

North Carolina DEMLR Stormwater Permitting Program's Response to Comments & Summary of Changes to NPDES Stormwater General Permit NCG020000 (2015 Renewal)

Background

NPDES Stormwater General Permit NCG020000, which regulates industrial *stormwater and wastewater* discharges from active and inactive mining sites (SIC Category 14xx), expired on June 1, 2015. The North Carolina Division of Energy, Mineral, and Land Resources (DEMLR) posted the proposed draft General Permit and the supporting Fact Sheet on the Stormwater Permitting Program website on May 29, 2015. We had already announced in sixteen selected newspapers across the state on or before November 30, 2014, that the draft of the proposed revised General Permit NCG020000 would be available on our website for public comment at a later date. DEMLR also ran that notice in the December 15, 2014, issue of the North Carolina Register.

The public comment period originally closed on June 30, 2015, consistent with the regulatory minimum duration of 30 days. The comment period was extended to July 15, 2015, giving the public more than 45 days to submit comments.

DEMLR's Stormwater Permitting Program (SPP) revises and reissues our NPDES stormwater General Permits on an approximately five-year schedule. Every five years we solicit public comment, especially from the particular regulated industry sector; we review analytical data from the previous five-year term of the permits; we evaluate identified compliance problems and problems in our enforcement of the permits as may be reported by our Regional Office inspectors; and we seek to improve the effectiveness of the permits as stormwater management tools for the permittees.

As required by agreement with EPA, DEMLR sent the proposed General Permit to U.S. EPA Region IV staff in Atlanta on June 5, 2015 for the agency's review. On September 3, 2015, EPA Region IV responded with comments. EPA's additional review and approval would be necessary if the proposed final General Permit incorporated significant changes from the published draft version or if significant public comments objecting to the permit were received. DEMLR concluded that neither of these criteria was met, and therefore further EPA review before final issuance was not required. However, DEMLR will provide EPA a copy of this document and the final version of the permit prior to issuance.

DEMLR routinely prepares this summary document both for those that submit written comments on the draft General Permits, as well as for other interested parties. This document will be posted on our website for public access.

Comments and Responses

DEMLR received ten letters of comments on the proposed draft General Permit NCG020000 during the public comment period, in addition to EPA's comment letter. All comments received were from members of the North Carolina Aggregates Association (NCAA), which was actively engaged in providing the Division feedback on this General Permit as it approached renewal. We appreciated an informed viewpoint of the proposed changes from the regulated entities under this permit, and we appreciated the time and effort reflected in those comments.

Many of the letters contained the same comments. We paraphrase those comments below. We have noted which comments resulted in changes in the final version of the General Permit. We also identify those comments that we rejected, and the basis for doing so.

1. Several commenters expressed frustration at not being able to see the draft General Permit prior to public notice and that some key changes surprised them. [NCAA Member Comments]

Response: Our program was grateful for NCAA's efforts to help us develop a better draft with early input through meetings, such as the meeting between the SPP and NCAA on April 28, 2015. However, the SPP did not promise the draft permit for membership review ahead of the public notice period. We knew some provisions would need more consideration and perspective from the regulated industry, and we acknowledge at least two key issues needed to be addressed very differently prior to finalizing this permit.

It was important for other permittees who are not NCAA members and the rest of the public to have an opportunity to review the proposed permit and weigh in on the changes. Public participation in the NPDES permitting process is integral to our program, and our responsibility is to follow the steps of that process appropriately, particularly with the pressed timeline we faced by May 29, 2015 (a comment period that would already extend past expiration of the *second extension* of the General Permit in place).

We regret that the NCAA felt this course of events negatively impacted the trust and open communication that the organization felt was being built between the agency and industry, as one commenter stated. We hope that future renewals will proceed without this outcome. The SPP does feel the public comment period provided ample time for more constructive discussion with NCAA to address concerns prior to finalizing the permit, and we appreciate the Association's continued efforts to meet with us to work through the issues in detail.

Result: The draft General Permit contains changes as discussed below as a result of comments received during the comment period.

2. Eligibility of the General Permit should not be restricted to mines with wastewater discharges of less than 1 MGD. [NCAA Member Comments]

Response: DEMLR proposed a 1 MGD flow threshold in an attempt to avoid cases of new mines applying for coverage under NCG020000 and being redirected to an NPDES individual wastewater permit from a different Division mid-way through that process. The change was prompted by at least one past instance where a company initially applied for coverage of a planned mine under the General Permit, but the projected flows and receiving water conditions dictated a more tailored and complex permitting approach—better suited by an individual wastewater permit developed by the Division of Water Resources (DWR). Initially involved with the project, the SPP remembered the frustration of the applicant of having applied for what was ultimately the wrong permit and having to begin a more lengthy application process on a delayed schedule. We incorrectly assumed that all applicants would want to avoid the same scenario and chose what turned out to be a very conservative flow rate that would have excluded numerous current permittees. In re-reviewing the flow data reported by permittees since 2010, DEMLR confirmed that well over 250 individually reported wastewater samples recorded flows above 1 MGD, and that this restriction indeed was not the best basis for requiring an individual permit application. The data corroborated one commenter’s assertion that 33 of ~45 Martin Marietta sites would not have qualified for the proposed General Permit.

Result: The final General Permit removes the item on the cover page that restricts coverage to mines with wastewater discharges less than 1 MGD. Instead, our program took the following actions to better evaluate whether a proposed mining wastewater discharge belongs under an individual permit:

- a) Revised the **Notice of Intent** (NOI) application to ask more specific questions about mine dewatering and process wastewater outfalls and maximum flow rates. DEMLR will work with DWR to evaluate the information, along with receiving water conditions, and determine whether the applicant should instead apply for an NPDES individual wastewater permit.
- b) Added an item to the Stormwater Pollution Prevention Plan (SPPP)’s *Annual Amendment and Update* section in the **General Permit (Part III, 8.e.)** that requires the permittee to review the previous year’s average daily and maximum wastewater flow rates, and to compare these flows to anticipated flow rates in the following year to identify and document significant increases in flow.

3. Remove the direction to obtain additional permits to construct and operate a recycle system, as well as the requirement to notify the Regional Office within 72 hours of operating a new or expanded wastewater treatment facility. Explore the option of a “Memorandum of Understanding” agreement between DEMLR and DWR so that a separate permit is not required for a recycle system. [NCAA Member Comments]

Response: The proposed language in Part II., Section B.1. that excluded authorization to operate a Closed-Loop Recycle System (CLRS) meeting the design requirements in N.C.'s 2T .1000 Rules and directed permittees to obtain a Non-Discharge Permit from DWR was originally added to the General Permit to mirror revisions to the last NCG14 Ready-Mixed Concrete General Permit. Those revisions attempted to clearly separate permitting responsibility between programs in what are now two different Divisions.

After consulting with DWR Non-Discharge Permitting Unit staff, we agreed that the best resolution was to remove references to separate CLRS permitting requirements all together because they were outside the scope of the discharge permit. In effect, this NPDES General Permit simply allows any discharges from recycle systems (overflows) that do not meet CLRS design standards, as long as they meet all effluent limitations and other provisions of the NCG02 General Permit. In addition, we concluded that it was appropriate to remove the 72-hour notice requirement to the Regional Office because this directive had been closely tied to the Authorization to Construct (AtC) requirements that are no longer valid.

One commenter recommended new language *exempting* CLRS from AtC requirements, as the previous General Permit did for treatment configurations like erosion and sediment control devices for dewatering wastewater. However, we concluded that referencing AtC requirements was less appropriate (given that Session Law 2011-394 removed our authority to do so for any industrial discharges to waters of the State under an NPDES permit) and potentially more confusing.

Result: The final permit omits the language referencing CLRS and Non-Discharge permitting actions in Parts II and IV. The final permit also removed the 72-hour notice requirement for new and expanded wastewater treatment facilities from Part II. These changes make a Memorandum of Understanding between DEMLR and DWR unnecessary.

4. Request documentation from DEMLR that “Dormant Site Status” has been approved. [NCAA Member Comments]

Response: The SPP agreed that further direction about “Dormant Site Status” documentation in the final permit was advantageous. The same recommendation was brought up by EPA during their initial review of the draft permit.

Result: The final permit includes language in Part III (SPPP), item 3.(b) that states “The DEMLR Regional Office will provide confirmation of dormant status and expected BMP inspection frequency in writing to the permittee.”

5. Confirm that SPPP requirement to keep rain gauge and monitoring records on site (Item 3.(b)) applies only to active mine sites, since often no employees are housed at dormant quarries to record rainfall or maintain records. [NCAA Member Comments]

Response: We agree with this interpretation of the intent of dormant status and do not see a need to modify the permit text.

Result: The final permit does not include any changes in response to this comment.

- 6. Remove the SPPP requirement for an annual inspection of BMPs for those sites qualifying for dormant status (also in Item 3.(b)); it seems redundant once the site has been stabilized. [NCAA Member Comments]**

Response: The objective of an annual inspection is specifically to discover unanticipated threats to surface waters at a site that may not be viewed for many months at a time. We agree that a threat is unlikely (as the Regional Office would not have granted dormant status and allowed reduced BMP inspections), but we think that a once-per-year inspection by the permittee intent on maintaining an NPDES permit is a minimal response.

Result: The final permit does not include any changes in response to this comment. An annual inspection is still required for mines with “dormant status” at a minimum.

- 7. Simplify the SPPP annual spill statement so as to be triggered only if there is a spill, and not triggered if there is not a spill (Item 8.(a)). [NCAA Member Comments]**

Response: We understand that logically it may amount to the same thing, but requiring a statement about whether spills have occurred should prompt the site management to have, or seek, affirmative knowledge of the site conditions over the past year. This objective is the purpose of the annual SPPP review. This provision was in the previous permit.

Result: The final permit does not include any changes in response to this comment.

- 8. Remove the SPPP requirement for annual BMP reviews (Item 8.(c)) because BMPs have already been reviewed and approved in the Mining Permit review process; it seems redundant. [NCAA Member Comments]**

Response: Note that the required SPPP review task is not an engineering design review. As in previous versions of the permit, it is an internal, self-conducted performance and operational status review intended to inform site management about whether the BMPs are in good shape, being maintained, and actually achieving the results they were designed for. In that sense, we do not see it as redundant to any agency engineering plan review conducted months or years earlier during the permitting process.

Result: The final permit does not include any changes in response to this comment.

9. Remove the new requirement to provide BMPs for stormwater pollutants potentially generated by blasting. [NCAA Member Comments]

Response: Note that the provision for controlling potential pollutants generated by blasting was in the 1999, 2005, and 2009 versions of the NCG02 General Permit. Re-formatting of the draft permit text in 2015 may have brought this provision to the attention of some commenters for the first time, but the provision itself is not new. Further, the requirement addresses a potential source of stormwater contaminants at mine sites and is appropriate.

Result: The final permit does not include any changes in response to this comment.

10. Support for the language in permit that indicates DEMLR will provide a written letter confirming Representative Outfall Status or “ROS” (Part IV, Table 1, footnote 3). [NCAA Member Comments]

Result: The final permit maintains this language.

11. Support for changes that include (1) elimination of BMP inspection within 24 hours of a runoff event, (2) “measurable” storm event allowance for sampling rather than “representative” storm event, (3) omitting event duration and flow for stormwater samples, (4) eliminating settleable solids monitoring in wastewater effluent sampling, (5) reduction to semi-annual wastewater effluent monitoring, (6) allowance to forgo sampling in adverse weather conditions or outside normal operating hours, and (7) dropping pH from Vehicle Maintenance Activity (VMA) stormwater sampling. [NCAA Member Comments]

Response: We appreciate that commenters acknowledged improvements they saw in the proposed permit. Some of the items above did change somewhat in the final permit, based on EPA’s review and comments; however, most remained intact in the final version.

Result: The final permit does not include any changes to items (1) – (3) or items (6) – (7). However, settleable solids (SS) monitoring was added back into the permit for wastewater effluent discharges to certain sensitive waters (based on waterbody classification), and the first year of wastewater monitoring must be quarterly before a permittee may drop to semi-annual monitoring. These changes were the result of EPA’s review and comments, and they are discussed in more detail below.

12. Support for the change that allows visual (qualitative) monitoring to be eligible for representative outfall status (ROS) and that DEMLR will provide written documentations. [NCAA Member Comments]

Response: We appreciate that the commenter acknowledged this change as an

improvement in the proposed permit.

Result: The final permit does not include any changes to this provision.

- 13. Revise the DMR (discharge monitoring report) submittal date from 30 days after receipt of lab results instead to a due date following the end of the monitoring period, or to annually like it was before. It's okay to maintain the requirement to report sooner if the results exceed a benchmark or effluent limit (like the current permit). [NCAA Member Comments]**

Response: We considered commenter's assertions that this change was confusing, more burdensome than before, and in some cases compromised their ability to collect data to calculate average flow (wastewater). We concluded that it was acceptable to go back to the previous requirement for annual data submittal and more prompt DMR submittals to the Regional Office directly when there were benchmark exceedances or effluent limit violations.

Result: The final permit was revised to allow the permittee to submit an Annual Summary DMR for stormwater and wastewater once a year by March 1, as in the previous permit. The final permit also directs the permittee to submit a DMR to the Regional Office within 30 days of receiving lab results in the event of a benchmark exceedance or effluent limit violation, like the previous permit.

- 14. Eliminate turbidity testing all together because other regulated sectors do not test for it—especially since the draft permit removed the option to test turbidity up- and downstream instead to demonstrate no water quality problems from the discharge. Discharge-only testing only creates a “data gap” because turbidity standards apply instream and provides no value except to raise questions. Note that neighboring states do not have turbidity testing in their mining stormwater permits, which were approved by EPA. Why make mines test it at all? If turbidity testing does stay in the permit, reinstate the option to sample up- and downstream so that a mine operator can demonstrate compliance with the standard or show the discharge is not the cause of elevated turbidity instream from another source. [NCAA Member Comments]**

Response: Turbidity is established as a statewide water quality standard in North Carolina rules. Where industrial activities might have potential to cause a turbidity water quality standard violation, it is legitimate to test for it. Of all the parameters monitored under this General Permit, measurements of stormwater discharge turbidity exceeded the base instream water quality standard of 50 NTU more frequently (in 199 out of 1082 samples for the period 2010-14) than any other parameter exceeded its benchmark or effluent limit. A discharge value above the instream standard is not necessarily a violation in and of itself—but it does not rule out one either, and is more likely in discharges to lakes, saltwaters, or trout waters that have lower NTU standards. We do agree with industry comments that testing only the discharge yields little

information about whether the instream turbidity standard is impacted by the discharge, except when discharge levels are below that standard. On this basis, and based on EPA comments (discussed further below), we reconsidered up- and downstream turbidity testing, and what should apply to stormwater and wastewater.

Our rationale for removing up- and downstream monitoring for stormwater discharges in the draft permit rested in part on possible safety concerns (i.e., monitoring in the stream during some rain events posing a risk). However, at least one comment letter rebutted that basis and asserted the company was “not sure of the relevance of safe access when considering environmental concerns. We operate safely and in compliance with other non-environmental regulatory agencies regarding safety.” One comment letter specifically recommended that the permit include up- and downstream turbidity monitoring when effluent levels are above the stream standard, an option that was covered in discussions with EPA reviewers as well.

Result: The final permit still requires turbidity monitoring of both the stormwater discharge outfall (SDO) and wastewater effluent (E). In addition, *optional* up- and downstream (U,D) monitoring for **stormwater discharges** was added back into the final permit. Unlike the previous permit, however, turbidity benchmarks along with modified tier responses for benchmark exceedances (which do not prompt monthly monitoring after two consecutive turbidity exceedances, as with other parameters) apply in Part IV.

For **wastewater discharges**, the final permit brings back optional U,D monitoring. However, the option is conditional: if effluent levels exceed the water quality standard of the receiving water, the permittee must begin U,D sampling for turbidity in addition to effluent sampling upon the next monitoring period. The permittee may also elect to contact the DEMLR Regional Office for assistance in establishing the best sampling points. There are still no turbidity effluent limits in the final permit.

These changes are still intended to allow relief from instream monitoring if stormwater and/or wastewater discharges are consistently at or below the turbidity standard NTU level that applies to the receiving waterbody.

15. The terms “industrial activity,” “wastewater treatment facility,” “effluent,” “wastewater,” “processed wastewater,” “like industrial activities,” “discharge,” “dormant site status,” and “surface water” should be listed in the Definitions section of the permit. [NCAA Member Comments]

Response: The proposed permit did not include all of these definitions, although some can be found in the federal regulations pertaining to the NPDES program or in N.C. rules and statutes. We understand the preference for a comprehensive and specific listing, but that task can be challenging. Some terms are not exact and instead must be inferred appropriately from pertinent sources.

For example, the 40 CFR §122.2 does not define *effluent*, but does define *effluent limitation* as “any restriction imposed by the Director on quantities, discharge rates, and concentrations of ‘pollutants’ which are ‘discharged’ from ‘point sources’ into ‘waters of the United States,’ the waters of the ‘contiguous zone,’ or the ocean.” *Effluent standards or limitations* is also a term defined in N.C. G.S. 143-213(23). “Effluent” therefore refers to that which is discharged from a point source of wastewater and subject to the limitations in the permit. The term “Waters” is defined in N.C. G.S. 143-212, and N.C. Rules 15A NCAC 2B .0100 rules outline the “Classifications and Water Quality Standards Applicable to the **Surface Waters** and Wetlands of North Carolina.” These references are integral to N.C.’s NPDES permitting programs and should be consulted if there are questions about what is or is not a *surface water*.

The draft permit did include the term *Stormwater Associated with Industrial Activities*: “The **discharge** from any point source which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or raw material storage areas at an industrial site. Facilities considered to be engaged in ‘**industrial activities**’ include those activities defined in 40 CFR §122.26(b)(14). The term does not include discharges from facilities or activities excluded from the NPDES program.” We feel this definition already addresses some of the terms in commenter’s letter.

Dormant site status is a procedural allowance within N.C.’s NPDES Stormwater Program that applies to inactive mines that have suspended all industrial activities and certified to NC DEMLR that the site has been stabilized. We feel the permit text is clear and the best place to explain what it means, especially because varying degrees of dormancy (e.g., just stabilized vs. stormwater structural BMPs removed) can result in different BMP inspection requirements. The final permit also requires that “dormant site status” be acknowledged in writing by NC DEMLR; The SPP concluded a separate definition was unnecessary.

Result: The final General Permit incorporates the definitions of “process wastewater” and “process generated wastewater” (both terms used in different parts of the federal regulations) into Part VI. Also, under the heading of Part VI, the final permit includes the statement: “Additional definitions for the NPDES Program may be found in federal rule at 40 CFR Part §122.2 and in the effluent limitation guidelines for the Mineral Mining and Processing Point Source Category at 40 CFR §436.”

16. At what point can the Division override the facility’s determination that the discharge of wastewater does not have a reasonable potential of violating water quality standards? (Part I, Section A language). [NCAA Member Comments]

Response: This determination is made on a case-by-case basis. In the event that a facility whose discharges drain to a watershed affected by a Total Maximum Daily Load (TMDL) is asked to make this demonstration, the Division will work with that mine operator to review the details of the waterbody’s impairment and other relevant

conditions, as well as facility-specific circumstances, to evaluate whether an individual permit is appropriate.

Result: The final permit does not include any changes in response to this comment.

17. EPA's comment letter stated that "The EPA and NCDENR have worked together to resolve many issues in the draft GP. The NCDENR has committed to revise the notice of intent to be more consistent with NC's antidegradation policy, add questions to the notice of intent that will more clearly identify the outfalls and receiving streams, include conditions in the GP to protect sensitive streams, and clarify definitions for wastewater and stormwater."

Response: We appreciate EPA's acknowledgement of revisions to the General Permit and Notice of Intent (NOI) in response to discussions following its initial review and questions to us.

Result: The NOI has been revised with the following items to address EPA's concerns: **Questions #20 and #21** now ask whether proposed discharges are to high quality waters (HQW) or trout (Tr) waters, or to Shellfish (SA) waters, also HQW by definition. This will help our program readily identify discharges to waters to which the N.C.'s anti-degradation policy applies. **Question #22** identifies proposed discharges to impaired waters or waters with a TMDL. **Question #23** requires the applicant to list each stormwater, mine dewatering, and process wastewater outfall (and show them on a site plan), along with proposed maximum wastewater flow rates. **Question #38** is a new section of the NOI devoted to a wastewater discharge alternatives review, as required by 15A NCAC 2H .0105(c)(2) and NC's antidegradation policy.

18. EPA questioned the rationale for removing settleable solids (SS) from wastewater monitoring in the proposed General Permit and recommended SS monitoring and limits apply to wastewater discharges to sensitive waters on the basis of N.C.'s Surface Water Quality Standards (WQS).

Response: We agree with EPA's recommendation to reintroduce SS monitoring and limits to protect sensitive waters of the state. Rules in 15A NCAC 02B .0221 and .0222 prohibit *any settleable solids attributable to industrial or other wastes*, which supports a limit on the wastewater discharges in this General Permit for SA, SB, and PNA waters. The effluent limits are carried over from the previous permit: 0.2 ml/l (daily maximum) and 0.1 ml/l (monthly average). These values correspond to the practical quantitation limit (PQL) of EPA Method 160.5 for settleable matter (0.2 ml/l) and EPA approved Standard Method 2540 F-1997, which indicates the PQL is generally in the range of 0.1 to 1.0 ml/l. The SPP also concluded that applying these SS limits to high quality waters (HQW) and trout (Tr) classifications is appropriate for protecting such waters.

We did not expand the SS monitoring and limits more broadly, as in the previous permit,

for two reasons. First, the SS monitoring requirement for this industrial sector originated in N.C.'s 2B .0500 rules, which set out monitoring requirements for industrial wastewater dischargers to N.C. surface waters according to SIC categories as far back as 1976. Section 2B .0508(b) allows the Director to modify monitoring schemes in those rules. The rationale cited in the original Fact Sheet still supports reduced applicability of SS monitoring for dischargers under this permit: less than 3% of SS measurements (in over 1200 data points) in the last permit cycle exceeded the 0.1 ml/l monthly average limit, and even fewer exceeded the 0.2 ml/l daily maximum limit.

The second reason is based on the N.C. rule in 2B .0406(d) that stipulates agency staff shall establish settleable solids effluent limitations (if none exist in federal regulations) *when the projected average exceeds 5 ml/l*. We re-examined the reported SS exceedances and found the three highest values were 7.4, 7.2, and 1.4 ml/l. The first two unusually high values are suspect. The 7.4 corresponded to a turbidity value of 7.4 NTU in the same sample, suggesting an error because such a low turbidity is not likely to be measured with such a high level of settleable solids. The 7.2 corresponded to a pH value of 7.2 standard units in the same sample, suggesting a possible transcription error. Given the third highest value was well under 5 ml/l, we concluded the reported data and the 2B .0406 rule support a narrowed applicability of SS monitoring and limits (to sensitive waters only) for this cycle of the General Permit.

Result: The final permit brings back the settleable solids (SS) monitoring and effluent limits for wastewater discharges to waters classified as HQW, ORW, SA, SB, Tr, or PNA.

19. EPA raised the concern that the proposed reduced monitoring frequency for wastewater (WW) discharges may not capture an accurate scope of pollutant concentrations in the effluent and that the Fact Sheet did not support a semi-annual WW monitoring frequency. EPA also expressed concern that semi-annual stormwater (SW) monitoring was not sufficient. As reasoning, EPA asserted that monitoring data for some facilities exceeded multiple pollutant benchmarks and effluent limitations, and that those facilities should not be allowed to monitor less. Their letter also pointed out that semi-annual WW monitoring made it difficult to apply and enforce the daily maximum and monthly average limits, and finally that North Carolina's own rules in 15A NCAC 02B .0508 dictate monthly WW monitoring for the mining industry. EPA recommended monthly monitoring for both WW and SW.

Response: We understand why EPA would question the proposed change for wastewater. We still feel the compliance of the vast majority of reported measurements meeting effluent limits made a good case for reduced frequency in the draft permit, and we have strived for the best compromise in the final permit. The final General Permit introduces a "ramp-up" and "ramp-down" approach for wastewater monitoring frequency based on demonstrated compliance, similar to the way the Tiers work for stormwater monitoring.

Because exceeding an effluent limitation may result in enforcement action and possibly also fines, the final permit does not increase wastewater monitoring in response to a violation. We also disagree that semi-annual or quarterly monitoring compromises our agency's ability to apply and enforce daily maximum or monthly average limits (set this way because federal effluent guidelines for this industry sector mandate them). From a compliance standpoint, a wastewater sample result from either quarterly or semi-annual monitoring under this General Permit serves as *both* the daily maximum and monthly average limit. If the permittee chooses to monitor more frequently than monthly, a monthly average can be calculated and used instead for compliance purposes.

We disagree with EPA's recommendation to increase stormwater monitoring frequency proposed in the draft permit. As with all of our program's general permits, the tiered response structure prompts a permittee to begin monthly monitoring in the event of two consecutive stormwater benchmark exceedances. Under the final General Permit, turbidity will work somewhat differently, but provisions still allow the Regional Office to require more frequent monitoring under Tier 2 for turbidity (discussed in more detail below).

Result: The final permit did not make any changes to the stormwater discharge monitoring frequency or tiered response structure, with the exception of the tiers specific to turbidity (discussed in more detail below). The final permit does change the *initial monitoring frequency* for wastewater discharges to quarterly; however, the permittee may reduce monitoring frequency to semi-annually after four consecutive quarterly samples meet effluent limits for all parameters.

20. EPA's letter advised changing the total suspended solids (TSS) stormwater benchmark applicable to HQW and Tr waters from 50 mg/l to 10 mg/l for Tr waters, and to 20 mg/l for HQW classified waters, consistent with the wastewater TSS effluent limits that apply to those waters.

Response: We understand that a discrepancy between the stormwater and wastewater TSS values would raise a question. However, we disagree that a lower benchmark value is appropriate for TSS in stormwater discharges at this time. N.C.'s standard TSS benchmark of 100 mg/l for non-HQW waters came from the National Urban Runoff Program (NURP) study, and our program applies one-half this value (50 mg/l) for stormwater discharges to HQW, ORW, Tr, or PNA classified waters. We do not have enough information on which to base a more stringent TSS benchmark. Also, many stormwater-driven discharges from mining sites are still considered wastewater because the water comes into direct contact with the manufacturing or processing activities at the mine operation, or commingles with wastewater in treatment systems on site. Those discharges will be subject to the more stringent TSS *effluent limits* for sensitive waters.

As a result of discussions with EPA on this topic, we took a closer look at the TSS monitoring and limit provisions in the proposed General Permit, and how those compared to the requirements under N.C.'s surface water quality standards (WQS). We discovered that in previous cycles of the permit, and in the proposed draft permit, more stringent TSS limits for HQW, Tr, and PNA waters applied *only to industrial sand mines*, and that the limits were not consistent with the standards. We reviewed 15A NCAC 2B .0224 and confirmed the correct interpretation with DWR's Planning Section staff: that TSS must be limited to 10 mg/l for *HQWs that are also PNA or Tr*, and to 20 mg/l for *all other HQWs*. The 10 mg/l limit does not apply to waters that are designated trout waters *but not HQW*. This standard also means that the TSS limits apply to wastewater discharges *regardless of whether or not the mine is an industrial sand mine*. Unfortunately, our program's previous efforts to implement the federal effluent guidelines for those sand mines unintentionally released other mines from TSS limits mandated by N.C. rules.

We appreciate EPA's dialogue and willingness to ask the questions that led us to identify the oversight, and to re-examine the corresponding daily maximum limits. We agreed with EPA that adjusting down the daily maximum limit values for HQWs to 1.5 times the monthly average—a calculation accepted as standard practice in the industrial wastewater NPDES program—made sense. Unless the permittee is sampling more often than monthly to calculate an average (allowed but not required), the sample result must meet both limits anyway.

Result: The **stormwater** benchmark for TSS that applies to HQW, PNA, and Tr waters remains unchanged (50 mg/l) in the final permit.

The final permit revises the **wastewater** TSS limits and corresponding footnotes: industrial sand mines discharging to non-HQW waters must meet the monthly average and daily maximum values set by the federal effluent limitation guidelines (25 mg/l and 45 mg/l, respectively); any kind of mine discharging to HQW or ORWs must meet more stringent limits established in N.C. rule.

21. EPA expressed concern that without mandatory collection of in-stream turbidity samples along with discharge samples, the draft permit provided no way to evaluate whether the in-stream turbidity standard was being violated. EPA recommended the General Permit contain turbidity monitoring for all three sample locations (discharge, upstream, and downstream) for both stormwater and wastewater.

Response: We agree that all three measurements are needed to determine whether the discharges are causing or contributing to a turbidity instream violation as described in the 2B .0211 rules. We also considered industry comments about proposed turbidity testing changes (see number 14. above) and decided to revise the permit in a way that still allows relief from instream monitoring, if stormwater and/or wastewater discharges are consistently at or below the turbidity standard NTU level that applies to the

receiving waterbody.

Result: The final permit still requires turbidity monitoring of both the stormwater discharge outfall (SDO) and wastewater effluent (E). In addition, *optional* up- and downstream (U,D) monitoring for **stormwater discharges** was added back into the final permit. Unlike the previous permit, however, turbidity benchmarks along with modified tier responses for benchmark exceedances (which do not prompt monthly monitoring after two consecutive turbidity exceedances, as with other parameters) apply in Part IV.

For **wastewater discharges**, the final permit brings back optional U,D monitoring. However, the option is conditional: if effluent levels exceed the water quality standard of the receiving water, the permittee must begin U,D sampling for turbidity in addition to effluent sampling upon the next monitoring period. The permittee may also elect to contact the DEMLR Regional Office for assistance in establishing the best sampling points. There are still no turbidity effluent limits in the final permit.

- 22. EPA's paramount concern centered on effluent and in-stream data collected in June 2015 from three mining operations covered under this General Permit (NCG020274, NCG020793, and NCG020818). The water quality data indicated copper, lead, and zinc concentrations may cause or contribute to violations of N.C.'s current water quality standards (WQS), and for certain metals, violations of N.C.'s proposed revised WQS and/or EPA recommended WQ criteria. EPA believes a reasonable potential analysis should be conducted using the collected data or other relevant information to assess risk posed by these three facilities, and if warranted, expects these facilities to be covered under an individual permit with site-specific effluent limits instead. While the presence of metals could be indicative of an industry-wide problem, or a problem within an industry subcategory, there is a need for additional receiving stream and effluent testing from facilities covered under this General Permit.**

Response: NCDENR (recently changed to NCDEQ) is committed to working together with EPA to determine how to obtain more industry-specific water quality data for metals and how best to proceed. NCDENR felt it was important not to employ a very small set of data to dictate significant monitoring parameter changes for a general permit affecting over 400 permittees, many of whom do not conduct mining activities that are like these three particular sites. DEMLR will coordinate with staff in DWR and with EPA to devise a way to evaluate (1) the industrial activities at these sites and how they differ from other mine sites in NC; (2) what wastewater NPDES permits are already in place at these sites, and whether they can be revised to include discharges currently under the NCG02; and (3) and how to conduct reasonable potential analysis for rain-driven discharges if current procedures are not adequate.

Result: The final permit does not contain any changes in response to this comment; however, the revised NOI includes a question about whether the operation applying for coverage under the General Permit is a **processing-only facility**—as at least one of the

sites that EPA sampled were materials-processing sites located remotely from the mines that supplied the earth materials.

In light of the data and EPA's concerns, the renewal Certificates of Coverage (COCs) issued to these three facilities will be different. Continued coverage will be conditional on supplemental metals monitoring, and the facilities will be notified that the agency may require coverage under an NPDES individual permit based on those monitoring results and a reasonable potential analysis. DEMLR has identified similar quartz and feldspar mining operations in the state and will also notify these facilities that additional monitoring or permitting actions may be necessary in the future to address potential water quality standard violation risks. The EPA and DENR will continue to coordinate how to obtain more industry-specific water quality data for metals and how best to revise permitting procedures for similar sites.

23. Concurrence with proposed NCG02 General Permit by Division of Water Resources (DWR) Public Water Supply Section [for *wastewater discharges to Water Supply waters*] and NC Division of Marine Fisheries (DMF) Shellfish Sanitation Section [for *wastewater discharges to shellfish "SA" waters*].

Summary: The Stormwater Permitting Program is bound by 15A NCAC 02H .0107 to refer NPDES permit applications for wastewater discharges into Water Supply (WS) waters and shellfish (SA) waters to the above entities for review and written approval. We routinely route individual NOI applications for these dischargers to PWS and DMF for approval, but we also request their review and approval of the draft General Permit at the time of renewal. This year, we also engaged the PWS section in a conversation about how to streamline approvals for future applicants that discharge to WS waters.

Result: The Division of Marine Fisheries (S. Jenkins) responded on June 24, 2015, with no objection to the proposed permit. The DMF wants the SPP to continue routing requests for NCG02 NOI application review and approval to their staff when proposed discharges would go into or near SA waters.

Our staff met with Jessica Godreau and Bob Midgette of DWR's Public Water Supply Section on June 30, 2015, to discuss the draft permit and how to improve the process for permit approvals. We received a memorandum on July 15, 2015 (from J. Godreau), offering no comment and stating concurrence with provisions in the draft General Permit. As per PWS's request, if there are special concerns presented by new or existing mine discharges near public water supply intakes, the DEMLR SPP will coordinate with DWR on appropriate alternative permitting actions. Otherwise, PWS understands this General Permit covers activities not expected to have a major impact to water supply waters and does not request a review opportunity for each NOI application.

Summary of Changes from the draft General Permit

1. Removed language on the cover page that restricts coverage to mines with wastewater discharges less than 1 MGD.
2. Minor corrections to Section C in the Table of Contents for consistency.
3. Minor change in reference to maps in the last paragraph of Part I, Section A.
4. In Part II, removed requirement to notify the Regional Office prior to operation of new wastewater treatment facilities, and removed language that referenced a closed-loop recycle system (CLRS) to better reflect the scope of this discharge permit. Separate Sections A and B were no longer necessary.
5. Part III SPPP Requirements – Item 1(c) now requires site map to include wastewater outfalls.
6. Part III SPPP Requirements – Item 3(b) commits the DEMLR Regional Office to provide confirmation of dormant status and expected BMP inspection frequency to the permittee in writing.
7. Part III SPPP Requirements – Item 8(e) is new and requires the permittee to compare previous year’s wastewater flow rates to projected flow rates for the next year.
8. Part IV, Section A Stormwater Discharges – added back in the option to monitor turbidity up- and downstream (U,D) of the discharge. If permittee cannot demonstrate discharge has not caused a violation of the instream standard, Division may require U,D monitoring.
9. Part IV, Section A Stormwater Discharges – revised reporting requirements back to an Annual Summary DMR submittal, except for benchmark exceedances.
10. Part IV, Section A, Table 2 – Footnote 3 revised to clarify first monitoring period for permittees renewing coverage under this General Permit.
11. Part IV, Section A, Table 3 – introduced turbidity benchmarks (same as instream standard) and Tier One/Tier Two Responses specific to turbidity.
12. Part IV, Tiers One and Two were revised to exempt turbidity, and to clarify that Tier 2 is triggered with two consecutive benchmark exceedances, *not counting periods with no discharge*.
13. Part IV VMA Activities – revised reporting requirements back to an Annual Summary DMR submittal, except for benchmark exceedances.
14. Part IV, Section C now also provides that the permittee is not required to *qualitatively monitor* events outside of the normal operating hours of the business (except in the case of inactive mines).
15. Part IV, Section D Wastewater Discharges – Item 1 now references Part VI Definitions of the permit and federal regulations for the terms “mine dewatering” and “mine” specific to industry sub-sectors in 40 CFR §436; item 2 now references Part VI Definitions and federal regulations for the terms “process wastewater” and “process generated wastewater” specific to the industry sub-sectors in 40 CFR §436.
16. Part IV, Section D Wastewater Discharges – Item 4 was revised to better reflect the scope of this General Permit and references overflow discharges from process wastewater recycle systems to surface waters.

17. Part IV, Section D Wastewater Discharges – revised reporting requirements back to an Annual Summary DMR submittal, except for effluent limitation exceedances.
18. Part IV, Section D, Table 7 – revised wastewater discharge monitoring frequency to quarterly for at least the first year, with a “ramp down” provision to semi-annually if all four samples meet or are below the limit for all parameters at the effluent outfall. Monitoring frequency remains (or “ramps back up” to) quarterly if any sample concentration from the effluent outfall.
19. Part IV, Section D, Table 7 – revised “Total Flow” parameter (measured in million gallons, MG) to “Daily Flow Rate” (measured in cubic feet per second, cfs) to accurately reflect flow “rate” and not just volume.
20. Part IV, Section D, Table 7 – added back in instream turbidity monitoring, to begin at the next sample period if effluent turbidity levels exceed the water quality standard of the receiving water. The DEMLR Regional Office may work with the permittee to establish the most appropriate U,D sample points.
21. Part IV, Section D, Tables 7 & 8 – added settleable solids (SS) back into monitoring requirements, but only for effluent discharges to HQW, ORW, SA, SB, PNA, and Tr waters. Corresponding monthly average and daily maximum limits of 0.1 ml/l and 0.2 ml/l apply.
22. Part IV, Section D, Table 8 – Total Suspended Solids (TSS) daily maximum limits revised to 30 mg/l and 15 mg/l for HQW/ORW and for Tr/PNAs that are HQW/ORW, respectively. Corresponding footnotes 2 and 3 clarify that more stringent TSS limits apply to *all mines discharging to those particular waters*, not just to industrial sand mines discharging to them, and how the limitations relate to sample frequency.
23. Part IV, Section D, Table 8 – Footnote 4 revised to restrict lower limit of pH to the value in the federal effluent guidelines (40 CFR §436).
24. Part IV, Section D, Table 8 – Footnote 6 revised to reflect flow rate rather than volume because 7Q10 is a flow, and to clarify the flow rate restriction applies to HQW/ORW, including Tr/PNAs that are also HQW or ORW.
25. Part IV, Section D, Table 9 – Monitoring schedule table revised to show periods for both quarterly and semi-annual schemes. Footnote 2 was revised to reflect Annual Summary DMR submittal, and footnote 3 was revised to clarify first monitoring period for permittees renewing coverage under this General Permit.
26. Part V Standard Conditions, Section E Reporting Requirements – Items 1 and 2 revised to require annual data monitoring report (DMR) submittal by March 1 of each year, and submittal to the DEMLR Regional Office within 30 days of receiving results if samples exceed a benchmark or effluent limit.
27. Part VI Definitions – Items 16., 23., and 24. define the terms “mine dewatering” (which references term “mine” from 40 CFR §436 as well), “process generated wastewater,” and “process wastewater.”
28. Changed “Department of Environment and Natural Resources” and “NCDENR” to “Department of Environmental Quality” and “NCDEQ” based on recent Department name change.

Summary of Significant Changes from the Previous General Permit

1. The following minor changes appear throughout the revised General Permit:
 - a. Minor word changes, format changes, and sequencing of paragraphs;
 - b. Table of Contents reflects re-ordering of some sections;
 - c. Reference now to the *Division of Energy, Mineral, and Land Resources* as the permitting authority, rather than the now defunct Division of Water Quality;
 - d. Website URLs have been updated where necessary.
2. The General Permit Cover page no longer excludes combined mining/asphalt operations, and it now includes authorization for stormwater or wastewater from like activities deemed to be similar to operations and exposures covered by this permit.
3. Part I, Section B now provides that the permittee's Certificate of Coverage is an enforceable part of the General Permit.
4. Part II has been condensed into one section and no longer includes language about authorization to construct wastewater treatment facilities or requires the permittee to notify the Regional Office in advance of operating new or expanded treatment facilities.
5. Part II no longer includes language about Non-discharge Permitting Program requirements for a process wastewater closed-loop recycle system (CLRS). Other references to CLRSs in the General Permit have been removed. This change reflects better the scope of an NPDES permit that authorizes wastewater discharges.
6. Part III has renamed the several elements required as part of the Stormwater Pollution Prevention Plan (SPPP) and includes minor re-wording to be more specific on the required content of several elements of the SPPP.
7. Part III 1(c) now requires the site map to identify wastewater outfalls as well as stormwater outfalls.
8. Part III 3(b) BMP Controls Inspection and Maintenance reduces BMP inspection obligations to weekly, dropping the requirement to inspect within 24 hours of a rainfall event that results in a discharge.
9. Part III 3(b) BMP Controls Inspection and Maintenance no longer distinguishes inactive mines with an "Inactive Renewal Mining Permit" from mines that maintain an active Mining Permit, and simply outlines reduced obligations for mines that qualify for "dormant site status." Dormant mine sites no longer must inspect BMPs within 24 hours of a rain event of 0.5 inches or more. The permit commits the DEMLR Regional Office to provide approval and specify reduced BMP inspection frequency in writing to the permittee.
10. Part III 8(a)-(e) breaks out the components required for the re-named section, "SPPP Amendment and Annual Update." Item (e) is new and requires the permittee to compare past year and anticipated future year wastewater flow rates; this provision is intended to raise awareness of potential flow rate increases into receiving waters, especially important for HQW waters, where maximum combined wastewater flows are limited by N.C. rules.
11. Part IV, Sections A, B, and C require monitoring during a measureable storm event (new term) rather than a representative storm event (old term). The revised sampling requirement should make it easier for permittees to obtain the required samples.

12. Part IV, Sections A, B, and C allow the permittee to forgo sampling if adverse weather conditions prevent sample collection.
13. Part IV, Sections A, B, and C provide that the permittee is not required to sample runoff events outside of the normal operating hours of the business (except in the case of inactive mines).
14. Part IV, Sections A, B, and D advise the permittee that failure to monitor *may result* in the Division requiring monthly monitoring for a specified time period; the monthly trigger is no longer “automatic.” This removes the problem of “indefinite” monthly monitoring without a provision to again reduce frequency if warranted.
15. Part IV, Sections A and B eliminate the requirement to record event duration and total flow.
16. Part IV, Section B removes the requirement to sample for pH in site stormwater discharges associated with Vehicle Maintenance Activities (VMA).
17. Part IV, Section B also renames the term “Total Petroleum Hydrocarbons (TPH)” to “Non-polar Oil and Grease” but does not change the specified method [EPA Method 1664 (SGT-HEM)] to reduce confusion over which laboratory test applies.
18. Turbidity monitoring in Part IV, Section A, Table 1 has changed somewhat. Permittee must monitor the stormwater discharge outfall (SDO) and *may elect to also* monitor up- and downstream turbidity. If SDO turbidity levels exceed the benchmark, the Division may require the permittee to monitor turbidity up- and downstream.
19. Part IV, Section A, Table 3 includes new stormwater benchmarks for turbidity; however, Tier one and Tier Two responses for turbidity are slightly different than tiered responses for other parameter benchmark exceedances (also new).
20. Part IV, Section A revises language in the Tier responses for benchmark exceedances. Updates include clarification that Tier Two begins upon exceedances in two consecutive monitoring periods, *omitting periods of no discharge*.
21. Part IV, Sections A, B, and D still require only annual reporting of a Summary Data Monitoring Report (DMR) by March 1 of each year, except when samples exceed stormwater benchmarks or effluent limits (no change from the previous permit).
22. Part IV, Section C revises the Qualitative Monitoring to allow representative outfall status (ROS) designation to reduce the number of outfalls monitored throughout the permit term, and no longer restricts monitoring to the same event as the analytical samples.
23. Part IV, Section D 1. revises the acronym for the Pumping Operation and Monitoring Plan from “Pumping O&M Plan” to “POM” to reduce confusion with other types of O&M plans.
24. Wastewater effluent monitoring in Part IV, Section D, Table 7 can begin as quarterly and drop to semi-annual after four consecutive quarterly samples meet the limit (Footnote 1). Permittees that drop to semi-annual monitoring must resume a quarterly schedule for any outfall where a sample exceeds the effluent limit.
25. Part IV, Section D, Table 7 maintains settleable solids (SS) monitoring, but now only for mines discharging to HQW, ORW, SA, SB, PNA, or Tr designated receiving waters.
26. Turbidity monitoring in Part IV Section D, Table 7 has changed somewhat. Footnote 3 explains that permittees do not need to measure instream turbidity unless effluent

levels exceed the water quality standard of the receiving water (which is not a limit violation). In that case, U,D monitoring in addition to the effluent must begin at the next sampling period.

27. Part IV, Section D, Table 7 now refers to “Daily Flow Rate” measured in cubic feet per second (cfs) instead of “Total Flow” measured in million gallons (MG). Other references to flow have been corrected to *flow rate*.
28. Part IV, Section D, Table 8 has slightly revised TSS daily maximum limits that apply to *all wastewater discharges* to certain waters (no longer restricted to *industrial sand mine* discharges to those waters). Footnotes 2 and 3 to Table 8 have been added to clarify this applicability. Footnote 1 (new) explains how TSS monitoring results will be compared to monthly average and daily maximum limitations.
29. Part IV, Section D, Table 8, footnote 4 was expanded to include an allowance for pH lower levels to be adjusted to 5.0, as per the federal effluent guidelines in 40 CFR §436.
30. Part IV, Section D, Table 9 has been adjusted to show both quarterly and semi-annual sampling period scenarios.
31. The Standard Conditions in old Parts V – VI have been reorganized and revised to be consistent with other NPDES permits’ Standard Conditions. All newly re-issued General Permits are being rewritten to include the elements of the new Standard Conditions. Most of the provisions are unchanged. However, some significant changes include:
 - a. Part V, Section A 1. revises SPPP compliance requirements to address existing facilities applying for renewed coverage under the permit, and to reduce the time period for existing facilities applying for first time coverage to develop and implement an SPPP.
 - b. Federal and state law and rule citations have been added for reference in several of the paragraphs throughout the Standard Conditions.
 - c. Part V, Section B 1. no longer requires the permittee to submit a renewal application within 180 days of permit expiration.
 - d. Part V, Sections B, D, and E provide new standard conditions related to the anticipated roll-out of on-line electronic reports and electronic records.
 - e. Part V, Section C includes distinct bypassing conditions for stormwater and wastewater treatment facilities.
 - f. Part V, Section D allows permittee to provide analytical records electronically to a DEMLR inspector upon request.
 - g. Definitions for the terms “mine dewatering” (including reference to “mine” in that context), “process generated wastewater,” and “process wastewater” have been added into Part VI because they are relevant to the NCG02 General Permit.

Conclusion

DEMLR’s overall intent in proposing changes to the General Permit was to provide permit requirements that will encourage permittees to respond with prompt corrective action to the discovery of pollutant discharges indicated by visual observation or analytical results in excess of the benchmark values or effluent limits. DEMLR has incorporated selected public comments received during public comment periods on other recent draft General Permits where we agreed that the comments were helpful and relevant to NCG020000.