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April 25, 2016

Colonel Kevin P. Landers, Sr.

Wilmington Regulatory Division Office

69 Darlington Avenue

Wilmington, NC 28403

ATTN: Ronnie D. Smith, USACE

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

RE: Draft regional permit 197800080 (RGP080) for bank stabilization

Dear Colonel Landers,

Restore America's Estuaries submits these comments concerning Regional General Permit 80 (RGP80). Restore America's Estuaries is a certified 501(c)(3) nonprofit organization dedicated to the protection and restoration of bays and estuaries as essential resources for our nation. We are an alliance of ten conservation organizations, including the North Carolina Coastal Federation, which collectively has engaged more than 250,000 volunteers nationwide to restore critical estuarine habitats.

While the permit in question is specific to North Carolina, we believe that it continues to support an ongoing national practice, shoreline hardening, that is harmful not only to the state but to the country's shorelines as whole due to the proposed permit conditions. As such, we strongly encourage you not to issue RGP80 in its current form.

Extensive research has shown that shoreline hardening techniques, such as those included in RGP80, increase erosion, particularly to neighboring parcels, shifting the erosion problem to neighbors downstream. A domino effect then occurs on adjacent parcels creating the perceived need for even more hardening. A recent report<sup>1</sup> indicated that 14 percent of our nation's shorelines are already hardened, and in some areas of North Carolina, the percentage of armored shorelines exceeds 35 percent<sup>2</sup>. RGP80 would continue and reinforce this trend, causing undue harm to the highly valuable coastal and marine ecosystems of North Carolina.

Not only does increased shoreline hardening not solve the problem of coastal erosion, but it negatively impacts the abundance and diversity of marine life, with a recent report indicating that hardened shorelines support 23 percent fewer species and 45 percent fewer organisms than natural shorelines.<sup>3</sup> These losses translate into negative impacts on

## Robert Stokes

Galveston Bay Foundation

Jeff Benoit President and CEO

Restore America's Estuaries

<sup>1</sup> Rachel K. Gittman, et al., Engineering Away our Natural Defenses: an Analysis of Shoreline Hardening in the US, 13(6) FRONT ECOL. ENVIRON., 301, 306 (2015).

<sup>2</sup> NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT, NORTH CAROLINA ESTUARINE SHORELINE MAPPING PROJECT 2012 STATISTICAL REPORTS 26 (2015), available at http://ncdenr.s3.amazonaws.com/s3fspublic/Coastal%20Management/GIS/Data/ESMP%202012%20Report%20FINAL%20013020 15.pdf.

<sup>3</sup> Rachel K. Gittman et al., Ecological Consequences of Shoreline Hardening: A Meta-Analysis (in review), Bioscience.





commercially and recreationally valuable fishes and crustaceans and loss of resilience to storms<sup>4</sup>, putting livelihoods and property at risk.

RGP 80 contributes to the continued hardening of our shorelines by allowing construction of up to 500 linear feet of bulkhead or seawall without the rigorous environmental and engineering review required of an individual permit. Without this review, USACE cannot properly account for and review the cumulative impact of shoreline hardening and its effects on coastal and marine ecosystems. Before such abbreviated permit processes are allowed to continue, the USACE should carry out a thorough evaluation of the cumulative impacts of armoring on coastal ecosystems and habitats.

The Presidential Memorandum on natural infrastructure and ecosystem services, issued October 7, 2015, makes it the policy of the Federal government to incorporate the ecosystem services value of "green" infrastructure into all Federal decision-making. As such, the USACE should be considering ecosystem benefits of erosion control methods when issuing its RGPs. Nature-based infrastructure solutions, otherwise known as "soft" stabilization or living shorelines, among other names, provide myriad ecosystem service benefits, including habitat, flood control, and water filtration, while shoreline hardening generally takes those benefits away. The USACE should adopt practices and approaches, including in its issuance of RGPs, which embrace and encourage the use of methods that promote habitat benefits and services while addressing erosion. These techniques incorporate living aspects, such as marsh grass and oyster reef, (and potentially "hard" elements to varying degrees) to provide shoreline stabilization while also offering environmental benefits. Every site should be assessed for its suitability for a "soft" or hybrid approach first and then be allowed the "hard" option, such as those outlined in RGP80, only as a last solution. The RGP80 as currently written requires no examination or consideration of other options bur rather allows a property owner to use riprap as the first option. Given the wide variety of initiatives within the USACE, including the Systems Approach to Geomorphic Engineering (SAGE) and Engineering with Nature (EWN), both of which encourage the use of hybrid approaches and working with nature, we would hope to see this philosophy extend to the development of permitting language.

We appreciate the opportunity to provide comment on this important matter.

Sincerely,

Jeffrey R. Benoit

President

<sup>&</sup>lt;sup>4</sup> Katie K. Arkema et al., Embedding Ecosystem Services in Coastal Planning Leads to Better Outcomes for People and Nature, 112 Proceedings of the National Academy of Sciences of the United States of America 739–739 (2015); Katie K. Arkema, et al., Coastal Habitats Shield People and Property from Sea-Level Rise and Storms, 3 NATURE CLIMATE CHANGE 1–6 (2013); Rachel K. Gittman, et al., Marshes with and without Sills Protect Estuarine Shorelines from Erosion Better than Bulkheads During a Category 1 Hurricane