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Mr. Paul Clark,

Sediment is the greatest pollutant, by volume in North Carolina. Sediment can quickly fill rivers, lakes, and reservoirs, destroying aquatic habitats and fish populations and resulting in costly treatment measures for drinking water utilities. The 2024 draft 303(d) impaired waterways list includes 62 waterbodies not meeting water quality standards for turbidity. Waterkeepers across North Carolina have been documenting sediment pollution statewide in our respective watersheds. Waterkeepers Carolina is comprised of fifteen Waterkeepers and includes Sound Rivers, Haw River Assembly, Mountain True, Cape Fear River Watch, Coastal Carolina River Watch, Winyah Rivers, Catawba Riverkeeper, Yadkin Riverkeeper Foundation, and Good Stewards of Rockingham County. This permit provides the opportunity to improve and correct regulatory authority to protect our state waters. Though many local sedimentation and erosion control programs provide additional permitting and regulatory enforcement, the state NCG01 permit serves as the bare minimum for these programs. This permit is the only construction permit required for projects that fall outside of locally delegated sedimentation programs, which as of January 2024, includes 708,396 acres of active construction projects. On behalf of Waterkeepers Carolina, and our tens of thousands of members across the state in our respective organizations, we respectfully submit the following comments on the NCG01 permit.

The draft permit is out of compliance with the Environmental Protection Agency (EPA) Construction and Development Rules (C&D Rules). The rules require all permits to “*Minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.*” As proposed the permit does not minimize the sediment discharges of small particle sizes.

Suspended small particles like clays cause high levels of turbidity and degrade waters by reducing photosynthetic activity, reducing food availability, burying habitat, and directly harming organisms. While various Best Management Practices (BMPs) are listed in the Design Manual, the BMPs most effective at reducing small particle discharge are not required. Permittees and regulators cannot minimize discharges of small particle sediments without the required implementation of the applicable BMPs and measuring their effectiveness. There are several economically feasible technologies available to permittees including flocculants, filter bags, and dewatering stop valves.

The EPA draft permit also states “*the discharges allowed by this General Permit shall not cause or contribute to violations of North Carolina Water Quality Standards for surface waters and wetlands (15A NCAC 02B .0200). Discharges allowed by this permit must meet all applicable water quality certification or permit requirements as outlined in 15A NCAC 02H .0500 and 02H .1300.*” However, permittees



meeting guidelines continue to cause and contribute to violations of turbidity standards due to dewatering operations that have been allowed by this permit. While there is an exemption for meeting numeric turbidity standards, it only applies to BMPs used to *achieve water quality protection goals (15A NCAC 02B .0202(8))*. In waters already impaired by turbidity, only discharges less than the background level could help achieve that goal. We contend that compliance can only be established by creating performance-based standards.

This loophole allows the dewatering of temporary sediment basins, where, as long as acceptable dewatering protocols and timelines are being followed, the discharges are deemed in compliance, even if the effluent is far above the relevant state standard of 50, 25, or 10 NTUs. This gap between the State's Sediment and Erosion Control measures and Clean Water Act water quality standards is resulting in ongoing pollution of sensitive and impaired waterways throughout the state, and in some places, is contributing to such extreme and lasting sedimentation of waterways that it amounts to nothing short of an environmental crisis.

Fortunately, the EPA has recently established rules to address dewatering operations to minimize the discharge of small particles and exceedances of the turbidity standard. In 2022, after stakeholder meetings and economic analysis, the National General Construction Permit [includes mandatory turbidity monitoring](#) when discharging into sensitive waters. This is not a numeric limit, but the monitoring sets daily benchmarks for performance and improvements. If the turbidity goals are not met, the permittee must take corrective actions. The total annual incremental cost attributable to the water quality-based dewatering requirements is projected to be \$524 per year per permitted project.

Additionally, the EPA outlines numerous ways in which sites with high turbidity levels in effluent can address the issue. By taking corrective measures such as utilizing flocculants, adopting the use of sediment bags, extending dewatering timelines, and other best practices, construction sites can be held accountable for reducing turbidity levels in effluent discharged.

To comply with the 2014 C&D Rules, the stated goals of the permit, and NC surface water we recommend the following amendments:

1. **Require daily turbidity monitoring of dewatering effluent discharged to sensitive waters with mandatory Corrective Actions if benchmarks are exceeded.** A full analysis of the goals, costs, legal basis, implementation, and enforcement can be found at <https://www.epa.gov/npdes/2022-construction-general-permit-cgp>.
2. **Make the daily turbidity results publicly available.** Though local programs typically respond to reports within the week, regional office staff may only respond to reports monthly. This infrequency results in extended periods of water quality violations and further degraded streams and wetlands. By providing daily and weekly turbidity data from dewatering operations, reports can be investigated and remedied promptly.



3. **Define sensitive waters to include those impaired for turbidity, fish community, benthos, and all sites within Triassic basins.** There is a well-documented link between turbidity impairment and biological impairment. When excess suspended sediment settles on the floor of a stream channel, it becomes a challenge for benthic populations that require gravel, leaf litter, stable vegetation, and riffles to thrive. A turbidity benchmark aimed at reducing in-stream sediment for turbidity-impaired streams should also be applied to those impaired for benthic and fish community populations.

North Carolina's Triassic basins have soils that are highly erosive with fine particulates. These soils are known to contribute to elevated turbidity levels in Triassic streams and, once suspended in the water column, can take weeks to settle. Triassic soils pose a particular challenge for construction projects and often require small particle-focused BMPs such as larger sediment basins, the use of flocculants, extended dewatering timelines, and sediment bags to prevent highly turbid water from being discharged.

This comment seeks to address a gap in our current regulatory system between Sediment and Erosion Control regulations on construction sites and the Clean Water Act goals for our waterways. The NCG01 permit intends to enforce the Clean Water Act by ensuring that activities on construction sites do not result in the discharging of pollutants into public waterways. However, Waterkeepers in North Carolina have documented pervasive examples of water quality pollution due to offsite sediment from construction sites that are nevertheless deemed in compliance with their Sediment and Erosion Control permits.

Unfortunately, there are many instances in which typical dewatering practices fail to sufficiently settle sediment in retention basins before water is discharged into receiving streams. Waterkeepers have documented a myriad of instances in which dewatering operations have operated as point discharges, and yet have been deemed "in compliance" by state and/or locally delegated regulators. The result is that sediment pollution in state waterways is being treated as a permissible outcome when the baseline practices meant to reduce sediment are not working.

Please consider the following examples of sediment pollution from dewatering discharge that North Carolina Waterkeepers have documented in our watersheds, and note that these are just a few examples of this pervasive issue.

Pollution of Ellerbe Creek—City of Durham, Durham County

In January 2023, the Neuse Riverkeeper received a report from Durham residents about elevated turbidity levels in Ellerbe Creek. This 303(d) listed waterway runs through the heart of Durham and within its Triassic Basin. Neighbors and the local Ellerbe Creek Watershed Association correctly identified the source of the sediment pollution as Shoccoree Residential, a large development site currently clearing land at the headwaters of Ellerbe Creek (Attachment 1). Concerned residents enlisted the Neuse Riverkeeper to conduct turbidity sampling in the creek to determine the extent of sediment coming from the construction site and making its way downstream. Samples taken on February 2nd, 2024, indicated turbidity levels of over 300 NTU just downstream of the construction site, and over 130 NTU in a public



park downstream (attachment 2). Weeks later, members of the Ellerbe Creek Watershed Association provided additional turbidity samples of Ellerbe Creek that measured 130 NTU in a sampling location just downstream of the construction site. As the Shoccoree Residential development is at the headwaters of Ellerbe Creek, taking samples upstream of the sediment impacts was not possible.

The Neuse Riverkeeper reached out to Durham regulators to request assistance in addressing the turbidity issue and, through a public records request, regulators shared the details of their inspection reports from the active permit. Regulators also received an outpouring of concerned reports from community members seeking to understand the source of the elevated turbidity in Ellerbe Creek.

In email communications, Durham County regulators acknowledged to the Neuse Riverkeeper and community members that the sediment in Ellerbe Creek was a result of the dewatering of temporary sediment ponds after significant rain events. Regulators stated that in a January inspection, regulators found that beaver activity contributed additional sediment to on-site stormwater features and that regulators allowed the site to dewater those basins, despite known high turbidity levels in the discharge. Regulators continued to allow the discharge of sediment ponds, recognizing the impacts in Ellerbe Creek downstream. The Triassic Basin was noted by regulators numerous times as a complicating factor in reducing turbidity in dewatering effluent.

During this time, no Notices of Violation were issued on the construction site, and no Corrective Action was required to reduce sediment levels in effluent discharged. Ultimately, regulators qualified the discharge of highly turbid water into Ellerbe Creek as an unavoidable outcome of BMPs on the construction site. As this comment is submitted, Ellerbe Creek continues to experience sediment pollution from the same development site following rain events (attachment 3).

Degradation of the Lick Creek Watershed, SE Durham County

For over eighteen months, Sound Rivers' Neuse Riverkeeper has been documenting severe sediment pollution from large-scale land-clearing developments in Southeast Durham's Lick Creek watershed. The Lick Creek watershed, part of Durham's Triassic Basin, is on the federal 303(d) list for biological impairment and flows into the Falls Lake drinking watershed. The dewatering of sediment-laden water from construction operations densely packed within this 22.9 square mile watershed has contributed to sediment levels in its surface waterways that regularly measure an order of magnitude higher than the state's turbidity standard of 50 NTU.

One striking example of this problem was at the Olive Grove development adjacent to the main stem of Lick Creek, and about two miles from the Falls Lake confluence. On 12/6/22, the Neuse Riverkeeper first documented a dewatering operation that was releasing effluent measured at 1043 NTU coming out of an edge-of-field outfall (attachments 4&5). This muddy water made its way directly into Lick Creek, where it brought turbidity levels from 62 NTU in Lick Creek, upstream of the discharge, to 309 NTU downstream (attachment 6).



This issue was reported to Durham regulators, and yet the same outfall was documented discharging extremely high levels of sediment again on March 2023, April 2023, and May 2023. The latter incident saw the highest turbidity levels in dewatering effluent recorded, at 1,920 NTU. It should be noted that these are only those occurrences documented by the Neuse Riverkeeper with water quality sampling, but that there were many additional occurrences where community members reported excessive sediment discharging from this dewatering outfall.

The issue persists despite numerous reports on behalf of the Neuse Riverkeeper and concerned local community members. Locals documented turbid dewatering discharge as recently as March 15th, 2024, coming from the same outfall and pouring into Lick Creek (attachment 7). Turbidity levels this high, across this extended duration of time, are likely harming aquatic populations in Lick Creek and contributing to the degradation of habitat required by benthic populations in the watershed.

Vinfast Development in Chatham County's Triassic Basin

Another major development in a Triassic basin falls in Chatham County. Haw River Assembly's Haw Riverkeeper began investigating sediment issues at the Vinfast manufacturing facility in Moncure in February of 2023. At the time, 230 acres had been cleared.

Staff continued to monitor turbidity in these creeks and related tributaries after observing discoloration at road-accessible sites around the planned Vinfast facility. This site drains into two creeks, Gulf Creek and Shaddox Creek (Attachment 8). Downstream of the facility, Shaddox Creek at Corinth Rd measured 132 NTU on 3/23/23 and 102 NTU on 3/30/23. A tributary flowing from a Vinfast parcel into Gulf Creek read 364 NTU and 383 NTU on these same dates. Additional turbidity testing was conducted on private property adjacent to the Vinfast facility on Shaddox Creek. A smaller tributary beginning on that land read 29.6 NTU before meeting Shaddox Creek, where turbidity levels surpassed our turbidity meters limit of 800 NTU. The landowner communicated several environmental concerns and confirmed that the section of Shaddox running through that property has consistently been orange and opaque for several months.

In response to these reports, we were informed that DEMLR does not measure turbidity. Site inspections resulted in no violations because the dewatering devices were operating as designed and approved. DEMLR staff recognized the failures in this permitting process to prevent turbid waters. "Despite the redundancy in sediment control measures, discharges from the basins were turbid." Though DEMLR staff recommended the use of polyacrylamides and additional settling time, no violations or mitigation requirements were issued to rectify the degradation of the wetlands from sediment pollution as a result of the dewatering operation.

Attachments:



Attachment 1–Sediment filled runoff leaving a construction site near Ellerbe Creek headwaters



Attachment 2—Sediment-filled runoff from a construction site in the headwater pond



Attachment 3–Turbid Ellerbe Creek (March 13th, 2024)



Attachment 4–Dirty discharge dewatering from sediment basin at edge of field, Lick Creek watershed
(12/16/22)



Attachment 5–Turbid discharge from construction dewatering flowing into wetland, Lick Creek watershed
(May 5th, 2023)



Attachment 6—Effluent from construction dewatering at “Olive Grove” development, Lick Creek Watershed (May 5th, 2023)



Attachment 7—discharge from same “Olive Grove” dewatering outlet, Lick Creek Watershed
(March 15th, 2024)



Attachment 8- Outfalls from dewatering operations at Vinfast in Chatham County, draining into wetlands feeding Shaddox Creek.