Guidebook to Living Shoreline Permitting in North Carolina, Georgia, Florida, and Mississippi

Key Takeaways from Our Research

The research that went into developing this guidebook was extensive. It included interviews with project proponents, regulators, and other stakeholders, as well as documentary legal and policy research and participation in several workshops and conferences. Thus, in addition to providing a tool to help project proponents to better understand the processes for permitting and regulatory review, it also seemed worthwhile to reflect on the overall findings from that research and provide insights about opportunities for improvements to policy and practice.

Recommendations for project proponents:

- Understand that, at the end of the day, regulatory agency staff are looking for ways to permit your project.
- Early review of state and federal general permit provisions, and efforts to design projects around those conditions, will make permitting and regulatory review more straightforward. Note, however, that general permits are only useful for small-scale projects.
- Early engagement with key regulatory staff will enhance efficiency in permitting and regulatory review. Request pre-application informal conferences with:
    - State coastal zone management program consistency coordinator;
    - State regulatory/permitting staff;
    - U.S. Army Corps of Engineers district office regulatory staff;
    - National Oceanic and Atmospheric Administration (NOAA) Fisheries staff; and
    - U.S. Fish and Wildlife Service (FWS) Ecological Services.
- Recognize that coastal zone consistency determinations take into account many viewpoints and concerns – environmental, social, and economic. Federally approved coastal zone management programs cover a variety of issues including habitat conversion and tradeoffs, opinions of neighboring landowners and businesses, and climate change resilience. Be proactive about addressing those concerns in conversations with and documentation provided to coastal zone consistency coordinators.
- Budgeting adequate time for regulatory review and permitting is critical for ensuring that approvals align with funding authorizations and spending cycles. Recognize that larger or more complex projects will typically involve longer regulatory review and permitting timelines, with requests for additional information from permit-seekers that may demand additional research and outside experts.

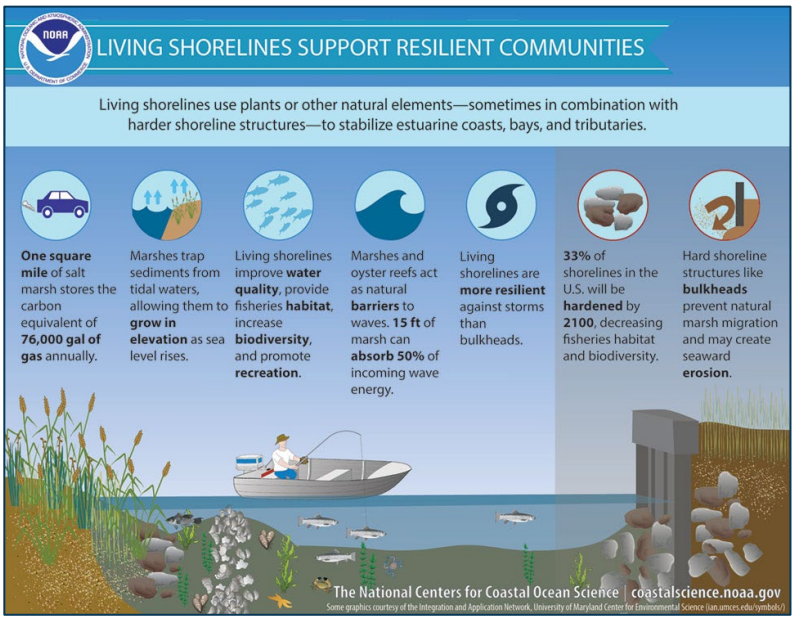
Recommendations for policymakers

- Permitting regimes originally designed to manage development may be unsatisfactory as we move into an era of solving coastal climate challenges with natural infrastructure. “Off-ramps” to alternative permitting processes for nature-based solutions should be considered. Priority review for projects that are substantially nature-based should also be considered.
- Convene practitioner advisory groups to better understand their experiences with permitting. Use that information to inform and prioritize the development of agency-wide guidance or regulatory reform to address key issues such as sea level rise, habitat conversion/trading, or other topics that warrant consistent treatment across projects.

- Examine whether the linear foot limitations on general permits are necessary.
- Creative alignment of state and federal general permits can simplify permitting – see, e.g., USACE Wilmington District Regional General Permit 1536 and USACE Jacksonville District State Programmatic General Permit VI.
- Investing in training and dedicated regulatory staff can improve familiarity with living shoreline design and enable effective and efficient permit processing.
- Interagency coordination teams that are designed around specific geographies and project types (e.g., for living shorelines or, more broadly, ecological restoration in a particular area) can be an effective way to encourage rapid processing – see, e.g., San Francisco Bay Restoration Regulatory Integration Team[1] and Puget Sound Federal Leadership Task Force.[2]

Executive Summary

In the southeastern coastal United States, Department of Defense (DOD) installations and surrounding communities face significant challenges from coastal erosion, flooding, and sea-level rise. Waves driven by wind, boat traffic, and storms can destroy fragile landforms along the coastline, not to mention sea walls and other traditional or "grey" infrastructure. On many installations and in their surrounding communities, this erosion can put important infrastructure at risk of failure – from runways to access roads to utility lines – creating risks to military readiness, training activities, and other ongoing support operations. Coastal erosion also alters ecological systems and functions that might make environmental compliance obligations more difficult, for instance those related to endangered species and water quality management. Owing to these risks, DOD's Defense Climate Assessment Tool (DCAT), which is used across the entire DOD enterprise to develop screening-level analysis of climate vulnerability for any given installation, declares coastal erosion "a significant problem." That said, DOD recognizes coastal erosion as a problem that "may be reduced or eliminated through structural and nonstructural measures."[3]



A nature-based solution to the issue of coastal erosion that is gaining ground in both the public and private sector is the construction of living shorelines. The term "living shorelines" encompasses a variety of techniques that can be used in place of a rigid bulkhead or other hard structure. As the name suggests, living shorelines typically involve the use of native material such as oyster reefs and/or saltmarsh cordgrass (*Spartina alterniflora*) to reduce wave and tidal energy. They can involve some degree of grading to achieve moderately sloped transition from intertidal areas to uplands and maintain a natural connectivity at the land-water interface. With these design features, living shorelines not only reduce erosive forces but also enhance biodiversity and increase heterogeneity of habitat features. Thus, the array of benefits from living shoreline projects inure to both the landowner – from erosion control – and to surrounding communities – through ecosystem services benefits. Research also suggests that living shorelines are a smart financial

investment as compared to a wooden bulkhead that would require the landowner to incur significantly more costs over the long term due to maintenance and replacement needs.[4]

Several notable examples of living shorelines that support the military mission at DOD installations in the southeast region have come up in this research. At Marine Corps Air Station Cherry Point in North Carolina, for example, installation staff have planned and obtained permits to construct a living shoreline along the Neuse River. It will be more than two miles long, providing critical protection to an eroding shoreline while also improving water quality and increasing habitat. The project involves many partner organizations involved in design and funding the project, including North Carolina Coastal Federation (NGO leaders in design and construction of living shorelines in North Carolina), the National Fish and Wildlife Foundation, DOD's Readiness and Environmental Protection Integration (REPI) Program, and the Eastern North Carolina Sentinel Landscapes Partnership.

MCAS Cherry Point Living Shoreline Project

From top left, going clockwise: Aerial view showing shoreline erosion at one stretch of the shoreline; shoreline view showing escarpment and fallen vegetation; initial plans for phased approach, showing overall project footprint. All photos from April 2021 Environmental Assessment and Finding of No Significant Impact.

When developing a living shoreline project, one source of uncertainty for planners is the regulatory landscape – the basic contours may be apparent, but without a more detailed understanding of the path forward in navigating various permitting and regulatory review requirements, projects can become mired in delays. This guidebook is intended to help

avoid those pitfalls by providing useful background information on relevant agencies, administrative processes, and the underlying laws in four key states in the SERPPAS area: North Carolina, Georgia, Florida, and Mississippi.

For each state, this guidebook describes:

- The state coastal zone management program;
- State permitting requirements related to water quality and wetlands protection;
- State public trust responsibilities for submerged lands;
- Federal permitting under Clean Water Act Section 404; and,
- Key design aspects of living shorelines that will affect the ability to obtain necessary permits and approvals.

This is not a comprehensive guide to the permitting and regulatory review process. For instance, a living shoreline project may necessitate a documented environmental analysis under certain state laws (e.g., Georgia Environmental Policy Act, North Carolina State Environmental Policy Act). The specific requirements of these laws are not described herein; nor are the mandates of the National Environmental Policy Act (NEPA) described. A reader should, nevertheless, find this document useful as a tool for planning how to approach the most challenging permitting processes in each of the covered states.

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[1] San Francisco Bay Restoration Authority, "San Francisco Bay Restoration Regulatory Integration Team (BRRIT)," *at* https://www.sfbayrestore.org/san-francisco-bay-restoration-regulatory-integration-team-brrit.
[2] US EPA, "Puget Sound Federal Leadership Task Force," *at* https://www.epa.gov/puget-sound/puget-sound-federal-leadership-task-force.
[3] Pinson et al., U.S. Army Corps of Engineers, "DoD Installation Exposure to Climate Change at Home and Abroad," (2021), *at* https://media.defense.gov/2021/Apr/20/2002624613/-1/-1/1/DOD-INSTALLATION-EXPOSURE-TO-CLIMATE-CHANGE-AT-HOME-AND-ABROAD.PDF.
[4] *See* Sicangco et al., Mississippi-Alabama Sea Grant Program, "Cost-Benefit Analysis of a Small-Scale Living Shoreline Project" (July 2021), *at* https://repository.library.noaa.gov/view/noaa/48521.