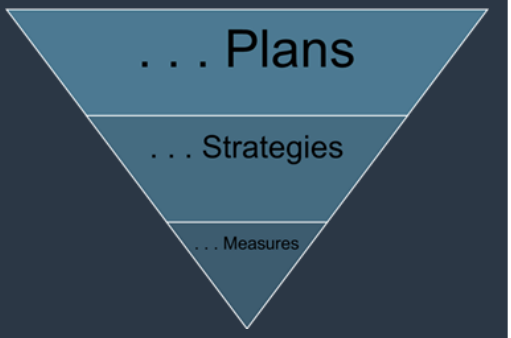
SHELLFISH SCOPING DOCUMENT

for

Eastern Oyster and Hard Clam Fishery Management Plans

Fishery Management



Management **PLANS** set specific management goals for a fishery.

Management **STRATEGIES** are techniques to achieve the set management goals.

Management **MEASURES** are the actions to achieve the management strategies.

September 2023

What is Scoping?

Scoping is the first stage of the Division of Marine Fisheries (DMF) Fishery Management Plan (FMP) process. Scoping serves to:

(1) Provide notice to the public that a FMP is under formal review.

(2) Inform the public of the stock status, when available.

(3) Solicit stakeholder input on relevant management strategies and issues that may need addressed.

(4) Recruit potential FMP advisory committee (AC) members to assist the DMF in drafting the plan.

Scoping is the first opportunity to provide insight on a FMP. This is the best opportunity to provide input for consideration during FMP development.

This scoping document provides an overview of the potential management strategies and issues identified by the DMF, as well as background information on the fisheries and stocks. Management strategies developed in Eastern Oyster Amendment 5 and Hard Clam Amendment 3 will be dependent on statutory requirements, available data, research needs, and the social and economic impacts of management.

The N.C. Division of Marine Fisheries seeks your input on management strategies for Eastern Oyster and Hard Clam

Shellfish Scoping Period for Eastern Oyster and Hard Clam
September 11 - 22, 2023
Scoping Meetings

DMF staff will provide information to prompt discussion about the N.C. Eastern Oyster FMP Amendment 5 and the Hard Clam FMP Amendment 3. Following a presentation, the public will have an opportunity to give comment and speak directly with DMF staff.

Four in-person meetings will be held across the state, one of which will be available virtually. All meetings will take place from **6 p.m. to 8 p.m**. The Shellfish Scoping Information page has up to date information on both plans.

Monday, September 11

Dare County Administration Building
Room 238
954 Marshall C. Collins Drive
Manteo, NC 27954

Monday, September 18

NC Department of Environmental Quality
Washington Regional Office
943 Washington Square Mall
Highway 17
Washington, NC 27889

Tuesday, September 19

Cape Fear Community College
Union Station Building
Room 470
502 N. Front Street
Wilmington, NC 28401

Thursday, September 21

NC Division of Marine Fisheries
Central District Office
5285 Highway 70 West
Morehead City, NC 28557

Attend virtually through WebEx
Meeting Link
Event number 2432 261 2180
Event password 1234

Looking for additional ways to provide insight?

Beginning September 11, submit written comments by online forms or U.S. mail by 5 p.m. September 22, 2023.

Eastern Oyster online form:

Hard Clam online form:

To comment by U.S. mail:

N.C. Division of Marine Fisheries
Shellfish Scoping
P.O. Box 769
Morehead City, NC 28557

FMP Process Questions? Contact the FMP Coordinator

Corrin Flora
Corrin.Flora@deq.nc.gov

Eastern Oyster FMP Amendment 5
Hard Clam FMP Amendment 3

Background

Previous Eastern Oyster and Hard Clam FMPs managed the harvest of wild shellfish stocks, as well as address issues specific to the private cultivation of shellfish in aquaculture. The ending of the relay program and the transition into the use of farming cages and hatchery sourced seed, have reduced reliance on wild shellfish. These changes to private culture practices reduce the need to consider aquaculture in the management of wild oyster and clam stocks. The FMP amendments under development will only focus on wild harvest in both fisheries.

Issues specific to the private aquaculture of shellfish on leases or franchises are addressed by the North Carolina Shellfish Lease and Aquaculture Program.

POTENTIAL JOINT MANAGEMENT STRATEGY TO EXPLORE

Recreational Shellfish Harvest

An issue acknowledged in all past eastern oyster and hard clam plans is the inability to accurately estimate the amount and extent of recreational shellfish harvest in the state. Recreational harvest is potentially a significant amount, resulting in a large gap in landings data. Limited data has been collected since November 2010 through a monthly shellfish survey sent to select Coastal Recreational Fishing License (CRFL) holders. Since no license is needed to recreationally harvest shellfish, there may be many additional recreational shellfish harvesters not included as possible survey participants. Low survey returns from CRFL license holders and the inability to adequately survey all potential recreational harvesters has resulted in unreliable estimates of recreational harvest.

An expansion of recreational harvest data collection, which includes the entire recreational shellfishing community, is needed to accurately estimate recreational effort and catch. Effort and catch are key components for a possible future stock assessment. The division is striving to establish the best available data sources across the fishery to complete a stock assessment.

A license or permit may be one way to collect the necessary data currently unavailable. The division is interested in public input on potential license or permitting options. This management tool would better allow for accurate estimates of recreational harvest for both eastern oysters and hard clams within North Carolina.

Needed Stakeholder Input

- How often do you recreationally harvest oysters and clams in North Carolina?
- How many oysters and clams do you typically harvest recreationally?
- In order to collect landings data, do you support requiring a license or permit to recreationally harvest oysters and clams?

Eastern Oyster FMP Amendment 5

Background

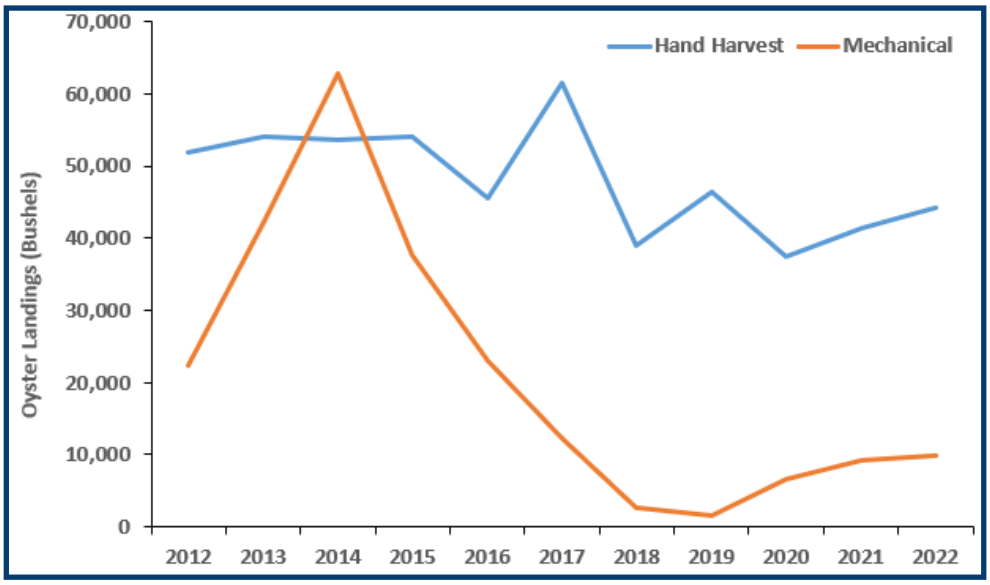
Eastern oysters (Crassostrea virginica) are unique when compared to other North Carolina managed marine resources because they support economically important wild harvest and private farmed aquaculture fisheries, as well as valuable habitat. Managing eastern oysters requires a balance of diverse stakeholder interests, long-term harvest, protecting and restoring habitat, and adapting to changing environmental conditions. Amendment 5 will focus solely on the management of North Carolina's wild oyster stocks. The Division seeks input on issues and potential management strategies to consider when drafting the Eastern Oysters Fishery Management Plan Amendment 5.

In North Carolina, oysters form intertidal and subtidal reefs. Intertidal oyster reefs are in the zone between the low and high tide marks. These areas are exposed to air during low tide and underwater during high tide. Intertidal oyster reefs are found primarily in the southern portion of the state from Cape Lookout to the South Carolina State line. Subtidal oyster reefs are in waters which are consistently submerged. The majority of subtidal oyster reefs are found in Pamlico Sound and surrounding bays from Wanchese to Cape Lookout.

Oyster harvest from intertidal reefs is limited to hand harvest methods, while mechanical harvest (dredge) is allowed on some subtidal oyster reefs. Hand harvest and mechanical harvest require different management approaches due to the reef type and the impacts associated with each harvest method.

Annual oyster landings fluctuate but have been consistent since 2018. Landings fluctuations are primarily due to mechanical harvest landings. Mechanical harvest landings depend on participation and effort, but there have also been declines in subtidal oysters in Pamlico Sound. Hand harvest landings remain relatively constant and make up 56% of total oyster landings from 2009 to 2022 . Due to a decrease in landings and participation in the mechanical harvest fishery, landings from hand harvest have accounted for 89% of overall oyster landings since 2018.

The Division has the longest running and largest scale harvestable oyster reef enhancement programs in the United States, as well as one of the largest no-take oyster enhancement programs. The Cultch Planting Program began in 1915 to replace shell material on oyster reefs removed by harvest. Since the program began, over 21 million bushels of cultch material have been planted in the form of small-scale, low-relief, harvestable oyster reefs.



Over the last ten years, 624 acres of oyster reef has been created on public bottom, with the goal of creating an additional 50 acres per year into the future. The Cultch Planting Program constructs oyster reefs for habitat restoration and to reduce pressure on natural reefs. In 1996, the Oyster Sanctuary Program was established to construct large, no-take reserves that support oyster brood stock and supply both wild and cultch planting sites with oyster larvae. As of 2023, over 395 acres are protected across 14 no-take Oyster Sanctuaries.

Amendment 5 of the Eastern Oyster FMP seeks to better integrate oyster restoration and protection programs with fishery management needs and to address data needs for a future stock assessment.

AMENDMENT 5 POTENTIAL MANAGEMENT STRATEGIES TO EXPLORE

Subtidal Oyster Mechanical Harvest

The mechanical oyster fishery is limited to Pamlico Sound and a maximum season from the third Monday in November to March 31. However, this season is closed by area when management triggers are reached. Triggers, monitored by the Division, are based on percentage of legal sized oysters in a management region. The shallow bays of Pamlico Sound have a total possible six-week season, but may be closed sooner if the management trigger has been reached. The oyster resource in the mechanical harvest areas may be impacted by hurricanes, low dissolved oxygen, or extreme temperatures. These impacts may only allow harvest for a few weeks before the management trigger is reached and the season closes. The actual mechanical harvest season for oysters is highly variable and is affected by the condition of the oyster resource and fishery effort. This variability in season length and area openings is often viewed negatively by commercial harvesters.

Poor water quality from storm events has disproportionately affected the deep-water oyster reefs in the Neuse River and Pamlico River areas of western Pamlico Sound. These reefs have suffered large die offs compared to oyster reefs in the shallow bays or the eastern portion of Pamlico Sound, closer to Oregon inlet. Therefore, these reefs have not supported a mechanical harvest fishery. Research has shown oyster reefs need higher vertical relief (height) in these deep areas to be resilient to these negative storm event effects. However, mechanical harvest reduces the ability of natural oyster reefs in deep water to gain and maintain height.

The Division's Cultch Planting Program has put significant effort into creating and enhancing oyster reefs in Pamlico Sound. Most of this effort has occurred in the shallow bays, along the shoreline to the north and the Crab Hole area south of Wanchese. Current mechanical fishery management does not distinguish between natural and cultch planted reefs in Pamlico Sound. The Division is seeking public input on management strategies which will better integrate the cultch planting program with the management of the mechanical fishery. Possible management could focus harvest effort on cultch planted reefs, help restore and protect the deep-water natural oyster resources in western Pamlico Sound, and offer greater certainty to commercial harvesters on season length and area openings.

Needed Stakeholder Input

- Do you mechanically harvest oysters? If yes, what area of Pamlico Sound?
- Are you familiar with the Division's Cultch Planting Program?
- Do you harvest on cultch planted reefs?
- What do you think about mechanical harvest on natural vs cultch planted reefs?
- Do you have ideas for mechanical harvest oyster management?

Intertidal Oyster Hand Harvest

Hand harvest accounts for most of the commercial landings and has been the dominant harvest gear for oysters in North Carolina since the 1960s. Hand harvest oyster landings are less variable than mechanical harvest landings. These higher, more consistent landings come primarily from intertidal oyster reefs between Core Sound and the South Carolina state line. Oyster hand harvest from this southern region is a significant amount of the overall oyster landings even though the area only accounts for five percent of the total shellfish harvest area open in the state. In response to the concern of increasing participation and declining bushels landed per trip in the hand harvest oyster fishery, the Marine Fisheries Commission limited Shellfish License holders to two bushels of oysters per person per day no more than four bushels per vessel statewide as part of Amendment 4 in October 2017. After Amendment 4 implementation, participation and landings in the hand harvest fishery declined.

A pilot program to monitor intertidal oyster reefs was developed and implemented by the Division. While this program is not currently used to manage the hand harvest fishery, information collected by this sampling program could be used in future management. The division in interested in public input on future possible management measures to reduce harvest pressure and sustainably hand harvest intertidal oyster reefs.

Needed Stakeholder Input

- What is your view on the health of North Carolina oyster reefs?
- Are oysters an important fishery resource for you?
- Do you think oysters are an important coastal habitat?
- Do you have ideas for hand harvest oyster management?

Keep Informed

Biologist Contact Information

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Hard Clam FMP Amendment 3

Background

Amendment 1 to the Hard Clam Fishery Management Plan was adopted by the Marine Fisheries Commission in 2008. Amendment 1 maintained the daily limits of hard clams from public bottom established in the original Hard Clam plan. Management in Amendment 1 additionally eliminated the mechanical clam harvest rotation in Pamlico Sound, instituted a resting period in the northern Core Sound mechanical clam harvest area, and developed sampling programs to collect information necessary for a potential hard clam stock assessment. Continued data limitations prevent North Carolina from conducting a stock assessment to calculate sustainable harvest.

Amendment 2, adopted by the Marine Fisheries Commission in February 2017, maintained the recreational hard clam harvest limits. Additional management eliminated mechanical harvest in Pamlico Sound by rule, required shading from April 1 to September 30, implemented modifications to shellfish lease provisions, and added theft convictions on shellfish leases and franchises to the violation types that could result in license suspension or revocation.

Amendment 3 of the Hard Clam FMP seeks to further manage mechanical harvest.

AMENDMENT 3 POTENTIAL MANAGEMENT STRATEGIES TO EXPLORE

Mechanical Harvest

The use of mechanical gear to harvest clams has historically made up an important portion of total clam harvest. However, mechanical harvest participation has been declining over the years. From 1994 to 2021 participants went from 122 to 4. Over the last five years 2017 had 13 participants land 12,370 pounds while 2021 had 4 participants land 9,889 pounds. When the area of New River is open, 48% to 97% of total mechanical harvest landings come from this location.

In the past 5 to 10 years there have been high rates of die offs in the New River. The root cause of die off events are hard to determine, but have been investigated to the practical extent of the Division's resources with no definite conclusions. Although, water quality is frequently cited by the public. Not only is there a decrease of clams coming from this location but the ecological impacts and bottom disturbing nature of mechanical harvest harbors negative effects. These effects include a decrease in clam recruitment, seagrass bed biomass, and other benthic macroinvertebrates.

Maintenance Dredging

Mechanical harvest can also occur before a maintenance dredging event occurs through Marine Fisheries Commission Rule 15A NCAC 03K .0301 (b). This could be an area where mechanical harvest can still be utilized. However, it has had not been used since 2007 and often the short window of opportunity has limited the ability to use this rule. Timing and communication with the Army Corps of Engineers is another factor that limits the use of this rule.

Needed Stakeholder Input

- What method of clam harvest do you use (hand harvest or mechanical)?
- Is clam harvesting an important source of your income?
- Are NC clams an important part of your food source?
- What offers more value or is of more importance: the food source or habitat?

Keep Informed on the FMP Process

Biologist Contact Information

Hard Clam

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