

Oyster Blueprint 2021-2025
Water Quality Strategy
Draft Recommendations April 2020

Overarching Goal:

Protect and Restore Water Quality in Shellfish Growing Waters that are Both Critically Important and Endangered.

Workgroup members:

Anne Deaton (NCDMF), Erin Fleckenstein (NCCF), James Hargrove (Middle Sound Mariculture), Jonathan Hinkle (LDSI, Inc.), Shannon Jenkins (Shellfish Sanitation, NCDMF), Casey Knight (NCDMF), Lauren Kolodij (NCCF), Andy McDaniel (NCDOT), Todd Miller (NCCF), Natalie Nelson (NCSU), Matthew Stuart (Onslow County), Keith Walls (Falling Tide Oyster Co.), Ted Wilgis (NCCF), Ana Zivanovic-Nenadovic (NCCF)

Background:

Respondents to a recent 2020 Oyster Stakeholder Survey, conducted by the North Carolina Coastal Federation and Oyster Steering Committee, identified water quality as the single greatest threat to oysters in the next 5-10 years. Pristine waters are key to oyster success, both as critical estuarine habitat and to ensure they are safe for human consumption. In many areas where the landscape has been modified by development and drainage ditches and pipes, shellfish waters are closed after moderate and severe rains due to runoff that contains high bacteria levels. About 34 percent of all coastal waters are permanently closed to shellfish harvest because of pollution, and many more areas are temporarily closed more frequently as a result of more polluted runoff. In our prime shellfish growing waters, it's imperative that the volume and rate of runoff resemble levels that occurred naturally before adjacent land uses occurred.

Over the past decade, multiple coastal communities have developed watershed management and restoration plans that determine the extent of hydrologic modifications that have occurred, and identify cost-effective practices that can help to restore or replicate more natural runoff patterns. In this updated Blueprint, lessons learned from these watershed management and restoration efforts are being used to develop a systematic approach to restoring or replicating natural hydrology in our most important and endangered shellfish growing waters in N.C. This effort will result in effective, targeted and collaborative measures to ensure a healthy future for oysters in these watersheds. This work will also demonstrate a strategy that can be replicated in additional future priority watersheds.

Accomplishments thus far:

In 2019, a series of stormwater retrofit projects reduced stormwater runoff that would be caused by one-year, 24-hour rainfall events by 7,700,000 gallons throughout coastal N.C. This work was accomplished through partnerships between the Coastal Federation, Beaufort, Pine Knoll Shores, Swansboro, New Hanover County, Wilmington, UNC-Wilmington and N.C. Wildlife Resources Commission, and N.C. Soil and Water Conservation Districts.

The N.C. Division of Energy, Mineral and Land Resources assembled a Post-construction Program Review committee to evaluate and recommend solutions to improve compliance with existing and often failing permitted coastal stormwater systems. This includes reviewing permit transfer procedures and long-term compliance for low density developments. The Division has also secured a new Permittee Outreach Coordinator to assist.

Partnering with The Pew Charitable Trusts, the Coastal Federation recently engaged in a collaborative project to advance Nature-based Stormwater Strategies to reduce flooding and protect water quality. This statewide effort will result in a comprehensive plan for reducing stormwater plaguing North Carolina surface waters. Four work groups focusing on new development, stormwater retrofits, roadways and working lands are working over the course of 2020 to establish the plan and create implementation strategies.

Draft Recommended Actions:

- 1. Demonstrate Success in Protecting and Restoring Two of the State's Most Important and Endangered Shellfish Growing Waters (Newport River and Stump Sound).** This action will take five years to fully implement, and involve the following steps: (a) Engage key stakeholders (fishers, farmers, landowners, government agencies, academia, experts) into teams to tackle the water quality threats facing these two water bodies; (b) Prepare a comprehensive and easily identifiable and understood watershed management and restoration plan that includes strategies for reducing the volume of runoff and other strategies to maintain, protect and replicate natural watershed hydrology for each of these growing waters and meets the EPA's nine minimum elements for plan development; and (c) Implement the top five cost effective measures identified in the plans in each watershed (implementation should continue after year five).
- 2. Create and Heavily Publicize a Prioritized List of Additional Endangered Shellfish Growing Waters for Targeted Management and Restoration Planning.** Develop maps with ranking criteria based on the following: (a) waters that have existing or potential oyster harvest; and (b) waters that have greatest threats for current and future shellfish closures as indicated by rainfall thresholds that cause current closures. This priority list will be developed and agreed upon by the oyster steering committee during year 1 of the Blueprint. The list will then be updated every five years.
- 3. Secure Formal Recognition and Commitment to Shellfish Growing Water Quality Strategy.** Twice a year the Coastal Habitat Protection Program will lead engagement of state boards such as the Coastal Resources Commission, Environmental Management Commission, Marine Fisheries Commission, Wildlife Resources Commission, and the Albemarle-Pamlico Estuary Partnership to secure formal support and widespread public recognition and buy in to the water quality goals and action strategies. Private non-profits, such as the Coastal Federation, will work directly with locally elected and appointed

officials that represent high priority target watersheds to also secure formal support and widespread public recognition and buy in to the water quality goal and action strategies.

4. **Adopt State Policy for Application of Stormwater Volume Matching Criteria (LID) (when feasible and practical) for State Funded Construction Projects and Showcase Projects Located in Priority Shellfish Growing Waters.** Government agencies have an opportunity to serve as role models by ensuring that state construction projects consider incorporation of low impact design or nature-based techniques into state funded projects where practical and feasible. This recommendation is consistent with an approved recommendation in the N.C. Strategic Plan for Shellfish Mariculture adopted in 2018 and should at a minimum be applied in priority shellfish growing waters.
5. **Integrate Protection and Restoration Strategies into Multiple State Programs.** Incorporate water quality protection and restoration strategies related to watershed management and restoration plans for priority shellfish growing waters into ongoing programs conducted by all state agencies such as the N.C. Division of Coastal Management and N.C. Division of Energy, Mineral and Land Resources. When needed, seek statutory authority, appropriations and grants to implement recommended watershed management actions including but not limited to land acquisition, wetland restoration, stormwater retrofits, and programs that encourage good operation and maintenance of permitted coastal stormwater systems. Develop annual report that evaluates the extent to which management measures recommended by watershed plans for priority shellfish growing waters are actually being implemented and identify causes for successes and failures.
6. **Revise Scoring Criteria for State-administered Grant Funding Programs.** Elevate scoring of projects that protect and/or restore priority shellfish growing waters identified by the oyster steering committee. Programs with scoring criteria include the Parks and Recreation Trust Fund, Clean Water Management Trust Fund, access grants from the N.C. Division of Coastal Management, Section 319 grants, and the N.C. Division of Water Resource grants.
7. **Report Progress Achieving Action Strategies in Annual State of the Oyster Report.** Each year the progress made in achieve these action items will be reported using metrics that can be quantified in the annual report prepared by the oyster steering committee.