(b)(2).
[15] *Id.* § 130.7(d).
[16] *Id.* § 130.7(d)(2).
[17] *Id.*
[18] *Id.* § 130.7(c)(1).
[19] *Id.* § 130.2(f).
[20] *Id.* § 130.2(e).
[21] *Id.*

Once the state determines the "loading capacity" of a waterbody, it allocates allowable levels of pollutant discharges among nonpoint and point sources[22] via load allocations[23] and wasteload allocations,[24] respectively. The TMDL is the sum of the load allocations (including background conditions) and wasteload allocations. The TMDL thus protects the overall health of waterbodies by ensuring that point and nonpoint discharges are reduced to ensure compliance with water-quality standards.

TMDLs are also subject to EPA approval.[25] Once an approved TMDL is in place, a waterbody no longer must be listed as "impaired" on the § 303(d) list. In summary, inclusion on the § 303(d) list is the first step toward assessing water-quality-limited segments and determining load allocations and wasteload allocations through the TMDL process to ensure water-quality standards are not violated and designated uses of waterbodies are protected. TMDLs and the § 303(d) process are one of the primary tools for protecting waterbodies from nonpoint source pollution specifically—which is "the leading cause of water quality degradation in North Carolina."[26] It is critical that DEQ take full advantage of these tools by developing § 303(d) lists consistent with the requirements of the CWA and timely developing TMDLs.

## II. DEQ's listing and delisting methodologies remains statistically unsound.

Maintaining an accurate list of § 303(d) impaired waterbodies is critical to protecting water quality. DEQ cannot address impairments via the TMDL process or via a management/restoration plan unless it correctly identifies all impairments. But for several years, multiple groups have pointed out flaws in DEQ's listing and delisting methodology. Those concerns remain, and we incorporate previous comments by reference here.[27]

### *A. DEQ's default delisting methodology remains statistically unsound.*

Briefly, North Carolina's methodology for delisting waters that are impaired for non-toxic pollutants[28] is flawed because it fails to reverse the null hypothesis used for listing decisions. Stated differently, while it is appropriate to complete a statistical analysis assuming stream segments are *not* impaired when evaluating whether a segment should be *listed*, that

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[22] A "point source" is "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). Point source discharges are regulated by National Pollutant Discharge Elimination System permits. Nonpoint source pollution is pollution that enters waterbodies but not via "discernible, confined, discrete conveyances."

[23] A "load allocation" is the "portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources." 40 C.F.R. § 130.2(g).

[24] A "wasteload allocation" is the "portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution." *Id.* § 130.2(g).

[25] *Id.* § 130.7(d).

[26] *See* N.C. DEQ, Nonpoint Source Planning, https://www.deq.nc.gov/about/divisions/water-resources/water-planning/nonpoint-source-planning#:~:text=Overview%20of%20Nonpoint%20Source%20Planning&text=This%20pollution%20is%20carried%20through,include%20sediments%2C%20nutrients%20and%20metals.

[27] *See* Letter from Patrick Hunter, SELC, to Cam McNutt, DEQ at 14-16 (Feb 28, 2022), attached as Exhibit 1; Letter from Spencer Scheidt, SELC, to Andy Painter, DEQ, at 1–9 ((Apr. 2, 2021).

[28] In the past, we also raised concerns related to the pathogen delisting procedure. Those concerns remain but we do not raise them here since DEQ is not proposing to delisting any waterbodies impaired by pathogens.

assumption must be reversed when evaluating whether a segment should be *de*listed because *already listed* segments must be presumed impaired until proven otherwise. Instead, DEQ applies the same method for both listing and delisting—whether waterbodies exceed criteria more than 10% of the time with more than 90% confidence—which allows DEQ to remove impaired waterbodies from the list with less statistical confidence than required to list them in the first place.

DEQ attempts to cure its failure to reverse the null hypothesis by adding several steps to the delisting methodology. Unfortunately, these additional steps only make DEQ's ultimate delisting decision even more arbitrary and statistically unsound.

According to the 2024 Listing and Delisting Methodology, previously listed waters with an exceedance rate greater than 10% with but less than 90% statistical confidence should be delisted "if there are less than 2 excursions of the criterion in newer data that have not been previously assessed," while previously listed waters with less than a 10% exceedance rate are delisted if there is greater than 40% statistical confidence that waters are meeting the criterion (i.e. an exceedance rate less than 10%) or if there are less than 3 excursions of the criterion in newer data (data from 2021–2022).[29]

This methodology is flawed for the same reasons we have described in previous comments. Namely, the procedure does not factor in the sample size of the "newer" data—which makes it impossible to tell if "less than 2" or "less than 3 excursions" of water-quality standards is statistically meaningful. The methodology also allows certain waters to be delisted so long as DEQ has *40%* confidence that the true exceedance level would be lower than 10%—an unacceptably low confidence interval that DEQ has never justified and would be rejected by most statisticians.[30]

Confusingly, DEQ also seems to graft another arbitrarily low confidence interval onto this procedure in the flowchart appended to the textual methodology. According to this flowchart, if waters have a *less* than a 10% exceedance rate then DEQ first asks—*before* getting to the 40% confidence/less-than-three-excursions step—if there is greater than 70% confidence that waters are meeting the criterion (i.e., the exceedance rate is less than 10%). DEQ never explains in its methodology where this 70% figure comes from or attempts to justify the level it selected.[31] If DEQ is more than 70% confident that waters with a less than a 10% exceedance rate are meeting criteria, then DEQ automatically delists the waterbody, regardless of whether it was previously listed on the § 303(d) list or not. So, DEQ is not only failing to reverse the null hypothesis for delistings, but also is apparently proceeding under the explicit assumption that whether a waterbody was previously listed *does not even matter* for certain waters. That is a statistically indefensible conclusion.

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[29] N.C. Dep't of Env't Quality, 2024 303(d) Listing and Delisting Methodology at 4 [hereinafter "2024 Methodology"].

[30] Pi-Erh Lin, Duane Meeter, & Xu-Feng Nui, A Nonparametric Procedure for Listing and Delisting Impaired Waters Based on Criterion Exceedances at 16 (2000) ("[A]ny statistical conclusion that has a confidence level of less than 90% is considered not acceptable by most statistics practitioners."), https://www.waterboards.ca.gov/water_issues/programs/tmdl/records/state_board/2003/ref1913.pdf.

[31] Like the 40% confidence interval, 70% would be considered too low for many statistics practitioners to accept. *Id.*

This process is convoluted and statistically unsound. It can also be easily fixed by simply reversing the null hypothesis for delistings. DEQ is plainly capable of doing this—its summary data sheet accompanying its Integrated Report already reports the appropriate confidence intervals for delistings after reversing the null hypothesis.[32] Following through with this procedure would not only result in a much simpler (and easier to understand) methodology, but would also ensure that impaired waters are not removed from the § 303(d) list with less than acceptable statistical confidence.

DEQ's failure to reverse the null hypothesis has real consequences. To illustrate, consider the Pee Dee River. The Pee Dee River is a critically important waterbody that is home to numerous federally protected aquatic species, including the endangered shortnose sturgeon, the endangered Carolina heelsplitter mussel, and the threatened Atlantic pigtoe mussel, among many others. In 2020, DEQ listed a section of the Pee Dee River—AU Number 13-(15.5)b—passing through the Pee Dee National Wildlife Refuse as impaired for turbidity. However, DEQ now proposes delisting this section based on an application of its flawed delisting procedure.

For the 2024 § 303(d) listing cycle, DEQ reviewed turbidity data from 2018 to 2022. This time span includes thirty-five sampling events, five of which were exceedances. This translates to a 14.3% exceedance rate with 73% confidence. Had DEQ appropriately reversed the null hypothesis, however, these same numbers would translate to a delisting decision confidence level of 13.2%.[33] In other words, DEQ is 13% confident that the currently impaired Pee Dee River is no longer impaired. Yet because the Pee Dee River had a greater than 10% exceedance rate with under 90% confidence, DEQ moved to the next step of its delisting methodology to consider whether "there are less than 2 excursions of the criterion in newer data that have not been previously assessed." DEQ only sampled seven times during this two-year "newer data" time period. But because none of these samples were exceedances, DEQ now proposes delisting the Pee Dee River to Category 3a (insufficient data).[34]

If DEQ had used a statistically sound delisting approach, the Pee Dee River would not be removed from the § 303(d) list. Instead, it would have remained listed as Category 5 impaired, requiring DEQ to prepare a TMDL and mitigate the sources of the turbidity impairment. Instead, the Pee Dee River risks remaining indefinitely listed in Category 3a and no TMDL will be developed—to the detriment of endangered species like the shortnose sturgeon and the Carolina heelsplitter that require clean water to survive.

The Pee Dee River is not the only waterbody that DEQ erroneously delisted in the 2024 § 303(d) cycle. If DEQ had properly reversed the null hypothesis, it would lack the statistical confidence to remove the following waters as well:

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[32] N.C. Dep't of Envtl. Quality, Div. of Water Res., 2024IR_BasinSumm_AMSMCPALMP_5yrAnd2yr_20230804 [hereinafter "2024 data"] (column entitled "Nonexceedance Confidence _5yr").

[33] The delisting "level of confidence" was calculated using the Excel BINOM.DIST function: 1-[BINOM.DIST(#exceedances, #samples, 10% exceedance rate, TRUE)]. DEQ calculated the same confidence number in its data summary spreadsheet. *See* 2024 data (column entitled "Nonexceedance Confidence _5yr").

[34] DEQ would have needed to show zero exceedances out of at least twenty-two samples to reach a 90% confidence level for its delisting decision based on this "newer" data only.

- **South Fork of the Catawba River (11-129-(15.5)):** This waterbody is currently listed as impaired for turbidity. DEQ's five-year dataset records six exceedances out of fifty-three samples—meaning DEQ's delisting confidence is 27.7%.

- **Flat River (27-3-(9)):** This waterbody is currently listed as impaired for dissolved oxygen. DEQ's five-year dataset records four exceedances out of forty-eight samples—meaning DEQ's delisting confidence is 53.1%.

- **Kendrick Creek (30-9-(2)):** This waterbody is currently listed as impaired for turbidity. DEQ's five-year dataset records seven exceedances out of forty-four samples—meaning DEQ's delisting confidence is 6.8%.

- **Tar River (28-(36)a2):** This waterbody is currently listed as impaired for chlorophyll a. DEQ's five-year dataset records one exceedances out of four samples—meaning DEQ's delisting confidence is 5.2%.

- **Cape Fear River (18-(71)a4):** This waterbody is currently listed as impaired for dissolved oxygen. DEQ's five-year dataset records five exceedances out of thirty-seven samples—meaning DEQ's delisting confidence is 16%.

- **Cedar Creek (28-29-(2)b):** This waterbody is currently listed as impaired for turbidity. DEQ's five-year dataset records five exceedances out of fifty-nine samples—meaning DEQ's delisting confidence is 54.6%.

- **Pantego Creek (28-34-34-(2)):** This waterbody is currently listed as impaired for chlorophyll a. DEQ's five-year dataset records six exceedances out of forty-seven samples—meaning DEQ's delisting confidence is 18.6%.

- **Pamlico River (29-(27)):** This waterbody is currently listed as impaired for chlorophyll a. DEQ's five-year dataset records four exceedances out of forty samples—meaning DEQ's delisting confidence is 37.1%.

- **Calico Creek (21-32b):** This waterbody is currently listed as impaired for chlorophyll a. DEQ's five-year dataset records seventeen exceedances out of forty-five samples—meaning DEQ's delisting confidence is 0.0000119%.[35]

- **Unnamed Tributary to Uwharrie River (13-2-(1.3(ut6)):** This waterbody is currently listed as impaired for arsenic. DEQ's five-year dataset records zero exceedances out of nine samples—meaning DEQ's delisting confidence is 61.2%.

- **Back Creek (13-2-3-3-(0.7)):** This waterbody is currently listed as impaired for chlorophyll a. DEQ's five-year dataset records zero exceedances out of thirteen samples—meaning DEQ's delisting confidence is 74.6%.

[35] We suspect this delisting is a mistake. Even under DEQ's faulty delisting methodology, Calico Creek would still qualify for listing with an exceedance rate of 37.8% with 99.99% confidence.

- **Richardson Creek (Lake Lee) (13-17-36-(3.5)):** This waterbody is currently listed as impaired for dissolved oxygen and water temperature. DEQ's five-year dataset records zero exceedances out of five samples—meaning DEQ's delisting confidence is 40.9%.

- **Little Richardson Creek (Lake Monroe) (13-17-36-4-(0.5)):** This waterbody is currently listed as impaired for water temperature. DEQ's five-year dataset records one exceedance out of five samples—meaning DEQ's delisting confidence is 8.1%.

- **Unnamed Tributary to Cold Water Creek (Lake Concord) (13-17-9-4-2-(2)):** This waterbody is currently listed as impaired for chlorophyll a. DEQ's five-year dataset records one exceedance out of three samples—meaning DEQ's delisting confidence is 2.8%.

- **Marks Creek (Boyds Lake, City Lake, Everetts Lake) (13-45-(2)a5):** This waterbody is currently listed as impaired for dissolved oxygen. DEQ's five-year dataset records five exceedances out of thirty-one samples—meaning DEQ's delisting confidence is 8.3%.

In sum, DEQ must not delist waters with less statistical confidence than it took to list them. Its flawed delisting procedure ensures it is doing just that. To rectify its error, DEQ should refrain from delisting the above waterbodies.

In the past, DEQ has responded to our delisting-methodology concerns by pointing to its previous responses to comments in 2022, 2021, and 2019. Those responses do not address the concerns raised above. In 2022, DEQ simply referred to its 2019 and 2021 responses.[36] In 2021, DEQ defended its methodology by noting that its delisting process requires "a multi-step evaluation that includes a focus on newer data."[37] Yet DEQ did not respond to our specific concerns regarding the null hypothesis, statistical confidence levels, or sampling size. In 2019, DEQ defended its methodology by noting that it had at least considered "statistical confidence" in some regard when delisting.[38] However, DEQ declined to reverse the null hypothesis largely because it would result in more waters remaining on the § 303(d) list, "increas[ing the] difficulty in prioritizing TMDL development."[39]

Respectfully, we fail to understand how having a longer list of impaired waters to prioritize for TMDL development justifies omitting waters from the § 303(d) list via a faulty statistical methodology. DEQ's focus here seems to be on minimizing its obligations under § 303(d) rather than taking action to improve water quality. To be clear, we understand this is not an easy task and that DEQ is often understaffed and underfunded but if science and statistics require keeping waters on the list, then they should remain there. Practical concerns may

[36] N.C. Dep't of Env't Quality, 2020 Draft 303(d) List Public Comment, N.C. Div. of Water Res. Responsiveness Summary at 20–21 (Apr. 1, 2022) [hereinafter "2022 Response to Comments"].
[37] N.C. Dep't of Env't Quality, 2020 Draft 303(d) List Public Comment, N.C. Div. of Water Res. Responsiveness Summary at 50 (June 3, 2021) [hereinafter "2021 Response to Comments"].
[38] N.C. Dep't of Env't Quality, 2018 Draft 303(d) List Public Comment, N.C. Div. of Water Res. Responsiveness Summary at 70 (Mar. 14, 2019) [hereinafter "2019 Response to Comments"].
[39] Letter from S. Jay Zimmerman, N.C. Dep't of Env't Quality, to Marion Hopkins, EPA (Feb. 15, 2017).

properly factor into the prioritization schema for TMDL development—but they should not influence whether waters should remain on the § 303(d) list at all.

Finally, we ask that DEQ inform the Environmental Management Commission of these delisting-methodology concerns when it seeks approval of its methodology for the 2026 § 303(d) list. When seeking approval for the methodology used in connection with this § 303(d) list, DEQ informed the Environmental Management Commission that the result of its consideration of comments on the methodology was "no changes proposed."[40] At the very minimum, the Environmental Management Commission deserves to be informed of the significant public concerns with DEQ's methodology.

*B. DEQ's listing methodology for toxic pollutants is still inappropriate.*

For years, multiple groups—and EPA—have warned DEQ that its listing methodology for toxic pollutants is inappropriate. Those concerns remain, and we incorporate our previous comments by reference.[41]

In short, DEQ continues to rely on the 10% exceedance rate to assess impairment for toxic pollutants. EPA has repeatedly explained that this approach is inappropriate for toxics and not reflective of state water-quality standards.[42] Unlike conventional pollutants, toxics such as metals "do not generally have wide variability in concentration under natural conditions that would still be protective of the designated use."[43] In other words, even modest spikes in toxicity levels can have dramatic effects on the aquatic ecosystem.[44] Yet DEQ's listing methodology assumes "that the water quality for a waterbody would be considered protective of aquatic life if the criterion truly were exceeded up to [10%] of the time."[45] This "one-size-fits-all statistical approach ignores the principle that exceedance frequencies associated with toxic pollutants should be based on biological endpoints and exposure-response relationships."[46]

Instead of this one-size-fits-all approach, EPA recommends "use of once in three year maximum allowable excursion recurrence frequency" for toxics—the so-called "1-in-3 method."[47] Many states have incorporated this test into their toxic assessment methodology.[48]

DEQ's prolonged refusal to adopt this 1-in-3 standard—or provide any data to show that the 10% "exceedance rate is reflective of [North Carolina's water-quality criteria for toxics] . . .

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[40] Presentation by Cam McNutt, DEQ, to the Environmental Management Commission (Sept. 8, 2022). The powerpoint for that presentation is available at https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=2466907.
[41] *See* Letter from Spencer Scheidt, SELC, to Andy Painter, DEQ at 1–9 (Apr. 2, 2021).
[42] U.S. Env't Protection Agency, Decision Document for the Partial Approval of the North Carolina Department of Environment Quality 2016 Section 303(d) List at 12 (Dec. 8, 2016).
[43] U.S. Env't Protection Agency, Decision Document for the Approval of the North Carolina Department of Environment Quality 2018 Section 303(d) List at 11 (Apr. 2, 2019) [hereinafter "2018 EPA Approval"].
[44] *Id.* at 12.
[45] *Id.*
[46] *Id.*
[47] U.S. Env't Protection Agency, Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act at 42 (July 29, 2005)
[48] 2018 EPA Approval, *supra*, at 12.

or is scientifically defensible for toxics"[49]—is puzzling. EPA has now been telling DEQ that its listing methodology for toxics is scientifically indefensible for five § 303(d) cycles—at least 10 years. Because DEQ has once again declined to adjust its methodology, EPA will again be forced to independently review North Carolina's water-quality data to determine whether all waterbody impairments were identified. DEQ must act to rectify this longstanding error in its listing methodology.

In the past, DEQ has responded to our concerns regarding its listing methodology for toxics by pointing to its previous responses to comments. Those responses do not address the concerns raised above. In 2022, DEQ failed to address our concerns at all.[50] In 2021, DEQ referred to its 2019 response and noted it "continues to work towards development of an assessment approach for toxics that addresses both EMC and EPA concerns."[51] In 2019, DEQ said that it was "work[ing] towards resolution of the disagreement between the state and EPA with regards to the appropriate assessment methodology for toxics."[52] These are inadequate responses. DEQ has been promising for years to resolve this issue—it is past time that it acted on that promise.

Like our concerns related to the delisting methodology, DEQ must also inform the Environmental Management Commission that its listing methodology for toxic pollutants is flawed, has been rejected by EPA, and leaves wildlife and the public at risk.

## III. DEQ is failing to conduct adequate sampling.

To assess compliance with water-quality standards and identify segments that necessitate a TMDL or other remedy, states must implement monitoring programs sufficient to evaluate trends in water quality. Adequate monitoring programs are also necessary for states to receive funding under Section 106 of the CWA.[53] As noted above, we appreciate that DEQ has recently struggled to retain and hire sufficient staff but we are troubled by the lack of data that informs 2024 § 303(d) list decisions. DEQ must address this problem, potentially by requesting more adequate funding from the North Carolin General Assembly, and otherwise work with EPA to correct this deficiency. Failure to do so puts at risk Section 106 funds and future § 303(d) lists.

A significant amount of the data used to prepare the § 303(d) list is compiled from DEQ's Ambient Monitoring System and Random Ambient Monitoring System. The Quality Assurance Plans for those programs require DEQ to complete at least 90% of planned sampling events. In 2021, DEQ completed only 72% of sampling events for these programs; that number dropped to

[49] *Id.*
[50] *See* 2022 Response to Comments at 20–21.
[51] 2021 Response to Comments at 50.
[52] 2019 Response to Comments at 70.
[53] 33 U.S.C. § 1256(e)(1) (EPA "shall not make any grant under this section to any State which has not provided or is not carrying out . . . the establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor, and to compile and analyze data on (including classification according to eutrophic condition), the quality of navigable waters").

58% in 2022.[54] Both years, the lack of sampling was largely attributable to "staffing issues"—including 94% of the missed sampling events in 2022.[55]

The lack of sampling is particularly acute in several western watersheds. In both 2021 and 2022, DEQ failed to complete 40% of its Ambient Monitoring System sampling events in the French Broad, Hiwassee, and Little Tennessee river basins.[56]

This year, to accommodate this lack of data DEQ is augmenting data sets under 10 "with the previous five years of data (2013–2017) where available."[57] While we agree that augmenting data may be appropriate in some situations, the data DEQ is seeking to add here could be more than a decade old. These older data could obscure more recent pollution events—including events that should have been captured by DEQ's 2021–2022 sampling. While we are sympathetic to DEQ's staffing difficulties, they should not result in the misidentification of impaired streams. Like other water quality issues in North Carolina, we remain available to work with DEQ to address these shortcomings as appropriate.

## IV. DEQ has made improvements but continues to wrongfully exclude stream segments that violate the temperature standard for trout waters.

As DEQ is well aware, for several years multiple organizations have repeatedly asked DEQ to forthrightly apply the trout waters temperature standard in § 303(d) and permitting contexts.[58] When preparing the 2022 § 303(d) list, DEQ largely refused to acknowledge the trout waters temperature standard (20° C) at all—instead applying the standard for non-trout mountain waters (29° C). DEQ corrected this error when preparing the draft 2024 § 303(d) list, identifying the correct standard (20° C) for most trout waters. We applaud this correction. Nevertheless, DEQ continues to fail to list streams as impaired when they violate the 20° C standard consistent with DEQ's listing methodology. DEQ must correct this error in its final 2024 § 303(d) list.

### *A. DEQ is correct that the temperature standard for trout waters in North Carolina prohibits stream temperature over 20° C.*

Trout—which require cool, clean water to survive—are ecologically and culturally significant to North Carolina. They are also big business. Trout fishing in western North Carolina generates $1.38 billion in economic impact annually.[59] Because of their importance, decades ago DEQ and the Environmental Management Commission had the foresight to promulgate a water quality standard to keep trout streams cold in order to sustain trout populations. Application of that standard is critically important as temperature in trout streams continues to rise due to climate change and other factors—including factors that can be controlled under the CWA.

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[54] N.C. DEQ, WSS data summaries for 2024 Integrated Report (2024 IR), 9.
[55] *Id*.
[56] *Id*. at 11-12.
[57] 2024 Methodology at 2.
[58] *See, e.g.,* Exhibit 1.
[59] *See* North Carolina Wildlife Resources Commission, The Billion Dollar Impact of North Carolina's Mountain Trout Fishing (Dec. 2023), https://www.ncwildlife.org/Connect-With-Us/the-billion-dollar-impact-of-north-carolinas-mountain-trout-fishing.

Failure to correctly apply this standard leaves trout populations—and their ecological, cultural, and economic benefits—at risk.

North Carolina's water quality standard for DEQ-designated trout streams requires that stream temperature is "in no case to exceed 20 degrees C (68 degrees F)."[60]

In waters that are *not* classified trout waters, temperature shall "in no case . . . exceed 29 degrees C (84.2 degrees F) for mountain and upper piedmont waters and 32 degrees C (89.6 degrees F) for lower piedmont and coastal plain Waters."[61]

When preparing its 2022 § 303(d) list, DEQ wrongfully applied the 29° C to over forty trout waters even though this standard only applies to *non-trout* mountain and upper piedmont waters. We commend DEQ for recognizing and correcting this error when preparing its draft 2024 § 303(d) list. This year, DEQ correctly identified the upper limit temperature standard for most[62] trout waters it evaluated as 20° C.[63]

For example, the 2022 Integrated Report applied the 29° standard to the Broad River (9-(17)), a designated trout water, but the draft 2024 Integrated Report correctly applies the 20° standard.[64] The same is true for many other trout waters including, but not limited to, the South Toe River (7-2-52-(1)), the French Broad River (6-(1)), and Buffalo Creek (10-2-(20)). Again—we commend DEQ for making this correction. Recognizing the correct trout waters temperature standard is a first, critical step in assessing impairment.

*B. DEQ must list waters that are violating the 20° C standard consistent with DEQ's listing methodology.*

Having identified the correct trout waters temperature standard, DEQ must then apply its listing methodology to determine which streams are exceeding the standard.[65] To recap, this methodology requires that streams be listed as impaired if there is greater than 10% exceedance rate with 90% statistical confidence. DEQ applies this methodology in the data set supporting its 2024 Integrated Report. That data show the following streams violate the trout waters temperature standard:[66]

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[60] 15A N.C. Admin. Code 2B .0211(18).
[61] *Id*.
[62] For the 2024 § 303(d) list, DEQ appears to have collected temperature data for 39 stream segments designated as trout waters. DEQ applied the correct 20°C to all of these waters with the exception of Big Laurel Creek discussed below. DEQ appears to have not collected temperature data for at least 425 stream segments designated as trout waters and thus makes no determination regarding compliance with the trout waters temperature standard for those streams.
[63] An exception is Big Laurel Creek (13567), a designated trout water in the French Broad River Basin, which was assessed using the 32° C standard. We assume this was a mistake that will be corrected in the final Integrated Report.
[64] *Compare* 2022 Integrated Report (listing temperature standard for this segment as 29° C), *with* 2024 Integrated Report (listing temperatures for this segment as 20° C).
[65] In its response to comments on the 2022 § 303(d) list, DEQ appeared to question whether the "the trout water temperature standard is included in the EMC listing and delisting methodology." It is. *See* 2024 Methodology at 6.
[66] This list excludes streams with less than ten sampling events from 2018–2022.

- **First Broad River (9-50-(1)):** 40.4% exceedance rate of 20° C standard at 100% confidence level.

- **French Broad River (6-(1)):** 20.8% exceedance rate of 20° C standard at 91.5% confidence level.

- **Pigeon River (6-(6.5)):** 29.4% exceedance rate of 20° C standard at 99.8% confidence level.

- **North Toe River (7-2-(21.5)):** 28% exceedance rate of 20° C standard at 99% confidence level.

- **North Toe River (7-2-(27.7)):** 32% exceedance rate of 20° C standard at 99.8% confidence level.

- **South Toe River (7-2-51-(1)):** 26% exceedance rate of 20° C standard at 97.7% confidence level.

- **Cane River (7-3-(13.7)):** 44.8% exceedance rate of 20° C standard at 99.9% confidence level.

- **Valley River (1-52):** 36.8% exceedance rate of 20° C standard at 99.8% confidence level.

- **Horsepasture River (4-13-(0.5)):** 32% exceedance rate of 20° C standard at 99.7% confidence level.

- **Watauga River (8-1):** 17.3% exceedance rate of 20° C standard at 92.8% confidence level.

DEQ's correct identification of the trout waters temperature standard (20° C) and these data require DEQ to list these streams as impaired for temperature in its 2024 § 303(d) list. Instead, DEQ lists these streams under Category 3a in its Integrated Report which indicates inconclusive data.[67] This categorization is not explained but we suspect it tracks DEQ's responses when we have raised this issue in the past.

When multiple groups raised this issue in comments on the draft 2022 § 303(d) list, DEQ explained that it had "previously responded to this comment in the 2020 Response to Comments."[68] The 2020 Response to Comments states that the trout waters temperature standard "applies in its entirety to the evaluation of heated discharges."[69] This is incorrect.

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[67] Some of these segments are listed in the draft 2024 Integrated Report under Category 4v. We have been informed that this is a mistake and streams exceeding the trout waters temperature standard listed under Category 4v should be listed under Category 3a. DEQ plans to correct this error in its final Integrated Report. *See* Email from Cam McNutt, DEQ, to Patrick Hunter, Southern Environmental Law Center (April 3, 2024).

[68] 2022 Response to Comments at 20.

[69] 2020 Response to Comments at 51.

*i. The text of the trout waters temperature standard does not require the presence of heated discharges in relation to the 20° C limit.*

The plain wording of the temperature standard leaves no doubt that the 20° C limit applies regardless of the presence of heated discharges. In full, the standard states:

> Temperature: not to exceed 2.8 degrees C (5.04 degrees F) above the natural water temperature, and in no case to exceed 29 degrees C (84.2 degrees F) for mountain and upper piedmont waters and 32 degrees C (89.6 degrees F) for lower piedmont and coastal plain waters; the temperature for trout waters shall not be increased by more than 0.5 degrees C (0.9 degrees F) due to the discharge of heated liquids, but *in no case to exceed* 20 degrees C (68 degrees F).[70]

This standard embeds two prohibitions, only the first of which is dependent on the presence of heated discharges. The first prohibition is that heated dischargers may not increase stream temperature by more than 0.5º C in trout waters. For example, heated discharges that cause stream temperatures to increase from 17 to 18º C are not allowed. The second prohibition is that stream temperatures in trout waters shall "in no case"—*i.e.*, under no circumstances—exceed 20º C. The second prohibition is not dependent on the presence of heated discharges but provides a temperature threshold that shall not be exceeded "in any case."

The first half of the general surface-water temperature standard lends even more contextual support for enforcing the 20º C limit regardless of the presence of heated discharges. The full standard starts by setting a delta limit applicable to thermal discharges: Temperature may not be increased by more than 2.8º C above baseline.[71] It then immediately pivots to a limit applicable to all waters: Temperatures are "*in no case to exceed*" 29 or 32º C, depending on location. The trout waters standard is functionally identical: It sets a delta limit applicable to heated discharges—temperature may not be increased by more than 0.5º C—then immediately pivots to a limit applicable to all trout waters: temperatures are "*in no case to exceed* 20 degrees C." DEQ does not suggest that the 29 and 32º C limits only apply to heated discharges. Given this context, DEQ cannot say that functionally identical language in the 20º C limit commands a completely different result.

DEQ acknowledges as much by correctly identifying the trout waters temperature standard as 20° C in its draft 2024 § 303(d) Integrated Report and supporting data. DEQ has applied that standard to every designated trout water that it sampled (with one, we presume accidental, exception) without knowing whether there were heated discharges on the stream. In other words, the presence of a heated discharge had no bearing on whether the standard is 20° C

[70] 15A N.C. Admin. Code 2B .0211(18) (emphasis added).

[71] Although this clause does not itself mention discharges of heated liquids, DEQ interprets this standard to prohibit thermal dischargers from increasing water temperatures by more than 2.8º C. *See, e.g.*, Dep't of Env't Quality, NPDES Permit NC0000396 at 5 (Apr. 9, 2020), https://files.nc.gov/ncdeq/Coal%20Ash/2020-actions/NC0000396-Final-Permit.pdf. EPA also understands the 2.8º C limit to apply to thermal discharges. *See* EPA, NC Thermal Water Quality Standards, https://www.epa.gov/sites/default/files/2014-12/documents/nc-thermal-wqs.pdf ("The rule limits thermal discharges to 2.8 degrees C (5.04 degrees F) above the natural water temperature and includes further restrictions based on geographic regions of the state").

(as DEQ correctly determined in its draft 2024 § 303(d) Integrated Report) or 29° C (as DEQ incorrectly determined in its 2022 § 303(d) Integrated Report). The plain wording and DEQ's practice show that the trout waters temperature standard does not apply "in its entirety to the evaluation of heated discharges" as DEQ previously asserted.

*ii. DEQ has applied the 20° C limit in the absence of heated discharges in other circumstances.*

DEQ has also correctly identified the 20° C standard in other contexts further underscoring that the limit applies in the absence of heated point source discharges. For example, NPDES Permit No. NC0020800 authorizes a discharge from the Andrews Wastewater Treatment Plant "into the Valley River, a class C; Trout waterbody."[72] There, DEQ correctly identified "the trout water temperature standard of 20°C" regardless of the presence of heated discharges.[73]

DEQ also correctly identified the standard in its response to comments on the draft 2022 § 303(d) list even though it failed to appropriately list segments that violated the standard. In that response, DEQ explained that "[c]urrently the standard basically says not to exceed 20."[74] This is correct even though DEQ failed to apply it correctly when compiling the 2022 list.

As we have explained before, DEQ has also previously filed enforcement actions against private landowners for causing exceedances of the trout waters temperature standard in the absence of heated discharges.

On June 30, 2021, DEQ issued a Notice of Violation to a landowner in Surry County, North Carolina, for violations of water-quality standards stemming from widespread clearing of forested lands. DEQ did not allege that the clearing activities resulted in a point source discharge but did state that:

> Title 15A North Carolina Administrative Code 2B .0211 (18) requires "Temperature: not to exceed 2.8 degrees C (5.04 degrees F) above the natural water temperature, and in no case to exceed 29 degrees C (84.2 degrees F) for mountain and upper piedmont waters …; the temperature for trout waters shall not be increased by more than 0.5 degrees C (0.9 degrees F) due to the discharge of heated liquids, but in no case to exceed 20 degrees C (68 degrees F);" Forested buffers adjacent to streams are important measures in regulating water temperature of streams, particularly in shallow tributaries as exists on the subject Parcels. Clearing of the vegetated buffers may results in increased temperatures of surface waters draining to Ramey Creek and Big Pine Creek. *Temperature field readings collected by DWR staff on June 28, 2021 constitute violations of NC Water Quality Standards*.[75]

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[72] NPDES Permit No. NC0020800 Fact Sheet (Nov. 28, 2023), 1.
[73] *Id*. at PDF pg. 36.
[74] 2022 Response to Comments at 20.
[75] *See* Exhibit 1, Attachment 10. On October 5, 2021, DEQ issued a Notice of Continuing Violation related to activities on the same parcels of land and stating more explicitly that "[t]emperature readings above 68 degrees . . . [constitute] violations of NC Water Quality Standards." *Id*. at Attachment 11. Sixty-eight degrees Fahrenheit is the maximum temperature allowed in classified trout waters.

The landowner failed to rectify the violations and on August 6, 2021, DEQ filed a Verified Complaint and Motion for Preliminary Injunctive Relief in Surry County Superior Court.[76] The Complaint states:

> Forest buffers adjacent to streams are important measures in regulating water temperature of streams. Clearing of the vegetated buffers may result in increased temperatures. *In Trout Waters, the temperature is not to, in any case, "exceed 20 degrees C (68 degrees F)."* 15A NCAC 2B .0211(18).[77]

The Verified Complaint continued by explaining that on "June 28, 2021, [DEQ] staff conducted water quality sampling. [DEQ]'s water quality samples show several temperature exceedances above the maximum allowable temperature of 20°C. 15A NCAC 2B .0211(18)."[78] It explained that "clear-cutting trees near the border of streams removes shade and can cause water temperature to exceed the regulatory limit for trout waters." Shade removal is not a point source thermal discharge, though DEQ still recognized that it could contribute to violations of the temperature standard for trout waters.[79] The Verified Complaint concluded by alleging that the landowner remained in violation of North Carolina's water-quality laws, including the temperature standard applicable to trout streams, and asking the court to order the landowner to prepare a "Temperature Restoration Plan" to "restore streams to the proper temperature for trout."[80]

*iii. Applying the trout waters temperature standard only in the presence of heated discharges violates the Clean Water Act.*

Perhaps most significantly, an interpretation that the 20° C trout water standard only applies in the presence of heated discharges violates the CWA because it makes application of a water-quality standard turn on the presence of a point source discharge. The CWA requires states to identify "designated uses" for each jurisdictional waterbody within their boundaries[81] and then set "criteria necessary to protect the uses" as water-quality standards.[82] North Carolina fulfilled this requirement by setting water-quality temperature standards for trout streams. That and other water-quality standards are designed to protect waterbodies from both point and nonpoint pollution. In other words, the water-quality standards apply even in the *absence* of point source discharges. In fact, the central purpose of § 303(d) is to assess compliance with water-quality standards taking a variety of different factors into account including point and nonpoint sources of pollution.

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[76] Exhibit 1, Attachment 12.
[77] *Id*. at ¶ 15 (emphasis added).
[78] *Id*. at ¶ 43.
[79] *Id*.
[80] *Id*. at ¶¶ 52–56; Prayer for Relief ¶ 2.
[81] 33 U.S.C. § 1313(d); 40 C.F.R. § 131.10.
[82] 40 C.F.R. § 130.3.2. North Carolina implements this procedure by classifying waterbodies and assigning water-quality standards for each classification. *See* N.C. Gen. Stat. § 143-214.1; 15A N.C. Admin. Code 2B.0101, .0301.

Courts have confirmed the same: "Water quality standards reflect a state's designated uses for a water body and do not depend in any way upon the source of pollution."[83] North Carolina state law reaches this same conclusion: "[W]ater quality standards relate to the condition of waters as affected by the discharge of sewage, industrial wastes, *or other wastes including those from nonpoint sources and other sources of water pollution*."[84] North Carolina could not promulgate, and EPA could not approve, a water-quality standard that restricts point source temperature pollution but allows unlimited nonpoint source temperature pollution to enter a stream because that standard would not protect the designated uses of the waterbody.

DEQ's interpretation—that the 20° C limit only applies in the presence of heated discharges—fatally undermines the trout waters temperature standard which was promulgated to protect trout populations. The interpretation would allow trout streams to consistently exceed that limit so long as there were no heated point source discharges on the stream, even if there were numerous sources of nonpoint temperature pollution. The stream's designated use as a trout water would then be lost. Water-quality standards are meant to prevent precisely this outcome.

*iv. EPA has confirmed that temperature water quality standards apply to point and nonpoint discharges under § 303(d).*

EPA has confirmed that water-quality standards apply specifically in the § 303(d) context regardless of the presence of point source discharges. EPA's "long-standing interpretation of section 303(d)" is that the "listing requirement applies to waters impaired by point and/or nonpoint sources."[85] Specific to temperature, EPA has previously advised that:

> [W]aterbodies that do not meet an applicable State water quality criterion for temperature or a designated use due to temperature should be listed. Listing is appropriate because the applicable water quality standard is not met. Heat, the cause of the impairment, is defined as a "pollutant" under section 502(6) of the Clean Water Act and can be allocated. *It is immaterial to the listing decision whether the source of the temperature-related impairment is a thermal discharge or solar radiation*. Both are sources of heat, and the heat can be allocated through the TMDL process.[86]

Indeed, EPA recently prepared a TMDL to address exceedances of temperature water-quality standards promulgated to protect salmon and steelhead in the Pacific Northwest.[87] That

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[83] *Pronsolino*, 291 F.3d at 1137.
[84] 15A N.C. Admin. Code 02B .0205 (emphasis added).
[85] U.S. Env't Protection Agency, *Decision Document for the Approval of the North Carolina Department of Environmental Quality 2018 Section 303(d) List* at 4 (May 22, 2019), https://files.nc.gov/ncdeq/Water%20Quality/Planning/TMDL/303d/2018/20190522-NC-208-303d-Approval-Package.pdf.
[86] U.S. Env't Protection Agency, *National Clarifying Guidance for the 1998 State and Territory Section 303(d) Listing Decisions* at 5 (emphasis added), https://www.epa.gov/sites/production/files/2015-10/documents/lisgid.pdf.
[87] *See* U.S. Env't Protection Agency, *Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load (*Aug. 13, 2021), https://www.epa.gov/system/files/documents/2021-08/tmdl-columbia-snake-temperature-08132021.pdf.

analysis noted, as an example, that "temperature TMDLs typically identify loss of riparian shade as a nonpoint source of heat."[88]

*v. The presence of heated discharges is relevant to the causes of impairment but not the existence of impairment.*

DEQ is close to getting this right. To its credit, it has identified the correct temperature standard for trout streams in the draft 2024 § 303(d) Integrated Report. It has data showing that multiple streams violate that standard consistent with DEQ's listing methodology. It must now take the final step—listing those streams under Category 5 rather than Category 3a. The presence or absence of point source discharges on those stream segments makes no difference to whether those segments are complying with the applicable water quality standard—20° C.

The only thing "inconclusive" about the impairments here—DEQ's justification for placing these streams in Category 3a—are the *causes* of impairment in these trout streams. But that is irrelevant to whether a waterbody is impaired in the first place. DEQ may be unable to determine what is causing exceedances of the temperature standard for trout waters without knowing whether heated discharges are present but compliance with the standard does not turn on the presence of those discharges.

Similarly, in its response to comments on the 2022 § 303(d) list, DEQ justified its refusal to list as impaired trout streams violating the temperature standard by stating that "[m]any if not all these [streams] would need to be addressed through a combination of riparian restoration, removal of no-permitted discharging amenity ponds, and perhaps dealing with climate change."[89] Again, this underscores that DEQ does not know what is causing the exceedances of the trout waters temperature standard—not that exceedances are not occurring.

Finally, DEQ also asserted that there "would likely be very few permitted discharges involved [in an assessment of exceedances] as they are likely to have addressed thermal issues via the Trout permit limit."[90] This is false. Over the past two years, several organizations have submitted comments on the following NPDES permits which authorize discharges into trout waters asking the agency to impose a trout waters temperature limit and DEQ has refused: NC0078697, NC0020800, NC0023086, NC0070394, NC0023281, NC0067326, NC0036692, NC0037737, NC0057193, NC067318, NC0059200, NC0038687, NC0087700, NC0084441, NC0044423, NC0020451, NC0061930, NC0089559, NC0038041, NC0061425, NC0032115, NC0079561, NC0030473, NC0049174, NC0050610, NC0032212, NC0035149, NC0058891, NC0038997, NC0039420, and NC0043125. Some of these permits allow discharges into or just upstream of segments that should be listed on the 2024 § 303(d) list but are wrongfully excluded. For example, Permit Nos. NC0030473, NC0049174, and NC0050610 all discharge into the Watauga River (8-(1)) which is violating the 20°C standard 17.3% of the time at 92.8% confidence level. Yet DEQ refused to include temperature limits in any of the relevant permits.

[88] *Id*. at 33 n.9 (emphasis added).
[89] 2022 Response to Comments at 20.
[90] *Id*.

This again points to the fact that DEQ does not know what is causing these impairments. Answering that question, and developing a solution, is exactly the purpose of a TMDL which would be triggered by a § 303(d) listing. DEQ must add streams to its § 303(d) list that are violating the trout waters temperature standard consistent with its methodology and proceed to developing TMDLs to address those exceedances whether they are caused by heated discharges, riparian problems, amenity ponds, climate change, or something else.

## V. DEQ must address shortcomings in its TMDL prioritization schema.

As explained above, accurately identifying impaired waters is only half the battle. DEQ must also allocate its limited resources to *address* these impairments via the TMDL process. DEQ's current prioritization schema is underdeveloped and should be improved.

As an initial matter, DEQ must provide for informed public comment during TMDL prioritization. DEQ should also revise its prioritization schema to prioritize acute threats to human and ecological health, account for environmental justice considerations pursuant to Executive Order 292, prioritize waterbodies containing listed species, and ensure that it is not automatically dismissing benthic and fish-community impairments.

### *A. DEQ must develop a TMDL prioritization list with informed public input.*

Binding federal regulations require DEQ to develop a list of "water quality-limited segments still requiring TMDLs."[91] This list "*shall include a priority ranking* for all listed water quality-limited segments still requiring TMDLs, taking into account the severity of the pollution and the uses to be made of such waters."[92] This priority ranking must "specifically include the identification of waters targeted for TMDL development in the next two years."[93] When developing this prioritization list, DEQ must "involve[e] the public, affected dischargers, designated areawide agencies, and local governments in th[e] process."[94]

DEQ failed to involve the public adequately in the development of the 2024 TMDL prioritization. Though DEQ requested public comment on TMDL prioritization, it failed to provide the public with a draft prioritization list or with DEQ's current prioritization schema. As we understand the process, DEQ waits until it receives public comments on TMDL prioritization to begin compiling its list for EPA. But the public cannot offer informed comments on DEQ's prioritization list without actually getting to review it or the schema that DEQ used to craft it.

The public is also unable to comment on another list—which DEQ calls its "vision list"—that the agency develops in parallel with its TMDL prioritization list. According to DEQ, the vision list comprises the waterbody segments that it plans to prioritize for restoration primarily using watershed management plans either instead of or in conjunction with TMDLs. However, DEQ has never publicly announced the existence of this list, or specifically sought public comment on it. Commenters only became aware of this second list after talking to DEQ staff. If DEQ is developing

[91] 40 C.F.R. § 130.7(b),
[92] *Id.* § 130.7(b)(4) (emphasis added).
[93] *Id.*
[94] *Id.* § 130.7(a).

its vision list in tandem with its TMDL prioritization list, it must publish a draft list for public review and explain how it complements the TMDL prioritization list required by federal law.

### *B. DEQ should prioritize unaddressed pollution and acute threats to human and ecological health during TMDL prioritization.*

Though DEQ did not publish its TMDL prioritization schema in its public notice, upon request it provided Commenters with its draft 2022 prioritization schema, which DEQ says will be used to prioritize waterbodies for TMDL development in 2024.

DEQ's 2022 prioritization schema prioritizes waters for development of TMDLs primarily by asking when waters were listed and whether the waterbody and pollutant "are good candidates for TMDL development." It is unclear what DEQ means by "good candidates for TMDL development." Based on the 2024 public notice and DEQ's 2022 prioritization list, what makes a waterbody a "good candidate" seems to be: (1) "willing stakeholders are already implementing restoration activities";[95] (2) the impairment is caused by non-toxic pollutants; and (3) the waterbody has been present on the § 303(d) list for an extended period of time. While we agree the last factor is an appropriate consideration, the first two factors get things backwards.

To start, DEQ should be prioritizing impairments that are *not* already being addressed by third parties. If willing stakeholders are already mitigating and remediating sources of a pollution in a watershed, then there is *less* practical need to develop a TMDL. Given the large number of impaired waterbodies and DEQ's limited resources, DEQ should not spend what limited capital it has on developing TMDLs for streams that are already being restored. Instead, it should save its resources for severe impairments that are not likely to improve without state intervention. To be clear, we recognize that stakeholder availability may inform prioritization of restoration plans that are alternatives to TMDLs but DEQ should use *its* resources to prepare TMDLs for stream segments that would otherwise not be restored.

In addition, DEQ should prioritize addressing impairments from toxic metals or carcinogenic pollutants. In 2022, TMDL priorities rated as "high" included chlorophyll and turbidity impairments, while priorities rated as "low" include impairments from arsenic, copper, dioxin, hexavalent chromium, mercury, nickel, zinc, and polychlorinated biphenyls. In other words, DEQ is generally prioritizing addressing non-toxic pollution over toxic pollution.

DEQ offers the partial explanation that toxic metals are a "low priority" because they are "being prioritized for reassessment using new dissolved standards."[96] But those standards are hardly "new"—they were promulgated in 2015. What's more, DEQ has already begun to incorporate data on dissolved metal concentrations into its § 303(d) list. Because dissolved metals data is now available, DEQ should be prioritizing at least *some* metal-impaired waterbodies for development of TMDLs.

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[95] N.C. Dep't of Env't Quality, *Public Comments Accepted on Proposed 303(d) List of North Carolina's Impaired Waters* (Mar. 15, 2024).
[96] *Id.*

To be clear, impairments caused by pollutants like chlorophyll and turbidity are serious water-quality problems that must be addressed. There will be times where addressing those problems should be prioritized over addressing metals impairments. Our point is that addressing metals impairments should not be systematically deprioritized.

We agree that waters that have lingered on the § 303(d) list for multiple years should be prioritized. In general, the longer that waters are impaired, the greater the environmental toll, and the more those waters stand to benefit from a TMDL.

### *C. DEQ must consider environmental justice impacts when setting its TMDL priority list.*

Governor Cooper's Executive Order 292 requires cabinet agencies—including DEQ—to incorporate environmental justice considerations into their decision-making and "consider public health impacts in their permitting, policy actions, and agency programs to the furthest extent permissible by law."

Therefore, DEQ must consider environmental justice effects when prioritizing waters for development of a TMDL or management and restoration plan. This should include, at a minimum, consideration of: (1) whether environmental justice communities are present in the watershed;[97] (2) the danger to human health posed by the pollutant at issue; and (3) the potential for cumulative harms to the environmental justice community (e.g., the presence of air pollution/polluters in the affected area).

The draft 2024 § 303(d) reveals that dozens, if not hundreds, of impaired waterbodies are located in environmental justice communities. The following representative examples were identified from the *first few pages* of the § 303(d) list—the full list is 193-pages long:

- **First Broad River (9-50-(28)):** This waterbody is listed as impaired for fecal coliform. This portion of the First Broad River flows through multiple environmental justice census blocks, including one block that is 59.2% minority and 67.6% low income.[98]

- **Hollands Creek (9-41-13-7-(3)):** This waterbody has been listed as containing and impaired fish community since 1998. Hollands Creek flows through a census block that is 77.29% minority and approximately 57.7% low income.

- **Buffalo Creek (Kings Mountain Reservoir) (9-53-(2.9)a):** This waterbody is listed as impaired for fecal coliform. This portion of Buffalo Creek flows through multiple

[97] The simplest way to do this would be to crosswalk results from North Carolina's community mapping tool with DEQ's map of impaired waters. In making this suggestion, Commenters acknowledge that mapping technologies contain their own flaws and may omit smaller marginalized communities or those that otherwise do not make up the majority of their geographic area. DEQ should, therefore, not limit its efforts to those communities which are identified by mapping technology.

[98] The terms "minority" and "low income" are sourced directly from North Carolina's community mapping tool, https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4cccb3cc212af8a0b8c8.

environmental-justice census blocks, including one block that is 44.7% minority and another that is 60.7% low income.

- **Haw River (16-(1)c1):** This waterbody is listed as impaired for copper. This portion of the Haw River flows through one census block that is 66.1% minority and 55.2% low income.

- **North Buffalo Creek (16-11-14-1b):** This waterbody is listed as impaired for fecal coliform, benthos, and fish community. This portion of North Buffalo Creek flows through multiple environmental justice blocks, including one that is 98.2% minority and 64.7% low income.

- **South Buffalo Creek (16-11-14-2a, b, and c):** These waterbody segments are listed as impaired for fecal coliform, benthos, and fish community. South Buffalo Creek flows through eight environment-justice census blocks, including one block that is 100% minority and another that is 85% low income.

Executive Order 292 requires these and other environmental justice communities[99] to be prioritized during TMDL development.

*D. DEQ should prioritize waterbodies with federally and state listed species during TMDL prioritization.*

DEQ should also prioritize waterbodies for TMDL development if they contain federally or state listed species or critical habitat. Though all aquatic organisms will benefit from improvements to water quality in impaired watersheds, rare and threatened species may stand to benefit the most. Many of these species are listed as endangered or threatened *because* of poor water quality. Thus, TMDL development will be critical to conservation and recovery of these species.

The draft 2024 § 303(d) list reveals that dozens of impaired waterbodies occur in listed species' habitat. The following representative examples—among many others—deserve prioritization during TMDL development:

- **Nolichucky River (7):** This waterbody has been listed as impaired for turbidity since 2008. The Nolichucky River also contains designated critical habitat for the federally endangered Appalachian elktoe mussel.

- **Dan River (22-(1)b):** This waterbody has been listed as impaired for turbidity since 2018. The Dan River also contains proposed critical habitat for the green floater, a proposed federally threatened mussel species.

[99] We wish to reiterate that there are many, many other impaired waterbodies flowing through environmental justice communities that deserve TMDL prioritization. The preceding list is only intended to illustrate the depth of the problem, not suggest that these communities' needs must be prioritized above others.

- **Tar River (28-(1), 28-(24.7)a2, 28-(36)b):** Various portions of the Tar River are listed as impaired for pH, turbidity, and dissolved oxygen. The Tar River contains designated critical habitat for the federally endangered Carolina madtom, the threatened Atlantic pigtoe mussel, the threatened Yellow lance mussel, and the threatened Neuse River waterdog.

- **Crooked Creek (28-30a):** This waterbody has been listed as impaired for dissolved oxygen since 2010. Crooked Creek contains designated critical habitat for the federally threatened Yellow lance mussel and Atlantic pigtoe mussel.

- **Deep River (17-(10.5)d2):** This waterbody has been listed as impaired for copper since 2008. This section of the Deep River contains designated critical habitat for the federally threatened Atlantic pigtoe mussel.

- **Brush Creek (17-23b):** This waterbody has been listed as impaired for benthos since 2020. Brush Creek contains designated critical habitat for the federally threatened Atlantic pigtoe mussel.

- **Little River (Tarpley's Pond) (27-57-(8.5)b):** This waterbody is listed as impaired for pH. The Little River contains designated critical habitat for the federally threatened Neuse River waterdog.

- **Mill Creek (27-52-(1)b):** This waterbody is listed as impaired for pH. This stretch of Mill Creek contains designated critical habitat for the federally threatened Neuse River waterdog.

- **Beaver Creek (27-101-15):** This waterbody has been listed as impaired for benthos since 1998. Beaver Creek contains designated critical habitat for the federally threatened Neuse River waterdog.

- **Swift Creek (27-97-(0.5)b):** This waterbody has been listed as impaired for benthos since 1998. Swift Creek contains designated critical habitat for the federally threatened Neuse River waterdog.

- **Town Creek (28-83b):** This waterbody is listed as impaired for dissolved oxygen. Town Creek contains designated critical habitat for the federally threatened Neuse River waterdog.

- **Fishing Creek (28-79-(30.5)):** This waterbody has been listed as impaired for benthos since 2020. Fishing Creek contains designated critical habitat for the federally threatened Yellow lance mussel and Atlantic pigtoe mussel.

- **Sandy Creek (28-78-1-(8)b):** This waterbody has been listed as impaired for benthos since 2000. Sandy Creek contains designated critical habitat for the federally threatened Atlantic pigtoe mussel.

*E. DEQ cannot automatically rank all benthic and fish-community impairments as a "low priority."*

In its draft 2022 TMDL prioritization framework, DEQ automatically rates benthic or fish community impairments as a "low" priority. According to DEQ, such impairments "are better suited for [a] 5r approach"—meaning they are better suited for the development of a watershed management or restoration plan. But according to DEQ's website, the agency has only completed three 5r watershed management plans to address benthic or fish community impairments—ever.

DEQ cannot decline to develop TMDLs for benthic or fish-community impairments based on a substitute that it almost never deploys. DEQ noted in 2022 that at least 304 waterbodies were listed as impaired for benthos; another 97 were listed as containing an impaired fish community. DEQ would need to be designing *dozens* of watershed management plans every two years to deal with this extensive backlog and stay abreast of new impairments. It is making virtually no progress on this objective.

Instead of automatically discounting the need for benthic and fish-community TMDLs, DEQ should prioritize waters for TMDL development if their benthos/fish impairments are (1) longstanding; (2) severe (i.e., waters categories as "Poor"); or (3) impacting federally or state listed species. This framework will help DEQ make progress on addressing these impairments particularly in watersheds which lack partner groups to help achieve restoration goals as is often necessary for 5r plans. Even if DEQ ends up developing a watershed management plan instead of a TMDL, it will be helpful to have a consistent system for deciding which benthic and fish-community impairments warrant prompt attention—one that allows for easy comparison with other restoration priorities. The TMDL prioritization process offers that opportunity.

## VI. Conclusion

Thank you for consideration of this letter. Please contact Spencer Scheidt (828-258-2023; sscheidt@selcnc.org) or Patrick Hunter (828-258-2023; phunter@selcnc.org) if you have any questions regarding these comments.

Sincerely,

Spencer Scheidt

Spencer Scheidt, Staff Attorney
Patrick Hunter, Senior Attorney
Southern Environmental Law Center

cc (by email): Marion Hopkins, Environmental Protection Agency
Michele Wetherington, Environmental Protection Agency
Chris Ventaloro, DEQ
Pam Behm, DEQ
Paul Wojoski, DEQ


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**Comments re: Draft 2024 303(d) List: Haw River Watershed delistings**

Haw River Assembly is the Waterkeeper organization tasked with monitoring, protecting, and advocating for the improvement of all waterways within the Haw River watershed. With over 1000 members and nearly 1 million people that depend on the watershed for swimming, fishing, recreation, and drinking water, our organization prioritizes advocacy efforts that promote effective change to benefit water quality throughout the watershed.

Though we would like to see all of our streams meeting or exceeding water quality standards, many of our streams need regulatory guidance in order to prevent further degradation and promote better practices to result in improved stream health. The impaired waterways list provides regulatory guidance for streams at risk. We recognize the importance of an impaired status as the impetus for setting Total Maximum Daily Limits to address the pollutant sources. We also recognize that delisting waters that have not adequately demonstrated meeting or exceeding water quality standards is detrimental to the health of our larger watershed by removing restrictions and requirements of upstream discharges or TMDL implementations.

For these reasons, we oppose the delisting of North Buffalo Creek in the Haw River watershed. We support new listings for Well Creek and Benton Branch, both streams that we have extensively monitored for fecal impairment and submitted data for this designation. We also support prioritizing these newly designated streams for TMDL implementation.

**Delisting Methodology of Dissolved Metals: North Buffalo Creek**

This stream segment has been proposed for delisting, but given a 3Z1 assessment, indicating that the data was not assessed using a North Carolina Water Quality Standard.

*3798: From North Buffalo Creek WWTP to Buffalo Creek*
Due to the historic impairment, upstream sources of impairment that have yet to be adequately addressed, and a scarcity of data published to the water quality portal, this stream should remain

on the impaired waterways list. Based on the published data in the Water Quality portal, the most recent samples taken between 2019 and 2020 fail to demonstrate the waterbody is no longer impaired. One out of six samples analyzed for dissolved metals exceeded copper standards. These samples were all collected in three months and may not reflect changes in water levels, effluent discharge pollutants, or seasonal changes. This does not reflect the one-in-three methodology recommended by the EPA, or a 10% exceedance. No additional sample data has been submitted to the water quality portal since 2020.

*According to EPA guidance, a criteria magnitude for toxic pollutants that cause an acute or chronic toxic effect on aquatic life should not be exceeded more than once every three years (referred to as the 1-in-3 method). This allows aquatic resources time to recover from the impacts of a toxic event. Many states incorporate the 1-in-3 method in their assessment methodology, in keeping with their specific EPA approved WQC, which typically include this exceedance frequency.* [1]

This segment contains effluent discharges from two wastewater treatment plants. Neither wastewater treatment plant has published zinc or copper data to the EPA Enforcement and Compliance History Outline, however there are two significant industrial users in the TZ Osborne Wastewater Treatment plant contributing significant amounts of zinc and zinc compounds. PPG INDUSTRIES GREENSBORO POWDER, TRI Facility ID 27409PPGND109PP, contributed a total of 0.399 total indirect pounds per year of zinc and zinc compounds, while PROCTER & GAMBLE MANUFACTURING CO, TRI Facility ID 27214PRCTR6200B, contributed a total of 768 total indirect pounds per year of zinc and zinc compounds. [2]

The evident sources of upstream metals pollution into this segment of stream through the two wastewater outfalls must be addressed in order to provide a statistical confidence level using EPA's recommended one-in-three method. With no sampling data to demonstrate reductions in copper or zinc from the discharges contributing to the impairment of North Buffalo Creek, and inadequate data of North Buffalo Creek to demonstrate water quality standards are met, this stream segment must remain on the 303 (d) impairment list. A TMDL plan must include reduction in dissolved metals from the wastewater treatment plants contributing to the impairment in order to adequately protect this stream.

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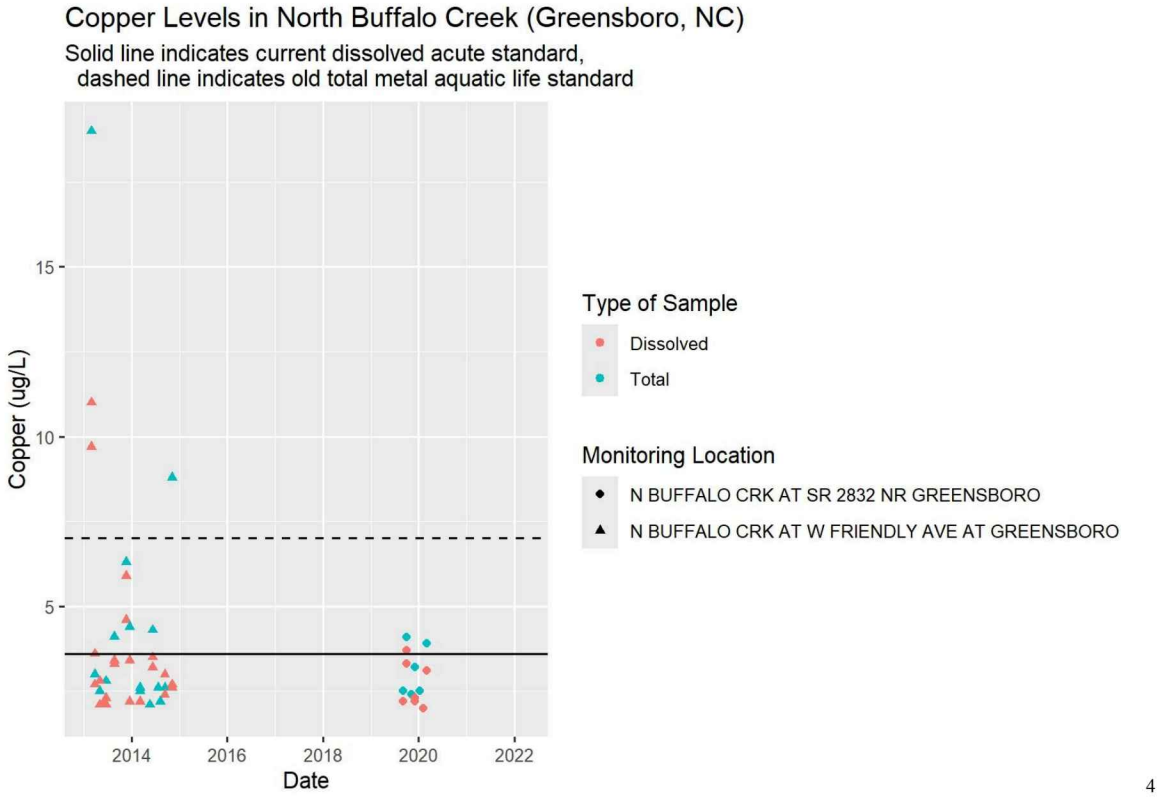
[1] https://www.deq.nc.gov/water-quality/planning/tmdl/303d/2020/nc-2020-303d-decision-document20210623/download

[2] https://echo.epa.gov/detailed-facility-report?fid=110001978165

This segment of stream has been listed as impaired for fish community and benthic populations since 2008. This stream is significantly stressed and does not support ecological use. The one-in-three methodology used by EPA is meant to address these stressed systems.

*This method considers the amount of time a normal, unstressed system is likely to take to recover from a toxic exceedance. In its independent assessment, the Agency noted that most of the delisted waters are, or have been in the past, identified as impaired for other pollutants and they would be considered stressed systems.* [3]

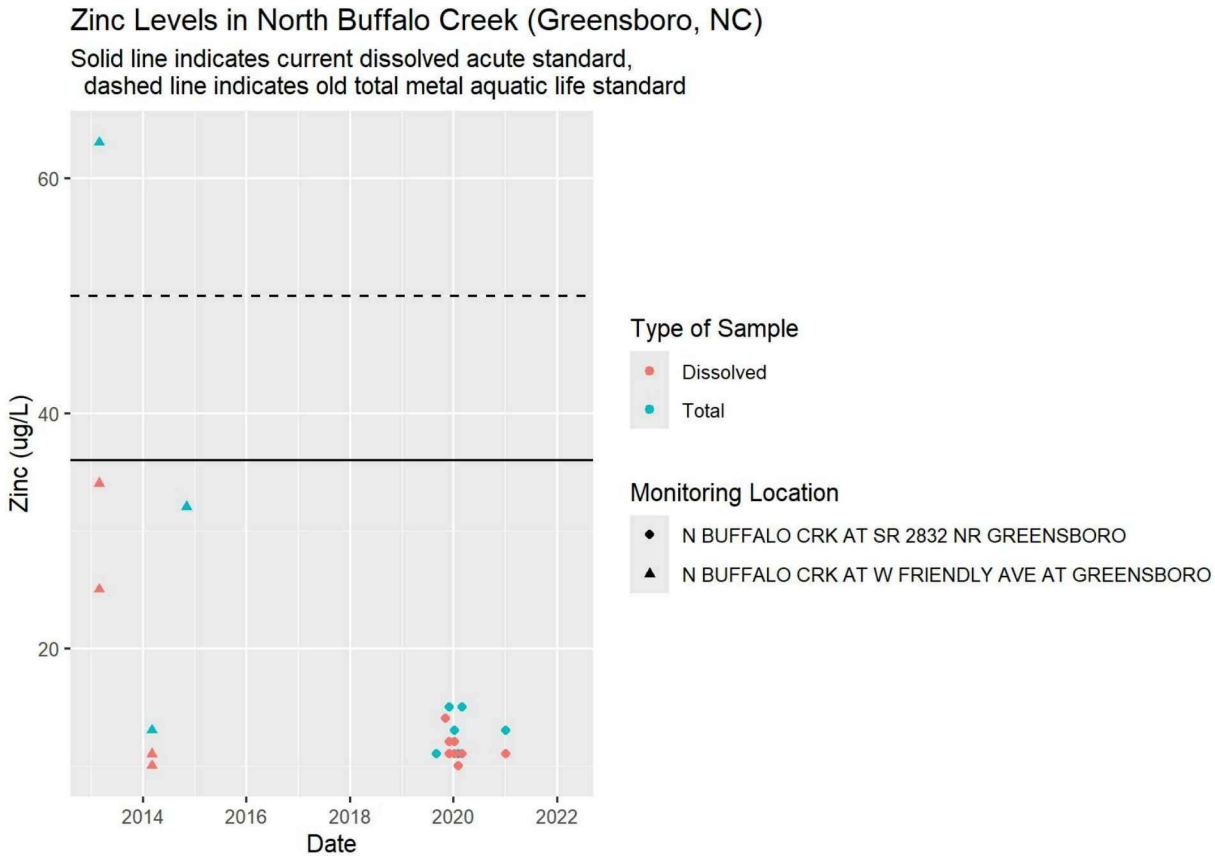
Until additional data is collected to confidently demonstrate the impairments have been addressed, it is imperative that this stream segment remain on the impaired waterways list and eligible for TMDL implementation planning.




[4]

[3]https://www.deq.nc.gov/water-quality/planning/tmdl/303d/2020/nc-2020-303d-decision-document20210623/download

[4] Methodology Attached




**Support for Listing Well Creek and Benton Branch for Fecal Impairment**

We support the listing of both Well Creek and Benton Branch for fecal impairment. We have provided fecal data using a state approved Quality Assurance Plan and Standard Operating Procedure to support these listings.

**Prioritization of TMDL Implementation and Restoration Planning**

Both Well Creek and Benton Branch have been documented by our staff for fecal impairment. Both of these streams are heavily impacted by cattle in the stream. We have also conducted source tracking to verify that the fecal impairment is because of the cattle in the stream. By listing these streams for impairment, we can better work with the respective municipalities to implement a TMDL using additional programs and existing funds for cattle exclusion.

In conclusion, we appreciate the opportunity to provide input and feedback on this critical process for protecting our state's waterways. For additional information, please contact Emily Sutton, Haw Riverkeeper.

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# EPA 1 in 3 vs. NCDEQ Metals Acute Toxicity Designation for 303d List

Kaitlyn Elliott

2024-04-25

### Library and Reading in Files

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.0     v tibble    3.2.1
## v lubridate 1.9.3     v tidyr     1.3.1
## v purrr     1.0.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(lubridate)
library(ggplot2)

WQP_COPPER_ZINC_Northeast_Creek <- read.csv("../Input_Files/Northeast_creek_zinc_copper.csv")
WQP_COPPER_ZINC_NorthBuffalo_Creek <- read.csv("../Input_Files/North_Buffalo_Zinc_Copper.csv")


# Dissolved Zinc Acute Toxicity: 36 ug/L

# Dissolved Copper Acute Toxicity: 3.6 ug/L

# Source: https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=3075173&cr=1

# Old info for Total Metals

# Total Zinc Aquatic Life Standard: 50 ug/L

# Total Copper Aquatic Life Standard: 7 ug/L
```

### Filtering and Selecting Needed Data

```
WQP_COPPER_ZINC_NorthBuffalo_Creek <- WQP_COPPER_ZINC_NorthBuffalo_Creek %>%
  select(ActivityStartDate, CharacteristicName, ResultMeasureValue,
         ResultSampleFractionText,
         ResultMeasure.MeasureUnitCode,
```

```
         MonitoringLocationName)%>%
  mutate(Date = as.Date(ActivityStartDate, format = "%m/%d/%Y"))%>%
  mutate(color_copper = ifelse(CharacteristicName == "Copper"&
                                 ResultMeasureValue >= 3.6, "Above", "Below"),
        color_zinc = ifelse(CharacteristicName == "Zinc"&
                              ResultMeasureValue >= 36, "Above", "Below"))

WQP_COPPER_ZINC_Northeast_Creek <- WQP_COPPER_ZINC_Northeast_Creek %>%
  select(ActivityStartDate, CharacteristicName, ResultMeasureValue,
         ResultSampleFractionText,
         ResultMeasure.MeasureUnitCode,
         MonitoringLocationName)%>%
  mutate(Date = as.Date(ActivityStartDate, format = "%m/%d/%Y"))%>%
  mutate(color_copper = ifelse(CharacteristicName == "Copper"&
                                 ResultMeasureValue >= 3.6, "Above", "Below"),
         color_zinc = ifelse(CharacteristicName == "Zinc"&
                               ResultMeasureValue >= 36, "Above", "Below"))


unique(WQP_COPPER_ZINC_NorthBuffalo_Creek$ResultMeasure.MeasureUnitCode)
```

```
## [1] "ug/L" ""
```

```
# [1] ""     "ug/L"
unique(WQP_COPPER_ZINC_Northeast_Creek$ResultMeasure.MeasureUnitCode)
```

```
## [1] "ug/L" ""
```

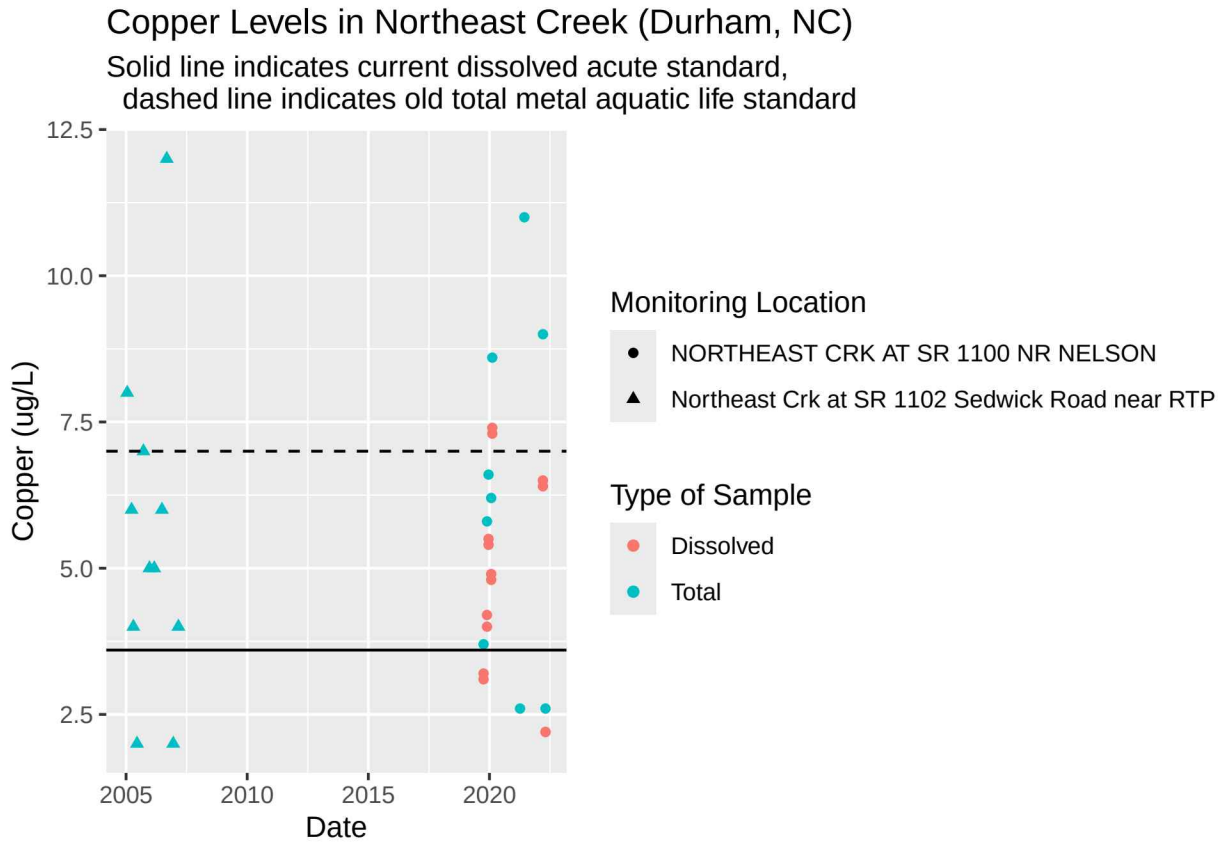
```
# [1] "ug/L" ""

# Units for dissolved are only in ug/L
```

## Plotting the Data

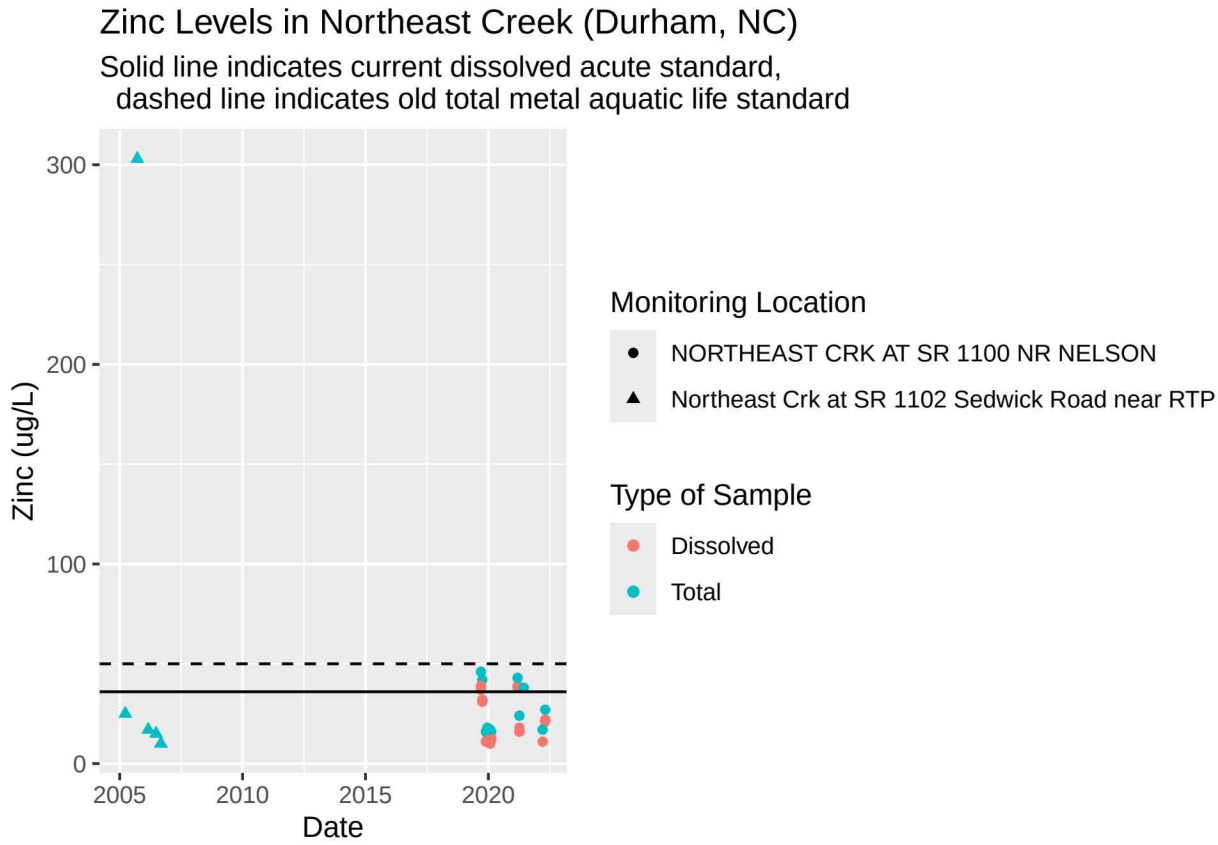
```
ggplot(WQP_COPPER_ZINC_Northeast_Creek%>%filter(CharacteristicName == "Copper"),
       aes(x = Date, y = ResultMeasureValue, color = ResultSampleFractionText,
           shape = MonitoringLocationName)) +
  geom_point() + xlab("Date") +
  ylab("Copper (ug/L)") + geom_hline(yintercept = 3.6) +
  geom_hline(yintercept = 7, linetype = 2)+
  labs(color = "Type of Sample",
       title = "Copper Levels in Northeast Creek (Durham, NC)",
       shape = "Monitoring Location",
        subtitle = "Solid line indicates current dissolved acute standard,
  dashed line indicates old total metal aquatic life standard")
```

```
## Warning: Removed 10 rows containing missing values or values outside the scale range
## (`geom_point()`).
```



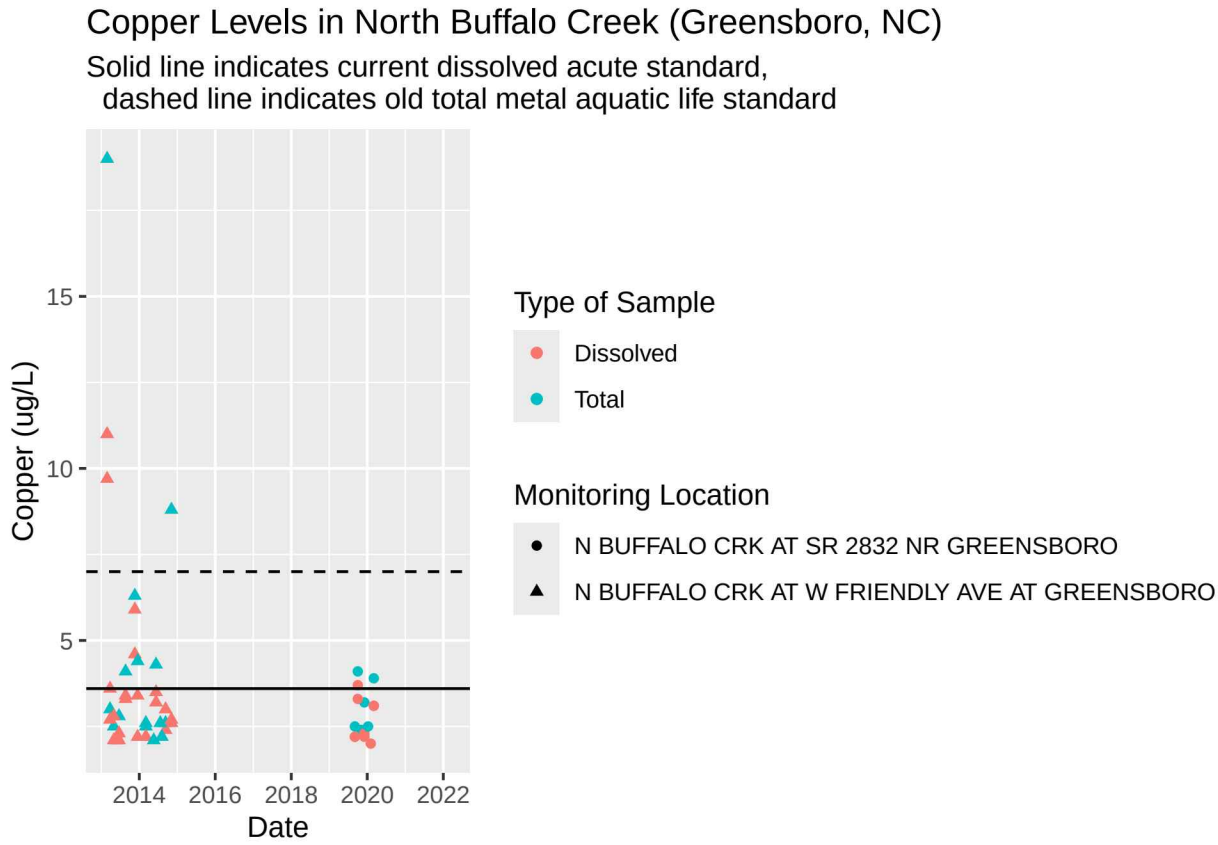

```
ggplot(WQP_COPPER_ZINC_Northeast_Creek%>%filter(CharacteristicName == "Zinc"),
       aes(x = Date, y = ResultMeasureValue, color = ResultSampleFractionText,
           shape = MonitoringLocationName)) +
  geom_point() + xlab("Date") + ylab("Zinc (ug/L)") +
  geom_hline(yintercept = 36) +
  geom_hline(yintercept = 50, linetype = 2)+
  labs(color = "Type of Sample",
       title = "Zinc Levels in Northeast Creek (Durham, NC)",
       shape = "Monitoring Location",
        subtitle = "Solid line indicates current dissolved acute standard,
  dashed line indicates old total metal aquatic life standard")
```

```
## Warning: Removed 10 rows containing missing values or values outside the scale range
## (`geom_point()`).
```



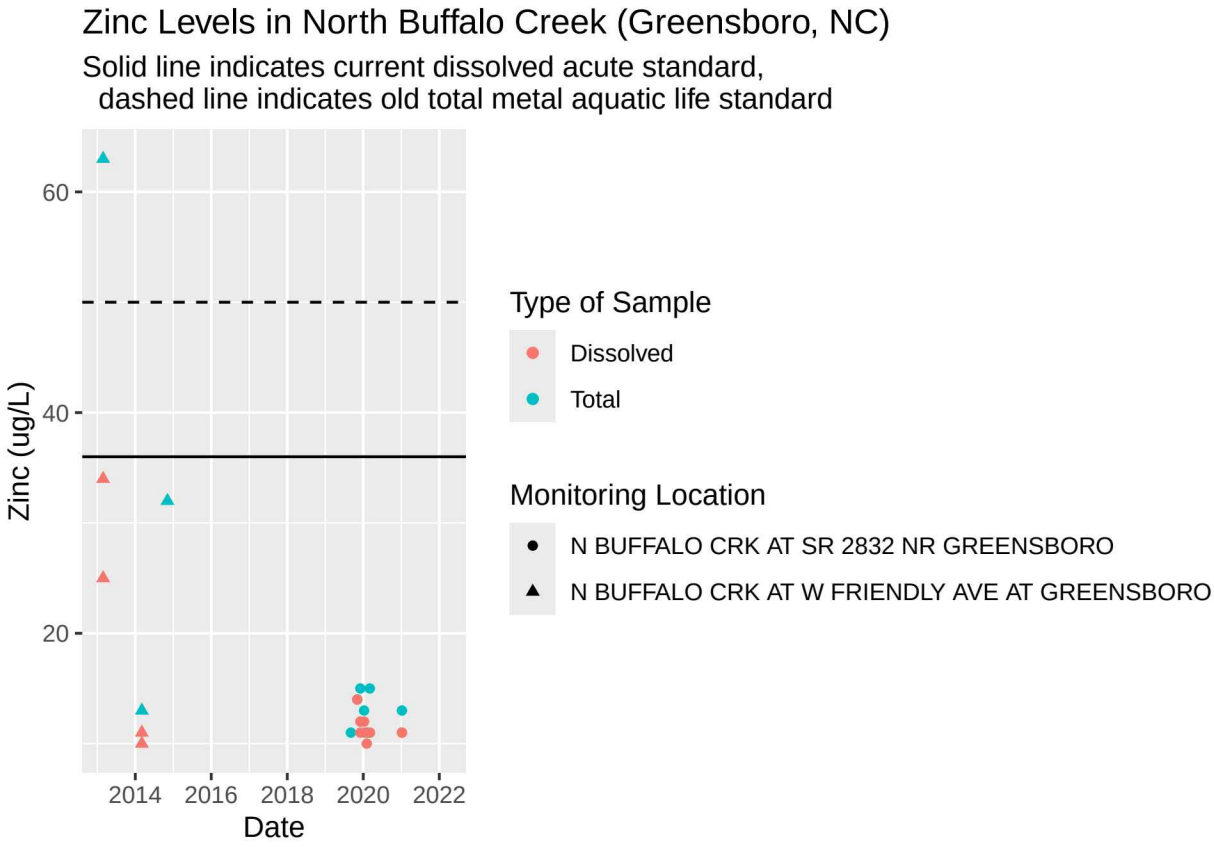

```
ggplot(WQP_COPPER_ZINC_NorthBuffalo_Creek%>%
         filter(CharacteristicName == "Copper"),
       aes(x = Date, y = ResultMeasureValue, color = ResultSampleFractionText,
           shape = MonitoringLocationName)) +
  geom_point() + xlab("Date") + ylab("Copper (ug/L)") +
  geom_hline(yintercept = 3.6) +
  geom_hline(yintercept = 7, linetype = 2)+
  labs(color = "Type of Sample",
       title = "Copper Levels in North Buffalo Creek (Greensboro, NC)",
       shape = "Monitoring Location",
        subtitle = "Solid line indicates current dissolved acute standard,
  dashed line indicates old total metal aquatic life standard")
```

```
## Warning: Removed 58 rows containing missing values or values outside the scale range
## (`geom_point()`).
```




```
ggplot(WQP_COPPER_ZINC_NorthBuffalo_Creek%>%
         filter(CharacteristicName == "Zinc"),
       aes(x = Date, y = ResultMeasureValue, color = ResultSampleFractionText,
           shape = MonitoringLocationName)) +
  geom_point() + xlab("Date") + ylab("Zinc (ug/L)") +
  geom_hline(yintercept = 36) +
  geom_hline(yintercept = 50, linetype = 2)+
  labs(color = "Type of Sample",
       title = "Zinc Levels in North Buffalo Creek (Greensboro, NC)",
       subtitle = "Solid line indicates current dissolved acute standard,
  dashed line indicates old total metal aquatic life standard",
       shape = "Monitoring Location")
```

```
## Warning: Removed 87 rows containing missing values or values outside the scale range
## (`geom_point()`).
```


Zinc Levels in North Buffalo Creek (Greensboro, NC)
Solid line indicates current dissolved acute standard,
dashed line indicates old total metal aquatic life standard
Zinc (ug/L)
60
40
20
2014
2016
2018
2020
2022
Date
Type of Sample
Dissolved
Total
Monitoring Location
N BUFFALO CRK AT SR 2832 NR GREENSBORO
N BUFFALO CRK AT W FRIENDLY AVE AT GREENSBORO

April 26, 2024

***Via Electronic Mail***

Cam McNutt
N.C. Department of Environmental Quality
Division of Water Resources
1617 Mail Service Center
Raleigh, NC 27699-1617
TMDL303dComments@deq.nc.gov
cam.mcnutt@deq.nc.gov

**Re: Comments on North Carolina's Draft 2024 § 303(d) List**

Dear Mr. McNutt,

Thank you for the opportunity to comment on North Carolina's draft 2024 § 303(d) list of impaired waters. Please accept these comments on behalf of the North Carolina Trout Unlimited State Council and the North Carolina Wildlife Federation. Together, we represent thousands of anglers and wildlife enthusiasts across the state who deeply value the ability to view and fish for trout. Our members invest significant time advocating for trout, traveling to fish, and investing in communities near trout waters. For many of us, fishing for trout is a way of life.

Unfortunately, it is a way of life that is becoming more difficult as North Carolina's trout streams rise in temperature. Trout require cold, clean water to survive. Years ago, North Carolina had the good judgment to develop a water-quality standard to keep trout streams cool and protect trout populations. This standard prohibits trout streams from exceeding 20° C. Temperature in excess of that amount can stress and kill trout. The trout waters temperature standard was promulgated to prevent that outcome.

For reasons that are unclear to us, the North Carolina Department of Environmental Quality (DEQ) has inconsistently applied this standard. Failure to apply the standard allows trout streams to exceed 20° C, putting trout populations—and the $1.38 billion economic impact trout fishing provides to the state—at risk. Over the past two years, we have commented on dozens of National Pollutant Discharge Elimination System (NPDES) permits that authorize discharges into trout waters, asking DEQ to impose a limit in those permits to prevent the discharges from causing or contributing to exceedances of the 20° C standard. We are disappointed that, for the most part, DEQ has refused to include those limits.

We also commented on the 2022 § 303(d) list. There, DEQ refused to recognize the trout waters temperature standard of 20° C and instead applied the non-trout mountain waters standard of 29° C to virtually all trout streams. We commend DEQ for recognizing this error and applying the 20° C standard in this year's § 303(d) Integrated Report. This is a critical step towards protecting trout populations.

Nevertheless, DEQ is still refusing to list trout streams as impaired when they violate the 20° C standard consistent with DEQ's § 303(d) listing methodology. DEQ provides no basis for its decision but we suspect it is related to its past assertions that the 20° C standard only applies in the presence of "heated discharges." As DEQ acknowledges by applying the 20° C standard to trout streams in the 2024 § 303(d) Integrated Report regardless of the presence of heated discharges, this is incorrect. We explain our concerns in more detail below and ask that DEQ correct this error by listing streams as impaired on the 2024 § 303(d) list if they violate the 20° C standard consistent with DEQ's § 303(d) listing methodology.

## I. DEQ correctly identifies the 20° C trout waters temperature standard in its 2024 Integrated Report.

North Carolina's trout waters temperature standard requires that stream temperature is "in no case to exceed 20 degrees C (68 degrees F)."[1] DEQ correctly identifies this standard in its 2024 Integrated Report. We commend DEQ for this approach which corrects errors from its 2022 § 303(d) list.

In 2022, DEQ wrongfully applied the *non-trout* mountain waters temperature standard to over forty trout waters. That standard provides that temperature shall "in no case . . . exceed 29 degrees C (84.2 degrees F)."[2] Application of this standard to trout streams is problematic because trout cannot survive temperatures of 29° C. This puts trout populations at risk and undermines the purpose of promulgating a trout waters-specific temperature standard—to keep trout streams cool and protect trout populations.

For example, the 2022 Integrated Report applied the 29° standard to the Davidson River (6-34-(15.5)), one of the most important designated trout waters in the state, but the draft 2024 Integrated Report correctly applies the 20° C standard.[3] The same is true for other important trout streams including, but not limited to, the Watauga River (8-(1)), the Nantahala River (2-57-(0.5)), and the Tuckasegee River (2-79-(24)). Again, we commend DEQ for identifying the correct trout waters temperature standard in its 2024 Integrated Report—20° C.

## II. DEQ's listing methodology requires it to list streams as impaired that violate the 20° C standard more than 10% of the time with at least 90% confidence.

DEQ's § 303(d) listing methodology requires it to list streams as impaired if they violate a water quality standard more than 10% of the time with at least 90% confidence.[4] Regarding the trout waters temperature standard specifically, DEQ is required to list streams as impaired if they exceed the 20° C standard more than 10% of the time with at least 90% confidence.[5] Applying that methodology, DEQ's 2024 Integrated Report shows the following trout streams should be listed as impaired:

---

[1] 15A N.C. Admin. Code 2B .0211(18).
[2] *Id*.
[3] *Compare* 2022 Integrated Report (listing temperature standard for this segment as 29° C), *with* 2024 Integrated Report (listing temperatures for this segment as 20° C).
[4] *See* N.C. Dep't of Env't Quality, 2024 303(d) Listing and Delisting Methodology.
[5] *Id*. at 6.

- **First Broad River (9-50-(1)):** 40.4% exceedance rate of 20° C standard at 100% confidence level.

- **French Broad River (6-(1)):** 20.8% exceedance rate of 20° C standard at 91.5% confidence level.

- **Pigeon River (6-(6.5)):** 29.4% exceedance rate of 20° C standard at 99.8% confidence level.

- **North Toe River (7-2-(21.5)):** 28% exceedance rate of 20° C standard at 99% confidence level.

- **North Toe River (7-2-(27.7)):** 32% exceedance rate of 20° C standard at 99.8% confidence level.

- **South Toe River (7-2-51-(1)):** 26% exceedance rate of 20° C standard at 97.7% confidence level.

- **Cane River (7-3-(13.7)):** 44.8% exceedance rate of 20° C standard at 99.9% confidence level.

- **Valley River (1-52):** 36.8% exceedance rate of 20° C standard at 99.8% confidence level.

- **Horsepasture River (4-13-(0.5)):** 32% exceedance rate of 20° C standard at 99.7% confidence level.

- **Watauga River (8-1):** 17.3% exceedance rate of 20° C standard at 92.8% confidence level.

Nevertheless, DEQ is refusing to list these streams as impaired (i.e., under Category 5 of its § 303(d) list). This is legal error—and, more importantly, fails to protect trout populations. Listing trout streams as impaired for temperature when they exceed the trout waters temperature standard consistent with DEQ's § 303(d) methodology is critical because these listings trigger the requirement to assess the reasons for impairment and remedy them through a Total Maximum Daily Load (TMDL) or other restoration plan. If DEQ simply ignores this impairment—as it is doing in its draft 2024 § 303(d) list—stream temperatures will remain high or increase, harming or potentially extirpating trout populations.

## III. DEQ's previously proffered reason for failing to list trout waters as impaired does not pass muster.

DEQ's correct identification of the trout waters temperature standard (20° C) and the data compiled in support of its 2024 Integrated Report require the agency to list the streams named above as impaired for temperature in its 2024 § 303(d) list. Instead, DEQ lists these streams

under Category 3a in its Integrated Report which indicates inconclusive data. This categorization is not explained but we suspect it tracks DEQ's responses when we have raised this issue in the past. Namely, DEQ has refused to apply the trout waters temperature standard by asserting that the standard "applies in its entirety to the evaluation of heated discharges."[6] This is incorrect.

*A. The text of the trout waters temperature standard does not require the presence of heated discharges in relation to the 20° C limit.*

The plain wording of the temperature standard leaves no doubt that the 20° C limit applies regardless of the presence of heated discharges. In full, the standard states:

> Temperature: not to exceed 2.8 degrees C (5.04 degrees F) above the natural water temperature, and in no case to exceed 29 degrees C (84.2 degrees F) for mountain and upper piedmont waters and 32 degrees C (89.6 degrees F) for lower piedmont and coastal plain waters; the temperature for trout waters shall not be increased by more than 0.5 degrees C (0.9 degrees F) due to the discharge of heated liquids, but *in no case to exceed* 20 degrees C (68 degrees F).[7]

This standard embeds two prohibitions, only the first of which is dependent on the presence of heated discharges. The first prohibition is that heated dischargers may not increase stream temperature by more than 0.5º C in trout waters. For example, heated discharges that cause stream temperatures to increase from 17 to 18º C are not allowed. The second prohibition is that stream temperatures in trout waters shall "in no case"—*i.e.*, under no circumstances—exceed 20º C. The second prohibition is not dependent on the presence of heated discharges but provides a temperature threshold that shall not be exceeded "in any case."

The first half of the general surface-water temperature standard lends even more contextual support for enforcing the 20º C limit regardless of the presence of heated discharges. The full standard starts by setting a delta limit applicable to thermal discharges: Temperature may not be increased by more than 2.8º C above baseline.[8] It then immediately pivots to a limit applicable to all waters: Temperatures are "*in no case to exceed*" 29 or 32º C, depending on location. The trout waters standard is functionally identical: It sets a delta limit applicable to heated discharges—temperature may not be increased by more than 0.5º C—then immediately pivots to a limit applicable to all trout waters: temperatures are "*in no case to exceed* 20 degrees C." DEQ does not suggest that the 29 and 32º C limits only apply to heated discharges. Given this context, DEQ cannot say that functionally identical language in the 20º C limit commands a completely different result.

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[6] 2020 Response to Comments at 51.

[7] 15A N.C. Admin. Code 2B .0211(18) (emphasis added).

[8] Although this clause does not itself mention discharges of heated liquids, DEQ interprets this standard to prohibit thermal dischargers from increasing water temperatures by more than 2.8º C. *See, e.g.*, Dep't of Env't Quality, NPDES Permit NC0000396 at 5 (Apr. 9, 2020), https://files.nc.gov/ncdeq/Coal%20Ash/2020-actions/NC0000396-Final-Permit.pdf. EPA also understands the 2.8º C limit to apply to thermal discharges. *See* EPA, NC Thermal Water Quality Standards, https://www.epa.gov/sites/default/files/2014-12/documents/nc-thermal-wqs.pdf ("The rule limits thermal discharges to 2.8 degrees C (5.04 degrees F) above the natural water temperature and includes further restrictions based on geographic regions of the state").

*B. DEQ has applied the 20° C limit in the absence of heated discharges in other circumstances.*

DEQ has also correctly identified the 20° C standard in other contexts further underscoring that the limit applies in the absence of heated point source discharges. For example, NPDES Permit No. NC0020451 authorizes a discharge from the West Jefferson Wastewater Treatment Plan into a designated trout water that is a tributary of Little Buffalo Creek—a designated trout water. The fact sheet for the permit correctly explains that the "receiving water is a designated Trout Water, with more stringent temperature standards of 20° C and not to increase more than 0.5°C due to discharge of heated liquids."[9] Similarly, DEQ identifies in its 2024 Integrated Report the correct temperature standard of 20° C for Buffalo Creek (10-2-20) which is the receiving stream for Little Buffalo Creek.[10]

DEQ also correctly identified the standard in its response to comments on the draft 2022 § 303(d) list even though it failed to appropriately list segments that violated the standard. In that response, DEQ explained that "[c]urrently the standard basically says not to exceed 20."[11] This is correct even though DEQ failed to apply it correctly when compiling the 2022 list.

As we have explained before, DEQ has also previously filed enforcement actions against private landowners for causing exceedances of the trout waters temperature standard in the absence of heated discharges.

On June 30, 2021, DEQ issued a Notice of Violation to a landowner in Surry County, North Carolina, for violations of water-quality standards stemming from widespread clearing of forested lands. DEQ did not allege that the clearing activities resulted in a point source discharge but did state that:

> Title 15A North Carolina Administrative Code 2B .0211 (18) requires "Temperature: not to exceed 2.8 degrees C (5.04 degrees F) above the natural water temperature, and in no case to exceed 29 degrees C (84.2 degrees F) for mountain and upper piedmont waters …; the temperature for trout waters shall not be increased by more than 0.5 degrees C (0.9 degrees F) due to the discharge of heated liquids, but in no case to exceed 20 degrees C (68 degrees F);" Forested buffers adjacent to streams are important measures in regulating water temperature of streams, particularly in shallow tributaries as exists on the subject Parcels. Clearing of the vegetated buffers may results in increased temperatures of surface waters draining to Ramey Creek and Big Pine Creek. *Temperature field readings collected by DWR staff on June 28, 2021 constitute violations of NC Water Quality Standards.*[12]

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[9] NPDES Permit No. NC0020451 Fact Sheet (June 6, 2023), 5.
[10] DEQ did not evaluate temperature for Little Buffalo Creek in the 2024 Integrated Report.
[11] 2022 Response to Comments at 20.
[12] *See* Attachment 10 to our 2022 § 303(d) Comments. On October 5, 2021, DEQ issued a Notice of Continuing Violation related to activities on the same parcels of land and stating more explicitly that "[t]emperature readings above 68 degrees . . . [constitute] violations of NC Water Quality Standards." *See* Attachment 11 to our 2022 § 303(d) Comments. Sixty-eight degrees Fahrenheit is the maximum temperature allowed in classified trout waters.

The landowner failed to rectify the violations and on August 6, 2021, DEQ filed a Verified Complaint and Motion for Preliminary Injunctive Relief in Surry County Superior Court.[13] The Complaint states:

> Forest buffers adjacent to streams are important measures in regulating water temperature of streams. Clearing of the vegetated buffers may result in increased temperatures. *In Trout Waters, the temperature is not to, in any case, "exceed 20 degrees C (68 degrees F)."* 15A NCAC 2B .0211(18).[14]

The Verified Complaint continued by explaining that on "June 28, 2021, [DEQ] staff conducted water quality sampling. [DEQ]'s water quality samples show several temperature exceedances above the maximum allowable temperature of 20°C. 15A NCAC 2B .0211(18)."[15] It explained that "clear-cutting trees near the border of streams removes shade and can cause water temperature to exceed the regulatory limit for trout waters." Shade removal is not a point source thermal discharge, though DEQ still recognized that it could contribute to violations of the temperature standard for trout waters.[16] The Verified Complaint concluded by alleging that the landowner remained in violation of North Carolina's water-quality laws, including the temperature standard applicable to trout streams, and asking the court to order the landowner to prepare a "Temperature Restoration Plan" to "restore streams to the proper temperature for trout."[17]

*C. Applying the trout waters temperature standard only in the presence of heated discharges violates the Clean Water Act.*

Perhaps most significantly, an interpretation that the 20° C trout waters standard only applies in the presence of heated discharges violates the Clean Water Act because it makes application of a water-quality standard turn on the presence of a point source discharge. The Clean Water Act requires states to identify "designated uses" for each jurisdictional waterbody within their boundaries[18] and then set "criteria necessary to protect the uses" as water-quality standards.[19] North Carolina fulfilled this requirement by setting water-quality temperature standards for trout streams. That and other water-quality standards are designed to protect waterbodies from both point and nonpoint pollution. In other words, the water-quality standards apply even in the *absence* of point source discharges—heated or not. In fact, the central purpose of § 303(d) is to assess compliance with water-quality standards taking a variety of different factors into account including point and nonpoint sources of pollution.

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[13] *See* Attachment 12 to our 2022 § 303(d) Comments.
[14] *Id*. at ¶ 15 (emphasis added).
[15] *Id*. at ¶ 43.
[16] *Id*.
[17] *Id*. at ¶¶ 52–56; Prayer for Relief ¶ 2.
[18] 33 U.S.C. § 1313(d); 40 C.F.R. § 131.10.
[19] 40 C.F.R. § 130.3.2. North Carolina implements this procedure by classifying waterbodies and assigning water-quality standards for each classification. *See* N.C. Gen. Stat. § 143-214.1; 15A N.C. Admin. Code 2B.0101, .0301.

Courts have confirmed the same: "Water quality standards reflect a state's designated uses for a water body and do not depend in any way upon the source of pollution."[20] North Carolina state law reaches this same conclusion: "[W]ater quality standards relate to the condition of waters as affected by the discharge of sewage, industrial wastes, *or other wastes including those from nonpoint sources and other sources of water pollution.*"[21] North Carolina could not promulgate, and EPA could not approve, a water-quality standard that restricts point source temperature pollution but allows unlimited nonpoint source temperature pollution to enter a stream because that standard would not protect the designated uses of the waterbody.

DEQ's interpretation—that the 20° C limit only applies in the presence of heated discharges—fatally undermines the trout waters temperature standard which was promulgated to protect trout populations. The interpretation would allow trout streams to consistently exceed that limit so long as there were no heated discharges on the stream, even if there were numerous sources of nonpoint temperature pollution. The stream's designated use as a trout water would then be lost. Water-quality standards are meant to prevent precisely this outcome.

*D. EPA has confirmed that temperature water quality standards apply to point and nonpoint discharges under § 303(d).*

EPA has confirmed that water-quality standards apply specifically in the § 303(d) context regardless of the presence of point source discharges. EPA's "long-standing interpretation of section 303(d)" is that the "listing requirement applies to waters impaired by point and/or nonpoint sources."[22] Specific to temperature, EPA has previously advised that:

> [W]aterbodies that do not meet an applicable State water quality criterion for temperature or a designated use due to temperature should be listed. Listing is appropriate because the applicable water quality standard is not met. Heat, the cause of the impairment, is defined as a "pollutant" under section 502(6) of the Clean Water Act and can be allocated. *It is immaterial to the listing decision whether the source of the temperature-related impairment is a thermal discharge or solar radiation*. Both are sources of heat, and the heat can be allocated through the TMDL process.[23]

Indeed, EPA recently prepared a TMDL to address exceedances of temperature water-quality standards promulgated to protect salmon and steelhead in the Pacific Northwest.[24] That

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[20] *Pronsolino v. Nastri*, 291 F.3d 1123, 1137 (9th Cir. 2002).
[21] 15A N.C. Admin. Code 02B .0205 (emphasis added).
[22] U.S. Env't Protection Agency, *Decision Document for the Approval of the North Carolina Department of Environmental Quality 2018 Section 303(d) List* at 4 (May 22, 2019), https://files.nc.gov/ncdeq/Water%20Quality/Planning/TMDL/303d/2018/20190522-NC-208-303d-Approval-Package.pdf.
[23] U.S. Env't Protection Agency, *National Clarifying Guidance for the 1998 State and Territory Section 303(d) Listing Decisions* at 5 (emphasis added), https://www.epa.gov/sites/production/files/2015-10/documents/lisgid.pdf.
[24] *See* U.S. Env't Protection Agency, *Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load (*Aug. 13, 2021), https://www.epa.gov/system/files/documents/2021-08/tmdl-columbia-snake-temperature-08132021.pdf.

analysis noted, as an example, that "temperature TMDLs typically identify loss of riparian shade as a nonpoint source of heat."[25]

*E. The presence of heated discharges is relevant to the causes of impairment but not the existence of impairment.*

DEQ is close to getting this right. To its credit, it has identified the correct temperature standard for trout streams in the draft 2024 § 303(d) Integrated Report. It has data showing that multiple streams violate that standard consistent with DEQ's listing methodology. It must now take the final step—listing those streams as impaired under Category 5 rather than Category 3a. The presence or absence of point source discharges on those streams segments makes no difference to whether those segments are complying with the applicable water quality standard—20° C.

The only thing "inconclusive" about the impairments here—DEQ's justification for placing these streams in Category 3a—are the *causes* of impairment in these trout streams. But that is irrelevant to whether a waterbody is impaired in the first place. DEQ may be unable to determine what is causing exceedances of the temperature standard for trout waters without knowing whether heated discharges are present but compliance with the standard does not turn on the presence of those discharges.

DEQ acknowledged as much in its response to comments on the 2022 § 303(d) list, where DEQ justified its refusal to list as impaired trout streams violating the temperature standard by stating that "[m]any if not all these [streams] would need to be addressed through a combination of riparian restoration, removal of no-permitted discharging amenity ponds, and perhaps dealing with climate change."[26] We appreciate the acknowledgement that a variety of hard-to-control factors may be contributing to the temperature impairment but the fact that these factors are difficult to manage does not let DEQ off the § 303(d) hook. And more to the point, DEQ's response underscores that it does not know what is causing these impairments, not that the impairments are not occurring. The first step toward assessing the reasons for impairment and rectifying them is listing streams as impaired that meet DEQ's § 303(d) list methodology.

We appreciate the opportunity to submit these comments and particularly commend DEQ for correcting its past errors and identifying the correct trout waters temperature standard—20° C—in its 2024 Integrated Report. We ask that DEQ take the next step and list streams as impaired that violate that standard consistent with DEQ's listing methodology. Once listed, we look forward to working with DEQ to address those impairments to secure healthy trout populations.

Sincerely,

Brian Esque, Chair
North Carolina Trout Unlimited State Council

[25] *Id*. at 33 n.9 (emphasis added).
[26] 2022 Response to Comments at 20.

Tim Gestwicki, CEO
North Carolina Wildlife Federation

**BRUNSWICK COUNTY**

Ms. Laura Oleniacz
NC DEQ, Division of Water Resources
1617 Mail Service Center
Raleigh, NC 27699

April 26, 2024

Dear Ms. Oleniacz,

Brunswick County Public Utilities (BCPU) would like to thank you and the NC Division of Water Resources (DWR) for accepting comments on the draft 303(d) list of proposed list of streams, rivers, reservoirs, and other water bodies in North Carolina considered to be "impaired" or that do not meet water quality standards in 2024. BCPU is the public drinking water and wastewater system serving customers in Brunswick County located in the southeastern part of North Carolina.

The draft 2024 303(d) list includes a new impairment listing for dissolved oxygen (DO) for the Shallotte River from US Highway 17 to the mouth of Mill Pond. Brunswick County requests that that this listing for the Shallotte River be returned to "data inconclusive." This request is based on recent data collection and analysis in the Shallotte River which indicates the presence of swamp-like characteristics. As swamps have naturally occurring low DO levels and pH, additional analyses are needed before making an impairment decision. Currently, Brunswick County is in the process of studying this area to collect data and further our understanding of the Shallotte River.

Sincerely,

**JOHN NICHOLS, PE, CPESC**
Director of Public Utilities
910.253.2653
john.nichols@brunswickcountync.gov

Cc. Glenn Walker, Water Resources Manager
Krysden Burden, Environmental Compliance Officer
Paula Kulis, PhD, PE, Water Quality and Ecosystem Restoration Discipline Leader- CDM Smith

April 26, 2024

**Re: North Carolina Conservation Network comments on state 303(d) list**

Thank you for the opportunity to comment on the state's 303(d) list and TMDL/watershed restoration process. We understand how important it is to properly designate the state's waters based on their impairment status in order to devise and implement restoration strategies. For this reason, we believe a comprehensive and accurate final list is imperative and offer these brief comments to encourage that this goal is achieved.

## I. Listing and Delisting

We encourage the Division of Water Resources (DWR) to maintain the current listing methods as outlined in the 2024 303(d) Listing and Delisting Methodology. While we understand that this document was approved by the Environmental Management Commission (EMC) in September 2022, the composition of the commission has since changed. New ideas may arise about the stringency of the 303(d) listing process based less on scientific soundness and more on political convenience. We caution against this for the current integrated report cycle and future years. While we do not agree with every facet of the methodology–for instance, we believe confidence intervals in some sections are unnecessary–we feel that it is a reasonable compromise between several stakeholders. Anything that would upend this equilibrium would also only serve to render the 303(d) list less useful and our state's water quality programs less effective.

## II. TMDL/Restoration Decisions

While we do not suggest any specific water bodies for the implementation of a total maximum daily load (TMDL) or watershed restoration plan, we do echo guidance from the EPA on the process of how these decisions are made.

First, we believe environmental justice should be a consideration in prioritizing waters for restoration. As EPA states in its Integrated Report guidance memo, "EPA encourages states, territories, and authorized tribes to incorporate environmental justice considerations as they carry out water quality monitoring, assessment, listing, and TMDL programs."[1] We encourage DWR to layer integrated report data with a relevant environmental justice tool to help determine its selection of waters for TMDLs and restoration plans. For now, the Centers for Disease Control's Environmental Justice Index provides a valuable set of indicators, including ones dealing with water quality and impairment, that could help guide DWR's decisions. For the future, Executive Order 292 directed the North Carolina Department of Information Technology to develop an

[1] Information Concerning 2024 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions

environmental justice mapping tool that will include a data layer of impaired streams. This will eventually be another helpful tool that will allow DWR to incorporate environmental justice into its restoration decisions.

Second, we emphasize EPA's recommendation that states "coordinate with National Pollutant Discharge Elimination System (NPDES) permitting programs to consider prioritizing watersheds for TMDL development where permits are coming up for issuance, reissuance, or renewal, furthering cross-program coordination."[2] This is an opportunity to use a more comprehensive approach to reducing pollution in degraded water bodies that couples the prevention of pollution with waterbody restoration.

Again, we appreciate the ability to offer these comments and look forward to the final decisions of the Division. If you have any questions, feel free to contact me at obrien@ncconservationnetwork.org.

Best,
Grady O'Brien
Policy Associate
North Carolina Conservation Network

[2] *Ibid.*

Charlotte-Mecklenburg STORM WATER Services

StormWater.CharMeck.org

4100 W Tyvola Rd
Charlotte, NC 28208

April 26, 2024

NCDEQ; Division of Water Resources
1601 Mail Service Center
Raleigh, NC 27699-1601
TMDL303dComments@deq.nc.gov
**Subject**: 2024 Draft 303(d) List and Integrated Report

To Whom It May Concern:

Charlotte-Mecklenburg Storm Water Services (CMSWS) appreciates the opportunity to provide input on the N.C. Division of Water Resources (NCDWR) 2024 Draft 303(d) List and Integrated Report. After reviewing these documents and the data that we submitted to the State on 7/31/2023 to help inform these listing decisions, we identified a few discrepancies that we would like to be taken into consideration before finalizing the 2024 303(d) List and Integrated Report. Based on the data we submitted, the following reaches should be listed as Category 5 (impaired) for benthos and are not currently listed as such:

- Paw Creek (11-124)
- Beaverdam Creek (11-126)
- Briar Creek (11-137-8-2) – this reach is also spelled incorrectly as "Brier"
- Coffey Creek (11-137-4)
- Fourmile Creek (11-137-9-4)
- Steele Creek (11-137-10)
- Mallard Creek (13-17-5a)
- West Branch Rocky River (13-17-3)
- Clarke Creek (13-17-4)

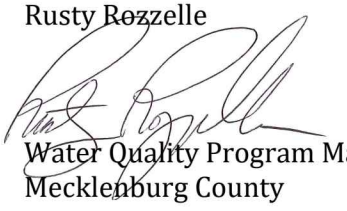
Additionally, Clarke Creek (13-17-4) is listed as Category 5 for Fish on the draft 2024 303(d) list while the data we submitted shows that our latest fish sample in 2022 was Category 1 (good-fair).

Thank you for taking these comments into consideration before finalizing the 2024 303(d) list and Integrated Report. If you have any questions, please contact Jason Hunt at Jason.Hunt@charlottenc.gov to discuss.

Thank you,

Jordan Miller
Surface Water Quality and Environmental Permitting Program Manager
City of Charlotte

Rusty Rozzelle



Water Quality Program Manager
Mecklenburg County

**From:** Nicki Stewart
**To:** TMDL303dComments
**Subject:** [External] Why
**Date:** Thursday, April 25, 2024 12:44:38 PM



Why are none of the waterways in Jamestown, NC tested or monitored for chemicals or metals (Jamestown's landfills sit on top of old Deep River Gold and Copper Mining and Smelting operations)

The permitting, compliance, discharge and monitoring data for companies that are discharging chemicals and contaminants into the Bull Run/Deep River Sub-Watershed is inconsistent, incomplete and wrong. For example: **Alberdingk Boley** is a German acrylic dispersions/resin manufacturer that emits toxins to the air and has spilled thousands of gallons of wastewater to a tributary to Bull Run – yet its storm water permit is for Food Warehousing.

Despite two years of focused outreach to our local government and the NC Department of Environmental Quality, our water supply sources – Deep River, Bull Run and Richland Creek – haven't been fully tested for chemicals, metals and organic compounds (which we now know exist in these streams because they're in our drinking water – water that flows to our faucets AFTER its been treated).

Based on what we now know, one of our first and foremost priorities is to get ALL of the surface water stream segments that flow through our town, parks and backyards, and all of the waterways that eventually flow into Deep River, tested (assessed) for inclusion on the 303(D) list, and monitored thereafter on a consistent, regular basis with well publicized public notices and alerts in the event of spills and toxin spikes.

Nicki Stewart
Jamestown, NC

**From:** kennyg698@gmail.com
**To:** TMDL303dComments
**Subject:** [External] Jamestown Water Supply
**Date:** Thursday, April 25, 2024 7:12:34 AM



My name is Ken Alonge. I'm a resident of a Jamestown, NC. Jamestown gets its water from the Randleman Lake reservoir.

We recently discovered that **Jamestown was switched over to Randleman Lake/PTRWA water, delivered through High Point and Greensboro pipes in 2010**! Here's the page from Jamestown's 2010 water planning report (link to the full report HERE):

The 2024 303(D) list has no new additions from our Bull Run/Deep River Sub-Watershed or the Deep River/Randleman Water Supply network – even though these waterways are the beneficiaries of decades of industrial wastewater and runoff from active and inactive landfills, untended Superfund sites and contaminated Brownfield sites; a giant quarry; PTI airport; old underground copper and gold mines; and several dozen manufacturing, textiles and chemical companies that discharge and spill into the streams that flow through our backyards, through the Eastside WWTP, then 11 miles downstream to Randleman Lake, where it is treated and sold back to us as “finished” drinking water. Contaminants include TCE, hexavalent chromium, Arsenic, Cyanide, 1,4-

Dioxane, PFAS, vinyl chloride, vanadium, mercury and, sadly, MUCH more.

And we haven't even BEGUN to talk about the underground storage tanks and contaminated Main Street properties yet.

WHY none of our waterways are tested or monitored for chemicals or metals (Jamestown's landfills sit on top of old Deep River Gold and Copper Mining and Smelting operations) is a mystery that has confounded us for the past two years. The lack of data, inconsistency of data, and lack of response from facility operators and county and state agencies, employees and administrators has been — and continues to be — very disappointing. Some action needs to be taken immediately!

Sent from my iPhone

**From:** Heather Mask
**To:** TMDL303dComments
**Subject:** [External] 303(D) PROGRAM Jamestown NC
**Date:** Thursday, April 25, 2024 11:30:35 AM



To Whom It May Concern,

Please consider that it is imperative that the State of North Carolina and EPA start assessing Jamestowns NC's waterways, IN TOWN, for contaminants, chemicals, metals and pesticides.

I would like to request that ALL of Jamestown's streams and waterways be added as high priority items to the 2024 303(D) Impaired Waterways List.

Thank you
Heather Mask
Greensboro NC

**From:** TJ Cullen
**To:** TMDL303dComments
**Subject:** [External] Lack of public information
**Date:** Thursday, April 25, 2024 1:56:05 PM



we are trying to bring attention on the EPA's and the NC Division of Water Quality neglect of the serious poor water quality in Jamestown,NC area from Deep River & Bull Run. Recent reports show
raised levels are, in part, caused from chemical spills and manufacturers disregard on the waste materials entering the water supply. There are several chemical storage facilities that are not being accurately monitored and lack of reporting to the public of the raised levels of measurements which are putting the drinking water at risk.
We have reports: " The new LEGAL LIMIT for PFOS and PFOA is 4ppt. Jamestown's PFOS level measured at 10.4ppt - MORE THAN TWO AND A HALF TIMES THE LEGAL LIMIT, and PFOA was 5.9ppt, also well above the legal limit. "

I would like to see more attention given to the Jamestown area property owners and to monitoring new construction proposals and their impact on storm water run off and damages to water supply.
Thank you,
Tarey Cullen

**From:** Bluebird Cafe
**To:** TMDL303dComments
**Subject:** [External] Waterway testing and 303(D) list
**Date:** Thursday, April 25, 2024 10:15:39 AM

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To Whom it May Concern,

Our local riverways are polluted with numerous toxic wastes making our drinking water unsafe. Deep River is of special concern since polluted streams flow into the Deep River which in turn becomes our drinking water.

Our water is impaired. The lack of adequate testing and oversight is deeply troubling.

I am writing this letter to request support that all surface water streams that flow into Deep River be tested and included on the 303(D) list and monitored on a consistent, regular basis with well publicized public notices about toxins and progress.

Thank you for your support,

Elizabeth Schabacker
4815 Tradition Way
Colfax, NC 27235
336-575-6563

**From:** Susan McAllister
**To:** TMDL303dComments
**Subject:** [External] We Deserve Clean Water!!
**Date:** Tuesday, April 23, 2024 2:49:51 PM



Seriously folks, this is unacceptable! I moved to Guilford County 30years ago and was astounded by the lack of controls/laws directed to the furniture industry - at the time these manufacturers were majority of companies polluting our water. I also saw a huge increase in cancer diagnosis's in the area - I am now seeing a noticeable increase in Parkinson's cases. We currently pay (High Point Utilities) more for water than any of our neighbooring towns/cities and the water we're getting is contaminated…you are endangering our health, affecting our life expectancy, decreasing our property values….time to move!

S. McAllister

Jamestown resident

Into that drinking water systems flows: (1) industrial wastewater from an unknown number (but at least a dozen) of High Point's manufacturing facilities, Kersey Valley Landfill and GFL Construction & Demolition Landfill – via Richland Creek and/or Eastside WWTP; (2) Industrial wastewater and groundwater from at least three neglected Superfund sites, four Brownfield (contaminated) sites, a giant quarry, PTI airport, the tank farm, old underground copper and gold mines, and an unknown number of chemical companies and manufacturers in Greensboro and Jamestown – via Bull Run, Deep River, Copper Branch, Long Branch and/or Eastside WWTP; (3) stormwater and groundwater from four 18-hole golf courses via Reddicks Creek and Deep River; and (4) EVERYTHING

from Eastside WWTP (whose NPDES permit has been unrenewable since December 2018).

THIS IS OUR DRINKING, BATHING, TODDLER POOL, HAND-WASHING and TOOTH-BRUSHING WATER.

The "finished" water is sold back to us from PTRWA, and it is pumped to us through pipes belonging to High Point and Greensboro. It is IMPERATIVE that the State of North Carolina and EPA start assessing our waterways, IN TOWN, for contaminants, chemicals, metals and pesticides — just like they did prior to 2012.

This is why we need YOUR Public Comments demanding that ALL of Jamestown's streams and waterways be added as high priority items to the 2024 303(D) Impaired Waterways List.

We have metals, PFAS, PFOA and 1,4-Dioxane in our tap water. We know the water is impaired. We just don't know HOW impaired, what's running through our backyards, and what's evaporating out of our groundwater.

**From:** Deborah Printup
**To:** TMDL303dComments
**Subject:** [External] Jamestown, NC water
**Date:** Tuesday, April 23, 2024 9:00:09 AM



Please do something about this situation. We don't know what chemicals we are drinking, bathing and using to cook. Our family's health is the most important thing in our lives. Do not ignore this grave issue.

https://thejamestowner9.com/public-comments-and-citizen-complaints/303d-deep-river-bull-run/

I pay taxes and I vote, will NOT forget this in November.

Deborah Printup
104 Buckeye Rd.
Jamestown, NC 27282

Deb Printup
336-580-3964 cell
336-454-1188 landline

**From:** Sheila Wenzel
**To:** TMDL303dComments
**Cc:** Sheila Wenzel
**Subject:** [External] Jamestown, NC Water
**Date:** Thursday, April 18, 2024 3:16:55 PM



Dear Sir,

We are very concerned about the water in Jamestown, NC. It has been brought to public attention that there is no testing or monitoring of chemicals or metals over the last few years.

The 2024 303(D) list has no new additions from Bull Run/ Deep River Sub-Watershed or the Deep River/ Randleman Water Supply network. These waterways are the beneficiaries of decades of industrial wastewater and runoff from active and inactive landfills, untended Superfund sites and contaminated Brownfield sites; a giant quarry; PTI airport; old underground copper and gold mines; and several dozen manufacturing, textiles and chemical companies that discharge and spill into streams that flow through our neighbor backyards, through the Eastside WWTP, then 11 miles downstream to Randleman Lake, where it is treated and sold back to us as "finished" drinking water. Contaminates include TCE, hexavalent chromium, Arsenic, Cyanide, 1,3 -Dioxane, PFAS, vinyl chloride, vanadium, mercury and sadly much more.

Jamestown's landfills sit on top of old Deep River Gold and Copper Mining and Smelting operations.

Thank you,
Sheila Wenzel

**From:** Susan Jorgensen
**To:** TMDL303dComments
**Subject:** [External] Drinking water for Town of Jamestown
**Date:** Friday, April 26, 2024 12:58:51 PM

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I am humbly submitting my thoughts on the ongoing matter of the "highly contaminated" drinking water in Jamestown and surrounding communities. As a tax paying resident and receiver of said water, I find it appalling that NOTHING appears to be happening to rectify this situation. Evidently the town thinks the water "is just fine" even though study after study as shown that to be false.

I am not going to again, point out all the facts that have been indeed been researched for years as I am sure you have read them all before. Just look at the numbers! I have been diagnosed with a number of skin issues as well as gastrointestinal problems. Is it coincidence? Maybe…but has to make me wonder since I previously drank water constantly from the tap, as well as showering, bathing, etc. until I woke up and was forced to drink bottled water… another expense. I will not provide my animals with city water.

So, what can be done. Please, consider forcing this town to deal with their problem. It is important, serious matter that affects many lives and future generations.

Thanking you in advance for some relief.

Sincerely,
Susan Jorgensen
Jamestown, NC
Sent from my iPad

**From:** rbryson@triad.rr.com
**To:** TMDL303dComments
**Subject:** [External] JAMESTOWN NC, Bull Run, Copper Branch, Deep River, Richland Creek, Reddicks Creek for 2024 303(d) list and TMDL assessment
**Date:** Friday, April 26, 2024 12:15:24 PM



To whom it may concern:

Please note that as a resident of Jamestown, NC , I echo the below comments by Susan Dickenson. Everyone in Guilford county and surrounding areas should be cery concerned about the quality of the water that is passed off as safe to drink. I believe the below scientific evidence says otherwise.

We concerned residents would appreciate further information about what will/can be done by the NCDEQ to begin to alleviate / resolve this water problem.

Thank you
John Bryson
Jamestown, NC 27282.

**From:** Susan Dickenson <susan122306@gmail.com>
**Date:** April 26, 2024 at 2:43:19 AM EDT
**To:** TMDL303dComments@deq.nc.gov
**Subject: JAMESTOWN NC, Bull Run, Copper Branch, Deep River, Richland Creek, Reddicks Creek for 2024 303(d) list and TMDL assessment**

To whom it may concern:

For two years, I have been researching, learning, writing, and waiting for the opportunity to submit public comments re the necessity of including Jamestown's surface waters on the 303(d) list, and to fully explain why we desperately need a comprehensive assessment of the metals, CHEMICALS and biological contaminants in order to put TMDL limits in place before we're all poisoned to death.

If you are reading this as an NCDEQ or EPA staffer who is fully aware of the controversies surrounding the water network in this area - specifically the creation of Randleman Lake and Reservoir in 2005 - then you know what I'm talking about. If not, please read this: https://thejamestowner9.com/water-

quality-jamestown-nc/ptrwa-randleman-lake/ptrwa-randleman-lake-reservoir/

A couple days ago, while researching for this project, I came across NCDEQ meeting notes from 1996 and 1997 regarding the environmental assessment of the proposed Randleman Reservoir.

We residents of the Randleman Watershed are well aware of the public outcry, concerns and objections raised by local citizens, doctors, professionals and environmental groups back then. (See: https://thejamestowner9.com/water-quality-jamestown-nc/ptrwa-randleman-lake/shortcut-link-to-1990s-public-comments-re-the-creation-of-randleman-lake-as-a-water-supply/)

But I was alarmed to discover that NCDEQ staffers not only repeatedly advised against and warned about this project, but they found the water quality to be of such a horrendous state that one staffer said out loud in a staff meeting, "… when DWQ permits the [Eastside] WWTP, we make it clear that the water quality predicted for [Randleman] Lake VIOLATES Water Quality standards so that we are not blamed for the condition of the lake and we are not asked to try to fix it once it is impounded." (See: https://thejamestowner9.com/water-quality-jamestown-nc/ncdeq-knew-it-was-a-bad-idea/)

I understand their concerns and agree with them in principle. But, unfortunately, the NCDEQ appears to be making good on that preemptive recusal by ignoring our pleas to apply the most basic provisions of the Clean Water Act to the numerous WOTUS water supply streams that criss-cross our tiny town. (See: https://thejamestowner9.com/public-comments-and-citizen-complaints/oakdale-forest-401-permit/)

Jamestown is the site of the first gold rush in America. We have old mining pits and tunnels throughout the town, and the massive Kersey Valley and GFL landfills sit on top of the Deep River Gold and Copper Smelting Operations (from the turn of the last century). For DECADES, Deep River has received the industrial wastewater from High Point's furniture industry, Greensboro's textiles industry, and now both cities' chemical industry.
(See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/jamestown-nc-map-contamination/)

This was all fine and good back when everyone had decided Deep River would be used for only THAT - industrial wastewater and contaminants. But now, after a hundred and fifty years of that, the governments of Jamestown, High Point, Greensboro, Guilford County, and North Carolina expect us to pay to FIX IT and DRINK IT. (See: https://thejamestowner9.com/local-government/jamestowners-heres-why-your-water-bill-is-suddenly-so-high/)

Here in Jamestown, it's not only about drinking the stuff, but these streams flow through our neighborhoods, parks and backyards. In my case, a WOTUS tributary flows across my back yard, about 10 feet from where I'm sitting inside my living room typing this letter right now. When a significant storm event occurs, these streams (and their metals, 1-4 Dioxane, PFAS, TCE, barium, chromium, mercury, acetone, vinyl chloride, sulfates and cadmium) soak our yards, swingset/play areas, vegetable gardens and tree roots.
(See: https://thejamestowner9.com/public-comments-and-citizen-complaints/jamestown-residents-stormwater-complaints/)

Once upon a time, extensive monitoring of Jamestown's waterways - WITHIN THE TOWN'S BOUNDARIES - took place at monitoring stations all over town. That all stopped about 12 years ago for some reason. But the contamination and discharge has only increased.

Here's the list of streams in Jamestown and the Deep River/Randleman Watershed that I and the good citizens of Jamestown respectfully ask be assessed for chemical, metals and biological contaminants and pollutants, and TMDLs be put in place to protect our waterways from the massive onslaught of "permits" for expanded capacity (at the landfills and Eastside WWTP), and generic General NPDES permits for unknown and unmonitored industrial and chemical waste into our water supply waterways.
(See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/landfills/gfl-high-point-cd-landfill-expanding/)

EVERYTHING in the following list of streams comes back to us as drinking water. Every stream on this list is completely unmonitored, ignored, neglected and near death.

We've volunteered thousands of hours to create this list and hope you will give it serious consideration:

**1. BULL RUN STREAM, Assessment Unit NC17-5-(1)**
NC Surface Water Classification: Water Supply WS-IV* since 3/31/1999
EPA classification: Aquatic Life

**Description:** Bull Run enters Jamestown's Protected Class IV Randleman Watershed from our town's northern boundary with Greensboro, and flows south to Deep River for about 2 miles — through Jamestown neighborhoods, backyards, and the Guilford County Technical Community College Campus.

Upon entering Jamestown, Bull Run flows south through the middle of a new 467-acre D.R. Horton development (farmland/forestland which is currently being razed, cut and cleared). (See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/dr-horton-jamestown-nc-contaminated/)

Parallel to, and uphill from, the D.R. Horton property, Bull Run receives stormwater runoff and groundwater leachate from 80 acres of contaminated Superfund Brownfield properties along West Gate City Blvd. The Brownfield properties include a former Burlington Industries site and a former Fortress Wood Products site. (See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/one-metals-drive-greensboro/)

**Known Contaminant/Dischargers in this segment:** Survey and engineering reports for the Brownfield properties (6008 West Gate City Blvd and One Metals Drive) list numerous contaminants in the groundwater and soil, including high levels of TCE, hexavalent chromium, arsenic, lead, petroleum hydrocarbons (19,300 ppm), mercury, barium, copper, acetone, thallium, chlorobenzene, vinyl chloride, xylenes, antimony, naphthalene, and more. (See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/tce-arsenic-chromium-contaminants-new-

brownfield-site/)

**Alberdingk Boley** is a German acrylics and resin manufacturer that has a front door address in Greensboro, but discharges out the back of the building/property to Jamestown, emits toxins into the air, and has had **two major spills to a tributary to Bull Run** – yet its storm water permit is for Food Warehousing.

Two water samples taken from Alberdingk Boley's pretreated wastewater in 2023 detected 1,4-Dioxane levels of 87.2ppb and 99ppb, according to the company's annual Pretreatment Report. (See: https://thejamestowner9.com/water-quality-jamestown-nc/pfas-1-4-dioxane/14-dioxane-levels-increase-jamestown-nc-water/)

The N.C. Division of Air Quality monitors Alberdingk Boley under SIC Code (2821) for Plastics and Resin Manufacturing (Air Permit 09206R05). The N.C. Division of Water Resources gave Alberdingk Boley a General discharge permit under the SIC code for "Warehousing, Food and Kindred" (Permit no. NCG060104). In addition to 1,4 Dioxane, Alberdingk Boley's pretreated wastewater contains Cadmium, Chromium, COD, Copper, Ammonia, TSS, BOD, Cyanide, Lead, Nickel, Nitrate-Nitrite, Phosphorus, Oil & Grease, TKN, Phenolic Compounds, Zinc.

About a half mile before Bull Run empties into Deep River, Bull Run's classification changes to WS-IV CA*, and the segment ID changes to NC17-5-(2)

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**2. BULL RUN STREAM, Assessment Unit NC17-5-(2)**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life

This segment of Bull Run continues south, through residential neighborhoods and Jamestown back yards for 1/2 mile, before emptying into Deep River.

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**3. DEEP RIVER, Assessment Unit NC17-(3.3)**
NC Classification: Water Supply WS-IV*, since 3/31/1999
EPA classification: this segment appears to be unknown to the EPA; it is not identified and no data exists for it on the EPA interactive waterways map.

**Description:** Deep River enters Jamestown's Protected Class IV Randleman Watershed from our northwest boundary with High Point, at High Point City Lake, then flows south in a curvy "s" pattern for about a half mile through a heavily industrialized area. Segment NC17-(3.3) ends at a plastics manufacturer called Teknor Apex (formerly Viking Polymers), approximately 1000 feet south of Dillon Road in Jamestown. Deep River then becomes Segment NC17-(3.7).

**Known Contaminants/Dischargers in this segment (via groundwater and tributaries to Deep River):** Univar Chemicals (extensive documentation about leaking underground tanks in the NCDEQ public records archives; holds a General NPDES permit; discharge is unknown); Highland Container (Hood Industries), corrugated cardboard manufacturer, holds the same General NPDES permit as Teknor Apex, for Finished Apparel (cutting & sewing), Printing, Leather & Rubber, but its Air Emissions Permit (05793/R08) is for Corrugated & Solid Fiber Box Manufacturing; Former Monarch/Chromecraft Furniture site at 301 Scientific (Cadmium, Chromium, Cyanide, Lead, Nickel, Mercury, Selenium, Copper, Zinc); Staples metal products (Superfund), Diversified Technologies
(See: **https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/hazardous-site-301-scientific-jamestown-nc/** AND

**https://thejamestowner9.com/contaminant-sources-hazardous-sites/univar-contaminants/** AND

**https://thejamestowner9.com/contaminant-sources-hazardous-sites/contaminated-tce-109-west-main-jamestown/**

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**4. DEEP RIVER Assessment Unit NC17-(3.7)**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life

**The current N.C. Water Classifications table incorrectly identifies this segment** as "Town of Jamestown water supply intake." This was water intake for Jamestown many years ago, before it was discovered that that toxins were leaching into this segment of Deep River from the Monarch/Chromecraft Furniture Company at 301 Scientific Street. Jamestown's water supply, according to Jamestown's LWSP reports, has come from Randleman Lake and Reservoir (PTRWA) since 2010. It is piped to us from Randleman Reservoir via Greensboro and High Point's pipes.

**Description:** Deep River continues south from Teknor Apex for about 1.5 miles, to the abandoned Oakdale Cotton Mill (which sits, neglected and falling down, on the banks of Deep River). A tributary from Teknor Apex empties into Deep River within this segment.

**Contamination sources/Dischargers:** Teknor Apex, Oakdale Cotton Mill. Very little discharge info exists in the public records for Teknor Apex, formerly known as Viking Polymers. A 2014 Triad Business Journal article describes the company as a "producer of thermoplastic compounds for a variety of materials."

In the article, Louis Cappucci, Teknor Apex's vice president and head of the vinyl division, said the acquisition of Viking Polymers in Jamestown adds to the company's "rigid PVC capabilities and represents an extension of its product portfolio into weather able cap stocks, CPVC compounds and other

specialties for the fast-growing building and construction market."

Teknor Apex gets a break from the NC Division of Water Resources in the form of a General NPDES permit for companies in the Finished Apparel (cutting & sewing), Printing, Leather & Rubber category. The Division of Air Quality issued the company a permit under SIC Code 3087 for Custom Compounding of Purchased Plastic Resins (permit no. 10379R01). A tributary flows from the company directly to Deep River. The company's 2023 Pretreatment Report shows the presence of antimony, arsenic, cyanide, lead and zinc in its pretreated wastewater.

Oakdale Cotton Mill has been closed since 2006. It is abandoned and falling apart and there are giant rusting above-ground fuel tanks on the property. In all of the NC DEQ public records, there are only TWO documents pertaining to this place. The owner and registered contact person is a guy in Cape May, New Jersey named Gus Andy, who died six months ago. There is only one recorded attempt to inspect this place (in 2022 – but when the NCDEQ inspector got there, he found the gate locked and not a soul anywhere). More info and photos of the mill are here: https://thejamestowner9.com/contaminant-sources-hazardous-sites/its-time-to-get-real-about-oakdale-mill/

**Condition/303(d) listing:** This segment is currently shown as a red (Impaired) waterbody, but an employee with the NC Dept of Environmental Quality made notes to the file in January 2023 stating that this designation is an error. She wrote in her notes that the "Impaired" designation for this segment is for an unnamed tributary that was identified as flowing to or from the southwest side of Deep River; and that this "Impaired" determination was made based on a biological test sample taken in 2015. The employee states in the notes that the correction would be shown on the 2024 list. This correction was not made to the 2024 proposed list. (I can send you these documents upon request.)

The "2022" assessment for this segment of Deep River is from water tests conducted in 2015 and 2018, and many of the results are shown as "DATA INCONCLUSIVE." The DWR employee states that this means there's "not enough data collected during this assessment period to make a determination of the status of the instream water quality condition." We take it to mean no one tried.

SO, the condition of Deep River at this segment is still unknown due to lack of sampling data and **therefore**:

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**5. DEEP RIVER Assessment Unit NC17-(4)a**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life, Recreation, Water Supply

**Description:** Deep River flows south from Oakdale Cotton Mill to Kivett Drive for about two miles. Bull Run stream flows into Deep River in this segment. Copper Branch flows into Deep River in this segment (carrying leachate and water runoff from the old McCulloch Gold/Copper mining

compound and Hazardous Site APAC Asphalt).

**Known Contaminants/Dischargers:** Martin Marietta Quarry (General permit, little is known about discharge into Deep River); APAC Asphalt Superfund site, a former NC Dept of Transportation asphalt lab (TCE, vinyl chloride, acetone is in groundwater within half-mile radius of the site - a charter school with 900 kids now sits within the contamination circle)
(See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/apac-asphalt-contaminants-flow-to-deep-river/)

**Condition/303(d) listing:** This segment was assessed for biological/fish health. We know from the NCDEQ's Fact Sheets that no water sampling has been done in Jamestown since at least 2019. The EPA How's My Waterway information declares this segment to be "Good" for Aquatic Life, Recreation and Water Supply. This is grossly misleading (and potentially hazardous) to locals who can access Deep River at this location to fish, kayak, wade and access the water

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**6. DEEP RIVER Assessment Unit NC17-(4)b**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life, Recreation, Water Supply

**Description:** Deep River continues south from Kivett Drive, for 6.6 miles, to Coltrane Mill Road. Reddicks Creek (WSIV-CA*) and Jenny Branch (WSIV*) empty into Deep River here from the east.

**Discharging/leaching into Deep River:** Eastside Wastewater Treatment Plant (Phosphorus, 1-4 Dioxane (spikes), sodium hypochlorite (spill), , Seaboard Chemical dump (1,4 Dioxane, Vinyl Chloride, Chlorobenzene, VOCs), High Point Landfill at Seaboard (contaminants unknown), High Point Material Recovery (discharge unknown), High Point Firearms Training Facility (in Google satellite imagery, targets appear to be set up with Deep River behind them).

See: https://thejamestowner9.com/water-quality-jamestown-nc/pfas-1-4-dioxane/seaboard-chemical-contaminant-source-to-deep-river/ AND

https://thejamestowner9.com/contaminant-sources-hazardous-sites/seaboard-chemical-jamestown-nc/jamestown-nc-seaboard-chemical-dump/ AND

https://thejamestowner9.com/eastside-wastewater-treatment-plant-jamestown-wwtp-nc/air-water-violations-eastside-wwtp-jamestown-nc/

**Discharging/leaching into Deep River via Richland Creek:** Kersey Valley Landfill*, GFL Construction & Demolition Landfill (aka "High Point C&D Landfill"), Thomas Built Buses (High Point), Ultra Coatings (High Point), Cintas Corp.* (High Point), Custom Drum Services (High Point), HandCraft Linen Services (High Point), Harriss & Covington Hosiery (High Point),

Hunter Farms (High Point), Innospec Chemicals* (High Point), Mickey Truck Bodies (High Point), Pantheon Softgels (High Point), SafeGuard (High Point), Slane Hosiery Fairfield* (High Point), Terra Nova Solutions* (High Point). All of the companies with an asterisk (*) discharge 1,4-Dioxane into Richland Creek/Deep River according to their annual Pretreatment Reports. Pretreatment samples taken in 2023 detected 1,4-Dioxane levels of 305 ppb at Mickey Truck Bodies, 185 ppb at Innospec Active Chemicals, and 174 ppb at Kersey Valley Landfill. (I can provide you with the link to our Dropbox folder of Pretreatment Reports upon request)

**Discharging/leaching into Deep River via Reddicks Creek and Jenny Branch:** Sedgefield Golf Course and both Grandover Golf Courses (two 18-hole courses) flow through these two streams.

**Condition/303(d) listing:** The EPA database says there is "INSUFFICIENT INFO" to assess the condition of this drinking water supply segment; **therefore:**

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**7. Copper Branch, Assessment Unit NC17-6**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: this segment appears to be unknown to the EPA; it is not identified and no data exists for it on the EPA interactive waterways map.

**Description:** Copper Branch runs along the southern border of an old Superfund hazardous site (APAC Asphalt) and receives water runoff from the site, flows beneath Riverdale Drive, through the Martin Marietta Quarry, and into Deep River Before it reaches APAC Asphalt from the west, Copper Branch flows through the middle of the McCulloch Gold Mine and Mill properties. The larger operation - Deep River Copper & Gold Smelting - is across the street, beneath the Kersey Valley and GFL C&D landfills.

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**8. Reddicks Creek, Assessment Unit NC17-8-(0.5) and NC17-8-(3); Dogwood Lake NC17-8-1, and Jenny Branch NC17-8-2**
NC Classification: Water Supply WS-IV* and WS-IV CA*
EPA Classification: no info/insufficient info

Description: This network of streams discharges into Deep River between Jamestown and Randleman Lake. The upper forks of Reddicks Creek travel through three 18-hole golf courses (Sedgefield and Grandover). Golf courses are notorious for heavy use of turf chemicals, fertilizer, weed killer and pesticides.

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM network in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**9. Richland Creek, Assessment Unit NC17-7-(0.5) and NC17-7-(4)**
**NC Classification: Water Supply WS-IV* and WS-IV CA***
EPA Classification: EPA site says "Waterbody information is temporarily unavailable" for this waterway.

**Discharging/leaching into Deep River via Richland Creek:** Kersey Valley Landfill*, GFL Construction & Demolition Landfill (aka "High Point C&D Landfill"), Thomas Built Buses (High Point), Ultra Coatings (High Point), Cintas Corp.* (High Point), Custom Drum Services (High Point), HandCraft Linen Services (High Point), Harriss & Covington Hosiery (High Point), Hunter Farms (High Point), Innospec Chemicals* (High Point), Mickey Truck Bodies (High Point), Pantheon Softgels (High Point), SafeGuard (High Point), Slane Hosiery Fairfield* (High Point), Terra Nova Solutions* (High Point). All of the companies with an asterisk (*) discharge 1,4-Dioxane into Richland Creek/Deep River according to their annual Pretreatment Reports. Pretreatment samples taken in 2023 detected 1,4-Dioxane levels of 305 ppb at Mickey Truck Bodies, 185 ppb at Innospec Active Chemicals, and 174 ppb at Kersey Valley Landfill. (I can provide you with the link to our Dropbox folder of Pretreatment Reports upon request)

The part of Richland Creek (NC17-7-(0.5)) that runs through south High Point's furniture, textile, auto/bus, and chemical manufacturing districts is RED/"Impaired" for Aquatic Life and for Swimming/Boating.

The part of Richland Creek (NC17-7-(4)) that runs up to Kersey Valley Landfill is RED/"Impaired" for Aquatic Life and Swimming/Boating, but "GOOD" for "Drinking Water."

The part of Richland Creek that runs along the southern border of Kersey Valley Landfill and GFL C&D Landfill up to the Eastside Wastewater Treatment Plant is now marked as being part of Deep River NC17-(4)b, and is "Condition Unknown" for Drinking Water and Aquatic Life, but "GOOD" for Swimming/Boating.

This is a horrific, macabre joke - Deep River is nothing but mud, trash and thick smelly brown sludge along that stretch).

Eleven and a half miles downstream from that dirty juncture is where that same water gets "treated" and piped back to us - as water to drink, wash vegetables in, and bathe/shower in.

Thank you,

Susan Dickenson
Jamestown, NC 27282

**From:** ROBERT FREDERICK
**To:** TMDL303dComments
**Subject:** [External] Comments regarding the TMDL303(d) list
**Date:** Thursday, April 25, 2024 10:36:50 PM



To Whom It May Concern,

I'm writing with concerns that there are several waterways in our county (Guilford) that are not properly monitored and may not even be propertly listed.

This concern is due in part to several spills by a nearby factory, Alberdingk Boley, which were initially not reported and then listed by our Town Manager here in Jamestown as going into an "unnamed tributary." That was all he reported, many months after the fact. But as neighbors had identified the spill, we all also know that tributary flows into Bull Run, which flows into Deep River and from there to Randleman Reservoir and then cycled back into our drinking water through a treatment plant — Eastside — that has its own problems.

Further, the mywaterway.epa.gov site lists the Aberdingk Boley company as "no violation identified" and no "significant effluent violation within the past three years." But the NCDEQ issued a civil penalty on February 6, 2023 for over five-thousand dollars, with an estimated 16,000 gallons discharged of a water-based resin.

That prompted several folks here in town to test their water at their own expense, finding high levels of pollutants — including PFAS — in our treated water.

Further investigations into public records show the EPA does not have the data it should about our waterways, with listings of, for example, "condition unknown" for Deep River (State Waterbody ID: NC17-(4)c2) even though it appears to have last been tested in 2022. How does that make any sense?

We the people deserve to know how well — or poorly — our waterways are being monitored, and what the results of those monitoring tests say. Our Town Manager has proven untrustworthy. Our Town Council is either silent or makes accusations of "fake news" even though we have the public records to back up our questions. But it''s clear that the inconsistent and missing data — along with a long history of overly business-friendly practices for polluters (as well as the establishment of Randleman Reservoir) —suggests that we need a careful re-examination of our waterways here in Guilford County, with updated tests and the sharing of the results publicly. It seems to me likely many more of our waterways here in Guilford County will be subject to a TMDL. But we all deserve that data, either way.

Thank you for your consideration,
Robert Frederick
500 Wyndwood Drive
Jamestown, NC. 27282

**From:** Martha Miller
**To:** TMDL303dComments
**Subject:** [External] This is unacceptable...
**Date:** Saturday, April 27, 2024 12:15:22 AM



I've read alot about this and I dont understand why this is continuing to happen.
I live about 10 miles from Jamestown and lived in same residence for 42 years.
Parts of Greensboro & Guilford county recieve drinking water from Randleman lake.
Why do the city officials for Greensboro & Jamestown think its acceptable to NOT clean this up and meet the standards required by the EPA and other agencies.
It's just shameful.

"Jamestown's stormwater permit has been ineligible for renewal since February 2022, and Jamestown Town Manager Matthew Johnson is now two years behind in submitting a Stormwater Management Plan that is acceptable to the State of North Carolina. It also states that local governments shall implement local ordinances that meet or exceed the provisions of Items (5) and (6) of this Rule. Jamestown's Ordinance – which is less stringent – with the 2020 Randleman Watershed Rules. Obviously this is an extremely bad call considering the massive over-development occurring right this minute in our tiny town, very close to three contaminated Brownfield sites, in the Randleman Watershed, alongside Bull Run Stream, Class IV Water Supply."

We as citizens would like action no excuses.

Martha M.
Greensboro, NC

**From:** Krisdena Foronato
**To:** TMDL303dComments
**Subject:** [External] TMDL 303D Comments
**Date:** Friday, April 26, 2024 11:48:07 PM



April 26, 2024

To Whom It May Concern,

I am writing this letter to advise the EPA that the system meant to protect us is broke. How is it we have environmental laws and regulations when they are completely ignored and/or only rarely enforced? How can state and federal agencies perform their obligations and responsibilities when they are severely underfunded, understaffed, and overwhelmed? These issues have detrimental consequences for local residents and their communities. And the Town of Jamestown, Guilford County, North Carolina is just one of many affected by these examples and many other forms of mismanagement on a local, county, state, and federal level.

BULL RUN/DEEP RIVER

Since the 1970s, NCEMC and/or NCDEQ have been performing decennial biological, chemical and macroinvertebrate studies on the Deep River. In the reports available on the NCDEQ Laserfiche database, the results repeatedly identified Jamestown Wastewater Treatment Plant ("Jamestown WWTP"), High Point Eastside Wastewater treatment Plant ("Eastside WWTP"), and Richland Creek as contributors to the poor conditions of the Deep River. While most of the research stops here, the point source dischargers have never been identified or pursued further. In one of these reports, it indicates during low-flow conditions, the Deep River is 74% wastewater, which is mindboggling, considering the Deep River flows downstream and ends up in the Randleman Lake Reservoir, which serves as a public drinking water source for the Town of Jamestown and many other communities in and around Guilford County. Other reports refer to high concentrations of metals, indicative of decades—if not centuries—of unregulated mining, landfills, many industrial and textile factories situated near and along these valuable and fragile waterways.

Three major municipal discharges occur in the upper Deep River. High Point Eastside's 10 mgd plant discharges to Richland Creek, Jamestown's 1.0 mgd plant discharges to the River below High Point Lake and Randleman's 0.5 mgd plant discharges to the river above the Worthville Dam. These facilities are discussed in more detail later in this section.

During low flow periods, the point source contribution to the Deep River flow far exceeds its natural flow. The natural 7Q10 flow at Worthville Dam, below Randleman's discharge, is 7.22 cfs. Above this point, facilities are permitted to discharge 13.2 mgd or 20.5 cfs. This means that during extreme drought conditions, if all facilities discharge at their design capacity, 74% of the Deep River is waste water. The three major municipals alone account for 11.5 mgd or 71% of the river's low flow.

*Source: Water Quality Evaluation Upper Deep River, Cape Fear River Basin, 1983. North Carolina Department of Natural Resources and Community Development Division of Environmental Management Water Quality Section, February, 1985.*

At issue is the fact Bull Run and Deep River are heavily lined with industrial contaminators (i.e. Alberdingk Boley, Univar, etc.), environmental polluters (i.e. farms, Kersey Valley Landfill, High Point C&D Landfill, etc.), Superfund sites (i.e. Seaboard Chemical Plant), and Brownfields (i.e. Alberdingk Boley, Burlington Distribution)—all with a history of burying hazardous materials in unlined pits (i.e. Seaboard Chemical, Oakdale Cotton Mill, etc.), violating water quality standards via chemical leaching and wastewater spills (i.e. Seaboard Chemical, Alberdingk Boley, UNIVAR, Highland Container etc.), violating air quality standards via uncontrolled releases (i.e., 109 E. Main Street, Eastside WWTP, etc.), and the failure to properly cleanup and remediate contaminated properties (i.e. Seaboard Chemical plant). Currently, I have a FOIA request pending since January 15, 2024 with the NCDEQ requesting the most recent/missing data on the Deep River's biological, chemical and macroinvertebrate studies as it appears the information has not been uploaded since late 1990s/early 2000s. These studies should be conducted every 10 years, with the most recent studies (2013 & 2023) and/or activity missing in the NCDEQ Laserfiche database. Mind you, Deep River "4136 From Guilford County SR 1334 to dam at Oakdale Cotton Mills, Inc. (Town of Jamestown water supply intake)" appears on the North Carolina Draft 2024 303(D) List (https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=3170580&cr=1) and appears to have been on the 303(d) list since 2018. So where is the monitoring and reporting for this stretch of the Deep River?

| | | | | |
|---|---|---|---|---|
| Deep River | 17-(3.7) | WS-IV;CA:* | 2.0 | FW Miles |
| 4136 | From Guilford County SR 1334 to dam at Oakdale Cotton Mills, Inc. (Town of Jamestown water supply intake) | | | |

| PARAMETER | IR CATEGORY | Method Code | 303D YEAR |
|---|---|---|---|
| Benthos (Nar, AL, FW) | 5 | B3 | 2018 |

*Source: NCDEQ (2024). NC 2024 303(d) List – DRAFT 20240227. Retrieved on April 26, 2024 from: https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=3170580&cr=1*

JAMESTOWN WASTEWATER TREATMENT PLANT

Back around the mid-1980s, after being identified as one of three sources of contamination of the Deep River and possessing a Poor/Very Poor rating (per biological, chemical, and macroinvertebrates studies on public record), the Jamestown WWTP was shut down—most likely due to the inability to make the necessary and costly repairs to the facility. Unfortunately, outside the few documents available on the NCDEQ Laserfiche database, little information is available on this facility Currently, I have a FOIA request pending since January 15, 2024 with the NCDEQ requesting the most recent/missing data on Jamestown WWTP inspections, NOVs, fines, SOCs, biological/chemical/macroinvertebrates studies/results, water quality survey/results, and/or any other communication regarding this facility.

The concern with Jamestown WWTP is the fact that many industrial contaminators are situated along Bull Run and various “unnamed” tributaries upstream from the facility. In particular, Alberdingk Boley (situated on a Brownfield), has had 2 significant events in the last 2 years where untreated wastewater (containing 1,4-dioxane and other harmful contaminants) have been dumped into Bull Run, a tributary to the Deep River, and eventually travels downstream to the Randleman Lake Reservoir, a public drinking water source. The first spill occurred between October, 27-31, 2022, and went undetected and/or unreported for several days. The public was never notified of the spill, as required by state law. At the time, the Town of Jamestown denied any responsibility for responding to and/or handling the spill. However, based on the Town of Jamestown zoning map, the Town of Jamestown ***is*** responsible for responding and reporting these events. The only reason the public was aware of the spill was due to an observant resident who noticed a “milky white” substance in a retention and reported it. So, when a second Alberdingk Boley spill occurred a year later, on November 8, 2023, the Town of Jamestown responded and assisted in overseeing the cleanup operations. Many people question the timing of when the spill was publicly reported (the day after Town Council elections) as well as the claims by a (now former) Town Council member (John Capes) indicating the spill, containing thousands of gallons of untreated wastewater, was cleaned up in a few hours, whereas the previous spill involving 16,000 gallons of untreated wastewater took several days. A notice was published via the Jamestown News, however, this is a very local Town newspaper with a limited readership, whereas state law dictates all area news media resources within the county are to be notified—which did not happen. Attempts to obtain the incident report and any other relevant documents for the November 8, 2023 spill have remained unfulfilled.

HIGH POINT EASTSIDE WASTEWATER TREATMENT PLANT

High Point Eastside Wastewater Treatment Plant is situated downstream from the now-defunct Jamestown WWTP. So, after the Jamestown WWTP closed, all the contaminated water from Greensboro (entering its final year of an SOC monitoring 1,4-dioxane levels) and Jamestown (this stretch of Deep River remains unmonitored) travels downstream and ends up being processed by High Point Eastside WWTP. At issue is the fact High Point Eastside WWTP has been operating with an expired NPDES permit for over 5 years (since 2018) as well as incurring air and water quality violations on a frequent basis. As with the defunct Jamestown WWTP, Eastside WWTP is also in desperate need of maintenance, repair, and upgrades. Mind you, the continual violations include huge spikes in CO, phosphorous, 1,4-Dioxane (681 ppb was registered on May 17, 2023), among other contaminants, and Eastside WWTP is reaping huge fines for these operational deficiencies. And, as with the Town of Jamestown, Eastside’s operator, the City of High Point has never informed the public of these violations, which could significantly impact the health and safety of area residents, at-risk adults, and schoolchildren, some medically fragile. Another concern is the fact when City Lake was created (which now serves as a public drinking source), a mill was submerged in the water. What types of health hazards does this mill pose to the quality of the drinking water extracted from City Lake?

RICHLAND CREEK

Richland Creek is also one of the suspected contaminators of the Deep River. Its contaminated and unprocessed waters empty into the Deep River, just below Eastside WWTP. Considering Kersey Valley Landfill sides to an “unnamed” tributary that empties into Richland Creek, as well as a golf course, farms, and other industrial companies along this waterway, there are potential contamination sources that could be pursued. However, due to the failure by anyone (local, county, or state) to investigate the matter further, Richland Creek remains unmonitored, unregulated, and continues to contaminate the Deep River.

RANDLEMAN LAKE RESERVOIR

Back in the mid-1990s, the creation of the Randleman Lake Reservoir to provide a regional water supply created quite a stir. Many citizens, businesses, experts, and agencies spoke against the project. Of concern was the long and lengthy history of unregulated and uncontrolled contamination by many of the industrial, manufacturing, furniture and textile companies along the Deep River. Stories of hazardous waste being buried or burned in unlined pits, chemical spills and other exposure and contamination concerns raised huge red flags upriver from the proposed Randleman Lake Reservoir. Although the NCDEQ excused themselves from being involved in the project, going as far as stating on the public record the water quality of the Randleman Lake violated water quality standards and poses environmental public health risks, and they would not be held responsible for fixing these issues moving forward. Yet, several communities—Archdale, Greensboro, High Point, Randleman, Town of Jamestown, and Randolph County—created the Piedmont Triad Regional Water Authority (PTRWA), which purchased land (sold through a blind trust) and then eventual flooding of land acquired creating the Randleman Lake Reservoir. The fact that property was acquired and sold through a blind trust, only piques my interest as to who benefitted from this purchase and why/how this construction project was ever allowed to proceed when there were far better alternative water sources available.

PIEDMONT TRIAD REGIONAL WATER AUTHORITY

The PTRWA is a conglomerate of local municipalities, Archdale, Greensboro, High Point, Randleman, and Town of Jamestown, and a county government, i.e., Randolph County. Each of these entities have at least one representative on the PTRWA's Board of Directors, which appears to be all male with extraordinarily little diversity. Information is hard to come by—the lack of transparency and accountability is astounding—considering the PTRWA is operated and funded with taxpayer dollars. In terms of transparency, the PTRWA website provides little information. Sure, the Consumer Confidence Reports (CCRs) are posted, however, if you dig deeper, you will notice the last time a Randleman Dam Discharge was posted was dated 9/9/2015-9/16/2015. Only recently was the "Construction" tab updated with a $120M reverse osmosis treatment system, yet previously, it displayed construction activity for the Randleman Lake Reservoir, dating back over a decade. The website lacks a calendar, meeting notices, meeting agenda, and/or meeting minutes. At the bottom of the website, it lists "Visitors" as "?". There is minimal, if any, promotion of PTRWA activities and they fail to engage their communities in activities related to water conservation, recreational activities, or curbing water pollution. I have tried FOIA'g the PTRWA for information, and I was advised by Greg Flory, PTRWA Executive Director, I would have to visit their offices to view meeting agendas and minutes, and/or pay a fee in excess of $300 to obtain this information. In this day and age, how is it acceptable to not have information readily available and published on a website? Also, an appointed Town of Jamestown Board member, Mr. Rich Glover, has huge conflicts of interest, including being a non-Jamestown resident (a requirement for Town of Jamestown "volunteers"), working on the failed Seaboard Chemical Plant remediation, working for a Town of Jamestown contractor (Jamestown Engineering), and representing the property owner of 4718 Harvey Road (without revealing his conflicts of interests) during public hearings with the Town of Jamestown Planning Board and Town Council.

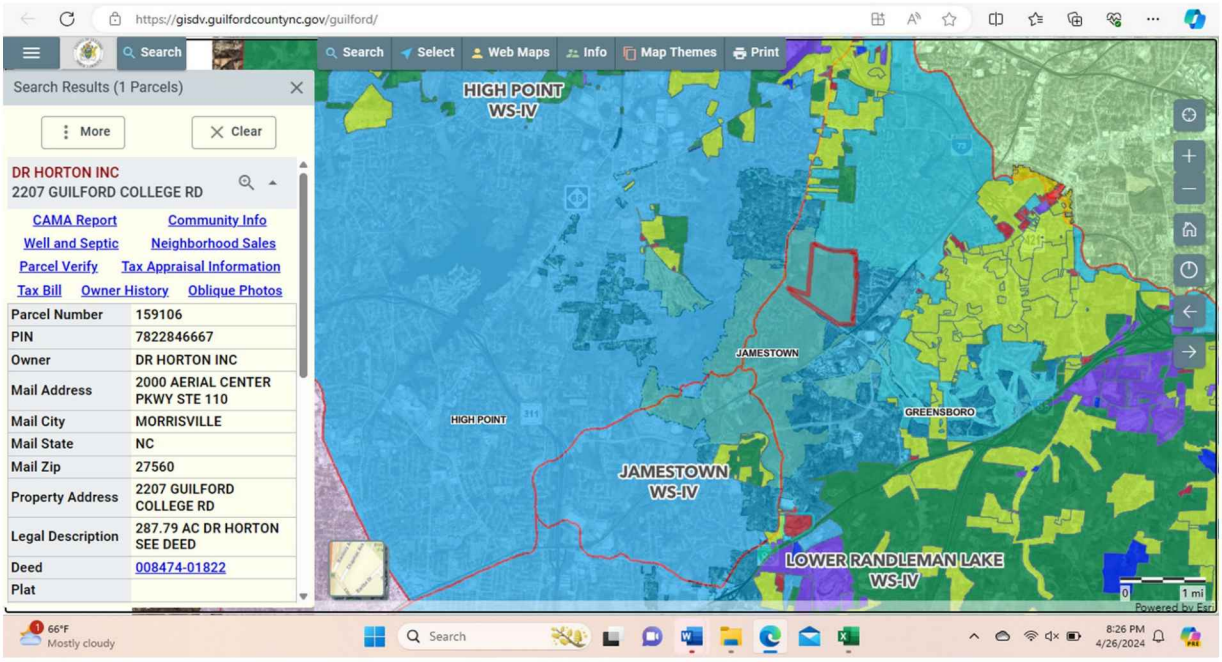
TOWN OF JAMESTOWN

When the Town of Jamestown was first made aware of residents' tap water tests indicating high levels of PFAS and other harmful contaminants (all supported by NCDEQ recommended laboratory and public records), the Town failed to acknowledge these claims and countered with a "misinformation" campaign, conjuring baseless claims and hearsay, against the very people trying to educate the public on a potential health and safety crisis. In attempts to quell the negative publicity, Town staff concocted and published a "press release" contradicting the "misinformation" purported being spread, however, these attempts backfired as the "press release" was riddled with inaccuracies and promoted its own misinformation. The Town was called out on their errors, but the retaliation continued. During Town Council meetings, Councilman John Capes, defiantly slurped his glass of tap water to demonstrate Jamestown tap water was safe to drink and to mock the "sensationalists". The extent the Town has gone to discredit and demonize the very people who are working hard to educate the public on the air, soil and water quality issues outlined in this letter, demonstrates the Town's inability to recognize the severity of the problem—

many people believe this reaction is intentional, because if the Town acknowledge a problem exists, then they will be responsible for fixing it. In other news, have I mentioned, the Town of Jamestown is operating under an expired MS4 Stormwater Permit? Or that recent water tests (mandated by the EPA), support exceedingly elevated levels of PFAS/PFOS in Town of Jamestown drinking water?

CLASS IV WATERSHEDS (WS-IV)

As previously stated, the Town of Jamestown is situated on three Class IV watersheds: Jamestown WS-IV, High Point WS-IV, and the Lower Randleman Lake WS-IV, with the latter having its own statute (15A NCAC 02b .0721) regulating the size and density of developments proposed for this area. Interestingly enough, these three watersheds meet and intersect near Town Hall (301 E. Main Street) in Jamestown. However, it does not appear anyone (local, county, state or federal) cares about these classifications because high density developments are popping up everywhere in and around the vicinity of Jamestown. Currently, D.R. Horton is clear cutting the former Johnson Farm, a 467-acre swath of pristine forest and farmland at the edge of Jamestown for a 1500-unit high density development. On the edge of the property, where proposed apartments will reside is a Brownfield. Yet, the Town of Jamestown, the NCDEQ, and the Army Corp of Engineers found nothing wrong with this “Kinsie” development and allowed this high-density development to built on a critical and protect watershed, a.k.a. Lower Randleman Lake WS-IV. Another high-density development under construction, 4718 Harvey Rd, is also situated on the Lower Randleman Lake WS-IV, whose property owner was represented by Mr. Rich Glover, PTRWA Board Chair and appointed Town of Jamestown PTRWA representative, during public hearings with the Town of Jamestown Planning Board and Town Council. Not once during these meetings were Mr. Glover’s conflicts of interests disclosed, including being formerly employed by Jamestown Engineering (a Town of Jamestown contractor), being appointed to the PTRWA by the Town of Jamestown since 2012, and/or his involvement with the failed remediation of the Seaboard Chemical plant. The Harvey Rd development has branches of NPDES classified waterways running through the property, something the NCDEQ either overlooked or did not care about when granting variances on buffer zones.




CONCLUSION

The segments of Bull Run and Deep River running through the Town of Jamestown have been neglected and ignored for way too long. Historically, these waterways are highly contaminated and were not meant to serve as sources of potable drinking water. In fact, during low flow, the Deep River consists of 74%

wastewater—we might as well be drinking directly out of our toilets! Yet, no one heeded the red flags when the Randleman Lake Reservoir was proposed, and now unsuspecting recipients are unaware their drinking water is contaminated. The very agencies that were meant to protect the public failed miserably and have jeopardized their health and safety. To think, these problems have existed for well over 50 years—FIFTY YEARS! —without resolve:

- Since the 1970s, it has been known that Jamestown WWTP, Eastside WWTP, and Richland Creek were sources of contamination of the Deep River

<!--[if !supportLists]-->- <!--[endif]-->Since the 1990s, all attempts to remediate the Seaboard Chemical Plant have failed and contaminated soil and groundwater continues to make its way into the Deep River.

<!--[if !supportLists]-->- <!--[endif]-->It has been over 20 years since the last Deep River studies were uploaded to the NCDEQ Laserfiche database.

<!--[if !supportLists]-->- <!--[endif]-->The PTWRA is requesting a $120M reverse osmosis treatment system to address elevated levels of PFAS/PFOS in Randleman Lake Reservoir, a public drinking water source.

<!--[if !supportLists]-->- <!--[endif]-->Eastside WWTP is operating under an SOC and expired NPDES permit while incurring air and water quality violations and fines regularly.

<!--[if !supportLists]-->- <!--[endif]-->The Town of Jamestown is operating on an expired MS4 Stormwater Permit.

<!--[if !supportLists]-->- <!--[endif]-->Recent water tests (mandated by the EPA), support exceedingly elevated levels of PFAS/PFOS in Town of Jamestown drinking water.

So, as a community we have been very vocal about the problems occurring here in Jamestown. Our town may be small, but the problems that exist impact the wider community. When will someone start standing up for us and start testing, monitoring, and enforcing the very laws that were put in place to protect us? We have dug deep into the trove of public records to uncover some pretty inexcusable, damning, and embarrassing information. What does it take until someone wakes up and starts acting… Is it the lack of potable water? Spikes in cancer rates? People dying?

I request immediate attention for consistent and effective monitoring of Bull Run and Deep River segments through Jamestown as well as addressing and enforcing action on all the issues outlined in this letter.

Thank you for your time and attention regarding these matters.

Sincerely,

Krisdena Reeser

High Point Resident, Jamestown Post Office/Zip

**From:** mendenmom k
**To:** TMDL303dComments
**Subject:** [External] Public Comment
**Date:** Friday, April 26, 2024 11:08:44 PM



To whom it may concern,

We live in Jamestown, NC and are writing you today to express our concerns about our drinking water. We have a right to clean, safe drinking water. This is the United States of America. We shouldn't have to worry about what ourselves, our children, grandchildren and pets are drinking and bathing in. This isn't the case in Jamestown, NC. The residents of Jamestown have serious concerns about the safety of our drinking water. These concerns are backed up by facts and data from your own EPA data and guidelines. Our town leadership has a serious lack of transparency problem and we have uncovered issues they did not notify us of and that was a requirement.

We deserve to know what's in the streams and creeks running through our yards, parks and woods, and in the groundwater beneath our homes.

The new LEGAL LIMIT for PFOS and PFOA in public drinking water supply is 4ppt (parts per trillion). Jamestown's PFOS level measured at 10.4ppt – MORE THAN 2.5 TIMES THE LEGAL LIMIT, and the PFOA level was 5.9ppt, ALSO well above the legal limit.

Not a word has been said about this health hazard to the citizens of Jamestown – nothing from town staff, town council, our water provider (PTRWA / Randleman Lake), Guilford County, nor the NC Dept of Environmental Quality. Nothing. Jamestown citizens found these results researching ourselves on the EPA's site.

Into our drinking water systems flows: (1) industrial wastewater from an unknown number (but at least a dozen) of High Point's manufacturing facilities, Kersey Valley Landfill and GFL Construction & Demolition Landfill – via Richland Creek and/or Eastside WWTP; (2) Industrial wastewater and groundwater from at least three neglected Superfund sites, four Brownfield (contaminated) sites, a giant quarry, PTI airport, the tank farm, old underground copper and gold mines, and an unknown number of chemical companies and manufacturers in Greensboro and Jamestown – via Bull Run, Deep River, Copper Branch, Long Branch and/or Eastside WWTP; (3) stormwater and groundwater from four 18-hole golf courses via Reddicks Creek and Deep River; and (4) EVERYTHING from Eastside WWTP (whose NPDES permit has been unrenewable since December 2018).

THIS IS OUR DRINKING, BATHING, TODDLER POOL, HAND-WASHING and TOOTH-BRUSHING WATER.

The "finished" water is sold back to us from PTRWA, and it is pumped to us through pipes belonging to High Point and Greensboro. It is IMPERATIVE that the State of North Carolina and EPA start assessing our waterways, IN TOWN, for contaminants, chemicals, metals and pesticides — just like they did prior to 2012.

We have metals, PFAS, PFOA and 1,4-Dioxane in our tap water. We know the water is impaired. We just don't know HOW impaired, what's running through our backyards, and what's evaporating out of our groundwater.

This past December, local media reported on emissions and operational violations racked up by the Eastside Wastewater Plant on Riverdale Road in Jamestown, NC. Since then, serious violations and discharges into Deep River, the WS-IV Water Supply source for Randleman Reservoir, have been discovered by Jamestown residents in the North Carolina DEQ's laserfiche library of public records. The Town of Jamestown's local government has yet to acknowledge or inform residents of these illegal and hazardous discharges, which include: (1) a discharge of 1,4 DIOXANE into Deep River in November 2021, with a concentration of 237 ug/l (micrograms/liter); North Carolina 's maximum human health criteria for 1,4 Dioxane is .35 ug/l in surface waters like Deep River, and (2) a discharge into Deep River of 1,330 gallons of sodium hypochlorite solution (poisonous if ingested) in April 2021 when an operator at Eastside treatment plant turned on the wrong pump and didn't discover the mistake until the next day.

As residents, we NEED and deserve some attention and something to be done! The Town of Jamestown, NC leadership are not leaders. They are busy spending our tax dollars on parks and sidewalks instead of our water quality issues. They are ignoring the facts, mocking the residents that bring up concerns and DOING NOTHING!

Please help us.

Thank you for your time and attention.

Stan & Pam Karboski

103 Mendenhall Rd

Jamestown, NC 27282

**From:** Liz A
**To:** TMDL303dComments
**Subject:** [External] Water Not Meeting Quality Standards
**Date:** Friday, April 26, 2024 9:36:49 PM



In 2010, Jamestown's drinking water source was switched to Randleman Lake. ALL of it. No announcement was made and the town has never shared this fact publicly.
Into that drinking water systems flows: (1) industrial wastewater from an unknown number (but at least a dozen) of High Point's manufacturing facilities, Kersey Valley Landfill and GFL Construction & Demolition Landfill – via Richland Creek and/or Eastside WWTP; (2) Industrial wastewater and groundwater from at least three neglected Superfund sites, four Brownfield (contaminated) sites, a giant quarry, PTI airport, the tank farm, old underground copper and gold mines, and an unknown number of chemical companies and manufacturers in Greensboro and Jamestown – via Bull Run, Deep River, Copper Branch, Long Branch and/or Eastside WWTP; (3) stormwater and groundwater from four 18-hole golf courses via Reddicks Creek and Deep River; and (4) EVERYTHING from Eastside WWTP(whose NPDES permit has been unrenewable since December 2018).
We have metals, PFAS, PFOA and 1,4-Dioxane in our tap water. We know the water is impaired. We just don't know HOW impaired, what's running through our backyards, and what's evaporating out of our groundwater.
One of our first and foremost priorities is to get ALL of the surface water stream segments that flow through our town, parks and backyards, and all of the waterways that eventually flow into Deep River, tested (assessed) for inclusion on the 303(D) list, and monitored thereafter on a consistent, regular basis with well publicized public notices and alerts in the event of spills and toxin spikes.

Thank you for your time,
Liz
Jamestown, NC

**From:** Katie Gumerson
**To:** TMDL303dComments
**Cc:** Reynolds.viola@epa.gov
**Subject:** [External] Public comment: Deep River, Bull Run, Copper Branch, Long Branch, Reddicks Creek, Richland Creek
**Date:** Friday, April 26, 2024 4:30:54 PM



Dear NCDEQ,

Last April, the NC General Assembly passed the Safe Drinking Water Act, to "protect North Carolina Citizens from harmful toxins in drinking water." The Town of Jamestown and surrounding communities are in need of that protection.

In the very first section of that bill, the Environmental Management Commission is directed to establish maximum contaminant levels for FIVE contaminants, all of which have been found to exist at high levels in Jamestown's public drinking water supply (Deep River/Randleman Lake/PTRWA).

All five of those contaminants exist in Jamestown's groundwater, surface water and soil in high levels, as described below:

**PFAS, PFOA and PFOS**

On February 1st, 2024, the Environmental Protection Agency released the results of a third round of PFAS testing of public water systems under UCMR5. Jamestown's PFOS level measured at 10.4 ppt – MORE THAN 2.5 TIMES THE LEGAL LIMIT - and the PFOA level was 5.9 ppt, also well above the legal limit.

The Jamestown community did not learn about the PFAS sampling program until last September, when a news article mentioned Jamestown as one of several North Carolina towns that had not told its residents about the PFAS levels in their drinking water. Here's that article: https://ncnewsline.com/2023/09/27/more-nc-utilities-are-detecting-pfas-in-drinking-water-but-some-arent-telling-their-customers/

The residents of Jamestown researched the specifics, shared the results with one another, and continue to monitor the results, which show that the PFAS levels in our drinking water are RISING. The amount detected for six PFAS chemicals increased from the last round of testing (May, 2023) in ten of fourteen water samples.
Not a word has been said about this health hazard to the citizens of Jamestown – nothing from town staff, town council, our water provider (PTRWA / Randleman Lake), Guilford County, nor the NC Dept of Environmental Quality. Nothing. Jamestown citizens found these results on the EPA's UCMR5 site.

Yesterday, one of our residents found an article referencing a meeting of North Carolina leaders from the private and government sector who are apparently brainstorming about ways to work around the new PFAS limits set by the EPA. One of the comments, made by a representative from an engineering company that has done a lot of work for the Town of Jamestown, was particularly disturbing: "Orie said the issue of PFAS mitigation "is in its infancy" and that there's going to be a "mad rush of communities" trying to meet the EPA standards. However, he said there are some communities he has heard from that are thinking of taking a fine for non-compliance rather than spending millions of dollars on improvements." Here is that article: https://www.bizjournals.com/triad/news/2024/04/25/north-carolina-water-wastewater-pfas-development.html

**Hexavalent chromium.** Jamestown is home to a number of old (and neglected) Superfund sites and Brownfield sites. Hexavalent chromium is one of the key contaminants in the groundwater and soil in a Brownfield site at the corner of Mackay Road and West Gate City Boulevard in Jamestown (the contaminants were found to a depth of at least five feet, according to the engineering reports). This particular site, like many of Jamestown's hazardous sites, is subject to chaotic zoning that puts the address of the site in Greensboro (One Metals Drive), but the actual location in Jamestown's ETJ. The chromium, TCE and other contaminants flow/drain to Bull Run stream, a Class IV Water Supply stream that has been represented to the EPA as being used only to support Aquatic Life. Here is more on that contaminated site, which is now for sale: https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/one-metals-drive-greensboro/

**Developer D.R. Horton is now razing 467 acres along Bull Run, downhill from the contaminated sites on West Gate City Blvd, to construct 1,500 homes. We have asked numerous times for environmental assessments and groundwater/soil studies but are unaware of ANY having taken place on the 467-acre site. Yet currently, we watch in horror as thousands of trees are being removed and the land is flattened.**

Hexavalent chromium has also been found at a hazardous Superfund site at 301 North Scientific Road, several blocks from Main Street.

A contaminated “lagoon” sits on the property and leaches to a tributary to Deep River, according to property records in the state’s environmental archives: https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/hazardous-site-301-scientific-jamestown-nc/

**1,4-Dioxane.** Levels of 1,4 Dioxane and spike incidents are also rising in our water system. Incoming samples from companies that discharge to Eastside Wastewater Treatment Plant tested higher for 1,4 Dioxane as evidenced in Eastside’s 2023 Annual Pretreatment Report, released in January.

1,4 Dioxane has leached from the Seaboard Chemical Superfund site into Deep River for decades and an experimental 1,4-Dioxane phytoremediation forest was planted there to help take some of the 1,4 Dioxane out of the groundwater. The Seaboard site is across Riverdale Drive from the Eastside WWTP in Jamestown, and both are approximately 12 miles upstream Deep River from Randleman Reservoir.

The NC Pre Regulatory unit found 1,4 Dioxane contamination in water and groundwater monitoring wells south of Kersey Valley Landfill in 2021, but we are clueless as to what has resulted, or if any clean-up is taking place.

In addition, a January NCDEQ update on Guilford County’s 1,4 Dioxane lawsuit shows that among local water supply facilities (Greensboro, Burlington, PTRWA/Randleman and Reidsville), PTRWA/Randleman has the highest level of 1,4 DIOXANE. https://thejamestowner9.com/water-quality-jamestown-nc/pfas-1-4-dioxane/14-dioxane-jamestown-greensboro/

Despite the documented evidence of high levels of these contaminants, AND despite the fact that the entire Town of Jamestown, NC is a Class IV Watershed, with both Protected and Critical designations, no one is monitoring our waterways. They are dying.

For some reason, NPDES permitting, with respect to the industries in town and the Town of Jamestown, is questionable, to say the least: Jamestown’s NPDES MS4 permit has been expired for over two years. The town has NO Stormwater Management Plan. Eastside WWTP’s NPDES permit has been expired since December 2018. Several chemical/plastics manufacturing facilities in town have NPDES permits for “Food Warehousing” and “Finished Apparel.”

Worst of all, the watershed classifications of our critical and protected water supply streams are outdated, ignored and not taken seriously: https://thejamestowner9.com/public-comments-and-citizen-complaints/303d-deep-river-bull-run/

Please add the Jamestown stream segments for Deep River, Bull Run, Richland Creek, Copper Branch, Reddicks Creek, Jenny Branch and Long Branch to the 303(d) Impaired List, and implement a long-overdue comprehensive water sampling program for chemicals, metals and biological contaminants for them, specifically: NC17-5, NC17-3.3, NC17-3.7, NC17-(4)a, NC17-(4)b, NC17-6, NC17-8-(0.5), NC17-8-(3), NC17-8-1, NC17-8-2, NC17-7-(0.5), NC17-7-(4), NC17-2-1-(2) and NC17-2-1-(1).

Sincerely,
Katie Gumerson
Jamestown, NC

**From:** Susan Dickenson
**To:** TMDL303dComments
**Subject:** [External] JAMESTOWN NC, Bull Run, Copper Branch, Deep River, Richland Creek, Reddicks Creek for 2024 303(d) list and TMDL assessment
**Date:** Friday, April 26, 2024 2:46:03 AM



To whom it may concern:

For two years, I have been researching, learning, writing, and waiting for the opportunity to submit public comments re the necessity of including Jamestown's surface waters on the 303(d) list, and to fully explain why we desperately need a comprehensive assessment of the metals, CHEMICALS and biological contaminants in order to put TMDL limits in place before we're all poisoned to death.

If you are reading this as an NCDEQ or EPA staffer who is fully aware of the controversies surrounding the water network in this area - specifically the creation of Randleman Lake and Reservoir in 2005 - then you know what I'm talking about. If not, please read this: https://thejamestowner9.com/water-quality-jamestown-nc/ptrwa-randleman-lake/ptrwa-randleman-lake-reservoir/

A couple days ago, while researching for this project, I came across NCDEQ meeting notes from 1996 and 1997 regarding the environmental assessment of the proposed Randleman Reservoir.

We residents of the Randleman Watershed are well aware of the public outcry, concerns and objections raised by local citizens, doctors, professionals and environmental groups back then. (See: https://thejamestowner9.com/water-quality-jamestown-nc/ptrwa-randleman-lake/shortcut-link-to-1990s-public-comments-re-the-creation-of-randleman-lake-as-a-water-supply/)

But I was alarmed to discover that NCDEQ staffers not only repeatedly advised against and warned about this project, but they found the water quality to be of such a horrendous state that one staffer said out loud in a staff meeting, "…when DWQ permits the [Eastside] WWTP, we make it clear that the water quality predicted for [Randleman] Lake VIOLATES Water Quality standards so that we are not blamed for the condition of the lake and we are not asked to try to fix it once it is impounded." (See: https://thejamestowner9.com/water-quality-jamestown-nc/ncdeq-knew-it-was-a-bad-idea/)

I understand their concerns and agree with them in principle. But, unfortunately, the NCDEQ appears to be making good on that preemptive recusal by ignoring our pleas to apply the most basic provisions of the Clean Water Act to the numerous WOTUS water supply streams that criss-cross our tiny town. (See: https://thejamestowner9.com/public-comments-and-citizen-complaints/oakdale-forest-401-permit/)

Jamestown is the site of the first gold rush in America. We have old mining pits and tunnels throughout the town, and the massive Kersey Valley and GFL landfills sit on top of the Deep River Gold and Copper Smelting Operations (from the turn of the last century). For DECADES, Deep River has received the industrial wastewater from High Point's furniture industry, Greensboro's textiles industry, and now both cities' chemical industry. (See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/jamestown-nc-map-contamination/)

This was all fine and good back when everyone had decided Deep River would be used for only THAT - industrial wastewater and contaminants. But now, after a hundred and fifty years of that, the governments of

Jamestown, High Point, Greensboro, Guilford County, and North Carolina expect us to pay to FIX IT and DRINK IT. (See: https://thejamestowner9.com/local-government/jamestowners-heres-why-your-water-bill-is-suddenly-so-high/)

Here in Jamestown, it's not only about drinking the stuff, but these streams flow through our neighborhoods, parks and backyards. In my case, a WOTUS tributary flows across my back yard, about 10 feet from where I'm sitting inside my living room typing this letter right now. When a significant storm event occurs, these streams (and their metals, 1-4 Dioxane, PFAS, TCE, barium, chromium, mercury, acetone, vinyl chloride, sulfates and cadmium) soak our yards, swingset/play areas, vegetable gardens and tree roots. (See: https://thejamestowner9.com/public-comments-and-citizen-complaints/jamestown-residents-stormwater-complaints/)

Once upon a time, extensive monitoring of Jamestown's waterways - WITHIN THE TOWN'S BOUNDARIES - took place at monitoring stations all over town. That all stopped about 12 years ago for some reason. But the contamination and discharge has only increased.

Here's the list of streams in Jamestown and the Deep River/Randleman Watershed that I and the good citizens of Jamestown respectfully ask be assessed for chemical, metals and biological contaminants and pollutants, and TMDLs be put in place to protect our waterways from the massive onslaught of "permits" for expanded capacity (at the landfills and Eastside WWTP), and generic General NPDES permits for unknown and unmonitored industrial and chemical waste into our water supply waterways. (See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/landfills/gfl-high-point-cd-landfill-expanding/)

EVERYTHING in the following list of streams comes back to us as drinking water. Every stream on this list is completely unmonitored, ignored, neglected and near death.

We've volunteered thousands of hours to create this list and hope you will give it serious consideration:

**1. BULL RUN STREAM, Assessment Unit NC17-5-(1)**
NC Surface Water Classification: Water Supply WS-IV* since 3/31/1999
EPA classification: Aquatic Life

**Description:** Bull Run enters Jamestown's Protected Class IV Randleman Watershed from our town's northern boundary with Greensboro, and flows south to Deep River for about 2 miles — through Jamestown neighborhoods, backyards, and the Guilford County Technical Community College Campus.

Upon entering Jamestown, Bull Run flows south through the middle of a new 467-acre D.R. Horton development (farmland/forestland which is currently being razed, cut and cleared). (See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/dr-horton-jamestown-nc-contaminated/)

Parallel to, and uphill from, the D.R. Horton property, Bull Run receives stormwater runoff and groundwater leachate from 80 acres of contaminated Superfund Brownfield properties along West Gate City Blvd. The Brownfield properties include a former Burlington Industries site and a former Fortress Wood Products site. (See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/one-metals-drive-greensboro/)

**Known Contaminant/Dischargers in this segment:** Survey and engineering reports for the Brownfield properties (6008 West Gate City Blvd and One Metals Drive) list numerous contaminants in the groundwater and soil, including high levels of TCE, hexavalent chromium, arsenic, lead, petroleum hydrocarbons (19,300 ppm), mercury, barium, copper, acetone, thallium, chlorobenzene, vinyl chloride, xylenes, antimony, naphthalene, and more. (See: https://thejamestowner9.com/contaminant-sources-

hazardous-sites/brownfields-hazardous-sites/tce-arsenic-chromium-contaminants-new-brownfield-site/)

**Alberdingk Boley** is a German acrylics and resin manufacturer that has a front door address in Greensboro, but discharges out the back of the building/property to Jamestown, emits toxins into the air, and has had **two major spills to a tributary to Bull Run** – yet its storm water permit is for Food Warehousing.

Two water samples taken from Alberdingk Boley's pretreated wastewater in 2023 detected 1,4-Dioxane levels of 87.2ppb and 99ppb, according to the company's annual Pretreatment Report. (See: https://thejamestowner9.com/water-quality-jamestown-nc/pfas-1-4-dioxane/14-dioxane-levels-increase-jamestown-nc-water/)

The N.C. Division of Air Quality monitors Alberdingk Boley under SIC Code (2821) for Plastics and Resin Manufacturing (Air Permit 09206R05). The N.C. Division of Water Resources gave Alberdingk Boley a General discharge permit under the SIC code for "Warehousing, Food and Kindred" (Permit no. NCG060104). In addition to 1,4 Dioxane, Alberdingk Boley's pretreated wastewater contains Cadmium, Chromium, COD, Copper, Ammonia, TSS, BOD, Cyanide, Lead, Nickel, Nitrate-Nitrite, Phosphorus, Oil & Grease, TKN, Phenolic Compounds, Zinc.

About a half mile before Bull Run empties into Deep River, Bull Run's classification changes to WS-IV CA*, and the segment ID changes to NC17-5-(2)

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**2. BULL RUN STREAM, Assessment Unit NC17-5-(2)**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life

This segment of Bull Run continues south, through residential neighborhoods and Jamestown back yards for 1/2 mile, before emptying into Deep River.

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**3. DEEP RIVER, Assessment Unit NC17-(3.3)**
NC Classification: Water Supply WS-IV*, since 3/31/1999
EPA classification: this segment appears to be unknown to the EPA; it is not identified and no data exists for it on the EPA interactive waterways map.

**Description:** Deep River enters Jamestown's Protected Class IV Randleman Watershed from our northwest boundary with High Point, at High Point City Lake, then flows south in a curvy "s" pattern for about a half mile through a heavily industrialized area. Segment NC17-(3.3) ends at a plastics manufacturer called Teknor Apex (formerly Viking Polymers), approximately 1000 feet south of Dillon Road in Jamestown. Deep River then becomes Segment NC17-(3.7).

**Known Contaminants/Dischargers in this segment (via groundwater and tributaries to Deep River):** Univar Chemicals (extensive documentation about leaking underground tanks in the NCDEQ public records archives; holds a General NPDES permit; discharge is unknown); Highland Container (Hood Industries), corrugated cardboard manufacturer, holds the same General NPDES permit as Teknor Apex, for Finished Apparel (cutting & sewing), Printing, Leather & Rubber, but its Air Emissions Permit (05793/R08) is for Corrugated & Solid Fiber Box Manufacturing; Former Monarch/Chromecraft Furniture site at 301 Scientific (Cadmium, Chromium, Cyanide, Lead, Nickel, Mercury, Selenium, Copper, Zinc); Staples metal products (Superfund), Diversified Technologies

(See: **https://thejamestowner9.com/contaminant-sources-hazardous-sites/brownfields-hazardous-sites/hazardous-site-301-scientific-jamestown-nc/** AND

**https://thejamestowner9.com/contaminant-sources-hazardous-sites/univar-contaminants/** AND

**https://thejamestowner9.com/contaminant-sources-hazardous-sites/contaminated-tce-109-west-main-jamestown/**

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**4. DEEP RIVER Assessment Unit NC17-(3.7)**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life

**The current N.C. Water Classifications table incorrectly identifies this segment** as "Town of Jamestown water supply intake." This was water intake for Jamestown many years ago, before it was discovered that that toxins were leaching into this segment of Deep River from the Monarch/Chromecraft Furniture Company at 301 Scientific Street. Jamestown's water supply, according to Jamestown's LWSP reports, has come from Randleman Lake and Reservoir (PTRWA) since 2010. It is piped to us from Randleman Reservoir via Greensboro and High Point's pipes.

**Description:** Deep River continues south from Teknor Apex for about 1.5 miles, to the abandoned Oakdale Cotton Mill (which sits, neglected and falling down, on the banks of Deep River). A tributary from Teknor Apex empties into Deep River within this segment.

**Contamination sources/Dischargers:** Teknor Apex, Oakdale Cotton Mill. Very little discharge info exists in the public records for Teknor Apex, formerly known as Viking Polymers. A 2014 Triad Business Journal article describes the company as a "producer of thermoplastic compounds for a variety of materials."

In the article, Louis Cappucci, Teknor Apex's vice president and head of the vinyl division, said the acquisition of Viking Polymers in Jamestown adds to the company's "rigid PVC capabilities and represents an extension of its product portfolio into weather able cap stocks, CPVC compounds and other specialties for the fast-growing building and construction market."

Teknor Apex gets a break from the NC Division of Water Resources in the form of a General NPDES permit for companies in the Finished Apparel (cutting & sewing), Printing, Leather & Rubber category. The Division of Air Quality issued the company a permit under SIC Code 3087 for Custom Compounding of Purchased Plastic Resins (permit no. 10379R01). A tributary flows from the company directly to Deep River. The company's 2023 Pretreatment Report shows the presence of antimony, arsenic, cyanide, lead and zinc in its pretreated wastewater.

Oakdale Cotton Mill has been closed since 2006. It is abandoned and falling apart and there are giant rusting above-ground fuel tanks on the property. In all of the NC DEQ public records, there are only TWO documents pertaining to this place. The owner and registered contact person is a guy in Cape May, New Jersey named Gus Andy, who died six months ago. There is only one recorded attempt to inspect this place (in 2022 – but when the NCDEQ inspector got there, he found the gate locked and not a soul anywhere). More info and photos of the mill are here: https://thejamestowner9.com/contaminant-sources-hazardous-sites/its-time-to-get-real-about-oakdale-mill/

**Condition/303(d) listing:** This segment is currently shown as a red (Impaired) waterbody, but an employee with the NC Dept of Environmental Quality made notes to the file in January 2023 stating that this designation is an error. She wrote in her notes that the "Impaired" designation for this segment is for an

unnamed tributary that was identified as flowing to or from the southwest side of Deep River; and that this "Impaired" determination was made based on a biological test sample taken in 2015. The employee states in the notes that the correction would be shown on the 2024 list. This correction was not made to the 2024 proposed list. (I can send you these documents upon request.)

The "2022" assessment for this segment of Deep River is from water tests conducted in 2015 and 2018, and many of the results are shown as "DATA INCONCLUSIVE." The DWR employee states that this means there's "not enough data collected during this assessment period to make a determination of the status of the instream water quality condition." We take it to mean no one tried.

SO, the condition of Deep River at this segment is still unknown due to lack of sampling data and **therefore**:

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**5. DEEP RIVER Assessment Unit NC17-(4)a**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life, Recreation, Water Supply

**Description:** Deep River flows south from Oakdale Cotton Mill to Kivett Drive for about two miles. Bull Run stream flows into Deep River in this segment. Copper Branch flows into Deep River in this segment (carrying leachate and water runoff from the old McCulloch Gold/Copper mining compound and Hazardous Site APAC Asphalt).

**Known Contaminants/Dischargers:** Martin Marietta Quarry (General permit, little is known about discharge into Deep River); APAC Asphalt Superfund site, a former NC Dept of Transportation asphalt lab (TCE, vinyl chloride, acetone is in groundwater within half-mile radius of the site - a charter school with 900 kids now sits within the contamination circle)
(See: https://thejamestowner9.com/contaminant-sources-hazardous-sites/apac-asphalt-contaminants-flow-to-deep-river/)

**Condition/303(d) listing:** This segment was assessed for biological/fish health. We know from the NCDEQ's Fact Sheets that no water sampling has been done in Jamestown since at least 2019. The EPA How's My Waterway information declares this segment to be "Good" for Aquatic Life, Recreation and Water Supply. This is grossly misleading (and potentially hazardous) to locals who can access Deep River at this location to fish, kayak, wade and access the water

**No assessment documents nor water sampling data exists for this DRINKING WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**6. DEEP RIVER Assessment Unit NC17-(4)b**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: Aquatic Life, Recreation, Water Supply

**Description:** Deep River continues south from Kivett Drive, for 6.6 miles, to Coltrane Mill Road. Reddicks Creek (WSIV-CA*) and Jenny Branch (WSIV*) empty into Deep River here from the east.

**Discharging/leaching into Deep River:** Eastside Wastewater Treatment Plant (Phosphorus, 1-4 Dioxane (spikes), sodium hypochlorite (spill), , Seaboard Chemical dump (1,4 Dioxane, Vinyl Chloride, Chlorobenzene, VOCs), High Point Landfill at Seaboard (contaminants unknown), High Point Material

Recovery (discharge unknown), High Point Firearms Training Facility (in Google satellite imagery, targets appear to be set up with Deep River behind them).

See: https://thejamestowner9.com/water-quality-jamestown-nc/pfas-1-4-dioxane/seaboard-chemical-contaminant-source-to-deep-river/ AND

https://thejamestowner9.com/contaminant-sources-hazardous-sites/seaboard-chemical-jamestown-nc/jamestown-nc-seaboard-chemical-dump/ AND

https://thejamestowner9.com/eastside-wastewater-treatment-plant-jamestown-wwtp-nc/air-water-violations-eastside-wwtp-jamestown-nc/

**Discharging/leaching into Deep River via Richland Creek:** Kersey Valley Landfill*, GFL Construction & Demolition Landfill (aka "High Point C&D Landfill"), Thomas Built Buses (High Point), Ultra Coatings (High Point), Cintas Corp.* (High Point), Custom Drum Services (High Point), HandCraft Linen Services (High Point), Harriss & Covington Hosiery (High Point), Hunter Farms (High Point), Innospec Chemicals* (High Point), Mickey Truck Bodies (High Point), Pantheon Softgels (High Point), SafeGuard (High Point), Slane Hosiery Fairfield* (High Point), Terra Nova Solutions* (High Point). All of the companies with an asterisk (*) discharge 1,4-Dioxane into Richland Creek/Deep River according to their annual Pretreatment Reports. Pretreatment samples taken in 2023 detected 1,4-Dioxane levels of 305 ppb at Mickey Truck Bodies, 185 ppb at Innospec Active Chemicals, and 174 ppb at Kersey Valley Landfill. (I can provide you with the link to our Dropbox folder of Pretreatment Reports upon request)

**Discharging/leaching into Deep River via Reddicks Creek and Jenny Branch:** Sedgefield Golf Course and both Grandover Golf Courses (two 18-hole courses) flow through these two streams.

**Condition/303(d) listing:** The EPA database says there is "INSUFFICIENT INFO" to assess the condition of this drinking water supply segment; **therefore:**

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**7. Copper Branch, Assessment Unit NC17-6**
NC Classification: Water Supply WS-IV CA*, since 3/31/1999
EPA classification: this segment appears to be unknown to the EPA; it is not identified and no data exists for it on the EPA interactive waterways map.

**Description:** Copper Branch runs along the southern border of an old Superfund hazardous site (APAC Asphalt) and receives water runoff from the site, flows beneath Riverdale Drive, through the Martin Marietta Quarry, and into Deep River Before it reaches APAC Asphalt from the west, Copper Branch flows through the middle of the McCulloch Gold Mine and Mill properties. The larger operation - Deep River Copper & Gold Smelting - is across the street, beneath the Kersey Valley and GFL C&D landfills.

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM segment in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**8. Reddicks Creek, Assessment Unit NC17-8-(0.5) and NC17-8-(3); Dogwood Lake NC17-8-1, and Jenny Branch NC17-8-2**
NC Classification: Water Supply WS-IV* and WS-IV CA*
EPA Classification: no info/insufficient info

Description: This network of streams discharges into Deep River between Jamestown and Randleman Lake. The upper forks of Reddicks Creek travel through three 18-hole golf courses (Sedgefield and Grandover). Golf courses are notorious for heavy use of turf chemicals, fertilizer, weed killer and pesticides.

**No assessment documents nor water sampling data exists for this WATER SUPPLY STREAM network in the EPA How's My Waterway database nor the NC Integrated Assessment data.**

**9. Richland Creek, Assessment Unit NC17-7-(0.5) and NC17-7-(4)**
**NC Classification: Water Supply WS-IV* and WS-IV CA***
EPA Classification: EPA site says "Waterbody information is temporarily unavailable" for this waterway.

**Discharging/leaching into Deep River via Richland Creek:** Kersey Valley Landfill*, GFL Construction & Demolition Landfill (aka "High Point C&D Landfill"), Thomas Built Buses (High Point), Ultra Coatings (High Point), Cintas Corp.* (High Point), Custom Drum Services (High Point), HandCraft Linen Services (High Point), Harriss & Covington Hosiery (High Point), Hunter Farms (High Point), Innospec Chemicals* (High Point), Mickey Truck Bodies (High Point), Pantheon Softgels (High Point), SafeGuard (High Point), Slane Hosiery Fairfield* (High Point), Terra Nova Solutions* (High Point). All of the companies with an asterisk (*) discharge 1,4-Dioxane into Richland Creek/Deep River according to their annual Pretreatment Reports. Pretreatment samples taken in 2023 detected 1,4-Dioxane levels of 305 ppb at Mickey Truck Bodies, 185 ppb at Innospec Active Chemicals, and 174 ppb at Kersey Valley Landfill. (I can provide you with the link to our Dropbox folder of Pretreatment Reports upon request)

The part of Richland Creek (NC17-7-(0.5)) that runs through south High Point's furniture, textile, auto/bus, and chemical manufacturing districts is RED/"Impaired" for Aquatic Life and for Swimming/Boating.

The part of Richland Creek (NC17-7-(4)) that runs up to Kersey Valley Landfill is RED/"Impaired" for Aquatic Life and Swimming/Boating, but "GOOD" for "Drinking Water."

The part of Richland Creek that runs along the southern border of Kersey Valley Landfill and GFL C&D Landfill up to the Eastside Wastewater Treatment Plant is now marked as being part of Deep River NC17-(4)b, and is "Condition Unknown" for Drinking Water and Aquatic Life, but "GOOD" for Swimming/Boating.

This is a horrific, macabre joke - Deep River is nothing but mud, trash and thick smelly brown sludge along that stretch).

Eleven and a half miles downstream from that dirty juncture is where that same water gets "treated" and piped back to us - as water to drink, wash vegetables in, and bathe/shower in.

Thank you,

Susan Dickenson
Jamestown, NC 27282