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Via email

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**Re: Public Comments on Draft NPDES Permit No. NC0089168 for Martin Marietta
Materials' Vanceboro Quarry**

Dear Mr. Denard,

The Southern Environmental Law Center offers the following comments on Draft NPDES Permit No. NC0089168 for Martin Marietta Materials' Vanceboro Quarry ("draft permit") on behalf of Sound Rivers, a not-for-profit organization based in Washington, NC. Sound Rivers' mission is to monitor and protect the Neuse and Tar-Pamlico River watersheds, preserving the health and beauty of the river basins, and the health of the communities that rely on them. Sound Rivers' members live near, fish, paddle, and otherwise enjoy Blounts Creek. Thank you for the opportunity to offer these comments.

Martin Marietta intends to discharge 12 million gallons of mine wastewater *each day* into Blounts Creek. Blounts Creek is a slow-moving, low flow coastal creek supporting an abundant and diverse biological community which draws people from up and down the east coast to fish, paddle, and enjoy wildlife. Blounts Creek is an invaluable natural resource in the region and must be protected from harmful mining pollution. The draft permit as written fails to protect what makes the creek special and lacks conditions to ensure that the company complies with water quality laws.

As described and explained in more detail below, the Department should not issue this permit for multiple reasons: the data supporting the draft permit is outdated, the draft permit is widely opposed by the surrounding community, and the draft permit is unenforceable as written. Nevertheless, should the Department decide to issue this permit, it must make the following changes to ensure protection of the biological community and water quality in Blounts Creek:

- Clarify the biological reference conditions for Blounts Creek;

- Add a quarterly biological monitoring and reporting requirement that could be amended if samples demonstrate compliance with the biological integrity standard;
- Require monitoring and reporting of impacts in lower Blounts Creek, including for fish species; and
- Reduce the permitted flow or alternatively, require a phase-in of the discharge based on impacts to Blounts Creek and compliance with the biological integrity standard.

In addition, if the Department determines during the permit cycle that Martin Marietta has violated the biological integrity standard, then the Department should do what has claimed it would do for the past decade: modify or revoke the permit to ensure that the creek's biological community is protected.¹ Finally, we urge the Department to review the Division of Marine Fisheries and Wildlife Resource Commission's letters of objection to an earlier and very similar draft of this permit.

I. The Department should not issue this permit because Blounts Creek is a special place that must be protected.

Blounts Creek is a coastal blackwater creek located in Beaufort County that is beloved by anglers, boaters, photographers, and nature lovers across the region. The creek is home to a diverse array of wildlife, including freshwater and saltwater fish, insects, mussels, birds, and other creatures. The freshwater headwaters of the creek are slow-moving and tannin-rich. The creek's upper reaches are narrow, the water is calm, and the banks are untouched. Herring Run, one of the creek's main tributaries, is the approximate dividing line between the freshwater headwaters of the creek and the downstream salt waters that flow into Blounts Bay and the Pamlico River. The creek widens as it flows past Herring Run and toward Blounts Bay and Pamlico River.

The amount and frequency of rainfall affects the balance of fresh and salt water in the creek, as well as the fish that inhabit the creek. During the summer or dry spells, when the flow coming from the headwaters slows, saltier water migrates upstream. Spot, croaker, flounder, and black drum are prevalent in the warmer months depending on salinity and water temperature. In the winter, or after heavy rains, when the flow coming from upstream is greater, salt water is pushed downstream towards Blounts Bay. Cooler weather fish include bass, bream, catfish, gar, puppy drum, speckled seatrout, and striped bass. Anglers flock to Blounts Creek because of this diversity of fish species from season to season.

¹ See, e.g., *Sound Rivers, et al. v. N.C. Dep't of Env't'l Quality*, Resp't-Appellee New Br. 27 (Aug. 6, 2021), <https://perma.cc/2U25-AQGD>.

In 2012, when the draft permit was under consideration for the first time, the Division of Marine Fisheries (“Marine Fisheries”) recognized the “diversity and abundance of high quality habitat,” which makes the creek “a popular recreational fishing location.”² Likewise, the Wildlife Resources Commission described the unique water quality conditions in Blounts Creek as supporting a “rich diversity” of fish species that are sought after by anglers.³ Both agencies expressed significant concern about the impact of the discharge on the water quality, habitat, and biological community in the creek.⁴

The problem with Martin Marietta’s proposed discharge is the sheer amount of wastewater that will be released into Blounts Creek. This small slow-moving creek is a delicate mix of fresh and salt water that come together to form a diverse habitat for a thriving aquatic community. The company’s 12 million gallons of wastewater per day would eliminate the low-flow conditions that are the foundation for the habitat throughout the creek. For that reason alone, the Department should not issue this permit.

II. State and federal law require the Department to protect biological integrity.

Congress adopted the Clean Water Act to protect the “chemical, physical, and biological integrity” of our nation’s waters. 33 U.S.C. § 1251. The U.S. Environmental Protection Agency delegated to the Department the authority to administer the National Pollutant Discharge Elimination System permitting program consistent with the Clean Water Act. The Department can only issue a permit for a discharge if it reasonably ensures that the discharge will not violate Clean Water Act requirements. See 15A N.C. Admin. Code 02H .0112; see *also* 33 U.S.C. § 1342(a)(1). One of those requirements is the biological integrity standard, and state rules define biological integrity as “the ability of an aquatic ecosystem to support and maintain a balanced and indigenous community of organisms having species composition, diversity, population densities, and functional organization similar to that of reference conditions.”15A N.C. Admin. Code 02B .0202(13).

The Department interprets the biological integrity standard as follows: a “permit complies with the biological integrity standard if the permit's terms and conditions reasonably ensure that the permitted discharge will not preclude maintenance of the ability of an aquatic ecosystem to support and maintain a balanced and indigenous community of organisms having species composition, diversity, population densities and

² Letter from Dr. Louis Daniel, III, Div. Marine Fisheries, to Cyndi Karoly, Div. of Water Quality 2, (April 12, 2013), <https://perma.cc/E87Y-GW6A> [hereinafter DMF letter].

³ *Id.* See *also* Letter from Shannon Deaton, Wildlife Resources Commn., to Tom Belnick, N.C. Div. of Water Quality 2, <https://perma.cc/26F6-TJHZ> (April 12, 2013) [hereinafter WRC letter].

⁴ See DMF letter, *supra* note 2, at 2-3; WRC letter, *supra* note 3, at 3-4.

functional organization similar to that of *reference conditions*.”⁵ The North Carolina Supreme Court recently endorsed this interpretation of the biological integrity standard in *Sound Rivers. v. N.C. Department of Environmental Quality*. 385 N.C. 1 (2023).

This interpretation of the biological integrity standard requires that the Department establish reference conditions in Blounts Creek. Reference conditions serve as a baseline against which to measure changes in the biological community. Moreover, this interpretation requires that the Department include adequate biological sampling to evaluate any changes to the biological community resulting from a discharge. Otherwise, the Department has no way to ensure that the discharge protects the biological community in receiving waters.

III. The Department must require updated biological sampling as part of Martin Marietta’s application.

The linchpin of the biological integrity standard is the establishment of reference conditions. Here, the Department has failed to establish reference conditions because it has not identified the existing conditions of Blounts Creek.

Although the North Carolina Supreme Court in *Sound Rivers* held that the Department established reference conditions when issuing Martin Marietta’s discharge permit in 2013, the Department cannot show that it did so with this draft permit. In *Sound Rivers*, the ALJ and the Department maintained that the agency “determined that the appropriate ‘reference conditions’ were the existing conditions of the Blounts Creek system before the proposed discharge.”⁶ But the Department does not have any data on existing conditions—the agency’s most recent data about the biological community in Blounts Creek is nearly *seven years old*. Martin Marietta’s 2018 biological assessment predates Hurricane Florence, which resulted in record-breaking flooding across eastern North Carolina, as well as other events that may have affected the biological community and water quality conditions in the headwaters of Blounts Creek.

Even when adopting the ALJ and the Department’s interpretation of the biological integrity standard in the recent litigation, therefore, the agency has not done its job for this permit. Because it has not established the existing conditions of Blounts Creek, the Department has failed to establish reference conditions and cannot reasonably ensure compliance with the biological integrity standard. To remedy this, at the very least, the

⁵ *Sound Rivers. v. N.C. Dep’t of Env’tl Quality*, 385 N.C. 1, 8 (2023) (internal quotations omitted) (emphasis added).

⁶ *Id.* at 5.

Department must conduct (or require Martin Marietta to conduct) updated biological sampling to establish reference conditions.

IV. The Department should go further and establish reference conditions for species composition, diversity, population densities, and functional organization.

We not only urge the Department to (or require Martin Marietta to) conduct updated biological sampling, we ask that the agency establish more specific reference conditions for the following biological integrity metrics listed in the standard: species composition, diversity, population densities, and functional organization. Nowhere in Martin Marietta’s 2018 sampling or in the Department’s permitting documents does any entity identify the creek’s species composition, diversity, population densities, or functional organization.⁷

Although the North Carolina Supreme Court did not appear to require the agency to establish reference conditions for these metrics using the Department’s Standard Operating Procedures (“SOPs”) for benthic and fish sampling,⁸ the Court’s decision does not stop the agency from doing more here to protect Blounts Creek. More specific reference conditions would serve to protect the creek’s unique biological community, and it would provide more clarity about permit compliance for the Department, Martin Marietta, and the public.

The biological integrity standard uses four technical terms to describe the status of a biological community, each of which reveal something different about the species that inhabit a creek or river. Species composition counts the number species in a system. Species diversity counts the number of species present and the relative abundance of each species. Population density describes how many individuals are in a defined area. Functional organization describes the organization of a biological community, often in terms of what different animals eat.⁹ Establishing reference conditions in terms of these metrics gives meaning to the biological integrity standard and equips the Department with more information with which to assess compliance with the standard.

⁷ Even older sampling also cannot count as reference conditions for this draft permit. Martin Marietta’s 2011 sampling was found invalid by the Department biologists, and the Department’s 2012 sampling failed to follow the Benthic SOP for benthic sampling in swamp waters. See *Sound Rivers, et al. v. N.C. Dep’t of Env’t Quality*, Pet.-Appellant New Br. 13-14 (June 3, 2021), <https://perma.cc/Z3FW-C2AS>.

⁸ Standard Operating Procedures for the Collection and Analysis of Benthic Macroinvertebrates, N.C. Dep’t of Env’t Quality – Div. of Water Res., Water Sciences Section (Feb. 2016), <https://www.deq.nc.gov/water-quality/environmental-sciences/bau/ncdwrmacroinvertebrate-sop-february-2016-final/download>; Standard Operating Procedure- Biological Monitoring, Stream Fish Community Assessment Program, N.C. Dep’t Env’t & Nat. Res. – Div. Water Res., Env’t Sciences Sect (Dec. 2013), <https://files.nc.gov/ncdeq/document-library/IBI%20Methods.2013.Final.pdf>.

⁹ Pet.-Appellant’s Br., *supra* note 7, at 51 (internal citations omitted).

V. If this permit is issued, the Department must mandate more biological monitoring.

The Department must strengthen the permit's biological monitoring condition to require more robust and frequent monitoring at more locations on Blounts Creek if it moves forward with this permit.

A. The draft permit's one-time benthic sampling requirement will not protect Blounts Creek or ensure compliance with the biological integrity standard.

The draft permit includes a requirement that Martin Marietta perform *one* instance of benthic sampling at four sampling locations. The Department calls this condition a "benthic monitoring requirement" and states that its purpose is "to evaluate the biological impact of this discharge." The Department has also given this one-time sampling requirement significant weight in arguing that it would help the agency assess compliance with the biological integrity standard by informing the agency about the impact of the company's discharge.¹⁰ Not only that, the Department has claimed that this one-time benthic sampling requirement would provide the agency with enough notice about any violations of the biological integrity standard that it could even *modify or revoke* the permit.¹¹ Unfortunately, this condition will do no such thing.

First, as noted above, Martin Marietta's 2018 sampling is far outdated. As a result, there is no valid baseline sampling that assesses the biological integrity of the creek prior to Martin Marietta's discharge. Because there is no valid baseline sampling, the Department has no information to which to compare any biological sampling and will not be able to assess changes in the creek.

Second, the "monitoring" condition in the draft permit requires too little too late. In fact, the condition is not a true monitoring condition—it requires only a *single* instance of sampling where Martin Marietta submits results "at least six months prior to the expiration date" of the permit. This condition, therefore, does not "monitor" the discharge, the effect of the discharge, or the conditions of the creek, as the Department will not receive *any* benthic sampling results until 2029. Because the permit only asks the company for a single instance of benthic sampling at the close of the permit's term, the Department will have no

¹⁰ Resp't-Appellee Br., *supra* note 1, at 26-27 ("[T]he Permit requires Martin Marietta to carry out a biological monitoring program to enable the Division to track the influence of the discharge on aquatic life within Blounts Creek. ... The information collected through these monitoring exercises will be available to Division staff to evaluate as part of its oversight of Martin Marietta's discharge.").

¹¹ *Id.* at 27 ("The Department has further argued that Under the Permit's reopener provision, the Division may modify or revoke the Permit at any time based on new information, including monitoring of benthos or fish, if the Division believes that the Permit conditions are no longer sufficient to ensure compliance with water quality standards.").

idea if Martin Marietta has fundamentally altered the creek until the permit has essentially expired. By that time, even if the company's discharge has had a catastrophic impact on the creek's biological community (which the state wildlife and fisheries agencies anticipate), there is little the agency can do to prevent that damage.

The draft permit's "monitoring" condition thus fails to fulfill the basic purpose of monitoring requirements. As stated in the NPDES Permit Writers' Manual, "[p]eriodic monitoring and reporting establish an *ongoing record* of the permittee's compliance status and, where violations are detected, create a basis for any necessary enforcement actions."¹² Martin Marietta's single benthic sampling event at the close of the permit's term: 1) is not periodic, 2) will not establish an ongoing record of the company's compliance with the biological standard, 3) will not alert the Department of any violations, and 4) will likely fail to create a basis for any necessary enforcement actions.

B. The Department must expand the permit's biological monitoring and reporting conditions.

In order to track compliance with the biological integrity standard *during* the permit's term, the Department must expand the permit's monitoring and reporting conditions. As stated in the NPDES Permit Writers' Manual, the "permit writer should establish monitoring frequencies *sufficient to characterize the effluent quality and to detect events of noncompliance...*"¹³

At the start of the permit's term, the Department should require biological monitoring *at least* quarterly. Moreover, for the monitoring to serve the purpose of creating an ongoing record and establishing Martin Marietta's compliance with the permit, the monitoring results should be reported to DEQ within 30 days of the sampling event.

After the permit's initial term, the Department could consider a tiered monitoring approach, as described in the Permit Writers' Manual. This means that, "where the initial sampling shows compliance," the agency may "justify[] a reduction in monitoring frequency over time."¹⁴ In other words, *if* Martin Marietta's discharge maintains biological integrity in the creek so that the creek's species composition, diversity, population densities, and functional organization remain "similar to that of reference conditions,"¹⁵ then the Department could reduce the company's quarterly monitoring requirements to

¹² NPDES Permit Writers' Manual, U.S. Env'tl Protection Agency 8-1 (Sept. 2010), https://www.epa.gov/sites/default/files/2015-09/documents/pwm_2010.pdf (emphasis added).

¹³ *Id.* at 8-5.

¹⁴ *Id.* at 8-6.

¹⁵ 15A N.C. Admin. Code 02B .0202(13).

two times per year. On the other hand, “if problems are found during the initial sampling, more frequent sampling and more comprehensive monitoring”¹⁶ should be mandated.¹⁷

Next, the Department has claimed that “fish species of concern will not be adversely impacted by the discharge.”¹⁸ To ensure this is the case, the agency should add fish sampling to the permit’s biological monitoring condition.

Finally, the Department should expand the permit’s monitoring locations. The Department has claimed that the “lower portions of the creek will be unaffected” by Martin Marietta’s discharge.¹⁹ The agency should therefore include sampling requirements for the lower portion of the creek to confirm that assumption.²⁰

VI. If this permit is issued, the Department should limit the flow of the discharge to protect Blounts Creek.

We maintain that the Department should not issue this permit in order to protect Blounts Creek. However, if this permit is issued, the Department can help protect the creek by limiting how much Martin Marietta can discharge each day. For the entirety of the permit’s term, the Department should limit the allowed flow to at most 3 million gallons per day per outfall. Because Blounts Creek’s biological community thrives from its slow-moving low-flow waters, limiting the flow of the discharge would go a long way towards protecting the creek. In fact, the Wildlife Resources Commission and Division of Marine Fisheries recommended a reduction in flow to protect the rich and abundant species and habitat in Blounts Creek more than a decade ago.²¹

In the alternative, the agency could allow for a phased discharge that is closely linked to the company’s biological monitoring requirements. For instance, the Department could limit the allowed flow to 3 million gallons per day per outfall for the first year and require consistent, periodic biological monitoring and reporting during that period. If the monitoring demonstrates that the discharge is having limited impacts on the aquatic

¹⁶ NPDES Permit Writers’ Manual, *supra* note 12, at 8-6.

¹⁷ Not only should the Department require more frequent sampling—if violations of the biological integrity standard continue, the Department should do what it has claimed it would do for the past decade: modify or revoke the permit to ensure that the creek’s biological community is protected. Resp’t-Appellee Br., *supra* note 1, at 27.

¹⁸ *Id.* at 5.

¹⁹ *Id.* at 4-5.

²⁰ NPDES Permit Writers’ Manual, *supra* note 12, at 8-2 (“The permit writer should specify the appropriate monitoring location in an NPDES permit to ensure compliance with the permit limitations and provide the necessary data to determine the effects of an effluent on the receiving water.”).

²¹ The Marine Fisheries Commission recommended reinjecting all mine wastewater rather than discharging wastewater into the creek in order to protect the fragile river herring habitat. See DMF letter, *supra* note 2, at 3. The Wildlife Resources Commission likewise recommended reducing the overall flow of discharge. See WRC letter, *supra* note 3, at 3-4.

community and that Martin Marietta is not violating the biological integrity standard or any other water quality standard, the agency could allow the discharge to *slowly* ramp up over second year of the permit's term. If any biological monitoring demonstrates that the standard is being violated, however, the Department should immediately require the discharge to halt and revoke the permit or modify it to include more protective limits and conditions.

VII. Conclusion

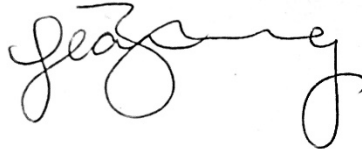
We urge the Department to adopt the changes and recommendations above to preserve Blounts Creek as a unique and invaluable natural resource in eastern North Carolina.

Thank you for your consideration of these comments. Please do not hesitate to reach out to us to discuss this matter further.

Sincerely,



Blakely Hildebrand
Senior Attorney



Jean Zhuang
Senior Attorney