DECISION DOCUMENT

Eastern Oyster Fishery Management Plan
Amendment 5

This document was developed to help the MFC track previous activity and prepare for upcoming actions for Eastern Oyster FMP Amendment 5.

November 2024

Summary

At their November 2024 business meeting, the Marine Fisheries Commission will review and provide input on the draft of Amendment 5 to the Eastern Oyster Fishery Management Plan (FMP). They will then vote on sending draft Amendment 5 out for review by the Marine Fisheries Commission Advisory Committees and the public.

Background

The Eastern Oyster FMP is undergoing its five-year review with focus on wild mechanical harvest, recreational harvest, and formalizing cultch planting as an integrated fishery management strategy. Since there is no stock assessment for status determination of the eastern oyster, the goal is to manage the resource to maintain populations to provide long-term harvest and continue to offer protection and ecological benefits to North Carolina estuaries. Only wild oyster harvest issues and management strategies are considered in Amendment 5 as current shellfish aquaculture methods have limited impacts on wild oyster stocks, and managing the private culture industry has grown beyond the scope of the FMP process.

Recreational shellfish harvest does not require a license in NC, resulting in the inability of the division to adequately collect recreational landings data. This data gap has been cited as a major need in all past FMPs and needs addressed to account for all removals from the populations. Additionally, shellfish harvest is subject to changing area closures due to human health and safety concerns. Without licensing or permitting requirements, the division is unable to ensure that every recreational harvester is informed of shellfish sanitation concerns. The FMP contains an issue paper outlining the broad need to capture recreational harvest sector information and have an effective means to provide health and safety information to all recreational shellfish harvesters.

Management strategies are divided regionally by Pamlico Sound (generally subtidal, mechanical harvest) and South of Core Sound (mixed subtidal and intertidal, hand harvest) populations. These strategies apply to both natural reefs and cultch reefs. Natural reefs formed with no human intervention and cultch reefs were built by DMF. Both types of reefs are colonized by wild oysters. Oyster reefs are highly susceptible to the effects of harvest, particularly mechanical, due to oysters being both a fishery resource as well as their own habitat needed to perpetuate their population.

Pamlico Sound is the only area where mechanical gears are allowed for oyster harvest. Mechanical harvest is managed through a sampling program which was designed to stop mechanical harvest in a management area when the percent legal oyster falls below 26% to reduce habitat impacts. The season duration for mechanical harvest for oysters in each management area can be highly variable and is affected by the amount of the oyster resource available and fishery effort. The current trigger monitoring approach, despite a

large sampling effort from the division, does not provide fishery independent data suitable to create indices for a future stock assessment. Additionally, the current approach results in the division having to quickly issue proclamations to close management areas to mechanical harvest, with short public notice. The draft FMP proposes a tiered approach to potential management aimed to balance both the habitat and fishery value of Pamlico Sound oysters. The proposed strategy would provide some certainty in season length for mechanical harvesters and utilize the divisions extensive cultch planting program as a management tool.

South of Core Sound, only hand harvest occurs and accounts for most of the commercial oyster landings. The FMP contains an information paper outlining the decline in participation and landings in hand harvest after a management shift implemented in Amendment 4 reduced holders of a Shellfish License statewide to 2 bushels per day and no more than 4 bushels per vessel in Internal Coastal Fishing Waters. The division is investigating the use of a pilot oyster sentinel site monitoring program to collect fishery independent data for intertidal oyster reefs to potentially inform a future stock assessment and management decisions for the southern region.

Amendment Timing

(gray indicates a step is complete)

September 2023	Division holds public scoping period
November 2023	MFC approves goal and objectives of FMP
December 2023 – June 2024	Division drafts FMP
July 2024	Division held workshop to review and further develop the draft FMP with the Oyster/Clam FMP Advisory Committee
August – November 2024	Division updates draft plan
November 2024	MFC Reviews draft and votes on sending draft FMP for public and AC review
You are here **January 2025**	**MFC Regional and Standing Advisory Committees meet to review draft FMP and receive public comment**
February 2025	MFC selects preferred management options
March – April 2025	DEQ Secretary and Legislative review of draft FMP
May 2025	MFC votes on final adoption of FMP
TBD	DMF and MFC implement management strategies

Goal and Objectives

The goal of the N.C. Eastern Oyster FMP is to manage the oyster resource in such a way as to maintain oyster populations that provide long-term harvest and continue to offer protection and ecological benefits to North Carolina's estuaries. To achieve this goal, it is recommended that the following objectives be met:

- Use the best available biological, environmental, habitat, fishery, social, and economic data to effectively monitor and manage the oyster fishery and its environmental role.
- Support and implement the restoration and protection of oyster populations as both a fishery resource and an important estuarine habitat through the actions of the Cultch Planting and Oyster Sanctuary programs.
- Coordinate with DEQ and stakeholders to implement actions that protect habitat and environmental quality consistent with the Coastal Habitat Protection Plan (CHPP) recommendations.
- Manage oyster harvesting gear use to minimize damage to habitat.
- Promote stewardship of the resource through public outreach to increase public awareness regarding the ecological value of oysters and encourage stakeholder involvement in fishery management and habitat enhancement activities.

Summary of Preliminary Management Recommendations

A summary of the DMF's preliminary recommendations can be found below. ***Please note: these are the Division's initial recommendations and are subject to change.***

Recreational Harvest

Support the NCDMF to further explore potential options and develop a solution to quantify recreational shellfish participation and landings, and to establish a mechanism to provide all recreational shellfish harvesters with Shellfish Sanitation and Recreational Water Quality health and safety information outside of the FMP process.

Mechanical Harvest

To continue to maintain harvestable oyster populations and to better balance the value of oysters as both a fishery resource and essential habitat, the Division recommends the following:

- Adopt the proposed Pamlico and Neuse River DORAs which are bound by existing navigational aids.
- Adopt the proposed Cultch Supported Harvest strategy as described in the Issue Paper.
- Adopt the proposed Rotational Cultch Site strategy as described in the Issue Paper.

- Adopt the proposed adaptive management framework.

Management Options

Recreational Harvest

Implementing a licensing or permitting requirement for recreational shellfish harvesters would give the Division the opportunity to inform participants of where to find information on harvest closure boundaries, where to sign up to receive polluted area proclamations or to access temporary closure maps, and where to find information on safe handling practices, particularly as it relates to Vibrio bacteria.

To pursue any of these solutions, significant time and effort will be needed to assess internal program and resource capabilities and limitations. Any legislative changes require a specific process and are ultimately out of NCDMF or MFC control. Given these constraints, NCDMF recommends exploring potential options and solutions outside of the FMP process.

Mechanical Harvest

The oyster resource in Pamlico Sound is unique in that the commodity is responsible for building the substrate of valuable subtidal habitat which supports rich biodiversity and provides vital ecosystem services. To continue to maintain harvestable oyster populations in Pamlico Sound, and to better balance the value of oysters as both a fishery resource and essential habitat, a three-tiered approach is proposed for the Pamlico Sound oyster mechanical harvest management:
Deep-Water Oyster Recovery Areas, Cultch Supported Harvest, and Rotational Cultch Sites.

Tier/Strategy 1:

The remnant deep water natural oyster reefs in the Pamlico River and Neuse River have suffered mass mortality from water quality impacts. These reefs have likely not supported much fishery effort since 2018 and have had very few live or legal oysters sampled during division monitoring efforts. Additionally, no cultch planting effort is occurring in these areas. Proposed Deep-Water Oyster Recovery Areas (DORAs) would not open to the mechanical harvest of oyster, to allow these reefs to accumulate shell material to gain the height necessary to be resilient to storm events. Reefs deeper than 5m have been identified to be most vulnerable to poor water quality events. Two proposed DORAs (Pamlico and Neuse River) have been constructed by creating boundaries using existing navigational aids for ease of compliance and enforceability.

Tier/Strategy 2:

The Cultch Supported Harvest strategy seeks to link mechanical oyster harvest management in Pamlico Sound to the Divisions extensive cultch planting effort. The primary changes from previous management in the proposed strategy is that season lengths will be predetermined and based on division pre-season sampling of the oyster

resource in these areas, and the 10-bushel per day bays and 15-bushel per day deep areas will be considered differently for each management area. This will eliminate the unpredictability experienced by harvesters of how long mechanical harvest will occur in given season and consider the differences in oyster mortality experienced in varying depths of Pamlico sound. Season lengths will be predetermined based on pre-season sampling of oyster condition. Results of sampling data will be used to set season length as shown in the Issue Paper. During the harvest season, in-season sampling will occur to determine if the initial season length should be extended. Harvesters will be encouraged to report productive sites, aiding in more accurate in-season assessments. The new approach aims to reduce unpredictability by setting season lengths based on oyster resource conditions and ensuring that harvesting does not overly damage oyster habitats. The goal is to balance sustainable oyster harvests with the preservation of habitat provided by cultch planting

Tier/Strategy 3:

The Cultch Planting Program has implemented a reef building strategy in Pamlico Sound to create large ~10-acre cultch planting sites in areas open to mechanical harvest, with the goal of having at least 16 sites planted by 2026. Within each management area there would be four cultch sites integrated into a rotational opening plan. These Rotational Cultch Sites would not be subject to the season lengths set for Cultch Supported Harvest. Instead, a subset of these large cultch sites would be open in each management area and their open/closure status would rotate between seasons. This strategy focuses on the fishery value of these reefs and gives harvesters relatively open access to these targeted cultch plantings. Formalizing a Rotational strategy would also help to add statutory anchor points for the Cultch Planting Program within the requirements of G.S. 113-182.1. This could be useful in pursuing additional and consistent funding for the Program moving forward.

Adaptive Management:

The fixed mechanical season lengths for Cultch Supported Harvest were developed using fishery monitoring data for the five oyster mechanical harvest seasons between November 2018 and May 2023. Any large changes in effort could result in these fixed season lengths becoming either inadequate or too restrictive. The average number of participants with landings in the mechanical oyster fishery between 2018 and 2023 was 93. If the three-year running average of participants is less than 70 or greater than 116 (calculated during annual FMP Update), examination of oyster sampling data and potential adjustment to fixed season lengths for Cultch Supported Harvest is triggered.

Next Steps

At their November business meeting, the Marine Fisheries Commission will review draft Amendment 5 to the Eastern Oyster FMP, including the full list of management options. This

is an opportunity for the Commission to provide input on the management strategies and options that are included in the draft FMP for public and MFC Advisory Committee review.

Following their review and input, the Commission will vote to send draft Amendment 5 out for public and MFC Advisory Committee review. If approved, the draft is expected to go out to the appropriate MFC Advisory Committees in January 2025 with a public comment period held around that same time. The outcome of that comment period and MFC AC review would then be presented to the Commission during their February business meeting.