



North Carolina Coastal Federation

Working Together for a Healthy Coast

April 22, 2016

Ronnie Smith
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69 Darlington Avenue
Wilmington, North Carolina 28403

Emailed to: Ronnie.d.smith@usace.army.mil

RE: North Carolina Coastal Federation Comments on Draft Regional Permit 197800080 (RGP80) for bank stabilization

Dear Mr. Smith:

The Southern Environmental Law Center has submitted detailed comments on our behalf on RGP80. The North Carolina Coastal Federation submits these additional comments and questions for consideration:

1. RGP80 will result in more than "minimal" impacts and is not compliant with the CWA.

This regional general permit is not consistent with the Clean Water Act. It is being proposed pursuant to Section 404(e)(1) of the Clean Water Act, 33 U.S.C. § 1344(e)(1), which states in pertinent part:

*... the Secretary [of the Army, acting through the Corps] may, after notice and opportunity for public hearing, issue general permits on a State, regional, or nationwide basis for any category of activities involving discharges of dredged or fill material if the Secretary determines that the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, **and will have only minimal cumulative adverse effect on the environment.** Any general permit issued under this subsection shall (A) **be based on the guidelines described in subsection (b)(1) of this section**, and (B) set forth the requirements and standards which shall apply to any activity authorized by such general permit. (Emphasis added.)*

The RGP80 renews a permit issued in 2011. Neither permit as issued by the Wilmington District requires pre-construction notification when used in the 20 coastal counties of North Carolina. As a result, the Corps of Engineers has no data or written records that



provide it or us with information on how many times this permit has been used, how many acres of wetlands have been effected by its use, the direct and indirect cumulative impacts of these thousands of projects, and if the best practical alternatives have been used. Therefore, there is no factual basis to rely on from the past use of this permit in North Carolina to evaluate the impacts—direct and cumulative—likely to flow from the proposed renewal. Nor does the renewal notice provide any factual basis for evaluating scientific findings made since the original 2011 issuance concerning the relevant factual inquiries the Corps is required to consider, cited in the SELC letter.

The Wilmington District relies on a general permit issued by the N.C. Division of Coastal Management under the state’s regulatory authority, and assumes that compliance with this state general permit ensures that the federal requirements in RGP80 are being met. As discussed in this letter and in comments submitted by the Southern Environmental Law Center, the legal authority of the state to review and enforce federal conditions within the Corp’s general permit does not exist for many of the federal permit conditions, and there are no written records maintained by the District that collect data, and then evaluates the cumulative adverse effects of bank stabilization around the estuaries of North Carolina.

Scientific peer reviewed and agency analysis conducted in North Carolina and around the nation in recent years clearly document that there are significant cumulative adverse effects resulting from hard bank stabilization around estuaries. These impacts result in the degradation or complete loss of some of the most productive saltwater wetlands in the world for fisheries and are clearly more than the “minimal” impacts allowed for authorization of a general permit. There are available “practicable alternatives” which would have “less adverse impact on the aquatic ecosystem” and which therefore preclude the continued blanket authorization of hardening without individualized consideration of the likely impacts.

In its 2015 publication entitled ***Guidance for Considering the Use of Living Shorelines*** the National Oceanic and Atmospheric Administration (NOAA) has found (full publication is attached to this letter and submitted for the agency record for consideration in this review):

Bulkheads have adverse effects on adjacent habitats. The vertical face of bulkheads reflects wave energy, resulting in erosion along the toe of the structure (U.S. Army Corps of Engineers 1981, Bozek and Burdick 2005, National Research Council 2007). Shoreline hardening from structures like bulkheads can cause adverse coastal habitat impacts, including the loss of shallow intertidal bottom substrate from scour, loss of fringing marshes, decline of intertidal or shallow water habitats like submerged aquatic vegetation (SAV), and a decrease in benthic abundance and diversity (Douglass and Pickel 1999, OSTP 2015, Patrick et al. 2014, Seitz

et al. 2006). Treated wood bulkheads may also contain chemicals that can leach into the coastal environment (Weis and Proctor 1998).

Similar and consistent scientific findings regarding the adverse impacts of hard stabilization on the health and productivity of estuaries are now a common theme throughout the scientific literature on estuarine shorelines. This literature is summarized and reported in public comments that have been submitted on this proposed permit by highly respected and accomplished scientists. Since these other comments provide citations to the scientific literature, the Coastal Federation will not provide those footnotes in this letter.

Thousands of general permits have been issued by the N.C. Division of Coastal Management for hard stabilization along estuarine shorelines. These permits are geographically expansive. The miles of estuarine shoreline altered by bulkheads and rip-rap within the estuaries of North Carolina was documented by the N.C. Division of Coastal Management in 2012 (see attached report). The overall numbers are dramatic, especially in urbanizing areas of the coast.

Overall, 7.56 percent of the estuarine shoreline in N.C., or about 805.7 miles, has been stabilized according to this report. Of this percentage, approximately 95 percent of modified shorelines have been hardened with bulkheads or rip-rap. About 70 percent of the hardened shorelines have bulkheads, and about 25 percent of these areas are covered with rip-rap.

Under the 404(b)(1) guidelines, the federal Clean Water Act requires the selection of the best practical environmental alternative to fulfill a project's purpose. Given that requirement, it is impossible to conclude that a federal and state permit process that results in 95 percent of modified shorelines being hardened with bulkheads and rip-rap complies with this regulatory mandate for selecting the best practical environmental alternative. The majority of shorelines along the N.C. coast could be stabilized with other non-hardening strategies, and would be considered practical and the best environmental alternative under the federal guidelines.

Within areas of our coast experiencing population growth and high demand for shoreline development, the percentage of shoreline modification and hardening is much higher. For example, approximately 60 percent of the estuarine shoreline in the Town of Topsail Beach is stabilized. Where shoreline development is intense, the percentage of shoreline that is hardened and stabilized is equally intense.

The 800 miles of already hardened shoreline is not the most significant direct adverse impact of that hardening: Most natural estuarine shorelines in N.C. are fringed by saltmarshes. If you assume that these fringing saltmarshes average about 20 feet wide (and, again, the proposed permit is not accompanied by facts and analysis, so reasonable, experienced based assumptions are necessary), then it can be estimated

from the Division's shoreline data that about 1,940 acres of saltmarsh seaward of stabilized shorelines have been lost, or will be eroded away over the next few decades just from the hardening that has already occurred. Renewal of the permit will expand this destruction into new areas.

N.C. operates a program that sells mitigation credits for salt marsh. In its mitigation program, the State charges private parties \$160,000 to mitigate each acre of saltmarsh that is lost. Therefore, the economic value placed by the state on 1,940 acres of saltmarsh is approximately \$310,400,000. Given the economic value of the acreage of saltmarsh being affected by shoreline stabilization, the cumulative environmental and economic losses from shoreline stabilization can no longer be characterized as "minimal."

It is important to evaluate the Division's estimates of shoreline hardening in the context of the ecology of N.C.'s many small estuaries. In addition, it is vital to evaluate the pattern of coastal development that is taking place around these sounds, creeks and rivers. The health and productivity of many of these small estuaries are highly influenced by localized land use activities that occur along the shorelines of these waters, and not from land use activities that are in different watersheds and coastal regions.

For example, many of the small coastal sounds south of Cape Lookout (such as Bogue Sound) are classified as "marine lagoons" because their watersheds are very small. Thus, the health of saltmarsh along the shorelines of these small sounds, tidal creeks, and small coastal river systems is a significant factor in the productivity of each of these "isolated" estuarine systems. Under the federal Clean Water Act, the Corps is obligated to protect existing uses and water quality of every sound, bay, creek and tributary. These water quality requirements are in force for each water body, and not based upon some evaluation of "net" impacts to an entire State's coastline. And so while it is true that bulkheads that line a majority of the estuarine shoreline of the Town of Topsail Beach in Pender County will cause no measurable harm to fisheries in Albemarle Sound that is many hundreds of miles away, it is not true that the cumulative effects of stabilizing 60 percent of the Town's shoreline can be assumed to have "minimal" impact on adjacent and nearby Topsail Sound. The Corps is obligated to evaluate the impact of its general permit for bank stabilization on a town-by-town, county-by-county, and estuary-by-estuary basis.

The N.C. Coastal Resources Commission has adopted sea level rise predictions for the next three decades that indicate that there will be between a six to eight inch rise in sea level. Most marine scientists and coastal engineers agree that even this very conservative estimate of sea rise is still large enough to result in significant erosion of saltmarshes that are currently seaward of bulkheads and rip-rap, in areas where those ecosystems have not yet been destroyed by the adverse effects of hardening. Sea level rise combined with on-going erosion from waves cause by fetch, storms and boats will

further degrade fringing saltmarshes, and cause estuarine shorelines that are walled off with hard stabilization to become a biological desert. Once marshes are walled off from high ground, they can no longer migrate and adjust to erosion forces.

The Coastal Federation believes that the impact of hard stabilization in some of North Carolina coastal estuaries is already significant. If the Corps does not agree with this conclusion, then we ask the Corps to provide the scientific studies, its data, and its analysis that would result in a conclusion that hard stabilization is having "minimal" impacts. This evaluation should have been provided as part of the public notice for this permit. It is unacceptable that there is no agency record or analysis for how cumulative impacts from this existing and proposed general permit were evaluated. This analysis, to be valid, should be provided by each stream segment in the coastal counties. Stream segments are numbered and listed under the water quality classification system by N.C. Division of Environmental Quality. To fully understand and evaluate the differential impact of hardening in different aquatic ecosystems, cumulative impacts need to be evaluated separately for waters that are classified SA, SB, SC, ORW and HQW. Please provide this analysis and data for the record of this proceeding.

2. The Notice of renewal of RGP80 does not include any factual basis.

As noted above, RGP80 does not require pre-construction notification to your agency if the project is within a coastal county covered by the Coastal Area Management Act. Therefore, over the years bulkheads and other forms of hard stabilization have been built on many miles of estuarine shorelines in North Carolina without any notification or review by your agency. How many projects within the 20 coastal counties has RGP80 authorized since it was reissued in 2012, and since it was first issued by the District? How many feet of stabilization has RGP80 authorized since it was reissued in 2012, and since it was originally authorized by the District? Where (in what classifications of waters) have these authorized stabilization projects occurred? What are the factual assumptions about future use of RGP80, by water classification type? What studies does the Corps rely on to conclude that the impacts of RGP80 will be "minimal?"

3. N.C. Division of Coastal Management cannot enforce all of the federal requirements of RGP80.

RGP80 contains definitions, special conditions and general conditions that are not requirements of the "General Permit for Construction of Bulkheads and Riprap Revetments for Shoreline Protection in Estuarine and Public Trust Waters and Ocean Hazard Areas" administered by the N.C. Division of Coastal Management. These include a definition for erosion as well as requirements that:

(a) The permit can only be used on shorelines "exhibiting erosion;"

- (b) Prohibits construction or placement of structures nor the discharge of fill material "within jurisdictional wetlands;"
- (c) Stabilization activities undertaken water ward of existing jurisdictional wetlands are limited to the placement of riprap and must comply with eight specific special conditions stated in the permit;
- (d) The general permit does not authorize any activity that will adversely affect any threatened or endangered species or a species proposed for such designation, or their designated critical habitat as identified under the Federal Endangered Species Act;
- (e) The permittee must maintain any structure or work authorized in good condition;
- (f) The permittee is not relieved of the need to maintain the structure in good condition if the permittee abandons the structure or work; and
- (g) The permittee must inform any subsequent owner of all activities undertaken under the authority of the permit and provide the subsequent owner with a copy of the terms and conditions of this permit.

The table below provides a comparison between RGP80 and the state general permit.

Permit Requirements Based Upon Statutory Authority of Administering Agency	Regional Permit 197800080	CAMA General Permit for Bulkheads	Are Federal Requirements Fulfilled by Corps Reliance on State General Permit?
Pre-Construction Notification	Not in 20 coastal counties. Reliance on CAMA General Permit to administer federal conditions.	Yes	Only for Conditions within the State's Legal Authority.
Definition of Erosion	Yes	No	No
Only used for shorelines exhibiting erosion	Yes	No	No
Prohibits Construction of Bulkheads within 404 jurisdictional wetlands	Yes	No	No
Prohibits Discharge of Fill Material within 404 jurisdictional wetlands	Yes	No	No
No activity which would adversely affect any	Yes	No	No

threatened or endangered species or a species proposed for designation, or their designated habitat as identified under the Federal Endangered Species Act			
Compliance with 404(b)(1) guidelines	No	No	No
Stabilization activities undertaken water ward of existing jurisdictional wetlands are limited to the placement of riprap and must comply with eight specific special conditions	Yes	No	No
Permittee must maintain any structure or work authorized in good condition	Yes	No	No
Permittee is not relieved of the need to maintain the structure in good condition if the Permittee abandons the structure or work	Yes	No	No
Permittee must inform any subsequent owner of all activities undertaken under the authority of the permit and provide the subsequent owner with a copy of the terms and conditions of this permit	Yes	No	No

If the above table is incorrect where it concludes that Federal requirements are not fulfilled by Corps reliance on the State general permit, please explain how those requirements are being met, and the statutory authority for the State's alleged powers to enforce those requirements.

4. NCDCM cannot protect all 404 wetlands.

The condition in RGP80 that prohibits construction or placement of structures or the discharge of fill material "within jurisdictional wetlands" is not being enforced under the current federal general permit process. The Corps does not have procedures in place to implement this condition within the 20 coastal counties because it does not require pre-

construction notification before RGP80 is used. The Corps is erroneously relying on the state's general permit for bulkheads and the general 401 Certification to fulfill its federal requirement.

Even though the N.C. Division of Coastal Management says that it discourages bulkheads in front of 404 jurisdictional wetlands, its statutory and regulatory authority to implement this condition is non-existent. This includes major regulatory differences between how the state and federal agencies delineate what they define as jurisdictional wetlands.

The Division's statutory authority to regulate "development" under the Coastal Area Management Act (CAMA) is restricted to Areas of Environmental Concern (AEC). CAMA specifically gives the Division authority to develop an AEC for coastal wetlands (N.C.G.S. 113-229(n)(3)). The CRC has never designated an AEC for non-tidal wetlands using its other AEC authorities.

The state-designated AEC for estuarine shorelines specifically references coastal wetlands. It states that development shall not have significant adverse impacts that would "alter coastal wetlands...." Another use standard for this AEC exempts from permit requirements: "Grading, excavation and landscaping with no wetland fill except when required by a permitted shoreline stabilization project." This state development standard indicates that it is acceptable to fill wetlands when installing bulkheads, a direct conflict with wetland "safeguards" in RGP80.

State use standards for bulkheads (when authorized by a CAMA major permit) state: "Bulkheads shall be constructed landward of coastal wetlands in order to avoid significant adverse impacts to the resources." Thus, for major CAMA permits, there are no adopted regulatory safeguards for non-tidal wetlands.

The state bulkhead general permit only references the existence of "wetland vegetation" which relates directly back to the state definition of coastal wetlands. The federal definition of wetlands deals with soils, hydrology and vegetation, and jurisdictional determinations of federal wetlands are complex since many factors must be evaluated over time (through the growing seasons) and analyze past land drainage practices (when hydrologic alternations might have occurred with or without permits) and many other factors. In cases where land has been altered without a permit, the federal wetlands delineation manual requires a "special case" analysis. Federal wetland delineations cannot be conducted in just one site visit, which is how the state general permit is administered. The state does not require wetland delineations as part of its general permit process.

Neither the Corps nor the state water quality agencies are notified prior to issuance of the state general permit for bulkheads. Since no Corps-approved wetland delineations are prepared and approved as part of the federal or state's general permit processes,

the Corps has no data or records to evaluate the impact of this general permits on its jurisdictional wetlands.

The state's general permit for bulkheads was never intended to place the burden on state agencies to protect 404 jurisdictional wetlands. That is why the state's general permit only references the presence of "wetland vegetation." If the state was to extend its authority beyond the species of coastal marsh plants explicitly protected by N.C. statute, then no state general permits could be issued for bulkheads if the estuarine shoreline has gum trees, myrtles, cat-tails, frag, or hundreds of other types of "wetland vegetation." Once the state commits to extend its protection of wetlands beyond coastal marsh, it would then have to implement the federal wetland delineation manual to determine where to exert its jurisdiction consistent with federal requirements.

Summary of Recommendations:

To comply with the requirements of the federal Clean Water Act, the Coastal Federation recommends the following:

- (a) Pre-construction authorization should be required by all applicants unless the N.C. Division of Coastal Management's general permit is amended to include all of the permit conditions listed in the federal regional permit, and it is clear that state government has the legal authority to administer and enforce these conditions;
- (b) The regional permit should authorize living shorelines with appropriate conditions, many of which have already been identified by the N.C. Division of Coastal Management in its general permit for living shorelines (see attached state general permit);
- (c) The regional permit should include a condition that requires that the applicant demonstrate that the best practical environmental alternative will be selected and used, and the Corps should make a written finding after receiving pre-construction notification that the bank stabilization method selected to use is the best practical environmental alternative for the project site; and
- (d) Since this is a general permit process, RGP80 should include an explicit condition that states that when there are uncertainties or a lack of agreement regarding the best practical environmental alternative for a specific project site, the proposed project is not eligible for authorization under a general permit. In these cases, the CAMA major permit process can be used to allow for full agency review and analysis, and public notice. Complicated situations where there is uncertainty about the best methods to achieve bank stabilization should be evaluated by using Regional General Permit 198000291 or the federal individual 404 permit rather than this expedited general permit.

Please do not hesitate to contact me if you have any questions regarding this letter. Thank you in advance to the answers and responses to questions we have asked to help clarify how the Corps has developed this draft permit.

With best regards,

A handwritten signature in black ink that reads "Todd Miller". The signature is written in a cursive style with a long horizontal flourish at the end.

Todd Miller
Executive Director

Attachments:

1. Guidance for Considering the Use of Living Shorelines, NOAA, 2015.
2. North Carolina Estuarine Shoreline Mapping Project, 2012 Statistical Reprint, January 2015, N.C. Division of Coastal Management.
3. General Permit for the Construction of Riprap Sills for Wetland Enhancement in Estuarine and Public Trust Waters