



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

MEMORANDUM

TO: ENVIRONMENTAL REVIEW COMMISSION
The Honorable Brent Jackson, Chairman
The Honorable Mike Hager, Co-Chairman

FROM: Matthew T. Dockham
Director of Legislative Affairs

SUBJECT: Final Report on Stormwater Permit Review Pilot Study

DATE: April 23, 2015

Pursuant to S.L. 2014-120, the Regulatory Reform Act of 2014, Section 29.(f) and (g), the Department shall complete a pilot study on the stormwater permitting program with the assistance of the North Carolina Board of Examiners for Engineers and Surveyors and the Professional Engineers of North Carolina. This pilot study shall include an inventory of work activities associated with the operation of the state stormwater permitting program, a determination of which of these activities constitute the Practice of Engineering, and recommendations to ensure that work activities constituting the Practice of Engineering are conducted with the appropriate level of oversight.

The Department shall report the results of the pilot study to the Environmental Review Commission no later than April 15, 2015. The attached report satisfies the pilot study requirement.

If you have any questions or need additional information, please contact me by phone at (919) 707-8618 or via e-mail at matthew.dockham@ncdenr.gov.

cc: Tom Reeder, Assistant Secretary for Environment
Jennifer Hoffman, Fiscal Research Division
Tracy Davis, Director, Division of Energy, Mineral, and Land Resources



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

**Report on the Division of Energy, Mineral, and Land Resources,
Land Quality Section's Pilot Study
Of the Stormwater Permitting Program
Pursuant to SL 2014-120, Section 29.(f) and (g)**

This report is intended to fulfill the requirements for a Stormwater Permitting Pilot Study required under **S.L. 2014-120 Regulatory Reform Act of 2014, Section 29.(f) and (g)**, which state:

(f) Pilot Study – No later than March 1, 2015, the Department of Environment and Natural Resources shall complete a pilot study on the Pretreatment, Emergency Response and Collection System (PERCS) wastewater collection system permitting program and the stormwater permitting program and perform the following activities with the assistance and cooperation of the North Carolina Board of Examiners for Engineers and Surveyors and the Professional Engineers of North Carolina:

- (1) Produce an inventory of work activities associated with the operation of each regulatory program.
- (2) Determine the work activities identified under subdivision (1) of this subsection that constitute the Practice of Engineering.
- (3) Develop recommendations for ensuring that work activities constituting the Practice of Engineering are conducted with the appropriate level of oversight.

(g) Report – The Department shall report the results of the pilot study to the Environmental Review Commission no later than April 15, 2015.

To complete this study, the Stormwater Permitting Program created an inventory of work activities associated with the review of state stormwater permits for review by the North Carolina Board of Examiners for Engineers and Surveyors (NCBELS) and the Professional Engineers of North Carolina (PENC). On February 5, 2015, a meeting was held between staff of the Division of Energy, Mineral, and Land Resources, representatives of the Professional Engineers of North Carolina, and representatives of the North Carolina Board of Examiners for Engineers and Surveyors to discuss the requirements of the legislation, the inventory of work activities, and the group's understanding of the practice of engineering. The following sections of this report convey the findings and recommendations of the pilot study group members.

(1) Produce an inventory of work activities associated with the operation of the stormwater program.

The Stormwater Permitting Program develops and implements statewide stormwater control policies, strategies and rules designed to protect surface waters of North Carolina from the impacts of stormwater pollutants and runoff. Staff handles permitting for industrial, municipal and post-construction (development projects) stormwater programs, and provides technical assistance to the regulated community, engineers, industry, citizens and local governments.

A. Initial Application Completeness Review:

- i. Ensure fee and supporting documents are attached;
- ii. Ensure application is signed by applicant and signed, sealed and dated by a licensed professional; and
- iii. Assess rules that apply, stream classification, etc. to assure correct information has been provided for the review process.

B. Application Review:

- i. Review to determine whether the project is new, a modification or renewal, etc.
- ii. Review application which includes application forms, supplemental BMP forms, calculation workbook, plan details, narratives, summaries and compare to plan information to ensure they are consistent and without discrepancies.
- iii. Ensure that systems selected are appropriate to meet rule control requirements (for example, 85% TSS removal) and are appropriate for the project area. This compares what the application proposes versus what the Rules or Statute requires.
- iv. Review plans provided to assure drainage areas for proposed management systems coincide with other submitted data and are in line with the type of permit requested – low density or high density.
- v. Review calculations provided in the application to ensure they are compliant with rule requirements for volume, draw down time, pre/post flow rates, average depth, etc.
- vi. Ensure that other required information is provided. This is often dependent on the type of management system – seasonal high water table, soil infiltration rates, vegetation planting plan, etc.
- vii. Review vegetated buffers provided on plans to ensure they are in line with rule requirements.
- iv. Ensure that appropriate information on deed restrictions and protective covenants is provided.
- v. Ensure operation and maintenance agreements are provided, signed and sufficient to ensure long term compliance with the rules.
- vi. Coordination with other agency's permits or approvals to ensure stormwater permits are handled appropriately.

(2) Determine work activities that constitute the practice of Engineering.

At the request of the Stormwater Permitting Program and pilot study group members, the Engineering Committee of NCBELs reviewed the above work inventory list in a meeting that was held on February 11, 2015. During the meeting, the Engineering Committee (Committee) agreed that none of the activities listed above fall within the practice of engineering. All the Items under Section A and all but one of the Items under Section B were found to be related to completeness and general compliance with the requirements of the state stormwater program.

Only one of the work items, Item (v), “Review calculations provided in the application to assure they are compliant with rule requirements for volume, draw down time, pre/post flow rates, average depth, etc.,” caused some concern during the Committee’s February 11th discussion. The Committee advised the Stormwater Permitting Program that implementing this work item requires caution on the part of the reviewer. First, the reviewer must be certain that the calculations being reviewed clearly relate to a clearly stated requirement in the stormwater design manual, statute or rule. Second, the reviewer must describe apparent deficiencies in calculations rather than prescribing the solution the PE should take to correct the deficiency.

The Engineering Committee provided written comments and guidance in determining when a review falls within the definition of the practice of engineering in accordance with G.S. 89C-3(6). See Appendix A for the committee’s complete response. The committee found that:

“If reviews are for compliance with regulations, or for determination of the completeness of the submittal package, then this effort does not fall within the practice of engineering. However, if the reviewer has a concern about design assumptions, design concept or the design itself, then the review and associated response is defined as engineering and must be performed by a PE or someone under the PE’s responsible charge.”

Please note that the stormwater program rules require that designs be done by an appropriately licensed professional and does not specify a particular profession. Besides Professional Engineers, Licensed Soil Scientists and Professional Landscape Architects may also submit stormwater designs to the state stormwater program for review and approval. In these cases, state stormwater staff will seek to provide the same courtesy to these licensed professionals as we extend to PEs.

(3) Develop recommendations for ensuring that work activities constituting the Practice of Engineering are conducted with the appropriate level of oversight.

The Stormwater Permitting Program is planning a multi-pronged approach to ensure that work activities conducted by stormwater reviewers who are not PEs do not stray into the practice of engineering:

1. By April 15, 2015, the Stormwater Permitting Program will train staff to ensure that permit applications are reviewed only for completeness and for compliance with clearly stated requirements in the statutes, rules and stormwater design manual. The training will also cover how staff should describe apparent deficiencies in calculations rather than prescribing the solution the PE should take to correct the deficiency. Non-PE reviewers will be informed about the correct procedure for reviews when the design assumptions, concept or the design itself appears to be a concern. See Item (2) below.
2. If concerns arise where a non-PE reviewer is concerned about design assumptions, concept or the design itself, then he or she will consult with a PE on staff before discussing the issue with the applicant or issuing a request for more information letter. In these cases, the reviewer will document concurrence with the PE on staff. The applicant will have the option of discussing the design issue with the PE on staff that was consulted in the review.
3. After the Minimum Design Criteria for stormwater control measures are codified in rules, the Stormwater Permitting Program will update review checklists to ensure that reviews do not fall within the practice of engineering by individuals who are not PEs.
4. If a stormwater plan review is not conducted by a PE, then the applicant may request review by a PE on staff per DENR's informal review process.
5. The Stormwater Permitting Program will encourage the regulated community to inform the Stormwater Permitting Program of specific instances when they feel that the practice of engineering is being performed by reviewers who are not licensed PEs.

APPENDIX A: Letter from the Engineering Committee of NCBELS



NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS

4601 Six Forks Rd Suite 310
Raleigh, North Carolina 27609

February 20, 2015

Nils W. Joyner, Jr., PLS
Chair
Carl M. Ellington, Jr., PE
Vice-Chair
Richard M. Benton, PLS
Secretary

David L. Pond, PE
Teresa H. Ratcliff, PE, PhD
Stacey A. Smith, PE
Linda A. Thurman, Public
Andrew G. Zoutewelle, PLS

Andrew L. Ritter
Executive Director

Mr. William E. Toby Vinson, Jr., PE, CPESC, CPM
NCDENR-Division of Energy, Mineral, and Land Resources
Land Quality Section
1639 Mail Service Center
Raleigh, NC 27699-1639

Re: Stormwater Permitting Program
Regulatory Reform SL2014-120, Section 29.(f) Pilot Study

Dear Mr. Vinson:

At your request from your emails and our meeting, the Inventory of Work Activities that you provided for the Stormwater Permitting Program was considered by the Engineering Committee of the NC Board of Examiners for Engineers and Surveyors.

You had submitted the request to comply with the requirements of SL2014-120, specifically to satisfy Section 29.(f) as to assistance and cooperation of our Board. That section reads as follows:

"No later than March 1, 2015, the Department of Environment and Natural Resources shall complete a pilot study on the Pretreatment, Emergency Response and Collection System (PERCS) wastewater collection system permitting program and the stormwater permitting program and perform the following activities with the assistance and cooperation of the North Carolina Board of Examiners for Engineers and Surveyors and the Professional Engineers of North Carolina:

- (1) Produce an inventory of work activities associated with the operation of each regulatory program.
- (2) Determine the work activities identified under subdivision (1) of this subsection that constitute the Practice of Engineering.
- (3) Develop recommendations for ensuring that work activities constituting the Practice of Engineering are conducted with the appropriate level of oversight."

The Inventory of Work Activities that you provided for the Stormwater Permitting Program was reviewed by the Committee. The application reviews identify procedures for review. The Committee provides the following comments and guidance on determining when the review falls within the definition of the practice of engineering in G.S.89C-3(6) and

Telephone
(919) 791-2000

FAX
(919) 791-2012

EMAIL Address
ncbels@ncbels.org

WEB Site
www.ncbels.org

APPENDIX A: Letter from the Engineering Committee of NCBELS

Mr. William E. Toby Vinson, Jr., PE, CPESC, CPM
February 20, 2015
Page 2

requires review by the PE or an employee under the PE's responsible charge and direct supervision:

If reviews are for compliance with regulations, or for determination of the completeness of the submittal package, then this effort does not fall within the definition of engineering. However, if the reviewer has a concern about design assumptions, design concept or the design itself then the review and associated response is defined as engineering and must be performed by a PE or someone under the PE's responsible charge. Also, if at any time a PE challenges a reviewer's determination that a design does not comply with a regulation then the DENR PE in responsible charge needs to respond.

For any follow-up and questions please contact me at aritter@ncbels.org or (919) 791-2000 ext. 101.

For the Board,



Andrew L. Ritter
Executive Director

DST/