THE N.C. LIVING SHORELINE STEERING COMMITTEE WORKING STRATEGY FOR THE COOPERATIVE EDUCATION, IMPLEMENTATION, RESEARCH AND MONITORING OF LIVING SHORELINES IN COASTAL NORTH CAROLINA

July 2019

PURPOSE OF THE STEERING COMMITTEE

This working strategy document establishes the general framework for the N.C. Living Shoreline Steering Committee (Steering Committee). The overarching goal of the Steering Committee is to support sustainable management of estuarine shorelines in North Carolina through the promotion and expanded use of living shorelines by fostering strategic cooperation and participation among the partners in the education, implementation, research and monitoring of living shorelines along the coast of North Carolina.

BACKGROUND

Living shorelines as defined by the N.C. Division of Coastal Management are a suite of options for shoreline erosion control that maintain existing connections between upland, intertidal, and aquatic areas which are necessary for maintaining water quality, ecosystem services, and habitat values. Unlike vertical stabilization measures such as bulkheads, living shoreline techniques typically use native materials such as marsh plants, oyster shells, and occasionally minimal amounts of structural materials (e.g. stone) to support stabilization of estuarine shorelines, minimize erosion, and enhance habitats for native species.

According to the N.C. Coastal Habitat Protection Plan (CHPP), biologically productive wetland and shell bottom habitat along shorelines have declined in many areas due to natural erosion and vertical shoreline hardening with bulkheads. Living shorelines protect estuarine shorelines from erosion while perpetuating valuable fish habitat and ecosystem services. The 2017 CHPP update listed living shorelines as a priority issue and encourages more widespread use of living shorelines.

Progress has been made in promoting the use of living shorelines and in documenting their benefits and limitations. This work has been accomplished by local, state and federal agencies, universities and nonprofit organizations. Research demonstrates that living shorelines support a higher diversity and abundance of fish and shellfish than bulkheaded shorelines, effectively limit erosion, and survive storm events. Education and outreach efforts have been done to increase awareness of this technique to the public and contractors. Nonprofit organizations have constructed numerous demonstration projects on both public and private properties. Despite these efforts, living shorelines are still the exception rather than the rule for shoreline stabilization¹. Advancements in permitting and the provision of incentives such as the use of cost-share programs and technical assistance make it easier to design, permit, fund and construct living shorelines.

COMPOSITION OF THE STEERING COMMITTEE

The Steering Committee is comprised of stakeholders from state and federal agencies, universities and nonprofit organizations and include:

¹ Approximately 60 living shorelines have been permitted coastwide, in contrast to 93 miles of bulkheads (based on 2012 DCM mapping). These data will be updated as they become available.

<u>Federal Agencies</u> NOAA National Ocean Service NOAA National Marine Fisheries Service

<u>NC State Agencies</u> Albemarle – Pamlico National Estuary Program (APNEP) Coastal Reserve and National Estuarine Research Reserve Division of Coastal Management Division of Marine Fisheries Division of Water Resources

<u>Universities</u> East Carolina University Duke University Marine Laboratory North Carolina State University-Sea Grant University of North Carolina-Institute of Marine Sciences University of North Carolina-Wilmington

Nonprofit Organizations The Nature Conservancy North Carolina Coastal Federation

ROLES AND RESPONSIBILITIES OF THE STEERING COMMITTEE

The Steering Committee will serve as a sounding board and advisory committee for the Subcommittees. Member's roles will include:

- Provide guidance and recommendations on actions necessary to adequately promote the use of living shorelines
- Promote best practices for how to locate, design, build and maintain living shorelines
- Set priorities for collaboration within the Steering Committee/Subcommittees
- Provide status updates to APNEP, the NC Coastal Federation, the member agencies and the public periodically on progress being made with living shorelines in North Carolina
- Update the Partner Initiatives Document (defined below) yearly
- Develop and implement a strategic plan to promote the use of living shorelines.

MEETING FREQUENCY

The Steering Committee meets at least twice a year with the subcommittees meeting more frequently as needed.

PARTNER INITIATIVES DOCUMENT

The Partner Initiatives Document includes a compilation/list of living shoreline partner actions grouped by Subcommittee topics.

SUBCOMMITTEES

The Steering Committee is comprised of three working Subcommittees. The purpose of the Subcommittees is to increase awareness of ongoing living shoreline activities, share experiences and lessons learned, identify needs and opportunities for collaboration, discuss priorities, and provide a list of partner accomplishments annually. Each Subcommittee reports back to the Steering Committee. Membership of the Subcommittees is open to everyone involved in the respective topic and is at the discretion of the Subcommittee Chair. The Chair of

the Subcommittee is a member of the Committee. Additional Subcommittees may be added as need by the Steering Committee.

- Education and Outreach (Chair: Whitney Jenkins)
 - Examples of Education and Outreach activities include engaging and enhancing communications with contractors, realtors, and homeowners' associations about living shorelines through workshops, educational materials, educational incentives and demonstration projects.
- Implementation and Incentives (Chair: Lexia Weaver)
 - Examples of Implementation and Incentives activities include providing technical, financial and regulatory assistance to encourage the construction of living shorelines. This Subcommittee will track trends in the use of living shorelines and explore ways that partners can further incentivize appropriate living shoreline practices.
- Research and Monitoring (Chair: Carolyn Currin)
 - Examples of Research and Monitoring activities include establishing research priorities, sharing results and lessons learned, recommending geographic priority areas, sharing and standardizing protocols, testing alternative materials for living shoreline construction and documenting costs, identifying social and economic factors affecting shoreline management decisions.

STEERING COMMITTEE MEMBERS

Co-Chair

Trish Murphey, Watershed Manager Albemarle – Pamlico National Estuary Program North Carolina Department of Environmental Quality North Carolina Coastal Reserve and National Estuarine Research Reserve 101 Pivers Island Rd, Beaufort, NC 28516 <u>trish.murphey@ncdenr.gov</u>

Co-Chair

Lexia Weaver, Coastal Scientist and Central Regional Manager North Carolina Coastal Federation 3609 Highway 24 Newport NC 28570 252-393-8185 <u>lexiaw@nccoast.org</u>

Reide Corbett Executive Director, Coastal Studies Institute Dean, Integrated Coastal Programs East Carolina University 850 NC 345, Wanchese, NC 27981 252-475-5428 corbettd@ecu.edu Carolyn Currin, Research Ecologist NOAA National Ocean Service National Centers of Coastal Ocean Science 101 Pivers Island Rd. Beaufort, NC 28516 252-728-8749 carolyn.currin@noaa.gov

Anne Deaton, Habitat Coordinator North Carolina Division of Marine Fisheries North Carolina Department of Environmental Quality P.O. Box 769 Morehead City, NC 28557 252-726-7021 anne.deaton@ncdenr.gov

Lora Eddy, Coastal Engagement Coordinator The Nature Conservancy 701 west Ocean Acres Drive Kill Devil Hills, NC 27948 252-774-4513 Iora.eddy@tnc.org

Rebecca Ellin, Coastal Reserve Program Manager North Carolina Coastal Reserve and National Estuarine Research Reserve Division of Coastal Management North Carolina Department of Environmental Quality 101 Pivers Island Rd Beaufort NC, 28516 252-838-0880 rebecca.ellin@ncdenr.gov

Devon Eulie, Assistant Professor Department of Environmental Sciences University of North Carolina-Wilmington Center of Marine Science 5600 Marvin K. Moss Ln. Wilmington, NC 919-962-3230 eulied@uncw.edu

Daniel Govoni, Policy Analyst Division of Coastal Management North Carolina Department of Environmental Quality 400 Commerce Avenue Morehead City, NC 28557 252-808-2808 daniel.govoni@ncdenr.gov Whitney Jenkins, Coastal Training Program Coordinator North Carolina Coastal Reserve and National Estuarine Research Reserve Division of Coastal Management North Carolina Department of Environmental Quality 101 Pivers Island Rd Beaufort NC, 28516 252-838-0882 whitney.jenkins@ncdenr.gov

Jimmy Johnson, Coastal Habitats Coordinator Albemarle – Pamlico National Estuary Program North Carolina Department of Environmental Quality 943 Washington Square Mall Washington, NC 27889 252-948-3952 jimmy.johnson@ncdenr.gov

Rachel Gittman, Assistant Professor Department of Biology Coastal Studies Institute East Carolina University Greenville, NC 27858-4353 252-328-9986 gittman17@ecu.edu

Karen Higgins, 401 & Buffer Permitting Branch Supervisor Division of Water Resources North Carolina Department of Environmental Quality 1617 Mail Service Center Raleigh, NC 27699-1617 919-807-6360 karen.higgins@ncdenr.gov

Niels Lindquist, Joint Professor The University of North Carolina at Chapel Hill – Institute of Marine Sciences 3431 Arendell Street Morehead City, NC 28557 252-726-6841, ext. 136 <u>nlindquist@unc.edu</u>

Todd Miller, Executive Director North Carolina Coastal Federation 3609 Highway 24 Newport NC 28570 252-393-8185 toddm@nccoast.org Spencer Rogers, Coastal Construction and Erosion Specialist North Carolina Sea Grant University of North Carolina-Wilmington Center of Marine Science 5600 Marvin K. Moss Ln. Wilmington, NC 910-962-2491 rogerssp@uncw.edu

Brian Silliman, Rachel Carson Professor of Marine Conservation Biology Duke University Marine Laboratory Nicholas School of the Environment and Earth Sciences 135 Duke Marine Lab Road Beaufort, NC 28516-9721 252-504-7655 brian.silliman@duke.edu

Paul Wojoski, Senior Environmental Specialist Division of Water Resources North Carolina Department of Environmental Quality 1617 Mail Service Center Raleigh, NC 27699-1617 919-807-6364 paul.wojoski@ncdenr.gov

Twyla Cheatwood National Marine Fisheries Service 101 Pivers Island Rd. Beaufort, NC 28516 252-838-0828 twyla.cheatwood@noaa.gov

EFFECTIVE DATE

July 9, 2019 – Finalized document.

This document is considered a living document and will be subject to updates and adjustments as needed by the Steering Committee.