FISHERY MANAGEMENT PLAN UPDATE
HARD CLAM
AUGUST 2025

STATUS OF THE FISHERY MANAGEMENT PLAN

Fishery Management Plan History

Original FMP Adoption:	August 2001	
Amendments:	Amendment 1	June 2008
	Amendment 2	February 2017
	Amendment 3	May 2025
Revisions:	None	
Supplements:	None	
Information Updates:	None	
Schedule Changes:	None	
Comprehensive Review:	2030	

The 2001 N.C. Hard Clam Fishery Management Plan (FMP) recommendations included adding a new mechanical clam harvest area in Pamlico Sound and rotating openings in this area with northern Core Sound, decreasing the daily harvest limit for mechanical harvest in Core Sound, changing some of the lease requirements, increasing relay of clams, and increasing funding for Shellfish Sanitation (NCDMF 2001).

The N.C. Hard Clam FMP Amendment 1, adopted in 2008, recommended the hard clam fishery from public bottom continue harvesting at current daily limits, eliminating the mechanical clam harvest rotation in Pamlico Sound, instituting a resting period in the northern Core Sound mechanical clam harvest area, and developing sampling programs to collect information necessary for the completion of a hard clam stock assessment (NCDMF 2008). Amendment 1 also endorsed several changes to the shellfish lease program to increase the accountability of the leaseholders and to improve public acceptance of the program.

The N.C. Hard Clam FMP Amendment 2, adopted by the N.C. Marine Fisheries Commission (MFC) in February 2017, recommended maintaining status quo on recreational harvest limits, eliminating mechanical harvest in Pamlico Sound by rule, instituting shading requirements for harvesters from April 1 to September 30, implementing modifications to shellfish lease provisions, and adding convictions of theft on shellfish leases and franchises to the types of violations that could result in license suspension or revocation.

The N.C. Hard Clam FMP Amendment 3, adopted by the MFC in May 2025, includes a three-year phase out of mechanical clam harvest on public bottom to be completed in May of 2028, discontinued the allowance for mechanical clam harvest in conjunction with maintenance dredging, and supports the North Carolina Division of Marine Fisheries (DMF) in further exploring potential options and developing a solution to quantify recreational shellfish harvest in order to move towards a stock assessment and stock level management for hard clams and to establish a mechanism to better provide recreational shellfish harvesters with important Shellfish Sanitation and Recreational Water Quality health and safety information (NCDMF 2025).

Management Unit

Includes the hard clam (*Mercenaria mercenaria*) and its fisheries in all waters of coastal North Carolina.

Goal and Objectives

The goal of the N.C. Hard Clam FMP is to manage the hard clam resource to 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 hard clam fishery and its environmental role.
- Manage hard clam harvesting gear use to minimize damage to the habitat.
- Coordinate with DEQ and stakeholders to implement actions that protect habitat and environmental quality consistent with the Coastal Habitat Protection Plan (CHPP) recommendations.
- Promote stewardship of the resource through public outreach to increase public awareness regarding the ecological value of hard clams and encourage stakeholder involvement in fishery management and habitat enhancement activities.

DESCRIPTION OF THE STOCK

Biological Profile

Hard clams are mostly estuarine-dependent, filter-feeding shellfish found in sandy and vegetated bottoms from Prince Edward Island, Canada to the Yucatan Peninsula, Mexico (Eversole et al. 1987). Spawning occurs from May through November when water temperatures are between 68 degrees and 86 degrees Fahrenheit (Loosanoff and Davis 1950). The larvae go through several stages before settling onto a suitable bottom. During the juvenile stages, hard clams tend to be dominantly male and then become either male or female as they mature into adults. Sexual maturity is reached in hard clams when individuals reach a shell length of about 1.3 inches, and the timing is therefore dependent on the rate of growth (Eversole et al. 1987). Growth rates are highly variable because of temperature, food availability, and genetic disposition. Legal size (one inch thick) is typically reached at age-3 in North Carolina, with the oldest individual known living to 46 years.

Stock Status

The status of the hard clam stock in North Carolina is unknown due to the lack of available data to assess the population, therefore benchmark reference values cannot be determined for the stock (NCDMF 2017). Amendments 2 and 3 of the FMP also define stock status as unknown due to the continued lack of data needed to conduct a reliable stock assessment (NCDMF 2017; NCDMF 2025).

Data limitations prevent DMF from conducting a hard clam stock assessment and calculating sustainable harvest. Currently, the only data available for the stock in most areas are the commercial landings and associated effort. For this reason, the current assessment focused on trends in catch rates in the commercial hard clam fishery from 1994 through 2022 (NCDMF 2025). Commercial landings of hard clams are considered a biased index of population size. Fisheries-dependent data, such as commercial landings, are often not proportional to population size due to a number of caveats including area closures and market fluctuations. As such, landings should be interpreted with caution if the interest is tracking relative changes in the population size.

Commercial landings data were obtained from the North Carolina Trip Ticket Program for 1994 through 2022. Catch rates were estimated for both hand harvest and mechanical harvest in each of the major water bodies from which hard clams are harvested, and where sufficient data were available. Hand harvest occurs year-round and is summarized by calendar year. The majority of mechanical harvest occurs from December through March with some harvest occasionally allowed during other times of the year in specific areas; therefore, mechanical harvest is summarized by fishing year (December through March). Only landings from public bottom were examined because planting of seed clams, grow-out availability, and market

demand often artificially drives landings from private leases. Fisheries-dependent catch rates were expressed as numbers harvested per transaction. Catch rates were consistently higher for mechanical harvest than for hand harvest.

Trends observed in fishery-dependent indices must be interpreted with strong caveats. For a fisheries-dependent index to be proportional to abundance, fishing effort must be random with respect to the distribution of the population and catchability must be constant over space and time. Other factors affecting the proportionality of fishery-dependent indices to stock size include changes in fishing power, gear selectivity, gear saturation and handling time, fishery regulations, gear configuration, fishermen skill, market prices, discarding, vulnerability and availability to the gear, distribution of fishing activity, seasonal and spatial patterns of stock distribution, change in stock abundance, and environmental variables. Many agencies, such as DMF, do not require fishermen to report records of positive effort with zero catch; lack of these "zero catch" records in the calculation of indices can introduce further bias.

The statutory obligation to manage hard clams according to sustainable harvest cannot be met until the appropriate data are collected. While landings records reflect population abundance to some extent, the relationship is confounded by changes in harvest effort and efficiency.

Stock Assessment

A stock assessment is not available for this species.

DESCRIPTION OF THE FISHERY

Current Regulations

Hard clams cannot be taken from any public or private bottom in areas designated as prohibited (polluted) by proclamation except for special instances for: Shellfish Management Areas (NCMFC Rule 15A NCAC 03K .0103), with a permit for planting shellfish from prohibited areas (NCMFC Rule 15A NCAC 03K .0104), and for the depuration of shellfish (NCMFC Rule 15A NCAC 03K .0107). Hard clams cannot be taken between the hours of sunset and sunrise of any day. Beginning in April 2014, time and temperature control measures were initiated for hard clams to prevent post-harvest growth of naturally occurring bacteria that can cause serious illness in humans.

Public Bottom

The recreational and commercial minimum size limit for hard clams is one-inch thickness (shell width). Daily commercial harvest limits on public bottom are no more than 6,250 hard clams (25 bags at 250 clams per bag) per fishing operation in Coastal Fishing Waters regardless of the harvest methods employed. Size, daily harvest limits, and season and area limitations do not apply in some situations on public bottom for temporary openings made on the recommendation of shellfish sanitation.

The daily hand harvest limit on public bottom is 6,250 hard clams and the fishery is open year-round. Rakes no more than 12 inches in width or weighing no more than six pounds can be used to take hard clams in any live oyster bed, in any established bed of submerged aquatic vegetation or in an established bed of saltwater cordgrass.

Mechanical hard clam harvest on public bottom can occur from December 1 through March 31 and is opened by proclamation in specific locations. The mechanical harvest season usually begins the second Monday in December and extends through the week of March 31st. Harvest is allowed from 7:30 a.m. to 4:00 p.m. on Monday through Friday until December 25th and then Monday through Wednesday after December 25th for the remainder of the open harvest season.

Internal waters that can open to mechanical hard clam harvest include areas in Core and Bogue sounds, Newport, North, White Oak, and New rivers, and the Intracoastal Waterway north of "BC" Marker at Topsail Beach which were opened at any time from January 1979, through September 1988. Harvest in

Bogue Sound was discontinued in 2020 due to SAV encroachment. Hard clam mechanical daily harvest limits vary by waterbody. In some instances, mechanical harvest areas are rotated (alternately open and close) with other areas (Table 1). The White Oak River, New River, and the Intracoastal Waterway of Onslow and Pender counties (Marker 65 to the BC Marker at Banks Channel) are fished mainly with escalator dredges and are rotated on a yearly basis with maximum daily limits of 6,250 hard clams (25 bags at 250 hard clams per bag) per operation. The mechanical harvest area from Marker 72A to the New River Inlet is opened annually with a maximum daily harvest limit of 6,250 hard clams. A maximum daily harvest of 3,750 hard clams is allowed in North River and Newport River (Table 1). Since 2008, upon adoption of Amendment 1 to the Hard Clam FMP, Core Sound has been divided into two areas and the northern area is open every other year while the southern area is opened annually. Each area in Core Sound has a daily harvest limit of 5,000 hard clams per operation.

With the adoption of Amendment 3 to the Hard Clam FMP, mechanical clam harvest on public bottom is undergoing a 3-year phase out. Mechanical clam harvest seasons will continue to open via proclamation in specific locations until May of 2028, at which point mechanical clam harvest will no longer occur on public bottom in North Carolina.

Recreational harvest limits from public bottom are 100 hard clams per person per day and no more than 200 hard clams per vessel. Hard clams can only be taken by hand for recreational purposes.

Private Bottom

Leases and franchises in internal waters must adhere to the minimum one-inch-thick size limit for the sale of hard clams for consumption. There is no daily maximum harvest limit applied to the taking of hard clams from private bottom in internal waters. Public bottom must meet certain criteria to be deemed suitable for leasing for shellfish cultivation and there are specific planting, production, and marketing standards for compliance to maintain a shellfish lease or franchise. Also, there are management practices that must be adhered to while the lease is in operation, such as: marking poles and signs, spacing or markers, and removal of markers when the lease is discontinued.

Possession and sale of hard clams by a hatchery or aquaculture operation, and purchase and possession of hard clams from a hatchery or aquaculture operation are exempt from the daily harvest limit and minimum size restrictions. The possession, sale, purchase, and transport of such hard clams must comply with the Aquaculture Operation Permit. Leases that use the water column must also meet certain standards as outlined in G.S. 113-202.1 to be deemed suitable for leasing and aquaculture purposes.

Table 1. Current daily mechanical hard clam harvest limits by water body. Seasons can be opened from December 1 through March 31 by proclamation until May of 2028.

Waterbody	Daily harvest limit (Number of clams)	Additional information
Northern Core Sound	5,000	Rotates one year open and one year closed opposite the open/close rotation of the New River
Southern Core Sound	5,000	Open annually
North River	3,750	Open annually
Newport River	3,750	Open annually
White Oak River	6,250	Rotates one year open and one year closed opposite the open/close rotation of the New River
New River	6,250	Rotates one year open and one year closed opposite the open/close rotation of Northern Core Sound, the White Oak River and the ICW in the Onslow/Pender counties areas
New River Inlet	6,250	Open annually from Marker 72A to the New River Inlet
ICW Onslow/Pender counties area	6,250	Intracoastal Waterway (maintained marked channel only) from Marker #65, south of Sallier's Bay, to Marker #49 at Morris Landing. All public bottoms within and 100 feet on either side of the Intracoastal Waterway from Marker #49 at Morris Landing to the "BC" Marker at Banks Channel. Open every other year when the New River is closed.

There is a specific application process to obtain a lease and a public comment process is required before a shellfish lease is granted, allowing any member of the public to protest the issuance of a lease. Owners of shellfish leases and franchises must provide annual production reports to DMF. Failure to furnish production reports can constitute grounds for termination. Cancellation proceedings will begin for failing to meet production requirements and interfering with public trust rights. Corrective action and appeal information is given prior to lease termination. A lease may be transferred to a new individual before the contract term ends, however there are specific requirements to do so.

For more information on the private culture of hard clams in North Carolina visit the NCDMf Shellfish Lease and Franchise webpage at https://www.deq.nc.gov/about/divisions/marine-fisheries/licenses-permits-and-leases/shellfish-lease-and-franchise.

Commercial Fishery

Hard clam harvest has fluctuated historically, often in response to changes in demand, improved harvesting, and increases in polluted shellfish area closures. Since 1994 about 88% (1994–2013 combined estimates; NCDMF 2025) of the total commercial hard clam harvest came from public bottom in North Carolina. It is assumed that trends in hard clam landings from both sources (private and public bottom) combined can be attributed to changes in hard clam landings from public bottom since they make up the largest component to the overall harvest. Adverse weather conditions (i.e., hurricanes, heavy rain events) can impact the annual landings. One of the greatest environmental impacts to hard clam harvest occurred in 1987–1988 due to red tide. The red tide bloom caused the closure of over 361,000 acres of public bottoms to shellfish harvest

from November 1987 to May 1988. These closures affected 98% of the clam harvesting areas and had its greatest impact on the clam fishermen. The dinoflagellate responsible for the red tide, *Karenia brevis*, produced a neurotoxin, which was concentrated in shellfish, making them unfit for consumption. Seventeen hurricanes have made landfall in North Carolina since 1996 (North Carolina State Climate Office 2025). Freshwater runoff after storm events often increase shellfish harvest area closures and cause a reduction in hard clam harvest effort for short periods. Hard clams are a live product and must go to market relatively quickly after harvest. Competition with hard clams grown in private culture from other states is a known contributor to reduced market demand for wild harvested hard clams since a more consistent product can be provided from private grow out facilities.

Annual average hard clam landings from 1994–2024 was 20.9 million clams (Figure 1). Annual landings in 2024 were the third lowest in the 31-year period at 3.9 million clams. This continues the trend of the low harvest levels seen in 2020–2023. There has been a steady decline in commercial landings since the early 2000s. The landings during the last ten years are less than one third of the peak seen from 1994–2001.

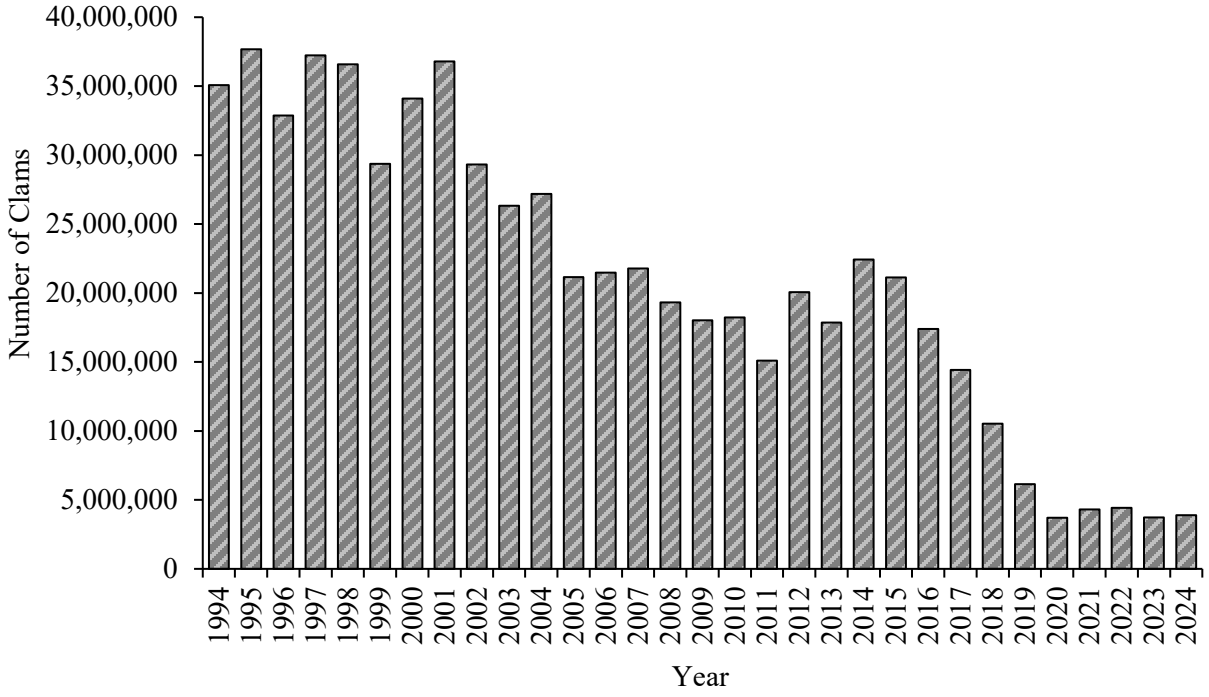

Figure 1. Combined annual commercial (1994–2024) hard clam landings (number of clams) from private and public bottom in North Carolina.

Hand Harvest Fishery

Hand harvest is a year-round fishery and has average landings of 17.2 million hard clams a year (1994–2024) from public and private bottom (Figure 2; NCDMF 2025). Most hand harvest for hard clams occurs in the spring and summer when warm water is conducive to wading. Annual hand harvest for hard clams has declined steadily over the 31-year time series to its lowest level of 3.2 million hard clams in 2024 (Figure 2; NCDMF 2025).

Mechanical Harvest Fishery

Hard clam landings from mechanical methods have averaged 3.7 million hard clams each fishing year (1994–2024) from public and private bottom (Figure 2). The mechanical clam harvest season usually has the highest landings at the beginning of the fishing season in December and declines as the season progresses. Landings outside of the usual mechanical clam harvest season are from temporary openings for

the maintenance of channels and temporary openings in Core Creek when bacteriological levels are at acceptable levels to harvest hard clams. Hard clam landings and trips fluctuate from fishing year to fishing year and have often been greatly influenced by harvest from the New River mechanical harvest area. From 1994 to 2022, over 80% of the total mechanical hard clam harvest came from the New River and Core Sound (NCDMF 2025). The New River accounted for most mechanical clam harvest from 2000 to 2016 but, following a series of clam kill events in the 2010s, contributions from this area to total mechanical landings have declined (NCDMF 2025).

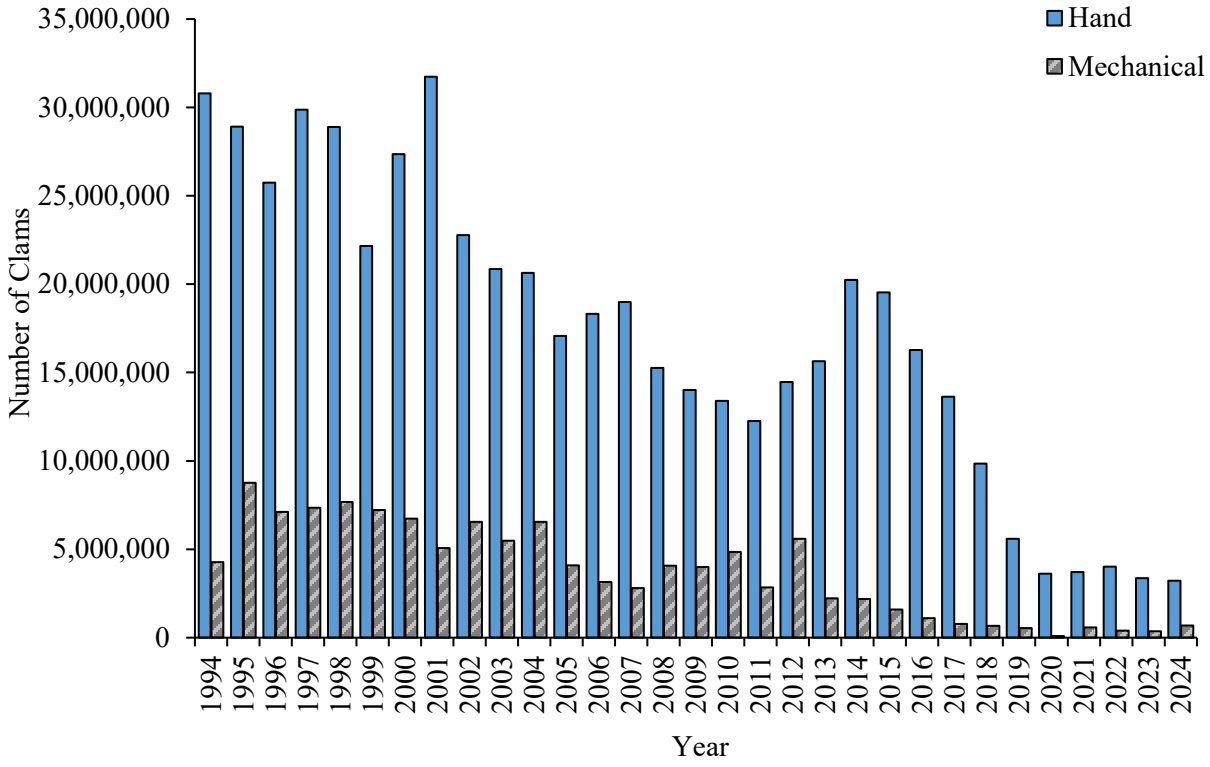

Figure 2. Annual hard clam landings (number of clams) from hand and mechanical harvest in North Carolina from public and private bottom, 1994–2024.

Private Culture

DMF administers the shellfish lease program whereby state residents may apply to lease estuarine bottom and water columns for the commercial production of shellfish. DMF does not differentiate between clam, oyster, bay scallop, and mussel leases; allowing shellfish growers to grow out multiple species simultaneously or as their efforts and individual management strategy allows. Since 1994, roughly 35% of all private culture operations harvested only clams (NCDMF 2017).

Private enterprise has provided roughly 12.3% of the total commercial hard clam harvest in North Carolina between 1994 and 2024 (Figure 3). The annual average hard clam landings from 1994 to 2024 from private production were 2.4 million hard clams. In 2024, harvest from private culture was 1.1 million hard clams, the highest since 2018.

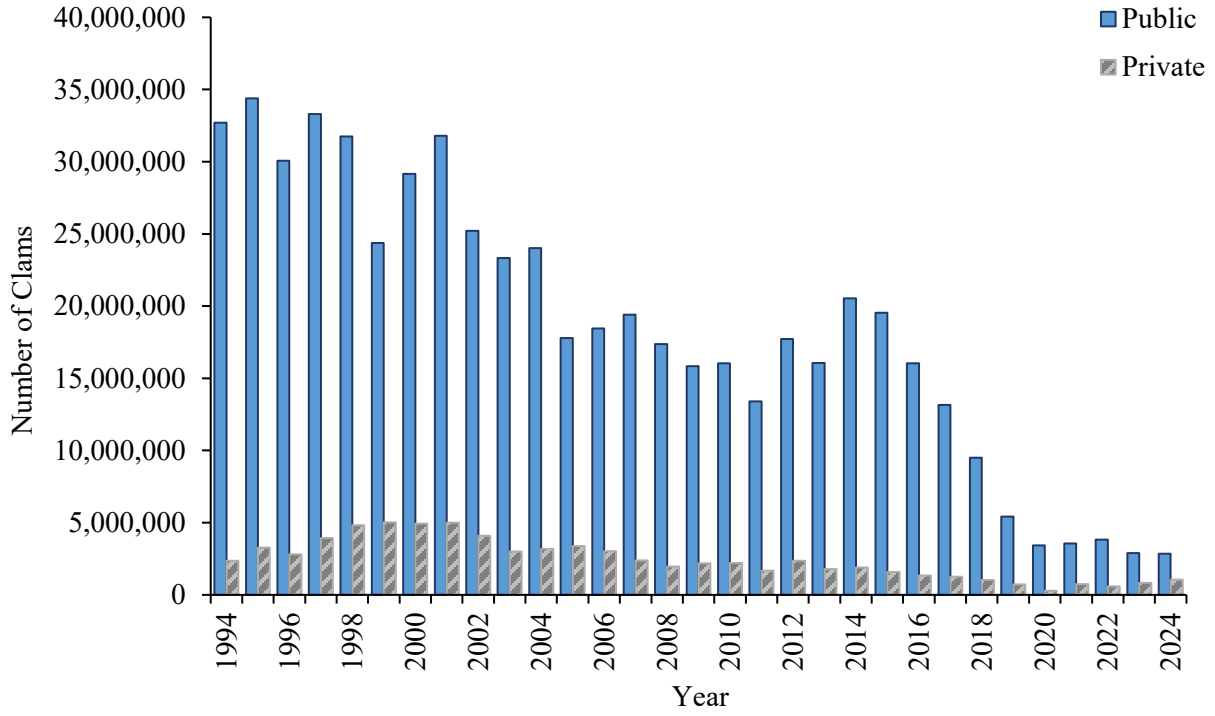

Figure 3. Annual hard clam landings (number of clams) from private and public bottom, 1994–2024.

Recreational Fishery

The recreational harvest of hard clams in North Carolina does not require a fishing license, and due to this the total amount of recreational landings cannot be estimated and remains unknown. However, a mailout survey was used from 2010 to 2022 to estimate harvest from Coastal Recreational Fishing License holders. This population of recreational harvesters makes up an unknown proportion of total recreational harvest, but still provides insight into catch rates, harvest trends, and scale of harvest. In 2010, surveys were only mailed out November and December, so harvest and effort estimates are very low (Table 2). Harvest and catch rate have been declining since 2013 (Figure 4). In 2022 recreational harvest was roughly one half of that in 2020 and only 30% of the time series average.

In 2023, a new licensing system was implemented, and the license database was restructured. This restructuring disrupted our ability to query the full license dataset to establish a sampling frame of eligible anglers for the mail surveys. As a result, we were unable to administer the mail surveys and expand potential responses and survey estimates are not available for 2023 or 2024. In 2025, the mail surveys resumed and these data will be included in the 2026 annual Hard Clam FMP update.

Table 2. Estimated number of trips, number of clams harvested, and catch rate (clams per trip) per year of Coastal Recreational Fishing License holders, 2012–2022. Survey estimates not available for 2023 or 2024.

Year	Number of Trips	Harvest (number of clams)	Catch Rate (number of clams/trip)
2012	6,726	146,151	27.3
2013	8,644	191,842	26.2
2014	6,325	162,656	28.8
2015	7,637	166,419	27.4
2016	8,456	84,199	12.3
2017	3,435	75,171	21.8
2018	2,362	26,769	11.3
2019	5,088	114,042	22.4
2020	6,557	62,164	9.5
2021	1,765	15,471	8.8
2022	7,087	31,707	4.5

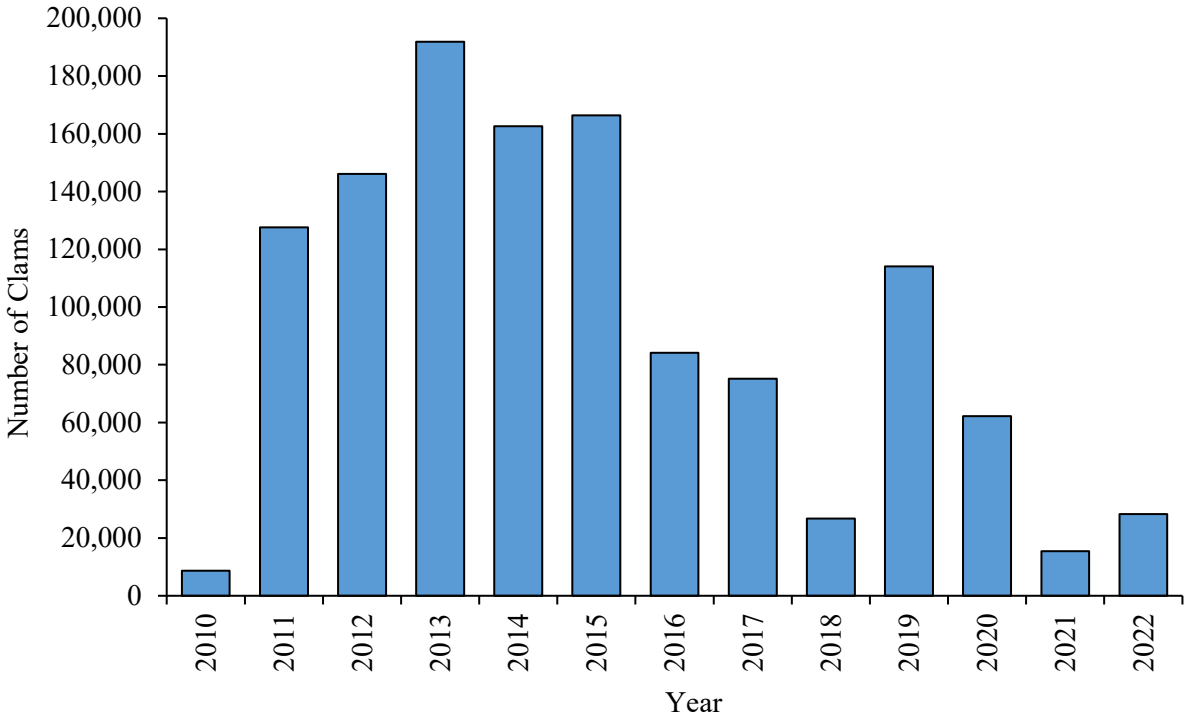

Figure 4. Annual recreational hard clam landings (number of clams) in North Carolina, 2010–2022. Data from 2010 represent a partial year of sampling. No recreational harvest estimates are available in 2023 and 2024 due to disruptions in the survey caused by the implementation of a new licensing system.

As part of Amendment 3 to the Hard Clam FMP adopted by the Marine Fisheries Commission in May of 2025, DMF will further explore potential options and develop a solution to estimate recreational shellfish participation and landings, with the intent to move towards a stock assessment and stock level management for hard clams 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.

MONITORING PROGRAM DATA

Fishery-Dependent Monitoring

Sampling of commercial catches of hard clams has been ongoing in the Southern District, Morehead City Office since 1998. Additional sampling of other areas followed later as funding became available for expansion.

The number of hard clam shell lengths from fishery dependent sources from 1999 through 2024 ranged from 114 in 2023 to 10,670 in 2011 (Table 3). Mean shell length ranged from 53 mm (2.10 inches) in 1999 to 70 mm (2.77 inches) in 2020, with a minimum shell length of 27 mm (1.06 inches) to a maximum shell length of 126 mm (4.96 inches) for clams measured from the commercial fishery (Table 3). In 2024, the mean shell length of hard clams caught in the commercial fishery was 2.64 inches, generally consistent with mean shell lengths seen in previous years (Table 3; Figure 5).

Table 3. Observed annual mean, minimum and maximum shell length (inches) of hard clams measured from commercial catches at the dealer, 1999–2024. In the 2025 update, an error from previous updates was corrected, so numbers in this table may be different as compared to hard clam FMP annual updates from prior years.

Year	Mean Shell Length	Min Shell Length	Max Shell Length	Total Number measured
1999	2.10	1.14	3.94	4003
2000	2.43	1.14	4.72	2138
2001	2.62	1.42	4.96	3265
2002	2.51	1.46	4.13	1900
2003	2.45	1.57	4.09	836
2004	2.62	1.57	3.78	1214
2005	2.61	1.81	3.78	304
2006	2.67	1.26	4.02	1558
2007	2.60	1.61	4.37	1405
2008	2.73	1.61	4.72	1383
2009	2.51	1.54	4.41	1859
2010	2.50	1.54	4.09	5358
2011	2.51	1.50	4.37	10670
2012	2.45	1.57	4.29	5851
2013	2.48	1.57	4.25	4750
2014	2.35	1.06	4.53	7447
2015	2.36	1.34	4.37	6218
2016	2.38	1.18	4.13	6460
2017	2.69	1.61	4.57	3420
2018	2.71	1.54	4.06	1946
2019	2.67	1.57	4.17	1786
2020	2.77	1.61	4.06	684
2021	2.64	1.57	4.02	646
2022	2.65	1.69	3.82	418
2023	2.74	1.77	3.54	114
2024	2.64	1.65	3.90	532

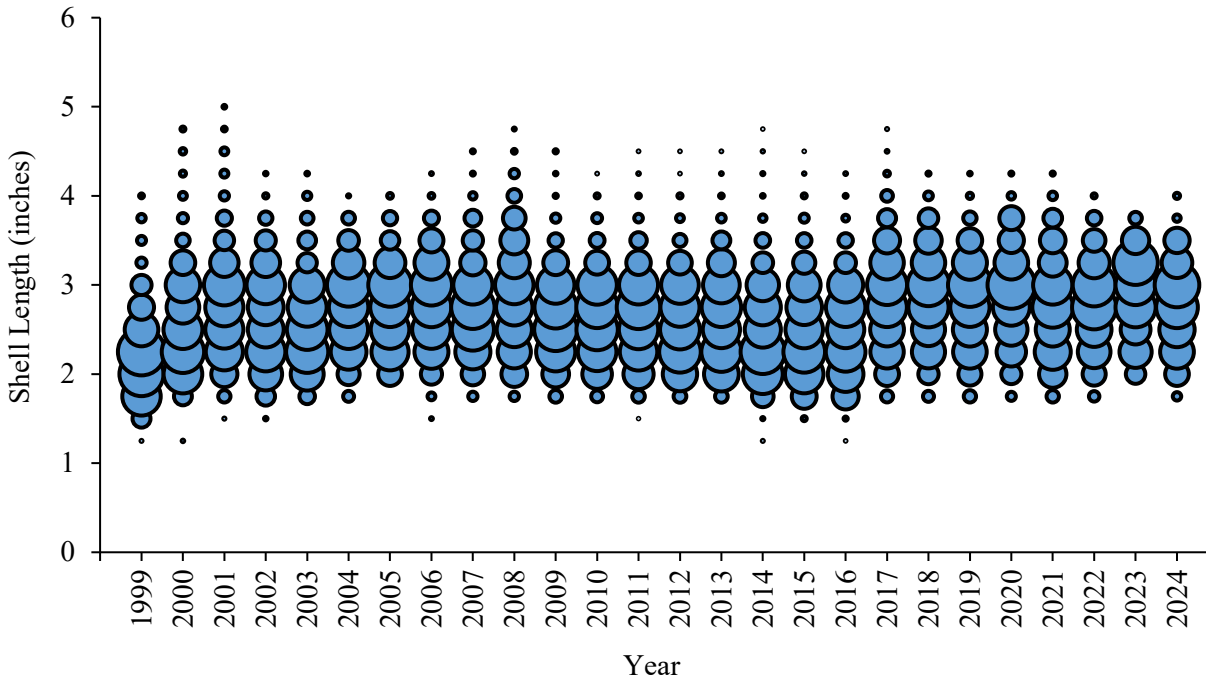

Figure 5. Length frequency (shell length, inches) of hard clams harvested, 1999–2024. Bubbles represent hard clams binned by ¼ inch up to that length and the bubble size is proportional to the number of hard clams at that length. In the 2025 update, an error from previous updates was corrected, so values displayed in this figure may be different compared to hard clam FMP annual updates from prior years.

Fishery-Independent Monitoring

A fisheries-independent monitoring program (Program 640) in Core Sound to provide baseline data on hard clam abundance and gather environmental information was conducted from 2007 to 2023 (Table 4). Thirty randomly selected stations were sampled each year in August within three strata. The three designated strata were: Shellfish Mapping Strata (ST), Known Fishing Areas (FA), and Closed Shellfish Areas (CA). Sampling was performed at each station location within each stratum using small patent tongs with an opening of 0.51 square meters on a 25-ft flat bottom boat. Samples were taken by station with three samples taken per station.

Very few hard clams were caught in this program due to the nature of the gear and random stratified sampling design. The relative abundance, or number of clams per station, ranged annually from 0.03 clams per station in 2023 to 1.27 clams per station in 2009 (Table 4). No trend is apparent from this sampling and due to these concerns coupled with significant safety risks posed by sampling gear, Program 640 was discontinued in 2024 (Figure 6). New fishery-independent programs for monitoring relative abundance of hard clams are being considered by the division.

Table 4. Fishery-independent hard clam sampling (Program 640) annual estimates of relative abundance (number of clams per station) and their standard deviations, 2007–2023 for Core Sound.

Year	Total number of stations	Number of stations with zero catch	Number of hard clams	Relative abundance (Number of clams/station)	Standard deviation
2007	30	22	20	0.67	1.54
2008	31	24	12	0.39	0.80
2009	30	15	38	1.27	1.82
2010	30	19	22	0.73	1.36
2011	30	26	14	0.47	2.03
2012	30	17	21	0.70	1.21
2013	30	25	16	0.53	1.53
2014	30	24	21	0.70	1.78
2015	30	22	15	0.50	0.50
2016	30	22	16	0.53	0.23
2017	30	22	35	1.17	2.57
2018	30	23	8	0.27	0.52
2019	30	23	9	0.30	0.13
2020	30	27	3	0.10	0.31
2021	30	27	6	0.20	0.76
2022	30	27	3	0.10	0.31
2023	30	29	1	0.03	0.03
Mean	30	23	15	0.51	

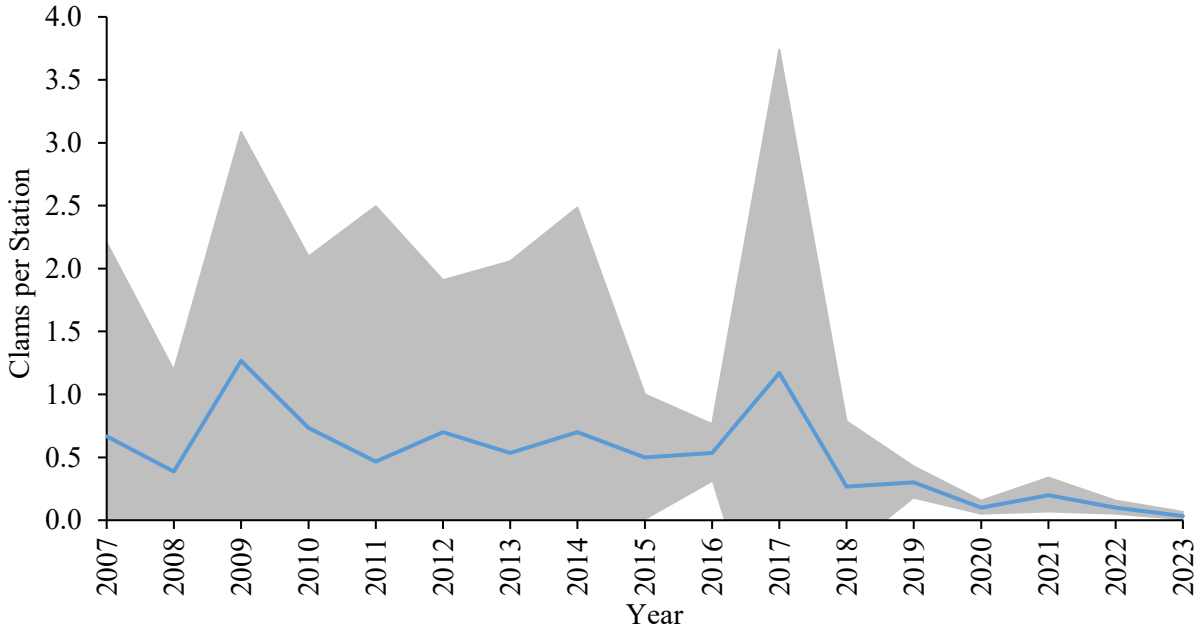

Figure 6. Annual relative abundance (number of clams per station) of hard clams in Core Sound from fishery-independent sampling (Program 640), 2007–2023. Shaded area represents standard deviation. Program 640 was discontinued after 2023 as it ultimately did not provide reliable estimates of hard clam relative abundance and posed significant safety risks to staff.

RESEARCH NEEDS

The specific research recommendations from Amendments 2 and 3, with their priority ranking, are provided below. The prioritization of each research recommendation is designated either High or Medium. A lower ranking does not infer a lack of importance but is either already being addressed by others or provides limited information for aiding in management decisions. A high ranking indicates there is a substantial need, which may be time sensitive in nature, to provide information to help with management decisions. Proper management of the hard clam resource cannot occur until some of these research needs are met. The research recommendations include:

High

- Develop hard clam sampling methodology to monitor regional adult abundance.
- Map and characterize hard clam habitat use by bottom type.
- Develop a survey to better quantify recreational harvest.
- Determine natural mortality estimates.
- Investigate causes of recent clam-kills and overall decline in hard clam abundance in the New River

Medium

- Survey commercial shellfish license holders without a record of landings to estimate hard clam harvest from this group.

MANAGEMENT

There are no management triggers or methods to track stock abundance, fishing mortality, or recruitment between benchmark reviews of the FMP. Landings and effort have decreased over time. There are no data to track the recreational fishery.

Amendment 3 was adopted in May 2025 with rule changes effective June 1, 2028 (Table 5). The selected management strategies of the Marine Fisheries Commission from Amendment 3 for hard clams included:

- Phase out mechanical clam harvest in three years (May 2028) to be consistent with G.S. 113 221 (d) without participation and landing triggers
- Discontinue allowance for mechanical clam harvest in conjunction with maintenance dredging upon adoption of this plan
- Support the DMF to further explore potential options and develop a solution to estimate recreational shellfish participation and landings, with the intent to move towards a stock assessment and stock level management for both hard clams and oysters; 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.

Additionally, Amendment 3 included the following management measures carried forward from Amendment 2:

- Daily harvest limit for recreational purposes is 100 clams per person per day not to exceed 200 per clams per vessel per day.
- Maintain shading requirements for clams on a vessel, during transport to a dealer, or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110.
- Maintain management of the Ward Creek Shellfish Management Area as described in the Hard Clam FMP Amendment 1.

- Maintain current daily mechanical Hard Clam harvest limits by waterbody (Table 1).
- Institute a resting period within the mechanical clam harvest area in the northern part of Core Sound.
- Take latitude/longitude coordinates of the poles marking the open mechanical clam harvest area boundary in the New River, still with the flexibility to move a line to avoid critical habitats.
- Maintain management of the mechanical clam harvest in existing areas from Core Sound south to Topsail Sound, including modifications to the mechanical clam harvest lines to exclude areas where oyster habitat and submerged aquatic vegetation (SAV) habitat exist based on all available information.

Table 5. Summary of MFC selected management strategies from Amendment 3 of the N.C. Hard Clam Fishery Management Plan.

Management Strategies	Implementation Status
MANAGEMENT OF PUBLIC BOTTOM	
Continue the daily harvest limit for recreational purposes at 100 clams per person per day not to exceed 200 per clams per vessel per day (NCDMF 2017).	No action required
Maintain management of the Ward Creek Shellfish Management Area as described in the Hard Clam FMP Amendment 1 (NCDMF 2008).	No action required
MECHANICAL HARVEST	
Phase out mechanical clam harvest in three years (May 2028) to be consistent with G.S. 113 221 (d) without participation and landing triggers	Existing proclamation authority; will begin in May 2028
Discontinue allowance for mechanical clam harvest in conjunction with maintenance dredging upon adoption of this plan	
Maintain management of the mechanical clam harvest in existing areas from Core Sound south to Topsail Sound, including modifications to the mechanical clam harvest lines to exclude areas where oyster habitat and SAV habitat exist based on all available information (NCDMF 2017).	No action required
Take latitude/longitude coordinates of the poles marking the open mechanical clam harvest area boundary in the New River, still with the flexibility to move a line to avoid critical habitats (NCDMF 2017).	Completed in 2015
Maintain current daily mechanical Hard Clam harvest limits by waterbody (NCDMF 2017).	No action required
Institute a resting period within the mechanical clam harvest area in the northern part of Core Sound.	No action required
ENVIRONMENT AND PUBLIC HEALTH	
Maintain shading requirements for clams on a vessel, during transport to a dealer, or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 (NCDMF 2017).	Existing proclamation authority, implemented beginning April 1, 2017

Management Strategies	Implementation Status
RECREATIONAL HARVEST	
Support the DMF to further explore potential options and develop a solution to estimate recreational shellfish participation and landings, with the intent to move towards a stock assessment and stock level management for both hard clams and oysters; 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.	Ongoing

FISHERY MANAGEMENT PLAN SCHEDULE RECOMMENDATIONS

The Marine Fisheries Commission adopted Amendment 3 to the North Carolina Hard Clam Fishery Management Plan in May of 2025. All management strategies in Amendment 3 will be maintained and implemented as outlined in the state FMP, with mechanical clam harvest phase out to be completed in May of 2028. The next scheduled comprehensive review of this plan will begin in July of 2030.

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